

Chile: Financial System Stability Assessment



CHILE

FINANCIAL SYSTEM STABILITY ASSESSMENT

December 2021

This Financial System Stability Assessment on Chile was prepared by a staff team of the International Monetary Fund. It is based on the information available at the time it was completed on November 17, 2021.

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is sufficiently capitalized overall and recommended that banks should ensure continued resilience by transitioning to Basel III-compliant capital structures and completing announced capital raises. Pandemic-related measures should be carefully withdrawn when appropriate. A bank resolution mechanism and deposit insurance should be introduced, and a risk-based capital framework is needed for insurers.

Washington, DC – December 9, 2021



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KEY ISSUES

Context: The financial system in Chile functions well overall within a sound regulatory framework. It features large and deep financial markets in a sector dominated by conglomerates, six systemic banks, and pension funds. The twin shocks of social unrest in late 2019 and COVID-19 were adeptly managed thanks to massive and well-coordinated supervisory and fiscal policy responses, as well as unprecedented liquidity support from the Central Bank of Chile (BCCh). Banks have remained profitable through the crisis, partially supported by central bank financing and government-guaranteed SME lending. The funded pension system that has been instrumental in market deepening is under threat due in part to a series of withdrawals. Congress has also authorized life annuity liquidations. A major reorganization of the financial regulatory authorities has been finalized, and Basel III will be implemented starting in December 2021.

Focus: The FSAP examined wholesale funding and systemic liquidity risks highlighted by mutual and pension fund redemptions and subsequent BCCh crisis measures during the shocks. Banking stress tests focused on capital levels, the impact of crisis measures, and a novel climate risk analysis. The new supervisory regime was assessed. The incomplete crisis management framework remains an issue. The World Bank's coverage of developmental topics is slated for completion in Q12022.

Policy advice: Banks should ensure continued resilience by transitioning to Basel III-compliant capital structures and completing announced capital raises. Pandemic-related measures should be carefully withdrawn when appropriate. There is a need for enhancements in several areas, including banking and conglomerate supervision, systemic liquidity, central bank risk management, and mutual fund liquidity management. A bank resolution mechanism and deposit insurance should be introduced. A risk-based capital framework is needed for insurers. The pension system should avoid system-depleting withdrawals and reduce fund switching. Annuity liquidations should be halted. Macroprudential coordination and communication should be further strengthened.

Approved By
**May Khamis and Patricia
 Alonso-Gamo**

Prepared By
**Monetary and Capital
 Markets Department**

This report is based on the work of the Financial Sector Assessment Program (FSAP) mission that visited Chile in 2021.

- An IMF and World Bank team led remote visits to Chile during March 15–April 9, 2021 and July 19–August 4, 2021 to conduct an assessment under the Financial Sector Assessment Program (FSAP). The team was led by Charles Cohen (IMF Mission Chief) and Miquel Dijkman (World Bank Mission Chief), and included Claudio Visconti (IMF Deputy Mission Chief), Stephane Couderc, Antonio Gabriel, Dimitrios Laliotis, Mindaugas Leika, Junghwan Mok, Ebru Sonbul Iskender, Peter Windsor (IMF); Ana Maria Aviles (World Bank Deputy Mission Chief), Beulah Chelva, Mark Davis, Valeria Salomao Garcia, Fiona Stewart (World Bank); and Eamonn White (external expert). The mission assessed financial sector risks and vulnerabilities, the quality of supervisory oversight of banks, the provision of systemic liquidity, crisis management and bank resolution arrangements, and the functioning of the pension system.
- The mission met with Minister of Finance Rodrigo Cerda, Central Bank Governor Mario Marcel and Director of the Central Bank Financial Policy Division Solange Berstein, Chairman of the Financial Market Commission Joaquin Cortez and Commissioners Kevin Cowan and Bernardita Piedrabuena, Superintendent of Pensions Osvaldo Macias, as well as senior management and staff of these institutions. The mission also met with commercial and investment banks, insurance companies, major conglomerates, and other private sector representatives.
- The team would like to thank the authorities for their excellent cooperation and fruitful discussions, particularly in the challenging remote circumstances under which the mission was conducted due to the COVID-19 pandemic.
- FSAPs assess the stability of the financial system as a whole and not that of individual institutions. They are intended to help countries identify key sources of systemic risk in the financial sector and implement policies to enhance its resilience to shocks and contagion. Certain categories of risk affecting financial institutions, such as operational or legal risk, or risk related to fraud, are not covered in FSAPs.

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Glossary

AC	Additional Criteria
AML/CFT	Anti-Money Laundering and Combatting the Financing of Terrorism
Bank	World Bank
BCBS	Basel Committee for Banking Supervision
BCCh	<i>Banco Central de Chile</i> (Central Bank of Chile)
BCP	Basel Core Principles
CAR	Capital Adequacy Ratio
CCB	Capital Conservation Buffer
CCCH	Colegio de Contadores de Chile
CCyB	Counter-cyclical capital buffer
	<i>Programa de Compra al Contado con Venta a Plazo</i> (Spot Purchase with Term Sale Facility)
CC-VP	
CEF	<i>Consejo de Estabilidad Financiera</i> (Financial Stability Council)
CLP	Chilean Peso
CMF	<i>Comisión para el Mercado Financiero</i> (Financial Market Commission)
CNC	Compendium of Accounting Standards
DNFBP	Designated Non-Financial Businesses and Professions
DPS	Deposit protection scheme
EAD	Exposure at default
ELA	Emergency Liquidity Assistance
EC	Essential Criteria
FCIC	Financing Facility Conditional on Increased Lending
FIU	Financial Intelligence Unit
	<i>Fondo de Garantía para Pequeños Empresarios</i> (Small Business Guarantee Fund)
FOGAPE	
FSB	Financial Stability Board
FSR	Financial Stability Report
FX	Foreign Exchange
GAFILAT	Financial Action Task Force of Latin America
GBA	General Banking Act
GDP	Gross Domestic Product
HQLA	High Quality Liquid Assets
IAS	International Auditing Standards
ICAAP	Internal Capital Adequacy Assessment Process
IFRS	International Financial Reporting Standards
IMF	International Monetary Fund
IRB	Internal Ratings Based
LAC	Loss-absorbing capacity
LCL	Liquidity Credit Line
LCR	Liquidity Coverage Ratio

LGD	Loss Given Default
LLS	Loan loss provisioning
LMF	Liquidity management framework
LMT	Liquidity management tool
MER	Mutual Evaluation Report
MF	Mutual fund
ML	Money laundering
MoF	Ministry of Finance
MOU	Memorandum of Understanding
NAGA	Chilean Generally Accepted Auditing Standards
NBFI	Non-bank Financial Institutions
NBL	Non-bank consumer lenders
NFSR	Net Funding Stability Ratio
NPL	Non-performing loan
PD	Probability of default
PF	Pension Fund
RAN	Updated Compilation of Regulations
RBC	Risk-based capital
RBS	Risk-based supervision
ROA	Return on assets
ROE	Return on equity
RWA	Risk Weighted Asset
SBIF	Superintendency of Banks and Financial Institutions
SMEs	Small- and Medium-sized Enterprises
SP	Superintendence of Pensions
SREP	Supervisory Review and Evaluation Process
TF	Terrorism financing
UBO	Ultimate Beneficiary Owners

EXECUTIVE SUMMARY

Macro-Financial Context

Chilean financial markets were tested by the twin shocks of social unrest in Q4 2019 and the 2020 COVID-19 crisis. The authorities responded with massive and well-coordinated monetary, fiscal, and supervisory policy responses. While the baseline growth outlook is now strong, high uncertainty remains.

Wholesale bank funding, which grew significantly over the last ten years, was tested by these events. Fixed income mutual funds and pension funds, the two largest institutional buyers of bank bonds, saw heavy redemptions and reallocations. BCCh countered market dislocations by, among other measures, expanding its collateral framework to include bank bonds.

Pandemic policy responses have been highly effective but decreased the role of market-based intermediation. As wholesale funding fell banks turned to collateralized central bank funding. In parallel, government-guaranteed SME-loans offset the severe drop in demand for market-rate loans. Extensive short-term mortgage and commercial loan rescheduling was conducted prudently.

The pension system has come under strain. Excessive pension fund switching was driven by a (now defunct) social media-based financial advisor—this lowered returns and increased market volatility. In addition, in 2021 Congress approved three pension withdrawals and a partial liquidation of life annuities that transcended crisis needs.

Policy Advice

Solvency stress tests show that the banking sector is sufficiently capitalized overall, but pockets of weakness need addressing. To ensure resilience under stress, banks should transition to Basel III-compliant capital structures and complete announced capital raising plans. Improving timely collateral valuation would lower downside risks. Climate stress tests do not show current vulnerabilities but suggest transition risks merit further monitoring.

While bank liquidity appears ample, it has been boosted by policy measures. Liquidity stress tests show limited risks as banks enjoy high deposits (due in part to pension withdrawals) and BCCh funding. This reversal of these conditions will require clear official communication and careful liquidity management by banks.

The banking supervisory framework is robust but needs further improvements. The Basel Core Principles (BCP) assessment found the Financial Market Commission (CMF) to be capably staffed with expertise in monitoring of individual risks. However, reforms are needed in several areas, including credit risk, asset classification, risk management, corporate governance, licensing, and corrective actions. More work is needed for strong consolidated supervision within the CMF of Basel III implementation starting December 2021 should largely address capital framework shortcomings.

Actions are needed to stabilize the pension system. Additional extraordinary pension withdrawals would further weaken domestic capital markets and should be avoided. The unprecedented scale of

this rapid change to a critical component of the financial system heightens short-term liquidity and long-term stability risks. Pension regulations and investment options that promote long-term investment and minimize switching are needed.

Further life annuity liquidations carry severe liquidity risks and have broader implications, including for macroeconomic stability. While insurers managed previous withdrawals, they could face forced fire sales under future unwinds, threatening their solvency and potentially causing spillovers to the broader financial system.

Mutual funds need a stronger liquidity management framework. Current regulations provide only limited ability for supervisors to ensure that funds have sufficient liquidity to meet redemptions in stress scenarios.

The systemic liquidity framework should be improved. The absence of a secured money market may overburden the central bank's liquidity-providing operations. Stronger risk management practices are needed, particularly regarding collateral requirements and the acceptance of bank bonds. The Emergency Liquidity Assistance (ELA) framework needs operationalizing.

A statutory bank resolution authority is needed to conduct resolution planning and manage bank failures. Chile is well positioned to introduce loss-absorbing capacity (LAC) requirements for systemic banks. To minimize the moral hazard and central bank balance sheet risks associated with the current deposit guarantee arrangements, an industry funded deposit protection scheme should be established to replace MoF and BCCh's deposit guarantee arrangements.

The Financial Stability Council (CEF) should play a greater role to further enhance macroprudential cooperation and coordination. Publication of CEF member's views on financial stability risks and potential regulatory responses would complement the current analysis of risks led by the BCCh. Coordination on risk monitoring and macroprudential measures should be further strengthened.

Chile should continue to enhance the effectiveness of its Anti-Money Laundering and Combating the Financing of Terrorism regime. A regional peer assessment of the AML/CFT framework against the Financial Action Task Force standard was adopted in July 2021. While the mutual evaluation report (MER) found a number of strengths, it identified gaps on the legal and effectiveness fronts that should be closed.

Table 1. Chile: FSAP Key Recommendations

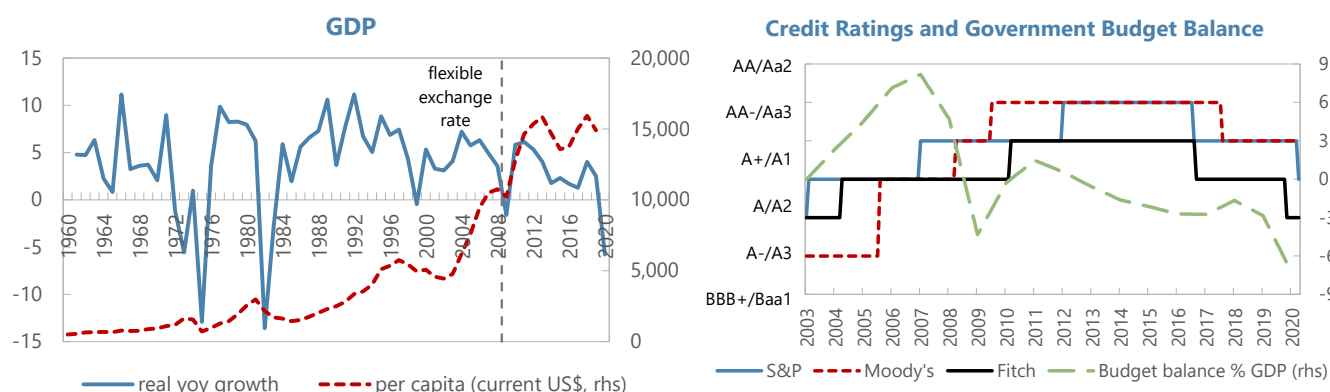
	Recommendations	Time ¹	Paragraph reference
Bank Solvency and Liquidity	Ensure banks transition to Basel III-compliant capital structures and complete announced plans for capital raises in a timely manner.	NT	23
	Improve the collateral valuation and reporting framework.	NT	15, 40
	Define and communicate clear criteria regarding conditions for the future unwinding of extraordinary liquidity support measures (FCIC and LCL).	I	25
	Introduce liquidity stress tests for prudential and stability monitoring.	NT	25
Banking Supervision	Ensure sufficient budget resources to attract and retain specialized talent.	I	37
	Strengthen credit risk management and asset classification, including provisioning and treatment of restructured loans.	I, NT	40
	Establish an integrated risk management framework and enhance corporate governance standards and supervision.	NT	40
	Strengthen the legal framework for licensing to ensure banks' shareholders are fit, proper and financially strong.	NT	40
	Improve the corrective actions framework.	NT	40
	Improve consolidated supervision by enhancing the legal framework, supervision practices and organizational arrangements.	NT	40
Pension Funds	Avoid further pension withdrawals and ensure that the pension system continues to support deep and liquid long-term capital markets.	I	14
	Improve pension fund regulation and investment options to promote long-term investment and minimize excessive switching.	NT	43
Insurance	Halt any further liquidations of life annuities.	I	14
	Implement a modern risk-based capital framework in insurance with due regard to the impact of introducing IFRS 17 and IFRS 9.	NT	46
Mutual Funds	Strengthen the mutual fund liquidity management framework.	NT	42
Crisis Management and Bank Resolution	Establish a statutory bank resolution authority with a comprehensive range of crisis management and resolution tools.	I	55
	Establish and implement recovery and resolution planning and set a loss-absorbing capacity requirement for systemically important banks.	I	55
	Establish a new industry funded deposit protection scheme.	NT	55
Systemic Liquidity	Facilitate the development of the interbank repo market.	NT	56
	Enhance the risk management function of the BCCh through higher haircuts and a stricter approach to unsecured bank bonds.	I	57
	Finalize the Emergency Liquidity Assistance (ELA) framework.	NT	58
Macro-prudential Framework and Tools	Increase CEF secretariat resources and consider an annual publication of official CEF views on macroprudential risks.	NT	51
	Enhance interagency coordination on the use of the macroprudential toolkit.	NT	51
	Establish a consolidated and comprehensive public credit registry.	NT	11
AML/CFT	Ensure a swift implementation of the 2021 AML/CFT MER recommendations.	NT	53

¹"I=Immediate" is within one year; "NT=Near Term" is 1–3 years.

MACROFINANCIAL BACKGROUND

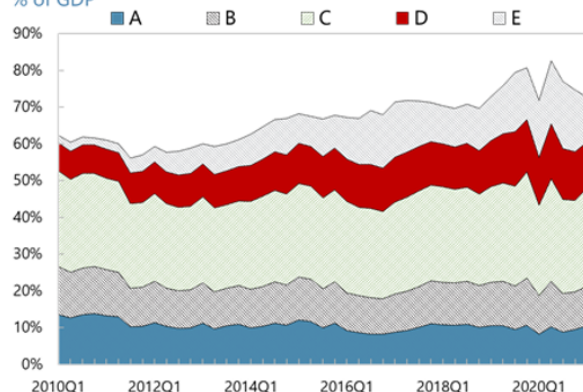
A. Macrofinancial Setting

1. Chile enjoys a long track record of strong fundamentals. Since the financial crisis of 1982–83 Chile has seen strong and consistent growth (text chart). Chile has low central government gross debt of 32 percent of GDP (up from 11 percent in 2011) and commands a high investment grade rating despite 2020 and 2021 downgrades following higher deficits (text chart).¹ Large pension funds are a major contributor to the depth and diversification of the financial system.



AUM of Pension Funds

% of GDP



Sources: SP and IMF staff calculations.

Note: Pension fund administrators (AFPs) are required to offer portfolios for their individual account holders that are labeled and classified by level of risk from A through E, with A being the riskier fund and E being the most conservative one, ordered by the statutory equity share range. Each AFP has the obligation to offer funds B through E but offering fund A is optional. In practice, all five types of funds are offered by each AFP.

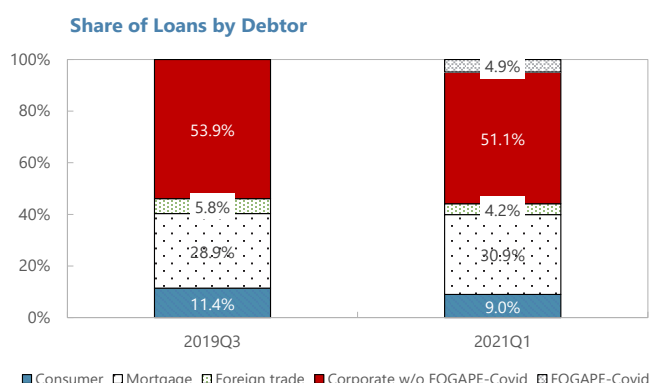
¹ Ratings by S&P, Moody's, and Fitch are A, A1, and A-, respectively.

2. The Chilean economy was impacted by both social unrest in 2019Q4 and the COVID-19 pandemic. In October 2019, widespread protests against inequality resulted in a significant negative economic shock. Subsequent elections approving the drafting of a new constitution and selecting members of the Constitutional Convention were held in October 2020 and May 2021, respectively. COVID-19 caused a precipitous fall in economic activity; a rapid vaccine rollout began in February 2021.

3. The authorities engaged in a massive, well-coordinated response to these shocks.

These included fiscal, monetary, and regulatory actions. Financial measures were appropriately implemented in line with IMF best practices for COVID-19 response. These included:²

- MoF expanded the government guarantee programs for commercial bank loans (FOGAPE-COVID) and SME loans (FOGAPE-REACTIVA). This offset a dramatic decline market loan demand (Figure 1 and text chart).
- CMF established special provisioning rules that facilitated banks rescheduling (with limited 3–6-month payment deferrals) viable mortgages, personal loans, and commercial loans. By end-October 2020, rescheduled loans represented 38 percent of bank mortgage and commercial lending combined. Additional guaranteed six-month mortgage payment delays were introduced in January 2021.
- CMF deferred Basel III implementation to December 2021.
- BCCh established the Financing Facility Conditional on Increased Lending (FCIC)—a bank lending facility tied to SME credit—and a bank bond purchasing program to offset temporarily dislocations in wholesale funding (Figure 1). As of October 2021 about US\$35.7 billion of the FCIC has been employed.
- BCCh cut the policy rate by 125 bps to its historical low of 0.5 percent and began a special asset purchase program in June 2020.³

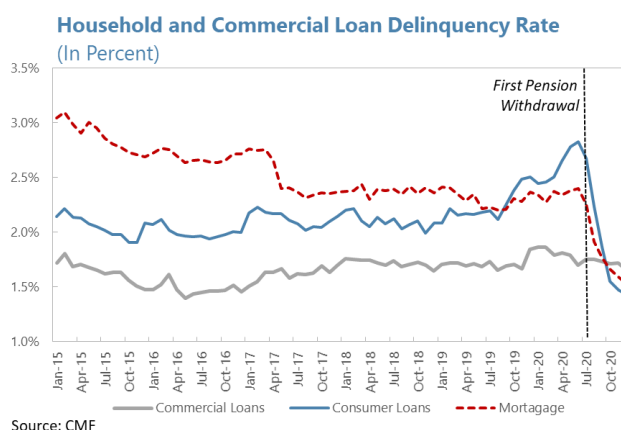


² For further details see Annex I of the 2021 Chile Article IV Consultation.

³ Since July 2021, BCCh has increased its policy rate three consecutive times to 2.75 percent.

4. In addition to a substantial fiscal stimulus, Congress approved three extraordinary pension fund withdrawals. Withdrawals totaled about 19 percent of GDP. Retail loan delinquencies plummeted following the first withdrawal in July 2020 (text chart). In May 2021, retirees and others were allowed to liquidate up to 10 percent of their life annuities, the legality of which was challenged by insurance companies in Chilean courts and through international arbitration proceedings.

5. Despite the strong baseline outlook, high economic uncertainty remains. Growth is projected at 11 percent for 2021 and COVID-19 vaccination rates are near the highest in the world. However, pandemic risks remain, constitutional reform is only just underway, and additional civil unrest would be highly disruptive to the economy. Furthermore, subdued growth is forecast over the medium-term (2.5 percent in 2022).

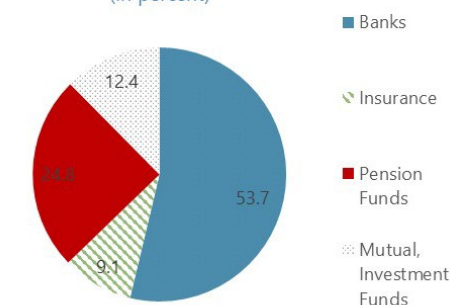


B. Financial System

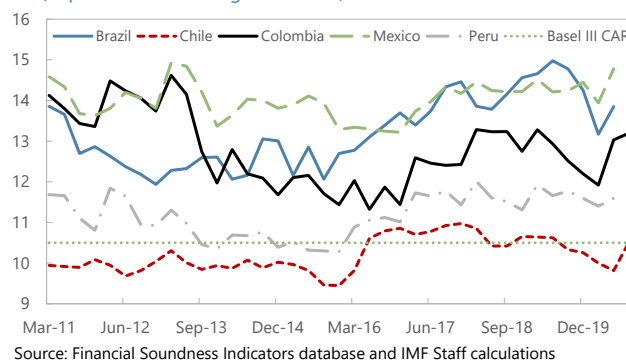
6. Eight conglomerates dominate the highly developed financial sector. At end-2020, financial assets comprised 300 percent of GDP. PFs held assets equal to 74 percent of GDP at the end of December 2020. Mutual funds (MFs) grew from 17 to 26 percent of GDP from 2010 to 2020 (Figure 1, Table 2, and text chart).

7. Banks dominate credit provision. The concentrated sector sees the top four (six) banks holding 66 (89) percent of assets. High profitability pre-crisis was driven by relatively low capital levels versus regional peers; return on assets (ROA) was below 0.5 percent (Figure 2 and text charts). Over the last decade, wholesale funding through bond issuance has grown to play an important role (Figure 1). Smaller banks have up to 40 percent of liabilities in bonds while the biggest banks have a large sight deposit base (text chart).

Financial System Assets, 2020 (in percent)

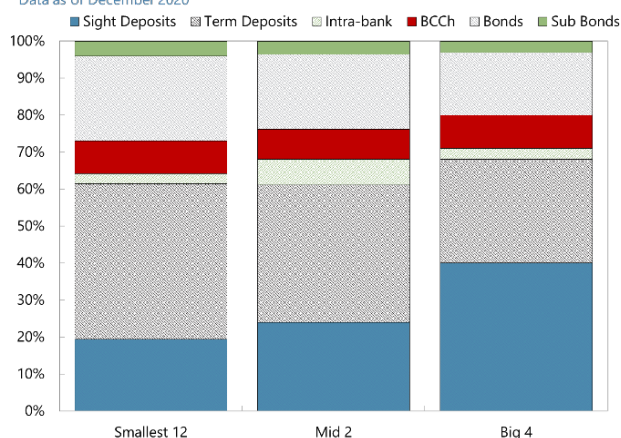


Chile and LA5: Regulatory Tier 1 Capital (In percent of risk-weighted assets)

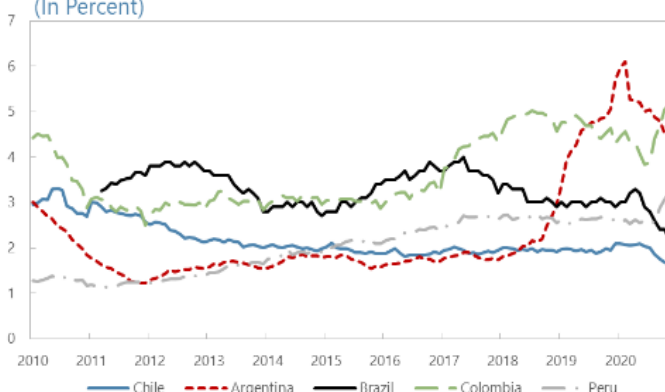


Chilean Banks - Funding Source Decomposition

Data as of December 2020



Source: CMF

Non-Performing Loan Ratio (LA5)
(In Percent)

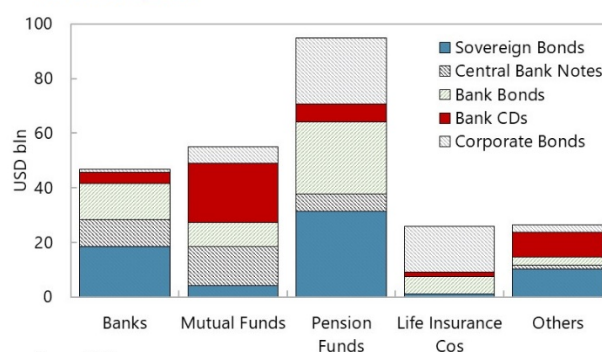
Source: CEIC and national authorities

8. Non-performing loans (NPLs) are low versus peers (text chart). Recently this has been supported by mortgages, personal and commercial loan repayment deferrals and voluntary rescheduling as well as the pension withdrawals (Figure 1).⁴

9. Collective investment vehicles are important sources of wholesale bank funding and corporate credit. Mutual and pension funds allocate 64 percent of their long-term credit portfolio to bank bonds. In contrast, life insurance companies allocate 72 percent of similar portfolio to corporates, suggesting a greater flexibility to invest in the less-liquid but higher yielding corporate space (text chart).

Debt Outstanding

November 3, 2020

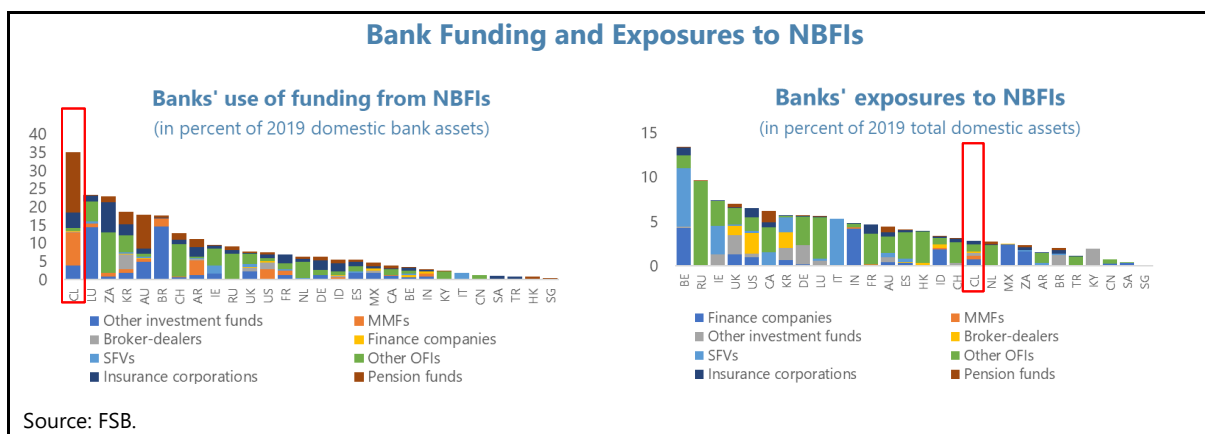


Source: BCCh.

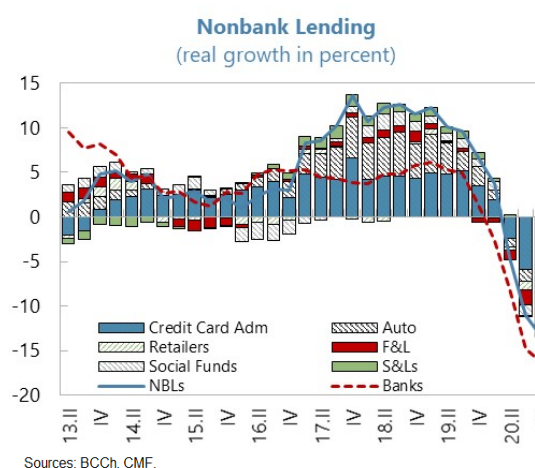
Notes: sovereign bonds include BCCh bonds, corporate bonds include shares.

10. Despite the large non-bank sector, shadow banking does not appear a major concern. Mutual funds buying bank debt have driven the growth in non-bank financial intermediation; riskier non-bank lending dependent on short-term funding has remained relatively constant (Figure 3). Although Chile has the largest dependency of bank funding on nonbank financial institutions (NBFIs) amongst the 29 FSB-monitored countries, average bank exposure to NBFIs is small (text charts).

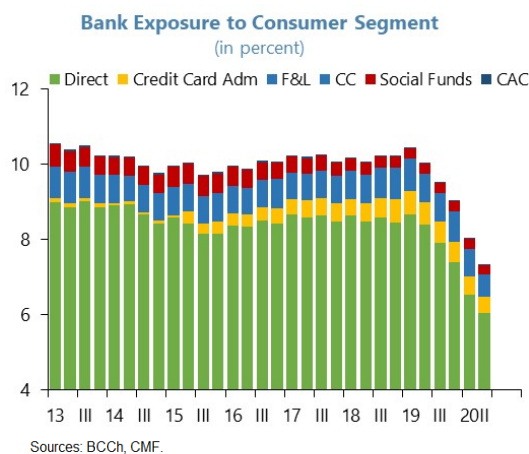
⁴ While the NPL (over 90 days past due) ratio is below 2 percent, the past-due loan ratio is about 5 percent at end-2020.



11. Nonbank consumer lenders (NBL) are small but growing (text chart). Systemic NBL risks are low, as bank exposure to consumer loans through NBLs represents only about 2 percent of bank assets (text chart). Since the last FSAP, major credit card administrators that had created non-bank risks were absorbed by banking entities. The continuing lack of a consolidated credit registry makes it challenging for financial institutions to assess borrowers' total debts.



12. BCCh guarantees banks' sight deposits in the absence of a deposit protection scheme. This raises the potential for significant BCCh losses following a bank failure. BCCh currently has a negative equity position of 0.9 percent of GDP, stemming from the 1980's banking crisis when BCCh bought bank assets and provided lender of last resort funding.



FINANCIAL STABILITY ANALYSIS

A. Vulnerabilities and Risks

Liquidity Risks

13. Wholesale bank funding is subject to some structural risks that materialized in 2019Q4. The mutual and pension funds that are among the main investors in bank securities are prone to redemption and reallocation shocks, driven partly by their retail investor bases (Figure 4). Pension fund reallocation increased dramatically since 2011 due to advising from social-media-based advisors.⁵ Unusually, pension fund switching is virtually unrestricted, which could lead to dislocations in bank and corporate bond funding. During Q3 2019, long-term fixed income pension and mutual funds suffered unprecedented reallocations and redemptions that put significant pressure on bank and corporate bonds as well as the Chilean Peso (CLP). BCCh's interventions quelled associated market volatility. However, by expanding the collateral framework for liquidity operations to include unsecured bank bonds BCCh assumed significant correlation risk and increased its exposure to the banking sector. Interventions in the FX spot market dampened volatility from the temporary spike in capital outflows. BCCh also introduced FX swaps to attenuate banks' US dollar funding stress. Funding risks are heightened by the lack of a functioning secured inter-bank lending market to backstop wholesale funding.

14. Further pension fund withdrawals or annuity liquidations would pose a systemic liquidity risk. While previous withdrawals were well managed by the authorities,⁶ further withdrawals risk market disruptions, especially given the uncertain environment and lack of an obvious buyer base for long-term assets.⁷ This is particularly a risk with life annuities, where insurance company liquidity buffers could be severely tested by further liquidations, potentially leading to asset fire-sales and capital shortfalls.⁸

Solvency Risks

15. The banking system is sufficiently capitalized but has pockets of weakness. Although asset quality has been consistently high and loans aggressively written off, provision coverage for non-performing mortgages (8.8 percent) and consumer loans (48.3 percent) are low versus international practices (26.4 and 61.9 percent respectively across all EU27/EEA exposure countries in the [EBA 2020 EU-wide transparency exercise](#)), and the ratio of specific provisions to all past due

⁵ An April 2021 law that requires financial regulation of these consultants seems to have shuttered the most influential such firm.

⁶ BCCh established a USD\$10 billion spot purchase with term sale facility (CC-VP) to soften the market impact of pension liquidations.

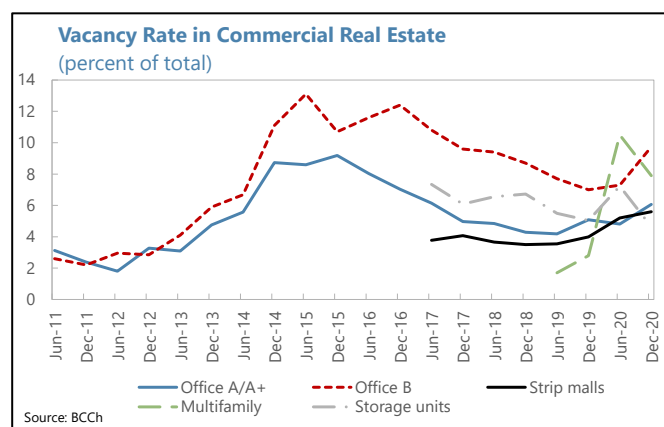
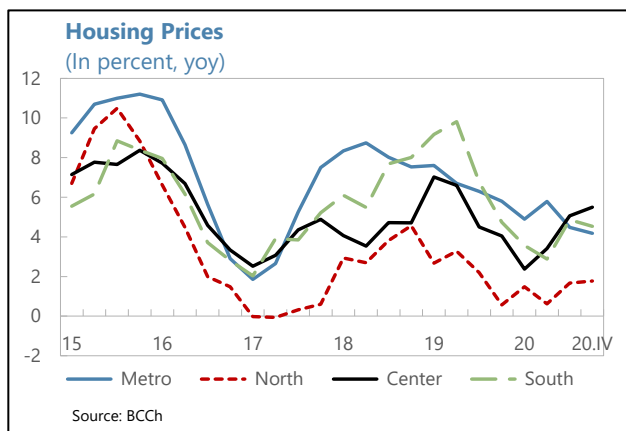
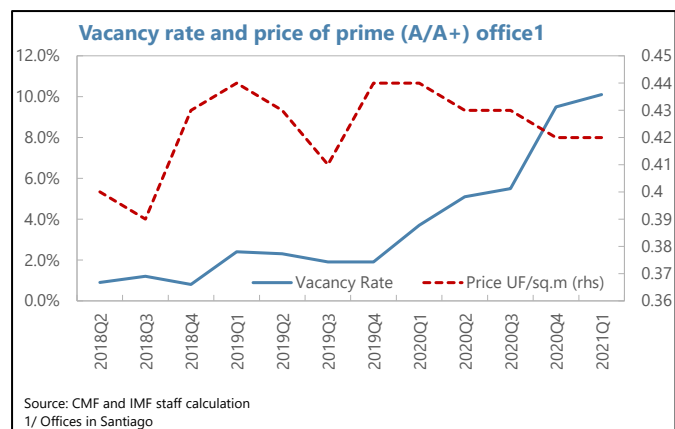
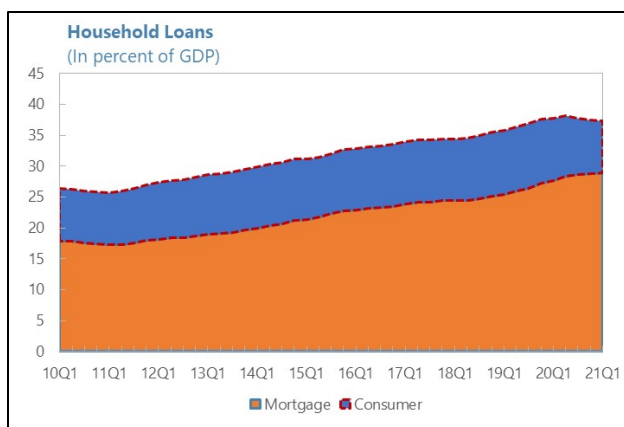
⁷ According to BCCh, withdrawals had a significant impact on local markets, including increases in interest rates, devaluation pressure and higher volatility of the CLP (BCCh Press Release, October 12, 2021, "[Presidente del Banco Central expuso ante Comisión de Constitución...](#)").

⁸ See October 2021 CMF analysis: www.cmfchile.cl/portal/estadisticas/617/articles-49575_doc.pdf

loans is only 29.7 percent as of end 2020 (Figure 2). Risks are likely to be heightened due to the large share of loans currently covered by COVID-related special provisioning rules. The chance of losses may also be raised by stale collateral valuations; stress tests (see below) show that under the adverse housing shock scenario loan losses would be significantly larger than are currently provisioned for.⁹

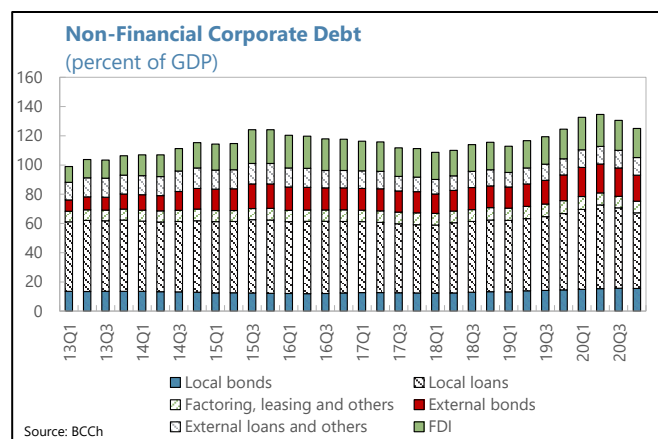
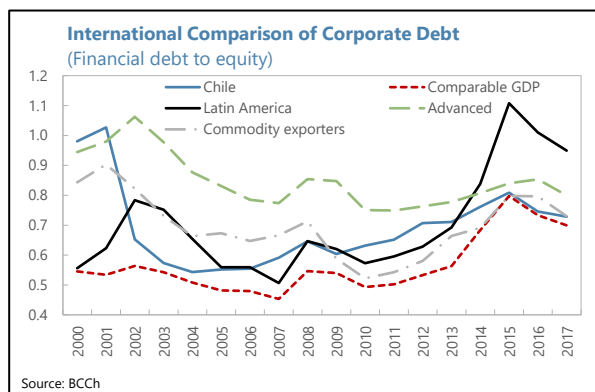
Emerging Risks

16. Easy financial conditions and financial deepening have increased household and corporate leverage. Although risks appear limited, pockets of vulnerabilities have built up among low-income households, where consumer loans had increased until the pandemic hit and present a sizeable debt burden. The housing market appears stable, and rising housing prices drove increases in mortgage debt. Increasing vacancy rates in the commercial real estate space could lead to medium term risks (text charts).

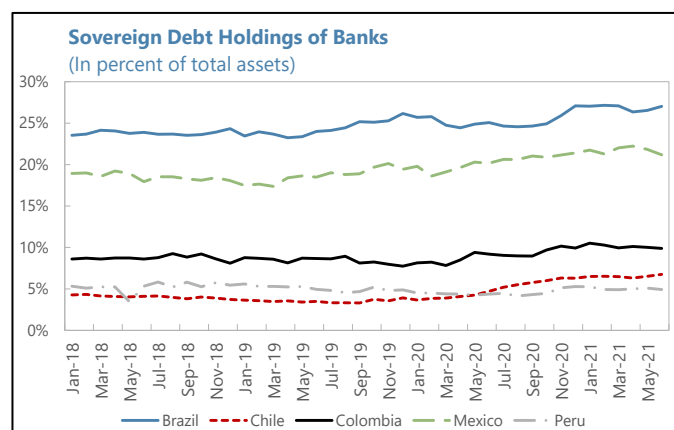


⁹ For example, the loss-given-default (LGD) for mortgages under the adverse scenario jumps to 22 percent for year 3 versus a current 8.9 percent prudential provision rate.

17. Corporate leverage risks appear limited. Financial debt to equity is relatively low (text charts), and a large share of corporate FX debt is hedged and related to FDI/obligations to parent companies. Large corporates have recently engaged in precautionary borrowing but could face challenges under a protracted recovery.



18. Bank exposure to sovereign debt has increased. Although much lower than in many peers, banks' sovereign debt holding to total asset ratio doubled from 3.5 percent in 2019Q2 to 6.7 percent in 2021Q2 (text chart). If trends continue, the risk of an intensified sovereign-bank nexus capable of transmitting sovereign stress to bank balance sheets could arise.



19. The gradual expansion of fintech requires a balanced approach to innovation and regulation.

Fintech entrants might improve efficiency and customer choice, but new risks could arise, such as increased interconnectedness or pressure on incumbent banks. A new fintech bill intends to establish a legal framework for fintech companies and a regulatory framework for open banking.

B. Stress Testing and Interconnectedness

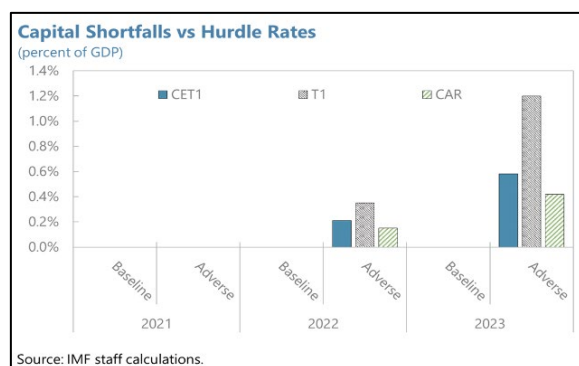
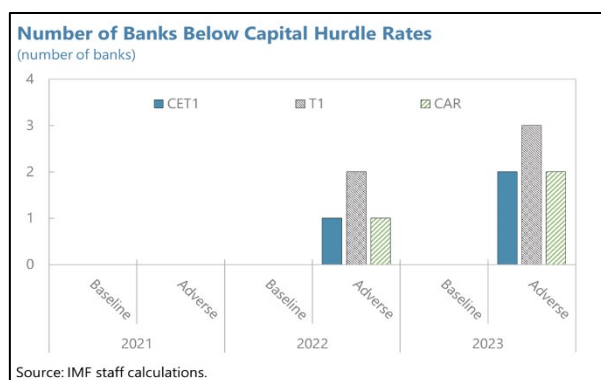
20. The FSAP conducted quantitative stress tests and contagion analyses. Quantitative approaches include: (i) bank solvency tests to assess resilience to credit, interest rate, and market risks; (ii) bank liquidity stress tests; (iii) an exploratory analysis on the impact of climate transition and physical risks; (iv) mutual and pension funds liquidity stress tests; and (v) interconnectedness and contagion risk analysis.

Bank Solvency Stress Tests

21. Solvency stress tests assessed resilience to severe macrofinancial conditions. A baseline scenario follows the April 2021 WEO forecast, while an adverse scenario implies a negative GDP shock close to 3 standard-deviations of the real GDP growth rate relative to the next two-year baseline (14 percent cumulative in level terms). This deviation reflects a baseline outlook that envisages a strong recovery, with 2021 GDP forecast significantly above average long-term growth. (Figure 5)

22. Banks appear healthy under the baseline scenario. The aggregate common equity Tier-1 (CET1) capital ratio rises due to banks' revenue-generating capacity and the mild impact on net interest income and credit impairment. The system's aggregate capital ratio (CAR) would increase by 0.8 percentage points to 15 percent by 2023 (Figure 6, panels 1, 2).

23. While systemic capital remains adequate under the baseline, results under the adverse scenario suggest pockets of weaknesses in individual banks. Several banks eat into CCB buffers, two fall below the hurdle rates for CET1/T1 and a third falls below the T1 threshold (text charts). Note that currently planned capital raises, which could significantly boost ending capital ratios, were not considered since they were not finalized when the exercise was conducted.¹⁰ Hence some shortfalls can be partially attributed to either low starting capital levels of some banks or to phased derecognition of certain capital instruments during Basel III implementation.¹¹



Sensitivity Tests

24. Capital shortfalls could be materially larger in a more severe shock. Sensitivity analyses explored the full unwinding of BCCh's liquidity support measures and credit lines. Under the assumptions used, the three-year cumulative effect on the capital ratio would be in the 0.3–1.3

¹⁰ A recapitalization of Banco Estado was subsequently finalized in October 2021.

¹¹ Notably, the phase-out of Tier 2 (T2) capital currently recognized as Additional Tier 1 Capital (AT1).

percentage point range (Figure 7). This suggests the importance of ensuring realistic capital planning by banks as support measures are appropriately unwound.

Bank Liquidity Stress Tests

25. The banking system appears resilient to sizeable funding withdrawals despite inter-bank dispersion. While the system seems well positioned to mitigate liquidity shocks, results vary across individual bank funding profiles and demonstrate the material impact of extraordinary liquidity support measures (Figure 8). Given the temporary nature of these measures, enhanced monitoring is recommended to identify potential points of stress. The authorities should also conduct cash flow liquidity analyses covering individual banks and system-wide liquidity.

Climate Change Risks

26. The FSAP team has developed a stress testing exercise to explore the potential impact of climate-related risks. Notwithstanding significant data gaps, both physical and transition risks were examined through an exploratory analysis to raise awareness of the materiality of such risks to banks.

Physical Risks

27. Physical risk analysis assessed banks' exposures to extreme hydrometeorological events.¹² Due to data limitations and the absence of a catastrophe risk model, historical loss events (Figure 9, Panel 1) were used to proxy the magnitude of physical capital destruction and the subsequent impact on real growth rates (Figure 9, Panels 2, 3).

28. The exercise suggests that physical risks are relatively contained. This is reflected in a relatively small impact on banking system capitalization (CAR). This benign result should be interpreted with some caution given the uncertainties surrounding loss event modelling. Assumptions did not consider non-linear amplification effects or potential spillovers (e.g., productivity shocks).

Transition Risks

29. Transition risks were assessed by the FSAP team in cooperation with BCCh staff. Analysis focused on risks driven by a material increase in carbon pricing and its impact on corporate PDs (Figure 10).¹³

30. Results provide some evidence transition risks could be material for some banks, but not sizeable enough to compromise solvency or financial stability. The magnitude of the PD increase suggests that a carbon pricing policy change can measurably impact the credit quality of

¹² Floods and droughts were identified as the most relevant risks.

¹³ For illustration purposes and to anonymize banks, starting point PDs pre-transition risk are randomized.

corporate portfolios, and that transition risks could be an important contributor to future stress test results. The increase in the segment exposure-weighted corporate portfolio PDs ranges from 0.3 to 0.5 percent under a 3-year scenario, with the transportation, electricity and gas, forestry and mining industries as the largest contributors.¹⁴

Mutual and Pension Funds Liquidity Stress Tests

31. Fixed income mutual funds stress tests suggest the need for enhancing liquidity management practices. Results show most funds hold liquidity buffers larger than 15 percent of AUM, but a significant share hold less. 15 percent corresponds to the first percentile (severe stress) of the typical distribution of weekly redemptions (Figure 11, Appendix IV). Recognizing the tradeoff between higher liquidity buffers and lower returns, the authorities should consider a more robust liquidity management framework for mutual funds to improve resilience and limit potential systemic risks.

32. Stress testing type “E” pension funds confirms sound liquidity management while highlighting the detrimental impact of excessive fund switching. Results show liquidity buffers are larger than 30 percent for all AFPs (Figure 13, Appendix IV). This suggests AFPs are cautiously managing liquidity given the excessive switching environment¹⁵. More restrictive switching rules and/or appropriate market mechanisms would help eliminate this negative dynamic.

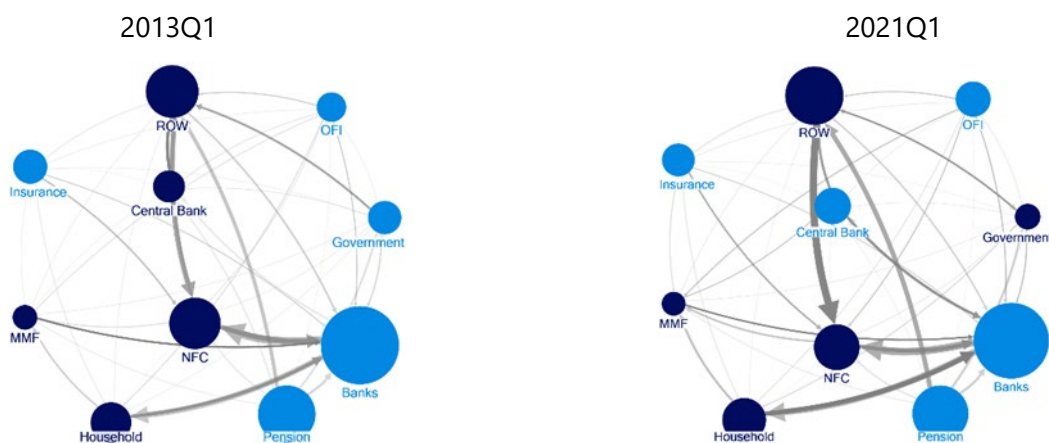
Interconnectedness Analysis

33. Network analysis suggests contained domestic contagion risks, while cross-border exposures of Chilean banks are significant for the transmission of credit shocks. As banks’ total capital is six times larger than aggregate interbank exposures, chances of cascading bank failures due to contagion are limited. A highly interconnected financial network between conglomerates and banks suggests vulnerabilities to contagion effects. In terms of inward spillover, the U.S. has the largest impact on Chilean banks (text charts)¹⁶.

¹⁴ For illustration purposes, and bearing in mind all relevant caveats, if transition risk were taken into account under the adverse scenario this would have resulted in an additional depletion of capital ranging between 26 and 53 bps.

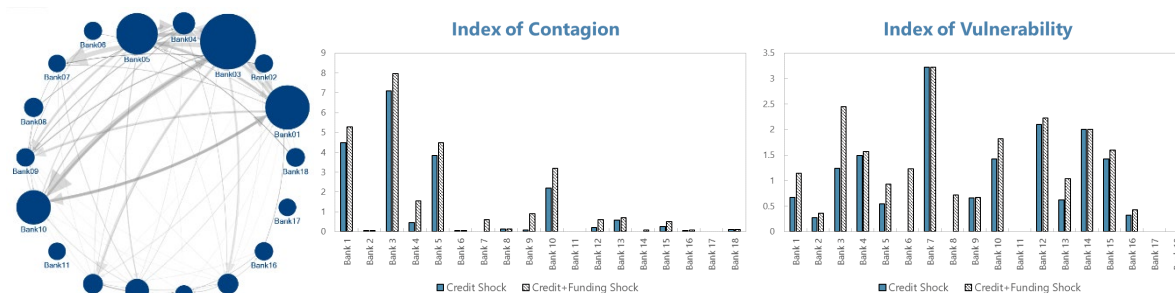
¹⁵ Switching behavior in Chile has been linked to lower observed profitability compared to default options (SP, 2021). Switching in general is not associated with improved performance (Morales et al, 2017), and default behavior in US 401(k) plans tend to be associated with much lower switching activity (Choi et al, 2001).

¹⁶ Analysis assumes creditors can only recover half of defaulted cross-border claims, and funding withdrawn from failed creditors cannot be replaced.

Chile: Balance Sheet Exposures¹

Source: BCCh and IMF staff calculations.

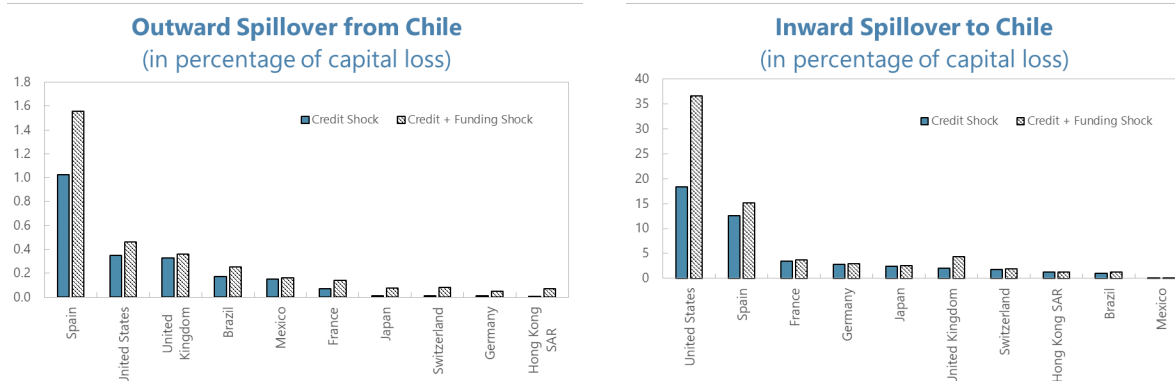
¹ Dark blue nodes represent net borrowers, while light blue nodes represent net lenders. The diameter of nodes reflects the share of an entity's total claims in percent of the system-side total claims. The thickness of arrows reflects the share of claims in percent of the system-wide total claims, while the opacity reflects the share of claims in percent of the creditor's total claims. The arrows point to the liability issuer.

Chile: Interconnectedness in the Banking System¹

Source: CMF and IMF staff calculations

¹ The diameter of nodes reflects the share of a bank's total claims in percent of the system-side total claims. The thickness of arrows reflects the share of claims in percent of the system-wide total claims, while the opacity reflects the share of claims in percent of the creditor's total claims. The arrows point to the liability issuer. The index of contagion is the average of the percentage of loss of other banks due to the failure of this bank. The index of vulnerability is the percentage of loss due to the default of all other banks.

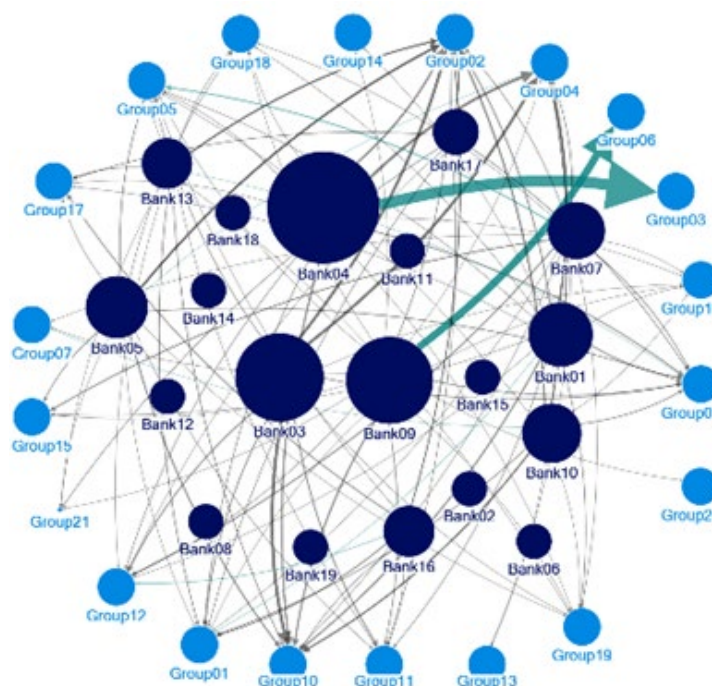
Chile: Cross-border Contagion¹



Source: BIS Locational Bank Statistics, and IMF staff calculations

¹ Results are based on the Espinosa-Vega and Sole (2010) approach. Outward spillover measures reflect the average of the percentage of loss of banks in other countries. The inward spillover measures reflect the percentage of loss against credit shocks from the banks in corresponding countries.

Chile: Linkage between Conglomerates and Banks¹



Source: CMF and IMF staff calculations

¹ Dark blue nodes represent banks, while light blue nodes represent conglomerates. The diameter of nodes reflects the share of banks' (conglomerates) total claims (liabilities) in percent of the system-side total claims. The thickness of arrows reflects the share of claims in percent of the system-wide total claims, while the opacity reflects the share of claims in percent of the banks' total claims. The arrows point to the liability issuer, and the green arrows indicate conglomerates' liabilities to their subsidiary banks.

FINANCIAL SYSTEM OVERSIGHT

A. Regulation and Supervision

34. The Financial Market Commission (CMF) is the primary financial supervisor and regulator. Established in 2018, CMF integrates bank, large credit union, insurance, and securities market supervisors. Pension funds are supervised by the Pension Superintendency (SP).

Banking Supervision

35. The Basel Core Principles (BCP) assessment found CMF to be capably staffed with expertise in monitoring of individual risks, although further improvements are required. The FSAP conducted a full BCP assessment of banking supervision, the first under 2012 BCP standards.

36. In 2018, the authorities revised the banking law and overhauled the financial supervisory structure. Reforms aimed to improve supervision through better coordination on financial markets and supervision of the regulatory perimeter and conglomerates.

37. Budget constraints might hinder the effectiveness of supervisory processes in the future. CMF's budget depends on MoF approval. Sufficient funding is essential to allow CMF to attract and retain staff in highly specialized fields.

38. CMF's legal mandate does not prioritize prudential supervision relative to its other mandates. CMF's broad legal mandate encompasses market conduct, market development, and financial stability. This could result in potential conflicts with prudential supervision.

39. Implementation of Basel III starting from December 2021 will largely address shortcomings of the capital framework. The Basel I framework is not compatible with the size and complexity of the banking industry. For now, capital is required for credit risk only. Pillar 2 capital requirements were introduced in the regulatory framework in September 2020 but are not fully in force.

40. Key reform areas include:

- **Establishing an integrated risk management framework** to help CMF and banks have a holistic view on banks' risk management capabilities.
- **Strengthening of corporate governance standards and supervision**, including in respect to aspects of governing banks' board members and senior management (fit and proper criteria, collective suitability of the board).
- **Strengthening the legal framework for licensing**, including granting powers to ensure banks' shareholders and senior management are fit and proper and that shareholders have capacity to provide additional financial support.

- **Increasing the scope of the corrective actions framework.** Current triggers rely mostly on breaches of regulatory requirements or materialized indications of deterioration, which could affect supervisory effectiveness. The corrective action toolkit should be enhanced, including by imposing more stringent prudential limits and requirements, restricting payments to shareholders, and facilitating takeovers/mergers with healthier institutions.
- **Strengthening consolidated supervision.** Improvements in the legal framework, establishment of a unit for comprehensive financial analysis and monitoring of financial conglomerates (2011 FSAP recommendation), and establishment of lead examiners and ratings for conglomerates would all be beneficial.
- **Improving credit risk management and asset classification.** Current regulatory guidance on the definition, identification, and treatment of loans subject to restructuring/refinancing is insufficient. Restructured loans can be quickly reclassified up to performing, creating a risk that banks delay the recognition of inevitable credit losses through aggressive restructurings.¹⁷
- **Strengthening collateral valuation and provisioning requirements.** Regulations lack explicit supervision guidelines on collateral revaluation to help adequately provision for problem exposures, including estimation of foreclosure and liquidation costs. Collateral valuations should be updated on a regular basis. There is recognition by the authorities that bank consumer loans are under-provisioned, which should be addressed with the adoption of CMF's standardized provisioning methodology.

Mutual Fund Supervision

41. Liquidity regulation is constrained by the current legal framework. Regulators are limited to a general prohibition on more than 50 percent of a MF portfolio being in “illiquid assets”.¹⁸ Given large fixed-income (type 3) mutual funds with assets (bank and corporate bonds) whose liquidity can deteriorate rapidly under stress, a more sophisticated approach is recommended. Fixed income market volatility and ensuing supervisory actions during Q42019 support the need for greater attention to this area.

42. A MF liquidity management framework (LMF) is needed to reduce systemic risks. The LMF should utilize a risk-based regulatory approach and conduct periodic stress-testing. While applicable to all MFs, it should be customized according to fund assets and redemption rules. Standard liquidity management tools (LMTs) that allow fixed income fund managers to respond to stress events should also be considered, including redemption fees, gating, and redemption in kind.

¹⁷ CMF is aware of this risk and is closely monitoring rescheduling activity.

¹⁸ Additional regulations limit leverage, prohibit certain investment types, and enforce portfolio concentration limits.

Pension Fund Regulation and Supervision

43. Supervisory measures are needed to reduce switching and improve participant outcomes. The multifondos approach was best-in-class twenty years ago but is now outdated and has helped enable recent switching behavior by providing extreme options (Funds A and E). Implementing target-date default funds, which in other markets have achieved a higher resistance to excess switching even during periods of higher market stress, could help facilitate this.¹⁹

44. The risk-based supervision (RBS) model of the pension supervisor should be enhanced. Overall, SP has provided robust oversight of the pension system. Though the move to a risk-based supervision approach has successfully begun, burdensome compliance-based oversight needs streamlining (in parallel with improvements to the investment regime) to allow SP to focus on the riskiest entities and activities.

Insurance Sector Supervision

45. More work is needed to strengthen the regulatory framework for RBS of insurance companies. However, some aspects of RBS require the approval of changes in the broader legal framework.

46. The authorities should implement a modern risk-based capital (RBC) framework. It should replace the current leverage limit and simple minimum solvency requirement. The RBC requirement should include capital requirements based on market and credit risks rather than current legal restrictions on asset allocation. A RBC requirement will complement the economic basis of valuation enabled by IFRS 17 and IFRS 9 and encourage better risk management, in particular better matching of assets and liabilities.

B. Macroprudential Policy

47. Macroprudential policy coordination is run through the Financial Stability Council (Consejo de Estabilidad Financiera, CEF), which lacks hard powers. Created through legislation in 2011, CEF is chaired by the Finance Minister and includes the CMF president, the Pension Superintendent, and the BCCh Governor as a permanent invitee and advisor. Despite the multiplicity of financial stability mandates in Chile and the CEF's lack of hard powers, it has historically performed well in facilitating both macroprudential coordination and crisis response. Furthermore, formal "opinion" mechanisms are embedded in legislation that foster coordination between BCCh and CMF.

48. BCCh's financial stability report (FSR) plays a central role in macroprudential risk analysis. The FSR is one of the highest quality financial stability reports in Latin America²⁰ and has

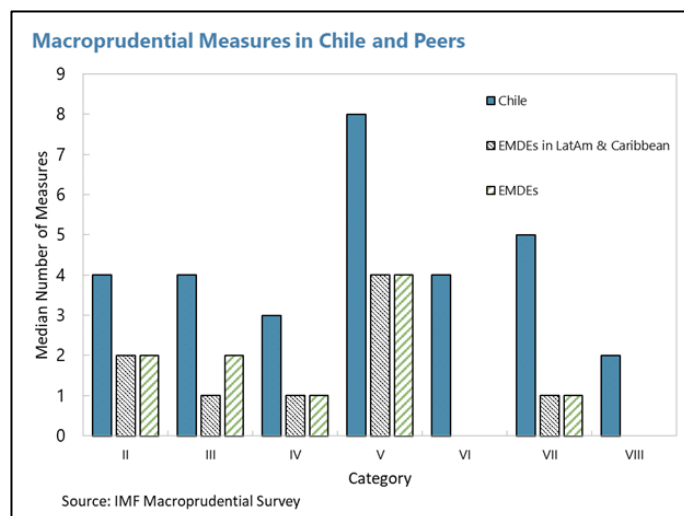
¹⁹ Vanguard "Automatic Enrollment: The Power of the Default" February 2021, Barron's 2 July 2020 "Target Date Funds Are Performing Well. But Choosing One Can Be Harder Than You Think."

²⁰ Financial Stability Reports in Latin America and the Caribbean, 2017, WP/17/73, Cheng Hoon Lim et al.

facilitated the identification and containment of financial stability risks in Chile.²¹ While CMF and other CEF members are given some input into the FSR, they lack a public venue for communication of their own views on financial stability.

49. The counter-cyclical capital buffer (CCyB) is currently being introduced. Given the complementarities between the CCyB (which is under BCCh's primary jurisdiction) and the rest of the macroprudential toolkit (largely controlled by the CMF), regulators should further strengthen coordination to ensure the most effective and efficient macroprudential tools are used for a given set of stability risks. Careful thought should be given to the desired neutral rate of the CCyB, which should balance regulatory flexibility against potential capitalization needs.

50. The Chilean authorities are well equipped for the use of broader macroprudential measures. They have a large number of tools at their disposal, although few new measures have been implemented recently (text chart). Given the uncertain global macroeconomic environment regulators should be prepared for a more active use of the toolkit going forward.



Category	Description
II	Broad-Based Tools Applied to the Banking Sector
III	Household Sector Tools
IV	Corporate Sector Tools
V	Liquidity Tools Applied to the Banking Sector
VI	Tools to Address Systemic Liquidity Risk and Fire Sale Risk in the Nonbank Sector
VII	Tools to Address Risks from Systemically Important Institutions and Interconnectedness within the Financial System
VIII	Tools to Address Other Sources of Systemic Risks

51. Overall, the CEF should take a more active role in financial stability issues. To further enhance macroprudential regulation, consideration should be given to: (i) expanding the capacity of the CEF secretariat; (ii) conducting annual reviews of systemic risks in a dedicated CEF meeting; (iii) publishing CEF member views on financial stability risks and regulatory responses.

²¹ Notably, a banking regulatory tightening was introduced from January 2016 to better align higher credit risks with additional loan loss provisioning (LLP) for mortgage loans. This followed a series of BCCh warnings published in FSRs about the buildup of residential real estate risks and associated lending standard practices.

C. AML/CFT Framework

52. Chile has taken important steps to strengthen its AML/CFT regime in line with the international standards. The July 2021 MER notes that Chile has made significant effort in identification and assessment of money laundering and terrorism financing risks through its 2017 National Risk Assessment and other sectoral studies. Strong AML/CFT policies and strategies are in place to address risks, with a high level of implementation of priorities identified in its 2018–2020 Action Plan.

53. Efforts should continue to enhance effectiveness of the AML/CFT regime. The MER notes remaining gaps in the legal framework and effectiveness that require attention. Authorities should ensure the application of effective, proportionate, and dissuasive sanctions for AML/CFT breaches to the preventive measures. They should also strengthen the implementation of the preventive framework regime and AML/CFT risk-based supervision. On entity transparency, significant improvements are needed to ensure timely availability of beneficial ownership information.

CRISIS PREPAREDNESS AND FINANCIAL SAFETY NETS

Crisis Management and Bank Resolution

54. The authorities have made progress in crisis management since the 2011 FSAP, but significant gaps remain. Banking regulations were revised to increase supervisory powers and expand the crisis management toolkit. While progress has been made to enhance the current early intervention framework, including by enabling the authorities to require firms to submit regularization plans, CMF's prudential toolkit to manage banks at risk of failure lacks an ex-ante recovery planning requirement for banks.

55. The main recommendations are:

- **Establishing a statutory bank resolution authority with a comprehensive range of resolution tools.** This is essential to orderly manage bank failures. It should include clearly setting failing banks apart from the general insolvency framework. While a range of institutional arrangements exist for the resolution authority (e.g., as a standalone agency, or as a function within an existing authority), structural separation and operational independence between resolution and prudential supervision functions must be ensured. Cross-authority crisis coordination should be enhanced to support bank recovery and manage orderly bank failure, including by finalizing and publishing the crisis management MoU between MoF, CMF, and BCCh.
- **Establishing and implementing resolution planning for all banks in scope of the resolution regime.** For systemic banks this should include setting a loss-absorbing capacity (LAC) requirement. Chilean Systemic banks are well-positioned to comply with LAC requirements given

their issuance of wholesale debt securities, which could be adjusted to meet LAC eligibility requirements when refinanced.

- **Establishing an industry funded deposit protection scheme (DPS) to replace existing MoF and BCCh deposit guarantee arrangements.** This will limit moral hazard and central bank balance sheet risks associated with the unlimited guarantee of sight deposits by the BCCh and term deposits of natural persons by the MoF. A prefunded DPS would better insulate industry from contagion effects (related to DPS levies) during a non-systemic bank failure. The DPS should be implemented alongside a new resolution regime, have the ability to ensure a rapid pay out of covered depositors under liquidation, and be able to contribute to the costs of resolution.

Systemic Liquidity

56. The absence of a secured money market may overburden BCCh's liquidity-providing operations. Despite well-developed capital markets, an institutional repo market does not exist in Chile, as banks prefer exchanging liquidity on an unsecured basis, with the central bank serving as backstop. Setting appropriate risk/reward and regulatory incentives to develop this market should be a policy priority.

57. The BCCh needs to implement stronger risk management practices, particularly regarding collateral requirements. The BCCh took significant risks in its crisis response, particularly with the use of bank bonds as collateral with minimal haircuts. Such collateral exposes the BCCh to correlation risk, as the performance of unsecured bank bonds is likely to mimic the counterparty risk assumed by the BCCh, in particular under a systemic shocks. The authorities should: (i) strengthen risk control measures through issuer limits and a more prudent haircut schedule, based on the risk equivalence principle; (ii) exclude unsecured bank bonds from the collateral framework except in crisis times; and (iii) reinforce the risk management perspective in policy proposals.

58. The operationalization of the Emergency Liquidity Assistance (ELA) framework will require close cooperation between the central bank and the banking supervisor. ELA should be reserved, as last resort, to solvent banks facing temporary liquidity issues, and should be accompanied by a government guarantee when liquidity support is provided to a bank with uncertain solvency or under resolution. While the BCCh Act provides an appropriate legal basis for an effective ELA framework, the legal architecture should be completed by a specific ELA Regulation, procedures for the central bank and the banking supervisor, a master agreement, and an MoU between the BCCh and the CMF.

AUTHORITIES' VIEWS

59. The Chilean authorities have been highly supportive of the FSAP mission. They are largely in agreement with its key recommendations which they believe would foster a more comprehensive reform agenda, particularly in crisis management, pension and mutual fund regulation, and insurance and banking supervision. They believe that their strong response to the events of 2019 and 2020 and continuing financial stability have demonstrated both the resilience of the Chilean financial system and the ability of regulators to deal with shocks in a well-coordinated fashion. Looking forward they are most concerned with the potential risks posed by further legislation allowing extraordinary withdrawals from the pension system and/or anticipated liquidation of life annuities, which could undermine these sectors and domestic financial markets more broadly, and potentially create liquidity risks.

Financial Stability Analysis

60. Authorities assess the banking sector as sound with adequate capital and liquidity levels, and risks being recognized in a timely manner.

61. Authorities saw merit in the FSAP team's bank stress testing approach and the alternative views it delivered compared to their own frameworks. For the solvency analysis, they expressed concerns with the severity of the adverse scenario and the reliance on satellite model estimations based on historical default rates, which no longer reflect the recent credit quality improvement of several market segments. Authorities emphasized that if announced capital raising plans had been incorporated into these scenarios, capital shortfalls identified by the FSAP exercise are materially eliminated. They also noted that regulators had already issued all secondary regulation towards Basel III and that the banks with the largest gaps were already taking steps.

62. Authorities agree with the need to introduce a more updated collateral valuation framework and to fully integrate liquidity stress testing. They emphasized that the conditions for the unwinding of extraordinary liquidity support measures will be largely state-dependent, and that banks know the expiration date and should be already preparing for their termination.

63. Finally, authorities welcomed the work on climate, especially the analytical work conducted with BCCCh staff on modelling transition risks, which could become a key component of their future stress testing exercises.

Financial System Oversight

64. Authorities noted that the BCP assessment was conducted when the CMF is still in the process of integration and the impact of the pandemic is continuing. CMF officials ensured excellent cooperation with the team in this challenging period.

65. CMF generally agrees with the BCP assessment and assigned grades but has some disagreements with proposed recommendations and assessments. In particular, CMF does not

fully agree with the assessment that supervisors are constrained by an incomplete legal framework for licensing, or that the corrective actions framework needs to be strengthened. Another disagreement is on asset classification and provisioning framework. While CMF acknowledges some gaps compared to international standards, it believes that the overall framework is sound.

66. Authorities agreed with recommendations for strengthening of pension, insurance, and mutual fund supervision. While they agreed with the need for a more robust liquidity management framework for mutual funds, they emphasized that mutual funds withstood the redemptions experienced in 2019 without incidents, demonstrating they have been adequately managing liquidity risks and that regulation must adequately trade-off liquidity concerns with the development of local debt markets.

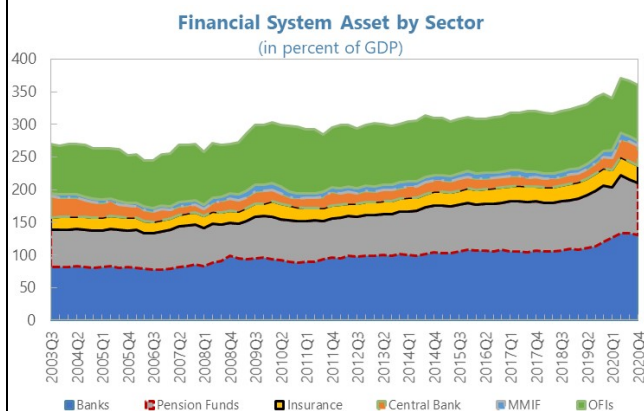
67. Authorities agreed with the FSAP recommendations on macroprudential framework and tools. They noted that BCCh has a long-standing role in financial stability, including taking several measures to preserve it and publishing the FSR since 2004. In addition, they noted that the financial stability mandate is shared with CMF, and that institutional macroprudential coordination among agencies has been very effective. Authorities also agree on enhancing systemic risk monitoring by strengthening the CEF.

Crisis Preparedness and Financial Safety Nets

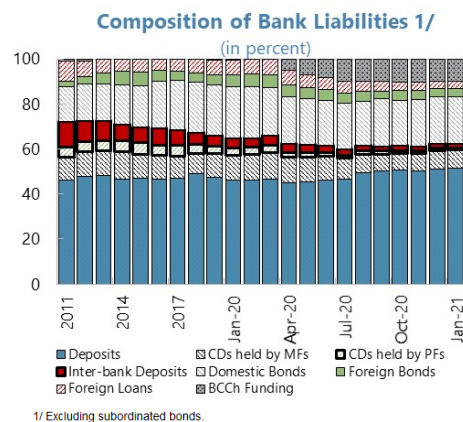
68. Authorities largely agreed with recommendations regarding bank resolution and crisis management. They emphasized the challenges of establishing a new resolution authority and did not fully agree that crisis coordination arrangements are triggered too late. On deposit insurance, they emphasized the need for balancing the substantial costs with the potential benefits of transitioning away from the current guarantees of sight and time deposits. Authorities agreed with the recommendations on systemic liquidity, while emphasizing the need for flexibility regarding the provision of ELA.

Figure 1. Chile: Financial Sector

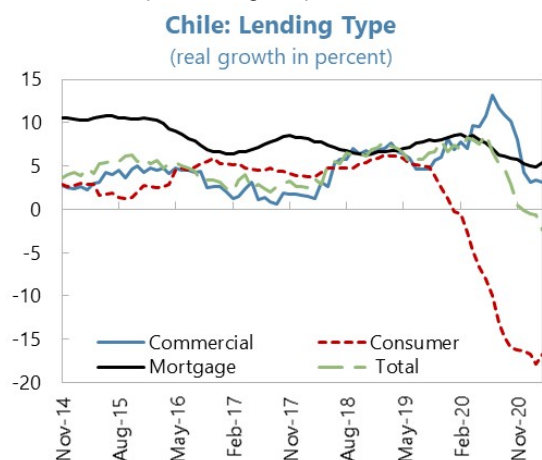
The financial system has grown steadily...



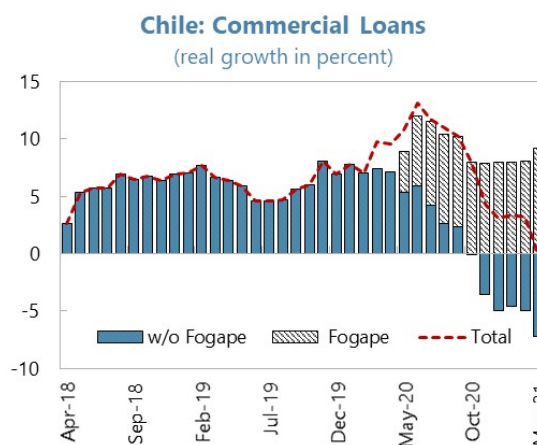
...and before the 2019 and 2020 shocks banks relied increasingly on market funding



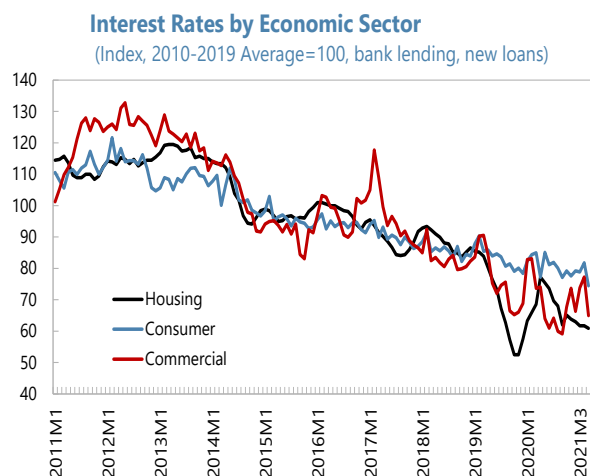
As credit collapsed during the pandemic...



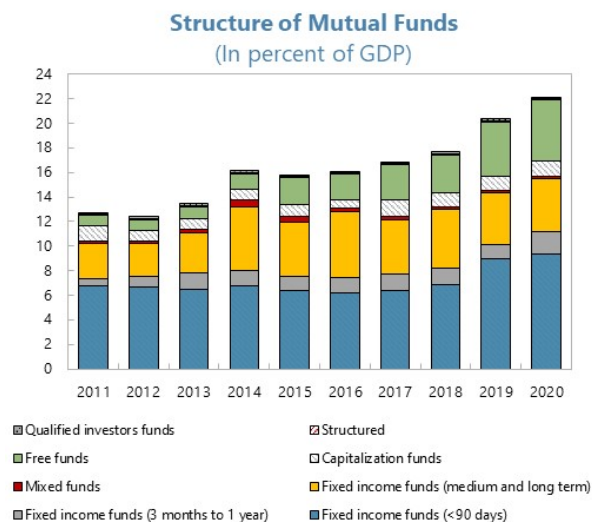
...government guaranteed loans took up the slack



With interest rates dropping across the economy...



...investment in mutual funds has grown steadily



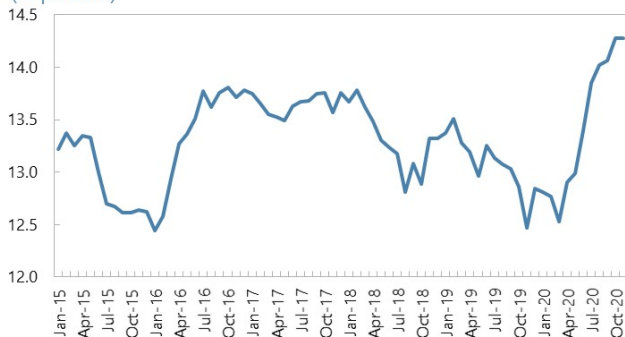
Sources: BCCh, and IMF staff calculations.

Figure 2. Chile: Selected Banking Indicators

Capital adequacy increased recently as risk-weighted assets declined due to state guarantees, capital increased, and loans contracted...

Chile: Capital Adequacy Ratio

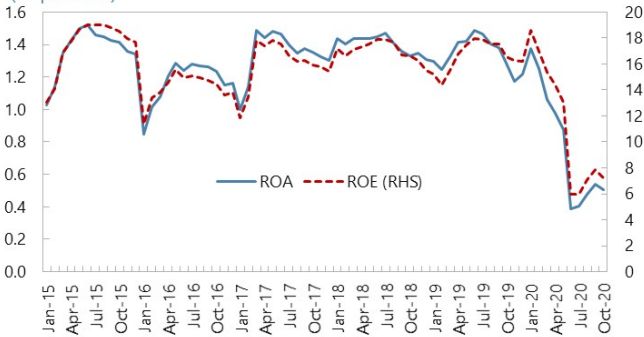
(In percent)



... while bank profitability declined with higher provisions.

Chile: ROA and ROE

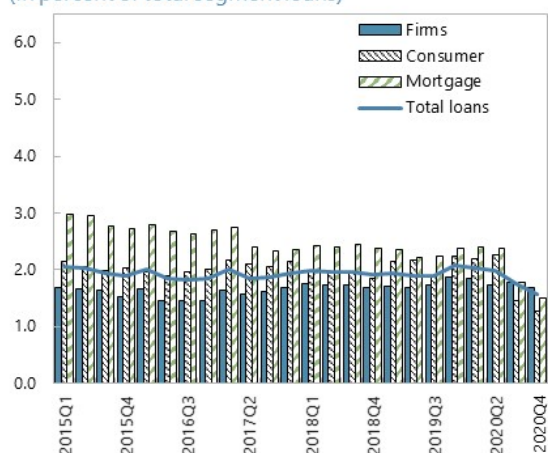
(In percent)



Non-performing loans have remained low...

Non-performing Loans

(In percent of total segment loans)



... but provisions have not kept pace with all past due loans.

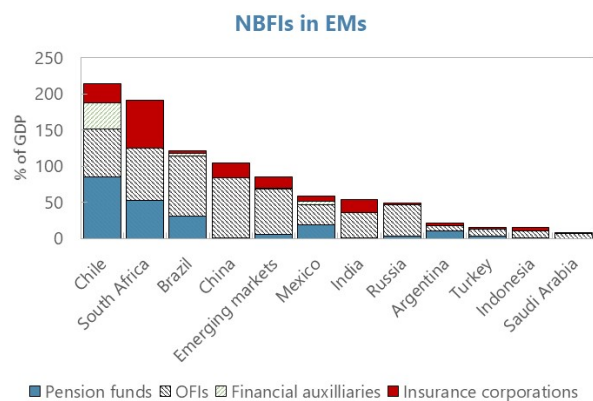
Provisioning Ratios

(In percent; specific provisions to all past due loans)

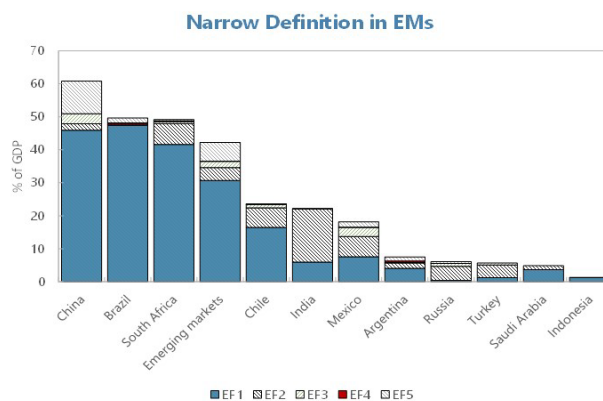


Figure 3. Chile: Nonbank Financial Institutions and Shadow Banking

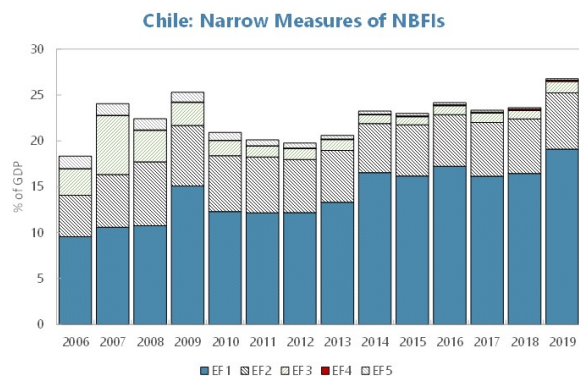
Chile NBFIs are large, driven by Pension/Mutual Funds...



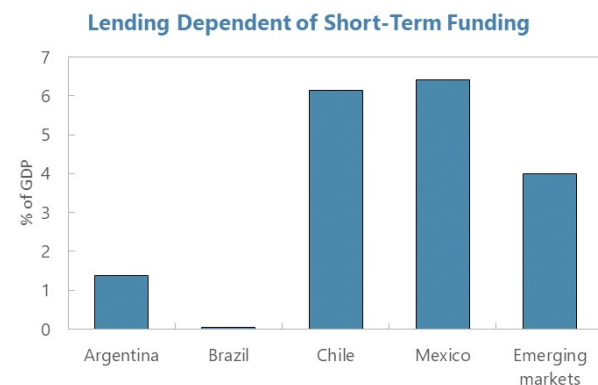
... but true shadow banking is not large, and is dominated by fixed income mutual funds (EF1).



Fixed income funds have grown steadily as other shadow banking activities have stayed constant or declined.



Lending dependent on short-term funding (EF2) remains large in Chile, particularly in non-bank consumer lending.



Source: FSB.

Notes:

"Shadow Banking" = FSB's "Narrow Measures of NBFIs" which comprises:

EF1: Collective investment vehicles with features that make them susceptible to runs

EF2: Lending dependent on short-term funding

EF3: Market intermediation dependent on short-term funding

EF4: Facilitation of credit intermediation

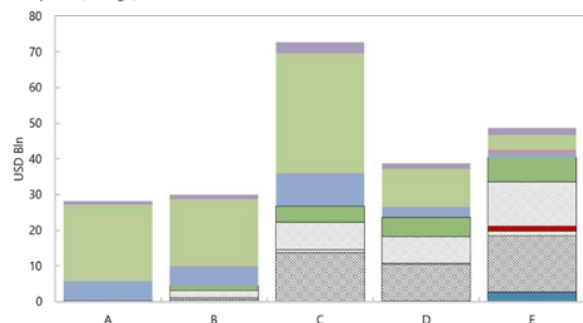
EF5: Securitization-based credit intermediation

Figure 4. Chile: Bank Funding Dynamics

Pension Fund Assets

Dec 2020

Central Bank Notes Chilean Treasuries Bank CDs <90 days Bank CDs >90 days
Bank Bonds Corporate Bonds Equities (Local) MF Shares (Local)
Equities (Foreign) Others

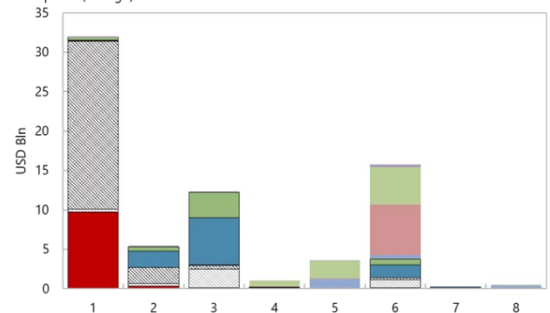


Sources: SP and IMF Staff calculations.

Mutual Fund Assets

Dec 2020

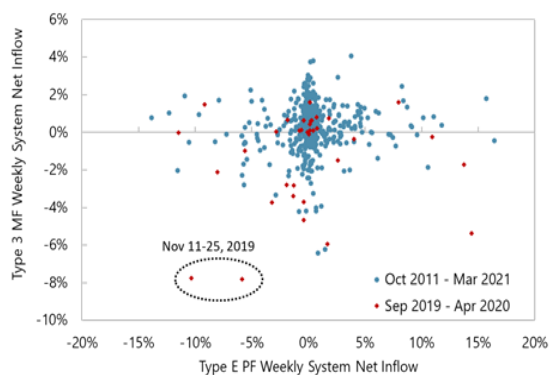
Central Bank Notes Chilean Treasuries Bank CDs <90 days Bank CDs >90 days
Bank Bonds Corporate Bonds Equities (Local) MF Shares (Local)
Equities (Foreign) Others



Sources: CMF and IMF Staff calculations.

Correlation between PFs and MFs

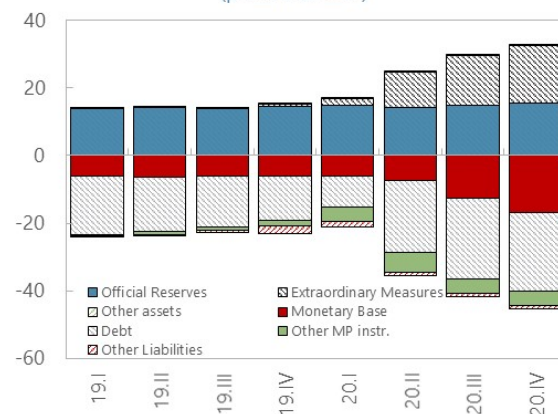
October 2011-March 2021



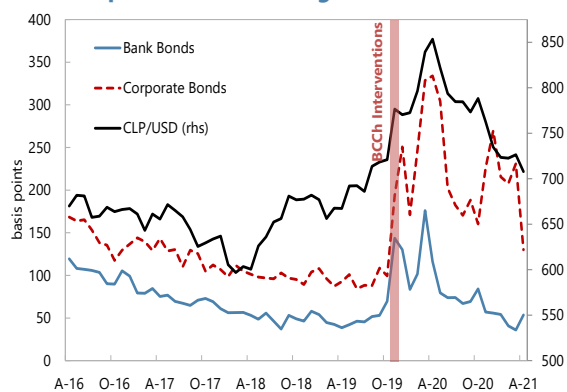
Sources: CMF, SP, and IMF Staff calculations.

BCCh Balance Sheet

(percent of GDP)



Bond Spreads and Exchange Rate



Sources: BCCh, Haver.

Note: 2019 BCCh interventions include FX swap (Nov 14), repos (Nov 19), and FX spot/NDF (Dec 2).

Figure 5. Chile: Bank Stress Test Scenarios

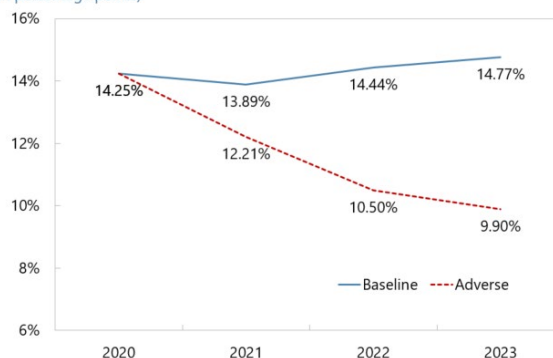
Sources: BCCh, and IMF staff projections.

Figure 6. Chile: Bank Solvency Stress Test Results

Large dispersion among bank results with two falling below regulatory minimum, mainly due to low starting points and Basel III phase-in impact.

Solvency Stress Test: CAR—Baseline and Adverse

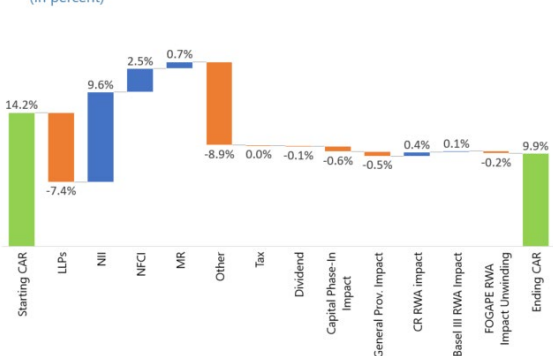
(In percentage points)



In the adverse, losses eat into banks' capital buffers, and in some cases landing ratios are below the regulatory minimum...

Stress Test Impact Attribution to Capital—Y3 Adverse

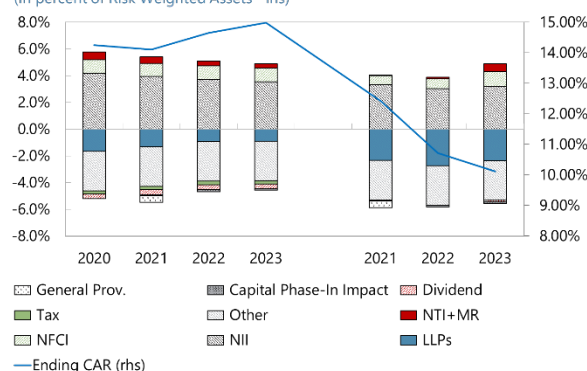
(In percent)



The effects of stressed interest and non-interest income and significant credit impairments in the adverse scenario are only partially offset by lower effective taxes and restrictions on dividend payouts.

Contribution to Capital—2020–2023

(In percent of Risk Weighted Assets - lhs)

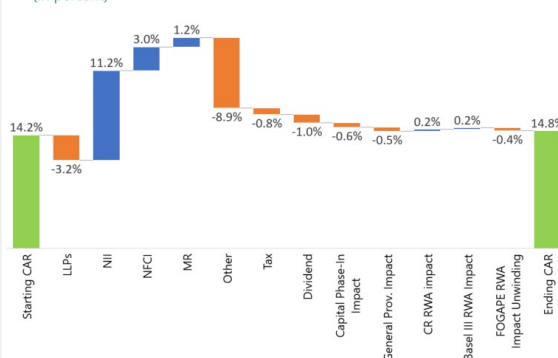


Source: IMF staff calculations.

Solid internal capital generation capacity in the baseline, mainly due to elevated net interest income, overcoming transitory capital reductions attributed to Basel III

Stress Test Impact Attribution to Capital—Y3 Baseline

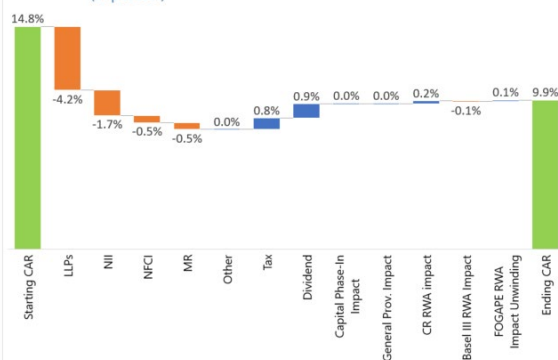
(In percent)



Credit losses and lower net interest income risk losses drives the negative result in Year 3 of the adverse scenario.

Stress Test Impact Attribution to Capital—Y3 Delta

(In percent)



Net income after taxes would only start recovering under Year 3 of the adverse scenario on the back of a favorable interest rate environment and contained credit impairments.

Aggregate Net Income After Taxes—2020–2023

(In CLP millions)

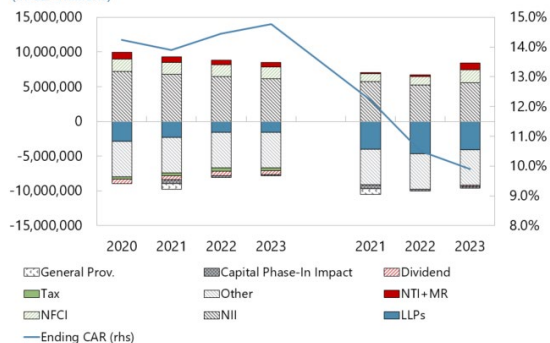
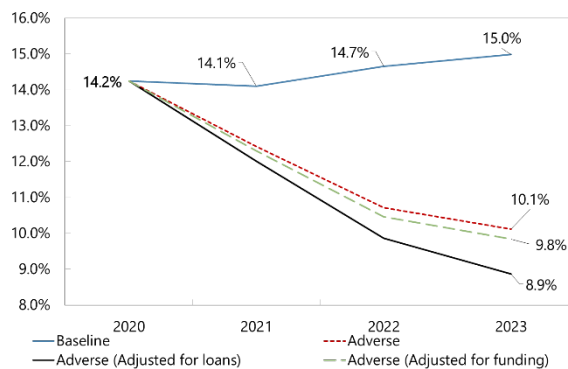


Figure 7. Chile: Stress Test Results — Sensitivity Analysis

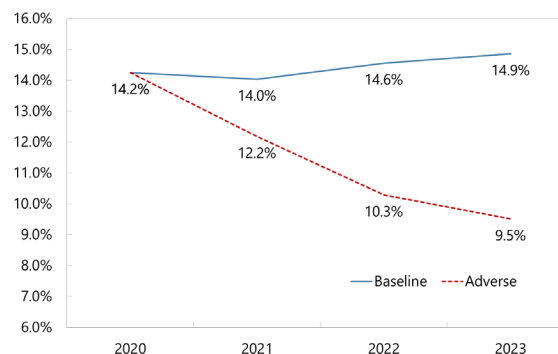
The 3-year cumulative impact of unwinding FCIC and LCL measures might reach 150 bps, banks should anchor their capital planning on the unwinding timeline...

Sensitivity Analysis II: Unwinding Liquidity Support Measures (In percentage points)



In the adverse scenario, the impact of partially unwinding the effect of 2020 policy support measures could exceed 60 bps in terms of capital ratios...

Sensitivity Analysis III: CAR Path Assuming Partial Redefaults (In percentage points)



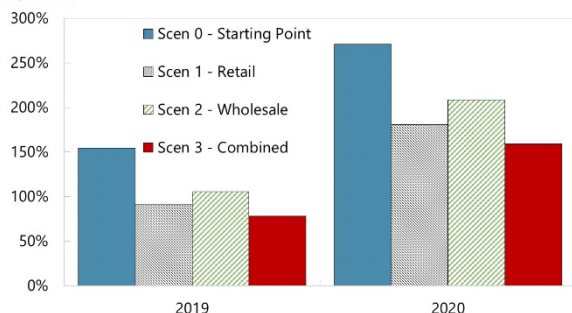
Source: IMF staff calculations.

Figure 8. Chile: Liquidity Stress Test Results

The impact of extraordinary liquidity support measures and pension fund withdrawals on LCRs has been spectacular; the transitory effect of measures should not be ignored...

CLP LCR Stress Test: Starting Point and 3 Stress Scenarios

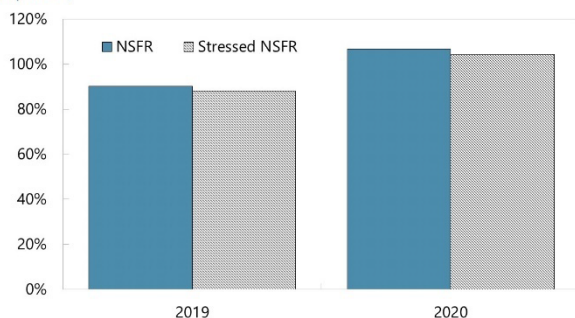
(In percent)



The ASF component of NSFR also affected by stable funding injections; potential cliff-effects as policies phase out and the requirement becomes binding...

NSFR Stress Test: 2019 and 2020 Starting Points

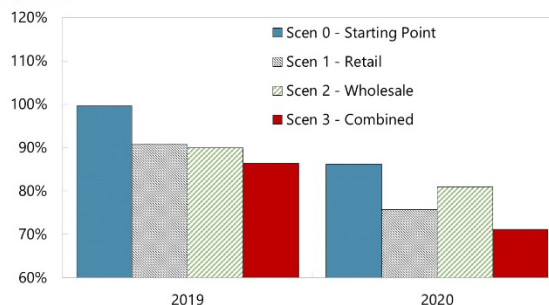
(In percent)



Weak U.S dollar LCR outlook warrants some attention in order not to amplify systemic liquidity stress...

USD LCR Stress Test: Starting Point and 3 Stress Scenarios

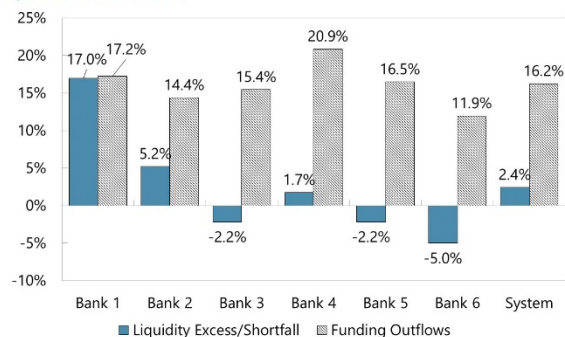
(In percent)



Some small liquidity shortfalls under the 3-month cash-flow analysis stress; large funding profile dispersion requires regular monitoring via liquidity stress testing...

CF Stress Test: Adverse Scenario

(In percent of total liabilities)

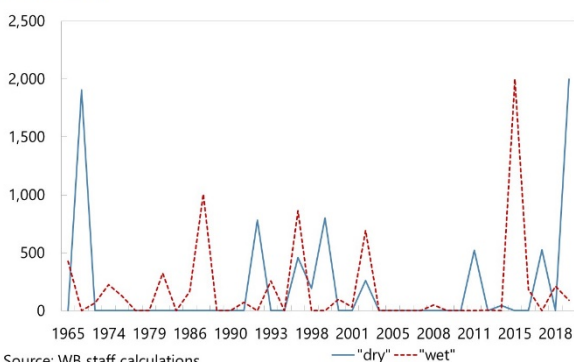


Source: IMF staff calculations.

Figure 9. Chile: Climate Change — Physical Risks

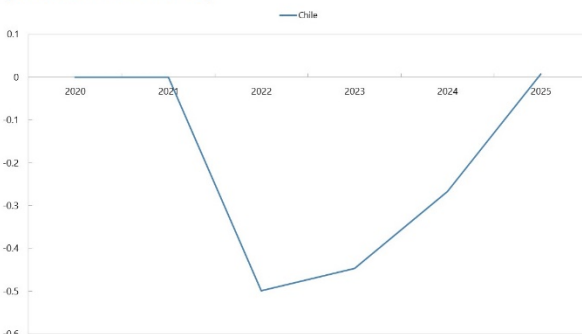
Historical data on physical risk event losses were used to estimate an adverse physical risk shock; capital destruction shock was anchored at 2 percent of GDP.

Hydrometeorological Events (1965-2019) & Cost Impact
(In USD billion)



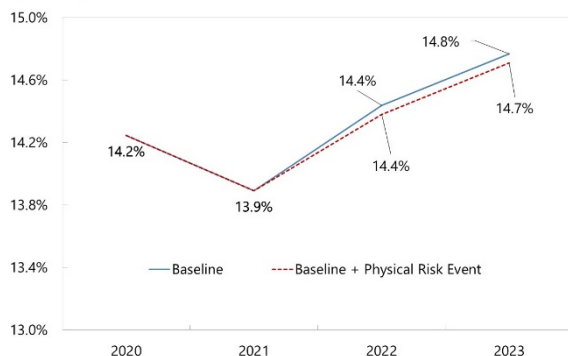
A 2 percent shock (in GDP terms) corresponds to a 0.5 percent shock in capital stock terms...

Simulated Capital Stock
(% deviation from baseline)



Given the low magnitude of the physical risk loss, the decline in the CAR horizon path is approximately 7 bps.

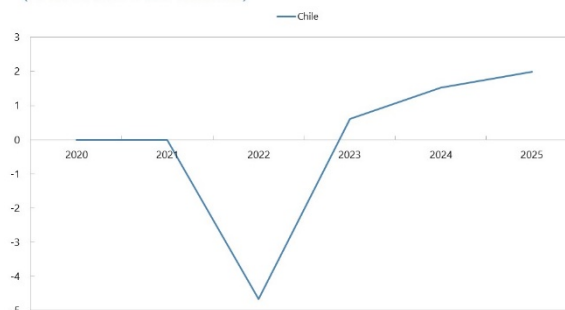
Solvency Stress Test: CAR - Baseline vs Baseline + Physical Risk
(In percentage points)



Source: IMF and WB staff calculations.

In the GFM macroeconomic model framework shock in investment in Year 2 was used to proxy the capital stock shock...

Simulated Investment Level
(% deviation from baseline)



... which translates into a very benign shock in output level of approximately -0.6 percent...

Simulated Output Level
(% deviation from baseline)

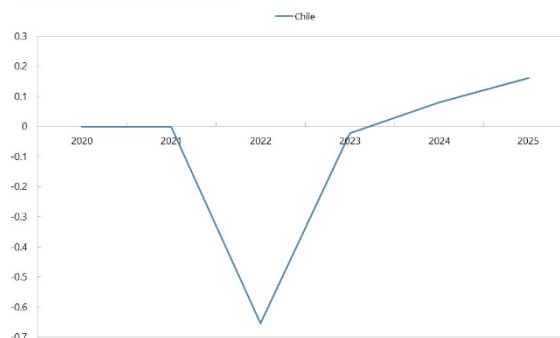
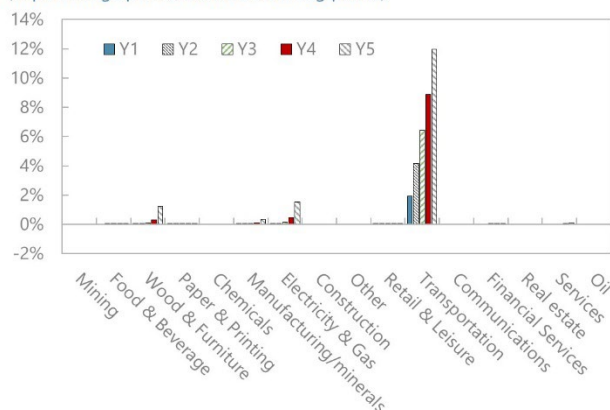


Figure 10. Chile: Climate Change — Transition Risks 1/ 2/

The approach captures sectoral differentiation of carbon price impact, supported by heterogeneous carbon intensity by industry.

Transition Risks: Delta PDs (100 USD per tonne carbon tax)

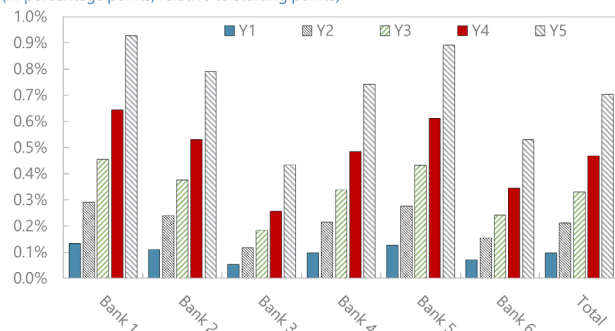
(In percentage points, relative to starting points)



Proof-of -concept validated, PD translation captures portfolio heterogeneity among banks...

Transition Risks: Delta PDs (100 USD per tonne carbon tax)

(In percentage points, relative to starting points)



1/ Bank ordering and ranking is random

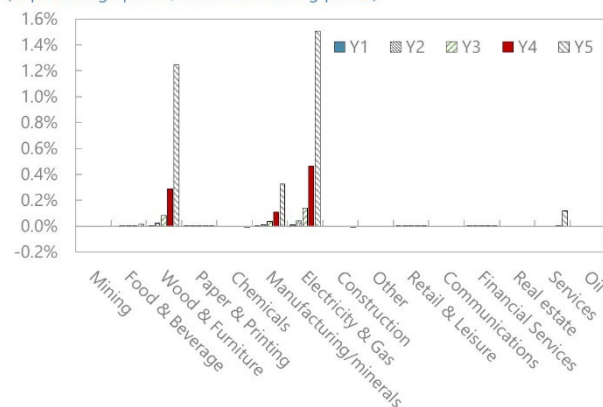
2/ Random starting points were used for illustration purposes

Sources: BCCh, and IMF staff calculations.

For industries with smaller emission footprint, differences in pre- and post-stress PDs might be marginal...

Transition Risks: Delta PDs (excluding Transportation)

(In percentage points, relative to starting points)



Delta PDs can be easily translated to PD path projection using the bank specific starting points...

Transition Risk: Stressed PDs (100 USD per tonne carbon tax)

(In percent)

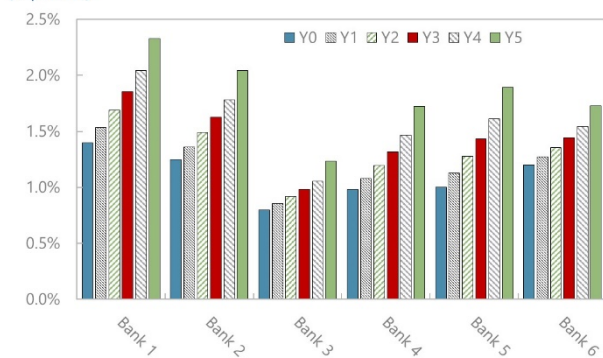
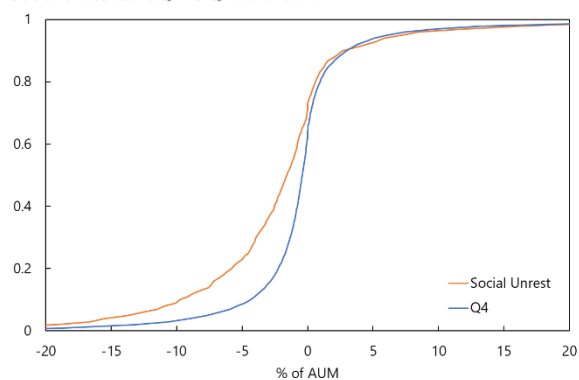


Figure 11. Chile: Liquidity Stress Testing of Type 3 Mutual Funds

Type 3 MF saw unprecedented redemptions during social unrest...

Type 3 MF Weekly Flows (CDF)

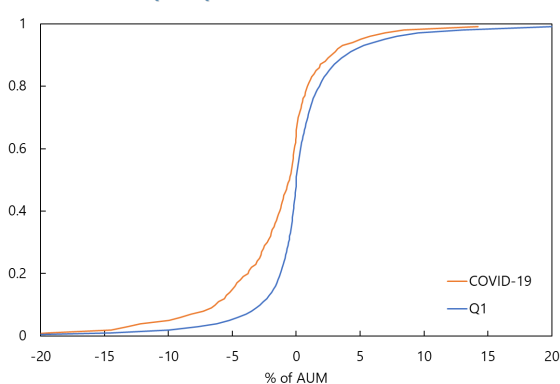
Social Unrest 2019Q4 vs Q4 2010-2018



...and to a lesser extent on the onset of the COVID-19 crisis.

Type 3 MF Weekly Flows (CDF)

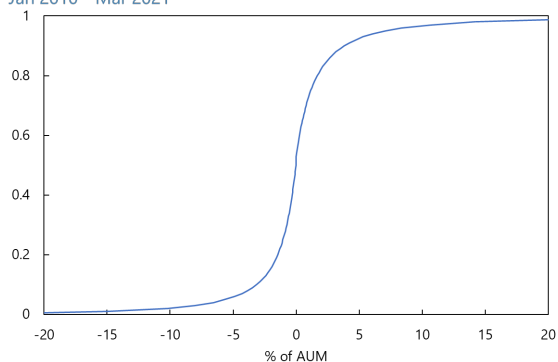
COVID-19: 2020Q1 vs Q1 2010-2019



Stress-testing of type 3 MF was undertaken...

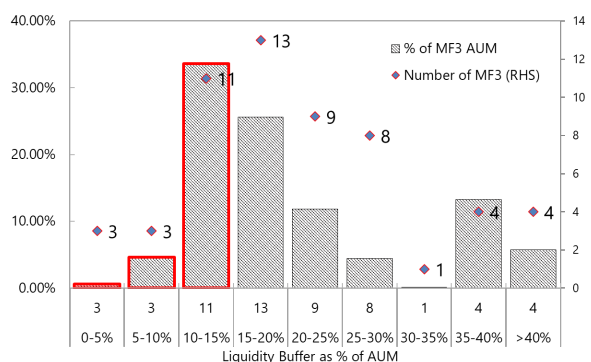
Type 3 MF Weekly Net Inflows (CDF)

Jan 2010 - Mar 2021



...showing that liquidity buffers may be less than desirable.

MF3 Liquidity Buffers



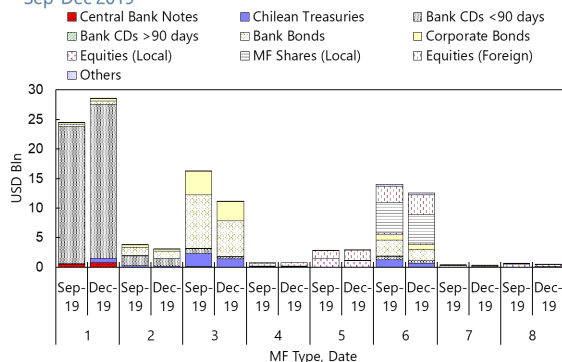
Sources: CMF, and IMF staff calculations.

Figure 12. Chile: Mutual Funds, Social Unrest, and COVID-19

Social unrest and COVID-19 generated a flight-to-quality...

Social Unrest and Mutual Fund Assets

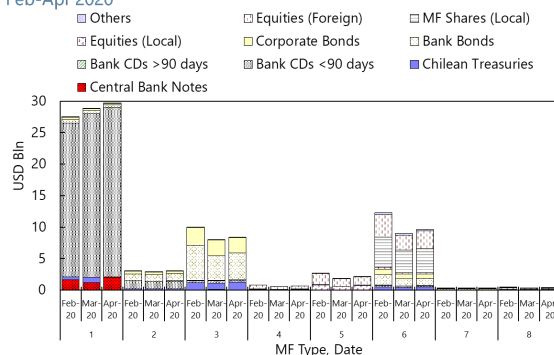
Sep-Dec 2019



...with type 3 MFs suffering redemptions while MMFs saw inflows.

COVID-19 and Mutual Fund Assets

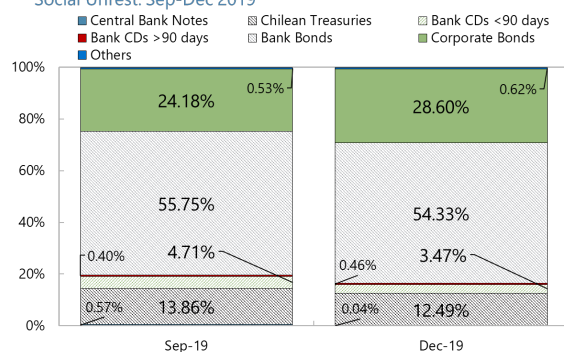
Feb-Apr 2020



Corporate bonds gained share from Treasuries and bank bonds...

MF3 Asset Composition

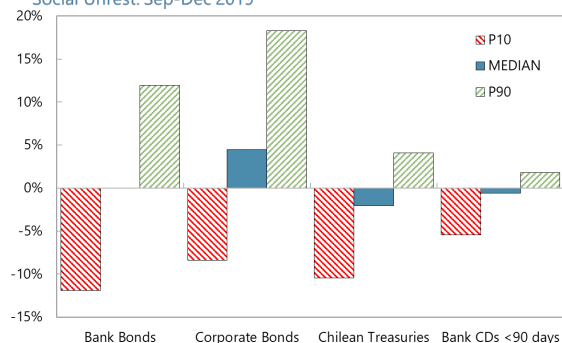
Social Unrest: Sep-Dec 2019



...since corporate bonds were not eligible for collateral for BCCh.

MF3 Change in Asset Composition

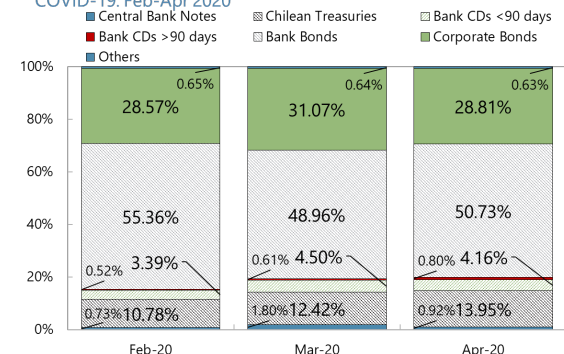
Social Unrest: Sep-Dec 2019



COVID-19 had a more muted impact on composition...

MF3 Asset Composition

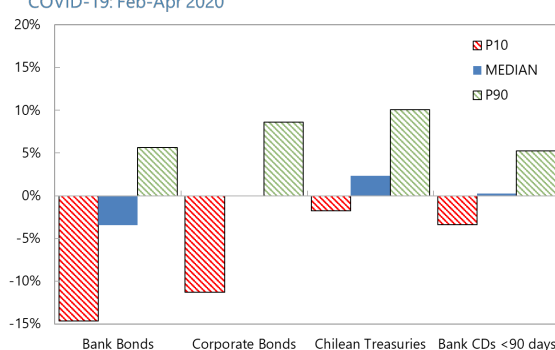
COVID-19: Feb-Apr 2020



...though there was significant heterogeneity in both episodes.

MF3 Change in Asset Composition

COVID-19: Feb-Apr 2020



Sources: CMF, and IMF staff calculations.

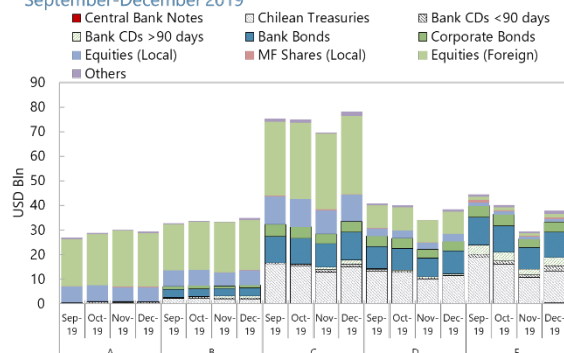
Figure 13. Pension Funds, Social Unrest, and COVID-19

Type E PFs saw significant pressures during social unrest...

...and resorted to using Treasuries while increasing Bank CDs.

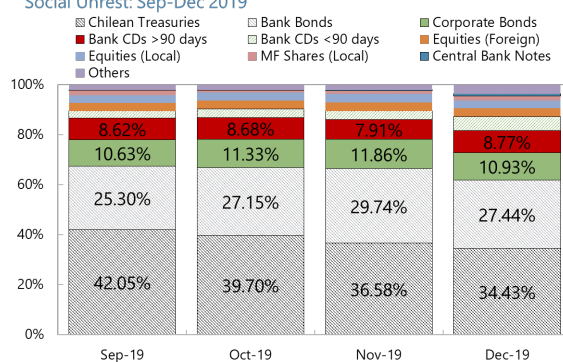
Social Unrest and Pension Fund Assets

September–December 2019



Fund E Asset Composition

Social Unrest: Sep–Dec 2019

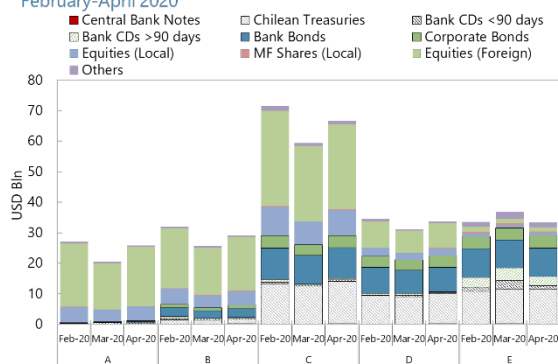


Such pressures were more contained on the onset of COVID-19...

...though the same can be observed in terms of composition.

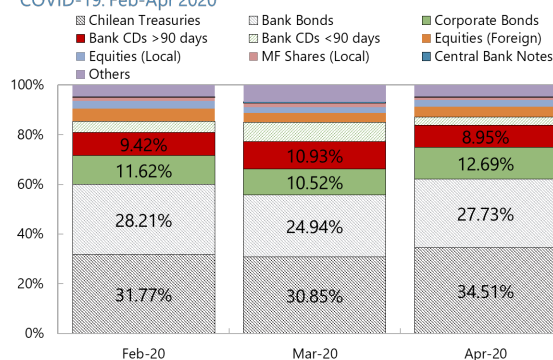
COVID-19 and Pension Fund Assets

February–April 2020



Fund E Asset Composition

COVID-19: Feb–Apr 2020



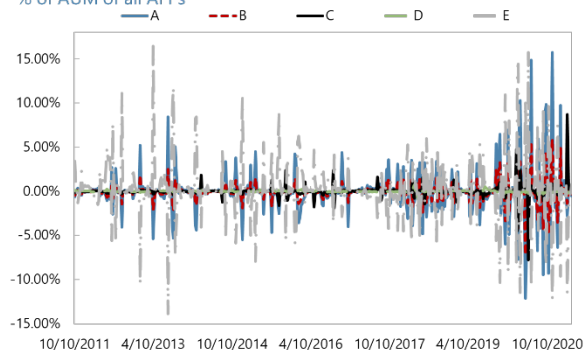
Sources: SP, and IMF staff calculations.

Figure 14. Chile: Pension Fund Switching and Stress Testing of Type E Pension Funds

Pension Fund switching has seen an increasing trend.

Systemwide Net Inflows (Switching)

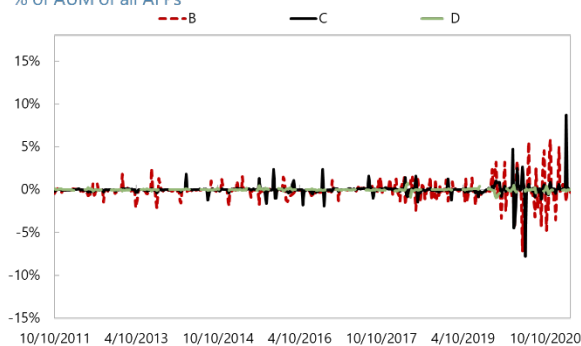
% of AUM of all AFPs



Default funds B, C and D are not heavily affected...

Systemwide Net Inflows (Switching)

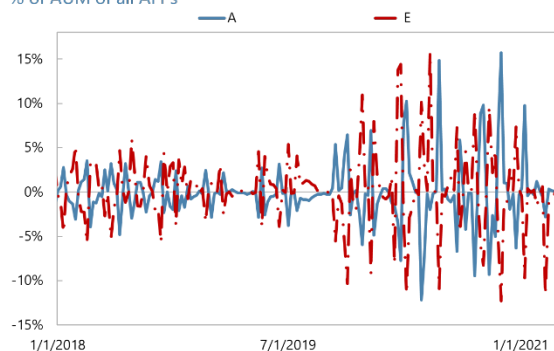
% of AUM of all AFPs



But funds A and E have been severely affected...

Systemwide Net Inflows (Switching)

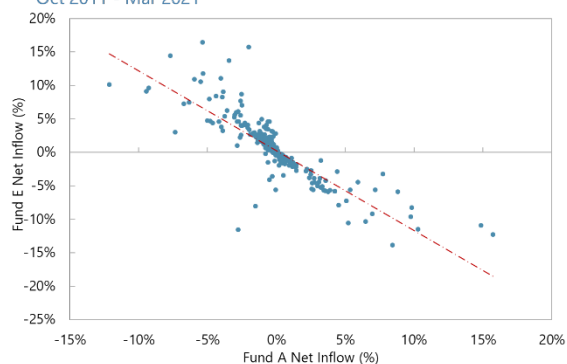
% of AUM of all AFPs



...with switching negatively correlated between the extreme portfolios.

A-E Fund Switching

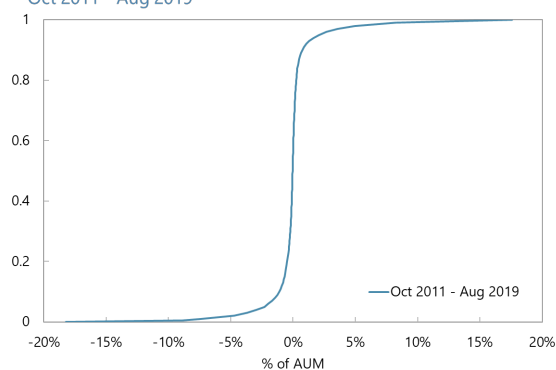
Oct 2011 - Mar 2021



Stress-testing of type E pension funds was undertaken...

Fund E Net Inflows (CDF)

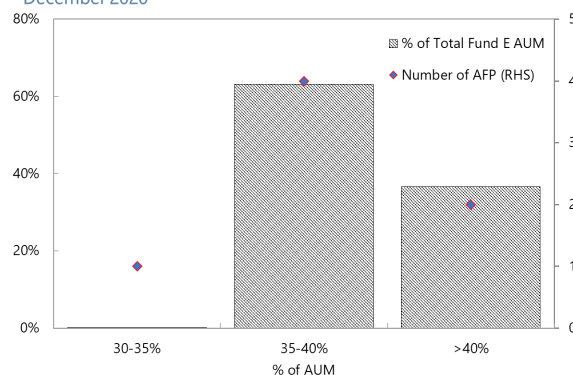
Oct 2011 - Aug 2019



...confirming that AFPs have ample liquidity buffers.

Fund E Liquidity Buffers

December 2020



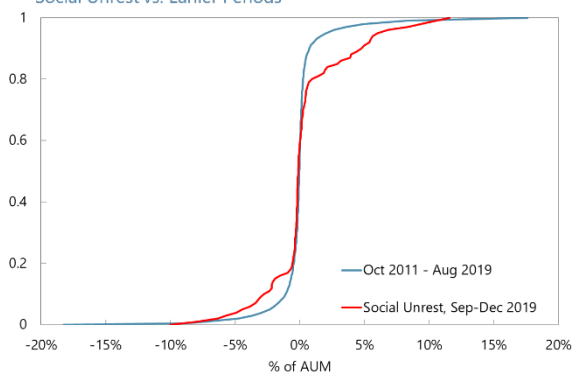
Sources: CMF, and IMF staff calculations.

Figure 15. Chile: Switching in Pension Funds Type A and E

Type A PFs saw large inflows during social unrest...

Fund A Net Inflows (CDF)

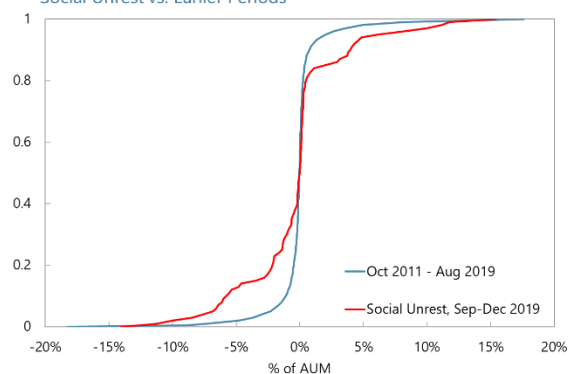
Social Unrest vs. Earlier Periods



...while type E funds saw large swings, though tilted to outflows.

Fund E Net Inflows (CDF)

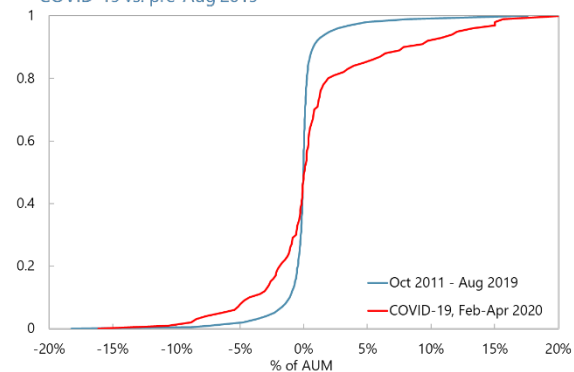
Social Unrest vs. Earlier Periods



At the onset of COVID-19, type A funds saw large inflows...

Fund A Net Inflows (CDF)

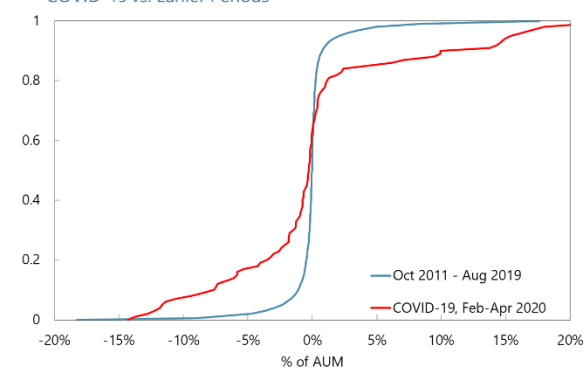
COVID-19 vs. pre-Aug 2019



...while type E funds were even more strained than in 2019.

Fund E Net Inflows (CDF)

COVID-19 vs. Earlier Periods



Sources: CMF, and IMF staff calculations.

Table 2. Chile: Selected Economic Indicators¹

	2019	2020	Proj.	
			2021	2022
(Annual percentage change, unless otherwise specified)				
Output				
Real GDP	1.0	-5.8	11.0	2.5
Total domestic demand	0.9	-9.3	20.2	1.9
Consumption	0.9	-6.9	16.8	3.7
Investment 2/	1.0	-17.8	34.1	-4.6
Net exports 3/	0.0	3.6	-8.7	0.6
Exports	-2.6	-1.1	-0.2	5.1
Imports	-2.4	-12.8	30.9	2.6
Employment				
Unemployment rate (annual average)	7.2	10.8	9.1	7.4
Consumer prices				
Inflation (End of period, %)	3.0	2.9	5.5	3.4
Inflation (average, %)	2.3	3.0	4.2	4.4
(In percent of GDP, unless otherwise specified)				
Public sector finances				
Central government revenue	21.6	20.0	23.3	22.0
Central government expenditure	24.5	27.4	31.4	23.8
Central government fiscal balance	-2.9	-7.3	-8.1	-1.8
Structural Fiscal Balance	-1.7	-2.7	-10.5	-3.9
Structural Non-Mining Primary Balance (% of NGDP)	-3.0	-3.6	-11.2	-4.3
Central Government Gross Debt	28.2	32.5	34.4	37.3
of which, FX-denominated Debt	5.8	7.5	12.1	12.3
Central Government Net Debt	8.0	13.4	19.8	20.7
Public sector gross debt 4/	49.0	59.4	61.2	64.1
Of which, share of FX-denominated Debt (in %)	20.6	23.1	35.2	32.9
(Annual percentage change, unless otherwise specified)				
Money and credit				
Broad money	9.4	6.1	20.3	7.1
Credit to the private sector	9.7	3.2	N.A.	N.A.
Balance of payments				
Current account (% of GDP)	-3.7	1.4	-2.5	-2.2
Current account (in billions of U.S. dollars)	-10.4	3.5	-8.3	-7.6
Foreign direct investment net flows (% of GDP)	-1.2	1.3	-1.7	-1.0
Gross international reserves (in billions of U.S. dollars)	40.7	39.2	51.2	51.2
Gross Reserves (Months of next year import)	5.7	5.9	9.3	6.5
Gross external debt (% of GDP)	66.1	77.7	70.6	68.9
Public	6.2	8.9	12.3	12.7
Private	59.9	68.8	58.2	56.2
(Annual percentage change)				
Relative prices				
Real effective exchange rate (real appreciation +)	-4.8	-8.2	N.A.	N.A.
Terms of trade	-1.7	10.0	16.8	-0.3
Memorandum items				
Nominal GDP (in billions of pesos)	196,444	200,276	240,837	258,033
(percentage change)	3.0	2.0	20.3	7.1
Nominal GDP (in billions of USD)	279	253	331	353
(percentage change)	-6.1	-9.5	31.0	6.5

Sources: Central Bank of Chile, Ministry of Finance, Haver Analytics, and IMF staff calculations and projections.

1/ The annual numbers occasionally show a small discrepancy with the authorities' published figures, as they are calculated as the sum of the quarterly series seasonally-adjusted by staff.

2/ Investment is defined as: gross fixed capital formation + changes in inventories.

3/ Contribution to growth.

4/ Includes liabilities of the central government, the Central Bank of Chile and public enterprises. Excludes Recognition Bonds.

Table 3. Chile: Structure of the Financial System, 2020

	Number	Assets (USD billions)	Percent of total assets	Percent of GDP
Banks	18	454.3	53.7	161.2
Domestic	8	192.5	22.8	68.3
Foreign	9	187.1	22.1	66.4
Subsidiaries	5	185.3	21.9	65.7
Branches	4	1.8	0.2	0.6
State-owned	1	74.7	8.8	26.5
Insurance Companies	69	76.7	9.1	27.2
Life insurance	35	8.5	1.0	3.0
Non-Life insurance	34	68.2	8.1	24.2
Pension fund administrators	7	209.5	24.8	74.3
Other fund administrators	68	105.0	12.4	37.2
Mutual funds	19	72.2	8.5	25.6
Investment Funds	49	32.8	3.9	11.6
Total financial system	162	845.5	100.0	299.9
Memorandum items:				
GDP (USD bn)	282			

Source: BCCh, SP, and CMF.

Table 4. Chile: Financial Soundness Indicators
(In percent, unless otherwise specified)

	2014	2015	2016	2017	2018	2019	2020	2021Q1
Total Assets								
Total assets (In billions of Chilean pesos)	180,846	203,609	211,687	220,365	246,266	290,500	323,127	313,784
Percent of GDP	121.7	127.6	124.9	122.7	129.1	147.9	161.3	152.6
Capital Adequacy								
Regulatory Capital to Risk-Weighted Assets	13.4	12.6	13.8	13.8	13.3	12.8	14.7	14.8
Regulatory Tier 1 Capital to Risk-Weighted Assets	10.0	9.4	10.9	11.0	10.7	10.3	10.7	10.8
Capital to Assets	8.0	7.6	8.4	8.4	8.4	7.5	6.9	7.2
Credit Risk								
NPLs Net of Provisions to Capital 1/	-2.1	-3.3	-5.2	-4.6	-4.5	-4.3	-9.6	-9.2
NPLs to Gross Loans	2.1	1.9	1.8	1.9	1.9	2.1	1.6	1.5
Profitability								
Return on Assets	1.5	1.3	1.2	1.3	1.3	1.2	0.5	1.5
Return on Equity	19.3	17.7	13.8	15.4	15.5	16.2	7.8	21.1
Interest Margin to Gross Income	67.8	66.6	66.8	67.1	67.6	67.1	69.4	71.1
Trading Income to Gross Income	10.8	10.6	10.1	8.5	8.7	9.6	8.4	6.6
Non-interest Expenses to Gross Income	47.4	48.6	52.1	51.1	49.3	46.8	54.9	46.6
Liquidity								
Liquid Assets to Total Assets	13.6	13.8	14.7	15.3	14.2	15.3	22.2	21.1
FX and Derivative Risk								
FX Loans to Total Loans	18.4	20.0	18.2	16.6	18.4	18.9	16.1	15.9
FX Liabilities to Total Liabilities	25.5	27.1	25.8	24.0	25.5	26.7	22.7	23.0

Sources: IMF Financial Soundness Indicators, Moody's Investor Service and IMF staff calculations.

1/ Total provisions (specific and general). The negative ratio of NPLs net of provisions to capital indicates that total provisions are larger than NPLs.

Table 5. Chile: FSAP Risk Assessment Matrix¹

Risk	Overall Level of Concern	
	Relative Likelihood	Expected Impact if Materialized
Global resurgence of the COVID-19 pandemic. Local outbreaks lead to a global resurgence of the pandemic (possibly due to vaccine-resistant variants), which requires costly containment efforts and prompts persistent behavioral changes rendering many activities unviable.	Medium <ul style="list-style-type: none"> Lower export revenue leading to lower growth, consumption, and investment. Financial outflows from emerging markets. 	<ul style="list-style-type: none"> Losses due to higher debt service to income ratio for leveraged corporations and households, including on bank's residential mortgage portfolios. Losses due to exchange rate mismatches following large exchange rate adjustment. Transmission between affiliated institutions via the conglomerate structure.
De-anchoring of inflation expectations in the U.S. leads to rising core yields and risk premia. A fast recovery in demand (supported by excess private savings and stimulus policies), combined with COVID-19-related supply constraints, leads to sustained above-target inflation readings and a de-anchoring of expectations. The Fed reacts by signaling a need to tighten earlier than expected.	Medium <ul style="list-style-type: none"> Large interest rate increase in response to higher risk premia and capital outflows. Disruptive corrections to stretched asset valuations. 	<ul style="list-style-type: none"> Losses due to higher debt service and refinancing cost. Losses due to interest rate mismatches following a large interest rate increase. Losses in the mutual funds due to maturities mismatches that translate into difficulties for banks to roll over market funding as corporate issuances are impaired. Severe price correction in the real estate market.

¹ The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path (the scenario most likely to materialize in the view of IMF staff). The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 percent and 30 percent, and "high" a probability of 30 percent or more). The RAM reflects staff's views on the source of risks and overall level of concern as of the time of discussions with the authorities. Non-mutually exclusive risks may interact and materialize jointly. Reflects the June 2021 G-RAM.

Table 5. Chile: FSAP Risk Assessment Matrix (Continued)

Risk	Overall Level of Concern	
	Relative Likelihood	Expected Impact if Materialized
The resulting repositioning by market participants leads to a front-loaded tightening of financial conditions and higher risk premia, including for credit, equities, and emerging and frontier market currencies.		
Widespread social discontent and political instability. Social tensions erupt either due to political turmoil related to the creation of the new constitution, or as the withdrawal of pandemic-related policy support hurts vulnerable groups, exacerbating pre-existing inequities.	Medium <ul style="list-style-type: none"> The shock affects the income of less affluent borrowers via higher unemployment, affecting their consumption. Sharp negative market reaction to social or political events. 	<ul style="list-style-type: none"> Credit losses in leveraged NBLs exposed to less affluent borrowers, which could further transmit to affiliated banks via the conglomerate structure. Lower capacity to repay mortgages for less affluent borrowers, leading to an increase in delinquency. Increase in risk premia (see above).

Appendix I. Banking Sector Stress Testing Matrix

Domain		Top-down Stress Test by FSAP Team—Assumptions
Banking Sector: Solvency Risk		
1. Institutional Perimeter	Institutions included	<ul style="list-style-type: none"> The six largest banks in Chile at the highest level of consolidation
	Market share	<ul style="list-style-type: none"> For the six banks within scope, approximately 88 percent of banking sector assets
	Data Source and Baseline Date	<ul style="list-style-type: none"> CMF regulatory returns and supervisory data Historical data on bank parameters based on BCCh and CMF statistical data warehouse Balance sheet and financial statement data available in the public domain Moody's Analytics: CreditEdge data on corporate default probabilities Data as of December 2020 (cut-off). End-2019 data were also be used for comparisons and sensitivity analysis purposes Scope of financial consolidation: group-wide at the global level
2. Channels of Risk Propagation	Methodology	<ul style="list-style-type: none"> Balance sheet approach Projections of key balance sheet, income statement and capital account items Static balance sheet assumption Credit risk, market risk, net interest income and non-interest income projections were produced for all banks within scope for two scenarios: baseline and macro adverse Granular projections of credit risk parameters were performed, including exposures at default (EADs), probabilities of default (PDs) losses given default (LGDs) for each asset class Four different loan segments were used: large corporates (monitored individually), smaller commercial loans, mortgages and consumer credit. Segmentation is based on current prudential rules and availability of historical data for the estimation of satellite models. PD PiT satellites were based on historical data series of PDs for the system and by individual bank. LGD PiTs were produced for each loan segment by applying the scenario shocks to the collateral of each individual exposure (loan data set) and aggregating at the segment level. Net interest income was projected based on its sensitivity to macrofinancial conditions for both reference rates and effective spread margins across all interest rate sensitive asset and liability segments. Liability reference and margin rate shocks were linked to the macroeconomic scenario and repricing profiles were used

		<p>to approximate pass-through rates for both asset and liability sides together with scenario anchored assumptions.</p> <ul style="list-style-type: none"> • The impact on P&L and OCI due to FVTPL and FVOCI positions is also estimated as part of the market risk impact. Market risk was based on the estimation of FV and OCI impact on the securities portfolios. The impact of the scenario on mutual fund, equity and FX exposures were also be measured. • Net fee and commission income were stressed based on its historical volatility in combination with haircuts based on a conservative methodology reflecting the scenario narrative. • Operational expenses over total assets are kept at the same level as in 2020. • Risk weighted assets are adjusted to reflect changes in the quality of credit exposures
	Satellite models for macro-financial linkages	<ul style="list-style-type: none"> • Several satellite model estimation alternatives were explored: <ul style="list-style-type: none"> - PD PiT models for each segment based on country aggregate historical PD time series and scenario translation of bank-specific starting points in the distance to default space. Bayesian Model Averaging (BMA) techniques was used to control for model uncertainty, - Panel PD-PiT econometric estimation models on bank-specific historical PD PiT time series using BMA techniques to control for model uncertainty. - Moody's EDF data series were used to produce econometric satellites for the corporate/commercial segments. • Loan level simulation was used to estimate the impact of macroeconomic scenarios on aggregate portfolio LGDs. • Cross-sector country proxies could also be used for the projection of parameters where a direct calibration is not feasible due to data constraints (for example group commercial /SME exposures may be proxied using the large corporates estimated model).
	Stress test horizon	<ul style="list-style-type: none"> • Three years (2021 Q1 – 2023 Q4).
	3. Tail Shocks	<p>Scenario analysis</p> <ul style="list-style-type: none"> • Based on two macroeconomic and financial scenarios (baseline and macro adverse). • The scenarios specify key macrofinancial variables (e.g., real GDP growth, inflation rate, unemployment rates, exchange rates, equity prices, house prices, interest rates and credit growth) for Chile, as well as global variables (e.g. copper, oil and other commodity prices). • The baseline scenario is based on April 2021 World Economic Outlook (WEO) projections.

		<ul style="list-style-type: none"> • The macro adverse scenario is calibrated using the Global Macrofinancial Model (GFM) model and it assumes the materialization of the systemic risks highlighted in the RAM. Financial instability can materialize in the form of real and financial stress continuing several years into the post-COVID-19 pandemic era. With the coronavirus far from fully tamed, the policy normalization and economic recovery is uneven across the globe. Mobility and demand in contact-intensive sectors remains suppressed and slow to recover. Reduction in current income as well as future income prospects further damages consumer and firm confidence, and leads to a tightening in financial conditions for vulnerable corporates. Meanwhile, stretched asset valuations fueled by past stimulus pose risks to financial stability. Eventually, a reassessment of market fundamentals triggers a widespread risk-off event and asset valuation corrections. • Due to the prolonged election uncertainty, the domestic layer introduces additional confidence shock that applies downward pressure on domestic demand with subdued consumption and investment aggravating the sharp correction on both real estate and equity prices. These losses, most of which are absorbed by the banking system, subsequently curtail banks' profitability and prompt a broad-based tightening in the interbank market, echoing market concerns towards banks' financial soundness. The stifled global commodity demand also translates to a markdown of copper price, whose negative impact on the economy can be only partially offset by a depreciation of the Chilean peso against US dollar. Finally, monetary policy is assumed to maintain its accommodative stance under the domestic layer and short-term interest rates are assumed to remain at the current levels for the entire scenario horizon. • In terms of severity, the adverse scenario features a deviation of Chile real GDP from its baseline of 7.6 percent by 2021, with a 2.9 Standard Deviation move in two-year cumulative real GDP growth rate, 1 6.8 percent increase in unemployment rate from its baseline and a 27 percent peak-to-trough decline in real estate prices.
	Sensitivity analysis	<ul style="list-style-type: none"> • The impact of policy support measures during 2020 and their gradual unwinding were the focus of the FSAP sensitivity analysis. COVID-19 related measures that were explored included: <ul style="list-style-type: none"> - Loan deferrals, grace periods or any other type of voluntarily or regulatory forbearance - State guarantees for the provision of new credit (FOGAPE credits) - Liquidity support measures and their impact in the provision of new credit - Pension-fund account withdrawals and their impact on delinquencies during the pandemic

		<ul style="list-style-type: none"> Assessment of the impact on different pass-through constraints for high net interest margin geographies is used to assess the resiliency of profitability across different funding conditions. Analysis of complementary approaches in IRRBB: an earnings-based approach (effective NII measure) by the FSAP team vs an economic value (EV) approach of CMF and BCCh stress testing frameworks. Analysis of complementary approaches in market risk: a FV duration revaluation approach by the FSAP team vs a cash flow revaluation approach of the CMF and BCCh stress testing frameworks.
4. Risks and Buffers	Risks/factors assessed	<ul style="list-style-type: none"> Credit risk captures all on-balance/off-balance sheet exposures at amortized cost by regulatory exposure sector and geography. Different paths are produced for different sector/geography combinations. The starting point of credit parameters is also used as the basis to project scenario dependent forward paths. 2020 starting points may be carefully assessed for the impact of policy measures and potentially adjusted for such impact Market risk is reflected in valuation effects of FVTPL and FVOCI positions, as well as net open financial positions (i.e., equities, funds and inflation-linked instruments exposures). Scenario-based Interest rate curves are used to infer reference interest rate changes. The adverse macro scenario is further augmented to include financial variables that are needed to produce accurate projections for fair value positions (like corporate spread rate shock or bank issued bonds spread shock). Net interest income is affected by projecting effective interest rates by asset/liability class. A time to repricing approach, based on fixed/variable rate break-down and using the point in time repricing ladder informs further the velocity of passthrough rates. Shocks to non-interest income are simulated to capture varying degrees of market-sensitive components of non-interest income. Projected RWA densities are also capturing a twofold impact: deterioration of credit quality and partial/full unwinding of relevant policy support measures.
	Behavioral adjustments	<ul style="list-style-type: none"> Under the static balance sheet assumption exposures remain constant and do not evolve in accordance with credit growth assumptions of scenarios. For NII, maturing assets/liabilities are assumed to be replaced by instruments of the same type, maturity but at current rates. There is no recognized interest on non-performing exposures. If banks' capital falls below regulatory requirements, no prompt corrective action is assumed.

		<ul style="list-style-type: none"> Banks are assumed to pay 27 percent of their profits as tax and dividend payout ratio is assumed to be the maximum of 40 percent or the payout ratio of the cut-off year.
5. Regulatory and Market Based Standards and Parameters	Calibration of risk parameters	<ul style="list-style-type: none"> Currently the banking system is regulated under Basel I rules. A transition to Basel III is planned for a gradual implementation in Q4 2021. The FSAP stress test produced results based on a fully loaded Basel III framework i.e. under the assumption that the system transition to Basel III on Dec 31st, 2021. A phase-in capital calculation was also attempted. In doing so, the FSAP team used CMF's internal projections or estimates on several aspects of this regulatory transition (eligible capital, RWA densities and levels for credit, market and operational risk, minimum capital requirements and capital buffer phase-in plan). Accounting provisions are set by CMF regulations (IFRS 9 is not yet implemented and CMF has the mandate to set requirements for the accounting loan loss provisioning). In this context the stress test analysis followed CMF definitions of PDs and LGDs where applicable. Currently all credit exposure portfolios are under the standardized approach (STA). This remained the working assumption after the transition to Basel III (all portfolios remain under STA). Risk-weighted asset densities are either assumed to remain constant or following the path defined by the extraordinary policy support measures phase-out. Therefore, RWAs densities by asset class change only due to the credit quality deterioration attributed to new defaults or because of policy support unwinding (gradual lapse of state guarantees). PiT PDs and LGDs are estimated for each asset class.
	Regulatory/ accounting and market-based standards	<ul style="list-style-type: none"> In the baseline, hurdle rates include the regulatory minimum and any applicable capital buffers. In the adverse scenario, the regulatory minimum is assumed to be the hurdle rate. Hurdle rates are based on the common equity tier-1 and total capital ratios.
6. Reporting Format for Results	Output presentation	<ul style="list-style-type: none"> System-wide evolution of CET1 and capital ratios. Distribution of banks' capital positions Contribution to key drivers to system-wide net income and capital position, including differences between the baseline scenario and the adverse scenario. Share of institutions with capital below the hurdle rates.

Banking Sector: Liquidity Risk		
1. Institutional Perimeter	Institutions included	<ul style="list-style-type: none"> The six largest banks in Chile at the highest level of consolidation
	Market share	<ul style="list-style-type: none"> For the six largest banks, approximately 88 percent of banking sector assets
	Data and baseline date	<ul style="list-style-type: none"> C46 and C47 CMF's regulatory returns monitoring the Liquidity Coverage Ratio and the Net Stable Funding Ratio and the additional monitoring returns capturing liquidity contractual maturity ladder. Scope of financial consolidation: group-wide at the highest level
2. Channels of Risk Propagation	Methodology	<ul style="list-style-type: none"> The exercise is based on three types of tests—LCR test, cash-flow analysis and NSFR test. The LCR test is in line with the standard CMF (and Basel compliant) monitoring tool, featuring total consolidated liquidity and liquidity in significant currencies (mainly U.S. dollar or euro). A set of scenarios for LCR outflows and HQLA haircuts will be used to produce stressed LCR ratios (by currency and at the consolidated level). The cash-flow analysis analyzes the net cash balance (as a proxy of banks' resiliency to liquidity stress events), accounting for available unencumbered assets, contractual cash inflows and outflows, and behavioral flows. Several scenarios consisting of funding run-off rates, liquid assets haircuts and assumptions on inflows and outflows for different durations of liquidity stress will be explored. Positive counterbalancing capacity post-scenario implies bank resiliency, negative is an indication of positive bank liquidity stress. For the cash-flow analysis, relevant second-round effects could be considered, including margin calls for existing collateral positions, central bank's liquidity provision, additional asset haircuts due to fire sales, additional repo haircuts due to limited collateral supply, and wholesale funding market freezes because of banks' solvency and liquidity concerns. NSFR reporting is still used for monitoring purposes (currently non-binding). NSFR stress involves the estimation of projected ratios under a prolonged stress scenario, where stable funding cannot be rolled over. For the cash-flow analysis, asset haircuts reflect two components: (i) shocks to interest rates and asset prices as captured the macrofinancial scenarios; and (ii) additional haircuts required by

		<p>counterparties to accept specific assets as collateral for secured funding transactions.</p> <ul style="list-style-type: none"> • For the LCR test, the stress test horizon is 30 days. • For the cash-flow analysis, the horizon of stress events would normally be 3 months. Nonetheless, a longer period of stress events (up to 1 year) may be considered as sensitivity analysis.
3. Risks and Buffers	Risks	<ul style="list-style-type: none"> • Funding liquidity risk is reflected in funding run-off rates and asset roll-over rates, the latter providing cash inflows related to non-renewal of maturing assets. • Market liquidity risk is reflected in asset haircuts, which could be influenced by market movements, potential fire sales and collateral supply considerations.
	Behavioral adjustments	<ul style="list-style-type: none"> • Liquidity from the central bank's emergency lending assistance (ELA) is not considered. • Inflows from maturing loans are ignored (cash-flow analysis) capturing a systemic liquidity stress scenario vs a bank-idiosyncratic one. • The cash-flow analysis may consider some behavioral assumptions about a counterparty's ability or willingness to transact based on banks' solvency and liquidity conditions.
4. Tail shocks	Scenario analysis	<ul style="list-style-type: none"> • For the LCR test, 12 scenarios are considered as a combination of: (i) three scenarios on liquid assets shocks (regulatory, mild and severe), and ii) four scenarios on liability outflows; regulatory, one reflecting retail outflows, one reflecting higher wholesale outflows, and one combining the retail and wholesale outflows. • For the cash-flow analysis, a series of scenarios are considered, with a range from mild to severely adverse liquidity conditions. The cash-flow analysis considers both funding and market liquidity risks. • For the NSFR analysis, only one stress scenario featuring inability of banks to roll-over longer term (stable) funding positions for a period of a year. (still of exploratory nature, given the smaller experience on stressed NSFR).
5. Regulatory and Market-Based Standards and Parameters	Calibration of risk parameters	<ul style="list-style-type: none"> • LCR tests are based on regulatory and stress parameters. • Cash-flow analysis may incorporate relevant second-round effects. • Stress funding run-off rates, asset roll-over rates, and asset haircuts are calibrated based on empirical evidence and relevant international experiences.

	Regulatory/accounting and market-based standards	<ul style="list-style-type: none"> • LCR per Basel III; the hurdle at 100 percent. • Net cash balance for the cash-flow analysis; to pass, a non-negative net cash balance is required, where the balance reflects net funding outflows and counterbalancing capacity. • NSFR per Basel III; the (targeted) hurdle at 100 percent.
6. Reporting Format for Results	Output presentation	<ul style="list-style-type: none"> • Changes in the system-wide liquidity position, including important drivers for cash outflows, cash inflows and counterbalancing capacity. • Distribution of banks' liquidity positions. • Number of institutions with LCR/NSFR below 100 percent and/or negative net cash balance • Amount of liquidity shortfalls, including by currencies
7. Sensitivity Analysis	Output presentation	<ul style="list-style-type: none"> • The analysis would cover policy support measures and will identify how such measures have impacted regulatory liquidity metrics. • As a natural result, the analysis will also assess how the gradual measure unwinding will have affect liquidity positions of banks.
8. Infrastructure	Impact of policy support measures	<ul style="list-style-type: none"> • Fully comprehensive infrastructure developed by IMF staff using the C46 and C47 CMF returns as a data repository. Matlab and Excel based.
Climate Change: Physical Risk		
1. Institutional Perimeter	Institutions included	<ul style="list-style-type: none"> • The six largest banks in Chile at the highest level of consolidation
	Data and baseline date	<ul style="list-style-type: none"> • Source: Supervisory data • Data as of December 2020 (cut-off)
2. Channels of Risk Propagation	Methodology	<ul style="list-style-type: none"> • A tail shock physical-risk related shock event is assumed (extreme hydrometeorological events). • In the absence of a Chile specific catastrophe risk model, event linked damage shock assumption is based on historical data analysis (provided by the WB FSAP team). • The adverse physical risk scenario (damage estimate) is used as a layer of shock in the amount of physical capital stock within the GFM model. • Using a simple OLS on the Cobb Douglas production function the elasticity between GDP and capital stock is used to arrive at an output growth impact shock (TFP and labor are assumed to remain constant). • The underlying DSGE model (GFM) is used to calibrate a full macroeconomic scenario.

		<ul style="list-style-type: none"> Positive investment shocks are imposed in years 3,4 and 5 to allow for accumulation of capital stock and a full recovery to the baseline value.
3. Risks and Buffers	Risks	<ul style="list-style-type: none"> Credit channel risks are assumed (revised PD paths). All other channels are assumed to remain unaffected. Scenario dependent capital projections are produced based on the revised -for physical risk shock- PD paths.
	Buffers	<ul style="list-style-type: none"> Banks' own capital
5. Reporting Format for Results	Output presentation	<ul style="list-style-type: none"> System-wide capital path projection under the physical risk scenario. Comparison with the central baseline scenario. Bank-level capital shortfalls
Climate Change: Transition Risk		
1. Institutional Perimeter	Institutions included	<ul style="list-style-type: none"> The six largest banks in Chile at the highest level of consolidation
	Data and baseline date	<ul style="list-style-type: none"> Sectoral exposure breakdown Source: Supervisory data Firm-specific emissions: publicly available dataset of the Ministry of Environment of Chile and BCCh calculations Firm balance sheets: Capital IQ and BCCh data post pre-processing Firm-specific historical default rates: Moody's firm-level EDFs
2. Channels of Risk Propagation	Methodology	<ul style="list-style-type: none"> An (arbitrarily set) carbon tax per metric tonne is assumed to be the pricing shock (a value of 100 USD per mt is used in the sample FSAP implementation). Step 1 (Bridge equation): establishing a relationship between firm-specific default rates and three firm level balance sheet indicators reflecting viability, liquidity and solvency conditions (ICR, current ratio and leverage ratio called vulnerability indicators). Firm sample restricted to listed companies with available historical default rate estimates. Step 2: Carbon tax scenario is applied to firms' balance sheets according to firm level carbon emissions. Multi-year projections for balance sheet and profit components (forward-looking ICR, current ratios and leverage ratios) estimated using accounting identity. Constant economic conditions, no shifts in business models, energy usage or technological advancement are assumed. Sample augmented to listed or non-listed companies for which balance-sheet information is available.

		<ul style="list-style-type: none"> Step 3: Elasticities from Step 1 are used to infer stressed default rates (using forward looking metrics from Step 2) for the augmented sample of firms. Step 4: Weighted sectoral aggregates (pre- and post-stress) are produced by aggregating firm level default rates and using total outstanding debt as weights. Step 5: Bank level sectoral corporate exposure breakdown is used to produce delta PDs using the pre- and post-stress default rates from Step 4. Step 6 (optional): Stressed delta PDs (reflecting transition risk) can be optionally fed to the standard solvency ST machinery to produce capital projections.
	Satellite models for macro-financial linkages	<ul style="list-style-type: none"> Bridge equation linking defaults rates to firm level vulnerability indicators: model averaging technique with sign constraint to perform a fixed effects panel regression on historical firm level default rates.
	Horizon	<ul style="list-style-type: none"> One to five years: multi-year projection of balance sheet dynamics and vulnerability indicators under a carbon pricing shock assumption.
3. Tail Shocks	Scenario analysis	<ul style="list-style-type: none"> Based on an assumed level of carbon pricing shock (a 100 USD price shock per metric tonne was used). Delta PDs will also be applied to PD paths corresponding to different macroeconomic and financial scenarios.
	Sensitivity analysis	<ul style="list-style-type: none"> On the level of carbon tax (optional).
3. Risks and Buffers	Risks	<ul style="list-style-type: none"> Credit channel risks (delta PDs added to scenario dependent PD paths). All other channels are assumed to remain unaffected. Delta PDs by bank is the envisaged outcome of the analysis.
5. Reporting Format for Results	Output presentation	<ul style="list-style-type: none"> Delta PDs by sector. Delta PDs by bank and (weighted) system-wide average. Materiality relative to normal/idiosyncratic corporate PDs.
Banking Sector: Interconnectedness		
1. Institutional Perimeter	Institutions included	<ul style="list-style-type: none"> All eighteen banks in Chile Other major nonbank FIs (subject to data availability)
	Data and baseline date	<ul style="list-style-type: none"> Source: Supervisory data Data as of December 2020 (cut-off)
2. Channels of Risk Propagation	Methodology	<ul style="list-style-type: none"> Interbank and cross-border network model by Espinosa-Vega and Solé (2010)
3. Risks and Buffers	Risks	<ul style="list-style-type: none"> Credit and funding losses related to interbank cross-exposures (and cross-border banking exposures)

	Buffers	<ul style="list-style-type: none"> • Banks' own capital and liquidity buffers
4. Tail shocks	Size of the shock	<ul style="list-style-type: none"> • Pure contagion: default of institutions • Fire sale haircuts
5. Reporting Format for Results	Output presentation	<ul style="list-style-type: none"> • System-wide capital shortfall • Bank-level capital shortfall • Number of undercapitalized and failed institutions, and their shares of assets in the system • Evolution and direction of spillovers

Appendix II. Non-Banking Sector Stress Testing Matrix

Domain		Top-down Stress Test by FSAP Team - Assumptions
Mutual Funds and Pension Funds		
1. Institutional Perimeter	Institutions included	<ul style="list-style-type: none"> Mutual funds with a large share of bank and corporate bonds. <p>Pension funds subject to liquidity pressures.</p>
	Market share	<ul style="list-style-type: none"> 18–42% of mutual funds depending of fund types considered. 18% corresponds to fixed income mutual funds, while the rest comprises possibly mixed funds that also have sizeable holdings of bank and corporate bonds. <p>22–35% of pension fund assets subject to frequent switching pressures.</p>
	Data Source and Baseline Date	<ul style="list-style-type: none"> For mutual funds, data is provided by the CMF. For pension funds, data is provided by the Pension Superintendency (SP). <p>The baseline date for stress testing will be end of 2020.</p>
2. Channels of Risk Propagation	Methodology	<ul style="list-style-type: none"> The stress testing will combine case studies with a historical approach. Case studies to study redemption and switching shocks will comprise the social unrest period of 2019, and the pandemic shock. Historical approach will be based on the distribution of past redemptions over the last decade, and also compare the distribution pre-2019 social unrest with the redemptions that followed. <p>An HQLA approach will be applied to construct appropriate measures of liquidity buffers at the individual mutual fund and pension fund level.</p>
3. Scenarios and Sensitivities	Scenario analysis	<ul style="list-style-type: none"> A redemption shock will be applied to mutual funds based on the historical and case study approaches. A switching shock out of long-terms bonds and into short-term assets will be applied for pension funds. <p>A distribution of liquidity shortages will be produced.</p>
	Sensitivity analysis	<p>While redemption shocks will be calibrated to the historical distribution of flows, the analysis will also comprise a reverse test to produce a distribution of the maximum redemption that can be sustained by current liquidity buffers.</p>

Domain		Top-down Stress Test by FSAP Team - Assumptions
Mutual Funds and Pension Funds		
4. Risks and Buffers	Risks/factors assessed	Highly liquid assets will most likely include cash, certificates of deposit, and government and central bank paper.
	Behavioral adjustments	Some alternative specifications of HQLA may be explored.
6. Reporting Format for Results	Output presentation	The analysis and results will be included in the Stress-Testing TN.

Appendix III. Implementation of 2011 FSAP Recommendations

Recommendations	Progress
Reduce information gaps, including through a consolidated credit registry and standardized residential and commercial property price indices.	Significant progress due to the merger of the credit registries of banks and retailers. [Include recently published changes to Art14]
Develop a strategy to ensure adequate replacement rate for retirees.	<p>2015 Bravo Commission reform proposals prepared (including addressing low replacement rates) / 2018 submitted to parliament but not enacted.</p> <p>2019 Solidary Pension increased to poverty line.</p> <p>2020 and 2021 extraordinary withdrawals have severely lowered expected replacement rates.</p>
Strengthen the independence and legal protection of regulatory agencies.	The CMF has operational independence and transparent processes in discharging their duties and use of resources with a high level of disclosure. Budget constraints nevertheless might hinder the supervisory processes in the near future. There is no legal protection as such although CMF senior officials and staff are provided legal defense by the CMF.
Complete the incorporation of Basel bank capital standards.	Legal and regulatory changes that aims to comply with Basel 3 capital framework are issued. They will be implemented starting from December 2021. Pillar 2 capital requirement was introduced in the regulatory framework in September 11, 2020.
Strengthen enforcement powers of securities regulators.	Legislation from February 2017 (Law 21000) grants powers to the securities regulator (CMF), including to access bank accounts, seize and intercept communications, and share information with other supervisors (in the context of the IOSCO MOU). CMF law (DL 3538) significantly enhanced legal powers of CMF to supervise securities markets, including access to bank account information,

	interception of communications amongst others. Other changes have been introduced in the Agents law – that include mandatory blackout periods and whistle blowers. Finally, investment advisors have been included in the CMF perimeter.
Establish legal framework to enable the consolidated oversight of financial conglomerates.	Although in recent years the CMF has established a framework of limited supervision of the financial conglomerate, the legal framework empowers the CMF to exercise full consolidated supervision only over the banking group, i.e. from the bank downwards. Parent companies are not effectively supervised or regulated and the CMF has no access to information on affiliates.
Enhance uniformity in business conduct regulation for asset management services and investment advice.	Legislation from January 2014 (Law 20712) establishes a uniform framework for the management of third-party portfolios (asset management services). Portfolio manager that meets certain conditions (including assets under management and number of clients) are now under the CMF supervision perimeter. Investment advisory services are addressed under a separate legislation Law 21214).
Introduce comparable transparency standards for fixed income securities traded outside exchanges.	Partly implemented. This recommendation is addressed in a crowdfunding regulation proposal, subjecting the Alternative Financial Instruments Transaction Systems to the supervision of the CMF. In addition, these systems will have pre- and post-transaction transparency obligations to allow knowing the prices and transactions of the OTC market of debt and other financial instruments.
Adopt a comprehensive approach to custodial, clearing, and settlement infrastructure.	Legislation from November 2014 (Laws 20789, 21000) provides coordination and information exchange between the Central Bank, the CMF, the Superintendency of Pensions, and the Ministry of Finance, which allows a comprehensive look at the different risks inherent in market infrastructures.

	<p>Joint policy statement for the commitment to comply with PFMI from 2017, signed by the Ministry of Finance, the CBC, the Superintendence of Banks and Financial Institutions (SBIF), the Superintendence of Securities and Insurance Companies (SVS), and the Superintendence of Pensions (SP).</p> <p>CMF Circular 2237 from 2018, requires compliance with the principles of financial market infrastructures issued by CPMI-IOSCO.</p> <p>In addition, BCCh 2018 regulation requires to "Designated Payment Systems" (currently RTGS System, LBTR System, and a deferred net high value payment system) the full observance of PFMI.</p>
Further enhance the AML/CFT framework.	FATF review in process; MER by GAFILAT completed in July 2021.
Strengthen legal framework for bank resolution.	Not implemented. There is no statutory resolution process in Chile. While robust prudential powers are available to improve resilience of firms in stress, liquidation remains the only statutory process available when a firm becomes insolvent.
Consider introduction of a premium-based limited deposit insurance system.	Not implemented. There is a MoF guarantee for bank time deposits held by natural persons up to a limited of about US\$8,000 and a BCCh guarantee of 100 percent of bank sight deposits.
Examine options to establish a framework for dealing with a systemic crisis and with the potential failure of a financial conglomerate.	Not implemented. CMF plans to improve bank's recovery planning capabilities and consider how existing CMF powers can be used to support a solvent wind down of a failing bank.

Appendix IV. Mutual and Pension Fund Stress-Testing

Stress-Testing Fixed Income Mutual Funds

- 1. Stress-testing was performed for type 3 (fixed income) MFs.** The approach used historic redemptions and asset classification to construct a measure of liquidity buffers for individual funds. Cumulative distribution functions (CDFs) for redemptions were constructed using daily fund flow data, enabling comparison of percentiles across different periods (text table, Figures 11, 12).
- 2. Fund liquidity buffers were constructed under stressed assumptions.** Only Bank CDs, BCCCh Notes, and Treasuries were considered for constructing buffers. For Treasuries and Bank CDs with a maturity over 90 days, a factor of 0.9 was used, to account for interest rate risk. Other typically liquid assets, including bank bonds, were not included based on the chance of a dramatic shift in liquidity under stress.

Date Range	Percentile 1	Percentile 5	Percentile 10
Full Sample	-15%	-6%	-3%
Before Sep2019	-15%	-5%	-3%
From Sep2019	-16%	-7%	-4%
2010Q4-2018Q4	-19%	-8%	-4%
2019Q4 – Social Unrest	-28%	-14%	-10%
2010Q1-2019Q1	-14%	-5%	-3%
2020Q1 – COVID-19 Shock	-19%	-10%	-6%

- 3. Results suggest potential vulnerabilities and underscore the importance of enhancing liquidity regulation for fixed income MFs.** Stress tests show a significant share of fixed income MFs do not hold sufficiently large buffers to meet redemptions beyond the first percentile and could face a liquidity squeeze under tail redemption scenarios. About 40 percent of Type 3 Fund AUM are held by funds with buffers below the 15 percent level that matches the first percentile of the typical distribution of weekly net inflows.

Stress-Testing Type E Pension Funds

- 4. Due to switching, many AFPs manage their portfolios in a manner closer to MFs than to a typical PF with a long-term investment horizon.** The unrestricted ability of individuals to reallocate assets across fund types,¹ combined with activities of social media-based financial advisors, have resulted in disruptive coordinated switching mostly between funds A (focused on FX equities) and E (focused on long-term local fixed income). These dynamics have pushed AFPs to

¹ Except for men 56 and over and women 51 and over, who are not allowed to choose the riskiest fund A.

hold larger liquidity buffers (punishing returns) and have negatively affected market volatility and financial stability (Figures 13, 14).

5. An analogous redemption stress-test was performed on Type E pension funds. With a four-day reallocation window, and with a fraction of E fund assets being relatively illiquid, AFPs need to manage portfolios with larger liquidity buffers and shorter duration. Historic pension fund switching activity was used to compute weekly net inflows for each type of fund (A-E) in each AFP. Distributions reveal high switching activity around social unrest and the COVID-19 crises, particularly in and out of funds A and E (sometimes close to 20 percent of a fund's AUM) (text table, Figure 15). However, since fund A is invested mostly in highly liquid FX assets, it is fund E that faces the larger liquidity management challenges.

Date Range	Min	p1	p5	p10
Full Sample	-19%	-12%	-5%	-2%
Until August 2019	-19%	-8%	-3%	-1%
After September 2019	-16%	-13%	-10%	-7%
2019Q4	-14%	-11%	-7%	-6%
2020Q1	-14%	-14%	-12%	-8%

6. The results confirm sound liquidity management from AFPs—but the detrimental impact of fund switching remains to be fully addressed. Liquidity buffers were constructed using the same definition as for MFs. Liquidity buffers obtained are larger than 35 percent for all but one AFP, and larger than 30 percent for all of them (Figure 14). This suggests that liquidity management practices from AFPs are set accordingly with their volatile environment. However, the perverse dynamics of fund switching remain to be fully addressed. Even though newly enacted legislation has led the main financial advisor to cease activities, it is paramount to tackle these dynamics by eliminating the potential for coordinated switching in the first place—possibly with a combination of more restrictive switching rules and market mechanisms like fees.

Appendix V. Financial Development and the Pension System

1. **The funded pension system has contributed substantially to financial sector diversification and stability, and promoted sustained economic growth.** Therefore, it should be maintained even while the system undergoes further transformation. The funded system is in a better position than the previous “pay as you go” system to withstand ongoing demographic challenges. The current system, with long-term investments in domestic capital markets, will be instrumental in helping the country overcome the challenges of the pandemic and in attaining longer-term development goals.
2. **In response to the social unrest and the COVID-19 pandemic, the “Solidarity Pension” rate was raised to the poverty rate and withdrawals allowed from the funds.** The relatively low pension levels from the funded system reflect low contribution rates and density linked to structural labor market issues, such as high informality and (in some cases) early retirement age. Three rounds of emergency withdrawals from pension funds took place in 2020/2021, reducing AUM by at least 25 percent (over US\$50 billion) and leaving over 3 million of the 11 million individual accounts empty, worsening future pension prospects.
3. **While additional pension fund withdrawals should be avoided, increased contributions are needed to improve pension levels.** As withdrawals have strained already low pension savings levels, increasing future contributions is paramount. It is crucial that the system remains fully funded to prevent further erosion of sustainability. Any new unfunded commitments should be covered within the existing solidarity pillar and funded by general taxation. Additional contributions (of at least the recently proposed 6 percent) are needed to increase the contribution rate and raise the pension replacement rate of middle-class workers to around the minimum wage. Higher contributions should be introduced gradually to minimize labor market impact. If central management of new funds is introduced, strong governance mechanisms are needed, and the existing individual account system should not be undermined.
4. **Replacing the multifondos investment regulation with target date funds would contribute to long-term investment and financial stability.** Fund series would be defined by retirement age cohorts, along with a few additional limited investment options, thereby reducing switching and more strictly controlling access to funds. This type of enhancement would represent an updated approach to investment risk management given each retirement group cohort would have investment portfolios better designed to optimize returns targeting their expected retirement date.

Table: Impact of Pension Reform on Capital Markets in Latin American Countries — Size of market before and after pension reform (In USD million)

	Corporate Bonds		Mortgage Bonds		Stock Market Capitalization	
Chile (1980 vs. 2011)	57	31,000	800	40,000	72	270,000
Colombia (1993 vs. 2007)	240	11,200	0.01	37	7	102
Mexico (1996 vs. 2011)	330	21,000	2,300	18,500	73,000	409,000
Peru (1992 vs. 2011)	0	5,800	0	27	1,700	82,000
Source: Taken from presentation made by Guillermo Arthur, President, International Federation of Pension Fund Administrators (FIAP) at the 2012 IOPS/ OECD Global Forum on Private Pension http://www.spensiones.cl/portal/institucional/578/articles-8611_recurso_3.pdf						

Appendix VI. Report on the Observance of Standards and Codes: Basel Core Principles for Effective Supervision

A. Introduction

1. This assessment of the current state of the implementation of the Basel Core Principles for Effective Banking Supervision (BCP) in Chile has been completed as a stand-alone Report on the Observance of Standards and Codes undertaken by the International Monetary Fund (IMF) and the World Bank (Bank) during March–May of 2021 at the request of the Chilean authorities. It reflects the regulatory and supervisory framework in place as of the date of the completion of the assessment. It is not intended to assess the response to the pandemic, and it is not intended to represent an analysis of the state of the banking sector or crisis management framework.

2. On an exceptional basis the assessment was conducted virtually due to the Covid-19 pandemic. As a result of the various coordination and operational challenges, the assessment took much longer than usual. The assessors deeply appreciate the efforts made by the Authorities so that the assessment could be completed successfully.

3. This was the first assessment done in Chile under the 2012 BCP standards, which feature an expanded and more sophisticated framework with greater emphasis on supervisory practices and risk management. The previous 2011 FSAP did not conduct a BCP assessment, but performed an assessment focusing on selected topics on banking supervision, highlighting gaps in the following areas: (i) the independence and legal protection of the supervisors; (ii) capital requirements (implementation of Basel II and III); (iii) the supervision of financial conglomerates; and (iv) bank resolution and crisis management.

4. The BCP assessors found the Financial Market Commission (CMF) to be capably staffed with expertise in monitoring individual risks. Nevertheless, improvements are required particularly in: (i) strengthening risk management framework (ii) enhancement of corporate governance standards and supervision (iii) classification and provisioning of problem loans. which together are critical to the supervision of a sophisticated financial system. More modern practices would help attenuate interconnectedness risks, including better risk-management practices, and stricter corporate governance. Supervisors are constrained by an outdated or incomplete legal framework, which hinders the licensing process and adequate supervision of conglomerates. Although supported by broad general powers the CMF would benefit from a strengthened corrective actions framework.

5. More work is needed to realize the goal of strong consolidated supervision within the CMF. In addition to improvements in the legal framework, the establishment of a comprehensive analysis and monitoring of financial conglomerates, coupled with lead examiners and ratings for conglomerates would be beneficial. The transfer of SBIF (former banking supervisor) to CMF is a very recent development, and integration and restructuring within the CMF was still underway while the BCP was assessed. The recent (March 2021) restructuring of the CMF putting under the same umbrella the supervision of insurance securities and banks will further strengthen the supervision of the financial sector as a whole. Financial analysis should also be strengthened as part of the process.

Certain areas will be a priority to improve given increased vulnerabilities due to the pandemic, including provisioning, classification of performing versus non-performing loans, and collateral valuation.

6. Transition to Basel III also remains a priority. Existing capital framework follows Basel I not including the 1996 market risk amendment. The CMF published regulations in 2019 and 2020 aiming to comply with Basel III. However, due to Covid-19 the authorities decided to postpone the implementation of the Basel III requirements for a year, as well as to maintain the current general regulatory framework for banking capital requirements until December 2021. Risk weighted assets will be computed according to the new framework starting from December 2021. A phase-in period until 2025 is provided for capital buffers/requirements (domestic systemically important banks charge, capital conservation buffer, counter cyclical capital buffer). Pillar 2 framework will fully come into force in December 2023.¹

B. Methodology

7. It should be noted that the ratings assigned during this assessment are not directly comparable to previous assessments. The current assessment of the CMF (former SBIF) was against the BCP methodology issued by the Basel Committee on Banking Supervision (BCBS) in September 2012. The authorities opted to be assessed against essential criteria. The last BCP assessment in was conducted in 2004. The methodology has been revised twice since the last assessment in Chile, first in 2006 and again in 2012. There was an FSAP update in 2011 but it did not include a BCP assessment.

8. In the 2012 revision of the Core Principles, the BCBS sought to reflect the lessons from the recent financial sector crisis, to raise the bar for sound supervision reflecting emerging supervisory best practices. New principles² have been added to the methodology along with new essential criteria (EC) for each principle that provide more detail and additional criteria (AC) that raise the bar even higher. Altogether, the revised Core Principles now contain 247 separate essential and additional criteria against which a supervisory agency may now be assessed. In particular, the revised BCPs strengthen the requirements for supervisors, the approaches to supervision and supervisors' expectations of banks. While the BCP set out the powers that supervisors should have to address safety and soundness concerns, there is a heightened focus on the actual use of the powers, in a forward-looking approach through early intervention.

9. The assessment team reviewed the framework of laws, rules, and guidance and held extensive meetings with officials of the CMF, and additional meetings with the Central Bank of Chile (BCCh), the Financial Intelligence Unit (FIU), auditing firms, professional bodies, and banking sector participants. The authorities provided a self-assessment of the CPs, as well as

¹ Pillar 2 capital requirements are introduced in the regulatory framework on September 11, 2020 but have not fully come into force yet.

² Among the enhancements, a new Core Principle on corporate governance has been added. Existing Core Principle on accounting and disclosure is expanded into two new ones dedicated respectively to greater public disclosure and transparency, and enhanced financial reporting and external audit.

responses to additional questionnaires, and facilitated access to supervisory documents and files on a confidential basis as well as staff and systems.

10. The team appreciated the cooperation received from the authorities. The team extends its thanks to staff of the authorities, who provided excellent cooperation, including extensive provision of documentation and technical support, at a time when many other initiatives related to domestic concerns and international regulatory initiatives were in progress.

11. The standards were evaluated in the context of Chile's financial system's sophistication and complexity. The CPs are applied to a wide range of jurisdictions whose banking sectors will inevitably include a broad spectrum of banks. To accommodate this breadth of application, a proportionate approach is adopted within the CP, both in terms of the expectations on supervisors for the discharge of their own functions and in terms of the standards that supervisors impose on banks. An assessment of a country against the CPs must, therefore, recognize that its supervisory practices should be commensurate with the complexity, interconnectedness, size, and risk profile and cross-border operation of the banks being supervised. In other words, the assessment must consider the context in which the supervisory practices are applied. The concept of proportionality underpins all assessment criteria. For these reasons, an assessment of one jurisdiction will not be directly comparable to that of another.

12. An assessment of compliance with the BCPs is not, and is not intended to be, an exact science. Reaching conclusions required judgments by the assessment team. Banking systems differ from one country to another, as do their domestic circumstances. Furthermore, banking activities are undergoing rapid change after the crisis, prompting the evolution of thinking on, and practices for, supervision. Nevertheless, by adhering to a common, agreed methodology, the assessment should provide the Chilean authorities with an internationally consistent measure of the quality of their banking supervision in relation to the revised Core Principles, which are internationally acknowledged as minimum standards.

C. Institutional and Market Structure—Overview

13. Chile has a large and well-developed financial system. The market is well integrated into the global financial system, with the active participation of Chilean firms investing in foreign financial assets, either directly or via institutional investors, as well as foreigners participating in the Chilean market. As of end-2020, financial assets accounted for 300 percent of GDP (Table 3). Total banking sector assets reached 323 trillion pesos (161 percent of GDP) by end 2020, nearly matched by the assets managed by pension and insurance providers (102 percent GDP) and non-bank financial institutions (NBFIs) (66 percent of GDP), which include collective investment vehicles and non-bank lenders (NBLs). NBFIs also include non-bank deposit taking institutions, such as credit unions and savings and loan associations, which are relatively small. The stock market is one of the largest and most liquid in the region. Total stock market trade stood at 403 billion pesos in 2020 (201 percent of GDP).

14. The financial system is dominated by eight conglomerates. Financial conglomerates combine banking with insurance, pension funds, mutual funds, and other NBFIs. Some mixed conglomerates also include non-financial businesses such as retail distribution, mining, and construction. Finally, some mixed conglomerates own business in other countries in the region (mainly retail stores and banks).

15. Banks are overall healthy although traditionally working with low level of capital (Tier-1 ratio at 10.9 percent as of 2020 year-end). The banking sector is composed of 18 private banks, including 9 foreign-owned banks, and Banco del Estado, a state-owned commercial bank with a developmental mission. The sector is highly concentrated, with the top six banks accounting for almost 88 percent of the market (by loans). Long-term bank funding structures are composed of deposit and wholesale funding. While Chilean banks have a high reliance on domestic bond investors in their funding structure, there is also an active foreign investor base in Chilean bank debt. Bond funding make up between 15-20 percent of total liabilities for the largest banks in Chile.

16. The pandemic has had an impact on banking sector's indicators. Banks' profitability has decreased due to the pandemic, with the average return on equity (ROE) at 7.8 percent and return on assets (ROA) at 0.53 percent in December 2020. Regulatory capital over risk-weighted assets stood at 14.7 percent, and does not yet meet the Basel III definition, which will gradually be phased in starting from December 2021. Non-performing loans (NPLs) remain low at below 4.8 percent as of February 2021. The banking sector's FX liabilities constitute 15 percent of total liabilities in 2020 year-end.

17. In 2019, Chile's regulatory and supervisory architecture was streamlined through the integration of the CMF and the SBIF. The aim of this consolidation of the bank supervisor and the securities and insurance company supervisor was to improve supervision through better coordination on financial markets and supervision of the regulatory perimeter and conglomerates. This will help ensure regulatory standards and firm specific supervision are better coordinated across respective sector-specific supervisors. Establishing a single consolidated supervisory authority will also help improve coordination within the CEF financial stability issues including on crisis management.

18. The CMF covers prudential supervision, market conduct, and surveillance of all major financial institutions.³ The CMF regulates and supervises insurance companies, securities issuers, fund managers, broker-dealers, and financial market infrastructures. It also supervises capital markets. CMF regulates and supervises banks, larger saving and credit cooperatives, and credit card issuers and retail payment systems.

19. The pandemic delayed by one year the implementation of regulations that are aiming to align country's standards with Basel III capital standards. The New Banking Law amendments dated December 1, 2019 aim to close the gap between the country's financial sector's regulatory and supervision environment with international standards. Amid the pandemic, the implementation of Basel III was delayed by one year, and additional capital needs are expected at about \$2.3 billion by

³ Pension funds are supervised by the Superintendence of Pensions

2025 (of which about 50 percent for Banco Estado). Congress passed legislation enhancing financial portability (facilitating customer movement across financial institutions, thus promoting competition in the financial sector), improving financial market functioning and facilitating access to financing in the local capital market, regulating financial advisors, and strengthening CMF powers to prevent financial market abuse.

D. Preconditions for Effective Banking Supervision

Soundness and Sustainability of Macroeconomic Policy

20. Chile's macroeconomic policy framework considers a fiscal policy guided by a structural balance rule, an autonomous central bank focused on inflation targeting, a floating exchange rate, and close coordination among economic authorities. Chile's fiscal position is strong with central government gross debt-to-GDP ratio at 33 percent of GDP which is low by international standards. Despite downgrades of the sovereign rating (most recently by S&P and Fitch, to A in March 2021 and A- in October 2020, respectively), which had a limited impact, the country has maintained fiscal space and steady access to international markets at low rates, and spreads have returned to pre-pandemic levels.

21. Chile has an autonomous technical and strong Central Bank which constitutes a vital safeguard for the soundness and sustainability of macroeconomic policy. In 2019, the BCCh has voluntarily undergone an independent external evaluation of the conduct of monetary and financial policy, which highlighted high standards of policy analysis, conduct, and independence, of comparable level to advanced economies. The BCCh is undergoing a pilot review of its transparency system in light of the new IMF Central Bank Transparency Code. Monetary policy is based on inflation targeting and a floating exchange rate regime. It is committed to keep annual CPI inflation around 3 percent most of the time, within a tolerance range of plus or minus one percentage point. The commitment and credibility of the Central Bank guides the expectations of economic agents and makes the midpoint of the target range the economy's nominal anchor.

22. The monetary response to the pandemic has been well-conceived, adequate, and unprecedented in magnitude. The monetary authorities' policy response has helped support liquidity, maintain interest rates low, and contain the adverse impact of the pandemic, while maintaining inflation expectations well anchored. The authorities did not engage in foreign exchange intervention during the pandemic until January 2021, though temporarily resorted to small interventions during the social unrest episode of 2019.

E. Financial Stability Policy Framework

23. The existing supervisory architecture is organized following an institutional approach. The CMF supervises banks, their subsidiaries, the large saving and credit cooperatives, credit card issuers, insurance companies; securities issuers; fund managers; brokers; and financial market infrastructures. The SP supervises pension and some social security benefits. The MoF is responsible for the preparation of financial sector bills, while the BCCh is responsible for monetary policy, also in charge of providing for the normal functioning of both internal and external payments, entrusted

with regulatory authority regarding the financial system and with other specific powers aimed to maintain the stability of the banking system.

24. In practice, both the BCCh and the CMF share the responsibility of preserving financial stability. The CMF's mandate is to safeguard the proper functioning, development and stability of the financial market. On financial stability policy, the mandate of the BCCh is limited to ensuring the normal functioning of internal and external payments systems, including the role of lender of last resort to the banking system. However, in practice, this gives the BCCh a broad interest in the stability of the financial system overall. Through its semi-annual Financial Stability Report, BCCh identifies, monitors and reports on risks and vulnerabilities within the financial system, from a macro-prudential perspective.

25. Cooperation, coordination, and the exchange of information of supervisory activities in Chile are facilitated through the Financial Sector Supervisory Committee. This forum enables financial sector supervisors (SP and CMF; and BCCh with observer status) to cooperate and exchange information on micro-prudential regulatory and supervisory developments. However, with the integration of SBIF with the CMF and formation of Consejo de Estabilidad Financiera (CEF) it lost its importance.

26. Technical cooperation and coordination of financial stability and macroprudential policies in Chile is facilitated via the Financial Stability Board (Consejo de Estabilidad Financiera or "CEF"). The CEF is chaired by the MoF, and consists of the CMF, and SP. The BCCh is not a formal member,⁴ but is a permanent advisor to the CEF. While the CEF has powers to request and share information from and among its members, including the BCCh, which is necessary for the identification, assessment and prevention of financial stability risks, its policy or regulatory recommendations issued to competent authorities in order to contribute to financial stability are nonbinding - considering that responsibilities and legal supervisory and regulatory powers remain within the respective individual authority.

27. There is room for further improving the role of the CEF. While the CEF provides an effective forum for general crisis communication and technical coordination between the Chilean designated authorities, it does not have any decision-making authority beyond the ability to commission analysis or information from its participants, providing its members and the BCCh with information in order to exercise their individual powers and fulfill their own responsibilities. In recognition of this, the CMF and BCCh are working on an MoU⁵ that will include information sharing arrangements, agreement on stress testing practices and more detail on crisis management

⁴ According with the legal framework applicable to the CEF, provided by Law 20,789, which considers said organism as a consultative entity that depends directly from the MoF, the BCCh is not a member of the CEF, considering also that the BCCh does not have supervisory powers regarding banking, insurance, securities or pensions activity, as the CMF and SP does. Instead, and in accordance with its constitutional autonomy and technical character, the BCCh is appointed as a permanent advisor to the CEF, empowered to have access to and share confidential information, to develop studies or analysis aimed to monitor the stability of the financial system and to be part of the different CEF's working groups.

⁵ Authorities reported that the MoU was signed July 5th, 2021.

protocols, particularly as it applies to CMF decisions to place a firm into a forced liquidation or BCCh decision to provide emergency liquidity assistance to a bank experiencing liquidity stress

F. Well Developed Public Infrastructure

28. Chile is governed by a State of Law, which is configured by the Constitution and the laws. The right to private property is preserved by the constitution. Rule of law is strong in Chile, ranking at the top among Latin American and Caribbean countries.⁶

29. Chile started a process leading towards a New Constitution. In an October-2020 Referendum—agreed in November 2019 in response to the social protest—Chileans voted overwhelmingly in favor of drafting a New Constitution, starting a process that is expected to finish in mid-2022. It is anticipated that the constitutional process will include consideration of social rights and the role of the State in the provision of basic goods and services but would preserve the main pillars of the current system.

30. The financial reporting framework in Chile is established under the Companies Law No. 18.046 of 1981. The Companies Law contains basic requirements for financial reporting for all companies in Chile, including requirements for the preparation of financial statements. The Colegio de Contadores de Chile (CCCH) has the responsibility for setting accounting standards for non-regulated companies. The CCCH has adopted IFRS and for IFRS for Small- and Medium-sized Enterprises (SMEs) since 2013.

31. The CMF (which absorbed the former SBIF) has adopted IFRS since 2009.⁷ The financial sector regulators are empowered to set accounting and financial reporting requirements for companies under their supervision. CCCH is responsible for setting auditing standards for non-regulated companies. The Auditing Standards Committee of the CCCH adopts the Chilean Generally Accepted Auditing Standards (NAGA) which, as reported by the CCCH, are the translation of the standards issued by the Audit Standards Board of the American Institute of Certified Public Accountants, which, in turn, are based on the IAS. The Financial Market Commission (CMF) has the authority to set the auditing standards for entities under their regulation and require application of standards issued by the CCCH.

32. Audit firms are regulated and supervised by the CMF. The CMF is empowered to: (i) maintain a registry of audit firms authorized to audit companies under their control; (ii) set ethical requirements; (iii) develop an investigative and disciplinary system; and (iv) require audit firms to establish quality control mechanisms. Audit reviews are only carried out when a suspicion or risk is identified.

⁶ World Justice Project Rule of Law Index 2020, can be reached from <https://worldjusticeproject.org/our-work/research-and-data/wjp-rule-law-index-2020>

⁷ IFRS 9 is not adopted. Financial sector is following provisioning requirements, both for accounting and prudential purposes, that are prescribed by the CMF

33. Credit data needs to be improved in Chile. There is a private credit bureau in the country but has a lower coverage than the one exhibited by the OECD economies and has significant scope limitations associated with the history and lack of positive information of the debtors. There is also public credit registry is administered by the CMF. There are two primary products associated with the public registry: the "Consolidated Debt File" and the "Debt Report." Recipient of these reports are banks and debtors respectively.

34. In Chile there is no statutory resolution regime to facilitate the orderly failure of banks. The existing statutory framework has important limitations as reliance on forced liquidation is recognized as unsuitable for managing the failure of a systemic bank or the failure of a bank carrying out critical financial functions.

35. Instead of deposit insurance scheme, the BCCh guarantees sight deposits and obligations received or contracted by a banking enterprise. Sight deposits and obligations are those whose payment may be legally demanded in an unconditional manner, immediately, except when the depositor or creditor is another banking enterprise since in such case the deposits, loans or obligations shall always be deemed as time obligations. The current MoF and BCCh deposit guarantee legal arrangements in Chile applies to all banks—domestic and foreign—and has no direct levy cost to those entities whose commercial deposit taking activities are benefiting from a state or central bank guarantee. The guarantees cover all banks authorized to operate in the domestic market, including branches of foreign banks.

G. Main Findings

Responsibilities, Objectives, Powers, Independence (CP 1–2)

36. The CMF is the prudential supervisor in Chile, being in charge of prudential regulation and oversight. As per the legal framework, the BCCh has certain prudential regulatory responsibilities, particularly regarding liquidity and FX. There are also several cross consultations embedded in the legal framework, including licensing, solvency, liquidity and corrective measures. The opinions and regulations issued by the BCCh in those areas pertain to BCCh legal mandate of preserving monetary stability and the normal functioning of payments. The BCCh also has oversight powers in what refers to its FX regulations.

37. The CMF's legal mandate does not prioritize prudential supervision relative to its other mandates. In addition to financial stability, CMF broad legal mandate encompasses also market conduct, and market development. While the legal framework does not establish a priority for prudential supervision which could result in concerns and decisions regarding other CMF mandates potentially jeopardizing the safety and soundness of the banking system.

38. Budget constraints might hinder the effectiveness of supervisory processes in the future. Although the CMF collects levies from supervised entities, its budget depends on the MoF approval and must adjust to its guidelines, which recently have been focused on austerity and efficiency of public resources. Especially, the CMF should have means to attract and retain talent in

highly specialized fields (i.e. cyber risk, IT, data science), as well as strengthen its specialized units. Legal protection for supervisors would merit further enhancements.

Licensing, Changes in Control, and Acquisitions (CP 4–7)

39. Supervisors are constrained by an incomplete legal framework for licensing. There are no legal provisions relative to individuals that might exert significant influence to be considered shareholders for licensing purposes and there is no requirement for information on related parties of significant shareholders during the licensing process. The licensing requirements do not encompass verifying the origin of initial capital and do not have requirements relative to the ability of the shareholders to provide additional financial support as needed. The licensing process does not encompass the assessment of the overall suitability of major shareholders, focusing solely on propriety. Propriety criteria only are applied to board members. Senior management is not subject to fit a proper assessment. Authorization from the home supervisor is required in case of foreign branches and a "no objection" in case of foreign subsidiaries.

40. Transfer of significant ownership criteria should be further enhanced. Related party criteria are not taken into account in order to calculate the threshold that requires authorization (10 percent) which could potentially result in a transfer of significant ownership without knowledge or approval by the CMF. Shortcomings also relate to the lack of regular reporting in relation to those that exert controlling influence, including the identities of beneficial owners of shares being held by nominees, custodians and through vehicles that might be used to disguise ownership.

Supervisory Cooperation and Cross Border Supervision (CP 3, 12, 13)

41. Arrangements currently in place in Chile provide a framework for cooperation and collaboration with relevant domestic and foreign supervisors and do reflect the need to protect confidential information. The establishment of the CMF as such in 2019, the subsequent restructuring of the CMF in March 2021, to be fully implemented as of December and the finalization of the MoU with the BCCh (still in draft⁸) will further enhance the arrangements for cooperation and collaboration within Chile. The CMF shares information and cooperates with home and host authorities for the effective supervision of foreign banking groups operating in Chile and subsidiaries of Chilean banks operating abroad. Authorities are yet to develop a framework for handling crisis situations.

Supervisory Approach (CP 8–10)

42. The CMF has a framework for assessing and monitoring risk profiles of banking groups, taking into account their systemic importance, maintaining an understanding of risks emanating from banks and the banking system as a whole. A number of techniques and tools are used to implement CMF's supervisory approach, with dedicated risk units providing for a thorough

⁸ Authorities reported that the MoU was signed on July 5th, 2021.

assessment of individual risks. A wide range of data is collected periodically satisfying CMF supervisory needs.

43. More work is needed to realize the goal of strong consolidated supervision within the CMF. In addition to improvements in the legal framework, the establishment of a unit for comprehensive financial analysis and monitoring of financial conglomerates (2011 FSAP recommendation), coupled with lead examiners and ratings for conglomerates, would be beneficial. The recent (March 2021) restructuring of the CMF placing under the same umbrella the supervision of insurance, securities, and banks will further strengthen the supervision of the entire financial sector. Financial analysis should also be strengthened as part of the process.

Corrective and Sanctioning Powers of Supervisors (CP 11)

44. The corrective actions framework is somewhat limited in scope and based on either breaches of regulatory requirements or materialized indications of deterioration of the bank. Despite having general powers to take action as necessary to protect the safety and soundness of the banking system in Chile, the somewhat late initiation of corrective measures and their limited scope can potentially affect the CMF's supervisory effectiveness. The range of supervisory tools available for timely corrective actions is limited, focusing on restricting current activities, additional loans to related parties, and investments. They do not encompass imposing more stringent prudential limits and requirements, restricting or suspending payments to shareholders or share repurchases, restricting asset transfers, barring individuals from the banking sector, replacing or restricting the powers of managers, Board members or controlling owners, and facilitating a takeover by, or merger with, a healthier institution.

Corporate Governance and Internal Audit (CP 14, 26)

45. The legal and regulatory framework for corporate governance requires improvement. The fit & proper criteria for banks' board of directors involve only the integrity aspect. Directors' technical suitability, board's collective suitability or directors' time commitment are not governed. Banks do not require the CMF's approval when electing directors. The supervisor does not have the power to require changes in the composition of the bank's Board if it believes that any individuals are not fulfilling their duties related to the satisfaction of these criteria. Additionally, there are no best practice guidelines issued by the CMF for the structure and management of overall remuneration frameworks as well as for prudent executive compensation that will prevent the banks assume excessive risk taking.

46. The CMF's corporate governance supervision practices requires improvement as well. The CMF's corporate governance assessment process is primarily designed in relation to identified risks and areas. The supervision process does not draw concrete conclusions regarding the quality of board oversight or corporate governance in general. The validation of banks' corporate governance on an ongoing basis through the examination process requires a more holistic approach and analysis. In addition, the supervision process does not evaluate a bank's strategy and its relationship

to risk appetite. A bank's risk appetite is evaluated only in relation to certain risks that are reviewed by the supervisors, without taking a holistic view.⁹

47. Policies and procedures for evaluating internal control, compliance and internal audit functions are adequate. However, lack of regulations to guide banks on prudent practices and the inclusion of good practices in supervision manuals that are not publicly available increase the burden on supervisors. It is also important to state clear eligibility requirements for the members of an audit committee and the head of internal audit. Additionally, banks should be required to have an adequately staffed, permanent and independent compliance function that assists senior management in effectively managing the compliance risks faced by the bank.¹⁰

Capital (CP 16)

48. The current capital framework follows Basel I in Chile which is not compatible with size and the complexity of the banking industry. Capital is required for credit risk only. Chile's capital definition and credit risk weights have some discrepancies from Basel I. Pillar 2 capital requirements were introduced in the regulatory framework on September 11, 2020 but include phase-in period until December 2023 for full implementation. Implementation of Basel III starting from December 2021 will largely address the shortcomings of the current framework.

Credit Risk and Problems Assets, Provisions and Reserves (CP 17–18)

49. The banking sector's NPL ratio is at 4.9 percent as of December 2020 year-end. The CMF has a specific division with qualified staff knowledgeable in credit risk modelling techniques. However, there are several issues that need to be strengthened regarding banks' credit risk management and asset classification and provisioning requirements. Loan provisioning levels are computed using expected credit loss techniques by banks. For large commercial loans credit individual customer-level analysis and for retail loans (including small corporates) group-level analysis is conducted. While for consumer loans banks use their own expected loss models, for other retail and small commercial loans, the CMF formed standardized methods where it provided PD and LGD parameters. CMF supervisors showed that banks' consumer loans are under-provisioned which will be addressed by the CMF in the near future by providing a standardized method for banks.

50. The regulatory framework does not provide guidance on definition, identification and treatment of loans that are subject to restructuring/refinancing. During the supervision process inspectors verify the existence of specific guidelines for renegotiated, refinanced loans, extended, restructured, and agreed loans. However, there are not any provisions to guide banks and inspectors on good practices. According to the current framework, if banks refinance group loans before interest or principal is 60 days past due, they will not have to classify the loans in the non-performing

⁹ This weakness could largely be improved with full implementation of Pillar 2.

¹⁰ The term "compliance function" does not necessarily denote an organizational unit. Compliance staff may reside in operating business units or local subsidiaries and report up to operating business line management or local management, provided such staff also have a reporting line through to the head of compliance who should be independent from business lines.

portfolio. Although the regulation states that individually assessed borrowers which are need of a compulsory debt restructuring which reduces or postpones the obligation to make principal or interest payments will be included in nonperforming portfolio, the regulation does not provide any explanation or conditions for compulsory loan restructuring. All this could result in problematic loans being categorized as performing using restructuring/refinancing.

51. The value of collateral is an important determinant for provisioning levels of both individually assessed and group loans. Regulations miss explicit guidance or norms on eligible collateral revaluation thereof for determining provisioning for problem exposures. The regulations or guidelines do not require collateral to be valued at least in certain frequencies. In practice, supervisors expect banks to have the collateral be revalued every two years. If the revaluation date is more than two years old, supervisors take the face value of the collateral for the provisioning calculation. The supervision of banks' collateral valuation and monitoring processes need to be improved. Supervision guidelines for banks' collateral evaluation process should be updated/prepared. The CMF supervisors conducted two banks' collateral processes reviews in 2019 and 2020. Considering the importance of the value of collaterals, the supervision of the process should be conducted on a regular basis (depending on risk profile of the bank). Additionally, absence of recovery information for commercial loans prevents the CMF from doing back-testing of bank provisions.

Risk Management (CP 19–25)

52. The CMF's supervision structure includes specialized risk divisions with highly qualified staff in credit risk, financial risk, operational risk and cyber risk. The level of personnel in the cyber risk division is not sufficient to conduct effective supervision on this topic in banks.

53. Although the regulatory and supervisory frameworks for individual risks are strong, absence of integrated risk management function and review is perceived as an issue. Banks organize their risk management function generally by risk units (credit risk, financial risk, operational risk) which could be separate from each other. There is no regulatory requirement for establishment of an integrated risk management function to oversee the identified risks that the bank is exposed to, although in some banks in practice there is one unit responsible for overseeing all risks. In some banks the financial risk function reports to the CFO which raises serious doubt about the independence of the function. Risk functions in banks are ultimately reporting to the CEO of the bank. They don't have direct reporting lines to the board of directors. Banks are not specifically required to have qualified CROs with sufficient stature, position and authority within the organization to oversee risk management activities. The level of senior manager may not provide the stature necessary to challenge high level risk decisions and processes.

Disclosures and Transparency (CP 27–28)

54. The CMF's disclosure requirements are sufficient. Additionally, the CMF on its website discloses comprehensive information periodically (monthly, quarterly, annually) to the market on banking system that enable public to understand the situation of banks. However, the disclosures could be improved to include remuneration policy and information about all material entities in the group structure. The supervision process could be further improved if the CMF regularly evaluates the timeliness and content of external audit / annual reports for compliance with regulatory parameters.

Abuse of Financial Services (CP 29)

55. The CMF has requirements and examination procedures that enables them to perform periodic in-depth assessments on banks' policies and processes related to AML/CFT. The restructuring process encompasses establishing a specialized team in charge of the assessment of AML/CFT, which should further strengthen CMF abilities in what refers to AML/CFT. The lack of a more robust sanctioning framework could impair, nevertheless the effectiveness of their work.

56. Table 1 offers a principle-by-principle summary of the assessment findings and conclusions.

Table 1. Chile: Summary Compliance with the BCPs

Core Principle	Comments
1. Responsibilities, objectives and powers	<p>The CMF is the prudential supervisor in Chile, being in charge of prudential regulation and oversight. As per the legal framework, the BCCh has certain prudential regulatory responsibilities, particularly regarding liquidity and FX, in relation to which the BCCh is required to consult the CMF. There are also several cross consultations embedded in the legal framework, including licensing, solvency, liquidity and corrective measures. The opinions and regulations issued by the BCCh in those areas pertain to BCCh legal mandate of preserving monetary stability and the normal functioning of payments. The BCCh has also oversight powers in what refers to its FX regulations.</p> <p>In practice such legal characteristics and arrangements do not seem to jeopardize CMF supervisory functions. The responsibilities and objectives of the CMF and the BCCh are clearly defined in legislation and publicly disclosed.</p> <p>The CMF supervises a wide range of financial entities, including banks, insurance and securities companies. Its legal mandate does not prioritize among investors, depositors, and policy holders nor</p>

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
	<p>between prudential supervision (banking, insurance, and securities), market conduct, and market development. A suitable legal framework for banking supervision is in place providing the CMF powers to authorize banks, conduct ongoing supervision and address compliance with laws. While recent legal amendments to the CMF Law and the GBA are commendable, shortcomings in the legal framework, particularly in relation to resolution and consolidated supervision, topics that the authorities have been aware for several years of the need for enhancements illustrate the limitations of the supervisory authorities in that front. The most recent amendment to the CMF law granted the CMF powers to, as an autonomous body, submit legal proposals to the Ministry of Finance which is deemed to further help in pushing the long-needed reform agenda.</p>
<p>2. Independence, accountability, resourcing and legal protection for supervisors</p>	<p>The CMF has, to a certain extent, operational independence and transparent processes in discharging their duties and use of resources with a high level of disclosure. Budget constraints, nevertheless, might hinder the supervisory processes in the near future. The levies collected from the banks, although at present exceeding the budget needs revert in full to the general budget, from which the CMF is granted its approved budget. The approval depends on the MoF and the general government budget policies (whereas the BCCh is provided with its own equity, having independence to approve, manage and execute its budget). Budget constraints are yet to jeopardize the CMF supervisory functions, but resources have been stretched and are to be further challenged by additional needs related to specialized teams and upcoming risks.</p> <p>The process for nominating the CMF board require the reasons for removal of a CMF board member (if such case materializes) to be publicly disclosed in case of serious breaches (e.g. aspects related to confidentiality of information, undisclosed conflict of interest, fit and proper). There is no legal protection as such although CMF senior officials and staff are provided legal defense by the CMF.</p>

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
3. Cooperation and collaboration	Arrangements currently in place in Chile provide a framework for cooperation and collaboration with relevant domestic and foreign supervisors and do reflect the need to protect confidential information. The establishment of the CMF as such in 2019, the subsequent restructuring of the CMF in March 2021, to be fully implemented as of December and the finalization of the MoU with the BCCh (still in draft ¹) will further enhance the arrangements for cooperation and collaboration within Chile.
4. Permissible activities	The permissible activities of institutions that are licensed and subject to supervision as banks operating in Chile are clearly defined and the use of the word “bank” in names is controlled.
5. Licensing criteria	The law sets out criteria to be applied in the licensing process and grants the CMF the power to reject applications for establishments that do not meet the criteria established by the GBA, although not explicitly in what refers to the business viability. The licensing process consists of an assessment of the ownership structure and governance of the bank. There are no legal provisions relative to individuals that might exert significant influence without being a significant shareholder and there is no requirement of information on related parties of significant shareholders during the licensing process. The licensing requirements do not encompass verifying the origin of funds and do not have requirements relative to the ability of the shareholders to provide additional financial support as needed. There are propriety criteria applied to board members but not to senior management. No fitness criteria are applied. Authorization by the home supervisor is required in case of foreign branches and a no objection is asked in case of foreign subsidiaries.

¹ Authorities reported that the MoU was signed on July 5th, 2021.

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
6. Transfer of significant ownership	<p>The CMF has the power to review, reject and impose prudential conditions on any proposals to transfer significant ownership or controlling interests above 10 percent held directly or indirectly in existing banks to other parties. Nonetheless, related party criteria are not applied in such cases so that natural persons and their related parties are considered a single person which could potentially result in a transfer of significant ownership without knowledge or approval by the CMF.</p> <p>The legal framework does not allow the CMF to reject, modify or reverse changes in significant ownership that occur based on false information. In such cases voting rights are suspended though. Shortcomings also relate to the lack of regular reporting in relation to those that exert controlling influence, including the identities of beneficial owners of shares being held by nominees, custodians and through vehicles that might be used to disguise ownership. Such reporting is important in order to be able to monitor situations where transfer of ownership occurs without the proper authorization. In addition, banks are not explicitly required to report to the CMF any material information that may impact the suitability of shareholders.</p> <p>Aspects related to the lack of legal powers regarding the parent, and resulting CMF legal limitations in authorizing or impeding transfers of ownership through the holding have been factored in the assessment of CPs 1 and 12</p>
7. Major acquisitions	<p>The CMF has the power to approve or reject, major acquisitions or investments by a bank, including the establishment of cross-border operations. Banks' subsidiaries type of business are limited and confined to financial sector activities or that support the activities of the financial entity. Mergers, acquisitions, as well as setting up branches or subsidiaries abroad require authorization.</p> <p>Aspects related to the lack of legal powers regarding the parent, and therefore CMF limitations in authorizing or impeding acquisitions or investment within the wider group relate to the overall limitations regarding consolidated supervision and have been factored in under CP 12.</p>

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
8. Supervisory approach	<p>The CMF has a framework for assessing and monitoring risk profiles of banking groups, taking into account their systemic importance, maintaining an understanding of risks emanating from banks and the banking system as a whole.</p> <p>A resolution framework is yet to be established.</p> <p>Issues related to EC8 and the legal limitations regarding consolidated supervision and the supervisory perimeter have been factored into the assessment of CP 12.</p>
9. Supervisory techniques and tools	<p>The CMF uses a number of techniques and tools to implement its supervisory approach. The off-site surveillance performed by the supervision and risk units provide for a thorough assessment of individual banks. On-site examinations are carried out annually for all banks, with more resources being deployed for systemic banks. A wide array of reports is produced which might merit some streamlining. The incorporation of the financial analysis unit within the supervision department offers the adequate grounds for such process, also offering an opportunity for those reports focusing more on systemic issues, trends and risks build ups. Authorities meet banks boards occasionally, and it is not common practice to have meetings with the board to discuss the results of supervisory examinations nor external audits. There are no procedures in place or practices to meet bilaterally with independent board members.</p>

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
10. Supervisory reporting	<p>The CMF collects a wide range of data from banks and banking groups regularly, both on a solo and on a consolidated basis. Information is automatically validated, and banks' internal audit have to make yearly a statement regarding the quality of information provided to the CMF. Banks and the CMF seem to take prudential reporting seriously and significant sanctions have been applied as a result of poor reporting. There is no comprehensive independent validation of the prudential returns.</p> <p>The assessors are of the opinion that although the amount of information most certainly satisfies supervisory needs it is likely for overlaps to occur, as well as there might be instances where certain information is no longer needed. There is no process in place to periodically review the prudential information collected to determine that it satisfies CMF needs.</p> <p>Aspects related to consolidated supervision were factored in the assessment of CP 12.</p>
11. Corrective and sanctioning powers of supervisors	<p>The CMF is granted general powers to take action as necessary to protect the safety and soundness of the banking system in Chile. The annual examinations and the rating system detailed under CP 8 provide a broad basis for the CMF to require banks to address issues found during examinations. However, actual corrective actions are triggered somewhat at a later stage, depending mostly on breaches of regulatory requirements or materialized indications of deterioration of the bank.</p> <p>The range of supervisory tools available to bring about timely corrective actions is limited focusing on restricting current activities, additional loans to related parties, and restricting investments. They do not encompass imposing more stringent prudential limits and requirements, restricting or suspending payments to shareholders or share repurchases, restricting asset transfers, barring individuals from the banking sector, replacing or restricting the powers of managers, Board members or controlling owners, facilitating a takeover by or merger with a healthier institution.</p>

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
12. Consolidated supervision	<p>The legal framework in Chile empowers the CMF to exercise full consolidated supervision only over the banking group, i.e. from the bank downwards. Parent companies are effectively not supervised or regulated and the CMF has no access to information on affiliates. While limitations exist given the missing legal powers, in recent years the CMF has established a framework for the supervision of financial conglomerates. The framework focuses mostly on solvency, intragroup exposures and reputational risk. Shortcomings related to solvency are to be addressed through the supervised entities, i.e. the financial entities.</p> <p>Banks' operations abroad are supervised either through on-site visits (in the case of subsidiaries) and off-site surveillance through dedicated prudential returns (branches). Notwithstanding, the lack of legal supervisory powers related to prudential requirements and enforceability over the parent, as well as lack of access to information on affiliates, as well as the fact that parents can have all types of investments in non-financial entities are significant shortcomings, impairing the effectiveness of the CMF in what refers to consolidated supervision. The fact that risk management and controls of the parent are not under the formal scrutiny or regulatory requirements of the CMF is also a concern.</p>
13. Home-host relationships	<p>The CMF shares information and cooperates with home and host authorities for the effective supervision of foreign banking groups operating in Chile and subsidiaries of Chilean banks operating abroad. Local operations of foreign banks are subject to the same requirements of local banks. Authorities are yet to develop a framework for handling crisis situations.</p>
14. Corporate governance	<p>Suitability requirements and supervisory processes do not include directors' technical suitability, the board's collective suitability or directors' time commitment. Banks do not require the CMF's approval when electing directors. The supervisor has no powers to require changes in the composition of the bank's Board if it believes that any individuals are not fulfilling their duties related to the satisfaction of these criteria or there are issues with the suitability of the Board as a collective</p> <p>The CMF's corporate governance assessment process is primarily designed in relation to identified risks and areas. Supervisory</p>

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
	<p>processes does not draw concrete conclusions regarding the quality of board oversight or corporate governance in general. The supervisory processes do not evaluate the bank's strategy and its relationship to risk appetite. The bank's risk appetite is evaluated only in relation to certain risks that are reviewed by the supervisors, without taking a holistic view.</p> <p>There are no best practice guidelines issued by the CMF for the structure and management of overall remuneration frameworks as well as for prudent executive compensation that will prevent the banks from excessive risk taking.</p> <p>There is no requirement for the majority of the board to be composed of non-executive members which could result in, potentially, boards being composed of a majority of executive directors with only the 2 nonexecutives as currently required by the legal framework. There is no maximum time limit a board member can stay in the position to be considered as independent.</p> <p>Regulations do not require systemic banks to establish a risk oversight committee and remuneration committee.</p>
15. Risk management process	<p>The risk management function is reporting to the General Manager and does not have direct reporting line to the Board of Directors. There are no regulatory requirements to ensure sufficient resources, independence, authority, and access to the banks' board. The risk management function in banks is organized by risk (credit risk, financial risk, operational risk). There is no regulatory requirement for the establishment of an integrated risk management function that will oversee the identified risks that the bank is exposed to. In some banks financial risk function depends on the CFO which raises serious doubt on the independence of the function.</p> <p>Internal audit does not have a responsibility to evaluate the overall efficiency of the risk management function of banks.</p> <p>Banks are not specifically required to have qualified CROs with sufficient stature, position and authority within the organization to oversee risk management activities. The level of senior manager</p>

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
	<p>may not provide the necessary stature necessary to challenge high level risk decisions and processes.</p> <p>Internal capital assessment process (ICAAP) in relation to a bank's risk appetite and risk profile has been introduced recently with Chapter 21-13 that was published on September 11, 2020. This regulation has not fully come into force yet. Risks that can arise from the macroeconomic environment will be integrated into bank's risk management process with the start of ICAAP assessments, which started in April 2021. Banks will conduct stress tests based on the scenarios given by the CMF and they will include results of the exercise in the ICAAP reports. On the other hand, the CMF has not issued a detailed guideline on stress tests that will be conducted under this framework. The April 2021 stress exercise associated with the ICAAP will not cover market, IRRBB, or liquidity risks. The focus will only be on credit risk. The April 2022 exercise will include these risks.</p>
16. Capital adequacy	<p>The current capital framework is based on Basel I which is not compatible with the banking industry's risk profile and complexity. Capital is required for credit risk only. Country's capital definition and credit risk weights have some discrepancies with Basel I. Legal and regulatory changes that aims to comply with Basel III capital framework are issued. They will be implemented starting from December 2021. Pillar 2 capital requirements have been introduced in the regulatory framework in September 11, 2020 with phase-in period until December 2023. On the other hand, implementation of Basel III starting from December 2021 will largely address the shortcomings of the current framework.</p>

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
17. Credit risk	<p>The legal and regulatory framework for the credit risk environment is generally satisfactory. The main weakness is the absence of an independent loan review function in banks.</p> <p>The CMF has not issued credit risk management guidelines for the banking industry.² While the CMF's RBS framework includes an assessment of management principles, details of which are established in supervision manual, the supervision manual is not publicly available.</p> <p>There are no specific regulations that require banks to prescribe in their credit policy that major risks exceeding a certain amount or percentage of the bank's capital, as well as risky exposures that are otherwise not in line with the mainstream of banks' activities, are to be decided by the Board or senior management.</p>
18. Problem assets, provisions, and reserves	<p>The regulatory framework does not provide guidance on the definition, identification and treatment of loans that are subject to restructuring. According to the current framework, if banks refinance group loans before interest or principal is 60 days past due, they will not have to classify the loans in non-performing portfolio. This could result in problematic loans being categorized as performing loans using restructuring.</p> <p>Both for individual loans and groups of loans, the value of collateral is an important determinant for provisioning levels. Prudent collateral valuation processes are necessary to help ensure adequacy of provisions. However, regulations miss explicit guidance or norms on eligible collateral revaluation thereof for determining provisioning for problem exposures. The regulations or guidelines do not require collateral to be valued at least with a certain frequencies. Supervisory guidelines for the valuation of collateral should be prepared. Considering the importance of the value of collaterals, the supervisory evaluation of the valuation processes should be conducted on a regular basis (taking a risk-based approach).</p> <p>Regulations do not prevent banks to accrue interest for all impaired loans. Group loans that are secured by real estate valued</p>

² As explained in each principle there are issues guidelines for other risks.

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
	at least 80 percent of the credit; C1 and C2 individual loan categories; and group loans until they become six months pass due will continue to accrue interest. Additionally, already accrued and not paid interests are not cancelled or subject to provisions. ³
19. Concentration risk and large exposure limits	The legal framework addressing concentration risk and large exposures limits is generally in line with international standards. With the recent amendment of the GBL, a business group limit is included in the legal framework. While the business group definition is comprehensive, implementation and monitoring of the business group limit is yet to be determined. All limits are computed on regulatory capital instead of Tier-1 Capital. Business group limits are set at a 30 percent level, while Basel standard is at 25 percent. Individual loan limits can be increased to 30 percent of capital in case collateral (wide range of collateral is considered eligible) is provided. Forms to monitor the groups are not developed or put into effect yet. With the introduction of the ICAAP process in Chapter 21-13 (which has not fully come into force yet) the CMF requires banks to have methodologies to measure all concentration risks.
20. Transactions with related parties	<p>The legal and regulatory framework for related parties is generally comprehensive. Reporting of banks on related party exposures are regularly monitored by the CMF. Examiners evaluate related party exposures during the onsite review.</p> <p>The related parties limit is calculated only on consolidated level. Loans to consolidated subsidiaries are exempted from the limit. The authority has not included provisions to deduct loans which are above limits from capital when assessing capital adequacy, or to require additional collateralization for such exposures in its regulatory framework. In practice banks' lending to related parties are not approved by banks' board.</p>
21. Country and transfer risks	CMF regulations adequately captures country and transfer risk. Banks are expected to classify countries based on their riskiness levels and determine provisions accordingly. Country risk is evaluated through the supervisory process.

³ With the change in the Chapter that is planned to come into effect in 2022, the accrual of interest will be stopped when past-dues reach 90 days.

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
22. Market risk	<p>The CMF has adopted appropriate regulation and guidance directing banks to identify, measure, and monitor their market risk exposures. With the adoption of the Basel III framework, starting from 1 December 2021 banks will be required to allocate capital for market risk as well.</p>
23. Interest rate risk in the banking book	<p>Interest rate risk in the banking book (the CMF calls it market risk in the banking book) is material in Chilean banking system. It is part of the financial risk assessment that the CMF regularly carries out. Current regulations require banks to have an adequate management process and they establish a measurement scheme and limits. However, these limits are set by the institution's board of directors. This risk will not be included in capital adequacy framework until December 2023.</p>
24. Liquidity risk	<p>The framework for liquidity regulation, monitoring, and assignment of banks' responsibilities is set up comprehensively by the BCCh and the CMF.</p> <p>Review of onsite documents indicated that conclusions regarding liquidity, funding stability, and management processes stopped short of considering other areas of the balance sheet, growth trends, asset quality, and management processes, etc. to support conclusions. Such issues should be captured and clearly conveyed in examination documents to support supervisory observations.</p> <p>There is also room for improvement of stress testing practices of banks specially to ensure consistency of their exercises. The conservatism of the exercise could be strengthened by the CMF guiding the banking industry on severity of the assumptions, through run off assumptions and access to funding sources i.e., no access to wholesale funding in an idiosyncratic crisis. Given that each bank applies a different set of assumptions for the liquidity stress test, the ease of identifying outliers and detecting weakness in a particular bank is made more difficult requiring more intensive analysis by the supervisor into the inputs. Also, there is no requirement for the results of the stress test to be submitted to the CMF.</p> <p>The BCCh should introduce a legal limit for the NSFR.</p>

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
25. Operational risk	<p>The regulatory framework for operational risk management is comprehensive. The CMF has dedicated Operational Risk Division and Cyber Security Division for the examination of banks' risks. However, the number of cyber security experts in the CMF is not sufficient. The CMF is facing difficulties in attracting and retaining qualified experts. In some banks technological risk is managed under Operations/Technology Management Department which compromises independence of the risk management function.</p>
26. Internal control and audit	<p>Policies and procedures for evaluating internal control, compliance and internal audit functions are adequate. However, lack of regulations to guide banks on prudent practices and the inclusion of good practices in supervision manuals that are not publicly available increase the burden on supervisors. Regulations do not impose strict eligibility requirements for members of the audit committee and the head of internal audit. Regular meetings with banks' audit committees should be part of CMF's supervision process.</p> <p>The regulatory framework does not require banks to establish an adequately staffed, permanent and independent compliance function that assists senior management in effectively managing the compliance risks faced by the bank.</p>
27. Financial reporting and external audit	<p>The financial statements prepared and published by financial institutions are in compliance with Generally Accepted Accounting Standards in Chile which in turn are in line with the International Financial Reporting Standards (IFRS). As explained in Principle 18, instead of IFRS 9 financial sector is following provisioning requirements (both for accounting and prudential purposes) that are prescribed by the CMF.</p> <p>Financial statements are audited by independent external auditors and the audited financial statements are published along with the explanatory notes and auditors' opinion annually. There is potential to improve governance arrangements to effectively oversee the external audit function. In this regard, the Authority is recommended to make necessary legal changes to request external auditors to report all matters that could be of material significance to the CMF, to include regular meetings with the external auditors as part of the supervision process and to be more active in influencing the scope of an external audit.</p>

Table 1. Chile: Summary Compliance with the BCPs (continued)

Core Principle	Comments
28. Disclosure and transparency	<p>Banks are required to disclose their financial statements according to Chilean Generally Accepted Accounting Standards, the Chilean version of IAS which in turn are in line with the International Financial Reporting Standards (IFRS), on consolidated basis. Disclosure requirements for nonfinancial information are generally adequate. However, the disclosures could be improved to include information on the remuneration policy and information about all material entities in the group structure. The supervision process could be further improved if the CMF regularly evaluates the timeliness and content of external audit / annual reports for compliance with regulatory parameters.</p>
29. Abuse of financial services	<p>The CMF has requirements and examination procedures that enables them to perform periodic in-depth assessments on banks' policies and processes related to AML/CFT. The restructuring process encompasses establishing a specialized team in charge of the assessment of AML/CFT.</p> <p>The lack of a more robust sanctioning framework, specifically designed for AML/CFT can impair, nevertheless, the effectiveness of their work.</p> <p>Additional aspects would merit further improvement:</p> <ul style="list-style-type: none"> a. banks are not explicitly required to report to the CMF suspicious activities in cases where such activities/incidents are material to the safety, soundness or reputation of the bank; b. within the regulatory framework there is no explicit requirement for banks to have policies and processes that promote high ethical and professional standards; c. there is no explicit provision in the framework or in examination procedures relative to relationships that turn into high risk; d. there is no explicit reference to ensuring high ethical and professional standards per se when hiring staff. There is no reference to AML/CFT aspects related to an agency or outsourcing relationship. Files made available to the assessors had no reference to hiring processes or to outsourcing; e. there are no requirements for banks to establish policies and processes to designate the compliance officer. There is

Table 1. Chile: Summary Compliance with the BCPs (concluded)

Core Principle	Comments
	<p>also no reference to a dedicated officer (beyond the compliance officer) to whom potential abuses of the banks' financial services (including suspicious transactions) are reported;</p> <p>f. there are no explicit provisions relative to dissemination within the bank as for to whom suspicious activities should be reported.</p>

H. Recommended Actions

57. Table 2 below lists the suggested actions for improving compliance with the BCPs and the effectiveness of regulatory and supervisory frameworks.

Table 2. Chile: Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks

Reference Principle	Recommended Action
Principle 1	<p>Authorities are recommended to amend the legal framework in order to:</p> <ul style="list-style-type: none"> • have guidance on the prioritization of the multiple CMF objectives; • speed up the process of fully implementing Pillar 2 for all banks in order to for individual banks and banking groups based on their risk profile; • effectively undertake timely corrective actions as detailed under CP 11; • fully exercise consolidated supervision as detailed under CP 12; • establish a resolution framework; • establish a framework on how to operationalize its mandate in relation to the prioritization of its prudential supervision mandate. <p>Authorities should consider amending the legal framework in order to require a non-objection from the CMF in what pertains to liquidity regulations.</p> <p>Authorities should also consider amending the legal framework in order to provide further delegation to the CMF for the issuance of prudential regulations instead of having an over prescriptive GBA. In that way, it can be ensured that prudential regulations remain up to date.</p> <p>Shortcomings related to consolidated supervision, corrective actions and resolution have been factored into the assessment of CPs 8, 11 and 12, respectively.</p>

Table 2. Chile: Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks (continued)

Reference Principle	Recommended Action
Principle 2	<p>Authorities are recommended to:</p> <ul style="list-style-type: none"> • amend the legal framework taking out the CMF budget from under the MoF in order to allow the CMF to have adequate resources to properly discharge their duties; • amend the legal framework explicitly requiring public disclosure of the specific reason(s) for removal of a CMF board member including cases that do not relate to serious breaches; • amend the legal framework in order to enhance CMF's legal protection • enhance the internal audit function into a full-fledged audit function enhancing CMF's governance.
Principle 3	<ul style="list-style-type: none"> • implement the restructuring of the CMF as planned • finalize and implement the MoU with the BCCh.⁴
Principle 5	<p>Authorities are recommended to strengthen the legal/regulatory framework regarding the licensing process by:</p> <ul style="list-style-type: none"> • incorporating into the licensing process the concept and necessary assessments relative to significant influence; • requiring information on related parties of founding shareholders; • verifying the ability of the shareholders to provide additional financial support, as needed, as part of the solvency test; also verifying the origin of its initial capital; • setting up effective fit and proper criteria to be applied to board members and senior management; • granting the CMF explicit power to reject a license based on a viability analysis;
Principle 6	<p>The authorities are recommended to:</p> <ul style="list-style-type: none"> • amend the legal framework so a natural person and their related parties are considered a single person in what refers to significant ownership. • amend the legal framework in order to empower the CMF to reject, modify or reverse the change in significant ownership that occur based on false information; • amend the legal framework to require banks to report any material information that may impact the suitability of shareholders • include in their prudential returns a report encompassing those that exert controlling influence, including the identities of beneficial owners of shares being held by nominees, custodians and through vehicles that might be used to disguise ownership.
Principle 8	<p>Authorities are recommended to:</p> <ul style="list-style-type: none"> • establish a process for assessing the resolvability of systemic banks; • amend the legal framework and set up a resolution framework; • enhance interactions with the board, within the process of understanding strategy, operations, controls and risks.

⁴ Authorities reported that the MoU was signed on July 5th, 2021.

Table 2. Chile: Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks (continued)

Reference Principle	Recommended Action
Principle 9	<p>The CMF is recommended to:</p> <ul style="list-style-type: none"> • Perform a review of all off-site reports produced, streamlining and further tailoring them as necessary, considering the different audiences for the reports • Produce an off-site surveillance procedures manual encompassing the tasks performed by the supervision teams, risks teams, as well as the financial analysis team; • Incorporate into its examination procedures meetings with the board and bilateral meetings with independent board members, • Establish a process to assess to what extent the CMF may rely on the internal audit work to identify areas of potential risk; • Consider sharing the results of stress tests performed by the CMF with the banks/ industry.
Principle 10	<p>Authorities are recommended to:</p> <ul style="list-style-type: none"> • establish a systematic review process of prudential returns to ensure that requirements are up to date and that they remain useful; • explicitly hold banks' senior management responsible for the accuracy of supervisory returns.
Principle 11	<p>Authorities are recommended to amend the legal and/or regulatory framework as necessary in order to be able to:</p> <ul style="list-style-type: none"> • make use of a wide range of corrective actions at an earlier stage, including imposing more stringent prudential limits and requirements, restricting or suspending payments to shareholders or share repurchases, restricting asset transfers, barring individuals from the banking sector, replacing or restricting the powers of managers, Board members or controlling owners, facilitating a takeover by or merger with a healthier institution, • ring-fence a bank as necessary. <p>The authorities are also recommended to develop a framework to operationalize such legal powers comprising a range of supervisory tools to be used depending on the severity of the situation, encompassing a full range of powers up to withdrawing a license.</p>
Principle 12	<p>Authorities are recommended to amend the legal framework in order to be able to fully exercise consolidated supervision over conglomerates operating in Chile.</p> <p>Meanwhile, authorities are recommended to expand the work performed by the financial conglomerates team beyond solvency, establishing a process to effectively monitor conglomerates operating in Chile. Once the legal amendments are adopted, authorities are recommended to establish a full-fledged consolidated supervision approach in line with this CP.</p>
Principle 13	<p>Authorities are recommended to update their MoUs to encompass elements related to crisis management.</p>

Table 2. Chile: Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks (continued)

Reference Principle	Recommended Action
Principle 14	<ul style="list-style-type: none"> • Authorities are recommended to: • Improve the supervision process/practices to include the evaluation of banks' corporate governance, strategy and risk appetite from a holistic perspective, • Make necessary changes in the legal framework to strengthen suitability requirements for directors and collectively for the board and improve the supervision process to involve these aspects. • Expand the qualifications of the collective board by requiring the majority to be composed of independent directors. • Initiate necessary changes in the legal framework to give the power to the CMF change unfit board members and senior managers (where an individual or individuals don't have necessary qualifications or have failed to discharge their corporate governance responsibilities effectively). • Require banks to establish risk management committees. Provide guidance on qualifications of members of board-level committees. • Issue best practice guidelines for the structure and management of overall remuneration frameworks as well as for prudent executive compensation that will prevent the banks assume excessive risk taking. Accordingly, include assessment of banks' compensation policies and systems during supervision process. • Consider compiling all regulations related to corporate governance (elements of good corporate governance, audit committee, board of directors, rules on conflict of interest) under one "Corporate Governance Regulation".
Principle 15	<p>Authorities are recommended to make necessary amendments in the regulation to:</p> <ul style="list-style-type: none"> • Require banks to have an integrated risk management function that will oversee all risks that the banks are exposed to. • Ensure risk management function has sufficient resources, independence, authority and access to the banks' Boards. • Ensure internal audit evaluates overall efficiency of the risk management function. • Require banks, commensurate with their size and activities, to have qualified CROs with sufficient stature, position and authority within the organization to oversee risk management activities. • Give boards explicit responsibility to understand the risks of new products. • Issue guidelines for banks to conduct stress testing under the framework of ICAAP.
Principle 16	<p>Authorities are recommended to:</p> <ul style="list-style-type: none"> • Consider providing flexibility to the CMF in the Law in order to timely align the capital framework with changing international standards by giving the CMF power to regulate details by bylaws (specifications of additional tier 1 capital, tier 2 capital, other details regarding capital components).

Table 2. Chile: Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks (continued)

Reference Principle	Recommended Action
	<ul style="list-style-type: none"> • Ensure that if loans are granted directly or indirectly to enable a person to pay the bank for own shares, these shares should be deducted from capital.
Principle 17	<p>Authorities are recommended to:</p> <ul style="list-style-type: none"> • Ensure independence of loan review function and require the function to have direct reporting lines to the board of directors a committee with audit responsibilities, or senior management not having lending authority, • Issue a comprehensive credit risk management guidelines for the banking industry. Consider below areas to be covered: <ul style="list-style-type: none"> ○ Rules/check points to ensure banks make credit decisions free of conflicts of interest. ○ Guidelines to assess risks of FX loans. • Require banks to prescribe in their credit policy that major risks exceeding a certain amount or percentage of the bank's capital, as well as risky exposures that are otherwise not in line with the mainstream of banks' activities, are to be decided by the Board or senior management. • Given that the descriptions of certain individual loan groups (A2 and A3; A4, A5 and A6) are similar, provide guidance to banks on the distinctive features of these groups.
Principle 18	<p>The CMF is recommended to:</p> <ul style="list-style-type: none"> • Establish explicit norms for collateral eligibility and valuation, that will involve haircut/ceiling requirements and minimum frequency for valuation depending on the nature of the collateral, • Develop/update supervision guidelines for banks' collateral valuation and monitoring processes, include this review in routine inspection programs (depending on supervision stance of the bank), • Provide guidance on definition, identification, and treatment of forborne exposures, ensure necessary safeguards to prevent banks using restructuring to avoid increase in provisioning, • Introduce minimum level of provisions expected from banks for problem loans depending on attributes of the borrowers or number of past due days of loans. • Ensure banks cancel or provision for accrued but not paid interests of impaired loans. • For estimating provisions, encourage banks to improve their internal models in group loans, develop advanced methods in individually assessed loans and address under provisioning issue in consumer loans.
Principle 19	<p>The CMF is recommended to:</p> <ul style="list-style-type: none"> • Prepare a regulation that elaborates on the implementation and monitoring of the business groups. • Align computation of limits with Basel standards (25 percent maximum and Tier-1 capital as the base for calculation).

Table 2. Chile: Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks (continued)

Reference Principle	Recommended Action
	<ul style="list-style-type: none"> • Develop/finalize reporting forms to monitor limits (business group limits, lending to foreign banks, individual limit for Chilean banks).
Principle 20	<p>The CMF is recommended to:</p> <ul style="list-style-type: none"> • Require banks to calculate related parties limit on a solo level. • Include lending to the consolidated subsidiaries in credit limits. • Explicitly require banks' exposures to related parties above certain amount to be approved by the board, • Make necessary changes in the regulatory framework that will enable the CMF to request related party loans be deducted from capital or to request for additional collateral.
Principle 22	<p>Authorities are recommended to:</p> <ul style="list-style-type: none"> • Deploy trained specialists to assess banks' stress test approaches and the mathematical integrity, • Ensure that an integrated risk management function is established in all banks that will oversee all risks.
Principle 23	<p>The CMF is recommended to:</p> <ul style="list-style-type: none"> • Consider limiting banks' exposure to IRRBB until pillar 2 requirements come into effect.
Principle 24	<p>Authorities are recommended to:</p> <ul style="list-style-type: none"> • Develop greater specificity for liquidity stress testing (severity, input assumptions, parameters etc.) to enable consistency across industry. • Request banks report liquidity stress testing results to the CMF and continuously review them as part of supervision process. • Impose regulatory limit for the NSFR ratio. • Expand written analysis during liquidity / funding risk examinations to capture the impact of and relation to other areas of the balance sheet, growth trends, asset quality, and management processes, etc. to support higher level conclusions.
Principle 25	<p>The CMF is recommended to:</p> <ul style="list-style-type: none"> • Recruit additional cyber security experts to monitor cyber security risks and conduct examinations on banks' management of cyber security risks. • Ensure that a bank's technological risk is assessed by an independent internal or external party.

Table 2. Chile: Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks (continued)

Reference Principle	Recommended Action
Principle 26	<p>The CMF is recommended to:</p> <ul style="list-style-type: none"> • Ensure that audit committees possess an appropriate balance of skills and expertise, at least one member be knowledgeable in accounting, audit and financial reporting. • Hold regular meetings with banks' audit committees whose frequency will be determined according to the risk profile and systemic importance of the bank. • Consider issuing a comprehensive guideline on sound internal control principles. • Request banks to have an adequately staffed, permanent and independent compliance function that assists senior management in effectively managing the compliance risks faced by the bank. Make sure the compliance function, <ul style="list-style-type: none"> ○ Advises the board and senior management on compliance issues ○ Monitors compliance with policies, procedures and reports to the management ○ Educates staff on compliance issues ○ should have the necessary stature, authority, independence, resources and access to the board ○ Directly reports to the board on compliance issues. • Set eligibility requirements for the Head of Internal Audit to ensure qualified and independent personnel fill the position. Require banks notify the CMF on appointment of Head of Internal Audit as well as his/her dismissal with the reasons of that decision.
Principle 27	<p>The Authority is recommended to:</p> <ul style="list-style-type: none"> • Make necessary legal changes to request external auditors report all matters that could be of material significance to the CMF, • Include regular meetings with the external auditors as part of the supervision process, • Be active in influencing the scope of an external audit, • Consider requesting banks' published statements to be signed by the Audit Committee members too. • Request external auditors control process of preparation of regulatory reports and opine on overall effectiveness of internal control.
Principle 28	<p>The Authority is recommended to:</p> <ul style="list-style-type: none"> • Further enhance bank disclosures by including information on the bank's remuneration policy and on all material entities in the group structure, • Regularly evaluate the timeliness and content of external audit / annual reports for compliance with regulatory parameters.

Table 2. Chile: Recommended Actions to Improve Compliance with the Basel Core Principles and the Effectiveness of Regulatory and Supervisory Frameworks (concluded)

Reference Principle	Recommended Action
Principle 29	<p>Authorities are recommended to amend the legal and regulatory framework in order to:</p> <ul style="list-style-type: none"> • have a sanction framework for AML/CFT that would enable the CMF to impose much more sizable fines, as needed. In addition, powers related to the possibility of suspending dividends, restrictions to asset growth, operating in certain business lines and others as detailed and factored in CP 11 would be important tools to better ensure compliance also with the AML/CFT framework. • incorporate regulatory provisions relative to relationships that turn into high risk; • explicitly refer to the need for banks to establish procedures that require high ethical and professional standards when banks are hiring staff. • require that outsourcing relationships take into account AML/CFT; • require banks to establish specific policies and processes to designate the compliance officer; • require banks to appoint a dedicated officer(s) to whom potential abuses of the banks' financial services (including suspicious transactions) are reported; • explicitly require banks to establish and follow clear policies and process for staff to report any problems related to the abuse of banks financial services • explicitly require banks to report to the CMF suspicious in cases where such activities/incidents are material to the safety, soundness or reputation of the bank; • require banks to develop their own internal policies and criteria for CDD beyond what is expressly prescribed in regulation; • have explicit provisions requiring dissemination within the bank as for to whom suspicious activities should be reported. <p>Authorities should consider requiring banks to include in their internal policies statements reinforcing that that internal communications in good faith should not be in anyway internally punished.</p>

I. Authority's Response

58. The Chilean authorities appreciate the work done by the IMF and WB, whose teams showed a high level of knowledge and experience. The mission was conducted virtually, which meant operational and coordination challenges that were successfully overcome thanks to the IMF, WB, and national teams' professionalism and flexibility.

59. We believe that the evaluation results carried out on the banking supervision and regulation process in Chile correctly reflect, in general, the level of compliance with the BCP. The Chilean banking system is healthy, the management of banks is framed within international

standards, and the CMF has legal powers and professional and expert staff to carry out its work. Additionally, we agree that the transition to Basel III should remain a priority.

60. We concur that the recent restructuring of the CMF, which put under the same umbrella the supervision of insurance, securities, and banks, will further strengthen the supervision of the whole financial sector. It will also help ensure regulatory standards and supervision to be better coordinated and consistent across sector-specific industries. Moreover, it will aid to improve coordination with BCCh on financial stability issues. In this sense, we also recognize that there is room for further strengthening the role of the CEF, particularly in coordinating the implementation of macroprudential policy.

61. Furthermore, we agree that coordination should include crisis management, particularly the need to develop a coordination framework with foreign authorities in handling crises situations.

62. Additionally, as recommended by the evaluators, we recognize the requirement for an enhanced statutory resolution regime that would facilitate the orderly failure of supervised entities (especially banks) and a full-fledged deposit insurance scheme. We also support the idea that CMF's organic law should incorporate proper legal protection to board and staff beyond legal defense and establish an independent and stable financing mechanism for the Commission.

63. The CMF considers necessary to improve the regulatory framework of financial conglomerates. Following this recommendation CMF has already approve a Manual for Conglomerates Supervision and perfected the regulation to include new instructions to the scope, exceptions and information systems for controlling the limit to the total of credits that banks can grant to persons or entities that belong to the same business group. We also agree that credit data must be improved in Chile.

64. We disagree with the opinion of the FSAP team that the CMF is constrained by an outdated/incomplete legal framework, which hinders the licensing process, although we see room for more detailed regulation in this area. We also strongly disagree on the evaluation that the corrective action framework is somewhat limited in scope and based on either breach of regulatory requirements or materialized indications of deterioration of the bank. The General Banking Act, recently modified in 2019, includes prospective measures and establishes that the CMF could ask for an early regularization plan if there is any indication of financial instability or poor management based on supervisory judgement. Indeed, early intervention comes earlier for systemic banks, given that the systemic requirement is compulsory, not a buffer. On top of that, the CMF could also designate a provisional administrator that in fact replaces the powers of the management and board of the bank, and CMF can impose higher provisioning recognition and impose restriction on new credit to related and non-related parties.

65. We agree that there are areas for improvement in the supervisory process, including overall board oversight of risk that would require banks to have an adequately staffed, permanent and independent compliance office and an integrated risk management function, both reporting directly to the board. Also, that CMF should issue credit risk management

guidelines for the banking industry, including a handbook of good practices, and that certain areas should be a priority, given increased vulnerabilities due to the pandemic, including strengthening standards for collateral valuation and developing liquidity stress test for banks. However, we disagree that there is not a holistic assessment of risks at the Supervisor, because RAN 21-13, issued in September 2021 is already in force. Even when a phase out has been considered for the progressive inclusion of new risks, there is an agenda known to the market. Said regulation also explicitly gives the board responsibility to understand the risks of new products and to define risk appetite and strategies, and this is evaluated by the supervisor.

66. We also strongly disagree that the regulatory framework does not provide guidance on definition, identification and treatment of loans that are subject to restructuring/refinancing.

Indeed, there are public guidance and definitions. What the team found were gaps, which is a different thing. The same is true for collateral valuation. Moreover, as of January 2022, the new Compendium of Accounting standards will enter in force to correct, among other things, issues on accrued interest.

67. Since the end of the mission, CMF has published several regulations that explicitly address gaps identified in this assessment. These include thresholds on identifying loans that will be evaluated individually, and the definition of a business group.

68. In addition, we would like to emphasize that as of December 2021 all capital requirement regulation for credit, market, and operational risks to implement the Basel Capital Framework is fully enforced. This regulation was not included in the assessment.

69. Authorities would like to clarify that all possible reasons for dismissal of commissioners are explicitly provided in the Organic Law of the CMF, other than a voluntary resignation. If any such situation should happen, it is also, by law, a public process.

70. All in all, the authorities welcome the exhaustive analysis carried out by the evaluators as well as the following recommendations. We are looking forward to implementing the recommendations that are not already addressed by the regulatory changes made in the last months.

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