# FINANCIAL STABILITY REPORT

SECOND HALF 2023

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## Financial policy of the Central Bank of Chile (BCCh)

The Central Bank of Chile has as its purpose to ensure the stability of the currency and the normal functioning of internal and external payments. To fulfill this second objective, it must safeguard the stability of the financial system within the perimeter of its legal powers, implemented from a macro-financial perspective. The decisions and actions derived from its powers are part of its financial policy framework. In this context, financial stability is considered to exist when the system performs its functions normally or without significant disruptions, even in the face of adverse temporary situations. Identifying potential risk events, vulnerabilities and mitigators, together with assessing their impact on the financial system, are at the core of the Central Bank of Chile's financial policy analysis.

## Financial policy conduct and implementation

The BCCh conducts its financial policy seeking to contribute, within its scope of competence, to the stability of the financial system. This has been deepening and gaining stability in recent decades due, in part, to the development of financial policy tools and their adequate application, which in turn has contributed to monetary policy effectiveness and increased the economy's resilience to disruptive events.

The Bank implements its financial policy through rigorous decision-making processes, in joint and coordinated actions with the supervisor and regulator. In particular, the BCCh issues and administers financial regulations, decides on the activation and deactivation of the countercyclical capital buffer, prepares reports and issues opinions on the impact of potential legal or regulatory changes on which it is consulted. In addition to these measures, it may exercise the role of lender of last resort for banking companies and other liquidity management tools.

## Information disclosure and transparency

The Financial Stability Report (FSR) is one of the BCCh's main financial policy and communication instruments. In view of its mandate, the FSR delivers the Board's view on the main risks, vulnerabilities and mitigators affecting financial stability.

The FSR is published twice a year, in May and November. In line with international best practices, it is produced by specialized professionals and is led by the Financial Policy Division. Its contents are disseminated through various channels. In this way, the Central Bank communicates its analysis and implements its financial policy in a transparent and active manner.

Cover picture: Molina / Maule Region, Chile.

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**BOXES**



*/ This is a translation of a document originally written in Spanish. In case of discrepancy, the original version prevails. The statistical cutoff date for this Financial Stability Report is October 25th 2023, except where noted otherwise.

# SUMMARY

The risks of the external macrofinancial scenario have increased compared to the previous Report. Short and long-term interest rates have risen significantly, responding to the reacceleration of the US economy and inflation, and concerns about the fiscal situation in that country. Added to a complex geopolitical context, the outlook for the global economy continues to be a relevant source of risk. If a scenario of higher long-term interest rates intensifies, with a prolonged monetary adjustment in advanced economies, financial conditions for emerging economies will tighten even further. Although there have been no new tensions in the financial systems of advanced economies, vulnerabilities remain in some segments. Internally, the resolution of macro imbalances continues to advance, which puts the Chilean economy on a better footing in the face of the deterioration of the global scenario. In addition to the reduction in inflation and short-term interest rates, there has been a reduction in corporate indebtedness and a normalization of the financial indicators of credit users. In any case, heterogeneity is observed between the different actors in the economy. Credit activity remains low, consistent with the state of the cycle, while the cost of credit began to fall especially at terms in which a less restrictive monetary policy has greater impact. Local banks have sufficient liquidity, provisions and capital to face severe stress scenarios. However, like the rest of agents, it is important that it continues to strengthen its capabilities to face new adverse events. They also need to continue preparing the expiration of support policies established during the pandemic (FCIC), increased credit risk, and the convergence to Basel III standards. A deterioration in external financial conditions represents the main risk for local borrowers and lenders. This reaffirms the need to continue adopting measures aimed at strengthening the resilience and capacity of the financial system to withstand adverse events.

## SITUATION OF THE FINANCIAL SYSTEM

**The risks of the international scenario have increased and continue to be the main source of concern for the global macrofinancial scenario.** The main change has been the tightening and increased volatility of global financial conditions. Among other factors, this has been associated with the performance of the US economy above expectations –and its implications on inflation– and a scenario of doubts about the fiscal evolution in that country. This is compounded by complex geopolitical conditions exacerbated by the events in Middle East and the possibility of escalation to a regional conflict.

**In this context, US long-term interest rates have increased significantly, and have propagated to the rest of the world, including Chile.** Since the last Report –May 2023–, the US ten-year term rate rose 150 basis points (bp), reaching levels not seen since 2007, in a global environment with high public and corporate debt. In the same period, the 10-year interest rates of emerging and advanced economies recorded increases of around 85 and 50bp, respectively.

**The Federal Reserve has reinforced the message of a prolonged monetary tightening, without ruling out further increases in the federal funds rate.** All this has increased the difference in inflationary and monetary policy paths between groups of economies. While in the advanced world the inflationary convergence process is relatively delayed, in the emerging world it has advanced more quickly, and its monetary policies show prospects for less restrictions.

**After a period of optimism, in recent months, global financial markets have shown a lower appetite for risk, strengthening the dollar, and negatively affecting the price of riskier assets.** Compared to the beginning of September of this year, the dollar –DXY– rose nearly 3% and the global risk indicator –VIX– increased. In the same period, the sovereign rates of advanced economies increased around 45bp – with an increase of 78bp in the US – while the sovereign rates of emerging economies increased around 70bp. Meanwhile, emerging stock markets recorded losses across the board, accumulating a decline of around 7% on average.

**The Chilean financial market has incorporated this greater perception of global risk, with an increase in the cost of long-term funding for all agents.** Sovereign bond rates have had significant increases since September –more than other emerging and advanced economies. These increases were close to 100bp, both in nominal and real assets. Relevant increases were also observed in the corporate sector. After hikes of about 100bp on average since September, the 10-year UF rates of this type of instrument are close to its highest value in 15 years. Mortgage loan rates have climbed about 25bp and are close to 4.5%, on its highest value since 2013. However, the cost of short-term financing –particularly in commercial lending– has decreased, in line with the traditional transmission channels of monetary policy.

**The peso has depreciated, following the global movements of the dollar, a lower interest rate differential and the deterioration of the terms of trade.** Thus, compared to the beginning of September, the exchange rate is close to 8% higher, without considering that during October it reached levels above current ones. Multilateral measures have also had relevant changes, with increases between 6 and 7% since the beginning of September. In recent days, following the communication and decisions of the Central Bank and the evolution of global markets, the peso has appreciated, reaching around $875 per dollar. Meanwhile. the local stock market has fallen, following the global trend.

**The volatility of the stock market and the exchange rate has recently increased, also following the trends of external markets.** In the case of the Chilean exchange rate, its volatility continues to be at the high end of a group of emerging economies, in a context where currency movements have increased across the board. Economic and political uncertainty have had limited changes, although at high levels in historical perspective. Meanwhile the volatility of interest rates remains similar to that seen during the previous Report, despite an increase in the level of rates.

**The tightening of global financial conditions finds the world economy in a stage of low growth, with high risks of further deterioration and lower prospects for expansion in coming years.** According to the forecasts of the September Inflation Report, in 2023 the growth of global economic activity will be below its average of the last 20 years, and the prospects for 2024 reflect an additional slowdown, both in advanced and emerging economies. Thus, while in advanced economies GDP growth would rise from 1.3 to 0.1% between 2023 and 2024, in emerging economies it would go from 3.8 to 3.5% in the same period. Added to this are some risk factors that could deteriorate these prospects, stemming from the reacceleration of inflation and activity in the US and its effect on monetary policy and global financial conditions; geopolitical tensions and their effects on commodity prices; and the economic and financial situation of China. Some of these elements have already started unfolding.

**This environment of greater external risks finds the Chilean economy on a better footing than a few quarters ago.** The evolution of activity and spending –particularly consumption– shows that the macroeconomic imbalances accumulated in previous years are on its way towards resolution. Inflation has fallen from the high levels it reached in 2022, strengthening the process of convergence to its target. National savings have partially recovered, so the current account deficit has decreased significantly. In this context, the Board began the process of reducing the Monetary Policy Rate (MPR), accumulating decreases of 225bp from July to date.

**Household debt indicators have tended to stabilize since the previous Report, thereby reducing exposure to changes in interest rates, although the risks associated with a deterioration in the labor market persist.** The lower dynamism of usage of revolving loans, together with a lower MPR, has reduced the vulnerability of the lowest income quintiles to high interest rates. Higher income groups have shown a certain increase in their financial burden due to the higher payments associated with mortgage loans due to the still high inflation. Delinquency rates show stabilization in recent data. Looking ahead, a further deterioration in the labor market is the main risk for households' payment ability.

**Regarding fiscal spending, consolidation has contributed to the resolution of macroeconomic imbalances; maintaining this path is essential to improve financing conditions for other agents in the economy.** After a decade of increases in public debt, the background information presented in the latest Public Finance Report indicates that the debt would continue to grow to stabilize at 41% of GDP in coming years. Maintaining fiscal consolidation, with expenses that are consistent with long-term structural income, is essential for the economy to have the capacity to mitigate the impact of future shocks, as indicated by the Autonomous Fiscal Council. The rise in long-term interest rates, in a context of greater fiscal debt maturities in the coming years, implies a higher rollover cost.

**Bank lending activity remains weak, affected by low growth in the commercial segment.** This portfolio has continued to decrease its dynamism since the last Report, which is mainly explained by lower demand momentum since last year (Box III.1). Likewise, loans to households maintain a low pace, more clear in consumer lending although mortgage credit flows show a moderation in recent data as well.

**Banks have accumulated provisions against a possible increase in credit risk and maintain adequate levels of liquidity.** In recent months, the delinquency rates of the consumer and commercial portfolio stabilized at around 2.7 and 2.2% of each total, respectively. Banks maintain a high level of total provisions in historical perspective. Meanwhile, profitability shows a trend towards normalization, with a recovery in the interest margin that compensates for the lower indexation margin.

## FINANCIAL REGULATION DEVELOPMENTS

**The events of last March in international banking have been the subject of extensive debate, from which the first lessons on supervision, regulation and bank resolution have been drawn.** They highlight the relevance of liquidity risk monitoring, market risk management (in particular, interest rate risks) and effectiveness of resolution systems for systemically important banks. This debate in the main international regulation forums and economies most affected by the events of March, could lead to a redefinition of global regulation standards in the medium and long term.

**Among the developments of local financial policy, the approval of the Law that Strengthens the resilience of the financial system and its infrastructure and the beginning of implementation of the Fintech Law stand out.** Among other advances, this will allow non-banking entities to expand access to the payment system operated by the Central Bank (LBTR System). Likewise, the Central Bank will have new tools for liquidity management, both in normal times and in stress situations (Box IV.1). Regarding the Bank's Regulatory Agenda, public consultation processes were opened, moving forward new initiatives announced in the previous Report: namely new tools for banks' liquidity management by enabling retained securitization schemes to expand the availability of collateral eligible in operations with the Central Bank; incorporate appropriate safeguards to allow the operation of new business models in the payment card market; and improve information management in the final stage of the exchange modernization process.

## MAIN RISKS

The Board estimates that the evolution of external financial conditions is the main risk to monitor for global financial stability.

An intensification of its recent tightening cannot be ruled out, as it would respond in part to structural factors that could worsen. Among them are a more delicate fiscal position in the US, greater investment needs for the energy transition and lower savings in economies such as China. In the US, vulnerabilities also persist among regional banking, even though no new episodes of turbulence like those of last March have transpired. A potential reacceleration of inflation in the US add to this list, which would trigger greater monetary tightening, and could worsen financial conditions for emerging economies.

On the other hand, after years of low interest rates, the search for profitability and the evolution of financial markets could have incubated vulnerabilities in some sectors. The risks of reversal stand out, particularly in the prices of risky assets, which remain high (GFSR, Oct.23). Added to this are the risks of financial fragmentation and geopolitical tensions, which have recently intensified. This could affect global risk appetite and investment flows towards emerging economies. Tensions may also be seen among non-bank financial intermediaries. In China, financial risks continue to gain relevance due to structural imbalances in its real estate sector, which could affect local financial markets and have significant repercussions on emerging economies (Box I.1).

Bank stress exercises show that local banks remain resilient. It should be noted that, in consideration of the already tight external financial conditions, in this Report stress tests were carried out subject to interest rate shocks larger than usual. Under this even more severe scenario, in which activity contracts sharply, funding costs rise, and financial conditions deteriorate in general, banks' capital level is adequate to absorb losses under stress. However, like the rest of the economic agents, it is important that they continue to strengthen their capabilities to withstand new adverse events and address the expiration of support policies applied during the pandemic.

The Chilean economy has made progress in resolving the macroeconomic imbalances of previous years but is faced with a complex external scenario. The impact on the Chilean economy will depend on the way in which financial markets respond to external turbulence. It is not possible to rule out that, given a further deterioration in the international scenario, an increase in risk aversion will materialize, triggering losses and greater volatility in local asset prices. This risk increases due to the fact that market depth indicators remain low in historical perspective, which reduces the ability to cushion external shocks. A deterioration in financial conditions could affect local economic activity, with significant impacts on the labor market and income.

The increase in external risks reaffirms the need to continue restoring headroom and adopting measures aimed at strengthening the resilience of agents and the financial system. The world economy is in a complex situation, which implies significant risks for emerging countries. Added to this is greater instability as a result of geopolitical conflicts. This scenario highlights the need to continue the process of rebuilding capabilities, which permits facing a more uncertain international context without risking local financial and macroeconomic stability. This process is supported by progress made in rebalancing the local economy, where the first signs of greater household savings stand out, along with an adequate balance of external accounts and further steps on the path of fiscal consolidation. Regulatory developments aimed at strengthening the resilience of the financial system are added, which contribute to better facing these challenges.

**The Board has decided to maintain the CCyB at a level of 0.5% of risk-weighted assets, which will be due starting next May.** As was the case last May, when the requirement was activated, its maintenance is adopted as a precautionary measure in the face of high external uncertainty, while, at the local level, the process of resolution of macroeconomic imbalances continues. The increase of external risks maintains the possibility of an extreme negative event, which would imply a significant decrease in credit. Having a previously established capital buffer, which can be released if an event of this nature occurs, would help mitigate the impacts regarding the provision of credit to households and firms.

**The use of CCyB and its interaction with other tools is still a matter of international debate. Throughout 2024, the Bank will review its CCyB implementation framework, including a definition of neutral level.**

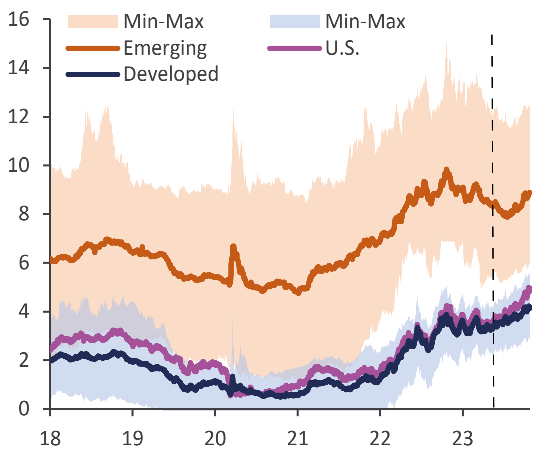
# I. TRENDS IN FINANCIAL MARKETS

External scenario risks are still high and have exceeded those with respect to the previous Report. On a global level, monetary tightening process has intensified in advanced economies due to concerns regarding the convergence of inflation, in the context of a re-acceleration of the U.S. economy. In contrast, inflation in emerging economies has recently begun to ease. This has led central banks' forward guidance for monetary policy in advanced economies to diverge from that of emerging economies, which has strengthened the dollar and tightened financial conditions. This has been compounded by concerns about the medium-term fiscal outlook in the United States, a tighter savings-investment balance and new geopolitical tensions. This has resulted in a significant and widespread increase in long-term interest rates. In this scenario of high rates and high uncertainty, the risk of asset price reversals has risen. The U.S. regional banking sector maintains vulnerability hotspots, even though no new disruptions have been observed. In addition, the financial risks in China's real-estate sector are still present, and a deepening of these problems could have significant repercussions in emerging economies. Financial fragmentation and geopolitical risks have intensified. Local financial markets has been following both external and domestic developments. On the one hand, long-term interest rates, stock market and exchange rate volatility indicators have grown significantly in response to international conditions. On the other hand, short-term interest rates have decreased due to a less contractionary monetary policy, while local uncertainty has not changed much. Even so, there are still concerns about the risk of asset price reversals and higher local long-term rates responding to a potential worsening of the external scenario. Finally, market depth indicators remain low by historical standards, maintaining their meager capacity to cushion external shocks ( Financial Stability Report, first half 2023).

## INTERNATIONAL FINANCIAL SITUATION

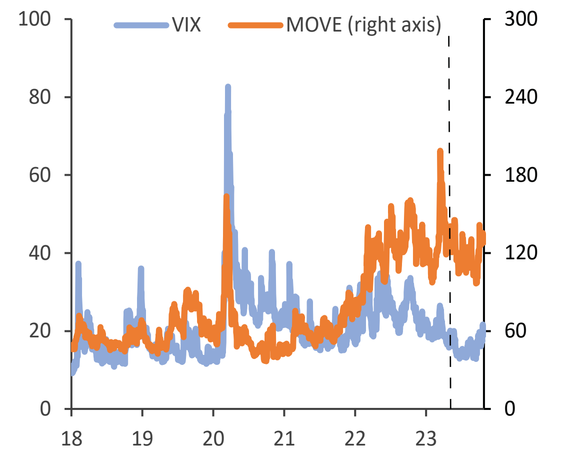
**In the developed economies long-term interest rates have risen significantly in recent months, in a context of a new macroeconomic acceleration in the U.S., high public and private indebtedness, and geopolitical tensions.** The tight labor market and better-than-expected macroeconomic data in the U.S., along with the messages delivered by its monetary authorities regarding the persistence of high inflation levels, anticipate that the contractionary monetary policy in the U.S. will last longer than previously expected ( Monetary Policy Report, September 2023). This is compounded by a global environment of high sovereign indebtedness. In particular, the U.S. governmental debt has doubled over the last 10 years, to close to 120% of GDP. This has heightened concerns and uncertainty about their fiscal outlook, which coincided with the downgrading of their sovereign debt rating from AAA to AA+. On top of this, there is a complex geopolitical context with wars in Ukraine and the Middle East. All these events combined have eroded global financial conditions. Thus, since the previous FSR, the U.S. 10-year interest rate has accumulated an increase of 150bp, putting upward pressure on the long rates of other developed economies, which have risen by around 85bp (figure I.1). In this context, the MOVE index continues to outpace its pre-pandemic rates (figure I.2).

**FIGURE I.1** RANGE OF SOVEREIGN 10-YEAR INTEREST RATES (*)
(percent)




(*) Dashed vertical line marks the statistical closure of Financial Stability Report (FSR) for the first half of 2023. The width of the bands corresponds to the maximum and minimum values. Sample of developed countries includes: Norway, Sweden, United Kingdom, Australia, Canada, Denmark, Singapore, Korea, Eurozone, and United States. Emerging markets include: Colombia, Peru, Mexico, Brazil, Chile, Thailand, South Africa, Turkey, Hungary, Poland, India and Indonesia.
Source: Central Bank of Chile based on Bloomberg data.

**FIGURE I.2** IMPLICIT VOLATILITY (*)
(percent, indexes)




(*) Dashed vertical line marks the statistical closing of the FSR for the first half of 2023. VIX: implicit volatility in one-month options on S&P500. MOVE: index of implicit volatilities on one-month options on 2-, 5-, 10- and 30-year U.S. Treasury bonds.
Source: Central Bank of Chile based on Bloomberg data.

**In the developed countries, inflation has been more persistent than anticipated, which has led these jurisdictions to keep their contractionary monetary policies.** Since the previous Report, the main central banks of developed economies have continued to tighten monetary policy (figure I.3). In particular, the Fed raised its target range for the monetary policy rate by 50bp to 5.25%-5.5%. The European Central Bank raised its policy rate to 4%, its highest ever. Other monetary authorities in advanced countries such as England, Norway, Sweden, and Switzerland also raised their benchmark rates between 25 and 100bp.

**In emerging economies, the decline in inflation has allowed monetary authorities to start reducing the policy rate. However, long-term financial conditions have deteriorated in line with external developments.** Thus, some countries such as Chile, Brazil, and Peru, have already begun their rate-cutting cycle (figure I.3). The disparities between the monetary policies of advanced and emerging countries have led to a depreciation of a number of emerging currencies, including the Chilean peso. Meanwhile, long-term rates in emerging economies have been gradually factoring in the increases in developed countries' rates (figure I.1) with spreads that, despite recent increases, are still below the levels shown in our previous Report (figure I.4).

**The prices of risky assets have reacted to the deterioration of the external scenario, posting declines in recent months.** Both developed and emerging stock markets have fallen from September to date (figure I.5), while advanced economies have shown sharper decline in a context of increased market volatility (figure I.2).

**FIGURE I.3** MONETARY POLICY INTEREST RATES (*)
(percent)

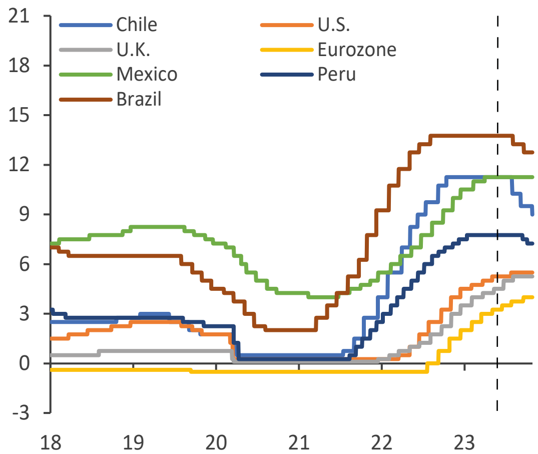
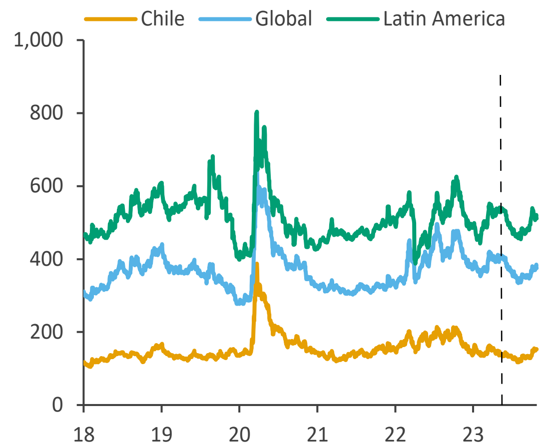



**FIGURE I.4** EMBI (*)
(basis points)




(*) Dashed vertical line marks date of publication of the FSR for the first half of 2023.
Source: Central Bank of Chile based on data from respective central banks.

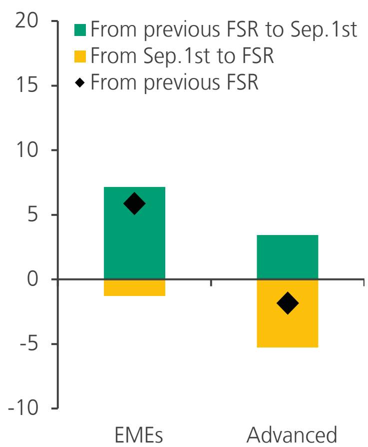
**A scenario of high interest rates and greater uncertainty may increase market volatility, negatively affecting non-bank financial institutions (NBFIs) due to their high leverage.** The growth of NBFIs has been accompanied by an increase in the proportion of illiquid assets within their portfolios (GSFR, April 2023), which accounted for about 50% of total global financial assets in 2022 (Financial Stability Board, 2022c). The growth of these entities owes mainly to financial leverage and the use of derivatives (FSR, first half 2023). An increase in market volatility and sharp changes in asset prices could have repercussions on the balance sheet of these highly leveraged institutions, affecting collateral and guarantees and forcing sales in search of more liquid instruments (Financial Stability Board, 2023b). Finally, the unavailability of reliable information and data from other sources of funding in this sector makes it difficult for authorities to assess risks in the face of episodes of fragility (Financial Stability Board, 2023a).

**Although American banks have not experienced new episodes of stress, vulnerabilities for regional banks are still present.** Asset prices of several U.S. regional banks have remained at levels 40%–50% below those observed early in the year (figure I.6), while their bond interest rates remain high from a historical perspective and unrealized losses have risen, in line with higher long-term interest rates. In addition, utilization of the Fed's support programs remains high, and reliance on uninsured deposits –i.e., a more expensive source of funding– is increasing, suggesting that some institutions still show a high demand for liquidity.

**In China, financial risks continue to gain importance due to structural imbalances in the real estate sector and high levels of debt (box I.1).** Most recently, Country Garden –China's leading real-estate developer and one of the main beneficiaries of government support– has evidenced liquidity strains that resulted in debt default. These developments, together with news about Evergrande's restructuring plan, have intensified concerns about this sector. Likewise, home sales continue to show weak figures, in a context of still depressed real-estate conditions (figure I.7), and where consumer expectations remain unfavorable (statistical appendix).

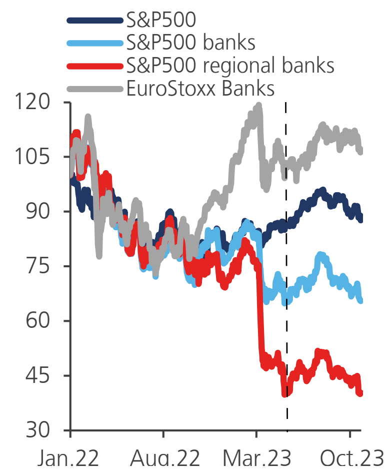
**Lately, geopolitical and financial fragmentation risks have intensified ostensibly following the tensions in the Middle East.** During October, Middle East conflict has intensified adding to the still ongoing war in Ukraine. For the time being, the financial effects of the former have not caused major effects on the global financial conditions as of the closing of this Report.

**FIGURE I.5** EVOLUTION OF STOCK INDEXES (*)
(changes since latest FSR, percent)



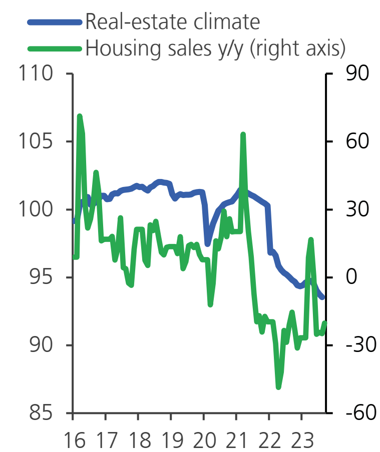

(*) Simple average of stock market yields in local currency. EMEs include: Brazil, Chile, China, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Peru, Poland, Russia and South Africa. Advanced economies include: Australia, Canada, Eurozone, Germany, Greece, Italy, Japan, New Zealand, Norway, Portugal, South Korea, Spain, United Kingdom and United States.
Source: Central Bank of Chile based on Bloomberg data.

**FIGURE I.6** STOCK MARKET INDEXES IN THE UNITED STATES AND EUROPE (*)
(index, 31.Dec.'21=100)




(*) Dashed vertical line marks date of publication of the IEF for the first half of 2023.
Source: Central Bank of Chile based on Bloomberg data.

**FIGURE I.7** THE CHINESE REAL ESTATE INDUSTRY (*)
(index; percent variation)




(*) The Chinese real-estate climate index is an indicator developed by the National Bureau of Statistics of China based on China's monthly real-estate development statistics, which uses land, capital, and sales indicators.
Source: Central Bank of Chile based on Bloomberg data.

## LOCAL FINANCIAL SITUATION

**In recent months, the local market has evolved in line with macro-financial developments both within and outside the country.** Chilean local activity has evolved in line with expectations, and the current-account deficit has narrowed, while core inflation has dropped more than expected and two-years-ahead inflation expectations have remained at 3% (Monetary Policy Report, September 2023). This has allowed the Board to start the process of MPR reduction, whereby since the last Report has accumulated a reduction of 225bp. Accordingly, the short-term interest rates have begun to reflect the less contractionary monetary policy stance (figure I.8). Meanwhile, the external scenario has seen long-term interest rates on corporate bonds to rise a cumulative 130bp since the last Report (figure I.9), resulting in record-high spreads. This situation has been mirrored by sovereign rates, which stand around 130bp higher than they did at the time of the previous Report. In turn, mortgage rates have also risen recently (chapter III). Local stock market volatility has shown important hikes since the last Report (figure I.10), and the volatility of local sovereign rates is still low, despite the increase described in this Report (figure I.11).

**FIGURE I.8** SHORT-TERM INTEREST RATES IN PESOS (1)(2)
(percent)

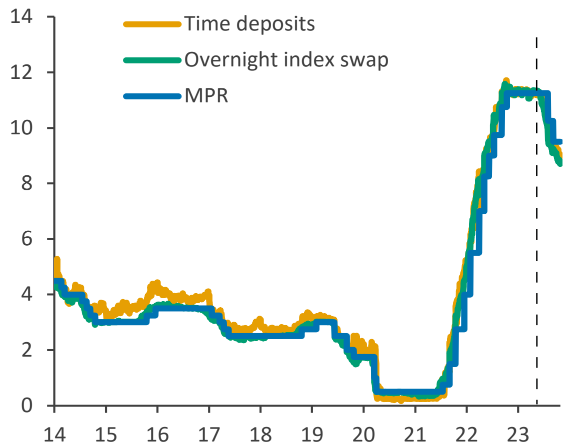
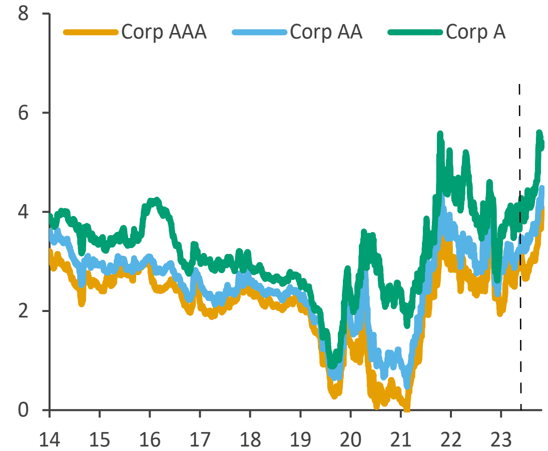



**FIGURE I.9** INTEREST RATES ON 10-YEAR CORPORATE BONDS IN UFS (2)
(percent)




(1) Average 90-day rates on term deposits in pesos and 90-day overnight index swap rates in pesos. (2) Dashed vertical dashed line marks statistical close for the FSR of first half of 2023.
Source: Central Bank of Chile and Risk América.

**FIGURE I.10** VOLATILITY OF LOCAL EMERGING-COUNTRIES' STOCK MARKETS (*)
(percent)

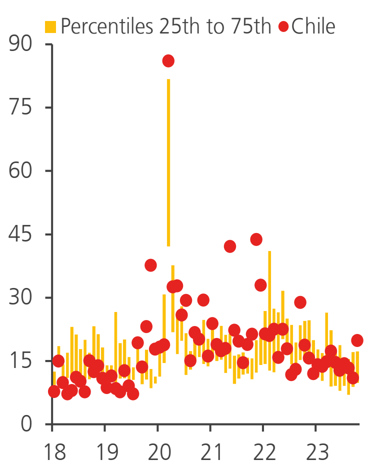



**FIGURE I.11** VOLATILITY OF SOVEREIGN INTEREST RATES OF EMERGING ECONOMIES (*)
(basis points)

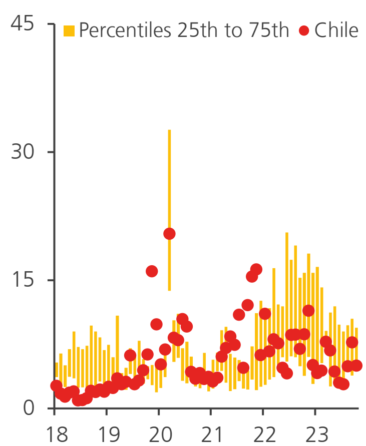
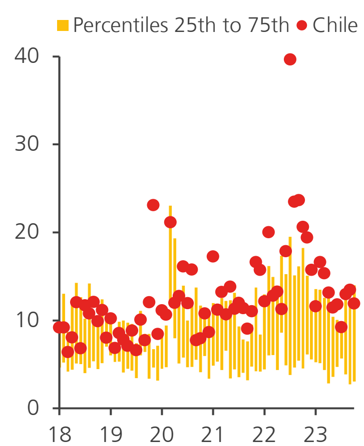


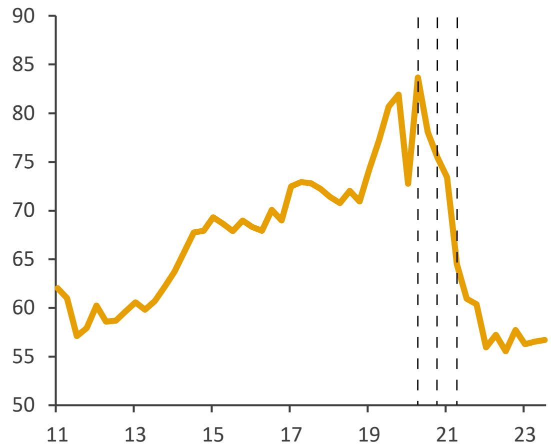

**FIGURE I.12** VOLATILITY OF EMERGING MARKETS' EXCHANGE RATES (*)
(percent)




(*) Sample of emerging countries includes: Brazil, China, Colombia, Hungary, India, Indonesia, Malaysia, Mexico, Peru, Poland, Russia and Turkey. Annualized standard deviation of daily returns during each month. October 2023 data cover up to the 25th.
Source: Central Bank of Chile based on Bloomberg data.

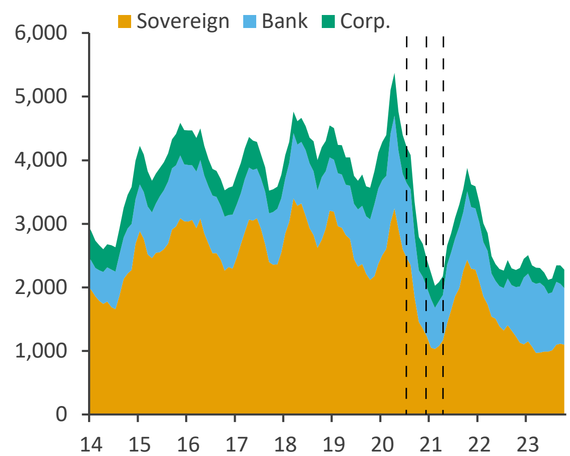
**Chilean peso has depreciated since the last Report, according to international developments.** With respect to the FX market, the exchange rate has depreciated 17% since the last Report, standing at around $923 chilean pesos per dollar at the statistical close of this report. The volatility of the exchange rate decreased between May and July, but this dynamic was reversed in the last few months due to the external scenario deterioration, reaching levels comparable to those in the previous FSR (figure I.12). Due to growing tensions in global financial markets, the Board agreed to suspend the international reserves replenishment program and the gradual reduction of its selling position in the forward market (Central Bank of Chile, 2023).

**FIGURE I.13** PENSION FUNDS' ASSETS (*)
(percent of GDP)




(*) Calculated using quarterly GDP data at current prices, accumulating four moving quarters, and monthly data of total assets of the pension fund system, considering the last month of each quarter. Third-quarter 2023 GDP calculated using the Economic Expectations Survey of October 2023. Dashed vertical lines mark pension fund withdrawals.
Source: Central Bank of Chile based on data from the Superintendency of Pensions.

**FIGURE I.14** FIXED-INCOME AMOUNTS TRADED IN UF IN BCS AND OTC (*)
(millions of UFs)




(*) BCS: Santiago Stock Exchange, OTC: over-the-counter market. Dashed vertical dashed lines mark pension fund withdrawals. Daily data are aggregated to obtain monthly series and show sums of moving half years. Amounts are nominal. October 2023 figures cover up to the 25th.
Source: Central Bank of Chile based on data from the Central Securities Depository and the Superintendency of Pensions.

**Institutional investors have increased the duration of their fixed-income investments since the previous FSR. Recently, they have experienced lower yields in a scenario of higher long-term interest rates.** On the one hand, pension funds have been the main buyers of recently issued long-term sovereign bonds, which have been financed with deposits and sales of short-term bank and sovereign bonds. Thus, their portfolio has lengthened its duration and reduced its liquidity to minimum levels. On the other hand, type-3 mutual funds' assets have shrunk, and their liquidity has also decreased, in the context of lower yields due to the recent increase in long-term interest rates. In contrast, type-1 mutual funds have grown since the previous Report, with increases mainly in Central Bank discountable promissory notes (PDBC).

**Indicators related to the depth of the local capital market remain at record lows and fairly unchanged since our previous Report (figure I.13).** Although since late 2022 transactions in the fixed-income market have increased both in the Stock Exchange and in OTC operations, in terms of the inflation-indexed UF, said amounts are around half their pre-pandemic levels (figure I.14). Local bond issues are below their historical averages and below 2022 figures, especially corporate ones. This could be associated with more stringent financial conditions after the hikes of long-term interest rates and companies' investment plans. Meanwhile, pension funds' assets and mutual funds remain fairly unchanged since the last IEF, stabilizing around 57% and 15% of GDP, respectively as of the second quarter of 2023.

## THREATS TO FINANCIAL STABILITY

A worsening of the external macro-financial scenario is the main risk for emerging financial markets. If the reacceleration of the U.S. economy persists beyond expectations, it would maintain its contractionary monetary policy for longer. This, among other factors, has pushed up long-term interest rates and it is expected to remain high for longer, increasing the cost of financing, intensifying the recent decline in asset prices –which could trigger abrupt increases in risk premiums– and increasing the risk of capitals flowing out of emerging markets (GFSR, October 2023; Obstfeld and Zhaou, 2023).

China's financial risks continue to gain prominence due to structural imbalances in the real-estate sector. A spillover of the fragility of this sector to other market players could have implications for China's financial stability. Furthermore, the intensification of tensions in its real-estate sector would spread to the rest of the world, mainly through the trade channel, with a greater impact on emerging markets (box I.1).

The American regional banking system maintains vulnerability factors noted in the previous Report. A further deterioration of this sector could have significant effects on U.S. banks (GFSR, October 2023). Regional banking in the U.S. has increased its exposure to the weakened commercial real estate sector, which constitutes a vulnerability. These vulnerabilities are higher for banks that experienced higher deposit outflows, have a higher proportion of uninsured deposits, have higher indebtedness to banks that provide liquidity,[1]/ experienced significant unrealized capital losses, and have high concentrations of lending to commercial properties (GFSR, October 2023).

An intensification of geopolitical tensions could affect financial markets. A scenario in which geopolitical tensions spread to other jurisdictions, as is the case of the Middle East conflict, could affect global risk appetite by increasing asset price volatility, generating disruptions in trade flows and capital flow reversals (GFSR, April 2023), as well as generating disruptions in commodity prices, particularly in oil, which could result in inflationary pressures (GFSR, October 2023).

While the Chilean economy continues to make progress in the resolution of domestic imbalances, the main risk is associated with a further deterioration of external financial conditions and the extent to which this deterioration is transmitted to local markets. This could accentuate risk aversion, adversely affect local asset prices, depreciate the Chilean peso and increase its volatility, and put upward pressure on local long-term interest rates. In a context where market depth indicators continue to be low by historical measures, which reduced the economy's capacity to cushion external shocks (FSR, second half 2022 y FSR first half 2023). Likewise, a deterioration of both local and external financial conditions could hold back the recovery of sectors that remain fragile since the pandemic, such as trade, construction, and real estate.

[1]/ In particular, Federal Home Loan Banks (FLHBs), which are 11 banks sponsored by the U.S. government that provide liquidity to financial institutions to back the funding of homes and economic development (FDIC, 2021).

## BOX I.1:

## Tensions in China's real estate market

**China's real estate market has experienced a significant contraction since 2021, due to the structural problems it is going through.** Real estate is an important sector of the Chinese economy, contributing about 30% of GDP directly and indirectly (Rogoff y Yang, 2021). Furthermore, home ownership accounts for more than 50% of household wealth (Li y Zhang, 2021), and land sales finance approximately 30% of local government revenues (Huang, 2023). Since 2021, the sector has suffered a substantial decline in investment and activity, and in its prices too. This deterioration is related to structural challenges, such as oversupply in the residential market and over-indebtedness of developers. These problems worsened after the introduction of various government policies aimed at controlling such indebtedness[1]/ (Bertinatto et. al, 2023).

**A deepening of China's real-estate problems could jeopardize its financial stability.** The financial difficulties of property developers are important because of their associated liquidity and viability risk, comprising about 50% of the real estate sector's assets under each of these criteria (figure I.15). These risks could have repercussions in the Chinese banking system, which is highly exposed to real estate, equivalent to 27% of its total assets as of the first quarter of 2023 (table I.1) —as also reported by some investment banks— and where the smallest banks could be the most vulnerable to further stress in this sector (RBA, 2023). Likewise, in the event that mistrust of developers spreads to wealth management products —one of the most exposed to real-estate conditions— this could result in widespread financial tensions. In turn, the weakness of the sector could spread to local government finances, which would also have implications for local financial stability (GFSR, October 2023). Most recently, the Chinese authorities have announced stimulus measures to contain the negative impact of the real-estate situation through local governments, but doubts remain as to whether their magnitude will prevent the situation to worsen even more.

**The escalation of real-estate tensions would be transmitted to the rest of the world mainly through the trade channel, with a greater impact on emerging economies.** A further contraction of this sector would negatively affect world growth over the next few years, mainly in emerging countries (WEO, October 2023). This effect is explained by China's weight in international trade (figure I.16), which plays an important role in global demand for commodities, which, in turn, make up an important part of the export basket of emerging economies. Finally, given that China is relatively closed to international credit (figure I.16), the pass-through to the rest of the world via the financial channel would be more limited, although there could be contagion effects on financial markets, given that slower growth in China implies a tightening of global financial conditions through a fall in the prices of risky assets and increased aversion to global risk (OECD, September 2023; Barcelona et al., 2022).

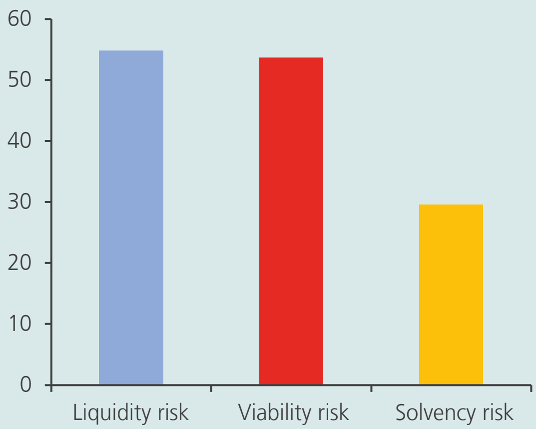
[1]/ In particular, the "three red lines" policy introduced by the Chinese government in August 2020 set limits on three financial ratios that developers had to meet in order to gain access to new loans. With the contraction of the sector and cumulative vulnerabilities, numerous companies have encountered significant liquidity and/or solvency problems in recent years, including Evergrande and Country Garden. Thus, these companies have seen significant declines in their valuations, which to date have been unable to reverse.

**TABLE I.1** EXPOSURE OF CHINA'S BANKING SYSTEM TO ITS REAL-ESTATE INDUSTRY.

| Loans (*) | RMB trillions | Share of total banking system assets |
|---|---|---|
| Real-estate companies | 67.2 | 17 |
| Households | 38.9 | 10 |
| Total | 106.1 | 27 |

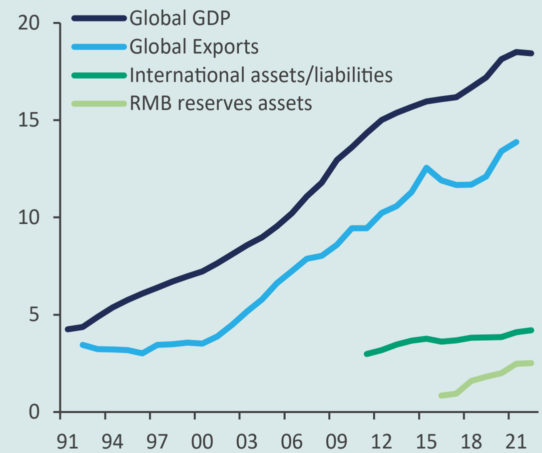
(*) Data at the end of first quarter of 2023.
Source: Central Bank of Chile based on data from the People's Bank of China.

**FIGURE I.15** REAL-ESTATE COMPANIES AT RISK IN 2023 (*)
(percent of the sector's total assets)




(*) Companies face: (1) liquidity risk if they have cash shortfalls after considering short-term debt and net payables, (2) viability risk if they have EBIT less than net interest expense (EBIT= earnings before interest rates and taxes) and (3) solvency risk if they have negative net worth. The exercise also considers a scenario in which companies would need to sell assets, subject to a 50% cut to cover their cash deficits.
Source: Central Bank of Chile base on data from GFSR, octubre 2023.

**FIGURE I.16** SHARE OF CHINA IN GLOBAL ECONOMIC AND FINANCIAL SYSTEM (*)
(percent)




(*) International assets/liabilities refers to the sum of both items in China over world total.
Source: Central Bank of Chile based on data from the World Bank and the International Monetary Fund.

# II. BORROWERS

The progressive resolution of macro-financial imbalances has had a positive impact on the aggregate financial position of credit users, although the exposure of groups identified in previous reports remain. Corporate indebtedness has decreased and non-payment has stabilized, with the exception of more procyclical segments and certain firms that benefited from support programs during the pandemic. Households have seen a stabilization in consumption and a rebound in savings, while defaults in the consumer portfolio have tended to stabilize more recently. Commercial and consumer credit rates are showing early signs of the start of a downward trend in interest rates, in a context of slow credit growth and financing conditions that are still perceived to be restrictive. Fiscal consolidation has contributed to resolving macroeconomic imbalances and maintaining this path will help improve financing conditions for other agents in the economy. A deterioration of external financial conditions, and how intensely it is transmitted to the local economy, poses the main risk for credit borrowers, a scenario for which the banking system maintain an appropriate level of provisions.

## FIRMS

On aggregate, the firms' financial situation has been normalizing. A further deterioration in external conditions that raises financing costs and depresses local activity represents the main risk for this segment.

As of the second quarter of 2023, aggregate indebtedness of the sector was down with respect to the end of 2022. Non-bank companies' debt reached 109% of GDP, which is less than the figure reported in the previous FS Report (117% of GDP), and is mainly explained by a fall in obligations associated with FDI, external bonds and local banks (figure II.1)[1]/. Figures up to September of this year show still negative real growth in the commercial portfolio (Chapter III), while local corporate bond issuance is below historical averages, in a context of tighter financing conditions following increases in long-term interest rates (Chapter I).

The financial indicators of the companies reporting their balance sheets to the CMF remained stable since the previous FS Report. Returns on assets stood at 8.6% in the second quarter, mainly influenced by one-off gains in the Transportation and telecommunications sector. The level of indebtedness and financial expenses coverage remained fairly stable at 0.8 and 3.3 times, respectively (figure II.2). Since the third quarter of 2022, liquidity measured by current and acid ratios has improved, standing at 1.3 and 1.0 times current liabilities. At the sector level, Forestry and Transportation and telecommunications account for the largest share of this increase[2]/. The aggregate exchange rate mismatch is close to zero (statistical appendix).

[1]/ According to National Accounts statistics, corporate indebtedness reached 94% of GDP in the second quarter of 2023. For more information, click link. The data sources and valuation methodologies explain much of the difference with the National Accounts, where other financial companies are also excluded.

[2]/ Both sectors account for about 27.3% and 31.7% of the corporate sector's short-term assets and liabilities, respectively. The improvement in liquidity is explained by a 7% decrease in liabilities between the two sectors, compared to year-end 2022.

**FIGURE II.1** DEBT OF NON-BANKING FIRMS (1)
(percent of GDP)

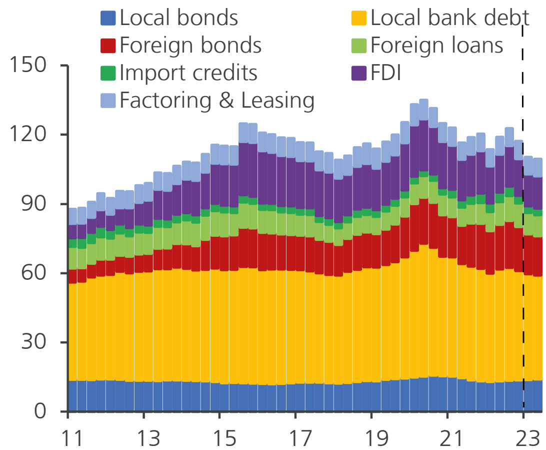
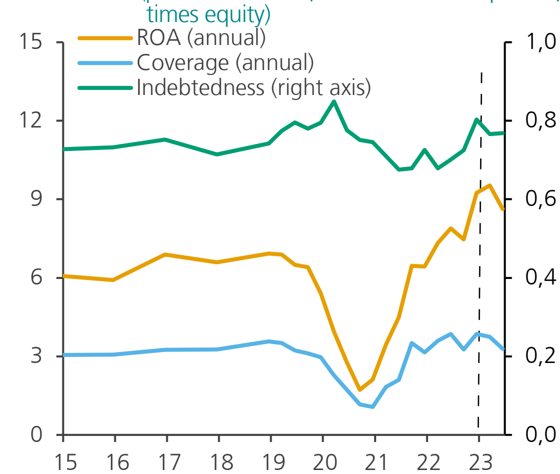



**FIGURE II.2** FINANCIAL INDICATORS (2)
(percent of assets; times financial expenses; times equity)




(1) Based on firm-level information with the exception of non-bank factoring, leasing and others, securitized bonds and bills of exchange. Does not include university commercial debt. Vertical line marks previous FSR publication. (2) Data at December of each year until 2018; thereafter, quarterly information. Vertical line marks previous FSR publication.
Source: Central Bank of Chile based FMC data.

**FIGURE II.3** RATES IN PESOS ON LOANS UNDER 12 MONTHS (1)(2)
(percent, weighted average)

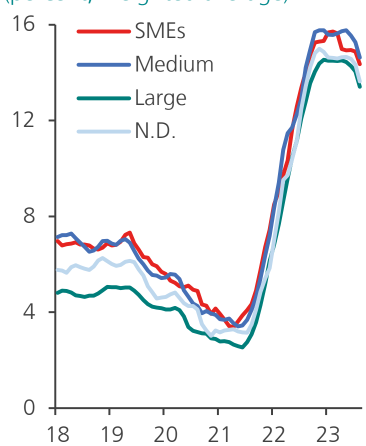
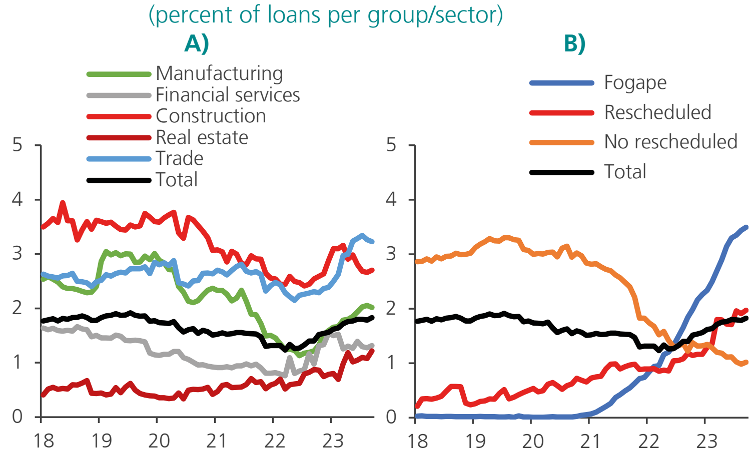



**FIGURE II.4** UNPAID INSTALLMENT INDEX (2)
(percent of loans per group/sector)




(1) Considers only installment loans of locally financed firms. (2) Firms with local bank funding. For more details, see the set of figures.
Source: Central Bank of Chile based on FMC and SII data.

**The fragile financial situation of the Isapres has dragged on.** The direct exposure of the financial sector is limited and the deterioration in the situation of this sector has led banking institutions to factor more risk into their portfolio management. As mentioned in previous reports, this case underscores the importance of a correct portfolio risk assessment by the banks, so that they can make the necessary and sufficient provisions to cover losses in a timely manner, as provided for in the CMF's regulations in force.

**Although still high, commercial credit rates have been reduced most recently with lending standards still perceived as restrictive, according to our Bank Lending Survey (BLS).** The reduction in rates has been transversal across company sizes (figure II.3) as well as by risk rating and has been aligned with the reduction in the MPR (MP Report, September 2023). Meanwhile, up to the third quarter of this year, credit supply conditions for SMEs remained tight due to higher credit risk and a more uncertain environment, while there were no significant changes in their demand in comparison with the previous quarter, where lower investment needs were matched by higher working capital needs (BLS and statistical appendix).

**Bank defaults have stabilized, with increases in specific groups highlighted in previous reports.** The number of companies in default is around 10%, close to the average of the last decade. The unpaid installment rate has remained at 1.8% of loans from April to September 2023. There has been a sustained increase in the default rate of those companies that accessed Fogape loans, rescheduled their loans or belong to the Trade, Construction, Real-estate, Manufacturing and Financial services sectors (figure II.4, panels A and B). Since mid-2021, there has been a significant increase in arrears prior to default, i.e., less than ninety days, concentrated mainly in the Real-estate and Construction sectors. Historically, there has been a slow recovery of these loans —from arrears to non-arrears— which could mean anticipate higher defaults in the future.

**A deterioration in external financial conditions, which is passed on to the local economy through higher interest rates and lower activity, poses the biggest risk for companies.** Scenarios of slower recovery of activity and worsening financing conditions would mainly affect smaller firms, particularly in the Manufacturing, Construction and Trade sectors. These firms are lagging behind in the normalization of their financial burdens and level of indebtedness compared to the pre-pandemic period (figure II.5).

## STRESS TEST FOR FIRMS

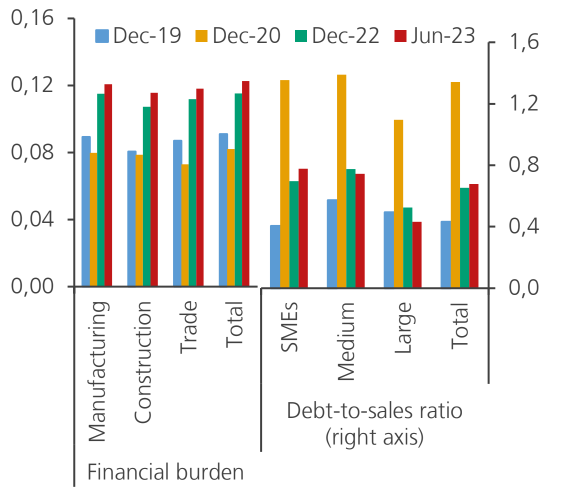
**Compared to the previous Report, debt-at-risk increased due to higher actual defaults and the greater impact of the shock in interest rates and sales.** Effective debt-at-risk grew from 0.8% to 0.9% of GDP between the two exercises. This is almost entirely explained by the increased default of firms that benefited from support policies during the pandemic. Despite the observed drop in domestic credit rates, the high uncertainty of the external scenario (Chapter I) means that this year we are assessing a stress scenario with short- and long-term rates rising by more than they did in the previous exercise[3]/. Thus, under the stress scenario, the debt-at-risk explained by the interest rate shock remains significant, but should decrease in the coming excercises as the banking sector passes on the lower benchmark rates to the cost of commercial loans. Meanwhile, a further tightening of external conditions or a significant pass-through to local conditions will put further pressure on the firms' payment capacity. The impact of the sales shock stands out among medium and large companies in the Trade, Manufacturing and Real-estate sectors, which is explained by the drop in effective sales in these groups compared to the last excercise. Of a lesser magnitude, indexation risk is mitigated by lower UF-indexed debt holdings (figure II.6)[4]/. As a reference, the estimated debt-at-risk is similar to the sum of the actual commercial provisions and the additional expense of the bank stress test, suggesting that banks have cover their credit risk in a manner consistent with what is implied by this type of microdata-based exercises (Chapter III)[5]/.

[3]/ This exercise is based on Córdova et al. (2021). It has a one-year horizon and analyzes the occurrence of three shocks under the following assumptions: for activity, a severe scenario of falling sales, consistent with the one presented in the banking stress test in Chapter III; for commercial interest rates, an increase of 600bp; and for inflation, an increase of 4pp in one year.

[4]/ This test considers increases in inflation that directly affect the payment of UF-indexed credits. It does not consider all additional general equilibrium effects associated with inflationary shocks.

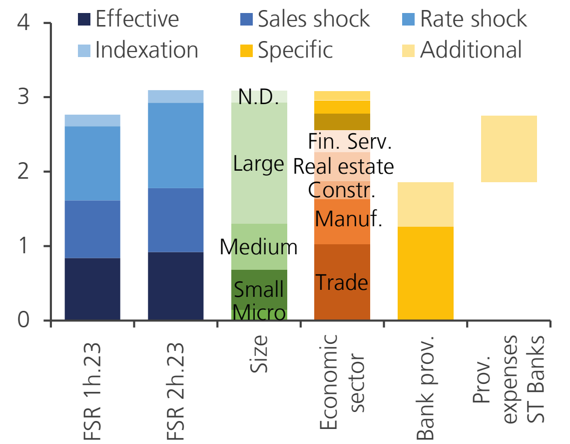
[5]/ This comparison should be considered only for reference purposes and as an upper bound. Unlike the actual build-up of bank provisions, the stress test with granular firm data does not consider the associated collateral.

**FIGURE II.5** INDEBTEDNESS AND FINANCIAL BURDEN(*)
(times the monthly sales, median)




(*) Firms with local bank funding. For more details, see the set of figures.
Source: Central Bank of Chile based on FMC and SII data.

**FIGURE II.6** COMMERCIAL DEBT AT RISK (*)
(percent of GDP, 2023)




(*) Firms with local bank funding. Last column corresponds to the additional expense in provisions that arises from the banking stress exercise (Chapter III). For more details, see the set of figures.
Source: Central Bank of Chile based on FMC and SII data.

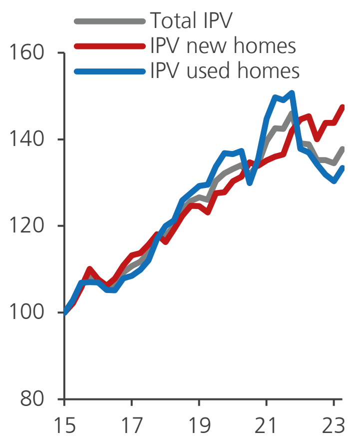
## REAL ESTATE

**The residential real estate sector remained sluggish, although in recent months there have been early signs of a recovery in residential sales.** Lending conditions for firms in the sector remained tight in the third quarter, while demand for credit from real-estate and construction firms was lower (BLS). The cost of financing commercial loans fell in recent months, in line with the lower MPR. In the construction sector, smaller firms presented a slower recovery in their margins, compared to the other firms in the sector. In this context, since our previous Report, housing sales recovered slightly. According to information from the Chilean Chamber of Construction, in the second quarter of 2023, there was a 33% increase in units sold compared to the same quarter of the previous year, but a 14% drop compared to average sales between 2011 and 2019. Similarly, there was an increase in the flow of mortgage loans at the third quarter of this year (12% real annual growth), almost all of which were granted at fixed rates.

**Housing prices continued to fall in annual terms, but recovered with respect to the previous quarter.** After several quarters of declines, driven by the used homes segment, the housing price index (IPV) showed a slight recovery in the second quarter of 2023 (figure II.7). Thus, at the national level, the IPV fell by 0.8% annually in real terms, while the IPV of used housing fell by 2.6% in the same period. In this dynamic, there was no misalignment between the evolution of prices and their fundamental variables, such as personal income and domestic financial conditions. Meanwhile, there was also a slowdown in the rental market, where as of the third quarter of 2023 prices posted negative real annual variations of 8% in apartments and 2% in houses, amid greater availability of units for rent[6]/.

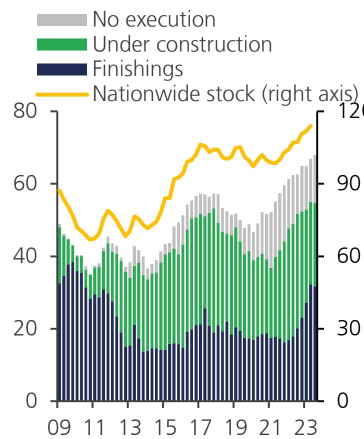
[6]/ Over the same time span, the rates of rental ads rose by 1pp for houses and 4pp for apartments. These increases are in line with the declines in listed rental prices.

**FIGURE II.7** HOUSING PRICE INDEX
(index, 2015.Q1=100)



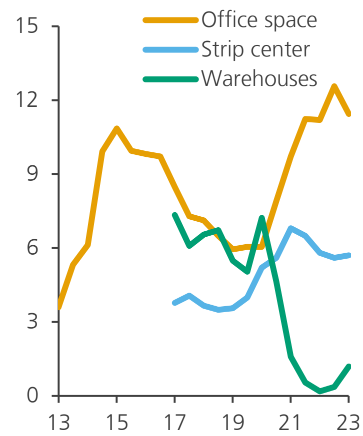

Source: Central Bank of Chile based on SII data.

**FIGURE II.8** STOCK OF NEW HOMES SUPPLY (*)
(thousands of units)




(*) Bars denote stock in Metropolitan Region. Last prelimary figure, average for July-August 2023. Source: Central Bank of Chile based on CChC data.

**FIGURE II.9** VACANCIES IN NON-RESIDENTIAL MARKET (*)
(percent)




(*) Half-year data.
Source: Central Bank of Chile based on CBRE, Colliers, and GPS data.

**The greater share of homes for immediate possession in the stock represents a vulnerability, since it could trigger future price declines in new properties.** As of August 2023, there was an increase in the available stock of finished homes, whose share in the total stock increased to 46%, from 31% in the same period of 2022 (figure II.8). A low share of finished housing in the available stock allows firms to better deal with the sales cycle, giving them room to adjust their inventory without repricing. Thus, if weak demand persists, the firms may need to adjust their prices and thus affect the profitability of their business.

**In the non-residential real-estate sector, office space remained weak.** As of the second quarter of this year, the vacancy rate was between 10% and 13% depending on the segment (A/A+, B), which is double the values seen before the pandemic (figure II.9)[7]/. The previously strong demand for warehouses has declined somewhat as reflected in an increase in vacancies, but which are still low compared to its historical average. Meanwhile, rental prices have risen by close to 6% in real annual terms as of the end of the second quarter this year. All in all, the direct exposure of banks to the non-residential construction segment is limited in Chile, at 6% of total loans in August 2023[8]/, while the exposure of life insurance companies is in the order of 16% of total investments according to June 2023 CMF figures.

**Summing up, the risk outlook for the real-estate sector is broadly unchanged since our last FS Report.** Over the past two years, the industry has faced rising costs, weakening demand and tight financing conditions, resulting in falling prices and rising inventories. Bank defaults among real-estate firms have been on the rise since mid-2022, and in the prospective risk exercise they appear among the main sectors affected, together with construction companies under a stress scenario (figure II.6). A continuation or deepening of the current negative outlook for the sector could have consequences for the rest of the economy due to the multiple interconnections and existing propagation channels. In particular, the recent increase in long-term rates in developed countries and its effects on domestic long rates could undermine the recent recovery in demand for housing.

[7]/ Higher vacancy rates have not been fully reflected in lease prices, thus, Class A/A+ office-space prices have remained stable since mid-2021, while those of Class B have shown declines in the last two years.

[8]/ In more developed economies such as the United States and the European Union, bank exposure reached 12% in 2023.Q2 and 32% in 2022.Q3 respectively, according to IMF data (GFSR April 2023; GFSR October 2023).

## HOUSEHOLDS

**The resolution of the macroeconomic imbalances accumulated in previous years has continued, with a stabilization of consumption, a decline in inflation and a rebound in household savings.** In the second quarter of this year, households' gross disposable income grew 16.5% annually[9]/. This, together with the slower expansion of consumption, caused the sector's savings rate to reach 2.9% of GDP in June of this year, which compares to -0.7% of GDP in our last FSR (statistical appendix). This is good news, because a higher saving rate makes households more resilient to a potential loss of income in the future. However, the households' net financial wealth has not recovered, as it was 116% of GDP, that is, less than the 120% of GDP reported in the previous FSR and even less than its pre-pandemic level of around 140% of GDP[10]/.

**In this context, consumer lending rates have adjusted in line with the start of the cycle of interest rate declines (Box II.1).** Lately, interest rates on consumer loans in installments at different maturities have seen a drop following the actual and expected MPR cuts. Nonetheless, the spreads of these loans are still high by historical standards, in particular among the lower-income borrowers and in longer-term credits (statistical appendix). The rates on mortgage loans have risen most recently and are in record highs, with a 4.5% at this Report's statistical cutoff date[11]/.

**While consumer credit eases its decline in the margin, mortgage lending shows an incipient recovery that, nevertheless, has lost momentum in the most recent period.** As of September 2023, lending standards for the consumer portfolio are moderating their constraints and no significant changes are observed in the housing segment. Household demand has strengthened slightly in the consumer segment compared to the previous quarter, while housing demand continues to be perceived as weaker (BLS and Chapter III). Consumer credit fell by 1.4% in real annual terms in September, due to a smaller drop in installment loans and almost zero growth in revolving loans (figure II.10). In housing, there has been progressive growth in the real volume of debt this year, although it is still below historical averages (statistical appendix).

**The levels of household indebtedness and financial burden did not show major variations, while non-payment of consumer loans remained at its pre-pandemic level.** Among higher-income households, mortgage indebtedness showed a slight increase compared to the previous FSR. The rest of the households showed similar levels of indebtedness to those observed at the start of the pandemic, mainly composed of consumer debts (statistical appendix). With regard to debt service, there was a stabilization in higher-income households and a slight increase in all other households, explained by their increased mortgage burden (figure II.11). Although total defaults have stabilized, there have been increases in consumer operations, especially in the lower-income quintiles. This increase would reflect a normalization of the indicator, after showing record lows (figure II.12). In the mortgage portfolio, default is still below its historical average.

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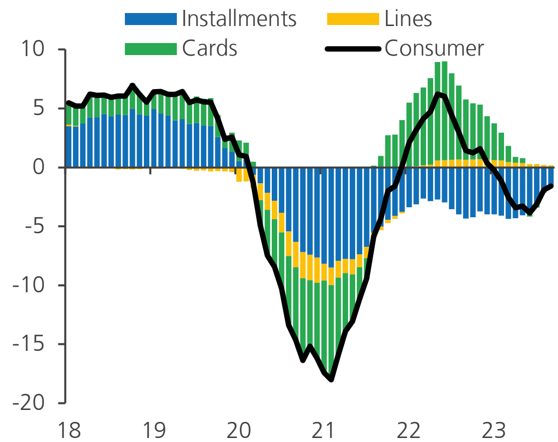
[9]/ Second quarter 2023 vs. second quarter 2022. The 16.5% increase was explained by the positive impact of production earnings (wages and self-employed income) of 7.7pp, with an annual growth of 8.7%, and of property income -through lower net interest paid and rent withdrawals- of 7.1pp. Also, social benefits net of social security and, to a lesser extent, net current transfers, had a positive impact with 1.7pp. and 0.3pp. respectively. By contrast, tax payments had a negative impact of 0.3pp. For details on the accounting treatment of pension fund withdrawals in household income, click link.

[10]/ The details of the evolution of households' net financial wealth, income, consumption and savings can be found in the National Accounts Report by Institutional Sector for the second quarter of 2023, by clicking link.

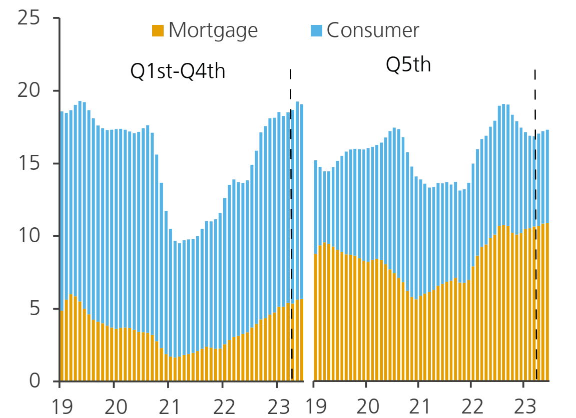
[11]/ See the complete series in our Statistical Date Base.

**FIGURE II.10** CONTRIBUTION TO ANNUAL GROWTH IN CONSUMER LOANS (*)
(real annual change, percent)



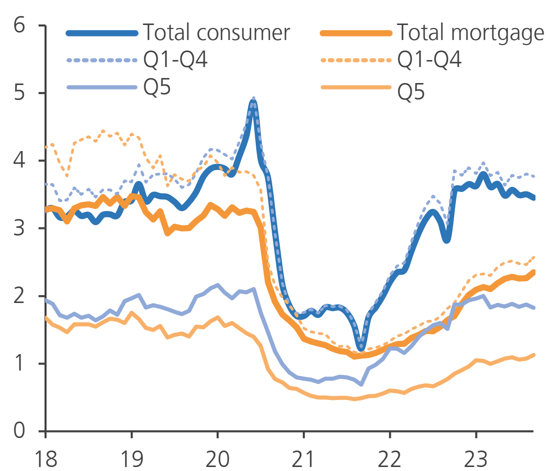

(*) Adjusted for the incorporation of SAG in December 2018 (CMR in Falabella and Walmart Financial Services in BCI bank).
Source: Central Bank of Chile based on FMC data.

**FIGURE II.11** FINANCIAL BURDEN TO INCOME RATIO (*)
(percent of monthly income, median)



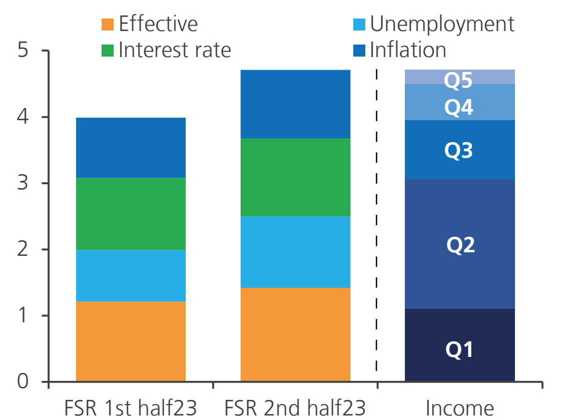

(*) Moving three-month average. 1st to 4th quintile up to clp$1,350,000, 5th quintile between clp$1,350,001 and clp$2,800,000. Fifth quintile truncated to account for taxable ceiling, which could bias upward this quintile's indicators. Q stands for quintile. For more details, see the set of figures. Vertical line marks previous FSR publication.
Source: Central Bank of Chile based on FMC and SuSeSo data.

**FIGURE II.12** NON-PAYMENT OF CONSUMER AND MORTAGE LOANS (*)
(proportion of borrowers in each segment)




(*) Q1 -Q4 up to clp$1,350,000, Q5 between clp$1,350,001 and clp$2,800,000. For bank debtors affiliated to a pension fund (AFP). Non-payment of 90 to 180 days for consumer loans and 180 days to one year for mortgage loans. Q stands for quintile. For more details, see the set of figures.
Source: Central Bank of Chile based on FMC and SuSeSo data.

**FIGURE II.13** DEBT AT RISK (*)
(percent of GDP)




(*) Q1 up to clp$210,000; Q2 between clp$210,001 and clp$490,000; Q3 between clp$490,001 and clp$805,000; Q4 between clp$805,001 and clp$1,365,000; Q5 between clp$1,365,001 and clp$2,800,000 (taxable ceiling). Q stands for quintile. For more details, see the set of figures.
Source: Central Bank of Chile based on FMC, Servel and SuSeSo data.

## STRESS TEST FOR HOUSEHOLDS[12]/

**The main vulnerability of households is their exposure to the job destruction shock.** The interest rate shock, despite being higher than in the previous FSR, given the evolution of long rates (Chapter I)[13]/, has a similar impact given the moderation in the use of revolving credit. Effective debt-at-risk increased from 1.2% in December last year to 1.4% of GDP as of the second quarter of this year, in line with the higher effective default in consumer credit and the weak labor market (figure II.13). Under the stress scenario, total debt-at-risk would amount to 4.7% of GDP (4% in the previous Report). By shocks, the risk of job destruction is the one explaining most of the increase, at 1.1% of GDP (0.3pp more than in December) and would be concentrated in the lower-income quintiles, which since the end of last year have seen the most jobs destroyed[14]/. The interest rate shock, despite having increased since the previous IEF, has almost the same impact as it is counterbalanced by the moderation of shorter-term debt. Similarly, the indexation shock has a similar effect due to higher mortgage debt holdings among higher-income households, offset by lower inflation figures. Information coming after data used in this test points to a stabilization of effective debt-at-risk, mainly as a consequence of a drop in the use of short-term debt.

**Going forward, the main risk stems from a potential increase in default due to a deterioration in net job creation.** A scenario with a weak labor market erodes household income and therefore increases the probability of defaulting on their commitments. Something similar occurs with high inflation, which drives up debt service, especially of mortgage loans. Both risks are significant and require continuous monitoring by banks and supervisors.

**In the face of a potential downturn in financial conditions, banks maintain an appropriate level of provisions.** A drop in activity or employment and an increase in interest rates represent a risk scenario. In this context, banks have accumulated sufficient provisions to cover the higher default risk of debtors and bank stress tests show that they remain resilient to withstand stress scenarios of this nature (Chapter III).

## THE CENTRAL GOVERNMENT

**After a decade of swelling public debt, the data presented in the last Public Finances Report suggest that it would stabilize in the coming years.** The central government's gross debt is projected to reach 38.2% of GDP by the end of 2023 and 41% in the following years (figure II.14). With respect to the actual and structural balances, although both presented surpluses in 2022, deficits of 2.3% of GDP in the actual balance and 2.6% of GDP in the structural balance are projected for 2023 (figure II.15). This is mainly explained by an estimated 11.1% real annual drop in effective revenues with respect to 2022 and an estimated real annual increase in central government spending of 2.2% with respect to 2022[15]/.

[12]/ Stress tests are used to evaluate the potential effect of shocks in extreme, low-probability, high-impact stress scenarios. These tests are partial in nature, as they do not model the agents' reactions and do not constitute forecasts. For details, see Box V.1 of the previous FSR and Córdova and Toledo (2023).

[13]/ Three shocks are considered, in line with the severe scenario considered for the stress test for banks (Chapter III). The first one consists of an increase in the unemployment rate of 7pp in one year. In the second, a 680bp increase in consumer credit interest rates (an additional 80bp relative to the previous Report) and a 350bp increase in mortgage rates (an additional 150bp relative to the previous Report) are assumed. Finally, an indexation shock of an additional 4pp in one year is included. Given the degree of wage indexation in Chile —close to 60% of wage earners receive some CPI adjustment (MPR September 2013 and January 2008)— a partial pass-through of inflation to real wages is considered.

[14]/ This raises the debt-at-risk in under deteriorated scenarios, but is partly mitigated by the lower share of these groups in the banking portfolio.

[15]/ The fall in revenues is explained by the downward correction in taxation, while the increase in expenses is associated with the emergency caused by the recent rainfall, the financing of the Pan American Games and interest expenses (IFP Third Quarter 2023).

**Maintaining the fiscal consolidation path is essential to mitigate future adversities.** Debt maturing in less than one year has increased compared to the past couple of years, from 3.4% of total debt in September 2021 to 5.5% in June 2023. Thus, the estimated cost of debt rollovers for the next ten years went from US$2.8 billion in September 2019 to US$17.1 billion in June 2023, mainly accounted for by debt in pesos (figure III.16). In a context of higher fiscal debt maturities in the coming years, the increase in long-term interest rates means a higher cost in the renewal of the central government's debt.

**There are risk elements that could stress public finances.** Among these are the divergence in the path of monetary policy between developed and emerging countries and the uncertainty in the global macro-financial situation (chapter I). These factors could increase volatility in global financial markets, impacting the value of public debt in foreign currency. At the local level, it is worth mentioning the potential impact on public spending that a financial crisis in the Health Insurance Institutions (Isapres) would generate, as well as a drop in mining output, with the consequent impact on the fiscal coffers (CFA, September 2023).

**Sustainable sovereign indebtedness improves the risk perception of the local economy, improving credit conditions.** Recently, the S&P Global Agency maintained its risk rating for Chile, but changed its outlook from stable to negative[16]/. This is explained by risks originating in a weakening of political and economic consensus, along with slower structural growth. Maintaining fiscal consolidation, with expenditures that are consistent with long-term structural revenues, is essential for the economy to have the capacity to mitigate the impact of future shocks, as pointed out by the Autonomous Fiscal Council.

**FIGURE II.14** CENTRAL GOVERMENT GROSS DEBT (*)
(percent of GDP)

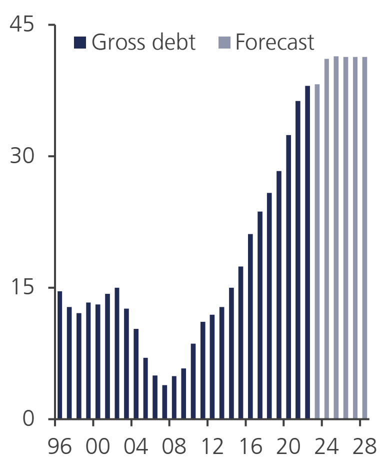
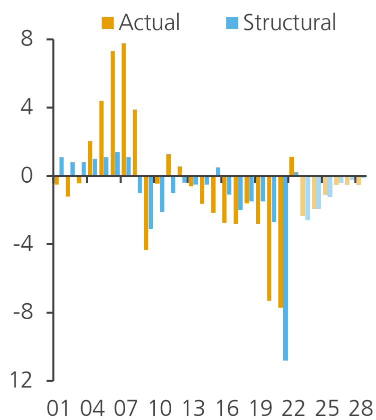
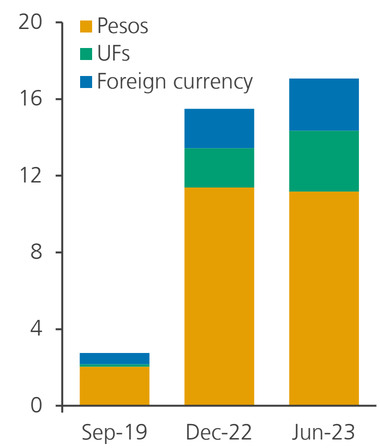



**FIGURE II.15** ACTUAL AND STRUCTURAL BALANCE SHEET (*)
(percent of GDP)




(*) Light-colored bars show forecasts in Public Finances Report, third quarter 2023. DIPRES.
Source: Central Bank of Chile based on data from Finance Ministry budget office DIPRES.

**FIGURE II.16** COST OF DEBT REFINANCIG OVER THE NEXT 10 YEARS (*)
(billions of dollars)




(*) Scenarios created using the cost of refinancing Treasury bonds maturing in the next 10 years. For more details, see the set of figures.
Source: Central Bank of Chile based on Finance Ministry and Bloomberg data.

16/ In the last five years, Chile went from having a credit standard similar to that of Korea (AA-) to one similar to that of Spain or Iceland (A) (statistical appendix).

# BOX II.1:

## Lending standards for bank consumer credit

**Since the onset of the pandemic, the consumer credit market has undergone significant changes, with a 30% drop in flows and different dynamics by product type.** Towards the middle of 2021, there was a sustained increase in the use of revolving loans, coinciding with a reduced liquidity of individuals and an increase in portfolio delinquency. The greater use of revolving loans was concentrated among lower-income borrowers, who had a tighter financial situation and a more pronounced increase in their non-payment (FSR, first half 2023).

**This box analyzes the recent evolution of interest rates on consumer installment loans, examining whether it is consistent with movements in the policy rate, as well as the impacts of the change in the composition of debtors on aggregate dynamics.** The results indicate that the interest rate on consumer credit has evolved in line with what is suggested by a model relating it to the MPR and the two-year overnight index swap. This indicates that changes in monetary policy have been adequately transmitted to bank lending conditions (figure II.17). In addition, movements in interest rates have been the outcome of a combination of changes within debtor groups and also of changes in the relative importance of the groups with the highest credit risk.

### Evolution of the flow and cost of installment consumer credit borrower category[1]/

**The microdata available at the Central Bank of Chile allow us to examine the behavior of consumer credit rates and flows according to debtor characteristics.** The microdata analysis is performed using two aggregations of borrowers. In the first, individuals are grouped according to a risk classification based on their credit history or lack thereof[2]/. These results show that new borrowers usually face higher interest rates than the rest, above those borrowers with high credit risk (figure II.18). In the second classification, where individuals are grouped according to their labor income, interest rates are lower for borrowers with higher income (statistical annex). Similarly to what has been observed in commercial credit, it is also verified that rates have been compressed among groups of borrowers, with greater speed since the start of the pandemic (MPR, September 2023).

**There has also been a change in the composition of credit flows in recent years, with both the number of operations and the amount of loans granted shifting toward higher-risk borrowers (figure II.19).** This is reflected in the fact that the group with the best credit history dropped from around 80% of the amount granted in 2018 to around 70% in 2023. A large chunk of this reduction was redistributed to debtors in the medium credit risk category and, on a smaller scale, to those in the high risk category. New borrowers reduced their share of credit flows over the same period.

### Analysis of adjustment margins

**Individual-level administrative information also makes it possible to decompose movements in the aggregate interest rate on loans into two adjustment margins.** The first relates to changes in rates within a group of borrowers, called the intensive margin; the second is defined as changes in aggregate rates due to changes in the relative importance of the groups, and this is called the extensive margin.

[1]/ This box only considers installment consumer loans granted by banks. All information used in the analysis is anonymous, which guarantees its confidentiality.

[2]/ Four categories are constructed according to the banking history of each individual, one with those who have just entered the system and have no previous history, and three others with different levels of past delinquency. With thresholds defined according to the portion of time in which each debtor was in arrears in consumer debts with respect to the total number of periods in which they have been bankarized.

**In mid-2021, the increase in consumer rates was initially the result of an adjustment in the intensive margin (see figure II.20 and statistical appendix).** In other words, with no change in the composition of groups, as the MPR was raised, consumer rates rose for borrowers with the same level of risk or labor income. From early 2022 onwards, the increase came to occur mostly through the extensive margin, where consumer credit was redistributed towards groups with a poorer credit history or lower income, in line with the aforementioned aggregates and with evidence linking consumer credit rates mostly to credit risk (Pedersen, 2016). In the recent MPR cut cycle started in July, the reduction in consumer rates has occurred via the intensive margin, mirroring previous benchmark rate cut cycles.

**FIGURE II.17** INTEREST RATES ON CONSUMER INSTALLMENT LOANS
(percent)

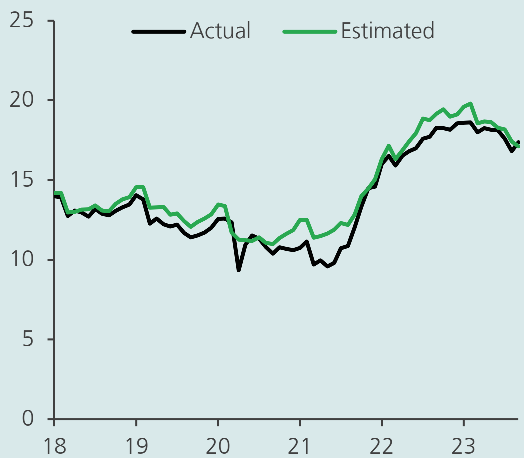



**FIGURE II.18** INTEREST RATES ON CONSUMER INSTALLMENT LOANS BY RISK RAITING
(percent)

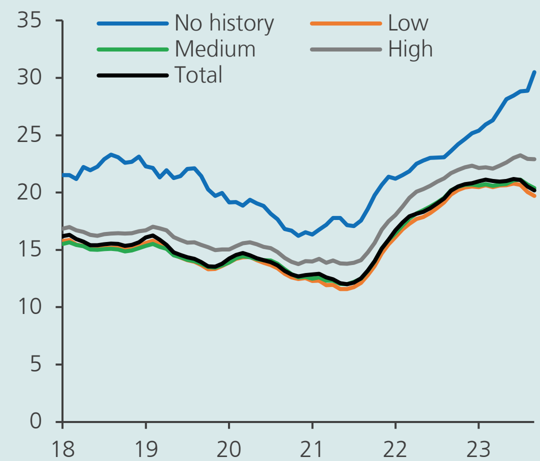



**FIGURE II.19** SHARE IN INSTALLMENT CONSUMER CREDIT FLOWS BY RISK RAITING
(percent of total amount per period)

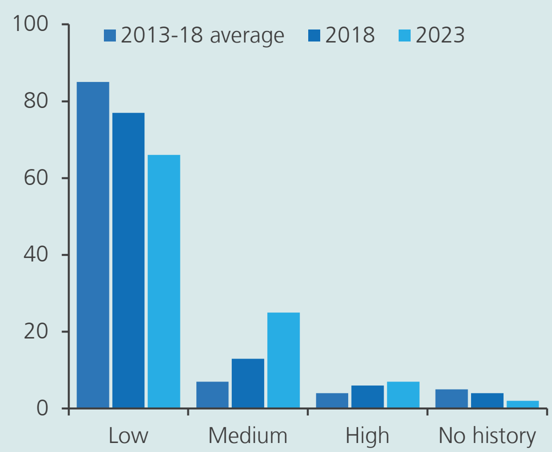
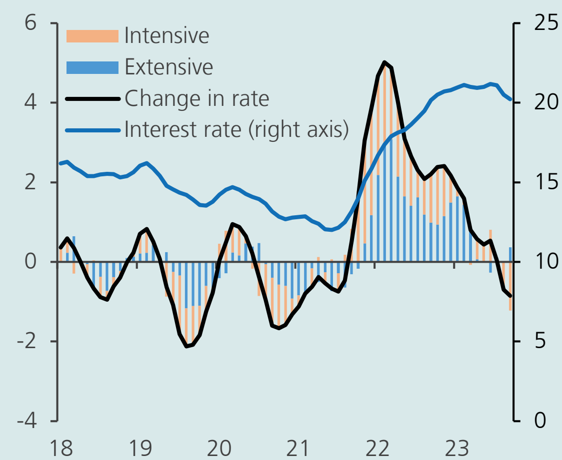



**FIGURE II.20** INTEREST RATE DECOMPOSITION IN SPREADS BY CREDIT HISTORY (*)
(percent)




(*) Orange columns (intensive) denote rate changes due to adjustments within each group, keeping credit shares constant. Blue columns (extensive) represent rate changes due to adjustments of each group's share in total consumer installment credit, fixing a rate charged to each group. The sum of the two columns yields the exact change in the weighted average interest rate, represented by the black line. Blue line shows level of the amount-weighted average rate, after applying a moving 3-month average. Transactions with unusually low or high rates were deleted. Does not consider rescheduling.
Source: Central Bank of Chile based on FMC and SuSeSo data.

# III. LENDERS

Since our last Report, bank credit has been showing low activity, in line with the process of resolving macroeconomic imbalances. Commercial loans continue to decelerate due to still restrictive financing conditions and weak demand. In households, installment consumer loans and credit card use remained sluggish, while mortgages showed some recovery in the margin. Consumer and commercial credit delinquency remains generally stable, although somewhat above historical patterns, in response to which banks have been building up provisions. Banking stress tests indicate that local banks remain resilient. It should be noted that, in consideration of the already tight external financial conditions, stress tests subject to higher shocks than usual were performed for this Report. Under this even more intense severe shock, in which activity contracts abruptly driven by an increase in funding costs and a deterioration of financial conditions, losses from the materialization of risks remain stable compared to the May Report. Nevertheless, like all other economic agents, it is important for banks to continue strengthening their capacities to deal with adverse events and the end of the pandemic-related support policies.

## SITUATION

**Bank lending activity remains weak, affected by the low dynamism of the commercial segment.** This portfolio has continued to decline since the last Report (figure III.1), which is mainly explained by reduced impulse from demand in the last year (box III.1). This low activity is generalized across business segments. According to our third-quarter Bank Lending Survey (BLS), credit conditions for large companies have not changed significantly since the previous quarter, while demand continues to weaken, mainly due to lower needs for financing investments (figure III.2).

**Household credit have remained sluggish, particularly in the consumer portfolio.** Consumer loans continue to contract due to a moderation in the use of credit cards from business support entities and non-bank credit providers (NBCP). Meanwhile, bank installment loans have softened the declines observed since mid-2020. Likewise, in the NBCP, the credit of Savings & Loans Cooperatives and Clearing Houses maintain positive dynamism. On the other hand, residential loans showed some recovery since the beginning of the year, which was reversed in the most recent period coinciding with the increase in mortgage rates.

**Credit risk in the consumer and commercial segments remains generally stable but high by historical standards, which has led banks to accumulate provisions.** In recent months, consumer portfolio delinquency has tended to stabilize at around 2.7% (figure III.3), which is above its historical average. In the NBCP segment, the consumer portfolio of the retail financial sector and automobile financing firms has maintained its upward trend in delinquencies. In the commercial banking segment, non-performing and substandard categories of the individually evaluated portfolio increased their relative importance in the total[1]/, while the higher proportion of guarantees has compensated for the deterioration of the portfolio's credit quality, keeping specific provisions stable at around 2.7% of commercial loans. Nevertheless, the banking sector continues to maintain a total stock of provisions in excess of historical ones and which provide a buffer against a worsening of the economic scenario. In the consumer portfolio, in particular, the participation of additional provisions stands out (figure III.3).

**Banking profitability shows a normalizing trend, with a recovery of net interest margins.** Since the last IEF, banking results have been moderating, partly due to the decline in the repricing margin, in line with lower inflation, as well as to the increase in credit risk provisions and operation support expenses, related to investments in the digitization of their services (figure III.4).

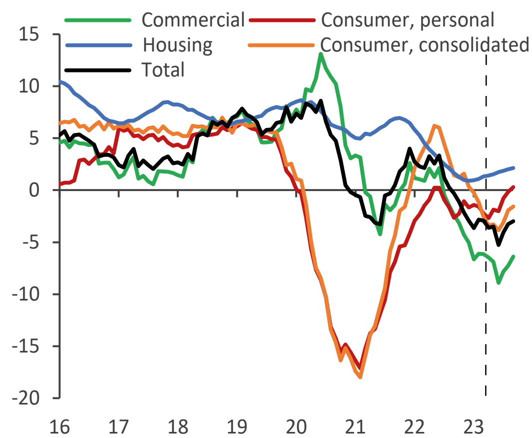
**The composition of bank liabilities remains stable since the previous Report, with the share of long-term funding below pre-pandemic levels.** Although the share of institutional time deposits in the balance sheet has not recovered, there has been a rebound in the use of these instruments by individuals. Meanwhile, longer-term financing remains slow, in line with the high cost of funding abroad, which is reflected in the spreads, and which could incubate a risk in view of the important bond maturities projected for the coming years (see chapter I and statistical appendix). These changes in the duration of liabilities lead to an adjustment in assets, which continue to show a shortening of their maturities.

**Banks have sufficient level of liquidity and it is important that they continue to manage it in order to meet the commitments associated with the payment of support programs provided during the pandemic.** The banks maintain a strong position in highly liquid assets, where the financial instruments issued by the BCCh are close to US$31 billion as of August this year. This also helps to ensure that the liquidity coverage ratios (LCR) have buffers above the required minimum (statistical appendix). This favors the banks' actions to extinguish the FCIC in April and July of next year, which accounts for more than 8% of their liabilities.

**The coming application of the regulatory requirements announced in the convergence to Basel III will require banks to continue adjusting their capital adequacy levels by 2025.** During the year, the system's core capital and regulatory capital remained above 10% and 15% of risk-weighted assets, respectively. Although these levels exceed the current minimum requirements, the buffers have been reduced given the higher requirements established in the process of convergence to Basel III. In view of the above, it is important that banks continue to build up their capital base to improve their resilience and sustain their lending activity.

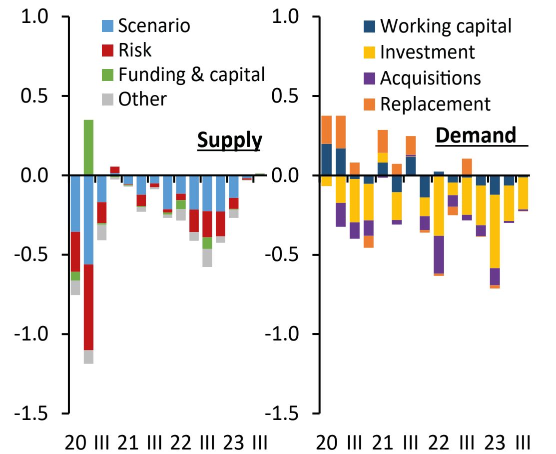
[1]/ The firms showing the sharpest deterioration belong to more procyclical sectors such as trade, real estate & construction, and manufacturing (chapter II).

**FIGURE III.1** LENDING GROWTH (*)
(real annual change, percent)



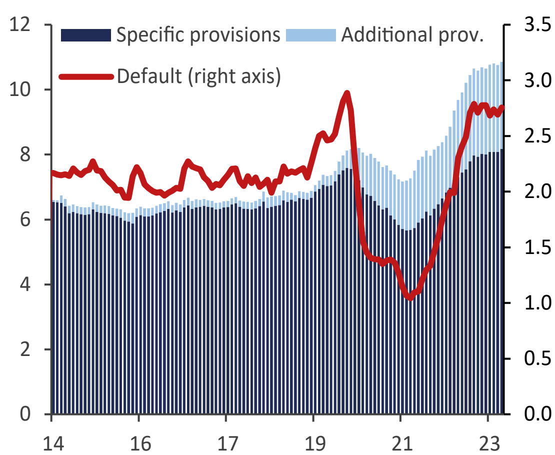

(*) Based on individual financial statements. Vertical line marks statistical cutoff of previous IEF. Consolidated local consumer loans include credit of business support entities.
Source: Central Bank of Chile based on CMF data.

**FIGURE III.2** FACTORS OF LARGE-SCALE COMPANIES' CREDIT CONDITIONS (*)
(index)



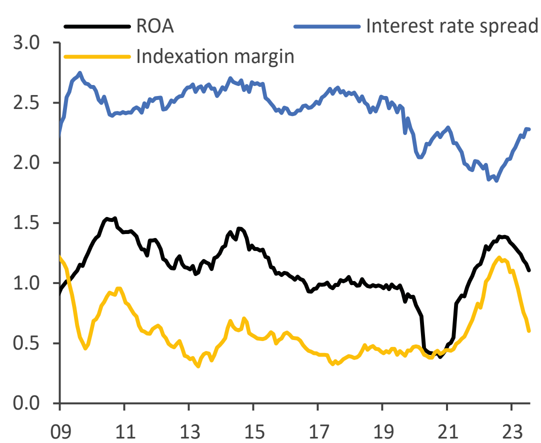

(*) The indicator represents the net value of responses weighted by the bank's share in the commercial portfolio. Negative (positive) values indicate greater restriction (flexibility) or weakness (strength) with respect to the previous survey.
Source: Central Bank of Chile.

**FIGURE III.3** CREDIT RISK INDICATORS OF CONSUMER LOANS
(percent of consumer loans)




Source: Central Bank of Chile based on CMF data.

**FIGURE III.4** MAIN ROA COMPONENTS (*)
(percent of assets)




(*) Profits calculated as the moving 12-month sum.
Source: Central Bank of Chile based on CMF data.

## STRESS TEST EVALUATION[2]/

The results of the tests applied to the banking system indicate that sufficient solvency and liquidity levels would be maintained to face the materialization of credit and market risks in stressed scenarios. This tool uses accounting data of the banking system at June and market data up to August of this year, considering an adverse and a severe stress scenario (figure III.5 and statistical appendix). The adverse scenario assumes a slow and persistent slowdown[3]/, while the severe scenario depicts an abrupt contraction of activity, accompanied by an increase in funding costs and a decrease in investment. Furthermore, in both scenarios, the fall in external demand and the deterioration of financial conditions affect the cost of funding and the exchange rate. Thus, given the recent evolution of external factors (chapter I), we consider a greater shock than in previous tests on interest rates, of 200bp for long-term and 300bp for short-term rates, in addition to an exchange rate volatility of 16% and a depreciation of 30%, which is also higher than the usual 20%.

Credit risk continues to be the focus of fragility and remains stable in relation to the May Report. Under the severe scenario, this risk is estimated to lead to a potential loss of 19.6% of the system's capital, similar to the results of the previous exercise (figure III.6). In the adverse scenario, credit risk would reach 17% of capital, slightly higher than that observed in the previous FSR, which reflects a significant effect of the persistent deterioration of activity. The low dynamism of the commercial and consumer portfolios, together with the stabilization of provision coverage, has reduced the banks' exposure to these segments, offsetting the worsening of the scenario.

Market risk remains contained, despite the volatility of international markets. The banking sector continues to show a smaller maturity mismatch compared to before the pandemic. This exposure to interest rate variations keeps results at similar levels to those of the previous version, despite the stronger shock applied to long-term rates (figure III.6). In particular, asset valuation risk remains stable and there is only a slight increase in currency risk, in line with the assumption of further exchange rate depreciation. Furthermore, the tests carried out indicate that the banks maintain sufficient levels of liquidity, above the regulatory requirements, which would enable them to face disruptive events.

Banks maintain good solvency levels to absorb capital destruction in stress scenarios. Profitability has moderated, determined by the lower repricing margin, reducing the capacity to absorb shocks and to partly convert profits into capital. Thus, in the severe scenario, the proportion of banks with negative profitability is 49% of the system's core capital.[4]/ In addition, initial solvency increased slightly with respect to the previous FSR, with the capital adequacy ratio (CAR) rising from 15.5% to 15.6%. Consequently, the impact of severe stress on the difference between initial and final capital increased from 2.7pp to 3pp (figure III.7). Therefore, capital headroom provides banks with the capacity to manage these risks, with levels similar to the previous test under stress (figure III.8). Although current bank buffers are in line with the process of increasing regulatory requirements towards full convergence to Basel III, capacities must continue to be built up to withstand possible stress scenarios in the future.

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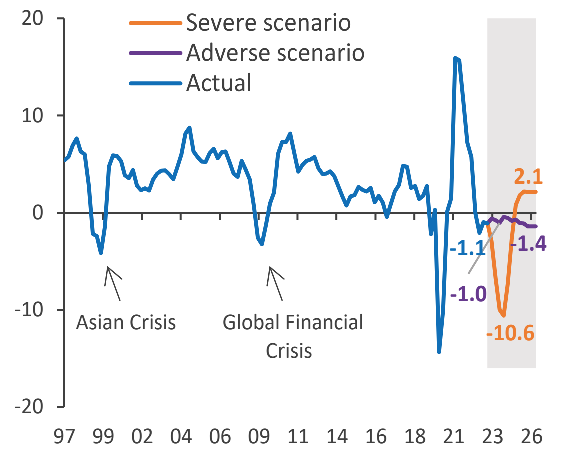
[2]/ Based on the methodology described in the FSR of the second half 2013 and in Martínez et al. (2017). Both the analysis and its results are routinely reported to the CMF. Moreover, given their nature, they should not be taken as projection exercises.

[3]/ The adverse scenario is based on the 5th percentile of the projections in the September 2023 Monetary Policy Report.

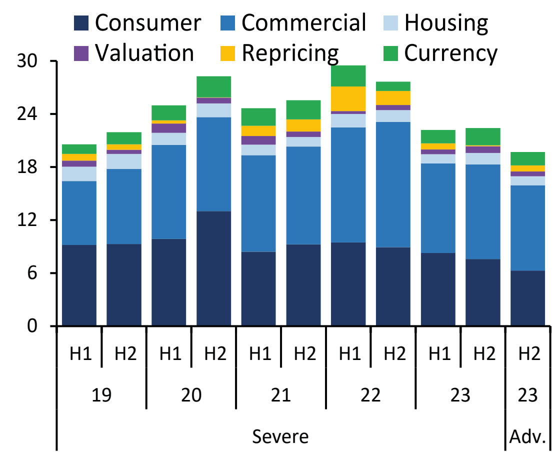
[4]/ In the adverse stress scenario, banks that account for a combined 32% of total core capital would exhibit negative returns, somewhat lower than the 33% of the previous exercise.

**FIGURE III.5** SCENARIOS OF ANNUAL GDP GROWTH (*)
(quarterly data, percent)



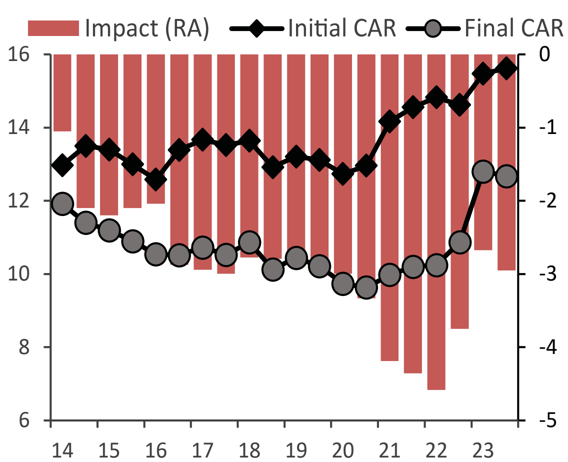

(*) Data are de-seasonalized. Shaded area indicates exercise window.
Source: Central Bank of Chile.

**FIGURE III.6** SYSTEM'S CREDIT AND MARKET RISKS
(percent of core capital)



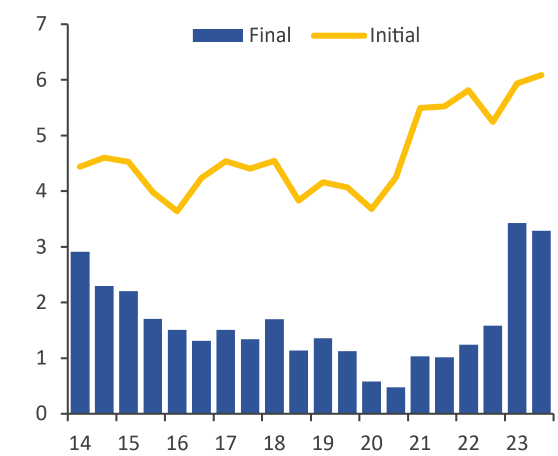

Source: Central Bank of Chile.

**FIGURE III.7** IMPACT OF THE SEVERE SCENARIO ON THE CAPITAL ADEQUACY RATIO (*)
(percent of risk-weighted assets)




(*) Considers profit reinvestment.
Source: Central Bank of Chile based on CMF data.

**FIGURE III.8** CAPITAL BUFFERS UNDER SEVERE STRESS CONDITIONS (*)
(percent of risk-weighted assets)




(*) Excess of effective net worth over the regulatory minimum. Considers the particular limits of each bank. As from 2021, Business support entities are considered.
Source: Central Bank of Chile based on CMF data.

## RISK FACTORS

**The worsening of firms' financial conditions, triggered by the unfavorable external scenario, may affect their payment capacity and, therefore, increase banks' credit risk.** More restrictive external conditions that are passed on to local credit would translate into a less dynamic level of economic activity than expected, weakening the quality of the commercial portfolio. Likewise, the weakening of the labor market could increase the risk of household defaults (chapter II). Faced with possible deteriorating scenarios such as the one described above, it is important for banks to maintain additional provisions that appropriately cover a higher credit risk.

**Deterioration in access to external financing may affect the issuance of debt and capital instruments.** Banks' possibilities to access long-term funding sources under favorable conditions could be restricted in such a case. This is relevant in the context of the Basel III implementation process, particularly for those banks that have initiated the process of issuing perpetual bonds.

**The increasing digital transformation process in banking, while boosting efficiency, also increases operating risk.** The advance of banking in digital innovations in its financial services has implied significant changes in bank-client relationships, generating ever more massive services and business models that pursue greater coverage and bankarization. However, these transformations of digital services entail an opening in the use of new platforms, which implies reinforcing safety and highlights the importance of making investments to mitigate the operating risk inherent in this new business environment.

BOX III.1:

## Supply- and demand-side drivers in commercial credit

**Commercial credit posted positive growth at the beginning of the pandemic; however, in the last two years this trend has been reversed.** The sales shock associated with the lockdowns caused a strong increase in the demand for credit by firms, which, coupled with a more expansionary supply sustained by the support measures, accelerated the growth of commercial credit in the first half of 2020 (Box III.1, FSR first half 2021). From 2022 onwards, commercial credit has decelerated from a real annual stock growth of 2.6% in December 2021 to –6.4% in September 2023 (figure III.1).

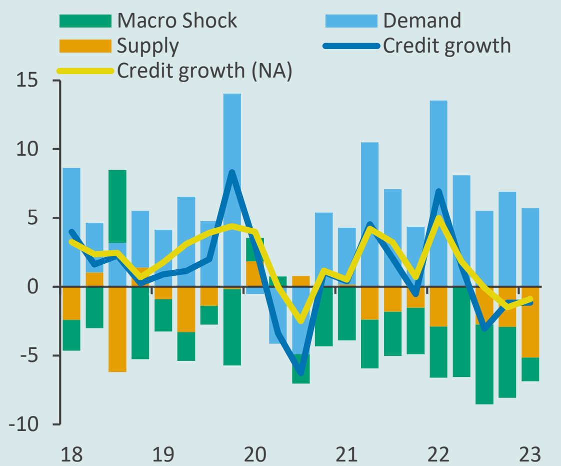
**This box uses three methodologies to break down the recent dynamics of commercial credit into supply, demand and other elements that have influenced its recent evolution.** The results coincide in indicating that the slowdown in lending activity is explained by both supply and demand factors, with the lower dynamism of demand prevailing. The Bank Lending Survey (ECB) reports a similar diagnosis, attributing this weakening of demand to reduced needs to finance investments, particularly by large companies. On the other hand, since the last quarter of 2022, the BLS also confirms a more restrictive credit supply, associated to the perception of a further deteriorated economic environment (chapter III).

**The first analysis —based on micro data— shows that the slowdown in the past year is mainly explained by a lower contribution of the demand factor and the macro factor.** Using the methodology of Amiti and Weinstein (2018) and data at the bank and debtor level, we decompose the growth of these loans into three types of shock: (i) a demand shock from firms, (ii) a supply shock from banks, and (iii) a common component associated with macro factors.[1]/ Since the last quarter of 2022, there has been a lower contribution from demand factors, and only in the second quarter of 2023 has there been a significant change in the supply component (figure III.9).

**The following two analyses, based on aggregate data, coincide in identifying elements of credit demand as the most relevant to explain the low dynamism of commercial credit.** The first one uses a structural VAR model with sign restrictions and indicates that the decline in demand shocks is the main factor behind the decline in commercial credit in the past year (figure III.10).[2]/ The second analysis is based on a macro-financial model that suggests that the main cause behind recent credit dynamics is greater uncertainty about the expected return on investment projects. In particular, the dynamics of prices and amounts of credit provided to the model are interpreted by the model as consistent with a higher risk to firms' investment returns and a lower accumulation of equity capital. To this is added a negative impact on the aggregate productivity of the economy. All these elements imply in the model a lower demand for bank credit and have explained most of the negative growth of commercial credit during the last two years, and stand out above the incidence of monetary policy or external factors (figure III.11).[3]/

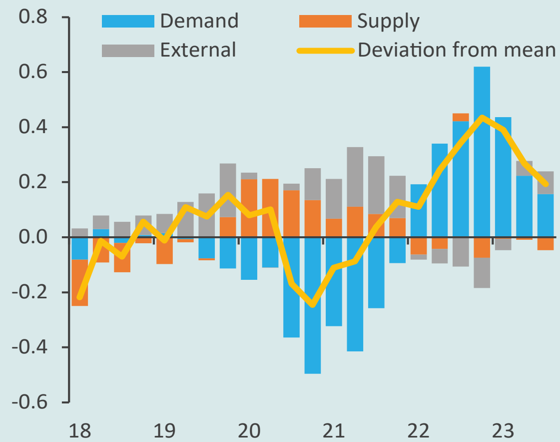
[1]/ Credit supply factors are understood as those that originate in banks' balance sheets and affect their capacity or willingness to grant credit. The credit demand factors are those that originate in the firms and affect their capacity or need to be granted a loan. The common element is one that cannot be separated into demand and supply and is therefore construed as a shock common to all firm-bank relationships, and is therefore associated with the macro factor. For details on this exercise, see Cristi and Toro (2021).
[2]/ This methodology is based on Barauskaite (2022), Balke (2021) and Uhligh (2005). The model considers commercial loans, the interest rate, and EMBI. Demand shocks consider positive impacts on credit and rates. Supply shocks consider a negative impact on credit and a positive impact on interest rates. External considers a negative shock on credit, positive on rates and positive on EMBI.
[3]/ The macro-financial model does not present a decomposition of demand and supply, but rather structural shocks that are extracted statistically from the data. For methodological details, see Calani et al. (2022).

**FIGURE III.9** DECOMPOSITION OF MICRODATA-BASED COMMERCIAL CREDITS (*)
(percent)



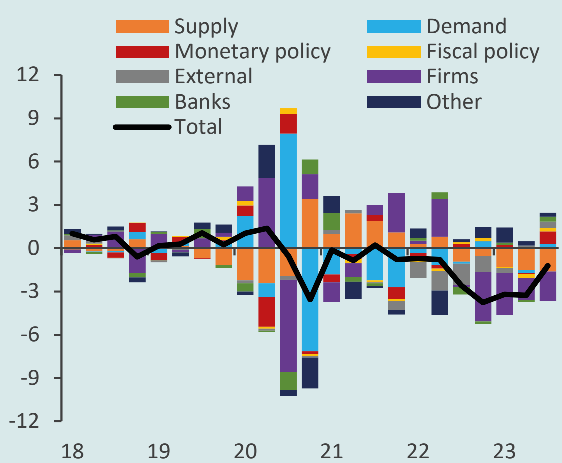

(*) Credit growth (NA) is the official quarterly commercial credit growth figure published in the National Accounts. The exercise decomposes the Credit growth series, which considers credit to firms with more than one banking relationship. Macro shock represents a factor that cannot be separated as a supply or demand component.
Source: Central Bank of Chile based on CMF data.

**FIGURE III.10** COMMERCIAL CREDIT DECOMPOSITION BASED ON SVAR MODE (*)
(deviations from mean, percent)




(*) Considers fims with local financing in pesos. Demand shock considers positive effects on credit and interest rates. Supply shock considers a negative impact on credit and a positive impact on interest rates. External considers a negative shock in credit, a positive rate, and a positive EMBI.
Source: Central Bank of Chile based on CMF data.

**FIGURE III.11** HISTORICALDECOMPOSITION OF COMMERCIAL CREDIT SHOCKS BASED ON STRUCTURAL MODEL (*)
(percent)




(*) "Other" includes factors associated with the initial value chosen for the decomposition, with financial effects of smaller magnitude and factors associated with consumption.
Source: Central Bank of Chile based on CMF data.

# IV. FINANCIAL POLICY DEVELOPMENTS

At the Financial Policy Meeting (RPF) of the second half of the year, the BCCh Board decided to maintain the Countercyclical Capital Buffer (CCyB) at 0.5% of risk-weighted assets (RWA), considering that this strengthens the resilience of the banking system and acts as a precautionary measure if faced with a severe financial stress scenario. This preventive and resilience strategy for the use of CCyB has been observed in a growing number of countries in the last decade, with different implementation criteria. In addition, active use of other macroprudential tools —such as systemic charges and Pillar 2— continues to be observed in several economies, partly due to their strong progress in the implementation of Basel III standards. Last March's events in international banking underscored the importance of monitoring liquidity risk, market risk management, and the effectiveness of resolution systems for systemically important banks. This has been at the center of a broad debate that has been followed by a review of supervisory practices, motivating the evaluation of banking regulation and resolution, which could lead to the revision or redefinition of global standards in the medium term. At the local level, progress continues to be made in the convergence to Basel III, which will allow banks to reach by 2025 —subject to their additional efforts to strengthen their capital structure— capital levels comparable to those required in member jurisdictions of the Basel Committee on Banking Supervision (BCBS). With respect to the BCCh's regulatory initiatives announced in the previous IEF, the following stand out: the incorporation of appropriate safeguards to allow the operation of new business models for payment cards; progress in matters of retained securitization instruments, which can be used as collateral in liquidity operations; and the final stage of the foreign exchange (FX) modernization process. Regarding legislation, the approval in Congress of the Financial System Resilience Law will improve the management of the BCCh's traditional liquidity tools and confers new powers to the financial authorities to address stress episodes; in addition, as the Fintec Law begins to be implemented, these advances will contribute to strengthening the initiatives contemplated in the BCCh's Payments Agenda.

## DECISION TO ACTIVATE TYE COUNTERCYCLICAL CAPITAL BUFFER IN CHILE

**At the Financial Policy Meeting in the second half of 2023, the Board of the Central Bank of Chile decided to maintain the Countercyclical Capital Buffer at 0.5% of eligible risk-weighted assets as of May 2024.** In 2021, the BCCh Board made explicit in its policy framework that the objective of the CCyB —a tool provided for in the new General Banking Law— is to enhance the resilience of the banking system to severe stress scenarios, resulting from the materialization of systemic risks, thus contributing to reduce the impact of such events on the flow of credit, financial stability and the overall economy (BCCh, 2021). Implementing this buffer consists of accumulating capital so that it is available when needed to address such scenarios, which, if materialized, could be released to mitigate the negative impacts of a sudden restriction of essential banking services, such as credit provision (BCCh, 2023). Thus, the decision adopted at the RPF in May to activate for the first time the CCyB at 0.5% of risk-weighted assets in one year, was a precautionary measure in a context in which major disruptions were taking place in international banking, especially in the United States (FSR, second half 2023, chapter IV).

**The decision to maintain the CCyB at the same level and implementation timeframe established in the previous FSR is viewed as an appropriate precautionary measure, considering the assessment of vulnerabilities and risks presented in this Report.** Although no new episodes of financial stress have materialized, external sector risks have been heightened by tighter and more volatile global financial conditions and escalating geopolitical tensions. This could adversely affect the local financial market through tighter long-term financing conditions and lower asset valuation (chapter I). Locally, progress has been made in the resolution of macro-financial imbalances, such as the reduction in inflation and short-term interest rates, the fall in corporate indebtedness, and the normalization of the financial indicators of credit users. The cost of long-term financing has evolved in line with international macro-financial developments, with rate hikes for both corporate and sovereign bonds and, more recently, for longer-term loans. In this context, a worsening of the external scenario could affect access to financing for households and companies (chapter II). In turn, the banking system remains resilient even in the face of adverse scenarios according to the findings of stress tests and, therefore, it can be estimated that it is in appropriate conditions to comply with the CCyB charge of 0.5% of RWA defined in the previous FSR, which will be enforceable as of May of next year (chapter III). This scenario reinforces the need to have the capital buffer constituted beforehand/in advance, considering that, if released or reduced by the authority in the event of a severe shock, it would help mitigate the impacts on the provision of credit to households and businesses and in relation to the potential propagation of this type of stress events to the rest of the economy.

**The BCCh will review its CCyB policy framework throughout 2024, evaluating the definition of a neutral level, considering international developments on the use of macroprudential tools.** This seeks to align its policy framework with international best practices, considering the idiosyncratic aspects of the Chilean economy and financial system as well as the state of progress towards Basel III. In the case of the CCyB, its use and relationship with other tools is still a matter of international debate. The BCCh constantly monitors the practical aspects of its implementation in other countries, including the updating of macroprudential or CCyB specific policy frameworks.[1/] The new trends in the use of the CCyB as a resilience tool and the debate initiated within the Basel Committee on its effectiveness are one example of relevant changes in policy practices in other countries that should be kept under observation. The BCCh constantly seeks to remain at the forefront in the implementation frameworks of the different tools that are part of its attributions, therefore, among other elements, these practices will be considered when reviewing and evaluating Chile's policy framework, including the definition of the neutral level and the implementation of the CCyB in Chile. This process will proceed throughout 2024 and the Bank will report on its progress in a timely manner.[2/]

[1/] The Australian Prudential Regulation Authority (APRA) and the Central Bank of Ireland (CBI) published an update of their macroprudential policy frameworks (APRA, 2021 and CBI, 2022), while the central banks of Cyprus, the Netherlands and Sweden published updates of the frameworks used for their CCyB decisions (CBC, 2022; DNB, 2022; and CNB, 2023).

[2/] In general, the elements to be considered for adopting a neutral CCyB approach include: the definition of the target level; the criteria under which the buffer is modified; the graduality of the construction or reconstruction of the buffer and its release; and communication and forward guidance aspects, among others.

## THE INTERNATIONAL REGULATORY CONTEXT

**Globally, the preventive and resilience strategy for the use of CCyB has been observed in a growing number of countries over the past decade.** Twenty-seven jurisdictions have announced ever having activated the CCyB since 2016 (figure IV.1). Of those that had activated or augmented CCyB prior to the Covid-19 pandemic, nine released CCyB completely and five partially, in all cases deciding to reactivate or rebuild the buffer after the sanitary crisis had abated. The use of this tool as a precautionary measure relies on the fact that it is difficult to anticipate big shocks that may be far into the future, either because the measures available for predicting credit crises are imperfect, or because they could not capture those that do not originate from financial imbalances that can be monitored —Covid-19 is a case in point. Meanwhile, there is evidence of some reluctance on the part of banks to use the so-called "releasable buffers" —for example, the capital conservation buffer— in order to avoid a potential stigma effect and corresponding restrictions on dividend distribution.[3]/ This kind of effects have allowed assigning to the CCyB a certain relative advantage in its capacity to act as an effective buffer in situations of financial disruption, insofar as the decision to release it for all banks depends on the authority. This resilience approach is also consistent with the International Monetary Fund (IMF) policy recommendations aimed at safeguarding economies from undesired effects on credit provision (IMF, 2023). It should be noted that, being a macroprudential tool still in the implementation and calibration stage in various jurisdictions, the evaluation of the effectiveness of the role of "releasable" macroprudential capital buffers is still an ongoing issue on the international agenda.

**Among the jurisdictions that have adopted this preventive strategy, several countries explicitly define a desirable level of positive CCyB when the economy is in a state of contained risks, guided by various criteria.** Currently, the countries that have explicitly defined a "neutral", "default," or "standard" CCyB level are Australia, Cyprus, the Czech Republic, Estonia, Georgia, Ireland, Lithuania, the Netherlands, Sweden, and the United Kingdom. While the implementation frameworks guiding these economies in taking this approach are relatively new and vary somewhat, some common elements can be identified, consistent with the objective of having a capital buffer readily available most of the time to enhance the resilience of the bank. One of these common elements is the buffer accumulation criterion based on the identification of systemic-risk conditions.[4]/ Thus, for example, it is considered wise to gradually build up the CCyB towards a positive neutral value when a standard risk environment —i.e., one in which risks exist but are contained— is observed;[5]/ while the CCyB could be set above that neutral level when the financial cycle is in an upward phase, meaning that systemic risks are increasing. On the other hand, the CCyB could be immediately released partially or totally in times of stress, that is, in the event of a disruption in the financial system triggered by the materialization of some risk. Among the policy elements where there is greater diversity of criteria, the definition of the CCyB target level and the pace of its (re)construction stand out. In particular, the neutral CCyB level defined by the countries that have explicitly adopted this approach is based on qualitative criteria, complemented in some cases by quantitative methodological tools.[6]/ Some jurisdictions also consider conducting explicit evaluations of the phase of the financial cycle the economy in question is in. Although most countries share similar graduality (a pace of 1% per year), differences exist in terms of the frequency and magnitude of the increments.

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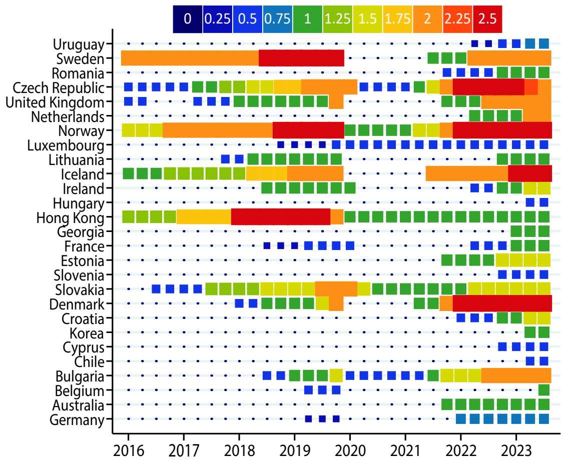
[3]/ For details, see Berrospide et al. (2021) and Couaillier et al. (2022).

[4]/ Among the jurisdictions that have published frameworks for implementing a neutral CCyB that explicitly communicate the use of this approach are Australia, Ireland, Estonia and the Netherlands. See, respectively, APRA (2021), CBI (2023), CBE (2021) and DNB (2022). For a generalization of the framework followed by some European countries, see Behn et al. (2023).

[5]/ The standard risk environment differs across countries, although they all use indicators of the macroeconomic situation, the credit market and the banking system. Also, the way to measure or calibrate the "neutral" level is based on historical losses, stress tests, assessments of the effects of buffer releases during the pandemic and expert opinions.

[6]/ See, for example, de Haan and Kakes (2020) for the case of the Netherlands, and Plasil (2019) for the Czech Republic.

**FIGURE IV.1** ANNOUNCED CCYB LEVELS (*)
(percent of risk weighted assets)




(*) Considers announcements from 52 countries that report some of their decisions to the BCBS (G20) and the ESRB (EU members), plus Chile, Georgia, and Uruguay. In periods where no decisions were reported, the latest CCyB level announced available on the websites of the respective jurisdictions is considered. The size of the squared markers is associated with announced CCyB values.
Sources: Central Bank of Chile base on BIS and ESRB data, as well as the information vailable on the respective websites of CCyB authorities of each jurisdiction.

**Regarding the countries that currently maintain an active CCyB, since the previous IEF, it has been observed that the CCyB announcements made by other jurisdictions have been heterogeneous and based on a broader set of criteria.** Since last May, announcements of CCyB increases were observed in eighty countries (including Chile),[7]/ whether by first-time activation or new increases in their requirements, mainly motivated by challenging financial conditions and global uncertainty. Typically, the need to increase the resilience of the banking sector is mentioned. Among the countries observed, the Czech Republic decided to gradually release the buffer in the face of a reduction in systemic risks in accordance with the particular situation of its financial cycle. Among the countries that continue to maintain the buffer at 0%, the following stand out: Italy, which recently announced that it will re-evaluate its CCyB implementation framework in light of the international discussion on positive cycle-neutral CCyB under normal conditions,[8]/ and Finland, which stated that adjustments to the policy framework would be necessary to be able to use the tool with such an approach in order to have greater flexibility to support credit provision in situations where an external shock to the financial system could jeopardize the operation of the credit market.[9]/

**It should be noted that the active use of other macroprudential tools continues to be observed in several economies.** The use of macroprudential policy tools, such as sectoral or system-wide capital requirements, restrictions on the exposure to risky segments or credit (e.g., through collateral or loan-to-income ratios), and liquidity ratios, among others, seeks to keep systemic risks at bay and can be applied to both the banking and non-bank sectors.[10]/ Among the capital-based macroprudential tools applicable to banks that have been used in Europe beyond the CCyB, the sectoral systemic risk buffer and the capital buffer for domestic systemically important entities stand out. Most recently, France introduced the sectoral systemic risk buffer at 3% for highly leveraged financial company exposures, while Belgium reduced the buffer from 9% to 6% for certain retail exposures backed by real estate assets, effective April 2024, the same month of the first increase in its CCyB.[11]/ Now, given the diversity of tools and their applications, deciding on the best combination in each economy, as well as evaluating their effectiveness, is complex and not without opportunities for constant improvement.

[7]/ Considers announcements from 52 countries that report some of their decisions to the BCBS (G20) and the EU's European Systemic Risk Board (ESRB), plus Chile, Georgia and Uruguay.
[8]/ BIS (2022) documents this tendency to building a buffer and using it to soften the impact of domestic and external shocks. The document also reiterates that the introduction of neutral CCyB levels above 0% by some countries is endorsed by the BCBS.
[9]/ For details, see FIN-FSA (2022).
[10]/ Macroprudencial policy is one of the fundamental pillars of financial stability (FSR, first half 2020).
[11]/ For details, go to link.

The use of other capital buffers in advanced economies is possible because they have either completed or are well advanced in implementing Basel III standards. In these jurisdictions, the implementation of Basel III standards began early, more so where the starting point involved full implementation of the previous standards (i.e., Basel II).[12]/ As a result, these economies have gained more expertise in the use of more sophisticated tools, such as Pillar 2 capital requirements and systemically important charges, in addition to the CCyB. Thus, the average Pillar 2 requirement applicable for 2023 stands at 1.1% of RWA in the EU, and a similar figure for the U.S.,[13]/ while Mexico and Brazil have not been active in the use of this tool. Meanwhile, the comparable average systemic charge[14]/ between the U.S. and Europe stands, respectively, at 1.6% and 1%, while the additional capital charge to systemic banks in Mexico is between 0.6% and 1.5%.

## LOCAL CONVERGENCE TO BASEL III STANDARDS

On the domestic front, progress continues to be made in the full implementation of Basel III standards, which would allow reaching levels of capital similar to those required in BCBS member jurisdictions by 2025 and subject to additional efforts by banks to strengthen their capital structure. In accordance with the Basel III implementation program in Chile, [15]/ the minimum standard level, i.e., CET1, AT1, T2, and the conservation buffer, of 10.5% of RWA will be reached in 2024. On this standard basis, the total requirements depend on the decisions adopted for the variable components. On aggregate and in simulated severe stress scenarios, it is estimated that banks have sufficient liquidity, provisions, and capital buffers to face multiple challenges in the short and medium term, such as the payment of the credit support programs granted during the pandemic in 2024 and the adjustments in regulatory capital requirements going forward (chapter III). By 2025, when Basel III standards would be fully implemented, local banks will need to continue strengthening their solvency. In this context, the recent announcements of capital increases and the start of the authorization process for future issuance of AT1 are well appreciated.

The evolution of the set of capital requirements, as well as other policy tools, will continue to be important elements to monitor, especially those that are still in the process of calibration. Since April of this year, with the repeal of chapter III.B.2.2.2 of the CNF by the BCCh and the submission by the banks of the first effective equity self-assessment report (IAPE),[16]/ the CMF has complete information to carry out the process defined in the framework for assessing the adequacy of banks' effective equity. The supervisory review process developed by the CMF evaluates and compares the banks' effective net worth requirements, defining the actions required in case of finding significant deficiencies.[17]/ These deficiencies could lead to higher effective equity requirements, to be completed in the composition of capital determined by the CMF by means of a substantiated resolution.[18]/ In turn, according to the Basel III implementation schedule in Chile, the charges associated with the systematic nature of a banking institution, which are determined in March of each year, must be constituted by 1 December, 2023 up to 50% of the requirement set for each entity defined as systemic. Recently, the CMF put out for consultation a regulatory proposal that adjusts the threshold that determines the systemic nature of banks based on their systematicity score,[19]/ and generates greater openness in the reported sub-factor data, aimed at improving the quality of information for determining the systemically important banks.

[12]/ Pillar 2 was designed so that capital appropriately covers risks that may arise from idiosyncratic factors not necessarily considered in the overall capital framework. For details, go to link.

[13]/ According to Enria (2023), who reports data up to the fourth quarter of 2022.

[14]/ For details, see Enria (2023).

[15]/ For details, go to link.

[16]/ Chapter 21-13, Updated compilation of CMF regulations.

[17]/ These consider: (i) changes to the entity's risk profile; (ii) improvements in governance, management and internal control; and (iii) higher effective equity requirements, if it is believed that there are material risks insufficiently hedged.

[18]/ As defined by the General Banking Law, the maximum Pillar 2 charge may not exceed 4% of the RWA and it is for the CMF to determine the type of regulatory capital (i.e. CET1, AT1, or T2) with which this charge must be supplemented.

[19]/ See link. With this adjustment, the CMF estimates that, in the process to be carried out in March 2024, there would be no change in the group of systemic banks identified in the previous processes.

## INTERNATIONAL DISCUSSION IN MATTERS OF BANKING REGULATION AND RESOLUTION

**The risk management problems of banking entities evidenced by the events of last March in international banking motivated a detailed review of various aspects of financial policy in some advanced economies.** The bankruptcy/resolution of some banks in the U.S. and Europe during March 2023 revealed business models focused on short-term growth and profitability, and weaknesses in risk management (FSR, first half 2023, chapter IV). These elements led to refocus international attention on the relevance of robust supervision to identify these weaknesses and act promptly to rectify them. Specifically, the initial evaluation focused on the criteria for the application of prudential standards such as liquidity requirements, the treatment of interest rate risk in the banking books and its relationship with the accounting classification of financial assets as "held-to-maturity," i.e., banking books, which are not valued at market prices.

**In addition to the initial assessment, a discussion centered on specific aspects of prudential regulation was initiated on an international level.[20]/** One of the elements that have been highlighted is the relevance of using the liquidity coverage ratio (LCR) as an available buffer to face liquidity stress situations. Additionally, questions have arisen about the possibility of more frequent reporting of liquidity ratios, as well as the possible development of other indicators not subject to risk weighting. Regarding the treatment of assets in the banking book, it has been raised that there is a trade-off between the lower volatility and procyclicality of regulatory capital by not valuing such assets at market and the negative effects on results and net worth due to the abrupt internalization of losses upon liquidation.

**The international banking events also prompted an inquiry into the loss-absorbing capacity of hybrid capital instruments.** The regulatory design of hybrid capital instruments (Additional Tier 1, or AT1) was aimed at maintaining the stability of the troubled bank through two fundamental characteristics: (i) their conversion or write-off in the event of capital levels above the minimum required to declare a bank insolvent, and (ii) granting discretion to the issuing bank in the payment of dividends or associated coupons in order to facilitate organic capitalization (BCBS, 2011). However, in the case of Credit Suisse, the fact of not suspending coupon payments despite incurring losses could have indicated a certain reluctance to exercise this option to avoid negative market signaling effects. The possibility of this type of situation occurring has triggered a review of the loss absorbing capacity of AT1 instruments, which, as of the statistical closure of this FSR, has not yet resulted in policy recommendations.

**Related to the above, the discussion on international standards for the resolution of systemically important banks has been reopened.[21]/** FSB (2023) provides an assessment of bank bankruptcies from the perspective of the functioning of the international resolution principles and framework established by the Key Attributes of Effective Resolution Regimes document.[22]/ For example, the adequate level of loss-absorbing capital required for global systemic banks, as well as the supervision of resolution plans required by the authority and cross-border cooperation together with the supervisor's ex ante readiness to act along these lines are identified as strengths of the framework. Among the challenges are the need to maintain greater strategic flexibility in the application of resolution tools, expand capital requirements for loss absorption to a wider range of institutions, reevaluate the concept of "systemic importance," and the role of deposit insurance as a mechanism to prevent liquidity stress situations of banks. The analysis leaves elements to be further developed, which the FSB considers to be able to address an update of critical attributes for resolution and to participate in collaboration with IADI in the update of its Core Principles for Effective Deposit Insurance Systems.

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[20]/ For details, see FRB (2023) and BIS (2023).

[21]/ Following the Global Financial Crisis, regulators and supervisors adopted measures aimed at better supervision and protection of banks and financial institutions. FSB (2014) identifies critical attributes for effective resolution regimes.

[22]/ The March episodes were a test of the functioning and effectiveness of the FSB's principles for resolution frameworks and their appropriateness in resolving a globally systemically important bank (as Credit Suisse was) versus that of locally systemic banks (as those intervened banks in the U.S.).

**In turn, the events of last March triggered responses from U.S. and Swiss supervisors, with improvement alternatives for their resolution frameworks and deposit insurance schemes in place.** For example, the relevant U.S. authorities —FDIC, OCC and FRB— have jointly addressed the analysis of the effects caused by the bank failures and issued regulatory proposals aimed at:[23/] (i) requiring more loss-absorbing capital for banking institutions with assets over US$100 billion; and (ii) providing guidelines to improve, in critical areas of potential vulnerability, the design of resolution plans (living wills) for large bank holding companies and foreign financial institutions with more than US$250 billion in assets. In addition, FDIC (2023) proposes three alternative deposit coverage changes to reform the deposit insurance system.[24/] In Switzerland, the Federal Department of Finance (FDF) commissioned a group of financial stability experts to prepare a report[25/] that would identify the main opportunities for improvement in this area focusing on the viability of the too-big-to-fail regime. The proposals are mainly aimed at better coordination and management of crisis situations among local financial supervisors, helping institutions to be better prepared through the creation of various alternatives for resolution plans, expanding the set of collateral for the provision of emergency liquidity, and reinforcing the quality of capital for loss absorption.

## BCCH REGULATORY AGENDA AND LEGISLATIVE DEVELOPMENTS

**In line with what was reported in the previous FSR, in recent months the BCCh has put three regulatory initiatives out for public consultation (table IV.1).** In chronological order, these initiatives are related to perfecting the rules for issuing and operating payment cards, enabling the issuance of self-securitized instruments that can be used as collateral in transactions with the BCCh, and closing the process of modernizing the foreign exchange regulation.

**In July, an adaptation and update to new business models of the regulation on issuance and operation of payment cards was published for consultation.** As a consequence of the BCCh's permanent analysis and monitoring of the evolution of the retail means of payment market, and taking into consideration recent market and regulatory developments, the Bank will make the following adjustments: (i) adapt the prudential requirements of prepaid card issuers to new closed or semi-closed payment schemes recognized by the Fintec Law; (ii) incorporate into the regulatory perimeter Payment Processing Service Providers (PSPs) that perform payment or settlement activities, under the proportionality criteria in their prudential requirements; and (iii) establish regulatory standards for the development of the so-called cross-border acquiring. The proposed adjustments should facilitate the development of these new business models, while maintaining adequate liquidity risk management safeguards.

**In August, the proposed amendment that would expand the possibilities for the issuance of securitized instruments and their potential use as collateral for liquidity risk management was published for consultation.[26/]** The proposal incorporates chapter 3.B.4 of the CNF the possibility of carrying out "self-securitization" operations, through which banks may sell or assign documents from their loan portfolio to a securitization firm, so that the latter may issue securitized debt securities to be acquired by the same banking institution. Potentially, these instruments may be used for liquidity operations with the BCCh according to the requirements and conditions that it may apply. Currently, the BCCh is in the process of analyzing the comments received from the market, in order to define if they can be incorporated into the proposal and proceed to its definitive publication.

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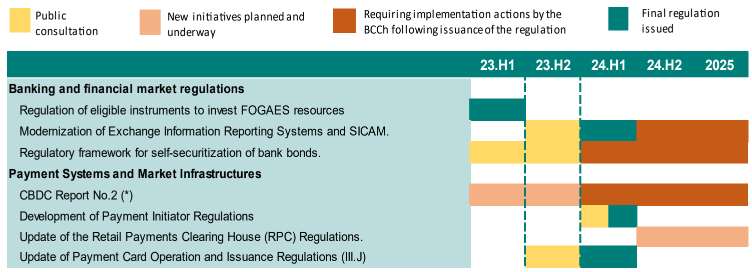
[23/] For more details, see FDIC and FRB (2023) and FDIC, FRB and OCC (2023).

[24/] The alternatives are: substantially increase the limits of the current coverage; move to unlimited coverage; or significantly increase coverage to corporate payment accounts while leaving coverage to other deposits largely unaffected.

[25/] For more details, see FDF (2023).

[26/] For more details on the proposal, see link.

**TABLE IV.1** PUBLIC FINANCIAL INITIATIVES OF THE CENTRAL BANK OF CHILE




(*) Steps ahead being explored.
Source: Central Bank of Chile.

**In October, the proposal to modernize the management of information reported by entities in the formal exchange market entities was published.** Since 2019, the BCCh has made successive modifications to its FX regulations, for example, authorizing cross-border operations to be carried out in Chilean pesos and relaxing the rules for operating in the formal FX market. This is part of a long-term process of modernization of FX regulations, the final phase of which is the reformulation of the Compendium of Foreign Exchange Regulations (CNCI), which will have a simpler structure and a streamlined regulatory burden. It also envisages the development of a new Foreign Exchange Information System (SICAM), which will follow high standards of safety and user experience. It should be noted that the implementation of the new CNCI and SICAM is expected by 2025, as it will require members to adapt their information reporting systems to the new standard.

**The BCCh's payments agenda is part of its Strategic Plan 2023–2027 and aims to promote the development of payment systems in line with changes in technology and user preferences, adapting the regulatory framework and infrastructure.** This is so because having a robust payment system is essential for financial stability, and advances in digital payments are an opportunity to increase financial inclusion and improve the efficiency of the system. To this end, for the coming years the Bank plans to carry out a set of initiatives related to the strengthening of financial market infrastructures, the challenges and new business models in retail payments, the exploration of Central Bank digital currencies, and the implementation of the Fintec Law. Further details of this agenda were outlined in chapter III of the Payment Systems Report.

**Regarding financial market infrastructures, although regulatory adjustments are not imminent, the BCCh continues working to make them more robust.** In particular, the process of implementing the Low Value Clearing House regulations continues, which should begin to operate as regulated entities in the coming months, and the review of experimental projects presented by the private sector is underway. In addition, new derivatives transaction reports will be incorporated into the SIID.

**Legislative advances, such as the approval in Congress of the Resilience Law and the beginning of the implementation of the Fintec Law, will contribute to improve the management of the BCCh's traditional liquidity tools and strengthen the initiatives contained in its Payments Agenda.**[27]/ The imminent enactment of the Law that Strengthens the Resilience of the Financial System and its Infrastructures will contribute to the stability of the financial system, by opening opportunities for market development, supporting the peso internationalization agenda, strengthening the regulatory framework for market infrastructures and strengthening the BCCh's capacity to manage liquidity, both in normal times and in situations of financial stress (box IV.I). The measures directly linked to the BCCh's legal mandate are the result of extensive work led by the BCCh and financial authorities during the last decade, which includes the application of international standards and practices, recommendations obtained from technical assistance and evaluations by international organizations,[28]/ together with the evaluation of the characteristics of the local market.

[27]/ For more details on the BCCh's Payments Agenda, see Payment Systems Report 2023.

[28]/ See, for example, IBRD/WB (2016), IMF (2020), and IMF (2021).

**The implementation of the Fintec Law in Chile opens new opportunities for the BCCh in the area of payment systems.** Following the enactment of the Fintec Law earlier this year, the CMF has been working on its regulatory implementation,[29]/ which has strict legal deadlines. These regulatory changes contemplate incorporating Fintech services and the design of an Open Finance System into the regulatory perimeter[30]/ which in turn are related to aspects of the BCCh's Payments Agenda. Thus, the CMF will regulate payment initiators, while those who hold funds temporarily will also be regulated by the BCCh. On the other hand, it is the Bank's responsibility to regulate the stablecoins that are issued locally and used as a means of payment, taking into consideration the developing international experience.

**Progress is being made in the incorporation of factoring into the regulatory perimeter, as the Fintec Law regulates alternative transaction systems (SAT), including those in which invoices are traded.** The Fintec Law defines "financial instrument" as a set of assets, including invoices. The Law also defines a SAT as a physical or virtual place that allows its participants to quote, offer or trade financial instruments or publicly offered securities, and which is not authorized to act as a stock exchange or commodities exchange. The regulation in consultation proposed by the CMF for the implementation of this aspect of the Fintec Law considers requirements for alternative transaction systems in matters such as risk management, that the instruments subject to negotiation in an SAT comply with the legal and regulatory framework in force, integrity, transparency, and collateral. This strengthens the framework in which activities such as factoring are carried out,[31]/ provided that these are performed through a platform that qualifies as an SAT, with the respective intermediaries and custodians also being regulated.

**Regarding policy tools for stress situations, the financial authorities that make up the Financial Stability Board and the BCCh signed a memorandum of understanding for the management of critical situations, and continue to work on a proposal for a Bank Resolution and Deposit Insurance scheme for Chile.** As stated in the previous FSR, the signed memorandum of understanding aims to allow a more timely, efficient and informed action by the authorities to safeguard financial stability when faced with a crisis. This type of agreement is in line with international best practices of inter-institutional coordination but does not supersede other mechanisms —such as bank resolution and deposit insurance schemes— that allow for the orderly conduct of strategies to safeguard the stability of the financial system when one or more banks pose systemic risks. The CMF, the BCCh and the Ministry of Finance are working on a proposal for a Bank Resolution scheme for Chile, which would allow the authority to have a broader toolkit for the protection of depositors, financial stability and public faith in the financial market, safeguarding public interests by keeping critical services of the entity in operation and minimizing the cost for depositors and taxpayers, in line with international standards. Due to the complexity and importance of such schemes, is the three authorities are expected to continue working on the evaluation of alternatives to address aspects related to the institutional framework and powers of the resolution authority and/or deposit insurance, resolution tools and aspects of deposit insurance, among other topics.

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[29]/ Last October, the CMF published in consultation the first part of the regulatory framework for the Fintech industry.

[30]/ In Fintech Services, it contemplates corporate governance practices, risk management, guarantees, suitability, transparency and others. In Open Finance System (OFS), it incorporates general guidelines to address authentication, consent, data protection standards, APIs, cybersecurity and others.

[31]/ The factoring industry has experienced significant growth in recent years. The main provider of this financial service is the banking industry, with a share of over 70%. For more details, see "The Evolution of Banking Factoring in Chile" in Financial Stability Report, second half of 2019, and Fernández and Vásquez (2022).

BOX IV.1:

## Approval of the bill to strengthen the resilience of the financial system and its infrastructures

**Last October, the Law to Strengthen the Resilience of the Financial System and its Infrastructures was approved, which represents an important contribution to financial stability and the payment system.** This initiative presented by the Ministry of Finance in September 2022 modifies several legal bodies, including the Constitutional Organic Law of the BCCh. It aims to improve financial market functioning , expanding the tools available to market agents and incorporating various powers to strengthen the authorities' response to stress situations.

**Most of the provisions of this new law relate to fundamental aspects of the BCCh's legal mandate and scope of action in the areas of liquidity, exchange rate policy, financial stability, and payments.** These include the extension of access to certain financial services provided by the BCCh to certain Financial Market Infrastructures (FMIs) and Non-Banking Financial Intermediaries (NBFIs), mainly considering financial stability, competition, and neutrality criteria. It also introduces improvements for the development of the repo market, both between private sector entities and those in which the BCCh could be a counterparty as a liquidity management tool in situations of financial stress. Additionally, the internationalization of the peso is facilitated by clarifying the type of information that must be reported to the tax authority on transactions carried out in peso correspondent accounts that may be opened by local banks for non-resident entities.[1/]

**In this area, national and international assessments are incorporated, as well as an internal analysis on liquidity and central banking financial services.** In 2019, the BCCh requested technical assistance from the IMF to evaluate the extension of central banking services according to international standards. The IMF's suggestions,[2/] together with the analysis of local authorities and the IMF's Financial Sector Assessment Program (FSAP) 2021,[3/] were important inputs to develop this legislation. Likewise, since 2015, the BCCh has coordinated assessments to further convergence towards international standards in financial market infrastructures, which include the operation of the RTGS System.[4/]

**The expansion of access to the BCCh's payment and liquidity systems for some relevant non-bank entities in the provision of payment services is conducive to greater financial stability and promotes neutrality among institutions, as is currently the case in more modern economies.[5/]** Allowing Credit Unions (CUs), payment systems and their participating entities -such as payment card issuers and operators- and securities depositories to open settlement accounts, ensures the settlement of payments through reserves at the central bank, when it is risky or not possible to do so at other financial institutions. Such access favors entities that until now depend on banking institutions to access settlement services. In addition, the law will make it possible to provide permanent deposit and emergency liquidity facilities to central counterparties, which respectively encourages the posting of collateral at the central bank and ensures the provision of liquidity in times of stress, which is especially important for systemic institutions.

[1/] For more information on the relevance of banking resilience, see box III.1 in IEF the second half of 2022.
[2/] For more information, go to link.
[3/] For more information, go to link.
[4/] For more information, go to link.
[5/] For more information, see box III.2 of the August 2023 Payment Systems Report (ISiP).

**In the particular case of CUs, the law will allow them full access to liquidation and liquidity management mechanisms granted by the BCCh, as long as they have a size and prudential framework equivalent to a banking institution.** The minimum requirements for access to these services are that the CU must have a minimum capital of 800 thousand UF (the minimum required to incorporate a banking company) and be subject to an integrated supervision model. To implement these requirements, the Resilience Law modified the General Cooperatives Law.[6]/

**This increased access of non-bank entities to the payment system operated by the BCCh will allow enhancing the project for Retail Payments Clearing House (RPC) regulation.** This new regulation requires that payment orders originating from transactions made with payment means, such as payment cards or electronic funds transfers, be cleared through an RPC (ISiP of August 2023). Non-bank participants of these RPC, such as payment card issuers and operators, will be able to directly settle their balances obtained by these clearing houses in the RTGS system operated by the BCCh, without the need to use a sponsoring bank. This broadens the possibilities for all banking and non-banking players and may contribute to increase competition in the financial system.

**Regarding the repo market, the legal treatment in case of default of a counterparty is improved and the BCCh is empowered to offer this type of contracts in case of financial stress events at the market level.**[7]/ Considering the benefits of a repo market for the financial system as a whole, the last FSAP of 2021 recommended promoting its development both at the private sector level and with respect to operations with the BCCh. For these purposes, the Resilience Law specifies the treatment applicable to repo transactions between private actors in default situations, assimilating them to the "related obligations" scheme of the Insolvency Law in order to provide greater legal certainty. It also establishes a framework under which the BCCh may, exceptionally and for reasons based on safeguarding the stability of the financial system, offer repos to market segments that require liquidity provision and are relevant for its functioning, an aspect that was also included in the recommendations of the IMF's 2020 Technical Assistance.

**In order to facilitate the internationalization of the Chilean peso, the Law includes amendments to the Tax Code to provide clarity on tax reporting obligations for peso transactions carried out by non-residents, recently authorized by the BCCh.** The peso internationalization agenda is part of a set of regulatory and foreign exchange reporting modifications that the BCCh began in 2019. These allowed non-resident agents to have current accounts in pesos, contract derivatives with physical delivery in pesos and grant loans in local currency, among other operations not allowed to date. However, in order to carry out such financial operations, it is necessary for local banks to have correspondent accounts in pesos for non-residents, a financial service that did not have a tax registration and reporting framework, since it is a new service. Therefore, it was necessary to legally provide the tax authority with powers for the creation of a taxpayer ID number (RUT) for non-resident entities, with obligations and responsibilities, which allows to give certainty to said operations, both for foreign entities and for local financial institutions.

**The implementation of these initiatives will contribute to the soundness of the financial system, facilitating optimal financial intermediation in stress situations.** Thus, it will make it possible to foster and amplify the interaction of the BCCh Payments System with new infrastructures and non-bank entities, thus promoting a more efficient and competitive market. It will contribute to the BCCh's essential objective of ensuring the continuity of internal and external payments, in line with the objectives of its 2023-2027 Strategic Plan. In this regard, the BCCh is working on the regulatory and operating adjustments necessary to ensure the proper implementation of this initiative.

[6]/ The CMF already supervised CACs with assets exceeding 400 thousand UF, except for corporate governance aspects.

[7]/ For more information, see box IV.2 in IEF, first half 2023.

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