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SECOND HALF

IEF

Financial Stability Report

BANCO CENTRAL DE CHILE

Financial Stability Report*

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DE CHILE

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

Contents*/

*/ The statistical closing date of this *Financial Stability Report* was 23 November 2011.

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 payments system, with the objective of promoting general knowledge and public debate with regard to the Bank's performance in fulfilling this function.

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The Board

Summary

The international scenario has deteriorated with respect to the last *Report*. In the past few months, the world economy has been characterized by greater financial stress and a higher degree of risk aversion. This financial stress originates in three factors; first, an intensification of the European financial crisis, which increasingly affects both systemically-important economies and the banking system; second, the uncertainty about the U.S. fiscal policy; and third, the reduced growth expectations in advanced economies and signs of slower growth in emerging countries. These elements underscore the importance of the interaction between economic growth, fiscal solvency and bank exposure which, in practice, poses a serious challenge to the financial stability of a number of advanced economies.

The risk scenario of this *Report* assumes that the extension of the current level of stress in global markets will translate into a significant slowdown in world economic activity. The risk scenario could be linked to a worse-than-expected deterioration in the more advanced economies and/or an impact of international tensions on some emerging economy of systemic nature. These conditions could be aggravated if the banking or sovereign crisis in the Euro area deepens, within a context where there is a limited capacity of the main advanced economies to implement countercyclical fiscal and monetary policies, and the capacity of some individual countries to support their financial intermediaries is smaller. If this scenario materializes, not only will external demand conditions for Chile deteriorate, but it is also very likely that external lending conditions to local agents will tighten, and the increased risk aversion will affect the domestic financial markets.

Most recently, external lending standards have tightened. Between the first and third quarter of 2011, long-term sovereign and corporate spreads increased 64 and 134 basis points, respectively. This situation was more evident since August and also coincides with a reduction in investments in local bonds by international investors, also affecting other emerging economies. After a long period of stability, the short-term cost of bank funding increased, to spreads around 90 basis points at the statistical closing date of this *Report*—that is, 30 basis points up from the first quarter. However, it is worth noting that domestic banks have a diversified financing base. Lately, they reduced funds coming from Spanish and Italian banks, a reduction they offset with increased funding from the U.S., Canada and Asia.

Domestic financial markets have been affected by increased external volatility. The prime-swap spreads at different terms have seen periods of high volatility associated, to a large extent, to external developments, and with tighter conditions lately. It should be noted that the higher external volatility also took its toll on the stock market, the forex market and the local fixed-income instruments, a situation common to other economies. This volatility, though lower than was seen in late 2008, could persist or even increase for as long as the fiscal and financial problems in advanced economies remain unresolved. It is important for financial agents and firms to internalize this increased volatility in their risk management activities.

In the corporate sector, the firms' debt continued to grow through the third quarter of 2011, with no material changes in liquidity, payment capacity or profitability indicators. Furthermore, despite the ever-increasing role of external debt as a source of funding, the corporate sector is showing stable and limited currency mismatch indicators. The analysis of a wide set of firms—including medium- and small-sized ones—reveals only marginal variations in their currency mismatches since the last *Report*. Meanwhile, a closer look at the profitability, indebtedness and liquidity shows that, in general, there were no significant changes between the years 2007 and 2010. The exception is profitability of smaller-sized firms which, although it has recovered after the crisis, it is still below the levels of 2007. Despite the sector's favorable financial indicators, it must be noted that financial intermediaries should keep a vigilant attitude towards credit risk, considering the negative effects on external demand implied by the international risk scenarios.

No deterioration of households' financial situation is observed at the aggregate level. Private consumption has recovered quickly, while the debt posted an annual growth of 11% in the third quarter of 2011, led by bank loans (14%). The evidence at hand suggests that, so far, borrowing has not increased above its long-term-growth trend, and the average ratios of debt over income and financial burden are stable. By the same token, banking credit risk indicators for households have been fairly low during the past year. In the present scenario, however, close monitoring of household borrowing will be necessary, because if it continues to grow at the current pace, the households' debt and financial burden may rise sharply in case of a sudden and severe occurrence of the risk scenario just described. Finally, lower-income households could be more financially vulnerable considering the worsened of their financial indicators in the period 2007-09. Although the volume of debt of these households has no systemic importance, it may matter on some credit providers focused on the lower-income segments.

In a context of increased lending activity, bank solvency indicators remain high and stable. The lower profits of the past few months are originated in lower intermediation margins, mainly interest margins, which have fallen due to the faster pace at which the banks have passed on their rate increases to their liabilities. However, and despite the lower profitability, both the core capital (tier 1) and regulatory capital, measured with respect to risk-weighted assets, have remained close to 10% and 14%, respectively. This has been favored by, among other factors, capital increases of around US$1.4 billion and liquid assets of over US$3.0 billion as of the statistical closing of this *Report*. Already announced capital contributions of an additional US$800 million are expected, which will allow keeping high solvency indices.

The Chilean banking system continues to accumulate significant liquid assets and has also diversified and extended the terms of its funding sources. Liquid asset holdings rose in late 2008 and stabilized at around 18% of the industry's total assets. This growth is higher than can be explained by the change in the levels of sight deposits and external debt or by the lower level of activity observed after the crisis of 2008. As for bank liabilities, bond issuances and long-term certificates amounted to a combined US$3.0 billion locally and US$640 million in the external market, privileging, most recently, placements in emerging financial markets. In addition, the larger banks have contracted syndicated credits for US$725 million, replacing other sources of shorter-term external financing. All this ultimately results in lower short-term mismatches in the margin, with enough room to meet the regulatory limits.

The persistent problems abroad, especially in the Euro areas, have begun affecting domestic banks' access conditions to external financing. Fiscal problems and their impacts on European banks have begun affecting the spreads of external credits, with no reduction so far in credit volumes or maturities. Still, and given the presence of banks established in Chile with a parent company or controller abroad, there is the risk that they will affect their respective subsidiaries. To this date, however, no relevant discrepancies are observed in the short-term external debt spreads of these banks, or in the valuations of issuances and/or transactions of their debt certificates in the domestic market. Nor has the risk-rating downgrade of some parent companies had an impact on the international or local risk-rating of their subsidiaries in Chile. The ratio of investments abroad over total assets does not differ much between national banks and foreign owned banks, both being below 4%, corresponding primarily to deposits in foreign correspondent banks. The significance of external financing does not differ between local and foreign banks either, with generally very low reliance on related bank financing. Finally, it is important to keep in mind that Chile's banking legislation mandates that the subsidiary fully constitutes its capital in the country before operating as a financial entity in the local market, and must fully comply with the requirements of solvency, provisions, market risk and liquidity provided for in the Chilean regulation.

The banking system maintains its capacity to absorb the materialization of a scenario of severe risk. Stress tests show that the industry's current level of capitalization can allow it to absorb an episode of GDP slowdown, an increase of financing costs in pesos and a depreciation, consistent with the scenario of external risk.

Internationally, a number of weaknesses persist—in the aftermath of the subprime crisis—that could trigger a significant deterioration in global activity and the world financial system. A particular concern is the macro-financial behavior of peripheral Europe and the United States. The worsened external financial conditions and the resulting world deceleration could have a negative impact on the Chilean economy. Although the analysis in this *Report* suggests that the Chilean financial system is prepared to confront this tightened external environment, it is important that credit users and financial intermediaries internalize these risks in their consumption, investment and financing decisions. In aggregate macro-financial terms, in the past few decades the country has made progress in building an economic policy framework that has already given proof of its ability to properly address difficult conjunctures.

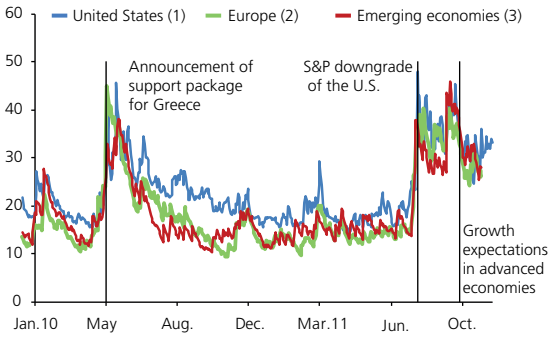
Finally, since the last *Report*, a number of regulatory and financial supervision amendments have been implemented. In the first place, the Financial Stability Board began operating, which seeks to coordinate and propose measures to safeguard the integrity and soundness of the financial system, via the coordination and exchange of information between the competent authorities. In terms of consumer protection, a Law was enacted which grants greater powers and responsibilities to the National Consumer Service, Sernac, in financial services matters. In parallel, Congress has continued with the procedures to create a consolidated debtors data base. Also in progress is the bill seeking to modify the maximum conventional rate. It is important to note that the potential benefits of the regulatory amendments demand a proper evaluation of their direct and indirect effects on both users and providers of credit.

I. External environment and financial risks

Figure I.1

Risk aversion

(index)



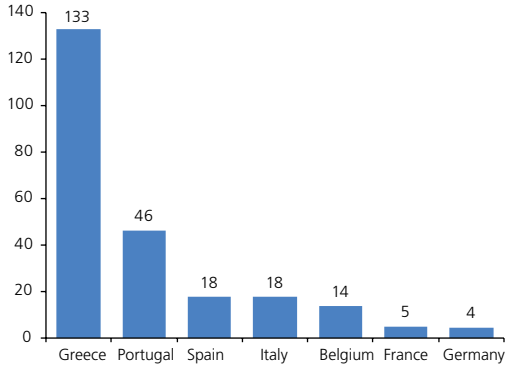
(1) Measured through the VIX index.
(2) Measured through the VDAX index.
(3) Measured through the MSCI index for emerging economies and the MSCI index for Latin America.

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

Figure I.2

Required recapitalization of the European banking system (1)

(percent of capital) (2)



(1) European Banking Authority (EBA) estimate, 26 October 2011.
(2) Capital corresponds to the estimate for December 2011 contained in the stress tests from June 2011.

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

The risks in the international scenario have increased as a result of the deterioration of the macro-financial situation in the advanced economies, greater uncertainty about the world recovery, and a slight change in trend in the emerging economies.

Evolution of the international financial situation

The risks for global financial stability have increased since the publication of the last Report

In recent months, the international economic scenario has been characterized by a significant increase in financial stress and greater risk aversion (figure I.1). The heightened financial stress is mainly related to three factors: first, the worsening of the European financial crisis, with an increasing impact on systemically important countries, such as Italy and Spain, and the growing exposure of the European banking system to the sovereign debt crisis; second, uncertainty regarding fiscal policy in the U.S.[1]/. and finally, lower growth expectations in the advanced economies and signs of lower growth in emerging economies. These factors underscore the importance of the interaction between economic growth, fiscal solvency and the banking system, whose interdependence could lead to an intensification of the macro-financial risks.

Greece's difficulty complying with the May 2010 agreement and the complex scenario for negotiating a new aid package aggravated the European crisis…

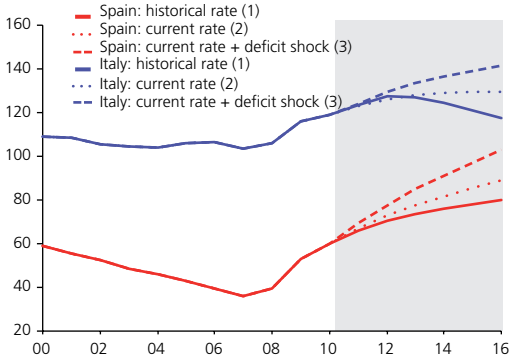
The crisis in Greece has worsened, and in the past few months the country has had difficulty complying with the stipulations of the aid program negotiated in May 2010. The fiscal deficit for 2011 will exceed the proposed target of 7.6% of GDP by approximately 1% of GDP. Moreover, the growth forecast for 2012 has been revised downward (from 0.6 to –2.0%, according to Consensus Forecast), so it will probably be hard to comply with the fiscal target next year (6.8% of GDP). Greece is also facing political difficulties that complicate the approval process for a larger fiscal adjustment, which has renewed the markets' fears about a credit event in this economy.

[1]/ In August, the stalled negotiations on the new debt ceiling in the U.S. and the lower growth outlook led S&P to downgrade the risk rating on U.S. debt.

Figure I.3

Public debt of Italy and Spain

(percent of GDP)



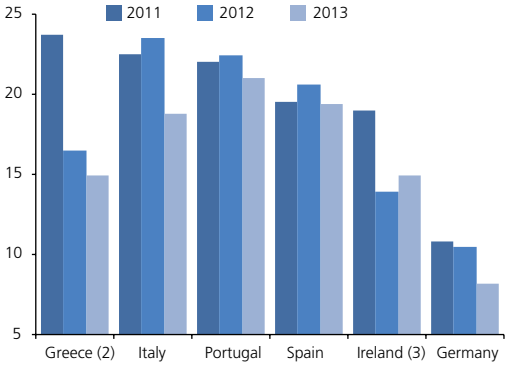
(1) Historical average interest rate on five-year sovereign bonds for the period 2000–10.
(2) Interest rate on five-year sovereign bonds on 22 November 2011.
(3) Similar to (2), but with the addition of a one-standard-deviation permanent increase in the fiscal deficit.

Source: Central Bank of Chile, based on data from Bloomberg and IMF (2011a).

Figure I.4

Sovereign funding needs in European economies (1)

(percent of 2011 GDP)



(1) Fiscal debt coming due and the fiscal deficit for each year.
(2) The calculation of the fiscal debt coming due assumes a 90% participation in the debt exchange program of September 2011.
(3) Includes 3 billion euros of debt coming due each year, related to the issue of bonds to help the financial sector.

Source: IMF (2011b).

…and the new plan approved by the EU authorities has not managed to reduce market uncertainty

In October the EU authorities announced a new agreement with the goal of providing a more integral solution to the crisis. The agreement includes the following three initiatives: (i) bank recapitalization to comply with a 9% capital requirement by mid-2012; (ii) rescheduling of Greek debt with the private sector, which, in principle, would involve a 50% haircut; and (iii) increased leveraging of the European Financial Stability Facility (EFSF).

However, the absence of details on these initiatives generated uncertainty. First, it is not clear precisely how the banks will be recapitalized. If the adjustment is made through asset reduction, the credit contraction could be especially significant in Greece and Portugal (figure I.2). There is also concern about the potential effect of this deleveraging on cross-border loans of banks based in the euro area. Second, the valuation of sovereign bonds at market prices could lead many banks to reduce their holdings of these instruments, further aggravating the sovereign debt problem. Finally, it is not clear whether the 50% haircut in Greek bonds will trigger the payment of sovereign risk insurance (CDSs) or what the possible implications would be[2]/.

The situation in Italy and Spain is increasingly serious because of their large liquidity needs

The deepening of the European crisis has affected Italy and Spain, despite their differences with Greece. While the Greek government is clearly insolvent, the debt over GDP of these two economies is sustainable under a scenario of interest rates at the average level of the last 10 years (figure I.3). However, given that Italy and Spain face large financing needs, they must hold down their financing costs, in addition to increasing their economic growth rates (figure I.4). That said, their sovereign risk premiums (CDSs) are at the highest level of the last 10 years (figure I.5). Consequently, the main risk is that, at the current rates, debt over GDP will grow, and the liquidity stress will deteriorate the solvency of these countries.

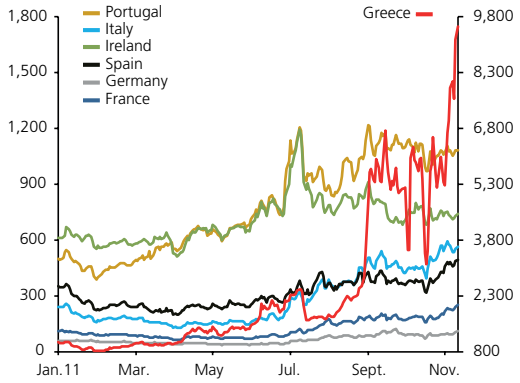
Italy and Spain thus need an additional fiscal adjustment and/or a mechanism for reducing their current financing costs. Attaining a new fiscal adjustment is politically difficult, however, and authorizing new mechanisms aimed at providing more financing—for example, increasing EFSF resources—also presents important challenges in the current scenario.

[2]/ In August, the stalled negotiations on the new debt ceiling in the U.S. and the lower growth outlook led S&P to downgrade the risk rating on U.S. debt. In the event that payments are triggered, there is uncertainty about the exposure of financial institutions. On the other hand, if the risk premiums are not triggered, it would raise questions about the role of the CDSs as instruments for covering risk. The ISDA has not made a formal statement on the possible halving of the debt; however, its communications suggest that whether the debt restructuring causes a credit event or not will depend on how voluntary it is (www.isda.org).

Figure I.5

Risk premiums in European economies (*)

(basis points)



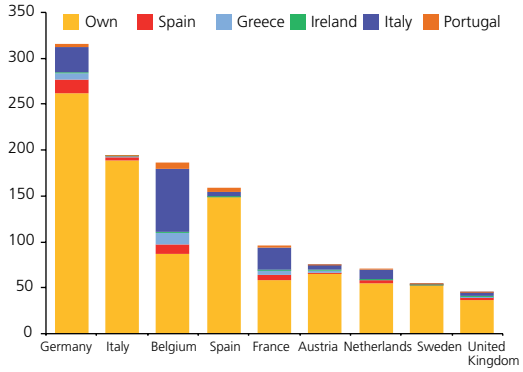
(*) Credit Default Swap on five-year sovereign bonds.

Source: Bloomberg.

Figure I.6

Exposure of European banks to sovereign debt (*)

(percent over Tier 1 capital)



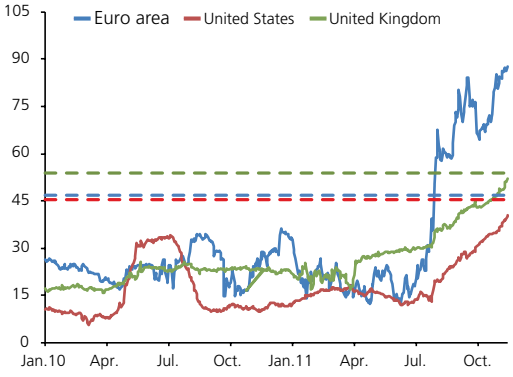
(*) The exposure of Italian and Spanish banks to their own sovereign is included under "Own".

Source: EBA.

Figure I.7

Three-month liquidity conditions in the interbank market (1) (2)

(basis points)



(1) Spreads Libor- OIS (Overnight Index Swaps) for each area.
(2) The dashed line indicates the average for each spread for the period from Jan.07 to Nov.11.

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

Exposure to European sovereign debt is affecting more and more banks in the euro area, limiting their funding sources...

The interaction between sovereign risk and the funding problems of European banks has intensified. The euro area banks have considerable exposure to sovereign debt, especially Italian sovereign debt (figure I.6). The increase in sovereign risk has thus had a negative impact on bank balance sheets, and the deterioration of confidence has limited access to the interbank market and raised counterparty risk premiums (figure I.7). The tighter funding options, especially at the long term, and higher costs constitute a challenge for the banking system, which is facing high levels of maturing debt in 2012 (box I.1)[3]/.

...and in the U.S., the development of fiscal policy remains uncertain

The committee created to propose a plan for reducing U.S. debt did not reach an agreement, which raises questions for both the short and medium terms. In the short term, the lack of agreement could trigger automatic spending cuts and imply the end of a series of fiscal stimulus initiatives that are currently in effect (OECD, 2011)[4]/. In the medium term, the automatic adjustments would be enough to stabilize the debt over GDP around 2015, but if any of these initiatives remain in place, the debt over GDP would continue to grow (CBO, 2011).

In this context, growth expectations have lowered for the advanced economies

Growth expectations for 2011 in the advanced economies fell from 1.9% last June to 1.4% in October; for 2012 they dropped from 2.5 to 1.5% (figure I.8). In contrast to previous months, this contraction affected all the advanced economies, not just the European periphery. The peripheral countries retained the low expectations for this year, but saw a significant reduction for 2012, which will affect the feasibility of the fiscal adjustment plans to which they have committed. Finally, and more generally, the advanced economies have less room for fiscal expansion, which limits the possibilities for stimulating growth through fiscal policy (IMF, 2011b).

The financial turbulence and lower growth outlook have also affected the emerging economies....

In 2010, the emerging economies were not strongly affected by the financial turbulence stemming from the problems in Greece, Ireland and Portugal. The recent intensification of risk has had a bigger impact on emerging

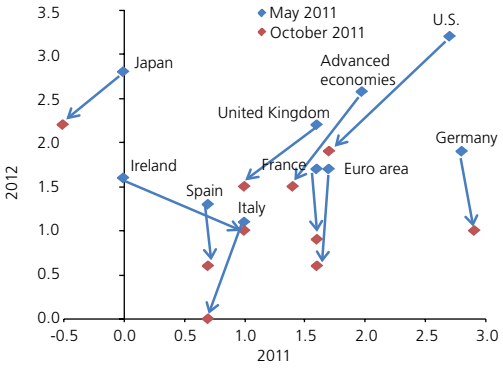
[3]/ The high funding costs could drive some European banks into insolvency (De Grauwe, 2011).

[4]/ The OECD estimates that this would generate a fiscal contraction of 2% of GDP in 2012 and 3% of GDP in 2013. The fiscal stimulus measures that would end include unemployment subsidies, income tax exemptions and social security contributions that expire in December 2011, as well as tax cuts from the George W. Bush administration that expire in December 2012.

Figure I.8

GDP growth expectations

(percent)

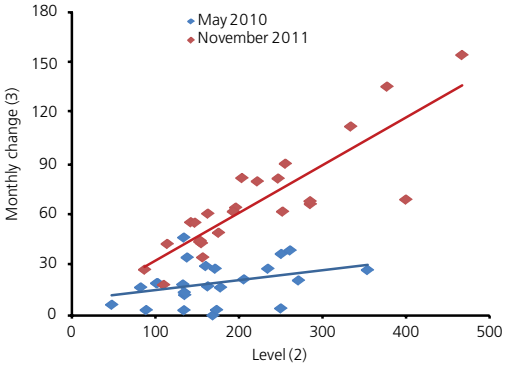


Source: Central Bank of Chile, based on data from Consensus Forecast.

Figure I.9

Change and level of sovereign risk in emerging economies (1)

(basis points)



(1) The lines correspond to the trend line for each date.
(2) The sovereign CDS level in May 2010 and November 2011, as indicated.
(3) The change in the CDS, in basis points, between the indicated date and the previous month.

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

markets, however. This has been reflected in more generalized increases in sovereign CDSs, proportional to sovereign risk levels, as is consistent with increased risk aversion (figure I.9). The emerging market stock indices lost nearly a quarter of their value in the third quarter of 2011, and they have had lower returns than the developed exchanges in the year to date. At the same time, the lower growth outlook for the advanced economies will have a negative impact on exports and the terms of trade in the emerging economies (*Monetary Policy Report*, 2011). Consequently, growth expectations for 2012 fell slightly for the emerging economies between June and October, from 4.3 to 3.9% for Latin America and from 7.6 to 7.2% for emerging Asia.

…which are beginning to record capital outflows

Since June of this year, gross portfolio inflows to emerging economies have slowed. According to the Emerging Portfolio Fund Research, equity flows recorded capital outflows between August and October 2011, which were reversed slightly in November[5]/. These outflows were generalized across all the emerging regions, but they were sharper in the Asian countries. Net inflows into emerging market fixed-income instruments contracted strongly between September and October, although not enough to offset the total positive flows accrued in 2011 (chapter II).

Finally, macro-financial vulnerabilities may be incubating in the emerging economies

The emerging economies do not show signs of financial vulnerability so far. In some, however, such as Brazil, the rapid credit growth has raised concerns about a possible buildup of macro-financial vulnerabilities (IMF, 2011c). In the case of China, the growth outlook has eased, as described in the *Monetary Policy Report*. Moreover, while this economy has implemented measures to mitigate credit growth, the expansion of the informal banking system and the uncertainty regarding its relationship with the formal sector represent an additional source of risk (box I.2). These trends do not constitute an immediate threat to financial stability, but they could be a source of instability if the external scenario suffers a more severe deterioration.

Main external threats to the financial stability of the Chilean economy

The baseline external scenario assumes lower world growth, with relatively higher growth rates in economies that have not been affected by the financial crisis and with spreads relative to the U.S. and the euro area. As has been

[5]/ Based on a sample of investment fund portfolio flows to Africa, Asia (excluding Japan), emerging Europe, Latin America, the Middle East and global emerging market investments.

the case in the recent period, this baseline scenario assumes that the global financial markets are likely to experience recurrent episodes of volatility. This increased volatility is tied to macro-financial events in Europe, as well as the evolution of output in systemically important advanced and emerging economies. In addition, the deleveraging needs of banks in the euro area will probably affect their cross-border lending operations, which is an important funding source for Chilean banks and firms.

The risk scenario considers that if the stress in the international markets persists, world economic activity could contract more than projected. Again, this situation could lead to a deterioration in the more advanced economies and/or a larger impact than expected in a systemically important emerging economy. In particular, the recent stress in the financial system could undermine China's capacity to offset a slowdown in the advanced economies. In this risk scenario, Chile is likely to face declining external demand conditions, including lower terms of trade.

The risk scenario could worsen in response to a deepening of the crisis in Europe or a possible deterioration of the fiscal situation in the U.S. Such a scenario could generate a significant economic slump and a large increase in risk aversion. The reasons for this severe scenario are, first, the limited options in some of the main advanced economies to apply countercyclical fiscal and monetary policies and, second, the lower capacity of individual countries to support their financial intermediaries. In this context, not only would Chile's external demand conditions worsen, but external financing conditions would likely tighten for local agents and the tide could turn for portfolio capital outflows, raising the volatility of local stock and foreign currency markets.

Finally, in the baseline scenario, possible episodes of external volatility could cause the financial situation of credit users and intermediaries in the economy to deteriorate, particularly in the case of firms and financial intermediaries with a larger degree of indebtedness and greater exposure to currency and liquidity mismatches. After analyzing these factors, this *Report* concludes that, to date, there is no evidence that systemic vulnerabilities are developing. However, given the highly dynamic and uncertain nature of the external scenario, financial system authorities and agents need to continuously assess their exposure to episodes of volatility.

Box I.1: **European banking system financing**

Since July of this year, the European banking sector has faced growing difficulties obtaining medium- and long-term funding in dollars and euros. Given the close link between sovereign and financial stress in Europe, the objective of this box is to describe the financing structure of the banking system in the main countries of the euro area and to outline the liquidity measures that have been implemented by the Eurosystem.

Financing structure

The main source of financing for the European banking sector is resident deposits. In September 2011, 33% of financing was through nonbank resident deposits; with the Spanish banking system the most dependent on this source (figure I.10).[6]/. The volume of resident retail deposits has not changed significantly, but deposit rates have risen. In September 2011, interest rates on bank deposits up to one year had increased 60 basis points in the euro area relative to September 2010. The hike was even sharper in Italian banks, which recorded an increase of 180 basis points.

Financing through interbank deposits, which represents 19% of total funding, was one of the most strongly affected sources during this period. In November 2011, the three-month LIBOR-Eonia spread was stable at around 84 basis points, four times higher than the average of the first half. The average daily trading of the Eonia has fallen from 40 billion euros to 26 billion euros thus far in the second half of 2011 (Bank of Spain, 2011).

The funding stress has also been reflected in a reduction in long-term debt issues. The sporadic issues of unsecured senior bonds and covered bonds since July 2011 do not exceed expirations for the year (BIS, 2011). The combination of smaller issues and higher financing costs becomes more relevant on considering that approximately 25% of the current bank debt stock is maturing in 2012 (Bank of Italy, 2011)[7]/.

European banks have recorded a sharp reduction in the volume of financing through external debt (13% of total funding sources) with steep hikes in market rates, especially for short-term dollar financing[8]/.The banks' issue of dollar-denominated commercial papers has fallen 20% since July 2011, and investment in European dollar deposits by U.S. money market funds has been more than cut in half since May 2011[9]/.

Finally, repo financing represents a small percentage of liabilities (2%), but it has become an important alternative to unsecured financing. The volumes traded in the private repo market have been normal, while repo rates have fallen in line with policy rates, thereby expanding the differential with unsecured interbank rates. Repos carried out with the Eurosystem have represented a larger share of funding for Italian and Spanish banks.

[6]/ Balance sheet data for the most important banks in the euro area, as of December 2010, confirm the strong dependence on funding from deposits, especially among Italian and Spanish banks.

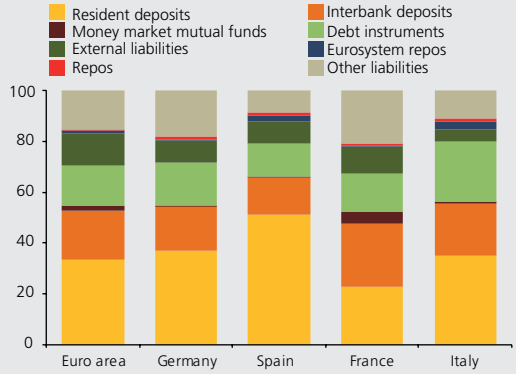
[7]/ The five-year spreads of the main European banks have risen more than 100 basis points since August 2011, in line with the increase in sovereign spreads.

[8]/ Between August 2011 and the closing date of this *Report*, the basis swap for one-year euro-dollar contracts expanded by over 40 basis points. This reflects tighter dollar financing conditions for European banks, but is still below the levels recorded during the subprime crisis

[9]/The French and German banking systems still accounted for 15% of the assets of these funds in August 2011.

Figure I.10

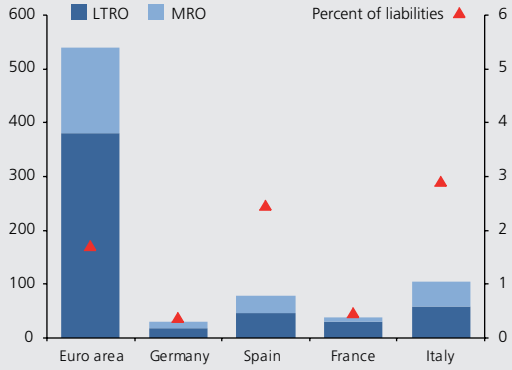
Funding sources of the European banking system
(percent, September 2011)



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

Figure I.11

Main Eurosystem liquidity injection operations (*)
(€ billion, percent)



(*) To September 2011. Monthly average of daily data.

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

Financing through the Eurosystem

The Eurosystem, comprising the ECB and the national central banks of the countries that use the euro as their currency, has injected new resources through its main refinancing operations (MRO) and longer-term refinancing operations (LTRO). At the same time, it has increased the maturity on the LTRO to 13 months, in order to reduce the pressure in the medium-term interbank market[10]/. The amount supplied through these operations has increased since July of this year, but they do not represent more than 3% of total banking system liabilities. Banks in Italy and Spain are the most dependent on these sources (figure I.11).

In October, the ECB, in conjunction with other central banks, announced a new three-month dollar liquidity facility to alleviate foreign currency liquidity pressures. In November, the monetary authorities announced additional new measures for supplying foreign currency liquidity, reducing the cost of dollar operations and establishing swap lines denominated in foreign currencies other than the dollar. Finally, the ECB has also incorporated measures to ease the long-term debt market. In October, it announced a covered-bond purchase program for 40 billion euros, to be carried out between November 2011 and October 2012; this program is similar to the one applied in 2009.

Despite the measures adopted by the monetary authorities, international reports indicate that there are still concerns about the ability of European banks to obtain long-term financing (Bank of Italy, 2011; Bank of Spain, 2011). First, the liquidity injected by the Eurosystem does not flow perfectly among the entities, which has resulted in an increase in the use of the deposit facility in the most recent period. Second, the worsening of the sovereign debt problems has caused the government instruments held by banks to lose value, reducing their usefulness as collateral in repo financing. Finally, spreads remain high. These factors are especially significant for banks in the European economies with the highest financing costs[11]/.

In sum, the European banking system has faced tighter financing conditions since August 2011. The situation has not reverted as of the closing date of this *Report*, despite the exceptional measures adopted by the monetary authority.

[10]/ The MRO and LTRO are liquidity provision operations carried out through repurchase agreements or collateralized loans. The MROs are conducted weekly and for a term of one week, while the LTROs are monthly and normally have a term of three months. Since September 2008, the ECB has held fixed-rate auctions, awarding the full allotment.

[11]/ In December 2010, the aggregate cost of all funding sources was as follows: for Spain, 1.80%; Italy, 1.32%; France, 1.29%; and Germany, 1.13%.

Box I.2: **The Chinese banking system**

There are at least two perspectives on the situation in the Chinese banking system: the official view, put forth by the People's Bank of China (PBC), and the position held by the IMF. The PBC holds that the Chinese economy is financially solid, whereas the IMF and other market analysts consider that there are financial vulnerabilities largely associated with strong credit growth in 2008 (IMF, 2011d). This box presents a brief description of the Chinese banking system, highlighting the two different perspectives. It is important to note, however, that the limited availability of data complicates the analysis and makes it difficult to obtain precise estimates.

The Chinese banking system is one of the largest in the world, with total assets equivalent to over 240% of GDP. It is also highly concentrated: there are over 3,000 banking institutions, but half the system's assets are held by the four largest commercial banks, which are mainly state owned. These four banks finance specific areas (manufacturing, agriculture, construction and financial services).

The banking system is essentially oriented toward financing the public sector and state enterprises (IMF, 2011d). The majority of loans to the corporate sector—public and private—are collateralized with real estate. According to the PBC (2011), loan quality is high, as reflected in a nonperforming loan index of just 2% of loans. At the same time, provisioning capacity has improved, with a provisioning coverage ratio of 250% in the second quarter of 2011[12]/.

On the liability side, the Chinese banking system is characterized by a strong dependence on deposits, which represent almost 80% of total financing. This contrasts with Europe and the U.S., where deposits make up between 50% and 60% of bank financing, and Chile, where the share is 65%[13]/. However, the loan-to-deposit ratio has been constant at around 70%, indicating a stable source of financing.

The ratio of Tier 1 (or core) capital to risk-weighted assets is 9.6%. This is lower than other emerging economies, which have leverage ratios of 12 to 13%. According to the PBC (2011), however, subordinate debt and preferred shares make up a small share of regulatory capital, so the quality of capital is relatively high.

In terms of soundness, the IMF (2011d) and the PBC indicate that the formal banking system has made significant progress in transitioning toward a more robust system. In particular, the banking sector has improved its credit structure, the quality of its assets and its provisioning coverage.

Nevertheless, the IMF (2011d) identifies the following sources of vulnerability.

(a) Asset quality following the credit expansion of 2008. Official PBC reports show that asset quality continues to be high in the banking system. According to the IMF, however, when credit growth slowed, Chinese banks began to move their loans off balance sheet and to group them in wealth management products (WMP), which they invest in corporate loans, stocks and bonds promising higher rates of return than traditional savings rates. These WMP are being used to finance sectors that the Chinese government is trying to cool down, including local governments. The banking system's asset quality could thus deteriorate in the coming years, and the nonperforming loan portfolio could reach 8 to 12% of total loans, an estimate shared by analysts from Fitch and Moody's (Bloomberg BusinessWeek, 2011).

[12]/ The ratio between provisions for impaired assets and nonperforming loans.

[13]/ Federal Deposit Insurance Corporation, ABE and SBIF.

(b) Growing role of the informal system. The credit tightening in the formal banking system has also caused a growth of assets in other nonbank financial institutions which, together with the off-balance-sheet bank operations, make up the informal or parallel system. The assets in the informal system are estimated to have grown from a range of 11 to 13% of GDP in 2009 to 26 to 29% of GDP in the second quarter of 2011 (*The Economist*, 2011). The exact quantity and quality of the assets in this sector are not known, however; nor are the interconnections between these institutions and the formal system. It is thus impossible to measure the credit risk, due to the lack of information.

(c) Housing prices. Between 2005 and 2010, prices in the real estate sector increased almost 60% in China. They have since tended to fall, in a context of tighter credit to the sector. This reduction in housing prices could imply an increase in credit risk for the banking sector, mainly because 30 to 45% of total formal system loans use real estate as collateral (IMF, 2011d). It could also generate an increase in the nonperforming loans of construction firms and real estate project developers, many of which have been financing their projects in the informal sector at much higher rates than official lending rates—up to 6% a month, versus 6% a year in the formal sector (*The Economist,* 2011; PBC, 2011). According to the IMF (2011d) the direct exposure to the real estate sector has been fairly moderate, because mortgage loans only represent 20% of total loans—a relatively low share compared with Hong Kong or the U.S.—and the sector's loan-to-value (LTV) ratio is around 30%, again fairly low compared with Europe and the U.S., which had LTVs of over 70% in 2009 (EMF, 2010).

(d) Increased inefficiency in the allocation of resources, caused by the current growth pattern. According to the IMF (2011d), the low relative cost of capital generated by government measures has distorted savings-investment decisions, creating an additional source of vulnerability by triggering an increase in potentially inefficient investment. The IMF (2011d) estimates that since 2001, each dollar of higher GDP growth has required five dollars of investment, which is 40% more than the level in Japan and South Korea during their strong growth periods.

The IMF (2011d) has conducted a partial evaluation of the potential impact of these risks, based on stress tests of the 17 largest commercial banks in China. The analysis concludes that the majority would not face problems in the event of isolated shocks, but if the shocks occurred together, the banking system would be seriously affected.

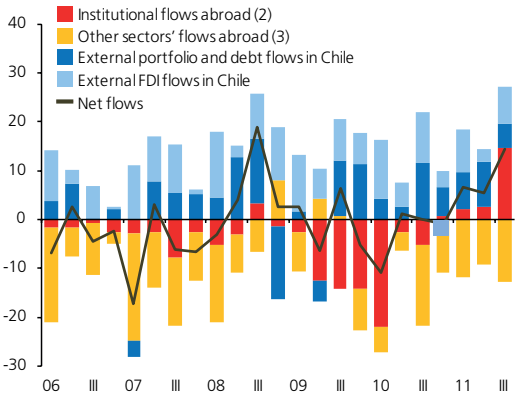
In sum, according to the PBC, the banking system is solid, with limited development of financial vulnerabilities. However, the IMF (2011d) and other market analysts find that there are potential sources of vulnerability which must be monitored. Beyond the divergence of these perspectives, the significant lack of information makes it difficult to verify and deepen the analysis.

II. External financing

Figure II.1

Capital flows in Chile (1)

(percent of quarterly GDP)



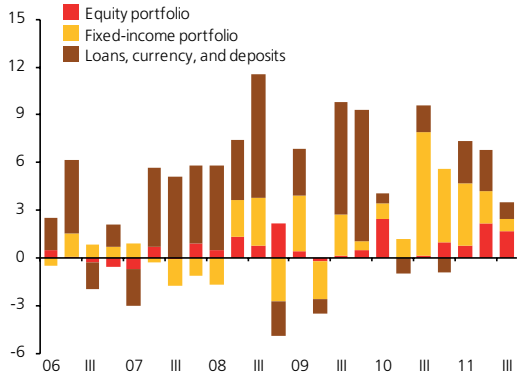
(1) Accrued quarterly flow.
(2) Includes pension funds, mutual funds, and insurance companies.
(3) Includes firms, banks, and the central government.

Source: Central Bank of Chile.

Figure II.2

Gross financial capital inflows to Chile (*)

(percent of quarterly GDP)



(*) Accrued quarterly flow. Includes investment flows to firms and individuals, banks, and the central government.

Source: Central Bank of Chile.

External financing conditions were relatively stable throughout much of the half, although they have become tighter in the most recent period. Nevertheless, the external solvency and liquidity position remains stable.

Capital flows

Since the last Report, the pension funds have significantly reduced their external assets, resulting in a net capital inflow

The third quarter of 2011 recorded the highest net capital inflow since the third quarter of 2008 totaling US$8.6 billion (14.5% of quarterly GDP) (figure II.1). These net inflows are mainly associated with the sale of foreign assets by the Chilean pension funds, which generated inflows of US$8.73 billion. This portfolio reallocation was primarily a response to members moving out of the relatively riskier funds (A and B), whose portfolio contains a higher share of variable-income investments abroad, and into less risky funds (D and E) (chapter III).

Gross foreign capital inflows into Chile fell

In the third quarter of 2011, gross capital inflows fell around 3.9% of GDP relative to the first quarter, to US$6.56 billion (11% of GDP)[1]/. Foreign direct investment (FDI) flows, bond issues and external loans decreased 1.3, 3.2 and 1.6% of GDP, respectively, although they were still positive. Foreign investment in local stocks was the only component of financial flows that increased, recording inflows of 1.6% of GDP, which is relatively high in historical terms (figure II.2).

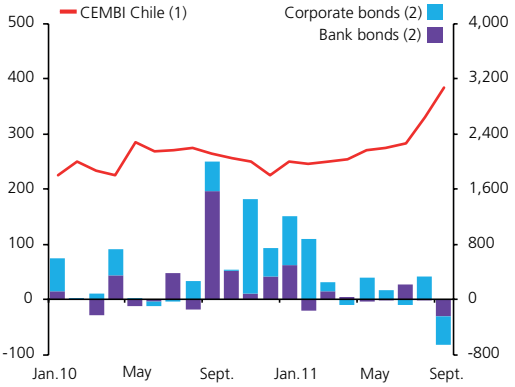
With regard to fixed-income flows, the volume of private external bond issues contracted by approximately 4.2% of GDP, dropping from around 4.0% in the first quarter of 2011 to –0.4% in the third. In contrast, government bonds increased considerably through the issue of a ten-year dollar-denominated bond for US$1.0 billion and a ten-year peso-denominated bond for US$350 million.

[1]/ Excluding trade credits.

Figure II.3

Cost of financing and gross fixed-income flows in Chile

(basis points, US$ million)



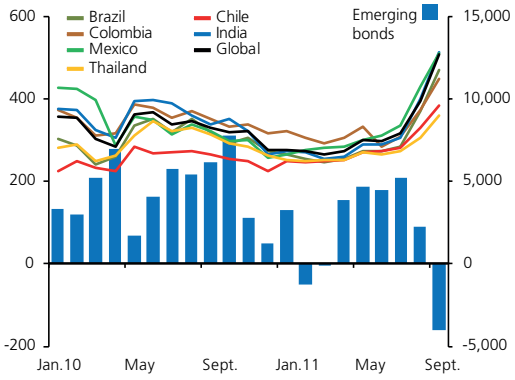
(1) CEMBI value at end of each month.
(2) Monthly flows.

Sources: Central Bank of Chile and Bloomberg.

Figure II.4

Cost of financing and gross fixed-income flows in emerging economies (1)

(basis points, US$ million)



(1) CEMBI value at end of each month
(2) Monthly corporate, bank, and sovereign flows.

Sources: Central Bank of Chile, based on data from Bloomberg and Emerging Portfolio Fund Research.

Financing conditions are becoming tighter in the long-term markets, as in other emerging economies

Between the first and third quarters of 2011, sovereign and corporate spreads in Chile increased 64 and 134 basis points, respectively. This trend intensified starting in August and coincided with a reduction in bond investments by international investors (figure II.3). These changes were also registered in other emerging economies, where in some cases the rise in corporate spreads was even higher (figure II.4).

Short-term external financing conditions were stable for the banks, although spreads have increased in the most recent period…

Throughout most of the third quarter of 2011, the cost of short-term external bank financing was stable around the level recorded since mid-2009, with an average spread of 64 basis points and a relatively constant interbank dispersion. Loan maturities were similar to the average since mid-2010 (10 months). Most recently, however, bank financing costs have increased to a spread of around 92 basis points at the closing date of this *Report*, which are 30 basis points higher than in the first quarter of the year (figure II.5).

…and in a context of greater stress in the European banking system, the local banking sector has diversified its funding sources

The share of loans from Europe in the total loans of Chilean banks has fallen systematically, from 32% in the fourth quarter of 2010 to 28% in the third quarter of 2011. This contraction was particularly marked in the case of loans from Italian and Spanish banks, which fell five percentage points in the same period. This reduction was offset by an increase in financing from the U.S., Canada and Asia (figure II.6).

Liquidity and solvency

Since the last Report, external debt has increased, and it continues to be largely private and long term…

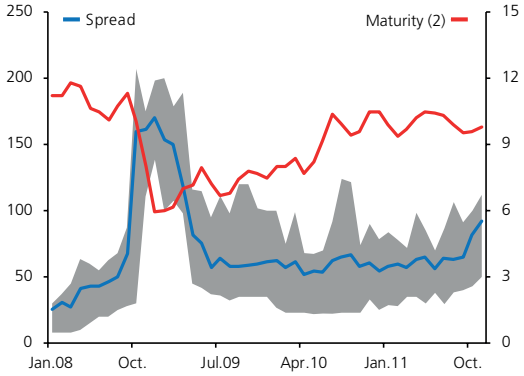
In the third quarter of 2011, external debt increased 7% relative to the first quarter, to US$98.15 billion (42% of GDP). The long-term private debt share reached almost 70%. As in previous quarters, a large share of total private financial debt was held by firms and individuals (71%), and the majority was long term, with an average maturity of 5.6 years (table II.1). In contrast, most bank financial debt is short term and current long term, and the average maturity has stayed at around two years[2]/.

[2]/ The breakdown of external debt is provided in the Statistical Appendix of the *Financial Stability Report* (www.bcentral.cl).

Figure II.5

Cost of short-term external financing for resident banks (1)

(basis points, months)



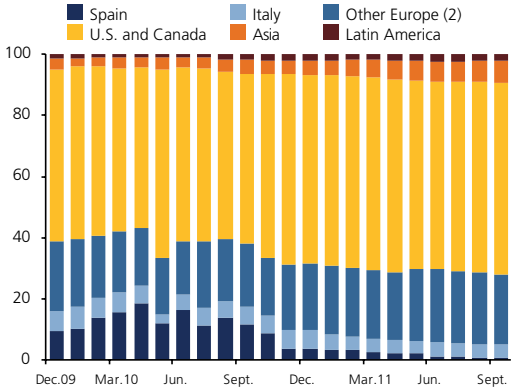
(1) Variable-rate loans from nonrelated banks. The gray area represents the interval between the 5th and 95th percentiles of the sample each month.
(2) Quarterly moving average.

Source: Central Bank of Chile.

Figure II.6

Composition of external bank loans (1)

(percent)



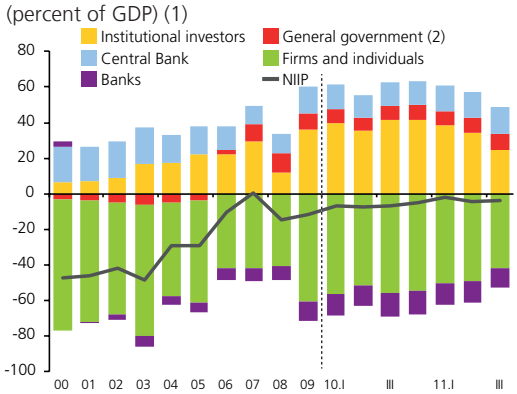
(1) Monthly stock.
(2) Includes Germany, France, the Netherlands, Norway, Switzerland, Portugal and the United Kingdom.

Source: Central Bank of Chile.

Figure II.7

Net international investment position of Chile

(percent of GDP) (1)



(1) GDP at constant real exchange rate (baseline index Sept.11 = 100).
(2) Central government and municipalities.

Source: Central Bank of Chile.

Tabla II.1

Gross external debt and external solvency and liquidity indicators

(percent)

	2008	2009	2010	2011		
	IV	IV	IV	I	II	III
Composition of PEFD (1)			(percent of total)			
Banks	25	25	27	29	29	29
Firms and individuals	75	75	73	71	71	71
Average maturity of total debt			(years)			
Banks	2.0	1.8	2.5	2.2	2.3	n.a.
Firms and individuals	5.3	5.8	5.6	5.6	5.6	n.a.
Solvency			(percent)			
External debt / GDP (2)	37	45	42	43	43	42
External debt / exports	118	169	145	148	146	145
Liquidity						
Financial RSTED / NIR (3)	86	75	84	82	78	70

n.a.: Not available.
(1) PEFD: Private external financial debt, excluding government debt and commercial loans.
(2) Twelve-month GDP in current dollars.
(3) NIR: Unrestricted international reserves, net of short-term foreign currency liabilities (maturing BCX, BCD, swaps), Treasury deposits at the Central Bank, and others.

Source: Central Bank of Chile.

…and aggregate external solvency remains stable

The main change in external assets and liabilities is associated with the reduction in the net credit position of the pension funds by 4% of GDP. External debt was thus stable at 42% of GDP as of the third quarter of 2011 (table II.1). As a result, Chile's net international investment position (NIIP) recorded an increase in its debit balance of 2.1% of GDP in the third quarter of 2011, putting the debit position at a historically high level of 4.1% of GDP (figure II.7).

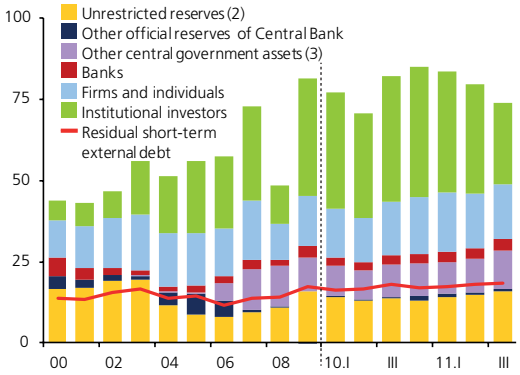
The central government maintains its credit position, thus contributing to the aggregate solvency of the economy

In October 2011, the fiscal authority published an updated financial forecast for the central government for 2011, which did not include any major changes relative to the June forecast (accrued and structural balances of 1.2 and –1.6% of GDP, respectively). Debt issues were on level with the maximum projected authorization of US$7.8 billion for this year. Consequently, and considering the acquisition of financial assets, the central government's net financial position should remain positive at year-end (at around 0.4% of GDP)[3]/. This makes the central government a net contributor of resources to the system.

[3]/ The Economic and Social Stabilization Fund (ESSF) and the Pension Reserve Fund (PRF) recorded balances of US$16.25 and 4.49 billion, respectively, in December 2011, while the item Other Treasury Assets registered US$7.72 billion.

Figure II.8

Availability of external financial liquidity for Chile
(percent of GDP) (1)



(1) GDP at constant real exchange rate (baseline index Sept.11 = 100). External liquidity includes short-term loans, currency, deposits and portfolio investments; and excludes derivative positions.
(2) Official reserves less short-term foreign currency liabilities (maturing BCX, BCD, swaps).
(3) Consolidated government less official international reserves.

Source: Central Bank of Chile.

The economy's external liquidity continues to improve

In line with the program to increase international reserves launched earlier this year, the liquidity position, measured through residual short-term external financial debt as a percentage of net unrestricted international reserves, fell 12 percentage points in the third quarter of 2011 relative to the first quarter (table II.1).

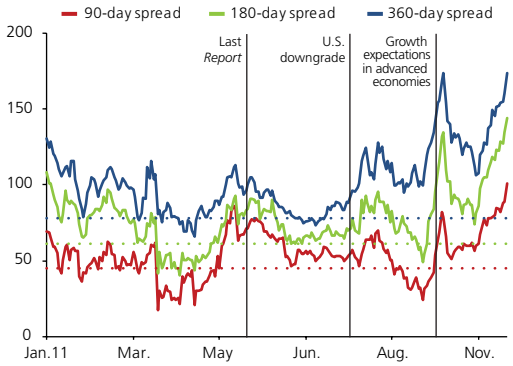
The availability of additional external liquidity sources decreased due to the institutional investors' reduction in their external assets, and the residual short-term external debt as a percentage of GDP grew nearly one percentage point in the third quarter of 2011. Nevertheless, additional external sources are still sufficient to more than cover the residual short-term debt (figure II.8).

III. Local financial markets

Figure III.1

Liquidity pressures in the peso money market (*)

(basis points)



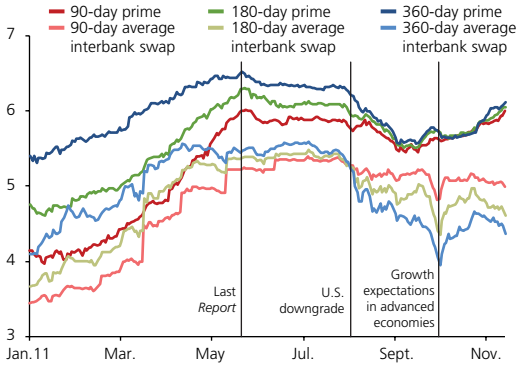
(*) Measured through the average interbank prime-swap spread. Horizontal dotted lines indicate the series average for 2005–11.

Source: Central Bank of Chile.

Figure III.2

Prime rates and average interbank swap rates

(percent)



Source: Central Bank of Chile.

The local financial markets have been affected by the greater external volatility.

Money and fixed-income markets

The peso money market has been highly volatile, with tighter conditions in the most recent period

The prime-swap spreads at different maturities have gone through periods of marked volatility, which are largely associated with external events (figure III.1). These episodes have been characterized by transitory increases in the prime-swap spread, all of which have featured a sharper contraction of the swap rate and a relatively stable prime rate (figure III.2)[1]/.Most recently, and in contrast to the previous events, prime rates have increased, which would be consistent with an external scenario of growing financial tension (chapters I and II).

The institutional investors increased their holdings of short-term debt instruments

In the third quarter of 2011, the institutional investors invested around Ch$1.7 trillion in bank time deposits, or six times more than in the first half. This trend is largely explained by the pension funds. Type 1 mutual funds, which are the main institutional investors in time deposits, increased their deposit holdings near the closing date of this *Report*. The mutual funds have been more stable in part because of the shortening of their portfolio maturities in mid-2010, due to the regulatory change in their asset valuation.

The dollar money market has also been more volatile…

From the closing date of the last *Report* through early August, the onshore short-term rate was relatively stable at around 2% (figure III.3)[2]/. Thereafter, the onshore rate became more volatile, consistent with the increased external

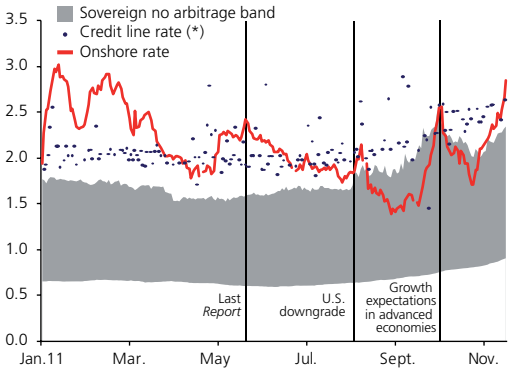
[1]/ These fluctuations in the swap rate could be related to possible portfolio effects and/or lower expectations for the monetary policy rate in the face of international news and events.

[2]/ The onshore interest rate is defined as follows: $i^*_t = S_t/F_t\ (1+ i_t)-1$, where S_t is the spot exchange rate, F_t is the forward exchange rate, i_t is the local interest rates and i^*_t is the dollar interest rate.

Figure III.3

Liquidity pressures in the dollar money market, at 360 days

(percent)



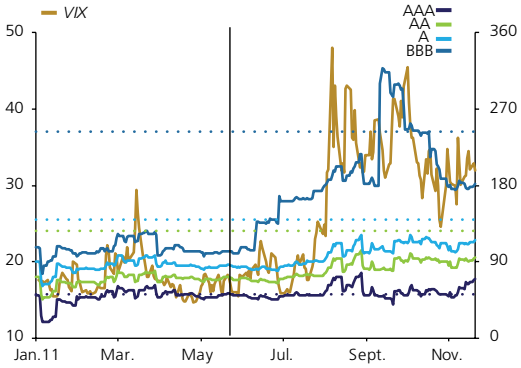
(*) Corresponds to the maximum local bank rates on overseas credit lines.

Sources: Central Bank of Chile and Bloomberg.

Figure III.4

Risk aversion and long-term bond spreads (*)

(basis points)



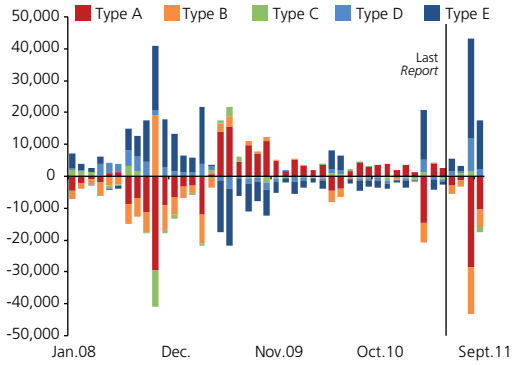
(*) Representative bank and corporate bonds with a duration of over 9 years. Horizontal dotted lines indicate the average spread for the period 2001–07.

Sources: Central Bank of Chile, based on data from Bloomberg and LVA índices.

Figure III.5

Net transfer of members between pension funds of a given administrator (*)

(number of members)



(*) Negative numbers indicate transfers sent, and positive numbers transfers received, in the respective funds.

Source: SP.

financial stress. Most recently, it has risen somewhat more than the banking system's marginal cost of external financing, in line with the tighter external financing[3]/.

…and forex spot and forward positions have undergone significant changes

In the context of increased external turbulence, the pension funds have repatriated some of their resources invested overseas, reducing both their spot and forward positions in dollars[4]/. Between late May and the closing date of this *Report*, the spot position fell by US$9.55 billion, while the forward position decreased by US$11.53 billion. This brought the stock of pensions fund forwards to US$13.07 billion, or 58% of the average forward position in the first half of 2011. Nonresident investors, in turn, regained a long forward position in September and have since fluctuated substantially.

The greater external volatility affected the fixed-income market

Corporate bond spreads have also fluctuated since the last *Report*. The corporate rate on AAA-rated instruments was fairly aligned with rates on government bonds. BBB-rated bonds, however, have posted a relatively larger rate increase since June 2011. Beyond the hike in mid-September 2011—associated with a particular issuer—the BBB spread continues to sit at around 180 basis points, a spread that has not been seen since the second half of 2009 (figure III.4). Internal estimates suggest that the main factor behind the increase in AA, A and BBB spreads is, to varying degrees, the level of international risk aversion, approximated by the VIX.

The demand for local fixed-income assets was influenced by the return of the pension funds

As mentioned above, the worsening of the external economic situation was the main factor behind the return of the pension funds in the third quarter. The average monthly reduction in overseas investment by the pension funds between July and September was US$2.9 billion, with a peak in August of US$3.8 billion. This compares with an average monthly reduction of US$380 million in the first half of 2011[5]/ In 2010 investment in external assets registered a monthly average of US$570 million, which reflects a return of the pension funds to foreign markets after the subprime crisis.

[3]/ For more detail, see Alarcón et al. (2008) and Opazo and Ulloa (2009).

[4]/ A reduction in the forward position implies lower sales of dollar forwards by the pension funds.

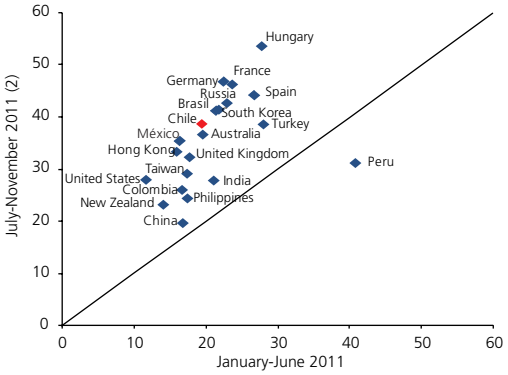
[5]/ The pension funds' reduction of external assets in the first half is largely explained by the change in the investment regime published in February 2011, which reclassified investments in high-yield instruments as restricted assets.

Figure III.6

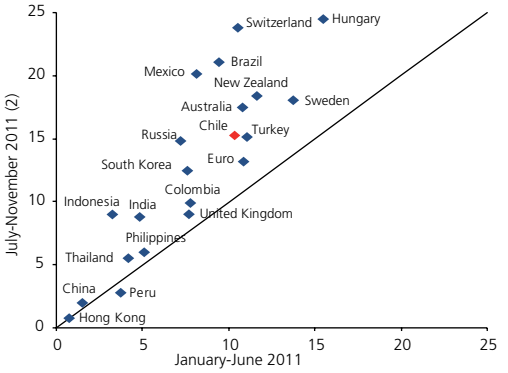
Financial market volatility (1)

(annualized percent)

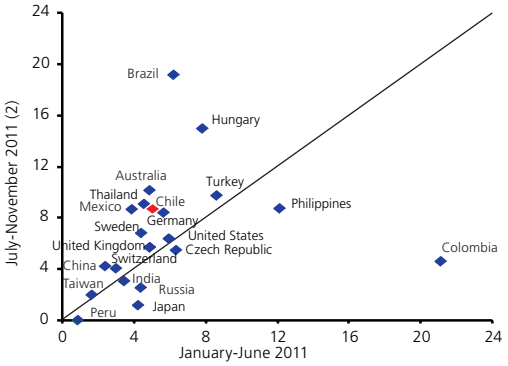
a) Stock market indices



b) Exchange rates



c) Government interest rates



(1) Calculated based on the daily return of price indices.
(2) Data as of the closing date of this *Report*.

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

The pension funds' disinvestment in external assets in the third quarter was directly related to the transfer of fund members out of riskier funds (A and B) and into relatively safer funds (D and E), where the former account for the largest holdings in external assets (figure III.5). In particular, between August and September, the movement of members into relatively less risky funds explains around 30% of the reduction in overseas investment by the pension funds. While the migration of pension fund members in the third quarter is similar to the trend recorded during the subprime crisis, the recent changes have tended to be sharper. As in the case of the subprime crisis, however, members should move back into the relatively riskier funds as risk aversion subsides.

Asset prices

Local financial asset prices have been influenced, both directly and indirectly, by international conditions

Through the closing date of this *Report*, the exchange rate trend has been in line with the trend in the parities of other countries in the region and other commodity exporters. The stock market has been somewhat affected by specific local phenomena, but it has recorded strong movements in relation to events and news in the external markets, which caused the stock index to plunge in early October to its lowest level since the start of 2011 (3,606 points). Finally, the rates on government instruments have tended to stabilize below their historical averages, in a context marked by the return of the pension funds in the third quarter, which strongly increased the demand for this type of asset.

Other economies have also experienced increased volatility in their domestic market…

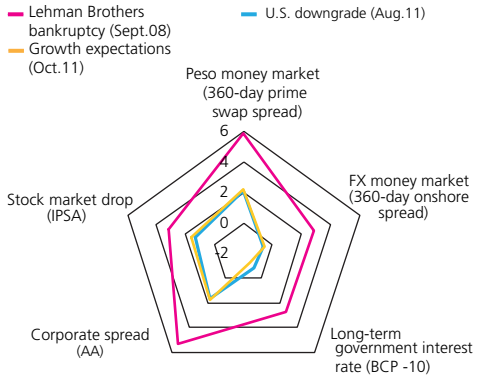
Asset price levels have evolved within a scenario of increased volatility over the course of the second half. This trend is not exclusive to Chile, but has also been recorded in countries with different levels of risk and development. This process has been most evident in the case of the stock and forex markets, which have recorded increased volatility in all countries in the sample except Peru (figures III.6a and III.6b). Finally, the evidence is less conclusive for government bond rates, where a similar number of countries have recorded increases versus decreases in volatility (figure III.6c).

…but the current fluctuations are lower than during the subprime crisis

A comparison of external volatility events shows that, in general, the impact on local financial markets has been lower since the Lehman Brothers bankruptcy in 2008 (figure III.7). During the subprime crisis, asset prices

Figure III.7

Map of stress indicators in the local financial market (*)
(standard deviations)



(*) Calculated as the maximum value within a window of two months after each event, less the average for 2003–11, over the standard deviation in the same period.

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

associated with the respective markets deviated between three and six times from their long-term values. In the more recent episodes, the maximum deviation in these prices is in the range of two standard deviations.

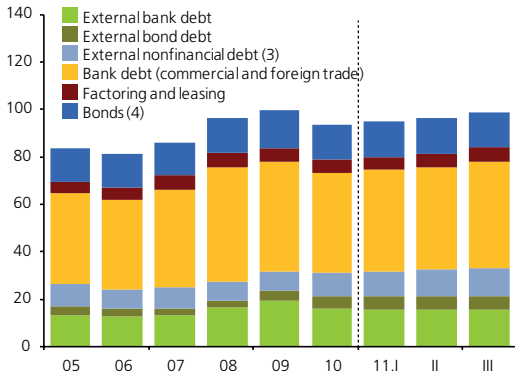
In sum, local markets have been affected by the increased volatility in international markets. This volatility, while lower than in 2008, could increase in both intensity and frequency in the short and medium terms as a result of a worsening in the international scenario. In this sense, both credit users and suppliers must internalize this scenario of higher volatility in key local asset prices.

IV. Credit users

Figure IV.1

Total debt of nonfinancial firms (1)

(percent of GDP) (2)



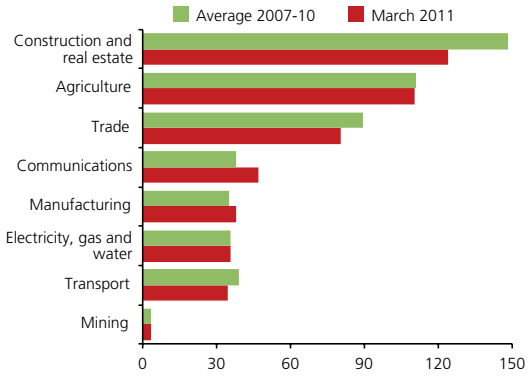
(1) External debt is converted to pesos using the average exchange rate for the period from Mar.02 to Sept.11.
(2) GDP for 2011 corresponds to the moving year ending in each quarter.
(3) FDI-related loans and commercial loans.
(4) Corporate bonds (excluding *Codelco*), securitized bonds with nonbank underlying assets, and commercial papers, at market value. Balance in the third quarter of 2011 based on data from the CSD and the international investment position.

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

Figure IV.2

Sectoral bank debt

(percent of sectoral GDP) (*)



(*) GDP for March 2011 corresponds to the moving year ending in the quarter.

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

Business and household debt continue to grow, in a context of a more moderately dynamic economy, with no sign of a deterioration in the financial situation at the aggregate level.

Firms

Business debt has continued to grow in the third quarter of the year

The Chilean economy grew 4.8% in the third quarter of 2011, the lowest rate since the second quarter of 2010. In contrast, gross fixed capital formation increased 21.6%, mainly explained by investment in machinery and equipment, which grew 31.5% in the same period. Total business debt grew 11.4% in annual terms in September 2011, which is higher than the rate of the last two years (table IV.1).

Table IV.1

Sources of financing

(real annual change, percent)

Indicator	Ave. 2005-07	2008 IV	2009 IV	2010 IV	2011 I	II	III	Contribution to growth (1)	Share in debt
Local debt	11.8	9.1	1.5	4.7	6.5	7.2	11.8	7.8	66.7
Bank and other loans	13.2	11.5	-2.3	5.2	7.5	8.4	14.0	7.1	51.7
Commercial loans	11.8	8.5	7.7	2.8	4.0	5.9	8.6	3.4	38.3
Foreign trade loans	16.1	35.3	-40.1	12.5	23.4	13.9	48.9	2.7	7.4
Factoring and leasing (2)	19.0	4.2	-11.1	15.9	17.9	20.6	17.3	1.0	6.0
Bonds (3)	7.4	0.7	15.8	3.1	3.4	3.4	4.6	0.7	15.0
External debt (4)	5.4	7.0	17.7	10.7	13.3	11.7	10.6	3.6	33.3
Bank loans	9.2	19.1	20.1	-4.8	-6.9	-1.2	-1.0	-0.1	15.8
Commercial loans	16.1	-13.9	-8.1	33.0	48.1	29.3	31.2	2.0	7.7
Bonds	-8.5	-2.7	48.6	35.4	47.2	43.1	25.7	1.3	5.8
FDI-related loans	-15.5	9.6	28.8	37.0	32.2	6.9	9.2	0.4	4.1
Total	**9.8**	**8.5**	**6.2**	**6.6**	**8.7**	**8.7**	**11.4**	**11.4**	**100.0**

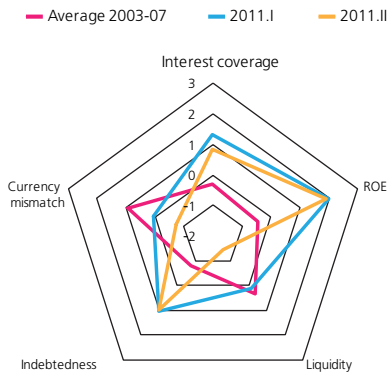
(1) Percentage points.
(2) Factoring includes bank and nonbank institutions.
(3) Corporate bonds (excluding *Codelco*), securitized bonds with nonbank underlying assets, and commercial papers, at market value. Balance in the third quarter of 2011 based on data from the CSD and the international investment position.
(4) Includes loans associated with FDI. Converted to pesos using the average exchange rate for the period from Mar.02 to Sept.11.

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

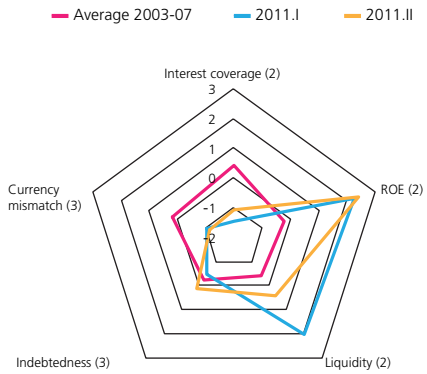
Figure IV.3

Financial indicators for the corporate sector (1)
(standard deviations)

a) Average



(b) Highest risk percentile

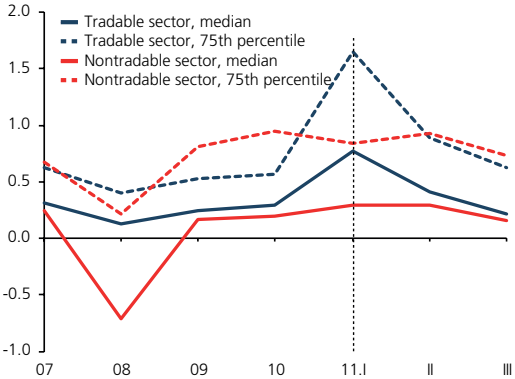


(1) Calculated as the value of each indicator less the 2003–11 average, over the standard deviation in the same period.
(2) 25th percentile.
(3) 75th percentile.

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

Figure IV.4

Currency mismatch of SMEs (1) (2)
(percent)



(1) Sample of firms that use foreign currency derivatives and/or external debt.
(2) Currency mismatch = (external debt – net derivatives position) / (exports – imports).

Source: Central Bank of Chile.

On aggregate, business debt as a percentage of GDP expanded slightly in recent quarters, to around 99% of GDP, which is similar to 2008–09 level (figure IV.1). Based on data through the end of the first quarter of 2011, bank debt has been stable at the sectoral level and has even fallen in some sectors (figure IV.2). In particular, in the real estate and construction sector, indebtedness level has fallen. Given the sector's relatively high share in the total stock of commercial bank loans (approximately 25%) and its contribution to the economic cycles, this *Report* provides a more detailed analysis of the potential risks that could arise from this sector (box IV.1).

The financial indicators of the corporate sector have been relatively stable

The evidence for the corporate sector reveals only marginal changes in financial indicators between the first and second quarters of the current year, and most are higher than in the 2003–07 period (figure IV.3a)[1]/. Average earnings rose to 15.7% in June 2011, versus 12.4% in 2003–07. Interest coverage rose to 3.96 times, whereas the precrisis average was 3.53 times. Indebtedness, measured over equity, increased to 0.68 times in June 2011, versus an average of 0.63 times in 2003–07.

Similarly, no significant changes have been recorded at the extremes of the distribution of these indicators (figure IV.3b). The indebtedness in the 75th percentile is slightly higher than its average for the 2003–07 period (0.90 versus 0.88). Earnings in the 25th percentile are 1.73%, which is substantially higher than the average (0.11%). Liquidity in the 25th percentile is 0.71 times, compared with 0.65 in 2003–07. The exception is solvency (interest coverage), which fell relative to its historical average, from 0.36 to –0.10 times in the 25th percentile.

The corporate sector maintains a stable currency mismatch…

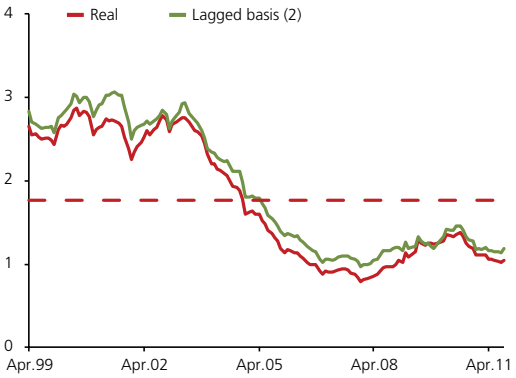
The corporate sector has kept its currency mismatch around 1.3% of total assets in the last two quarters, which is below the average for 2003–07 (2.4%) (figure IV.3a). This trend is essentially explained by the currency mismatch of firms in the nontradables sector. In contrast, the mismatch of firms in the tradables sector has been increasing: the moving average in the last three quarters was 1.0% of assets, versus a historical average of –1.5%. While the mismatch in this sector implies greater financial risk in relative terms, it is limited in absolute terms.

[1]/ The corporate sector is made up of nonfinancial firms that report their financial statements to the SVS. In June 2011, there were 369 firms with data.

Figure IV.5

Commercial nonperforming loan index (1)

(percent of commercial loans)



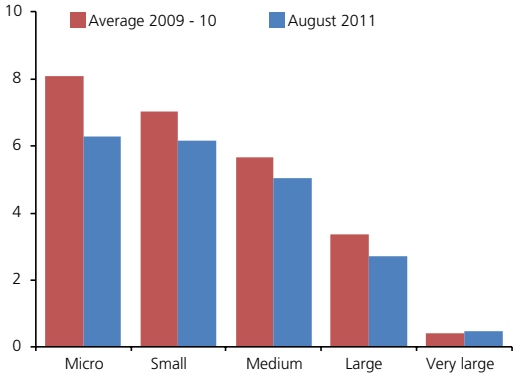
(1) The dashed line indicates the average real index.
(2) A lag of 12 months for the comparative basis, average maturity by segment. See Matus et al. (2009).

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

Figure IV.6

Delinquency by size of debt (*)

(percent of total loans in the segment)



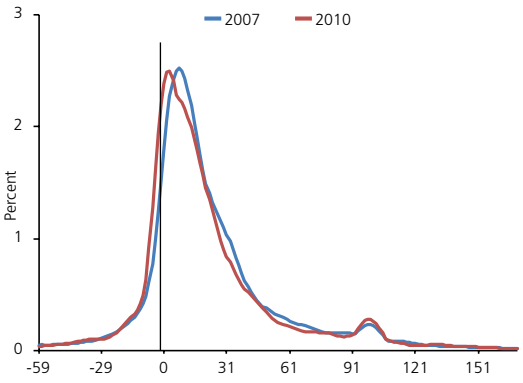
(*) Delinquency of over 30 days. Micro: debt of less than UF500; small: debt from UF500 to UF4,000; medium: debt from UF4,000 to UF18,000; large: debt from UF18,000 to UF200,000; very large: debt of over UF200,000.

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

Figure IV.7

Return on equity of large firms

(percent)



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

…and the currency mismatch has not increased significantly in SMEs

The currency mismatch of smaller firms in the tradables sector increased in the first quarter of 2011. Most recently, however, the mismatch of these firms has converged toward the levels of previous years (figure IV.4). The trend is similar for firms with a larger mismatch (the 75th percentile). Currency mismatch of SMEs in the nontradables sector have been fairly stable, in terms of both the median firm and firms with larger mismatches.

The credit risk of firms remains low

In the first part of this year, the nonperforming loan ratio (NPLR) on commercial loans continued to fall, reaching levels near 1% of the total portfolio. This compares favorably with the historical average of 1.8%. The NPLR based on the lagged loan stock performed similarly to the real NPLR, so the reduction in business credit risk is not explained by the increase in the loan stock (figure IV.5). Finally, NPLR estimates based on the economic cycle suggest that the levels recorded are consistent with the dynamics of the economy.

The credit quality of firms shows a slight decrease in delinquency relative to previous years in most debt segments (figure IV.6). The exception was firms with larger debt, which posted a slight increase with respect to previous years (0.42 versus 0.48%). These levels, however, are still relatively low in comparison with the rest of the firms[2]/.

A scenario of greater risk to firms could arise from a worsening in international situation and its repercussions on domestic activity

The corporate sector, on average, is in a good position to face an unfavorable output scenario. However, smaller firms could find themselves more vulnerable to the impacts of a possible materialization of international risks (chapter I). This was the case with the steep, though relatively transitory, output contraction in early 2009. It is therefore important to analyze the financial situation of a broader set of firms given the current scenario.

To this end, financial indicators were analyzed for the sample of private nonfinancial firms that are subject to business income tax (termed first category tax in the Chilean tax system)[3]/.These indicators, in general, were lightly affected by the subprime crisis, but they recovered in 2010. Large firms recorded a reduction in debt levels over the course of the period and a stable trend in liquidity (table IV.2). However, these firms also saw a drop in earnings and financial solvency (interest coverage) in 2008 and 2009, which was partly reversed in 2010 (figure IV.7). In SMEs, indebtedness and liquidity have been constant, but earnings and interest coverage were lower in 2010 than 2007 (figure IV.8).

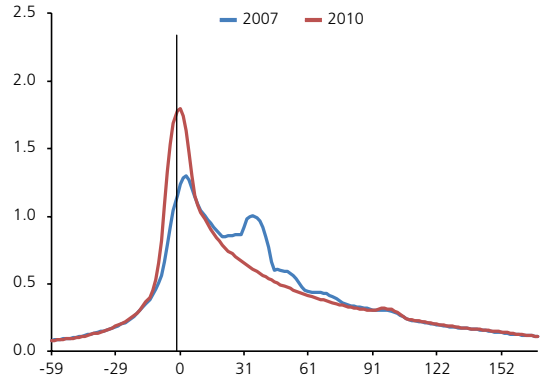
[2]/ Delinquency of 90 days or more posted a similar performance, although the segment of firms with the largest debt was stable at 0.28%.

[3]/ For details, see Pérez (2010).

Figure IV.8

Return on equity of SMEs

(percent)



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

Table IV.2

Financial indicators for nonfinancial private firms (1)

(times, percent)

	2007	2008	2009	2010
Large				
Indebtedness (2)	0.69	0.70	0.54	0.54
Liquidity (2)	0.04	0.05	0.06	0.05
Interest coverage (2)	4.91	3.84	3.43	5.89
Profitability (3)	14.87	14.39	11.47	12.99
SMEs				
Indebtedness (2)	0.41	0.42	0.40	0.39
Liquidity (2)	0.26	0.26	0.27	0.29
Interest coverage (2)	12.01	10.47	8.70	9.93
Profitability (3)	30.34	29.28	18.72	22.78

(1) Corresponds to the median of each indicator.
(2) Times.
(3) Percent.

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

This analysis, combined with the information described above, reveals that, in general, financial indicators have not changed significantly and thus do not signal a more deteriorated financial situation. The exception is earnings in SMEs, which have recovered since the crisis but remain below 2007 levels. Taken together, these financial indicators suggest that firms have a relatively solid financial position from a historical perspective. Nevertheless, the financial intermediaries must remain vigilant in the area of credit, especially considering the risk associated with the external scenario.

Households

Household debt continued to accelerate in the third quarter of 2011…

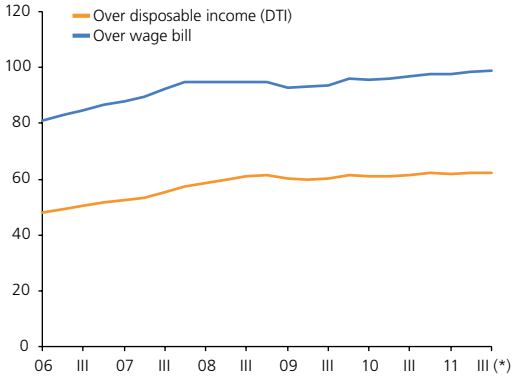
In the third quarter of 2011, total household debt grew 9.2% in annual terms, a higher rate than in previous years. This trend is largely explained by more dynamic consumer debt (10.8%) relative to mortgage debt (8.1%). As in the last *Report*, the most active component of consumer debt was bank debt, which recorded a growth rate of 14.4%. In contrast, debt with retail companies grew 0.5% (table IV.3).

The growth of bank consumer debt occurred in a context of looser credit conditions. According to the Bank Lending Survey for the third quarter, this segment continued to exhibit more flexible supply conditions, mainly due to a lower risk perception and more aggressive competition from other banks and nonbank institutions. At the same time, demand was strong, thanks to more attractive interest rates and a better income and employment situation among bank clients.

Figure IV.9

Household indebtedness

(percent)



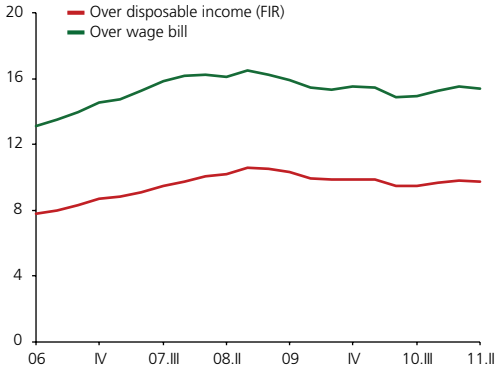
(*) Preliminary data.

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

Figure IV.10

Long-term household financial burden

(percent)

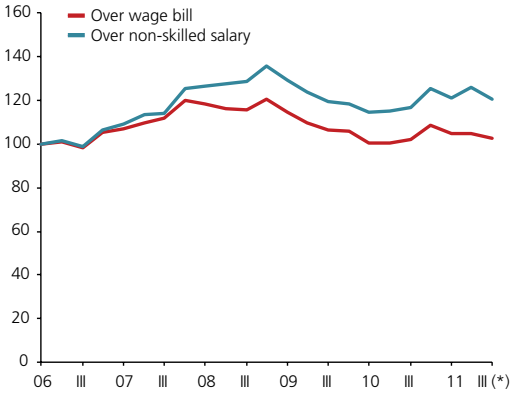


Source: Central Bank of Chile, based on data from the SBIF, SuSeSo and SVS.

Figure IV.11

Household debt with retailers

(baseline index Mar.06 = 100)



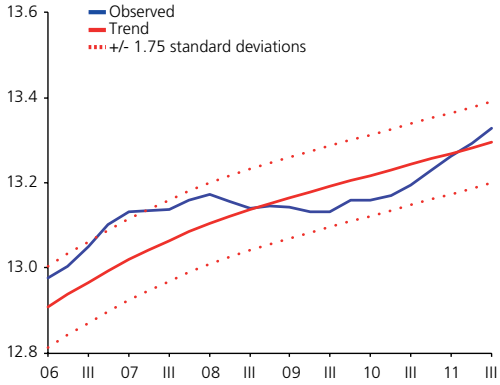
(*) Preliminary data.

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

Figure IV.12

Household bank consumer debt

(credit per capita on a logarithmic scale)



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

Table IV.3

Household debt

(real annual change, percent)

	Ave. 2005-07	2008 IV	2009 IV	2010 IV	2011 I	2011 II	2011 III	Contribution to growth (1)	Share in debt
Mortgage	14.6	13.1	7.4	7.1	7.7	8.5	8.1	4.7	57.3
Bank	14.6	13.1	8.6	9.0	9.3	10.0	9.4	4.8	50.8
Nonbank (2)	14.4	12.8	0.1	-5.0	-3.2	-2.3	-0.8	-0.1	6.5
Consumer	15.0	3.7	4.6	7.4	10.1	11.8	10.8	4.5	42.7
Bank	13.8	-0.3	2.2	8.6	11.8	14.0	14.4	3.4	25.4
Nonbank	21.6	12.5	0.5	5.5	6.8	5.8	1.4	0.2	12.4
Retailers	22.3	9.3	-7.9	7.9	10.6	8.5	0.5	0.0	6.3
FCF (3)	20.7	9.3	8.5	3.6	4.4	5.9	6.6	0.3	3.9
Cooperatives	21.0	31.8	15.5	1.9	0.8	-1.2	-4.1	-0.1	2.3
Other (4)	2.9	0.0	40.7	6.5	10.7	17.9	18.8	0.9	5.0
Total	**14.8**	**8.9**	**6.2**	**7.2**	**8.7**	**9.9**	**9.2**	**9.2**	**100.0**

(1) Percentage points.
(2) Includes securitized mortgage debt.
(3) Family compensation funds.
(4) Includes car financing, university loans and insurance company loans. Beginning in the third quarter of 2009, includes higher education loans under Law 20,027.

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

…in line with the growth of household income

Household indebtedness has increased in line with disposable income, resulting in relatively stable debt-to-income (DTI) ratios since the crisis. The same trend is found when the wage bill is used as an alternative measure of income (figure IV.9). Similarly, aggregate indicators show that the long-term financial burden-to-income ratio (FIR) has been relatively constant (figure IV.10). Debt with retail companies has also been stable since the financial crisis (figure IV.11). In addition, the net financial wealth of households has recovered to precrisis levels[4]/.

In terms of trend, the growth of debt does not exceed the long-term trend of its different components

Despite the acceleration in the growth rate of indebtedness, the growth of all the components of household consumer debt is close to long-term trend values[5]/ In particular, per capita bank consumer debt, which is the household debt component with the highest growth rate, is near its trend value (figure IV.12). This evidence is thus consistent with the aggregate debt indicators described above.

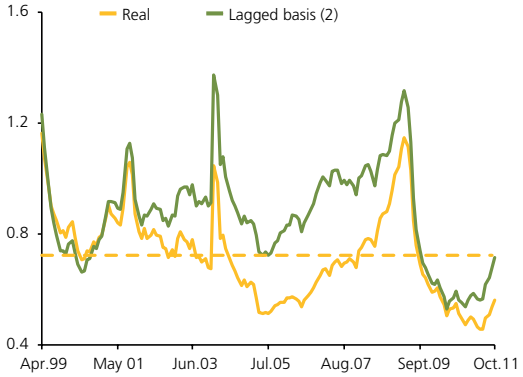
[4]/ For more details, see Central Bank of Chile (2011b).

[5]/ Estimates were made using the methodology developed by Mendoza and Terrones (2008), as described in the last *Report*. A significant deviation is defined as a change of more than 1.75 times the historical standard deviation of the difference between the observed value and the trend.

Figure IV.13

Nonperforming loan index for bank consumer debt (1)

(percent of consumer loans)



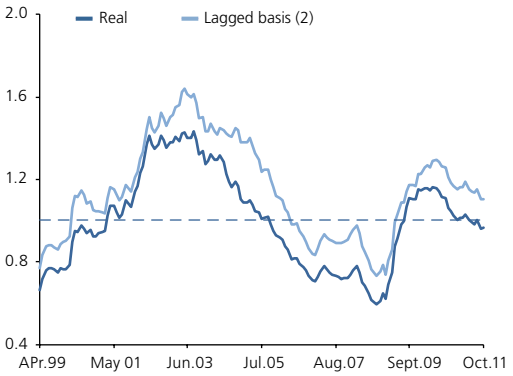
(1) The dashed line indicates the average real index.
(2) A lag of 22 months for the comparative basis, average maturity by segment. See Matus et al. (2009).

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

Figure IV.14

Nonperforming loan index for bank mortgage debt (1)

(percent of mortgage loans)



(1) Excluding *BancoEstado*. The dashed line indicates the average real index.
(2) A lag of 12 months for the comparative basis.

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

Household credit risk is still limited, particularly in the case of bank consumer debt

The nonperforming loan ratio (NPLR) on bank consumer debt has remained below its historical average (figure IV.13). The future trend must be monitored, however, given that the adjusted NPLR is somewhat higher and both indicators recorded a small increase between June and October of this year. Despite this slight increase, the consumer NPLR trend is not significantly different from the NPLR level that would be consistent with the current economic cycle.

The NPLR on mortgage debt continues to fall (figure IV.14). Excluding *BancoEstado*, this indicator was below its historical average in October 2011. Moreover, both the traditional and adjusted NPLR show a similar trend, with the adjusted being slightly higher than the traditional. As with the consumer portfolio, the real mortgage NPLR is not significantly different from the NPLR consistent with the current economic cycle.

In the case of retail companies, credit risk indicators—reported at the request of the SVS in order to compile more homogeneous information on their credit policies—show that the renegotiated debt portfolio has been relatively stable since December 2010, with a fairly wide dispersion among retailers[6]/.In contrast, delinquency has been stable, on average, but it has increased for retailers that are more oriented toward lower-income segments.

However, financial indicators deteriorated in lower-income households after the subprime crisis

On aggregate, indebtedness has not increased more than its determinants. However, the Household Financial Survey (HFS) provides evidence that the DTI ratio increased in lower-income households after the financial crisis[7]/. This greater indebtedness would appear to reflect both the income shock and the increase in debt stemming from the rollover of financial obligations in households that were more vulnerable to the crisis.

In particular, the HFS reports an increase in households having difficulty making loan payments during the last crisis. The percentage of households in the lowest income stratum with difficulty paying their debts increased from 20.5 to 32.9% between 2007 and 2009[8]/.At the same time, the share of households with debt-at-risk in this stratum rose from 5.2% in 2007 to

[6]/ SVS Ordinary Official Letter (*Oficio Ordinario*) 23946, 23947, 24851, 23941, 23942, 23945, 23943 and 23944, issued on 15 September 2011.

[7]/ Similarly, the Social Protection Survey indicates that for consumer debt, the DTI of the first quintile increased between 2006 and el 2009.

[8]/ The lowest income stratum corresponds to the first five deciles of the distribution.

6.8% in 2009[9]/.Although more recent data are not available for analyzing the trends in these indicators, the evidence provided by the HFS suggests that lower-income households are relatively more vulnerable to negative output shocks and increases in unemployment.

The systemic risk associated with these households is limited, however, given that they hold a relatively small share of total debt (11%)[10]/. At the same time, these strata have a different debt composition than higher income strata, so the distribution of risk varies across the different lenders. In the case of bank consumer and mortgage debt, households in the lowest income stratum represent 8.3 and 19.0%, respectively, but they account for 26% of debt with retail companies.

In sum household debt and credit risk have not changed significantly on aggregate. The future trend of household debt must be monitored and analyzed, however. If debt continues to grow at current rates, indebtedness could increase above its long-run trend, especially if a risk scenario like the one described in chapter I materializes. Finally, it is particularly important to continue monitoring the debt trend of lower-income households, as they may become more financially vulnerable. The indebtedness of these households, while not systemically important for the banking sector, could be significant for lenders that are more oriented toward lower-income segments.

[9]/ Debt-at-risk is defined as the debt of households with an FIR of over 75% and a financial margin below –10%.

[10]/ HFS 2009.

Box IV.1: The real estate sector: implications for financial stability

The real estate sector is an important factor in the economic cycle, whether considering its contribution to GDP or its share in the portfolio of different financial agents[11]/. The significance of cycles in this sector and their propagation to the rest of the economy was evident during the subprime crisis in the U.S., as well as in the development of macrofinancial vulnerabilities in several other economies in the world, such as Ireland and Spain. From a historical perspective, Reinhart and Rogoff (2009) find that the five most severe economic crises have coincided with contractionary cycles in this sector[12]/. With these factors in mind, this box provides a conceptual framework for identifying the risks that the real estate sector could imply for financial stability in Chile.

From the perspective of financial stability, the potential implications of real estate cycles, whether expansionary or contractionary, depend on the presence or absence of greater credit risk in households, real estate firms and construction companies. In simple terms, credit risk is determined by the probability that households and firms will face a credit event (mortgages and business loans) and by the recovery value of the debt under that scenario. This has a direct effect on the financial institutions that have financed these agents and an indirect effect on agents that have invested in financial instruments and assets tied to the sector, such as mortgage bonds and real estate funds.

In the case of households, the probability of nonpayment is related to the household's financial situation (indebtedness, financial burden, etc.) and potential employment or spending shocks, among other factors[13,14]/.The recovery value of the debt, in turn, would be determined simultaneously by the value of the collateral backing the loan (the loan-to-value, or LTV, ratio) and the expected sale price of the home at the time of default. The latter can fluctuate due to factors like income (Girouard et al., 2006), interest rates (Glaeser et al., 2010), expectations (Shiller, 2008) or simply a possible reversal of a price misalignment related to economic fundamentals. These factors can interact, thereby amplifying their effects. For example, credit risk could depend on the degree of collateralization of the mortgage loans, or prices could be more sensitive to income shocks depending on the LTV ratio (Almeida et al., 2005)[15]/.

For real estate firms, the analysis must also consider the possible formation of an excess supply of housing, which can increase the firms' financial vulnerability and cause greater fluctuations in housing prices. Ellis (2010) considers this to be a central factor in the development of the subprime crisis in the U.S.. According to this author, the real estate cycle had such severe consequences in the U.S. because there were simultaneously a significant accumulation of housing inventories, a relaxation of lending standards and, finally, a sizeable share of households that were highly vulnerable to a reduction in their home value.

[11]/ The GDP share of the construction and engineering sector rose to 6.8% in the second half of 2011. In the same period, commercial and mortgage loans represented 38.7% of the total loan stock of the banking system. The life insurance companies are exposed through endorsable mortgage loans, mortgage bonds and real estate, which equal 26.1% of their total assets.

[12]/ Spain in 1977, Norway in 1987, Finland in 1991, Sweden in 1991 and Japan in 1992.

[13]/ The purchase of a second home could potentially represent a greater financial risk than the first home, given how second homes are used.

[14]/ The nonpayment event could also be strategic. That is, the borrower determines that the costs of making the payment are lower than the benefits and therefore opts not to fulfill his financial obligations. This component could be significant in the U.S.. In economies such as Chile, however, where the consequences of not paying a mortgage loan go beyond the collateralized real estate, it is plausible that this type of strategic nonpayment is less common.

[15]/ This effect is associated with households that base their behavior on a fixed leverage level. Thus, a positive income shock is accompanied by an increase in debt and, in turn, a greater demand for housing.

The rest of this box analyzes these risk factors for households and firms in Chile.

Households

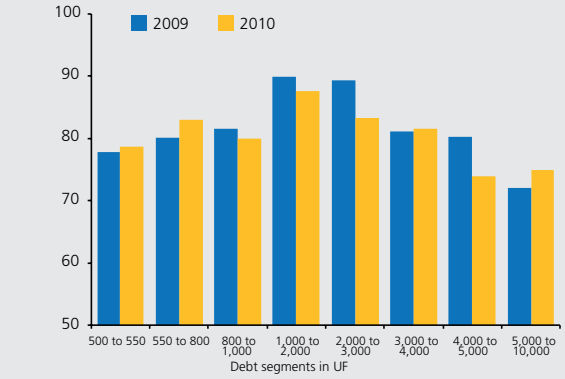
(a) Financial situation. As analyzed in detail in chapter IV, the financial situation of households has not deteriorated relative to previous periods. Nonperforming loan ratios and default indicators on bank consumer and mortgage debt are below their historical averages, which is consistent with the expansionary phase of the Chilean economic cycle. The household financial situation could deteriorate, however, in the face of worsening economic conditions under a risk scenario such as the one described in chapter I.

(b) Collateralization of individual mortgage loans (LTV). LTV ratios at the time a loan is originated have been relatively stable over the last two years, averaging about 80%, with no significant differences among different mortgage loan segments (figure IV.15). In addition, Chile's LTV ratio is in line with other economies (IMF, 2011e). However, the LTV ratio at loan origination is only a proxy of the LTV needed for estimating expected losses from a credit event, which requires the LTV ratio including the amortization of the debt and the current sales price of the home. Future advances in monitoring the real estate sector should consider this measure of the LTV ratio.

Figure IV.15

Housing loan-to-value ratio (*)

(percent)



(*) Including renegotiations.

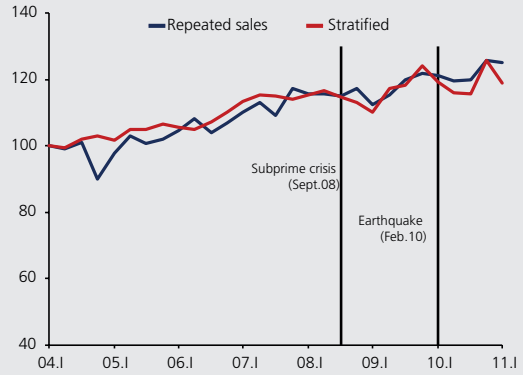
Source: Central Bank of Chile, based on data from the SBIF.

(c) Housing prices. Based on housing transaction data compiled by the Chilean SII, different aggregate price indices show moderate growth. In 2010, the stratified house price index grew 1.4% in real annual terms, while the repeat sales index rose 3.6% in real annual terms (figure IV.16)[16]/. Internal estimates suggest that the aggregate price trend recorded in Chile is consistent with the dynamic output and interest rates of the last few years[17]/. The housing price-to-income ratio has been relatively stable, in contrast to the substantial increases in countries that have recently experienced expansionary real estate cycles (figure IV.17).

Figure IV.16

Real housing price index

(baseline index Mar. 04 = 100)

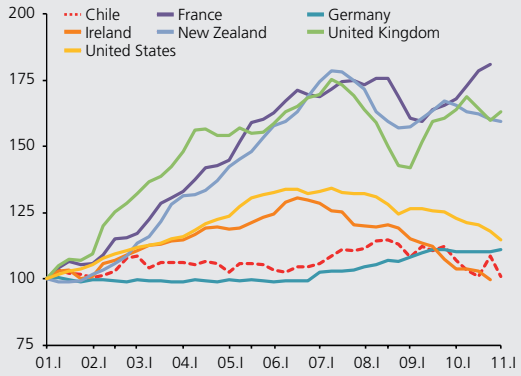


Source: Central Bank of Chile, based on data from the Internal Reserve Service, SII.

Figure IV.17

Real housing prices relative to disposable income (*)

(baseline index Mar.01 = 100)



(*) Disposable income is adjusted by demographic growth.

Source: Central Bank of Chile, based on data from the Internal Reserve Service, SII and CEIC data.

[16]/ For details on the housing price calculation, see Vio (2011).

[17]/ Studies based on alternative measures of housing prices in Chile also suggest that their growth is strongly linked to their economic fundamentals (Sagner, 2009; Parrado, et al., 2009).

At community level, few locations recorded an increase in the growth rate of housing prices in the most recent period, and those that did are characterized by above-average density. This could be an indication that these communities are in a growth phase that is pushing up against land availability constraints, and their prices could thus be more sensitive to fluctuations in housing demand. On the other hand, these higher growth rates could also be transitory, simply reflecting relatively high housing price volatility (figure IV.16). Either way, this situation is radically different from the dynamics observed in the U.S. during the subprime crisis (Ferreiro and Gyourko, 2011), which, in general terms, was characterized by a gradual increase in prices that was ultimately propagated to numerous metropolitan areas.

Firms

(a) Financial situation. The real estate market is highly fragmented (Feller, 2007), so the analysis must cover a broad set of firms. The results reported in this box are thus based on a sample of more than 20,000 firms in the construction and engineering sector[18]/.

The standard financial indicators do not show any sign that the financial situation of firms in this sector has deteriorated substantially in recent years. The debt ratio was relatively stable in the 2007–10 period, whether looking at the median or the 75th percentile of the distribution of large firms and SMEs (table IV.4). Although return on equity decreased in 2007–10, average levels are still relatively high. Earnings fell more among SMEs in the 25th percentile. Finally, the firms' liquidity has not deteriorated, based on liquid asset holdings as a share of total assets.

Given the fragmentation that characterizes the sector, however, it is possible that individual firms or groups of firms could find themselves in a complex financial situation. Moreover, firms whose business focus is in areas where prices are especially sensitive to the economic cycle could be more financially exposed to potential real estate cycles.

Table IV.4

Financial indicators for the construction and engineering sector
(times, percent)

	2007	2008	2009	2010
Large (1)				
Indebtedness (2)				
Median	0.89	0.73	0.82	0.65
25th percentile	0.43	0.30	0.25	0.21
75th percentile	1.47	1.35	1.49	1.42
ROE (3)				
Median	21.05	18.80	18.83	16.20
25th percentile	8.29	7.66	5.25	3.69
75th percentile	39.23	35.11	42.94	35.48
SMEs (1)				
Indebtedness (2)				
Median	0.46	0.42	0.43	0.43
25th percentile	0.03	0.01	0.00	0.00
75th percentile	1.01	0.98	1.06	1.05
ROE (3)				
Median	39.42	34.57	19.41	23.10
25th percentile	6.48	5.46	0.00	-0.02
75th percentile	77.50	89.56	70.97	77.92

(1) SMEs: firms with sales up to UF100.000. All others are classified as large firms.
(2) Times.
(3) Percent.

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

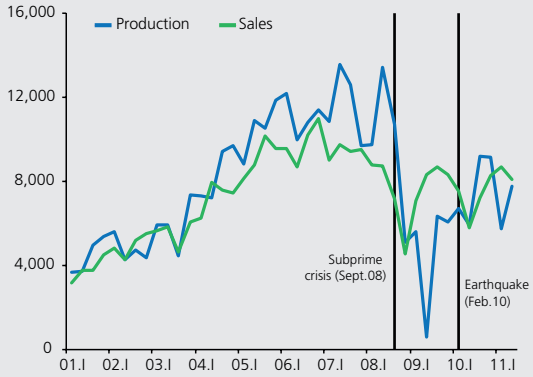
(b) Supply and demand. Supply was systematically higher than new house sales in 2005–08 (figure IV.18). In the second half of 2008, demand contracted sharply, and supply went through a period of relatively strong inertia. This dynamic led to an increase in the months to sell existing inventory, which far exceeded the historical average for both houses (17.6 versus 8.5) and apartments (38.8 versus 15.2). Sectoral activity then contracted sharply. This supply-demand dynamic was observed in the housing markets of most communities in Greater Santiago.

In the most recent period, however, housing supply and demand have recorded a more even trend. The situation is now more favorable than in the 2005–08 period: if economic conditions worsen and housing demand contracts, the months to sell existing inventory would increase substantially less than in late 2008, especially in the case of apartments.

[18]/ The sample comprises all firms in the sector that file business income taxes. See Pérez (2010) for more details.

Figure IV.18

New home production and sales in the Santiago Metropolitan Region
(units)



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

In sum, the risk factors analyzed for this *Report* do not show generalized signs of vulnerability that could cause or amplify a possible real estate cycle in Chile. In particular, household and business credit risk is stable, aggregate housing price growth is consistent with its economic fundamentals and the supply and demand for housing show an even growth trend. However, given the sector's importance in the economy and the international evidence on the serious repercussions of real estate crises, it is advisable and necessary to continuously monitor the risks.

Box IV.2: Potential effects of the bill on processing financial and economic liability data

Centralized debt registries are common throughout the world, and they can be maintained by either the public or private sector. The registries vary in terms of the type of data they contain, whether it be total debt in the financial system, payment history (positive data or a blank) or delinquency or nonpayment events (negative data). The registries also vary among countries in terms of their coverage of lenders, with some covering only banks and others including nonbank lenders.

Chile does not have a consolidated, exhaustive debt registry or specific regulations on processing the data.

Objectives and key points

The main objective of the bill presented to Congress on 30 August 2011 is to expand the available information on financial liabilities—consolidating the available data, expanding the universe of lenders that report to the system and widening access to the credit registry. Three aspects of this bill bear highlighting. First, all the information, including positive and negative bank and nonbank data, will be compiled in a consolidated database. Second, the positive and negative bank and nonbank data will be made available to lenders that contribute to the system. Third, the project establishes mechanisms for protecting the rights of the data owners. Specifically, positive data can only be made available with the express authorization of the owner; negative data do not require authorization prior to being reviewed by lenders that contribute data to the system.

International evidence

The literature suggests that data systems on debt and payment behavior can contribute to alleviating information asymmetries in the credit market, with positive effects on risk assessment and access to credit (Pagano and Japelli, 1993; Padilla and Pagano, 1997).

The aggregate evidence supports this hypothesis. Based on a sample of 40 countries, Japelli and Pagano (2002) find that consolidating credit data (positive and negative) increases access to credit and reduces the risk of nonpayment. Djankov et al. (2007), using a sample of 120 countries, find that the countries that have a system for sharing data on debt have a higher credit-to-GDP ratio. Moreover, this increases with legislative changes that allow the consolidation of data. The IDB (2005) finds that the financial system is significantly deeper in countries with credit registries.

Microeconomic studies show positive effects in this sense. Brown et al. (2009) find that consolidating data has improved access and reduced the cost of credit for firms in transition economies. Kallberg and Udell (2003) show that the availability of credit history data improves the prediction of nonpayment by firms in the U.S.. Barron and Staten (2009) simulate individual data and show that the use of negative data on debtors and a broader coverage of lenders (banks and retail companies) improve credit access and reduce the risk of nonpayment. Cowan and De Gregorio (2003) show that the availability of positive data contributes significantly to improving the Chilean banking system's ability to predict nonpayment.

Final notes

The empirical evidence suggests that consolidating data and, in particular, incorporating positive data have positive effects on access to credit and risk management capacity. A consolidated database also offers important benefits for the supervision and regulation of the financial system. It is therefore important that this data be available to the relevant regulatory and supervisory authorities, with appropriate safeguards, at the level of individual debtors. Finally, any advances made in broadening the coverage of institutions contributing positive data to the registry must not come at the expense of information currently available to the SBIF.

V. Banking system

Table V.1

Activity, profitability and solvency indicators

(percent)

	Ave. 2001-07	Dec.08	Dec.09	Dec.10	Oct.11 (*)
Real annual growth of loans					
Total	8.7	7.8	-0.4	5.7	11.7
Foreign trade	12.6	14.2	-26.6	23.6	35.6
Return on equity (ROE)					
Large	22.4	18.5	18.5	22.1	19.2
Medium	11.2	4.0	12.1	14.9	13.5
Retail	18.5	0.3	3.1	16.6	17.1
Treasury and foreign trade	7.6	7.3	4.7	4.7	2.8
System	16.9	12.4	15.1	18.6	16.3
Tier 1					
Large	9.0	8.6	9.9	9.2	9.4
Medium	11.7	10.7	10.3	9.8	10.1
Retail	14.7	14.1	14.6	14.9	14.6
Treasury and foreign trade	48.0	35.0	56.0	44.4	39.0
System	10.8	9.9	10.9	10.1	10.3
Regulatory capital (CAR)					
Large	12.5	12.1	13.3	13.5	13.6
Medium	13.4	11.8	13.9	13.5	13.8
Retail	15.1	17.6	18.3	18.3	17.6
Treasury and foreign trade	48.0	34.1	56.0	44.5	38.9
System	13.6	12.5	14.3	14.1	14.2

(*) Solvency indicators are through August.

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

The solvency of the banking system has been strengthened by higher capital and liquidity levels, mitigating the impact of the risk scenarios described in this Report.

Despite credit growth and lower profitability, solvency of the banking system remains high and stable, thanks to higher capital and liquid asset levels

Bank credit continued to grow at real annual rates of almost 12% (table V.1). However, with the exception of consumer loans, the Bank Lending Survey for the third quarter of 2011 shows somewhat tighter lending conditions, mainly due to the heightened uncertainty of the economic environment and an increased perception of the credit risk of bank clients. These factors, together with the global macroeconomic scenario, point to a credit slowdown in the coming quarters.

Although external liabilities have continued to expand, the banking system has reduced its exposure to currency risk in nonderivative instruments, thanks to the strong increase in foreign trade loans (table V.1). The net asset position in foreign currency derivatives has shrunk, since the pension funds have reduced the volume of their forward purchases (chapter III). The overall foreign currency mismatch has thus been kept down, to below 2% of the system's regulatory capital (figure V.1)[1]/.

The lower profitability recorded in the past few months are explained by a reduction in net interest margins, which have fallen due to the faster pass-through of the increased rates on liability operations in the banking system[2]/. This drop in profitability has mostly affected the large multibanks, but these institutions continue to be the most profitable segment in the system (table V.1).

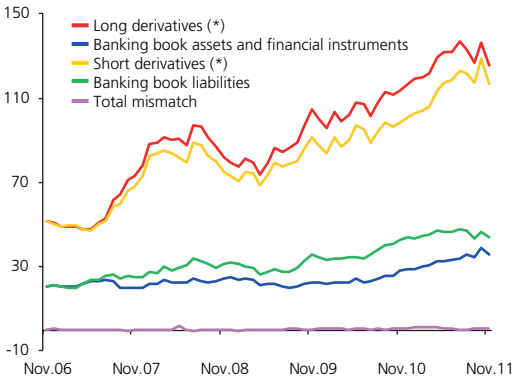
[1]/At the individual level, only some smaller banks, which together represent less than 5% of total system assets, registered asset or liability mismatches of over 4% of effective equity (estimated) in November.

[2]/ In the 90- to 365-day segment, deposit rates increased more than 300 basis points, on average, between January and October 2011 relative to the same period one year previous. Asset rates only increased 66 basis points, on average, in the same period. The higher deposit rates reflect faster growth of time deposits in the system at the expense of demand deposits, thereby increasing the banks' funding costs.

Figure V.1

Foreign currency balance in the banking system

(US$ billion)



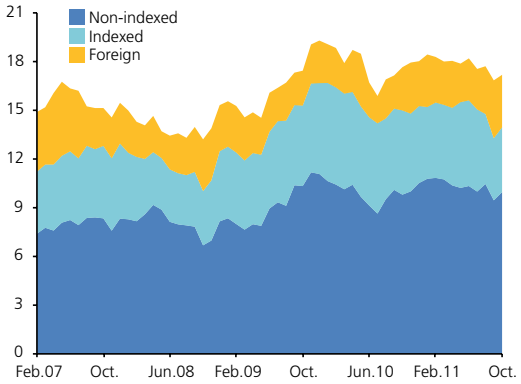
(*) Includes the notional value of foreign currency forwards and swaps.

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

Figure V.2

Liquid assets by currency

(percent of total assets)

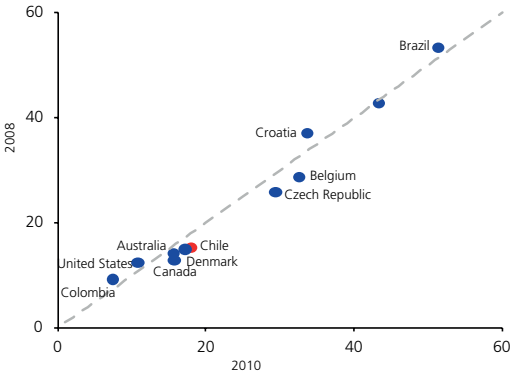


Source: Central Bank of Chile, based on data from the SBIF.

Figure V.3

Liquid assets of the banking system (*)

(percent of total assets)



(*) Data as of December of each year.

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

Despite the lower profits, the solvency indicators of the banking system remain high and stable, thanks to capital increases of around US$1.4 billion and growth of liquid assets (with a lower risk weighting) of more than US$3.0 billion as of the closing date of this *Report*. Both Tier 1 capital and regulatory capital, measured as a function of systemwide risk-weighted assets, have been stable at around 10 and 14%, respectively. Additional capital contributions have been announced for approximately US$800 million, which will keep the solvency indices at high levels.

Major highlights

This section analyzes the liquidity position of the banking system and assesses some aspects of the composition of commercial and personal credit

Liquidity

The Chilean banking system continues to record a strong buildup of liquid assets…

Late 2008 saw an increase in the liquid assets on the balance sheet, which stabilized in the past year at around 18% of total system assets. On average, around 60% of these assets were concentrated in Central Bank securities and bank time deposits in the past year. Thus, peso- and UF-denominated assets not only make up the largest share of this portfolio, but also explain the bulk of the growth trend (figure V.2).

Panel estimates show that the faster growth of demand deposits and external debt, as well as the lower levels of activity observed following the 2008 crisis, explain, in part, the liquid asset trend in the banking system. Additionally, the trend in the ratio of liquid assets to total assets shows a structural break starting in 2008[3]/. This increase coincides with a better liquidity position in the banking systems of several advanced economies in the post-crisis period, partly in anticipation of the greater regulatory requirements discussed within the Basel III framework (figure V.3).

…and banks have moved on with the process of diversifying their internal and external financing sources and lengthening the associated maturities

In addition to the capital contributions, between January and October 2011 the banks issued long-term bonds and securities for approximately US$3.0 billion in the local market and US$640 million in the external market, with a preference for placements in emerging financial markets in the most recent period[4]/. The larger banks have also issued syndicated loans in different markets, totaling US$725 million, substituting other, shorter-

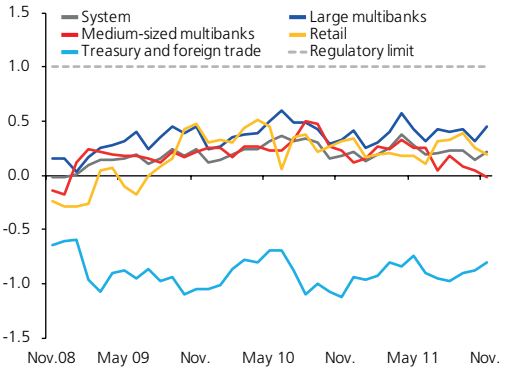
[3]/ Statistically significant at the 5% level. There are no significant differences between domestically owned and foreign owned banks.

[4]/ In October 2011, the banks reported US$1.5 billion in securities listed in Mexico, with effective issues of US$140 million. Other markets such as Colombia and Peru are also being explored for future listings.

Figure V.4

30-day mismatch in the banking system (*)

(liabilities minus assets, times Tier 1 capital)



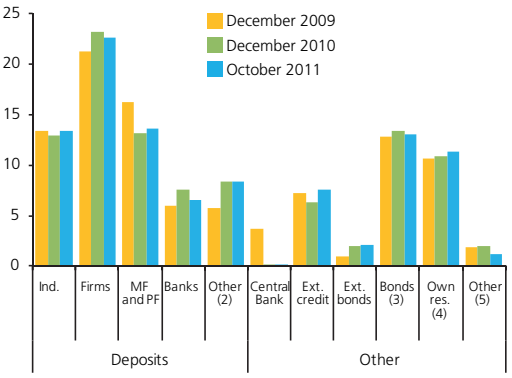
(*) Adjusted basis for banks authorized by the SBIF.

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

Figure V.5

Sources of bank financing

(percent of total liabilities) (1)



(1) Total liabilities net of contingent liabilities and fair value of derivative instruments.
(2) Includes the public sector, external sector, insurers and stock brokers.
(3) Includes mortgage, senior and subordinate bonds.
(4) Includes Tier 1 capital, provisions, net reasonable value of derivative instruments and earnings.
(5) Residual in comparison with balance sheet data.

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

term external financing sources. As a result of these operations and the greater accumulation of liquid assets, short-term mismatches have remained stable and even improved at the margin, with enough space to comply with regulatory limits (figure V.4).

The increase in deposit rates has favored an expansion in the share of retail deposits

In addition to the higher deposit rates, some banks have pursued a strategy oriented toward increasing the share of deposits from retail sources (firms and individuals). The composition of the system's liabilities reflects these trends, with a change in this direction. Thus, despite deposits of US$540 million by the pension funds in September 2011, the banks' dependence on institutional deposits has tended to fall in the last two years (figure V.5).

Smaller banks, however, continue to be highly dependent on wholesale sources. Larger banks' fraction of loans to firms and individuals financed with deposits from these same sources has increased and currently exceeds 50%. This figure is around 30% for medium-sized banks and retail banks (figure V.6).

Banks whose exposure to time deposits from mutual funds and pension funds is over 20% of liabilities together represent 10% of total system assets. If, in addition to these institutional sources, we consider direct interbank loans and the purchase of time deposits by other banks in the secondary market, the share rises to 32% of total system assets. This variable could become significant in the event of liquidity pressures in local money markets.

Despite the stress in the international markets, the local banking system's foreign currency liquidity position appears to be stable...

As mentioned earlier, the larger local banks have been actively exploring longer-term financing sources in international markets, which have contributed to increasing the short-term foreign currency liquidity cushion. The availability of foreign currency liquidity in the local market has also increased thanks to the reallocation of pension funds' investments from external assets to domestic bank's instruments (bonds and time deposits; see chapter III).

...and external financing representing a small fraction of the local banks' funding needs

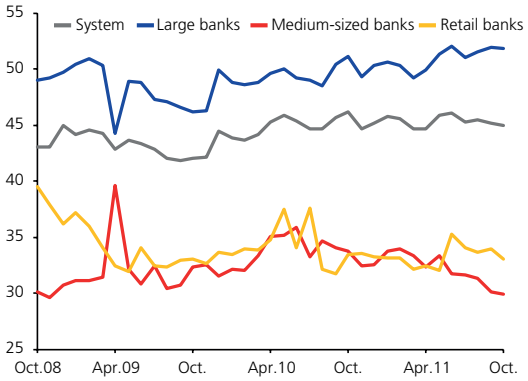
Although external debt has increased, it continues to represent less than 10% of total system liabilities. Only a few smaller banks—which together represent 5% of total assets—are more dependent on external credit, mostly concentrated in non-European creditors.

With regard to short-term credit, 90% corresponds to foreign trade financing, which grew over the course of the year but still represents less than 10% of

Figure V.6

Firm and individual deposits

(percent of firm and individual loans)

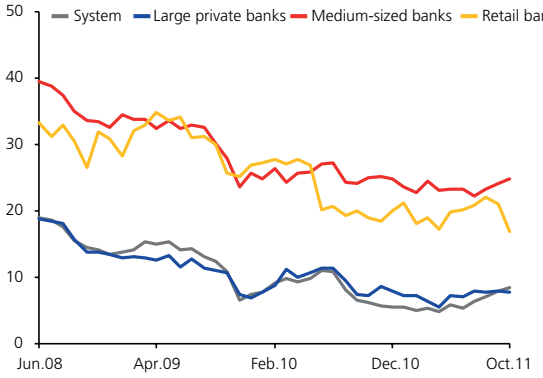


Source: Central Bank of Chile, based on data from the SBIF.

Figure V.7

Funding volatility ratio (*)

(percent)



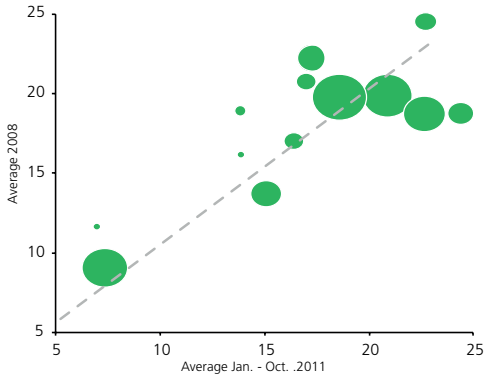
(*) (Volatile liabilities – liquid assets) / (total assets – liquid assets). Volatile liabilities include deposits from institutional sources (MF and PF), interbank deposits (direct and time deposits purchased in secondary markets) and external credit.

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

Figure V.8

Short-term funding ratio (*)

(percent)



(*) (30-day liabilities – liquid assets) / (total assets – liquid assets).

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

total system loans. As mentioned in chapter II, dependence on European creditors for these loans has been falling, and while the average maturity and loan amount have not dropped, spreads have increased substantially in recent months.

All of this implies that the liquidity position of the Chilean banking system has improved, whether measured in absolute terms or through the volatility and maturity of the financing structure

At least two indicators support this assessment. First, the funding volatility ratio, which measures the fraction of liquid assets that are financed with volatile liabilities, shows an improving trend for different bank clusters (figure V.7). Individually, most of banks improved under this variable, compared with the second half of 2008[5]/. Second, the short-term funding ratio, which measures the fraction of liquid assets that are financed with short-term liabilities, has improved for the majority of the banks relative to 2008, despite the fact that the duration of time deposits has shortened (figure V.8)[6]/.

Credit composition

The main bank assets are commercial loans, which on average show a stable concentration by sector and by firm

Credit for firm financing (commercial loans and foreign trade credits) represents approximately 65% of total loans, which in turn represents 70% of banking system assets. This share has been stable over the last decade. In this segment, the concentration by economic sector has not varied substantially in the last two years, with a strong focus in financial and social services (figure V.9)[7]/.

At the individual bank level, the concentration by specific sector can be as high as 40% of effective loans. However, the Herfindahl index, which provides a broader vision of sectoral concentration, is relatively low for most of the multibanks (figure V.10). This level of diversification has supported a stable trend in the banking system's credit risk indicators, which have only deteriorated in the most recent period and only for a limited number of debtor firms. By bank, the concentration of credit to the three largest debtor firms ranges from 3 to 8% for the multibanks (figure V.11). These exposures, though low, could translate into earnings losses in the event of problems in specific firms, as seen in the third quarter of this year. This risk can be higher in niche banks, smaller banks, and banks with a higher degree of concentration.

[5]/ With the exception of four entities, which together represent less than 2% of total system assets.

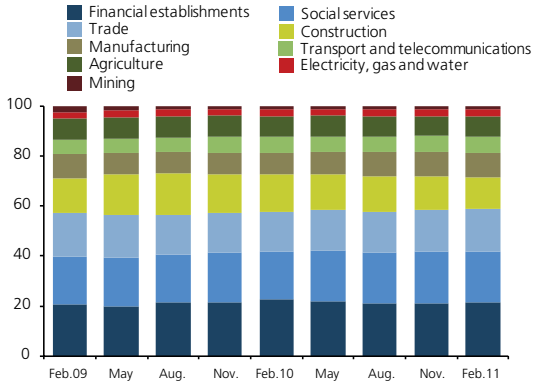
[6]/ In part as a result of the regulatory change on the valuation of type 1 mutual funds in March 2011.

[7]/ Including loans to financial firms, public sector firms, community and social firms, and business services in general.

Figure V.9

Sectoral distribution of loans to firms

(percent)

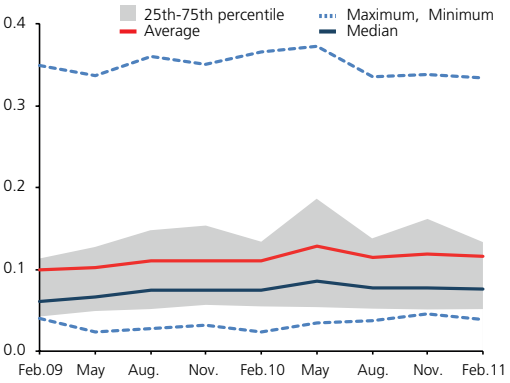


Source: Central Bank of Chile, based on data from the SBIF.

Figure V.10

Normalized sectoral Herfindahl index for multibanks (*)

(index)



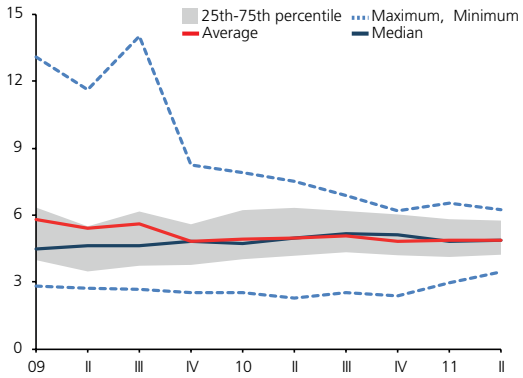
(*) Loans to firms.

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

Figure V.11

Loans granted to firms by the multibanks (*)

(percent)



(*) The three largest debtors in the debtor base over loans to firms.

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

Consumer loans represent a smaller share, but they have been strongly dynamic, especially in higher-income segments

Consumer loans continue to account for around 12% of system loans, despite being strongly dynamic through October (13.5%). According to the Bank Lending Survey, this segment continued to enjoy looser lending conditions through the third quarter, mainly due to a lower risk perception and more aggressive competition from other banks and nonbank financial institutions. At the same time, demand was strong thanks to more attractive interest rates and a better income and employment situation among clients. However, the growth has not been homogeneous across the system: banks whose business is concentrated in higher-income client segments have recorded the highest growth rates (over 20% in real annual terms), whereas retail banking and consumer divisions have been less dynamic (figure V.12)[8]/.

At the product level, consumer installment loans make up the majority (75.4%), followed by credit cards (16.3%) and credit lines (7.5%)[9]/. The share of credit cards has increased almost 4 percentage points over the last two years, as a result of a higher growth rate (24% in real annual terms in October, versus 12% for installment loans). This trend is related to commercial strategies focused on higher-income clients (zero rate loans) and a change in loan marketing for clients in general (installment loans granted via cards).

Spreads on consumer products have been relatively stable during the year, although they are somewhat higher than their pre crisis average (figure V.13). The increase recorded in recent months is consistent with a slight deterioration in the delinquency indices for this portfolio (chapter IV).

Assessment of risk factors

A riskier external scenario could have a negative impact on system's profits

Lower lending activity, combined with increased credit risk and higher domestic financing costs, could translate into lower profits for the system, especially in institutions oriented toward more procyclical credit segments, such as banks specialized in consumer loans. At the same time, greater foreign currency volatility could have an impact on the profitability of the commercial portfolio, but the impact would be limited given that Chilean bank provision regulations take into account the currency risk exposure of debtors. As the stress tests show, however, the banking system has built a strong capital base that should be able to accommodate a deterioration in returns while keeping solvency levels above the regulatory minimum.

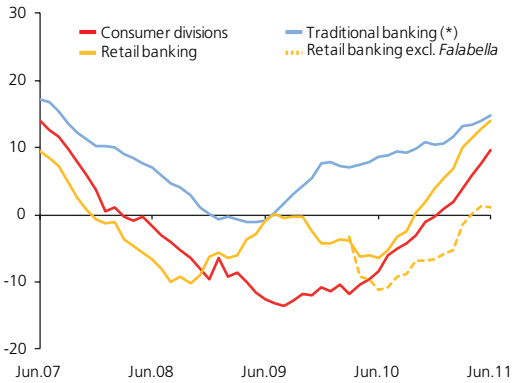
[8]/ With the exception of *Banco Falabella*, which recorded growth rates of 27%.

[9]/ Values as of October 2011.

Figure V.12

Growth of consumer loans

(real annual change, percent)



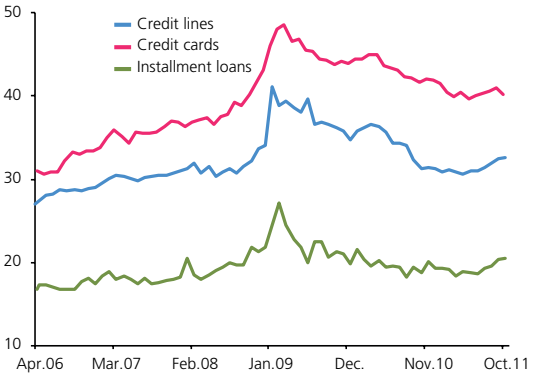
(*) Multibanks without consumer divisions.

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

Figure V.13

Consumer product spreads (*)

(annual percent)



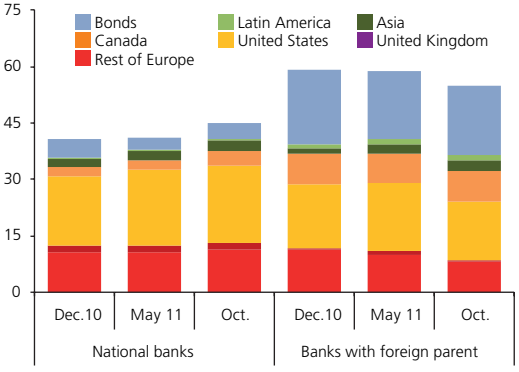
(*) Average nominal rates less the 360-day prime deposit rate.

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

Figure V.14

External debt of the banking system by region (*)

(percent of the system's stock of external debt)



(*) By country of residence of the creditor bank's parent.

Source: Central Bank of Chile.

The persistent problems in the European banking system have begun to affect external financing conditions for the local banking system

The fiscal problems and their repercussions in the European banking system have begun to have an impact on the external credit spreads of Chilean banks, although loan volumes and maturities have not decreased to date (figure II.5). Nevertheless, dependence on external financing is low, and the national banking system has already demonstrated its capacity for diversifying its creditor base in response to stress events.

Given the current international environment and the presence in Chile of banks with a foreign parent or holding bank, there is a risk of potential effects in the respective subsidiaries

Foreign-owned banks represent almost 40% of total assets and account for more than 50% of the system's stock of external debt. However, more than 80% of this debt has a maturity profile of over 12 months, in particular bonds. These banks depend less on creditors in the euro area than the Chilean-owned banks, and as of October 2011, the direct exposure with related banks was a small fraction of total liabilities (figure V.14)[10]/. After taking into account maturity differences, there are no significant discrepancy in the spreads on short-term external debt of these banks or in the valuation of their debt issues and/or transactions in the local market. Moreover, the downgrading of the risk rating of some parent banks did not affect either the international or local risk rating of their subsidiaries in Chile.

The share of overseas investments over total assets is not substantially different between domestic and foreign-owned banks, with both groups below 4%, and they are mainly deposits in external correspondent banks[11]/. This suggests that the direct exposure to the assets of related counterparties is low.

Finally, for banks established in Chile, there are objective conditions that could mitigate the risk of potential effects in the respective subsidiaries. For instance, Chilean banking legislation requires the subsidiary to fully constitute its capital in the country in which it operates as a financial entity in the local market. The subsidiary must also fully comply with requirements on solvency, provisions, market risk and liquidity as stipulated in the Chilean regulatory framework. Finally, supervisory functions aim to ensure that the management of liquidity and solvency in these banks is completely independent from the parent bank.

[10]/ The one exception is banks focused on foreign trade, where exposure exceeds 25% in some cases. Banks with a Spanish parent company have explicit self-financing policies for the subsidiaries, which translate into percentages below 1% of total assets in the Chilean case.

[11]/ The overseas deposits of foreign-owned local banks peaked at 25% of effective equity in the past year, which is less than the exposure of some national banks.

Table V.2

Impact of stress tests on profitability

(percent of Tier 1)

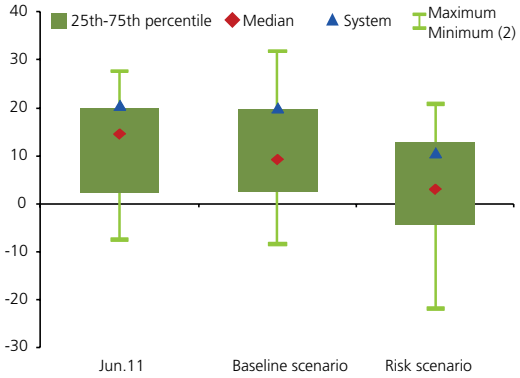
	Risk scenario
initial ROE	20.6
Market risk	-1.1
Valuation	-0.3
Repricing	-0.8
Currency	0.0
Credit risk	-15.3
Consumer	-3.4
Commercial	-11.9
Housing	0.0
Margin	6.4
Final ROE	10.6

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

Figure V.15

Return on equity forecasts under different scenarios (1)

(percent)



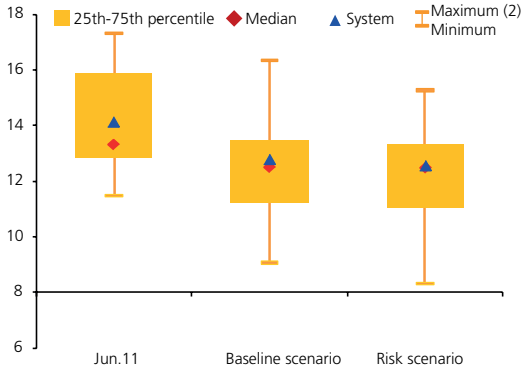
(1) Data weighted by the Core Tier 1 of each institution.
(2) Minimum is the 1st percentile.

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

Figure V.16

Capital adequacy ratio forecasts under different scenarios (1)

(percent)



(1) Data weighted by the core Tier 1 of each institution.
(2) Maximum is the 90th percentile.

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

The strengths of the Chilean banking system are reflected in different market indicators and the positive assessment of international agencies

The discount rates on securities issued in the local market and the favorable conditions in international debt markets reflect the positive perception of the national banking system held by investors in these instruments. The solid earnings and solvency position of the national banking system is emphasized by the IMF's Financial Sector Assessment Program (FSAP) in August 2011 and the World Economic Forum's Global Competitiveness Report 2011–12, which is consistent with the improvement in the risk rating of local instruments. Finally, the trend in the stock indices of local banks is disengaged from the trend of their foreign parent companies, instead recording a performance more in line with the trend in the IPSA.

Stress tests[12]/

The exercises carried out using data for June 2011 show that the banking system is in an appropriate financial position to operate normally and maintain its capacity to absorb the materialization of a severe risk scenario

The baseline scenario considers an output level and interest rates consistent with the forecasts described in the *Monetary Policy Report* for December 2011. Specifically, the economic growth rate considered for 2012 is 4.2%, the interest rate on one- to three-year UF-denominated loans forecast for December 2012 is 4.9% and the forecast rate on endorsable mortgage loans is 5.8%. In contrast, the risk scenario considers a significant downturn toward the end of this year. This scenario assumes temporarily negative growth rates for 2012, which later converge to 2.2%. In addition, the scenario considers interest rate hikes of 300 basis points in the short term and 100 basis points in the long term, together with an exchange rate depreciation of 20% over a period of 15 days.

The tests show that under the risk scenario, there are losses to the system equivalent to a 10 percentage point reduction in return on equity (ROE) (table V.2). At the level of individual institutions, some banks, which together represent 19% of the system's Tier 1 capital, show negative earnings under the risk scenario (figure V.15). For the majority of banks, however, the capital adequacy ratio (CAR) remains over 11% (figure V.16)[13]/.

Finally, bear in mind that stress tests are an analytical tool that contribute to identifying weaknesses and sizing up financial strengths 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.

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

[13]/ These results take into account capital increases made by the banking system in the current year, together with an average equity reinvestment rate of 30%.

VI. Financial regulations and infrastructure

Table VI.1

Amounts settled and processed through the large-value payment systems (1)

(Ch$ billion)

	2010	2011
Payments settled in the RTGS	6,962	8,042
Interbank	2,076	2,945
Own account	713	1,005
Client account	667	1,112
Securities market, CCLV (2)	401	383
Securities market, not CCLV	295	446
Clearing houses (net)	610	595
Checks	98	117
Automatic teller machines	18	21
Combanc	494	457
Central Bank of Chile	4,276	4,501
Payments processed in *Combanc*	2,903	2,970
Own account	772	812
Client account	1,697	1,564
Securities market, not CCLV	434	594

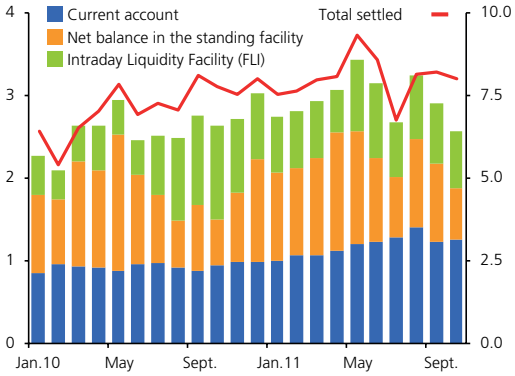
(1) Daily averages. Data for the period from January to September of each year.
(2) For 2010, data are for SCL, the old securities clearing house.

Sources: Central Bank of Chile and *Combanc*.

Figure VI.1

Liquidity in the RTGS system (*)

(Ch$ trillion)



(*) Monthly daily average.

Source: Central Bank of Chile.

The amounts settled in the large-value payments systems have increased, as has the use of retail payment means. In the area of regulation and supervision, one of the highlights was the commencement of the Financial Stability Council.

Payment systems and financial infrastructure

Large-value payment systems[1]/

In the first nine months of 2011, the amounts settled in the RTGS system were 15% higher than in the same period last year, despite the fact that growth slowed in the last quarter. This increase is explained by the growth of interbank operations: own account and client account transactions increased 41 and 67%, respectively, in the period. The rise in interbank operations reflects the low basis of comparison in the first half of 2010, when the operation of the short-term liquidity facility (known locally by its Spanish acronym, FLAP) substituted the volume of interbank transactions (table VI.1 and figure VI.1).

Retail payment systems

The use of checks continued to decline in 2011, although the associated amounts increased in the period. Nonbank credit cards did not change substantially relative to last year in terms of amounts, but the downward trend in number of transactions was reversed. Bank debit and credit cards continued to grow at levels consistent with previous periods (table VI.2 and figure VI.2). The strong growth of bank debit and credit card transactions is related to the increase in the number of businesses using the system, as a result of a reduction in the associated operating costs, and the proliferation of point-of-sale (POS) terminals. In the case of credit cards, another factor is their use as a means of transacting consumer loans (chapter V).

[1]/ The large-value payment systems (LVPS) are made up of the real-time gross settlements (RTGS) system and the large-value payment clearing house (*Combanc*). The RTGS system settles gross transactions immediately in the accounts of each bank, whereas *Combanc* nets the transactions for each bank at the end of the day and then clears them through the RTGS system.

Table VI.2

Main retail payment means
(Ch$ billion)

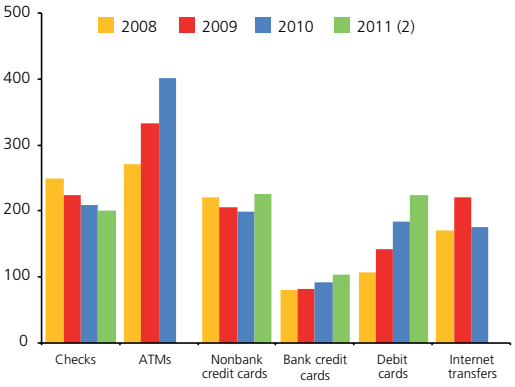
	2009	2010	2011 (*)
Checks	336,650	320,174	324,554
ATMs	13,729	17,212	n.a.
Nonbank credit cards	4,636	5,438	5,600
Bank credit cards	3,713	4,598	5,574
Debit cards	2,580	3,460	4,348

n.a.: Not available.
(*) Annualized data as of June 2011.

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

Figure VI.2

Retail payment means (1)
(millions of transactions)

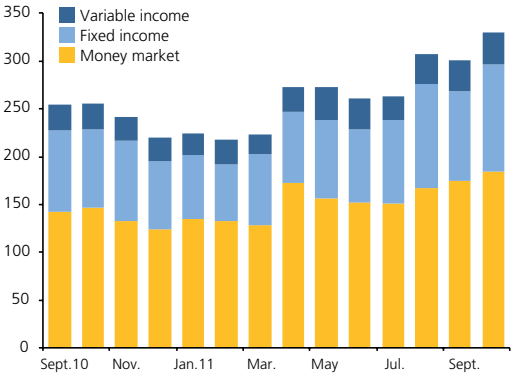


(1) Includes personal and business transactions.
(2) Annualized data as of June 2011.

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

Figure VI.3

Amounts settled in the CCLV by type of instrument (*)
(Ch$ billion)



(*) Daily averages.

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

Major highlights

The banks' use of Central Bank liquidity management tools decreased, as did the share of Combanc in the large-value payment systems

The slowdown in the growth of the amounts settled in in the RTGS system in the last quarter was caused by a drop in Central Bank operations, especially in terms of the amounts processed through the standing deposit facility and intraday liquidity facility. Thus, the average daily payments settled in the first three quarters was Ch$8 trillion a day, while the balances cleared in *Combanc* approached Ch$3 trillion.

As mentioned in previous *Reports*, the reduction in *Combanc's* share in the large-value payment systems between 2010 and 2011 is related to the entry into operations of the new securities clearing house (*Sociedad CCLV*), whose transactions are channeled through the RTGS system. However, OTC transactions and other fund transfers that do not originate in the securities market continue to be settled through *Combanc*.

Despite channeling a growing number of transactions, the CCLV has not experienced any operating contingencies or difficulties since it opened

Transactions processed in the CCLV have grown around 30% since the clearing house opened. This primarily reflects the growth of fixed-income and brokerage operations between September 2010 and October 2011, while variable-income operations grew just over 20% in the period (figure VI.3). This increase in the amounts processed through the CCLV did not translate into higher average daily payments settled in the RTGS, due to the efficiency of the settlement process in that system. Consequently, the net amounts settled in the RTGS system were actually lower than in the equivalent previous period.

The greater volume of transactions processed has been smoothly absorbed by the CCLV. This is particularly notable given that 55% of the settlements are generated by brokerage operations, which put more pressure on the system since they are settled the same day they are submitted.

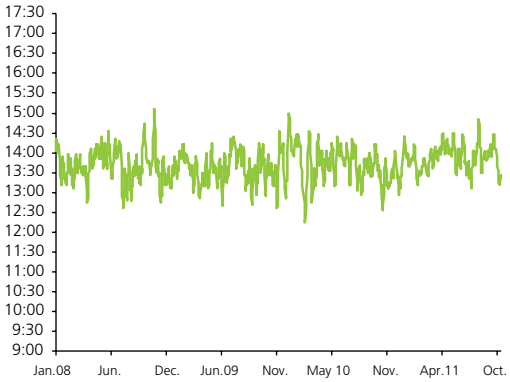
The orderly settlement of transactions through time indicates that the RTGS system is functioning well

The time of day at which 50% of the daily transactions are settled in the RTGS system is an indicator of operating risk with regard to the possible impact of an interruption of service. If a large share of transactions is settled near the close of the business day, a system failure could imply that a large share of settlements would not be made that day, with consequences for the financial system. Since 2008, the time at which 50% of operations have been settled is between 13:00 and 14:00. The RTGS system stops receiving transfer instructions at 17:30 (figure VI.4).

Figure VI.4

Completion of 50% of RTGS transactions (1) (2

(time)



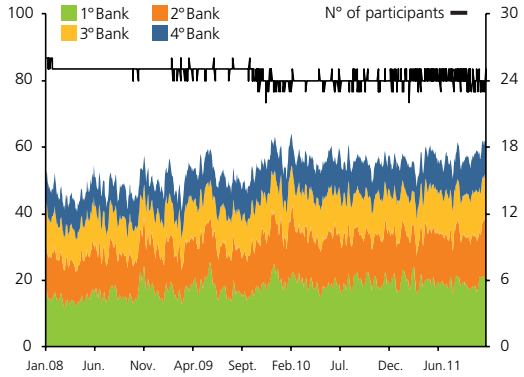
(1) Weekly moving average of transactions accumulated in 15 minute periods.
(2) Excluding Central Bank operations and transactions processed by the clearing houses.

Source: Central Bank of Chile.

Figure VI.5

Share of RTGS transactions (1) (2)

(percent, number of banks)



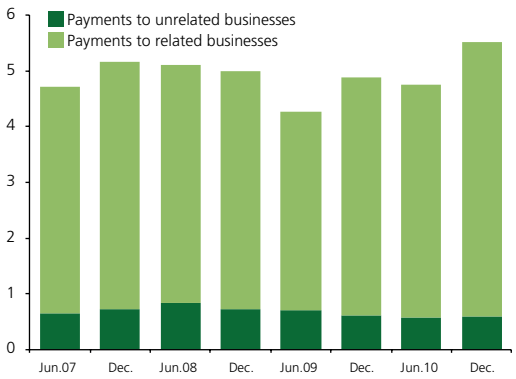
(1) Weekly moving average of the banks' share in aggregate transactions (credit and debit).
(2) Excluding Central Bank operations and transactions processed by the clearing houses.

Source: Central Bank of Chile.

Figure VI.6

Payments with nonbank credit cards (1)

(US$ billion) (2)



(1) Accumulated halfyearly flow.
(2) Constant dollars (fixed-base index, Dec.10 = 100).

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

The four banks that settle the largest amounts in the RTGS system account for approximately 50% of the total. To safeguard the settlement system, all banks that participate in the RTGS system are required to implement high operating standards and contingency plans, so as to minimize the impact of a failure from any given participant (figure VI.5).

In relative terms, the use of nonbank credit cards in businesses not related to the issuer has fallen

On aggregate, the amounts paid to businesses not related to the issuer using nonbank credit cards were relatively stable during the period covered by the available data (2007–10). In relative terms, however, the fraction of payments made to unrelated businesses fell in the last two years of the sample, from 17% of total nonbank credit card payments in the first half of 2009 to 11% in the second half of 2010 (figure VI.6).

Beyond the stability at the aggregate level, the issuers displayed different dynamics in the period. This was particularly the case with the five largest issuers, which accounted for more than 85% of these flows in 2010. One of the issuers doubled the amounts paid to unrelated businesses in the second half of 2010 relative to the first half of 2007, another recorded high volatility and others were relatively stable in the period (figure VI.7).

An analysis of 2010 reveals a direct relationship between payments to related and unrelated businesses. Thus, credit cards that record more sales within the respective business group are also used more widely as a means of payment outside the stores related to the issuer (figure VI.8).

The main nonbank issuers have a significant regulatory capital buffer[2]/. At the same time, the most important issuers in terms of payments to unrelated businesses also have the highest levels of capitalization. While there is one issuer that does not precisely fit this description, its capital was five times the minimum required by the regulatory framework (figure VI.8).

Financial regulation

Results of the Financial Sector Assessment Program

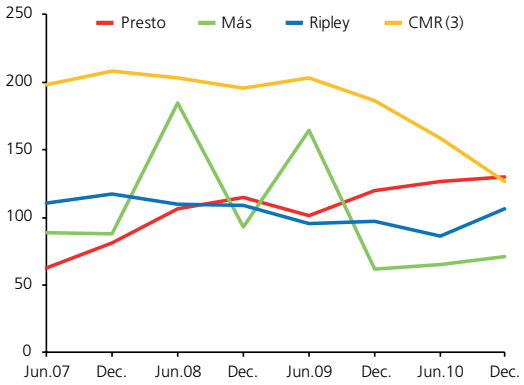
This year, the Chilean financial sector underwent a new evaluation within the framework of the Financial Sector Assessment Program (FSAP). A team formed by the World Bank, the IMF and external experts analyzed the stability of the financial system, identifying strengths and areas for improvement and giving specific recommendations on how to increase the soundness of the Chilean system. The FSAP assessments are carried out periodically in different countries (the last assessment in Chile was in 2004), and their objective is to help governments, central banks and supervisory authorities understand and improve their financial systems. This section summarizes the main aspects of the 2011 FSAP report for Chile.

[2]/ Nonbank issuers with total payments to unrelated companies of over UF1,000,000 have a minimum capital requirement of UF100,000 when the payments are made within three bank days and UF200,000 when the payments are made at longer terms.

Figure VI.7

Payments with nonbank credit cards to businesses not related with the issuer (1)

(US$ million) (2)



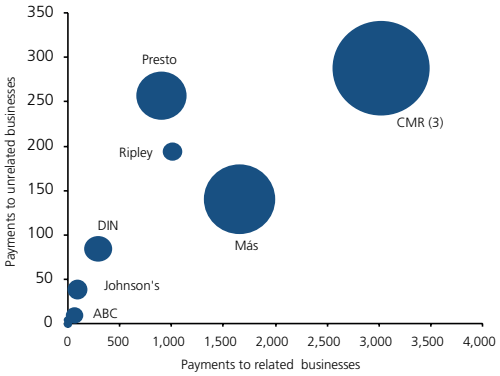
(1) Main issuers. Accumulated halfyearly flow.
(2) Constant dollars (base index, Dec.10 = 100).
(3) Excluding payments with CMR-Visa cards.

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

Figure VI.8

Payments with nonbank credit cards and issuer capitalization in 2010 (1)

(US$ million) (2)



(1) The size of the circle is proportional to the issuer's capital.
(2) Constant dollars (fixed-base index, Dec.10 = 100).
(3) Excluding payments with CMR-Visa cards.

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

The Chilean financial sector is one of the deepest in the region, and it is highly integrated in the global financial system. Banks are well capitalized, liquid, and highly profitable. Stress tests did not reveal near-term stability concerns, suggesting that the banking system is likely to be resilient to adverse shocks. Earlier concerns with the solvency of the financial industry have largely been addressed.

One of the main goals of prudential policies is to prevent a build-up of potential vulnerabilities, especially as capital flows may intensify, raising the risk of credit and asset price bubbles. Efforts to reduce information gaps to help firms assess credit risk and support the authorities in monitoring systemic risks should therefore continue.

Chile's financial and regulatory system is robust. Areas for further strengthening are the independence and legal protection of regulatory authorities, the oversight of financial conglomerates, the anti-money laundering and terrorist financing framework, and the framework for the resolution of failed financial institutions. The authorities are rightly focused on improving the regulatory architecture while taking onboard a macroprudential function, and have recently established a Financial Stability Council.

Regional consultative groups of the Financial Stability Board (FSB)

In its work to promote financial stability at the international level, the FSB has incorporated countries that are not members of the G20, to ensure that their activities fully reflect the nature of the international financial system. In this context, six regional consultative groups were created toward the end of last year, in which authorities from both FSB member countries and nonmembers (such as Chile) can exchange opinions on the vulnerabilities affecting the international financial system and discuss initiatives for promoting financial stability. The regional consultative group for Asia met in November of this year, and the regional group for the Americas had its first meeting on 2 December, with Chile participating as co-chair. The group's discussions were focused on systemically important financial institutions, Basel III, the sovereign debt crisis in Europe and the risks of contagion, among other issues.

Regulations issued in the country

Commencement of the Financial Stability Council

On 4 October, Ministry of Finance Decree 953 was published in the *Official Gazette*, formally establishing the creation of the Financial Stability Council (FSC), which, as discussed in the last *Report*, was recommended by the Commission on Financial Regulation and Supervision Reform. The FSC's mission is to propose and coordinate measures that safeguard the integrity and soundness of the financial system, and to provide the necessary mechanisms for coordinating and exchanging information in order to implement a preventive approach to systemic risks and the resolution of critical situations requiring the exercise of the Superintendents' powers and functions.

In its first session, the council members agreed on the creation of a Technical Secretariat within the FSC, which will be housed in the Ministry of Finance, adopted a set of Internal Regulations and approved the creation of three working groups in the following areas: (i) monitoring of the external situation; (ii) oversight of financial conglomerates; and (iii) regulatory and legislative coordination.

The FSC is composed of the Minister of Finance (who presides over the council), the Superintendent of Securities and Insurance, the Superintendent of Banks and Financial Institutions, and the Superintendent of Pensions. In addition, the Governor of the Central Bank is invited to attend council meetings.

Regulations affecting mutual funds and exchange-traded funds (ETF) (June 2011, www.svs.cl)

Through Circular 2,027, the SVS established a new system for mutual funds on deposits of internal rules, which aims to improve the information available to investors and standardize internal rules.

The SVS also issued two General Type regulations (GT) outlining instructions to mutual funds that operate as exchange-traded funds (ETF). First, GT 312 established standards for "mutual funds whose internal rules consider the contribution and recovery of instrument shares," with requirements on the contribution and recovery of shares. In addition, fund administrators are obligated to sign contracts with stock brokers in order to act as market makers, keeping current buy/sell offers on fund shares throughout the exchange's trading hours.

Second, GT 313 addresses mutual funds that establish an investment policy conditioning their investments or returns on an index. This GS defines some key concepts for these instruments, identifies the characteristics of eligible indices to which these instruments can be conditioned and specifies investment limits, a tracking error margin of 5% and information that must be reported to the fund's shareholders.

New law on derivatives taxation

On 22 October, Law 20,544 on derivatives taxation was published in the *Official Gazette*. The objective of this legislation is to provide tax certainty to the derivatives market. Prior to the publication of this law, there were no regulations governing the taxation of these instruments, which were addressed in Administrative Directives and interpretations by the Chilean Internal Revenue Service (SII).

This law defines derivatives contracts (as well as contracts that are not covered by this law), stipulates the guidelines for determining the source and nature of income and establishes the obligation for taxpayers to send a sworn statement to the SII reporting any and all derivative transactions

carried out and to maintain a record of these transactions, which must contain the information and format specified by the SII and be made available to the SII on request.

Sernac and financial consumer protection

On 5 December, Law 20,555 was published in the *Official Gazette,* granting increased powers and functions to the National Consumer Service (*Sernac*) in the area of financial services and assigning the additional resources and authority for performing these new functions. Highlights of the initiative include vesting *Sernac* officials as certifying officers and conferring rights to consumers of financial products or services, such as the right to receive information on the total cost of the product or service, including the equivalent annual charge, and to be informed of the total loan payment on request.

The Law also includes provisions to promote the simplicity and transparency of contracts and stipulates that lenders that offer the option of automatic payments via an account transaction or electronic transfer cannot require that the electronic transfer or automatic transaction originate in their own institution. Lenders further cannot offer or sell mandatory bundled financial products or services.

An important element of the Law is the "Sernac Seal," which is a voluntary program available to institutions on request. To receive the seal, the institutions must satisfy the following requirements: (i) *Sernac* must verify that all adhesion contracts offered by the institution comply with the law and the associated regulatory provisions; (ii) the institution must provide customer service that addresses consumer inquiries and complaints; and (iii) the institution must allow the consumer recourse to a mediator or financial referee in case the customer service department does not provide a satisfactory response. There are also requirements for maintaining the seal once it is granted, such as submitting contract modifications to *Sernac* for prior approval, as well as a detailed procedure for resolving controversies.

Finally, it is mandatory for all financial service providers to provide *Sernac* with information on request, for the purpose of fulfilling its functions. The Ministry of Economy will dictate the necessary guidelines for implementing the provisions of the law, which in areas governed by special legislation will require the signature of the Minister of the respective sector.

Highlights in international regulations

Implementation of financial reforms in the U.S. (*"Dodd-Frank Wall Street Reform and Consumer Protection Act"*)

The Dodd-Frank Act, approved by the U.S. Congress in July 2010, is still in the process of implementation, as it requires the development of numerous studies and guidelines. The regulations will enter into effect gradually, with different transition periods and effective dates for different sections or even particular provisions of the law (Kern, 2010; Davis Polk, 2010).

In this half, initiatives were incorporated in the areas of orderly liquidation, investor protection and the use of ratings from credit rating agencies.

Title I, section 165 (d) of the Dodd-Frank Act establishes that systemically important financial institutions must periodically report to the Federal Deposit Insurance Corporation (FDIC) and the U.S. Federal Reserve a plan for orderly liquidation and dismantling in case of insolvency or severe financial stress. On 13 September 2011, the FDIC approved the Final Rule on Resolution Plans, which requires companies to describe their rapid and orderly resolution in the event of bankruptcy so as to preserve the stability of the financial system, taking into account specific standards and defining a set of specific actions to achieve orderly liquidation.

This law also created a new whistleblower program, which pays rewards to individuals who provide information on financial violations. The Implementation of the Whistleblower Provisions of Section 21F of the Securities Exchange Act of 1934 identifies the associated procedures. In particular, the whistleblower must be a natural person; the provision of information on the legal violation must be voluntary; the reward will be paid only for original information that leads to the successful enforcement of an action brought by the Securities and Exchange Commission (SEC) that results in monetary penalties exceeding US$1,000,000; and the reward will range from 10 to 30% of the penalty. Finally, employers are prohibited from retaliating against employees who blow the whistle.

Finally, the Dodd-Frank Act requires financial regulators to reduce dependence on credit rating agencies. To address this requirement, the SEC adopted new short form criteria to replace ratings by these agencies. Previously, companies that had received an investment-grade rating by at least one nationally recognized statistical rating organization were allowed to use short forms to register an offering of non-convertible securities (other than common equity), and the issuers were allowed to use certain published reports to satisfy the SEC reporting requirements. The criteria that replace the investment-grade option are related to the amount of recent issues of non-convertible securities (other than common equity) by the company, the amount of outstanding non-convertible securities, or the company's status as a subsidiary of (or as controlled under certain conditions by) a well-known seasoned issuer.

"Policy Measures to Address Systemically Important Financial Institutions," FSB, November 2011

Systemically important financial institutions (SIFI) are those entities that, should they run into trouble, could cause a disruption to the financial system as a whole and economic activity. Given these characteristics, it has been determined that the regulatory and supervisory treatment of these institutions should be different from other institutions. In this publication, the FSB presents a range of policy measures with the objective of avoiding the need to use public resources to resolve a troubled SIFI. These measures include a requirement for global SIFIs to draw up resolution and recovery plans, with inter-jurisdictional cooperation agreements; higher regulatory capital requirements; and more intensive supervision, with expanded powers for the authorities. The document also includes plans for implementing

the measures, and it explicitly identifies an initial group of 29 systemically important financial institutions at the global level.

Documents of interest published by national and international organizations

In the second half of 2011, the international discussion on financial regulation has been dominated by topics associated with capital and/or liquidity requirements, bank resolution and governance. The discussion of these issues is related to systemically important institutions (table VI.3).

Tabla VI.3

List of documents reviewed

Document	Title	Organization	Capital / Liquidity	Infrastructure / Transparency	SIFI	Resolution	Macroprudential Regulation	Riesk mgmt. / Governance
1/	Assessment of the macroeconomic impact of higher loss absorbency for global systemically important banks	BIS	x		x			
2/	Capitalisation of bank exposures to central counterparties - Consultative document	BIS	x	x				
3/	Global liquidity – concept, measurement and policy implications	BIS	x					x
4/	Global systemically important banks: Assessment methodology and the additional loss absorbency requirement	BIS	x		x			
5/	Operational Risk – Supervisory Guidelines for the Advanced Measurement Approaches	BIS						x
6/	Payment, clearing and settlement systems in the CPSS countries - Volume 1	BIS		x				
7/	Principles for the Sound Management of Operational Risk	BIS		x				x
8/	Range of Methodologies for Risk and Performance Alignment of Remuneration	BIS						x
9/	Report on asset securitisation incentives	BIS	x	x				x
10/	Resolution policies and frameworks – progress so far	BIS				x		
11/	The impact of sovereign credit risk on bank funding conditions	BIS	x	x				
12/	Principles for financial market infrastructures - consultative report	BIS-IOSCO	x	x				x
13/	Report on OTC derivatives data reporting and aggregation requirements	BIS-IOSCO		x				
14/	The Bank of England, Prudential Regulation Authority - Our approach to banking supervision	BoE	x			x	x	x
15/	The Bank of England, Prudential Regulation Authority - Our approach to insurance supervision	BoE	x					x
16/	EBA Guidelines on Internal Governance	ABE						x
17/	Eurosystem Oversight Policy Framework	BCE		x				
18/	Recovery and Resolution Plans - Consultation Paper	FSA	x		x	x		x
19/	A Coordination Framework for Monitoring the Implementation of Agreed G20/FSB Financial Reforms	FSB	x	x	x	x	x	x
20/	Consultative Document - Effective Resolution of Systemically Important Financial Institutions - Recommendations and Timelines	FSB			x	x		
21/	Key Attributes of Effective Resolution Regimes for Financial Institutions	FSB	x		x	x		
22/	OTC Derivatives Market Reforms - Progress report on Implementation	FSB	x	x				
23/	Policy Measures to Address Systemically Important Financial Institutions	FSB	x		x	x		
24/	Potential financial stability issues arising from recent trends in Exchange-Traded Funds (ETFs)	FSB	x	x				x
25/	Shadow Banking: Strengthening Oversight and Regulation	FSB		x			x	
26/	Understanding Financial Linkages: A Common Data Template for Global Systemically Important Banks	FSB			x			
27/	Study & recommendations on prohibitions on propietary trading & certain relationships with hedge funds & private equity funds	FSOC					x	x
28/	Macroprudential policy: Addressing the things we don't know	G30	x				x	
29/	Final Report Recommendations	ICB	x			x		x
30/	Principles for Dark Liquidity - Final Report	IOSCO	x	x				

Source: Website of each institution.

Box VI.1: **The institutional framework of financial regulation and supervision in Chile and the case of *La Polar***

This box analyzes the institutional framework of financial regulation and supervision in light of what happened with the retail company *La Polar*, including the role played by Central Bank regulation.

La Polar is a relatively small company, in terms of both the volume of operations and its interconnections with the financial system. Under this metric, it is not a systemically important financial entity. The case has had serious consequences, however, with negative effects on a large number of people. Those affected include consumers who contracted debt with *La Polar* and investors who held the company's stocks and bonds, either directly or through their pension funds.

For the purpose of analysis, it is useful to separate the company's activities according to its roles as lender, securities issuer, and participant in the retail payments system. Each of these roles is governed by a different regulatory and supervisory framework with specific objectives, which are analyzed below.

Preserving financial stability and the public trust of depositors and insured persons

In Chile, as in the rest of the world, the most restrictive regulatory framework—and the area receiving the most public resources—pertains to the supervision of the solvency of entities that, with express legal authorization, are dedicated to obtaining resources from the public in order to then loan or invest those funds. This emphasis is necessary because any problems that arise in the functioning of these operations could affect the stability of the financial system, undermine the public trust or require the use of state resources. Among the entities in question, banks in particular are subject to broad regulation and have a long tradition of supervision by the Superintendence of Banks and Financial Institutions (SBIF), which explicitly considers risk management and policies for credit operations. Similarly, the SVS supervises the solvency of insurance companies.

The savings and loan cooperatives (S&Ls) and the family compensation funds (*cajas de compensación*) are also subject to a specific regulatory and oversight framework, although individually they are not systemically important. The largest S&Ls are supervised by the SBIF, while the remainder falls under the jurisdiction of the Department of Cooperatives within the Ministry of Economy[3]/. The Superintendence of Social Security (SuSeSo) is charged with overseeing the family compensation funds. While this regulatory and supervisory framework has elements in common with the supervision of bank solvency (especially in the case of S&Ls, which take in public resources), it is more focused on ensuring that these institutions fulfill their role in the area of financing.

In the case of other agents, such as retail companies and car loan providers (chapter IV), risk management and policies for credit operations are not subject to a specific regulatory framework, so their oversight is not assigned to a specialized supervisor.

Protection of borrowers in the financial system

The protection of the rights of borrowers in the financial system—including the clients of banks, retail companies, insurance companies, mutual societies and other entities—is based on specific legislation that applies to all money and credit operations (Law 18,010). This legislation includes the framework for determining the maximum conventional rate, as well as the Consumer Protection Law (Law 19,496). The laws assign specific oversight roles to the SBIF, SVS and *Sernac*.

Protection of the public trust of investors

The Chilean corporate legislation (Law 18,046) contains the regulatory framework covering the constitution and operations of corporations such as *La Polar S.A.*, with a focus on minimizing moral hazard. The securities legislation (Law 18,045), in turn, seeks to provide investors with a sufficient, timely, true and equitable flow of information so as to minimize information asymmetries, by defining mandatory reporting requirements for issuers of public securities. These requirements include the obligation to report audited information, which applies to issuers of securities listed in the

[3]/ In accordance with the General Law on Cooperatives, S&Ls with equity exceeding UF400,000 are subject to oversight and supervision by the SBIF. Of the 47 S&Ls identified by the Department of Cooperatives, five are supervised by the SBIF.

Securities Registry maintained by the SVS, the agency in charge of overseeing issuers' compliance with the general norms on the presentation of financial statements, which are consistent with current international standards. The public good that is the object of these safeguards is investors' confidence in financial assets, a key component of a disintermediated financial market.

Functioning of the payments systems

Another important element in the analysis is the safeguarding of the retail payments systems, given that *La Polar S.A.* acts as a nonbank credit card issuer through its subsidiary, *Inversiones S.C.G. S.A.* The credit cards in question are "open" cards that are accepted in businesses that are not related to *La Polar.*

In 2006, the Central Bank issued regulations applicable to issuers of nonbank credit cards, in fulfillment of its legal mandate to safeguard the normal operation of the payments systems[4]/.

These regulations require that issuers of open nonbank credit cards comply with the legal requisites, including filing in the Issuers and Operators Registry maintained by the SBIF in order to establish the applicable supervisory and regulatory guidelines prior to the startup of the regulated activity. Other prudential requirements address minimum capital and equity requirements, corporate purpose, the assessment of risk management and control, and the potential obligation to hold liquid assets, which depends on the payment terms agreed with affiliated establishments[5]/ These rules and procedures seek to reduce the risk of an interruption in payment to the associated businesses.

The rest of this box highlights lessons from the *La Polar* case that are germane to regulatory issues and discusses various measures currently under study, which could reduce the probability of similar situations arising in the future.

1. Strengthening consumer protection

The regulatory and institutional framework for consumer protection displayed significant need for improvement.

In this context, the provisions in Law 20,555 for improving the legislation on consumer rights protection (Law 19,496) are a move in the right direction, as they confer additional powers and resources on *Sernac* in the area of financial consumer protection (chapter VI).

It is also necessary to develop legislative initiatives aimed at increasing transparency and possibly limiting client charges associated with the administration of past-due loans. In this sense, one specific advance is the proposal of specific legal limits on charges in out-of-court debt collection[6]/.

Another important issue is the need to increase the coordination between the institutional framework on consumer protection and the sectoral supervision of the financial system. Reports by Sernac staff should be incorporated into sectoral oversight as directly as possible, providing an additional element of financial monitoring.

2. Improving information on portfolio quality

In the past few years, SVS regulation has advanced toward convergence with international financial reporting standards (IFRS). Based on these guidelines, corporations report detailed complementary information via notes to the financial statements.

As the case of *La Polar* illustrates, however, corporations that regularly carry out consumer credit operations may require more detailed reporting standards in order to promote better decision-making on the part of entities that invest in this type of company through their public securities. To this end, the SVS requested that the retail companies under its supervision add explanatory notes to their financial statements, through which they provide information on their corporate policies on lending, debt renegotiation, refinancing, provisions and write-offs, as well as their provision factors and a breakdown of their normal and renegotiated loan portfolios.

[4]/ The regulatory guidelines contained in Chapter III.J.1 of the *Compendium of Financial Regulations* is applied to credit card issuers and operators subject to SBIF oversight, in accordance with the stipulations of the second paragraph of article 2 of the General Banking Law, in relation to article 35 N° 7 of the Central Bank's Basic Constitutional Act. This regulation specifies the regulatory burden applicable in each case, based on the nature of the operations deriving from the use of the respective credit card system, taking into account its impact or importance as a generally accepted means of payment. For more detail, see the Presentation to the Economy, Fostering and Development Commission of the House of Representatives, constituted as an Investigative Commission, July 2011 (www.bcentral.cl).

[5]/ The current regulation establishes a threshold of UF1,000,000 in annual payments to unrelated businesses for these requirements to apply.

[6]/ Specifically, there is a proposal for improvement of article 37, Law 19,496 (which was not included among the changes to this legislation that were recently approved via Law 20,555).

3. Strengthening the oversight role of corporate governance and reviewing the role of auditing firms and risk rating agencies

The corporate governance of *La Polar* was clearly insufficient for handling agency problems, despite a legal change in 2009 that introduced improvements to the pertinent regulatory guidelines (Law 20,382)[7]/.

The financial crisis underscored the importance of corporate governance and the problems that arise when governance fails. Several initiatives are thus being developed at the international level to address these issues, including a set of principles by the BIS and the Dodd-Frank Act in the U.S.[8]/ With regard to the latter, one of the key elements involves strengthening corporate governance and handling conflicts of interest, with a focus on the central role played by corporate directors in monitoring the company.

Finally, auditing firms and risk rating agencies play a complementary role in the detection of anomalies and the signals they send to the market. A rigorous review by these agencies is critical for strengthening the transparency of information in the market and promoting confidence among participants.

4. Adjusting the regulation of nonbank credit card issuers

Although the case of *La Polar* did not have an effect on the Central Bank's ability to fulfill its public duties in the area of credit card regulation, the Board ordered an exhaustive review of the relevant regulatory guidelines with the goal of incorporating, within a reasonable timeframe, the necessary adjustments or improvements as prescribed by its legal mandate and the powers conferred on the Bank in these matters[9]/.

5. Thoughts on the extension of the scope of regulations on credit operations

In the public discussion, it has been suggested that this case could have been avoided if there was an agency responsible for the direct supervision of the credit policies and procedures of retail companies like *La Polar*, over and above the current supervisory realm of the SBIF. As already explained, the SBIF is concerned with credit card issuers (in this case, *Inversiones S.C.G. S.A.*) and their potential impact on the payments systems, and not with the granting of credit by retail companies as a whole.[10]/.

This would imply conferring powers to a specialized agency to allow it to supervise retail companies and other credit providers, independently of whether they habitually take in funds from people, and applying a supervisory regime similar to the banking sector. This would require, for example, the establishment and on-site inspection of renegotiation policies, credit risk provisions, concentration criteria, delinquent credit information mechanisms, write-off periods, and so on.

Such an institutional design is not common in the rest of the world, and there is no international consensus on best practices. In particular, and especially in the wake of the financial crisis that began in 2008, the international discussion has suggested the possibility of widening the regulatory perimeter, so as to include entities that, although they do not take in funds from people, do represent a risk to financial stability based on their size, complexity and/or degree of interconnection with other agents in the financial system[11]/.

The emergence of legislative proposals on the maximum conventional rate and the treatment of financial and economic reporting requirements would imply substantially expanding the responsibilities assigned to the SBIF, at least with regard to specific aspects of the provision of credit by agents other than those that have traditionally been supervised (box IV.2)[12]/.

This could be a positive development, to the extent that it increases the effectiveness of the aforementioned legislative initiatives. It also raises a challenge, however, in terms of ensuring that this extension of authority does not undermine the SBIF's performance of its current supervisory duties. It will be critical to precisely define the reach of the agency's new functions.

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[7]/ The SVS is developing advances in this area through the regulatory channel. In particular, General Standards 309 establishes principles on corporate governance for insurance companies.

[8]/ "Principles for Enhancing Corporate Governance" (2010).

[9]/ See chapter VI of the last *Report*.

[10]/ The regulations, and thus the actions of the SBIF, are only applied if the retail company contracts payment liabilities with unrelated businesses. In 2010, this type of transaction totaled approximately UF3.8 million in the case of *La Polar*, or just under US$170 million.

[11]/ "Financial Stability Issues in Emerging and Developing Economies, Report to G-20 Ministers and Central Bank Governors," World Bank, IMF, FSB (2011).

[12]/ The proposed bills on the maximum conventional rate and the consolidated debtor database coincide in their definition of entities that are subject to oversight by the SBIF, namely, all companies or institutions that carry out credit operations for an annual amount of UF100,000 or more.

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Glossary

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

Additional provisions: Bank provisions constituted in excess of required provisions, which are not allocated to any particular loan portfolio.

Available-for-sale instruments: Financial instruments that are not included in either the trading instruments category or the held-to-maturity investment category.

Average interbank interest rate swap (*promedio cámara*)**:** Derivatives contract between two parties, who carry out an exchange of flows at future dates, between a fixed rate established when the contract is written and a variable rate (fixed-for-floating swap). The variable rate corresponds to the average interest rate in the interbank clearing house (*cámara*), which in turn is derived from the average clearing house index.

Basel II: The second accord issued by the Basel Committee on Banking Supervision (BCBS), with the goal of creating an international standard for the banking industry's operation and risk control. Basel II is based on three pillars, which seek to foster greater stability of the financial system: (1) minimum capital requirements aimed at making resource allocation more sensitive to credit and market risks; (2) procedures for improved supervision; and (3) greater market discipline.

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

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%).

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

CCAV: Large-Value Payment Clearing House (*Cámara de Compensación de Pagos de Alto Valor*). Electronic system of interbank payments that operates as a netting engine, with procedures to ensure the final clearing of the net results of each settlement cycle in the RTGS system.

CDS: Credit default swap. A derivative instrument that provides insurance against the credit risk of the issuer of a given underlying sovereign or corporate bond. The institution that grants the CDS commits to covering the loss associated with a previously established credit event occurring before the bond's maturity date.

CEMBI Broad Premium: Measures the differential return on corporate bonds in dollars issued by a set of emerging economies in international markets, relative to U.S. Treasury bonds.

CEMBI Chile Premium: Measures the differential return on corporate bonds in dollars issued by Chilean firms in international markets, relative to U.S. Treasury bonds.

Central government: Institutions associated with the three branches of the State (executive, legislative, and judicial), as well as Law 13,196, the interest earned from recognition bonds, and the oil price stabilization fund.

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).

Consolidated government: Total central government and the Central Bank of Chile.

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.

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

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

Currency mismatch: The difference between foreign currency liabilities and foreign currency assets, less the net position in derivatives (the difference between buy and sell positions in derivatives contracts). An alternative indicator 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.

Currency swap: A contract between two parties establishing a commitment to exchange the specified notional principal and fixed interest in one currency for the specified notional principal and fixed interest in another currency, at a future date and at a pre-established price. In this type of contract, the notional principal must be specified in both currencies.

Default: The nonpayment of the interest or principal on a legally contracted debt.

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

EBA: European Banking Authority. Established by the European Parliament on 24 November 2010 to replace the Committee of European Banking Supervisors (CEBS). This regulatory agency arose from the need to monitor, evaluate and advise on the behavior of the European banking systems.

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

EMBI Premium: 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 (*Fondo de Estabilización Económica y Social, or FEES*). Created in 2007 by Decree with Force of Law DFL 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.

ETF: Exchange-traded funds. A hybrid investment vehicle that is an open-end mutual fund investing in financial instruments and at the same time is quoted and traded on the securities exchange (closed-end fund), and its value is quoted throughout the day.

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 drafts. 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.

FLAP: short-term liquidity facility (*Facilidad de Liquidez a Plazo*). Financing provided by the Central Bank of Chile to banking entities, at maturities of 90 to 180 days and at a fixed rate for the full period of the operation. The guarantees required for these operations are the same as those for overnight loans.

FLI: Intraday liquidity facility (*Facilidad de Liquidez Intradía*). Financing granted by the Central Bank of Chile to banking entities through the RTGS system. This facility operates daily through the purchase of financial instruments with a repurchase agreement. The terms and conditions of these operations are contained in the Central Bank's financial regulations.

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.

FPD: Standing deposit facility (*Facilidad Permanente de Depósito o Depósito de Liquidez*). 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.

FSAP: Financial Stability Assessment Program. Joint initiative of the IMF and the World Bank, through which experts from these institutions undertake a comprehensive assessment of the financial systems of countries that voluntarily participate in the program, identifying strengths and weaknesses and recommending measures to reduce vulnerabilities and improve financial intermediation.

FSB: Financial Stability Board. An international forum operating under the auspices of the G20, comprising national financial authorities and international agencies. The Board's objective is to coordinate the work of its members in the development and promotion of effective regulation and supervision, as well as other financial policies.

Funding volatility ratio: The fraction of liquid assets that are financed with volatile liabilities, measured as liquid assets over volatile liabilities net of liquid assets.

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

G7: An economic and political group made up of the seven largest industrialized countries (namely, Canada, France, Germany, Italy, Japan, the United Kingdom, and the United States).

Goodwill: The recognized value of a company, above the market value of its assets.

Herfindahl index: A measure of market concentration, defined as the sum of the squares of the market shares of the firms in an industry.

IFRS: International Financial Reporting Standards. A set of standards issued by the International Accounting Standards Board (IASB), whose goal is the comparable and transparent revelation of financial statement information, for all participants in the world capital markets.

Impaired portfolio: Loans for which there is evidence that the borrowers will not fulfill their obligations under the contracted payment terms, without the possibility of recovering the debt through guarantees, legal actions, or the contracting of different terms. A loan is considered impaired when it is past due by 90 days or more.

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

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

Interest margin: Difference between the interests 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.

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.

Liquidity coverage ratio: Short-term funding requirement. The fraction of liquid assets that are financed with short-term liabilities, measured as high-quality liquid assets over 30-day liabilities net of liquid assets.

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.

Listed instruments: Instruments issued by firms and traded in the capital market.

LVPS: Large-value payment systems. Comprises the RTGS and CCAV systems.

M1: A measure of the money supply that includes currency in circulation, the value of checking accounts held by the nonfinancial private sector (net of clearing), non-checking demand deposits, and demand savings accounts.

M2: M1 plus time deposits, time savings deposits, mutual fund shares with investments in debt instruments with a maturity of up to one year, and deposits with savings and loan cooperatives, less the time deposits of the aforementioned mutual funds and savings and loan cooperatives.

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.

MKIII: Law 20,448, published on 13 August 2010, whose purpose is to increase the liquidity and depth of the capital market, enlarge the financial market, introduce elements of competition to the credit market, and facilitate the financial integration of the capital market.

MSCI: Morgan Stanley Capital International, a company that provides stock, bond and hedge fund indices. The MSCI indices are used as benchmarks because they provide a basis for comparing the value of companies or stock market indices from different economies, since they are calculated using a single methodology.

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 transfer to the nonperforming portfolio if acceleration clauses are enforced.

Onshore dollar rate: Estimate of the external rate relevant to the national foreign exchange market, which is 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 flow: Cash movements including all transactions and events that are not defined as investment or financing, which are mainly related to the entity's business, that is, the production and supply of goods and services in a given period.

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.

Paid-in capital: The contributions of shareholders for the issue of subscribed shares, which have been paid in cash, or for the capitalization of reserves or of distributable earnings.

PRF: Pension Reserve Fund (*Fondo de Reserva de Pensiones, FRP*). A fund created by the Fiscal Accountability Law, 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 is managed by the Central Bank of Chile in its capacity as fiscal agent, under investment guidelines defined by the Finance Ministry's Decree 1382 and complementary instructions.

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

Repos: Repurchase (reverse repurchase) agreements. A sale (purchase) collateralized with an agreement or commitment to repurchase (sell back) the security.

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.

Risk Rating Commission: A legally recognized entity with equity in its own right and with duties and powers established in Article 99 of Decree Law 3500, including the authorization for the pension funds to invest in stocks issued by foreign firms that are listed and traded on specified stock markets.

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 an indicator 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.

RTGS: Real-time gross settlements system. Electronic interbank payment system managed by the Central Bank of Chile, in which the processing and clearing of transactions is carried out continuously, individually, and in real time.

Savings banks: Financial institutions in Spain (known locally as *Cajas de Ahorro*), which are limited liability companies run as foundations (whereas commercial banks are corporations) and must therefore earmark a share of dividends to social ends or have government representation on the board, although they are private entities.

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

Shadow inventory: Real estate properties that have been foreclosed by the banks but are not yet listed for sale; also includes mortgages with negative equity and mortgages that are over 60 days past due, which will soon be foreclosed by the 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.

SPV: Special Purpose Vehicle. A subsidiary entity whose operations are limited to the acquisition and financing of specific assets and that has an asset and liability structure and legal status that ensure the fulfillment of obligations even if the parent company goes bankrupt.

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.

Swap: Derivatives contract between two parties, who carry out an exchange of flows at future dates. One of the most common swap contracts is the interest rate swap, in which the parties exchange predetermined flows at a fixed rate, set when the contract is written, for predetermined flows at a variable rate.

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 provision 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.

Trading instruments: Easily transferable instruments acquired with the objective of reselling them in the short term in order to make gains from arbitrage or fluctuations in the market rate or price.

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.

Type 1 mutual fund: Mutual funds that invest in short-term debt instruments, with duration of 90 days or less.

VDAX: Volatility index calculated on the basis of the implicit volatility in 30-day options on the DAX index (German stock index).

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).

BIS: Bank for International Settlements.

CDS: Credit Default Swap.

CEMBI: Corporate Emerging Market Bond Index.

CSD: Central Securities Depository.

ECB: European Central Bank.

EMBI: Emerging Market Bond Index.

EU: European Union.

GDP: Gross domestic product.

IMF: International Monetary Fund.

IPSA: *Índice de Precios Selectivo de Acciones* (Selective stock price index).

ISDA: International Swaps and Derivatives Association.

LIBOR: London Inter-Bank Offered Rate.

OECD: Organization for Economic Cooperation and Development.

PDBC: Central Bank discountable promissory notes, denominated in pesos.

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.

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

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

SVS: *Superintendencia de Valores and Seguros* (Superintendence of securities and insurance).

U.S.: United States of America.

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

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SECOND HALF 2011 FINANCIAL STABILITY REPORT