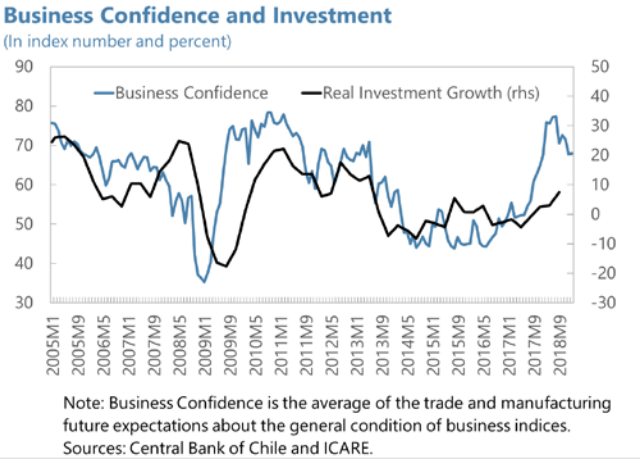
CONTEXT

1. Chile's economy remains grounded in strong fundamentals, solid institutional frameworks, and a sound track record of macroeconomic policies. Such attributes have helped the economy through the adjustment to sizable external shocks, given high openness and exposure to global developments. The new administration of President Sebastián Piñera, which took office on March 11, aims to reinvigorate investment, improve competitiveness, and boost economic growth through a series of structural reforms, within the context of five national agreements (*acuerdos nacionales*) with broad constituencies.

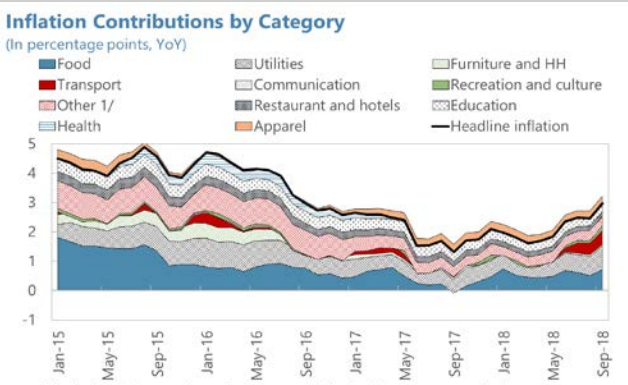
CHILE'S ECONOMIC RECOVERY GAINS MOMENTUM

2. The economy proved resilient through the prolonged slowdown. While several adverse shocks (e.g., related to copper, trading partner growth, and domestic policy uncertainty) affected economic activity in the recent past (see Selected Issues Paper), the economy proved its resilience, supported by expansionary monetary and fiscal policies as well as a free floating exchange rate regime, and avoided an outright recession. Nonetheless, per capita GDP growth averaged only 1 percent in the past four years (down from 4 percent during 1990-2013) and last year GDP growth reached only 1.5 percent, bottoming out in 2017Q1.



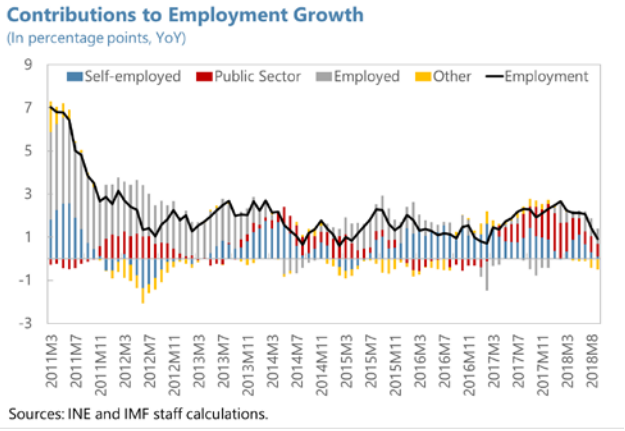
Note: Business Confidence is the average of the trade and manufacturing future expectations about the general condition of business indices.
Sources: Central Bank of Chile and ICARE.

3. Improved external conditions and lower domestic policy uncertainty have favored an economic rebound in the first half of 2018. Growth reached 5.3 percent yoy in 2018Q2, the highest since 2012Q3. The recovery has been supported by mining exports and improving consumer and business confidence, resulting in robust private consumption and buoyant investment (4.5 and 7.1 percent yoy in 2018Q2, respectively). Inflation has been close to the lower bound (2 percent) of the target range until May 2018, and has risen to 3.1 percent in September, partly driven by energy prices and the peso depreciation. However, core inflation remains subdued (2.1 percent in September).

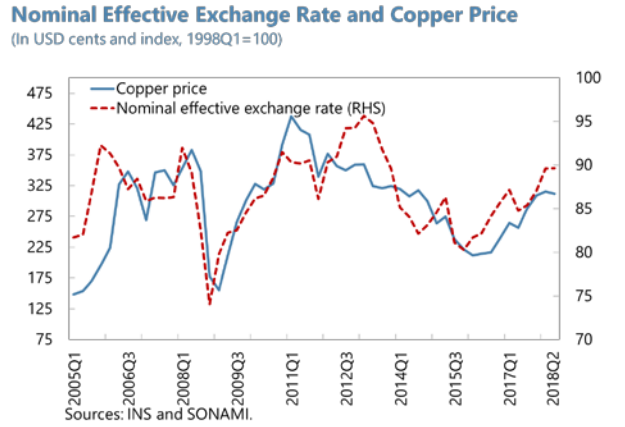


1/ Includes other goods and services, and alcoholic beverages and tobacco.
Source: INE.

4. Unemployment edged up, while the quality of job growth improved. The unemployment rate reached 7.3 percent in August 2018, as labor force growth outpaced employment. On a positive note, private-sector salaried jobs accounted for an increasing employment share, while contribution from public sector jobs and self-employed declined, which may in part reflect a reversal of the previous shift toward self-employment and public-sector jobs that helped keep unemployment low during the downturn. The remaining slack in the labor market is likely to have contributed to the protracted slowdown in real wage earnings growth, which continued its decline and was virtually null in July.



5. Terms-of-trade fluctuations have driven the current account and the exchange rate. The current account deficit narrowed from 4.1 percent of GDP in 2013 to 1.5 percent in 2017, helped initially by a peso depreciation, then by a strong compression in investment-related imports and a rebound in copper prices that led to an 11 percent increase in the terms-of-trade in 2017. Import growth increased strongly since the last quarter of 2017, led by import-intensive business investment.



6. Monetary policy remains accommodative. The central bank cut policy rates by a cumulative 100 bps from January to May 2017 and has kept the rate at 2.5 percent until October 2018, when it raised the rate to 2.75 percent. The monetary policy stance was mildly accommodative from mid-2017 till early 2018—given the marked growth slowdown and the deceleration in inflation—but since mid-2018 it has become more accommodative with the pickup in economic activity and inflation.

7. After years of consistent deterioration, the fiscal balance is at a turning point. The structural deficit in 2017 was 2 percent of GDP, 0.4 percentage point wider than the structural deficit in 2016 on comparable parameters basis[1] (rather than 0.25 percentage point lower as set in the fiscal targets for 2017). The headline fiscal deficit in 2017 was 2.8 percent of GDP, wider than the structural deficit because of the considerable negative output gap. The fiscal deficit in the first half of 2018 was reported at 0.1 percent of GDP, close to the first-half outcomes registered over the past four years. Following the sovereign credit rating downgrades by Fitch and Standard & Poor's in 2017Q3,

[1] This methodology was used since 2015 to compare structural balance results across years and was replaced in 2018 by the pre-2015 methodology that calculates the structural balance using the parameters in the budget for the corresponding year.

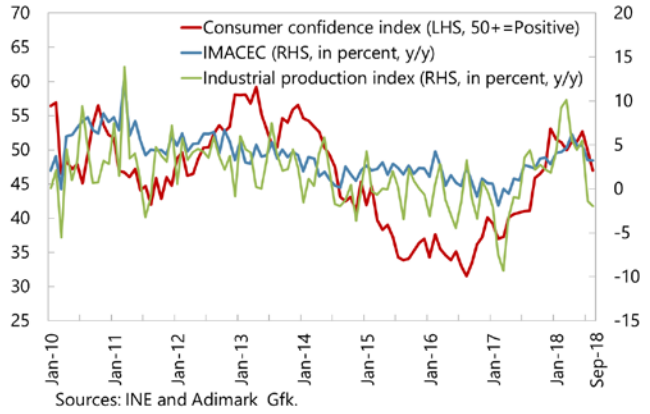
Moody's also lowered Chile's rating in July 2018, arguing that the planned fiscal consolidation would not be sufficient to reverse the significant debt increase that occurred over the past decade.

8. Financial conditions have remained stable and are roughly neutral. Despite increasing distress in emerging markets lately, Chile's CDS and bond spreads have remained stable, and are generally lower than regional peers. House prices and household mortgage growth slowed down in 2016-17, in part due to the effect of a regulation tightening bank provisioning on high LTV-loans and the introduction of VAT on new houses in 2016. Corporate debt remains high by international standards (see Selected Issues Paper).

A. Outlook and Risks

9. The growth momentum is continuing but at a slower pace relative to the strong performance of the first half of 2018. After the significant rebound in 2018H1, GDP growth is expected to slow down (partly due to a base effect from solid growth in 2017H2) in line with the recent softening of economic activity and confidence. Accordingly, growth is projected at 4 percent in 2018. As the output gap closes and monetary policy normalizes, GDP growth should converge to its medium-term potential estimated at about 3 percent (based on the staff projections and historical productivity growth over the past two decades). The unemployment rate is projected to move toward its neutral rate of around 6 percent, as slackness is reabsorbed, participation picks up, and the quality of job composition improves.

IMACEC, Consumer Confidence, and Industrial Production
(In percent and index number)



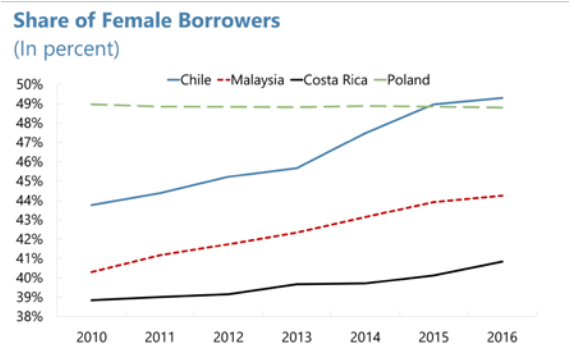
Sources: INE and Adimark Gfk.

10. While headline inflation is close to the target level, core inflation remains low. Headline inflation rose to 3.1 percent in September 2018, reflecting higher fuel prices, the peso's recent depreciation and the closing of the output gap. However, core inflation is picking up more slowly, partly dragged down by residual slackness in the labor market (as also suggested by the slow wage growth), and the weakening of economic activity since mid-2018.

11. The current account deficit is expected to widen slightly as the economy expands. Staff projects a decline in the goods trade balance (from 2.9 percent in 2017 to 2.0 percent in 2018 and 1.6 percent of GDP in 2019) due to a strong increase in imports, largely related to the investment recovery, and a terms-of-trade worsening. In turn, the decline in the trade balance should result in a widening of the current account deficit to 2.5 and 2.7 percent of GDP in 2018 and 2019, before narrowing to about 2 percent of GDP over the medium term. Staff assesses Chile's external position and exchange rate to be broadly in line with medium-term fundamentals and desirable policies (Annex II).

12. Risks appear balanced (Risk Assessment Matrix, Annex V). *External risks* stem from both financial and trade sources. Rising protectionism could lead to further declines in copper prices, denting fiscal revenues and growth prospects. A sharp tightening of global financial conditions, notably from a faster-than-expected monetary tightening in the U.S., could pass through onto domestic rates, thereby dampening growth. Weaker-than-expected trading partners' growth (especially China) would affect copper and other exports. Domestic *upside risks* may result from a stronger-than-expected rebound in investment, including due to recently-announced structural reforms. Domestic *downside risks* could arise mainly from new cyber-attacks and high leverage in the non-financial corporate sector and increasing household debt (see Selected Issues Paper). Nonetheless, staff and authorities agree that these latter risks are mitigated from the fact that such leverage is associated either with debt to parent companies or long maturity and exchange rate hedging, as well as from the recovery in economic activity and expected improvement in the labor market.

13. The financial sector is healthy and resilient, but risks remain especially via macro-financial linkages. The banking system is generally well-capitalized at present and non-performing loans remain low at about 2 percent of total loans, notwithstanding the prolonged economic slowdown. Going forward, banks will need to increase capital to meet Basel III minimum solvency requirements in line with the new banking law, and higher global rates will pass through onto local rates; however, better economic prospects should lower credit risks. The planned pension reform could provide higher long-term stable funding for banks and more room for credit expansion, though possible risks from limited absorptive capacity may arise. In recent years, Chile significantly closed the financial access gender gap, via 'simplified deposit accounts' requiring only national identification and no employment history.



Source: IMF 2018 SDN "Women in Finance: A Case for Closing Gaps."

Authorities' Views

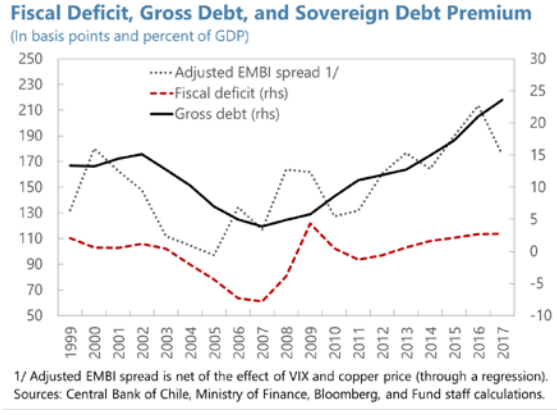
14. The authorities (the Central Bank and the Ministry of Finance) expect the economy to grow 4-4½ percent in 2018 and 3¼-4¼ percent in 2019, largely owing to a rebound in private investment. They estimate trend growth over the medium term at 3½ percent. The Ministry of Finance estimates that the effect of planned reforms (which is not included in the staff projections) might increase trend growth to 4 percent. In terms of risks, the authorities concurred with staff's view that downside risks mainly stem from the uncertain external environment, underlining the importance of global trade tensions and China's growth performance. They consider spillovers from countries in the region to be rather limited at present. They do not see significant concerns originating from corporate sector debt given the extent of hedging mechanisms. Moreover, in light of Chilean firms' sizeable foreign-based operations, they believe measuring indebtedness as a percentage of domestic GDP underestimates balance sheet strengths.

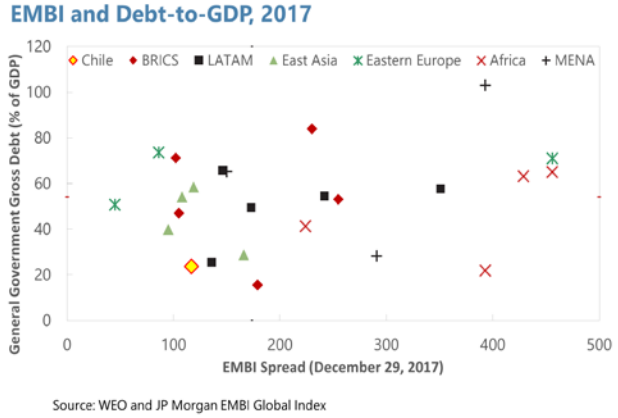
MACROECONOMIC POLICIES

A. Fiscal Policy

15. While Chile's fiscal position deteriorated over the past decade, it still remains solid. Between 2007 and 2017, gross debt rose by nearly 20 percentage points of GDP, accompanied by an increase in spreads. The recent sovereign downgrades point to a deterioration of market perceptions of Chile's debt position. Nonetheless, the public net-debt position (about 5 percent of GDP in 2017) remains strong by international standards and provides some fiscal space to smooth growth shocks, support potential growth, and continue social inclusion programs. Such flexibility could only be exploited to the extent that market credibility has been adequately strengthened.

16. The announced gradual fiscal consolidation should enhance policy credibility and stabilize debt over the next few years. The fiscal targets over the next four years entail an improvement in the structural balance by 0.2 percent of GDP per year. The consolidation path aims to strike a balance between addressing spending challenges and stabilizing debt over the medium term. In the staff projections, the authorities' consolidation plans will be sufficient to stabilize debt as a share of GDP by the early 2020s (see Annex IV).



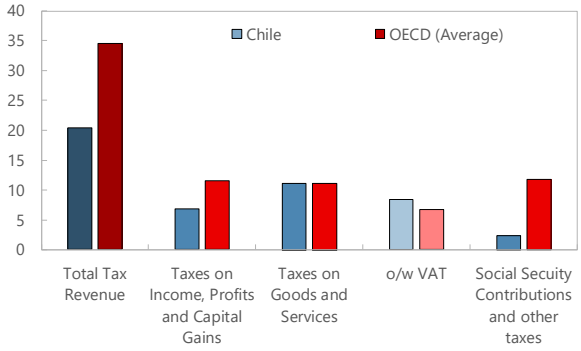


17. The overall fiscal deficit will narrow substantially this year. The authorities have announced a series of austerity measures to cut government expenditure by US$4.4 billion between 2018 and 2022 to make room for the government's priority spending. At the same time, the authorities indicated they inherited unbudgeted expenditures (mainly health-related) in the amount of US$5.6 billion over the same period, now included in the baseline. In 2018, staff expects the fiscal balance to improve substantially vis-à-vis 2017 by about 1 percentage point of GDP to minus 1.7 percent of GDP (after deteriorating since 2013), due to an increase in actual mining revenues and a decline in expenditure as a share of GDP. As structural revenues (in percent of GDP) decline due to the narrowing of the output gap, meeting the structural balance target requires lower expenditure to GDP (see Annex III for further details). Overall, the 2018 staff fiscal projections are similar to the authorities' ones, in percent of GDP. In 2019, staff expects the fiscal balance to worsen slightly with

respect to 2018 (to about 2 percent of GDP), despite a modest decline in expenditure as a share of GDP, as the decline in actual revenues (associated with a lower copper price) is not reflected in structural revenues (due to the large increase in the reference long-term price for copper). The authorities expect a somewhat smaller deficit (as percent of GDP) in 2019, mainly owing to different structural adjustments. The 2019 budget emphasizes a focus on enhancing jobs, education, health, and pensions. Over the medium term, the authorities need to ensure adequate provision is made for such items. On the basis of the staff revenue projections, meeting the structural balance targets would require constraining expenditure below the committed expenditure path announced in the 2019 budget.[2]

18. The authorities presented a proposal that includes measures to streamline the tax system to make it more efficient and pro-growth. The current administration announced a broad tax reform, encompassing the return from a combination of semi-integrated and integrated tax system to a single and fully integrated system, broader definition and simplified record keeping requirements for SMEs, accelerated depreciation, a more favorable tax treatment to withdraw retained earnings (from *FUT*), a streamlined tax system, a tax on digital services, mandatory electronic invoicing, strengthened toolkit for the tax authorities, faster reimbursement of VAT, and higher VAT incentives on new housing, among others. The tax integration should enhance efficiency with respect to the existing system, by simplifying tax reporting and removing significant differences in taxation of Chileans investing locally and abroad, as well as across foreign investors in Chile (as these differences relate to the partial refundability of the corporate income tax within the semi-integrated system). At the same time, integration will lower the effective personal income tax (PIT) from business activity (by about 9 percent for firms in the semi-integrated system), which together with accelerated depreciation and faster reimbursement of VAT should overall spur investment and growth. The authorities should take into account the OECD (2018, Tax Challenges Arising from Digitalization) recommendations when designing the new tax on digital services.

Source of Tax Revenues, 2016
(In percent of GDP)



Source: OECD Stat.

19. It will be essential to ensure that the final outcome of the tax reform is equitable and funded. In order to offset the income inequality implications of lowering the effective tax rate on business activity and to contain tax evasion and avoidance, the authorities are encouraged to consider alternative or complementary options, such as strengthening the tax administration, raising the top marginal PIT rate, and introducing a final flat withholding dividend tax. The authorities expect the package to be sufficiently funded, despite the expected loss in revenue from integration (estimated by the authorities at about 0.2 percent of GDP). However, the large positive revenue gain assumed from the electronic invoicing will require significantly strengthening tax administration.

[2] The authorities' revenues projections are higher than staff's projections (by about ½ percent of GDP in 2018 and 2019, and over 1 percent of GDP in 2020-2023), as they are based on higher GDP projections and include the estimated effect of planned reforms.

Additional revenues could be raised if needed by expanding the tax base via: a) a reduction of special tax regimes for income tax (for example, a better screening of the use of *renta presunta*); b) an extension of VAT coverage to professional services; and c) a reassessment of excise taxes (for example, gradually aligning the diesel with gasoline tax).

20. The authorities proposed to enhance the fiscal council and could consider embedding a solid anchor in their fiscal framework. With the aim to strengthen the institutional framework on fiscal responsibility, the authorities' proposal envisages a new Autonomous Fiscal Council composed of five members nominated by the President and approved by the Senate. The new council will have own resources and the mandate of the members will not coincide with the government term. It will be tasked, among other things, with conducting analyses, evaluating the calculation of the structural revenues, monitoring the compliance with the structural balance targets, and proposing mitigating measures. More broadly, embedding a solid medium-term anchor (such as an adequate debt ceiling or structural balance) in the fiscal framework would strengthen predictability and credibility, thus helping balance out social objectives with fiscal discipline (see IMF 2018, SDN 18/04, and Selected Issues Paper).

Authorities' Views

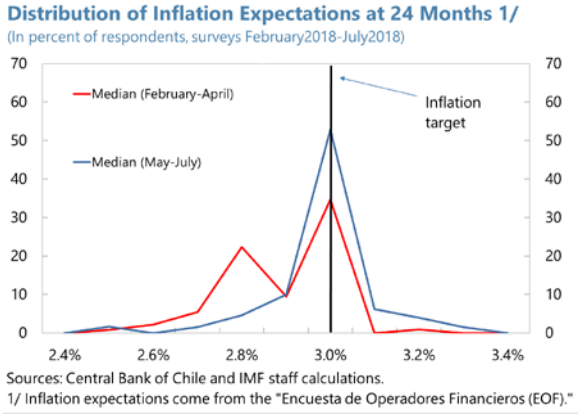
21. The authorities reiterated their strong commitment to meet the recently-announced fiscal targets and stabilize central government debt. The authorities also expressed a strong belief that the tax reform is more than funded and clarified that most of the revenues will come from the reduction of tax evasion via the introduction of electronic invoicing which will be enforced via electronic cross-checking in addition to the induced effects of the tax reform on fiscal revenues through higher economic growth. They believe tax evasion has been significantly reduced via previous legislation on electronic billing, and that income inequality is likely to decline due to strong GDP and employment growth as well as the broad range of social programs in the overall government agenda.

B. Monetary Policy

22. Monetary policy remains accommodative. The real policy rate remains below the real neutral rate estimated at between 1 and 2 percent. In September, the Central Bank upgraded inflation projections and now projects headline (core) inflation at 3.1 (2.7) percent y/y by the end of 2018, very close to the target of 3 percent; at the same time, it revised its output gap estimate for 2018 to close to zero. Supported by the strong inflation-targeting framework and monetary policy record, inflation expectations in Chile have been better anchored than in other emerging markets as well as the average of advanced economies with inflation targeting regimes (text figure). Also, they have been rapidly converging toward the target in recent months.

Expected Real Interest Rate and Real Policy Rate
(In percent)

Note: 1-year ahead interest rate is calculated as the difference between the interbank swap rate and the expectation of inflation for the relevant periods; Real policy rate is calculated as the monetary policy rate minus headline inflation.
Sources: Central Bank of Chile and IMF staff calculations.

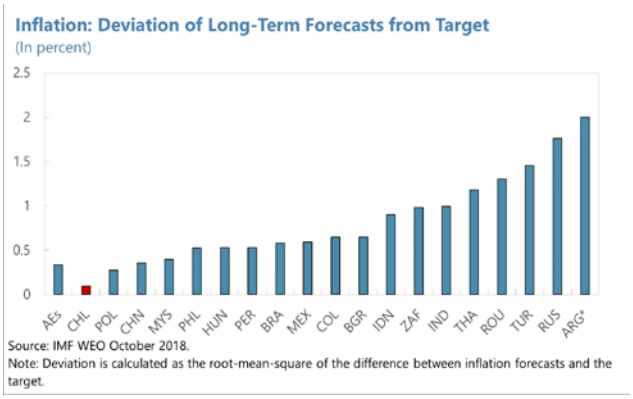


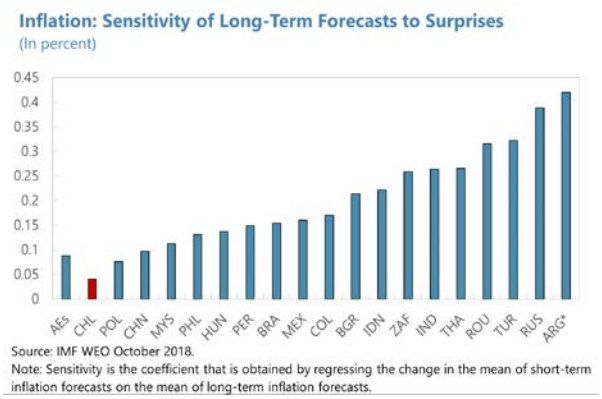
23. Monetary policy normalization should be undertaken cautiously. Despite the pickup in economic activity since 2017 and in headline inflation since 2018Q2, the tightening cycle should be guided by evidence of a persistent convergence of inflation towards the target that is supported by a broad set of indicators. On the one hand, the pickup in economic activity and headline inflation point to the need of a fast tightening pace. On the other hand, the large gap between headline and core inflation (mainly driven by factors such as energy prices and the peso depreciation), the remaining slack in the labor market, weak earnings growth, and the recent signs of moderation in economic activity (notably industrial production) and confidence constitute key additional factors to determine the pace of the tightening cycle. In this context, the evolution of external and domestic risks would need to be given careful consideration. Staff expects a gradual convergence of the policy rate toward its medium-term level (estimated between 4 and 5 percent), which—on the basis of current expectations—should occur by 2020.

24. The revamped communication strategy by the central bank is welcome. The authorities aligned the release of the Monetary Policy Report (4 times a year) to the policy meetings, introduced regular press conferences, and reduced the number of meetings from twelve to eight (a frequency in line with many other central banks). Staff expects these changes to further enhance the already strong central bank's communication policy. Staff analysis (Pescatori 2018), indeed, shows that the past communication framework (thanks to its transparency and the clarity of its monetary policy report) has improved over time and has generally delivered a highly-predictable monetary policy conduct (especially after the great financial crisis). Predictability, in turn, has helped minimize unwarranted financial market volatility and improved monetary policy effectiveness, inducing an adequate management of private sector expectations.

Authorities' Views

25. The authorities broadly concurred with staff's assessment. However, the Central Bank considers that the labor market has been more dynamic than implied by official statistics, due to some rapid demographic changes that have been observed. They also expect a more visible pickup in core inflation in the rest of 2018, partly due to 2017-base effects, and estimate a smaller range for the neutral policy rate (4-4½ percent).



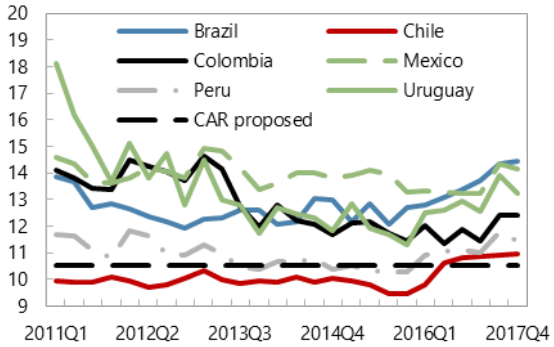


FINANCIAL SECTOR

A. The New Banking Law and Financial Sector Stability

26. The new general banking law will bolster the sector's resilience, but additional efforts are necessary. [3] The new law is an important step forward towards enhancing the resilience of Chile's financial system. It aims at closing the gap with Basel III minimum capital requirements, providing new financial stabilization tools, and improving the governance of supervisory and regulatory agencies. Banks have six years to increase the minimum total solvency requirement to 10.5 percent from 8 percent of risk-weighted assets (RWA). The law also mandates a capital surcharge of up to 3.5 percent of RWA for systemically-important domestic banks. The authorities estimate the capital needs at about 0.5 percent of GDP (excluding *Banco del Estado*), which appears manageable without posing undue constraints to credit supply under the baseline scenario. In addition, the authorities already passed a regulation imposing on banks a minimum liquidity requirement equivalent to 60 percent of the liquidity coverage ratio, gradually increasing to 100 percent over 5 years.

Regulatory Tier 1 Capital
(In percent of risk-weighted assets)



Sources: Haver Analytics; IMF, Financial Soundness Indicators database; and national authorities.

27. The law provides additional macro-prudential tools. It gives the central bank the authority to set counter-cyclical capital buffers with the aim of increasing the resilience of the banking system. The financial market commission (CMF), recently created, will set capital surcharges

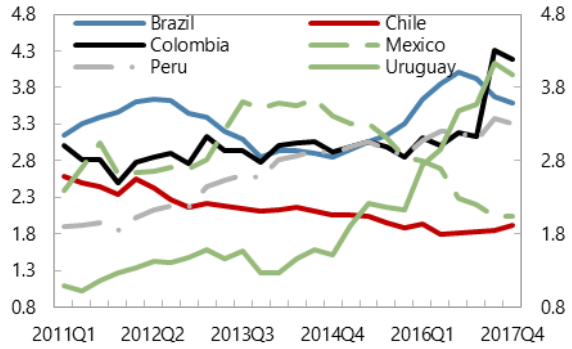
[3] The law allows the authorities to move forward on the implementation of the Basel III framework, however, it does not incorporate other important recommendations of the 2011 FSAP with respect to powers for consolidated supervision and the resolution regime.

for systemically-important institutions. In both cases, however, methodological and governance details are still left to be clarified.

28. The newly established CMF, once fully implemented, will put the regulator in a better position to supervise conglomerates, reduce data gaps, and offer the potential for exploiting synergies, although room for further improvement remains. The CMF now incorporates the former securities and insurance superintendence (SVS) and will incorporate the banking superintendence (SBIF). Further enhancements would still be needed in certain areas of the institutional set-up, i.e. autonomy, governance, and legal protection of staff. The planned integration of banking supervision into the CMF (to be realized over the next 12 months) will be a significant organizational challenge, also considering that the CMF itself is still settling into its new governance structure (transitioning from a single person Superintendent model to a collegial Board). The authorities have asked technical assistance from the IMF on these matters.

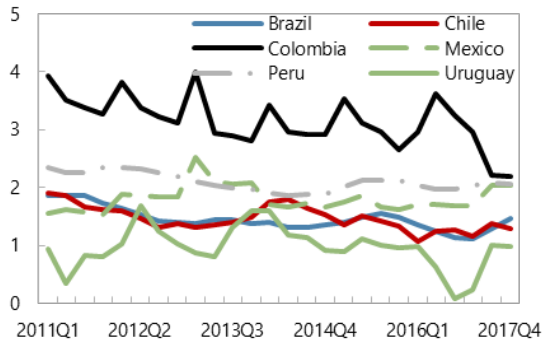
Chile: Selected Banking Indicators

Nonperforming Loans
(In percent of total loans)



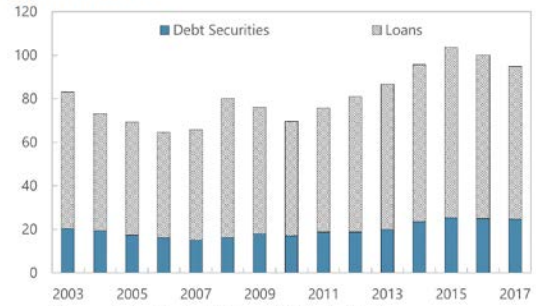
Sources: Haver Analytics; IMF, Financial Soundness Indicators database; national authorities.

Return on Assets
(In percent)



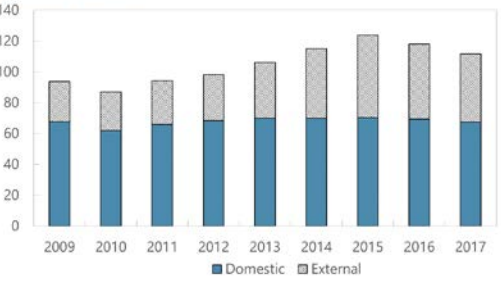
Sources: Haver Analytics; IMF, Financial Soundness Indicators

Non-financial Corporate Debt
(In percent of GDP, EOP)



Sources: Central Bank of Chile and IMF staff estimates.

Non-financial Corporate Debt
(In percent of GDP, EOP)



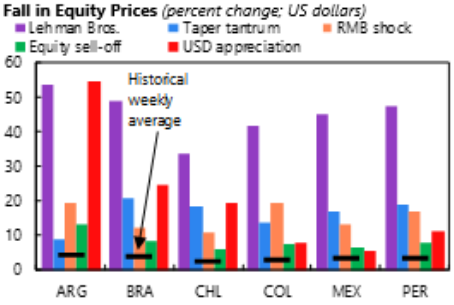
Source: Central bank of Chile and IMF Staff estimates.

Box 1. Chile's Resilience to External Financial Shocks[1]

Chilean assets have managed to differentiate themselves from other financially-integrated Latin American economies, showing higher resilience and overperformance, both in normal times and in periods of market stress, as evidenced by the episodes of heightened market volatility earlier this year (that is, the global equity sell-off in early-February and the generalized U.S. dollar appreciation more recently). This happened despite both a high degree of co-movement of financial asset prices and capital flows with peers and common vulnerabilities to commodity price swings. Chile's strong resilience is in large part attributable to a relatively strong institutional setting, credibility of the macroeconomic framework, and a free-floating exchange rate regime.

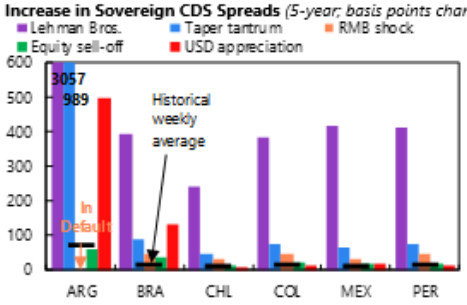
The impact of global financial distress episodes is generally smaller in Chile than in peers...

Fall in Equity Prices *(percent change; US dollars)*



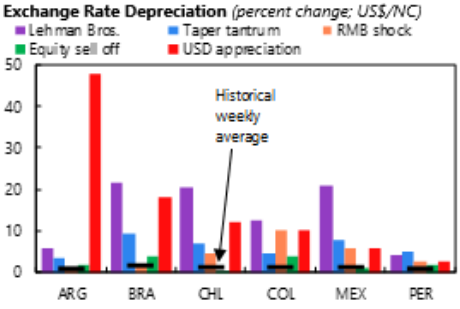
... both in terms of equity market reaction and interest rate spreads...

Increase in Sovereign CDS Spreads *(5-year; basis points change)*



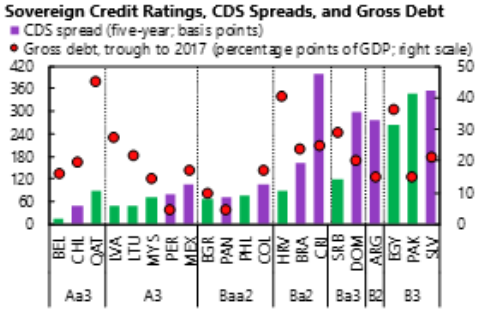
... while the exchange rate plays a role as a shock absorber, but without excessive reaction.

Exchange Rate Depreciation *(percent change; US$/NC)*



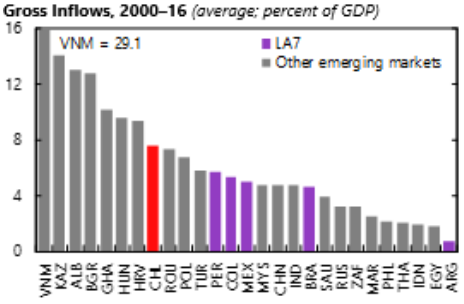
Chile also enjoyed favorable market perceptions, significant borrowing space, and low funding costs...

Sovereign Credit Ratings, CDS Spreads, and Gross Debt



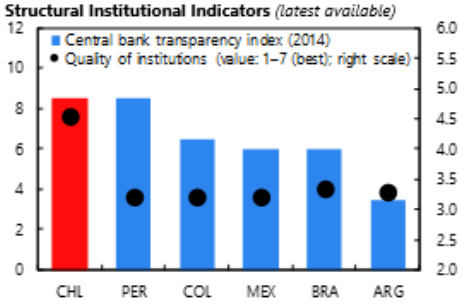
... attracting high levels of capital since the turn of the century.

Gross Inflows, 2000–16 *(average; percent of GDP)*



This likely reflects the relatively strong credibility and quality of Chile's institutional setting.

Structural Institutional Indicators *(latest available)*



Sources: Bloomberg Finance L.P.; Dincer and Eichengreen (2014); Haver Analytics; IMF, Balance of Payments Statistics Yearbook database; IMF, World Economic Outlook database; Moody's Investor Service; Thomson Reuters Datastream; World Economic Forum, *2017–18 Global Competitiveness Report;* and IMF staff calculations.

Note: Time horizon of events: Lehman Bros. (9/15–10/24/2008); Taper tantrum (5/2–6/25/2013); RMB shock (8/10–8/24/2015); Global equity sell-off (1/31–2/9/2018); U.S. dollar appreciation (4/16–8/30/2018). The index of central bank transparency covers five categories and does not control for the quality of central bank publications, hence is subject to uncertainty around the reported transparency scores; it reflects relative (and not absolute) performance. The quality of institutions is based on the efficiency and the behavior of individuals, firms, and governments as well as the legal and administrative framework within which they interact; WEF makes efforts to validate source data, although some data may be outdated or imperfect proxies.

1/ Prepared by Carlos Caceres and Genevieve Lindow (both WHD).

29. Some of the limitations of the current legislation will still need to be addressed in the future. These include:

- *Resolution regime*. In line with the 2011 FSAP, staff recommends strengthening the early intervention regime, revising and expanding the triggers for resolution, and broadening the powers and tools available to the resolution authority (CMF), including the power to override shareholders' rights.

- *National deposit insurance scheme*. The current system, where checking and sight deposits at banks are 100 percent guaranteed by the Central Bank while personal term-deposits are 90 percent guaranteed by the government up to a limit, creates a contingent fiscal liability. Staff recommends establishing a national deposit insurance institution funded by member banks.

- *Coordination among supervisors*. Staff recommends strengthening the supervisory framework and inter-agency coordination and cooperation for the supervision of *cooperativas* and *cajas de compensación*.

- *A credit registry*. There is only partial sharing of borrower's information among non-bank lenders and between banks and non-banks. Staff recommends establishing a consolidated public credit registry across the entire financial industry, while adequately managing the delicate balance of consumers' rights versus financial data sharing.

- *Oversight of conglomerates*. A more effective oversight of conglomerates and the non-banking sector is still needed. The new banking law is extending bank exposure limits towards own conglomerate (30 percent) to any conglomerate; this is a positive step, and exposure limits to the own conglomerate (which is riskier) should be tightened further. Moreover, the supervisors should be given the power to bring financial holding companies and affiliates in the supervisory sphere.

- *Banco del Estado*. Staff recommends a gradual capital injection into *Banco del Estado*—government-owned bank and main provider of loans to SMEs—to address an estimated capital shortfall of about 0.5 percent of GDP, as well as an upgrade of its corporate governance, a review of operational risks, and measures to increase its efficiency.

Authorities' Views

30. The authorities agreed with the staff suggestions on the agenda beyond the recently approved banking law. They stressed that in the next few years they plan to work on developing a resilience agenda that would tackle issues related to the resolution framework, credit unions (*cooperativas*), and supervision of conglomerates. The authorities have requested a Financial Sector Assessment Program from the Fund, scheduled for early 2020. The recapitalization of Banco del Estado is planned for 2020-2024.

B. Cybersecurity and FinTech: Challenges and Opportunities

31. FinTech is a rapidly growing business in need of regulation. Chile is relatively advanced among Latin American peers in terms of per capita FinTech investment and activity, especially in crowdfunding and peer-to-peer lending. Santiago's stock exchange launched the first blockchain system for securities lending in Latin America, designed to reduce transaction costs, strengthen transparency, and increase market participation. However, most FinTech companies still operate in a grey area outside regulatory perimeters. The key challenge for the regulator and legislator will be to strike the right balance between promoting innovation and efficiency on the one hand and protecting the integrity and stability of the financial system, safeguarding consumers and investors, and combating tax evasion, money laundering and terrorism financing on the other hand. Staff encourages the authorities to speed up ongoing efforts to tackle the capacity, regulatory and legal challenges, based on international experience.

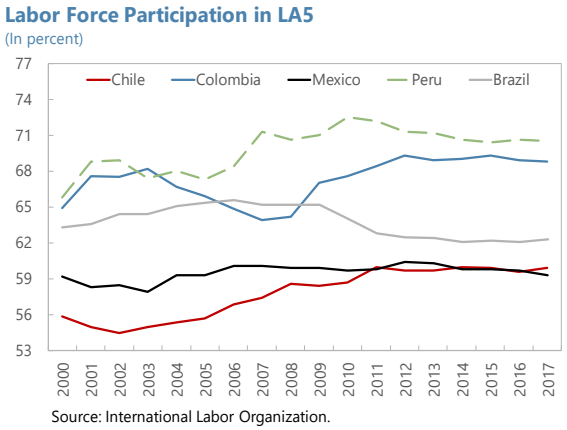
32. Cybersecurity needs to be strengthened. A series of important cyberattacks affected the financial system in recent months. While these incidents did not negatively affect financial stability, they likely point at regulatory gaps and underinvestment in cybersecurity, which may affect market confidence if left unaddressed. The authorities' swift reaction with requesting TA from the Fund, assessing regulatory gaps, and introducing regulations dedicated to cybersecurity demonstrates a strong commitment.

Authorities' Views

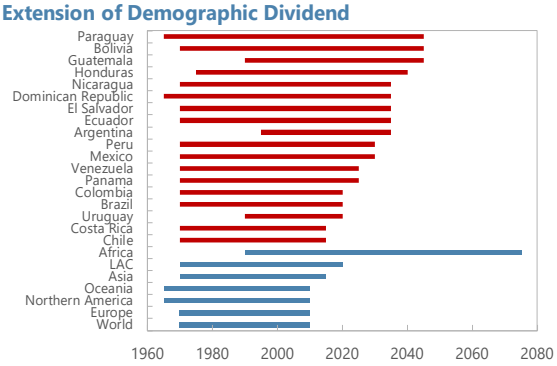
33. The authorities are preparing cybersecurity legislation and planning to expand the regulatory perimeter of FinTech using international experience. The authorities acknowledge the importance of improving the cybersecurity framework to incentivize private-sector investment in this area and are preparing new cybersecurity legislation aimed at enhancing information sharing, detection, and response. The Ministry of Finance and the CMF announced in May 2018 that they will be designing a FinTech regulation with a broad reach, encompassing cryptoassets, crowdfunding, and a flexible approach to engage the private sector, while the Central Bank announced the creation of a Technological Observatory to enhance knowledge, coordination, and information sharing with the FinTech community in Chile and abroad.

TRANSITIONING TO ADVANCED ECONOMY STATUS

34. Higher growth in a more diversified and inclusive economy is a medium-term challenge. Demographic trends are putting downward pressure on labor force participation, while the lack of diversification keeps the economy dependent on mining. At the same time, income inequality is high, redistribution policies are limited (the 2015 post-tax-and-transfers Gini index is 0.13 above the OECD average) and social mobility is low, in part due to uneven distribution of skills and access to high-quality education. Our baseline medium-term per capita growth, of about 2 percent, would imply a very slow convergence to AEs' income levels. To meet the authorities' goal of reaching an advanced-economy status will require significant efforts to diversify and increase productivity.



Source: International Labor Organization.



Note: The bars depict the period in which the total dependency ratio (Population <15 + Population >64/Population 15–64) is falling.
Source: IDB, 2016 based on United Nations, 2015; and United Nations, 2017.

35. Pension reform remains urgent. Chile's pension system—based on privately-managed funded schemes and rooted in sound principles—has helped develop capital markets and reduced fiscal risks. However, the system is not delivering adequate benefits for a large share of retirees (low replacement rates). The new administration is considering a comprehensive reform that aims to increase future pensions through higher mandatory contribution rates, raise current pensions with a focus on the solidarity pillar, and introduce new long-term care insurance. They are also considering options to postpone the retirement age, differentiate pension supplements by age and gender, and enhance incentives for voluntary pensions. At present, staff considers appropriate to complement the increase in contribution rates with a gradual equalization of retirement ages for men and women (possibly contingent on life expectancy and employability), and to enhance the solidarity pillar via budget resources. In August, the authorities unveiled a proposal to expand mandatory pension and social security coverage to self-employed workers providing professional services, which includes an option for a gradual increase in contributions.

Chile: Median Replacement Rates (in current system)

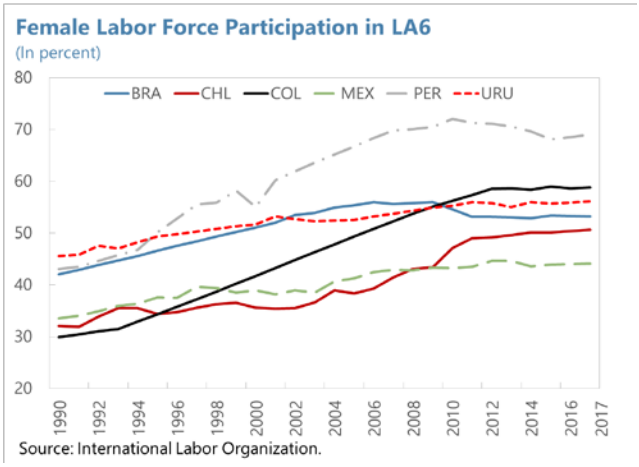
	Total	Men	Women
	(in percent of average salary over last 10 years)		
Actual replacement rates (2007-14)			
Self-financed pension (*)	34	48	24
Self-financed pension + public benefit (APS)	45	60	31
Projected replacement rates (2025-35)			
Self-financed pension (*)	15	24	8
Self-financed pension + public benefit (APS)	37	41	34

(*) Obtained from individual pension savings accounts.
Source: Mesa-Lago and Bertranou (2016) based on data from CAPSP (2015).

36. Streamlining business regulation is essential to raise investment, productivity and competitiveness. The existence of numerous and complex regulations and permit procedures amplifies uncertainty, slows down investment activity, and reduces competitiveness. The 2018 OECD Economic Survey suggests that complex regulations put Chile at a disadvantage relative to OECD-peers, including due to burdensome notary procedures. Building on progress with requirements to

start a business and e-registration, there is scope to streamline procedures through a single contact point and improve coordination among license-issuing institutions. In this context, the recently announced government's "pro-investment agenda" with twelve core measures, coupled with the establishment of a Sustainable Projects Management Office (GPS) and a Productivity Office (OPEN) and the proposed legislation to streamline and lower cost of notary services, focus on addressing key regulatory bottlenecks, reducing red-tape and business costs, facilitating investment, and enhancing firm productivity. Strengthening competition, particularly in the maritime sector, as well as improving market access (including to finance) for new and small firms, are likely to yield productivity dividends.

37. Labor market measures need to focus on reducing legal uncertainty and increasing flexibility. The labor law adopted in August 2016, which aimed at reforming labor negotiations, has created some legal uncertainty about the form of collective negotiations and the employees' obligation to provide minimum services during strikes. With the aim to lower uncertainty, the Labor Directorate issued an opinion (*dictamen*), clarifying that negotiating groups can also conclude labor agreements with employers, which is now being challenged by labor unions through the judicial system. Increased labor market flexibility, e.g. by reducing firing costs (severance payments and legal procedures) as well as incentivizing the use of flexible employment contracts (on hours, timing, and workplace) along the lines of the authorities' recent telework proposal, would help increase job creation in the formal sector, and facilitate labor mobility toward well-performing sectors. There is a need to revamp and target both training incentives and active labor market policies toward the unemployed workers who are most likely to benefit from them. Reducing the minimum contribution period for unemployment benefits eligibility would help the adjustment of workers with precarious jobs. The proposal to fund universal childcare through contributions by all employers would lower female hiring costs and boost female employment. Continued assessment of labor market policies will help prioritize resources and strengthen their impact.



38. Enhancing human capital and innovation capacity is key to achieve advanced-economy status. Building on recent progress in education coverage, policies need to focus on improving education quality. In international education assessments (e.g. PISA), Chilean students score better than Latin American peers, but significantly below OECD countries. In addition, while higher education is among the best in the region, the share of engineering graduates is among the lowest in Latin America, which may constrain the ability to compete and diversify into new technologies and knowledge-based economy (see Selected Issues Paper). Education priorities also include continued quality assessments and linking teacher performance to student achievements. There is space to enhance R&D and innovation capacity, including through streamlined incentives schemes, as Chile's spending on R&D and innovation, particularly by the business sector, is substantially lower than OECD-peers.

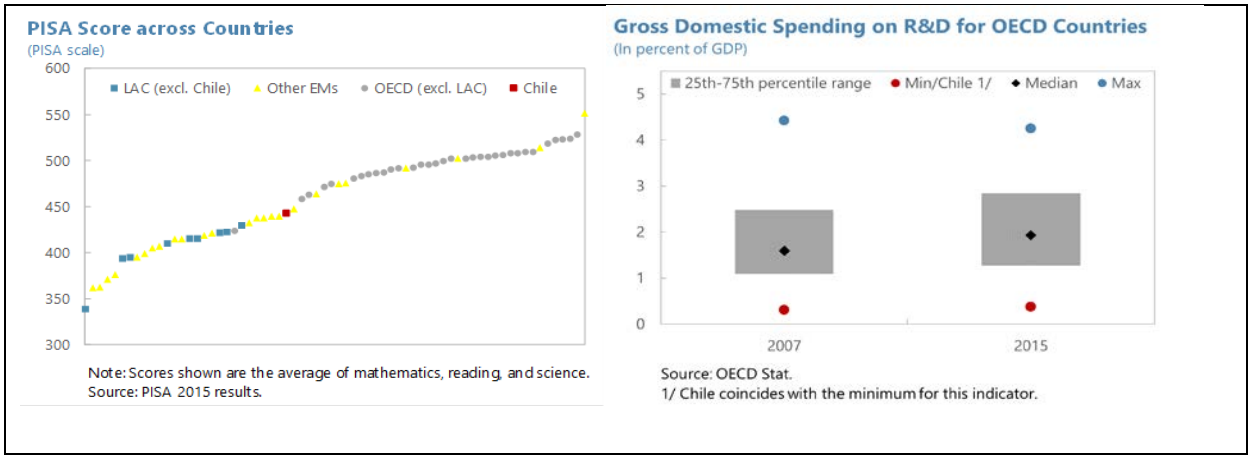
Chile: Selected Innovation Indicators (2017-2018)

(percentile rank; higher means better score)

Indicator	Chile	Brazil	Colombia	Mexico	Peru	Uruguay
Innovation capacity	76	73	89	70	113	101
Quality of scientific research institutions	43	77	64	46	105	61
Company spending on R&D	99	62	89	77	123	105

Sources: World Economic Forum (WEF), Global Competitiveness Rankings.

39. Specific measures could be undertaken to address obstacles to growth of SMEs. Small and medium firms—which have the potential to contribute to economic diversification—would benefit in particular from improved access to working capital (via elimination of provider payment delays, facilitating the portability of collateral across lenders, and promoting development of a joint-venture capital market) and tailoring the training programs to the needs of SMEs (via reinstating the minimum voucher for small firms as well as creating training courses targeted to cash flow management, special taxation regimes, and marketing).

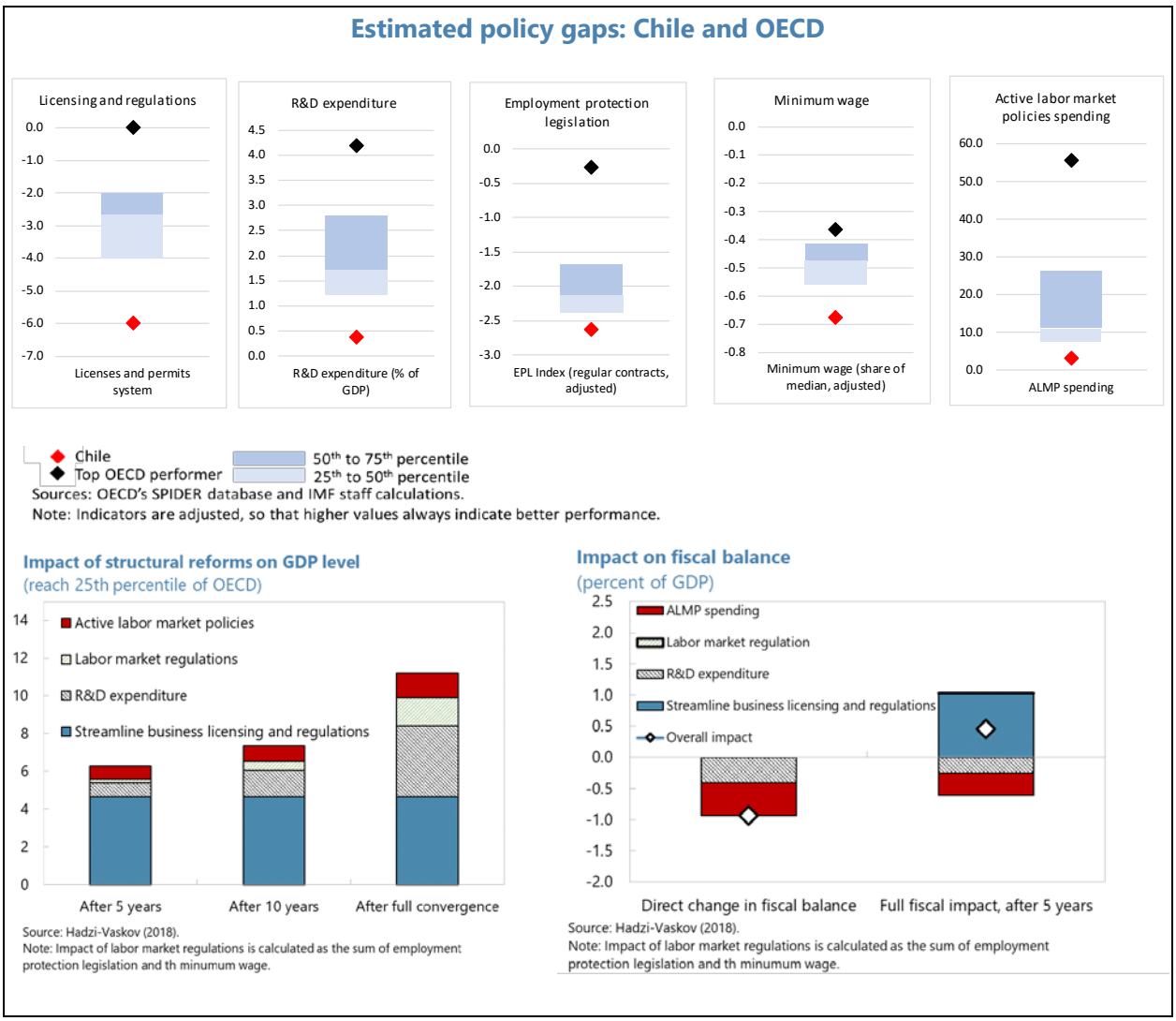


Authorities' Views

40. The authorities broadly shared staff's assessment and underlined their strong commitment to streamline business regulation, improve investment climate, and increase competitiveness. The authorities aim to improve competitiveness by streamlining bureaucracy, and making the labor market more flexible and inclusive, and to raise living standards with a better pension system. The authorities concurred that improving quality of education is a priority, especially in early childhood, and aim to enhance the assessment, training and monitoring of teachers, as well as improve language training. In tertiary education, they plan to focus on enhancing technical-professional and engineering programs, including through targeted scholarships and the creation of 15 new technical institutes to reduce skill mismatches and allow students to combine work with education. The authorities acknowledged that there is scope to improve innovation capacity and will aim at enhancing effectiveness of public policies, including through tax credits. They also expressed some skepticism about the adequacy of international measures of innovation and R&D.

CLOSING POLICY GAPS WITH STRUCTURAL REFORMS

41. A staff study shows that there is considerable potential to enhance economic performance by closing structural gaps relative to OECD countries. Chile generally outperforms Latin American peers on various structural indicators, but typically exhibits more obstacles to economic activity compared to OECD. The needed set of key reforms would encompass comprehensive streamlining of the licensing and permit system (with the largest potential beneficial impact), including through improved coordination among institutions, higher labor market flexibility, and strengthened capacity for innovation and R&D. Closing Chile's policy gaps to the level of OECD's 25th percentile, which involves major reforms beyond the typical experience of historical reform episodes, could increase output by up to 6 percent over 5 years (see Hadzi-Vaskov 2018). IMF research shows that such gains are likely to materialize after several years (Duval and Furceri, IMF Economic Review 2018). In addition, following an initial deterioration of the fiscal balance due to direct policy outlays, the set of reforms is likely to produce positive net fiscal impact through higher output over the medium term.



STAFF APPRAISAL

42. The economy is recovering after several years of subdued growth. Supported by robust business and consumer confidence, and a considerable rebound in both mining and non-mining, growth in the first half of 2018 has been the strongest since 2012. Given solid fundamentals and limited bilateral trade exposure, the economy has been largely sheltered from the recent volatility in the region, with the free floating exchange rate playing the role of shock absorber.

43. The outlook is favorable with balanced risks. Output growth is projected to gradually converge to its medium-term potential of about 3 percent, and headline inflation to remain around the 3 percent target. Downside risks mainly stem from the uncertain external environment and are related to rising protectionism, sharp tightening of global financial conditions, and weaker-than-expected growth in key trading partners. Upside risks to the outlook are related to a rapid implementation of the structural reform agenda.

44. The financial sector remains healthy, though macro-financial linkages need to be closely monitored. Risks to financial stability are mostly related to high leverage of non-financial corporates, which could propagate through macro-financial linkages. Nonetheless, these risks are mitigated because leverage is often associated either with debt to parent companies or long maturity and exchange-rate hedging.

45. The announced gradual fiscal consolidation should enhance policy credibility, with the aim of striking a balance between stabilizing debt and addressing development and social spending needs. Staff projects central government gross debt to broadly stabilize in 2021. To further enhance credibility and market confidence, the authorities could consider strengthening the fiscal framework or deepening the fiscal consolidation.

46. The authorities presented a proposal to streamline the tax system to make it more efficient and pro-growth, and it will be essential to ensure that the final outcome is equitable and funded. Overall, the reform should spur investment and growth in the short term. Staff welcomes the authorities' commitment that the reform will be fully funded. In order to address concerns about income inequality and tax evasion and avoidance, the authorities should consider further strengthening tax administration and explore additional measures such as raising the top marginal PIT rate and introducing a final flat withholding dividend tax. In a broader context, the authorities could also consider widening the tax base.

47. With the aim to strengthen the institutional framework on fiscal responsibility, the authorities proposed to enhance the fiscal council. The proposal will institutionalize a new council with more independence, its own resources, and a broader mandate than the existing one.

48. Caution is warranted in deciding the pace of the monetary policy normalization. Such a tightening cycle should be guided by evidence of a persistent convergence of inflation towards the target that is supported by a broad set of indicators. Despite the pickup in economic activity and headline inflation, a subdued core inflation, remaining labor market slack, weak earnings growth, and

the evolution of domestic and external risks constitute key additional factors to determine the pace of the tightening cycle.

49. The revamped communication framework by the central bank is welcome. The authorities aligned the release of reports to policy meetings, reduced their number, and introduced regular press conferences, which further enhances the central bank's already-strong communication framework.

50. Staff welcomes the approval of the general banking law, which will bolster the sector's resilience. The law aims at closing the gap with Basel III minimum solvency requirements, enhancing stabilization tools, and improving the corporate governance. Going forward, it will be important to strengthen the early intervention regime, broaden the powers and tools for bank resolution, establish a national deposit-insurance scheme funded by member banks, and strengthen inter-agency coordination. Staff welcomes the authorities' efforts in preparing draft laws enhancing the responsibilities of financial market agents, reinforcing data protection, and establishing the legal basis for risk-based insurance supervision.

51. Staff supports the structural reform agenda, which would lead to a more favorable outlook than presented in our baseline medium-term projections. Among others, the authorities announced measures to substantially streamline business regulation and licensing, improve coordination among public institutions, solve bottlenecks in the business environment, increase labor participation, facilitate resolution of labor market uncertainties and enhance social protection, address skill mismatches, and increase benefits in the pension system.

52. A broader set of reforms would help improve productivity and thus speed up the transition to advanced economy status. Strengthening capacity for innovation and R&D, further improving the quality of education, deepening labor market flexibility, and enhancing the business environment for SMEs would further boost productivity, medium-term growth prospects, and diversification.

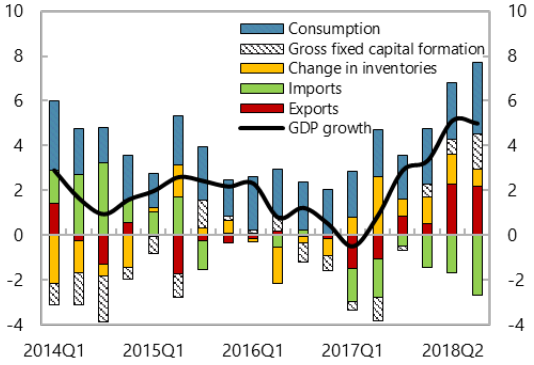
53. Cybersecurity and FinTech regulation frameworks need to be strengthened. Staff welcomes the authorities' ongoing efforts to prepare new cybersecurity legislation and plans to ensure adequate regulation of FinTech activity based on international experience.

54. Staff proposes to hold the next Article IV consultation on the standard 12-month cycle.

Figure 1. Chile: Economic Activity

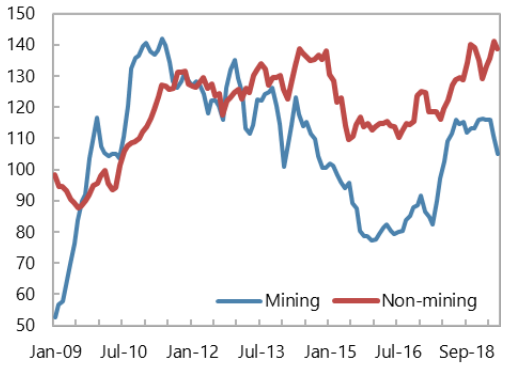
GDP growth is rebounding led by investment and exports.

Contributions to Real GDP Growth
(In percentage points, y/y, S.A.)



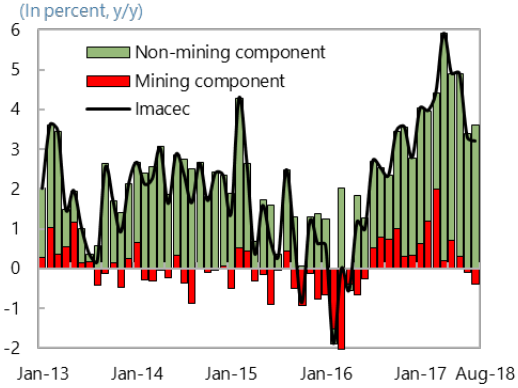
Mining and non-mining exports recovered strongly...

Mining and Non-Mining Exports
(Index, 2010M1=100, 3mma)



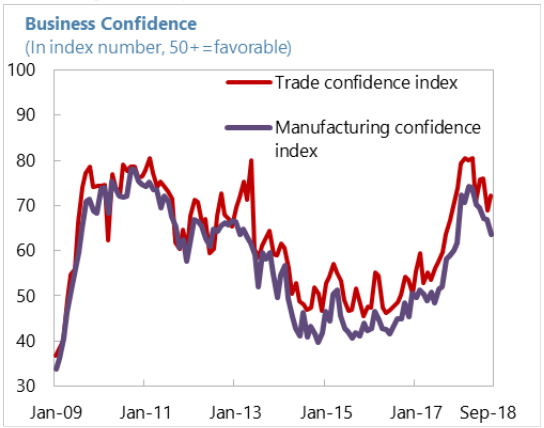
...driving up IMACEC...

Contributions to IMACEC Growth /1
(In percent, y/y)



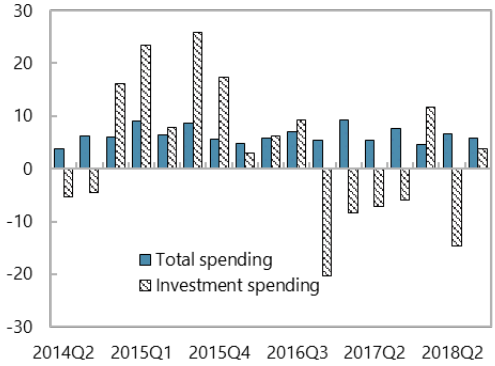
...owing also to improved business confidence.

Business Confidence
(In index number, 50+=favorable)



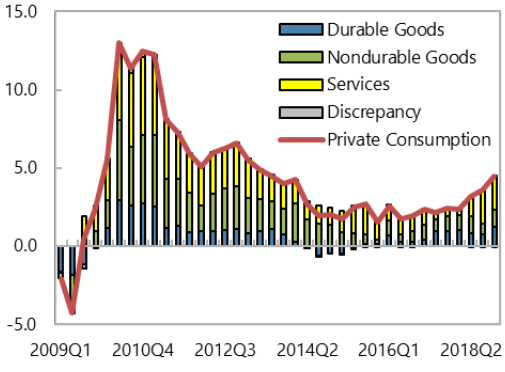
Public consumption has supported growth...

Real Government Expenditure
(In percent, y/y, 2013 pesos)



...together with private consumption, especially in services.

Contributions to Private Consumption Growth
(In percentage points, y/y, S.A)

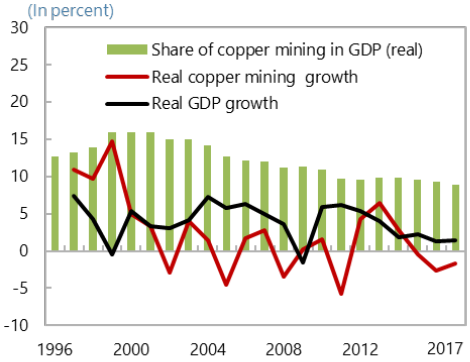


Sources: Central Bank of Chile, Ministry of Finance, Haver Analytics, and IMF staff calculations.
/1 IMACEC is a monthly economic activity indicator.

Figure 2. Chile: Macroeconomic Effects of Copper Prices

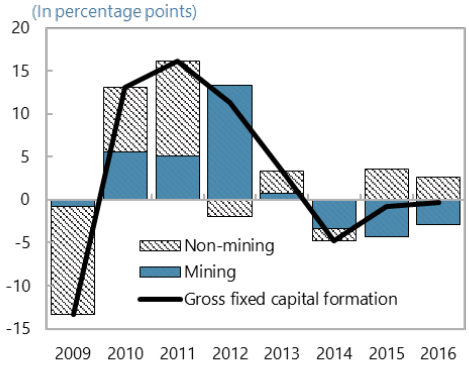
Copper production represents around 10 percent of real GDP...

Real GDP and Copper Output
(In percent)



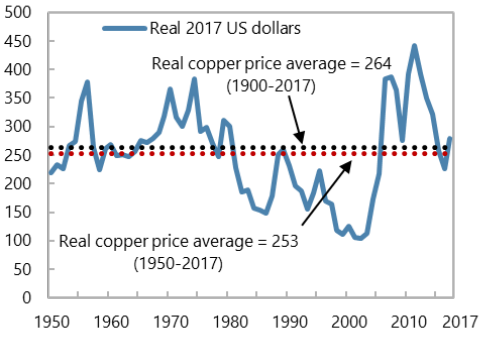
... but mining plays a much stronger role in investment demand.

Investment in Mining and Non-mining Sectors
(In percentage points)



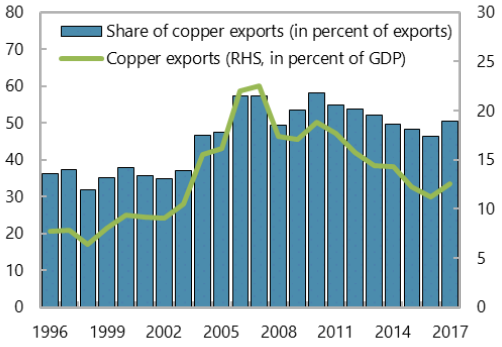
After the boom years, real copper price declined towards its historical average.

Historical Price of Copper
(In U.S. cents per pound)



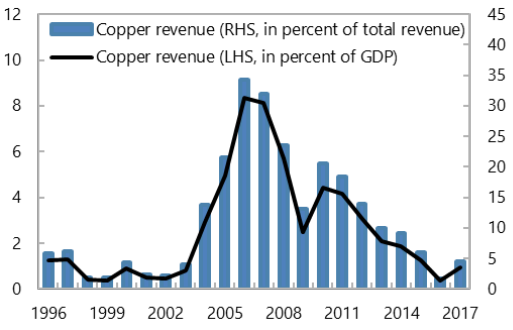
Mining contribution to exports is falling...

Copper Exports



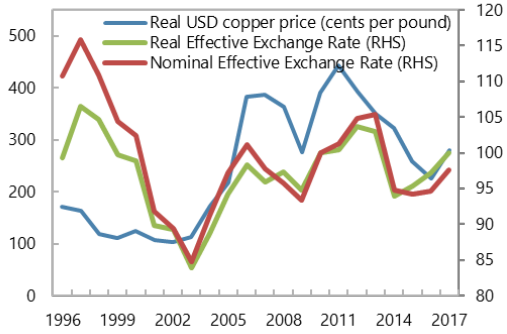
...as well as its contribution to government revenue...

Government Copper Revenues



... while the peso plays the role of shock absorber.

Real Copper Price and Real Exchange Rate

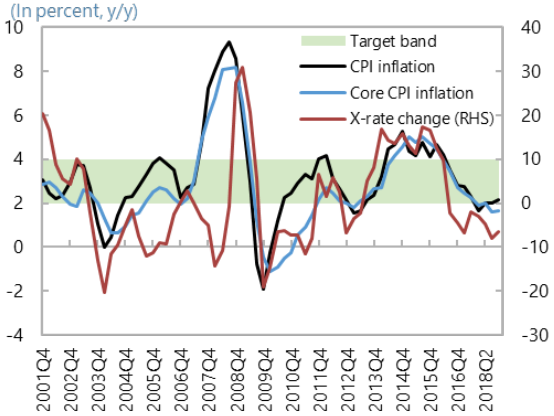


Sources: Central Bank of Chile, Haver Analytics, U.S. Geological Survey, and IMF staff calculations.

Figure 3. Chile: Monetary Policy and Inflation

Chile's outside-the-band inflation dynamics reflect large swings in the exchange rate movements.

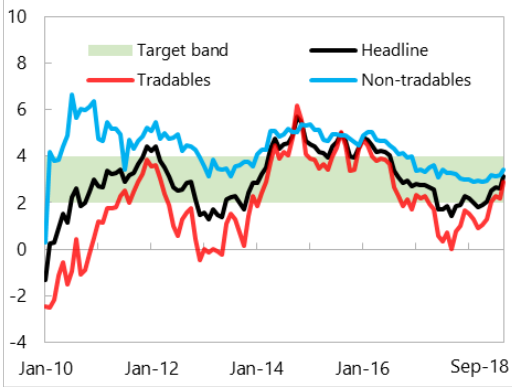
CPI Inflation and Exchange Rate
(In percent, y/y)



...though core inflation remains low...

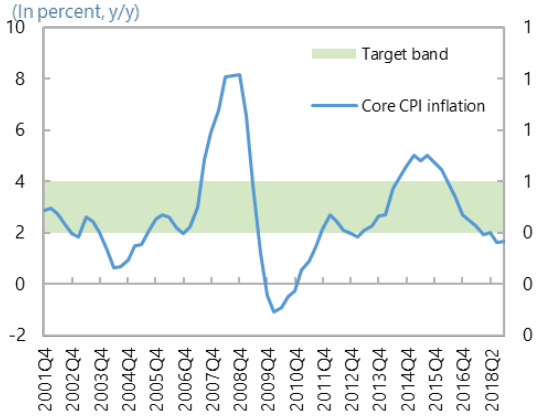
After an appreciation-supported decline in 2016-17, inflation started to pick up lately with higher fuel prices and depreciation...

Consumer Prices in Tradables and Non-tradables
(In percent, y/y)



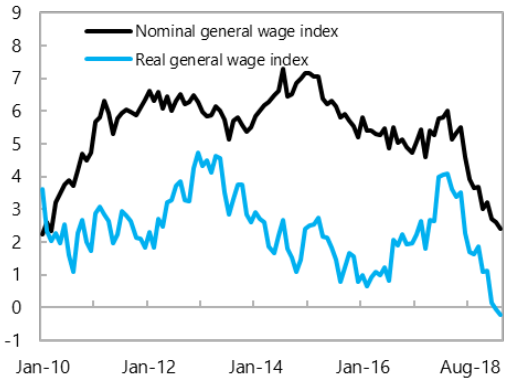
...and wage growth declined considerably.

Core Inflation
(In percent, y/y)



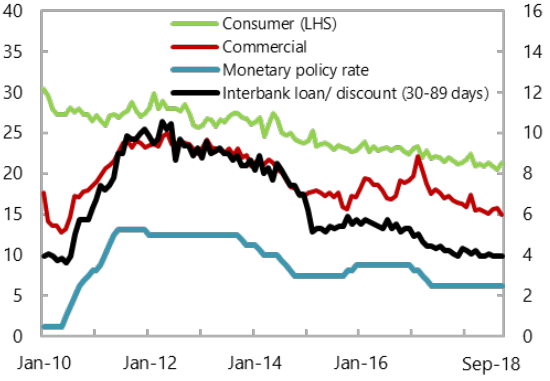
An acommodative monetary policy brought down the interest rate structure over time.

Wages
(In percent, y/y)

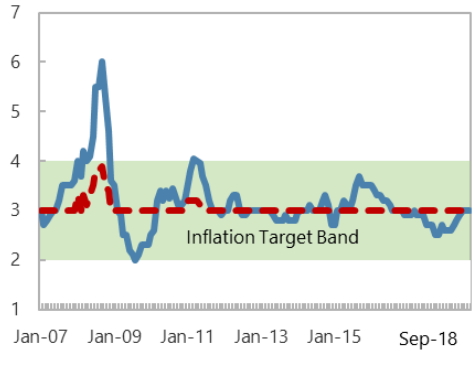


Inflation expectations have remained well anchored.

Policy and Lending Rates
(In percent)



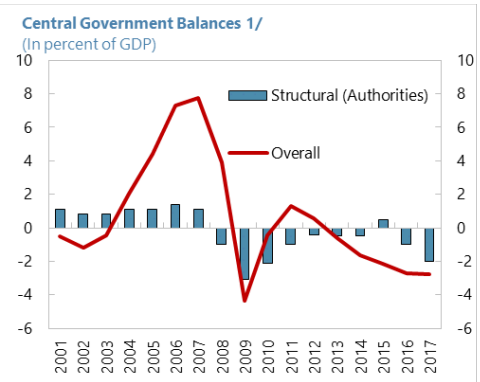
Inflation Expectations at 1 and 2 Years
(12- month variation, in percent)



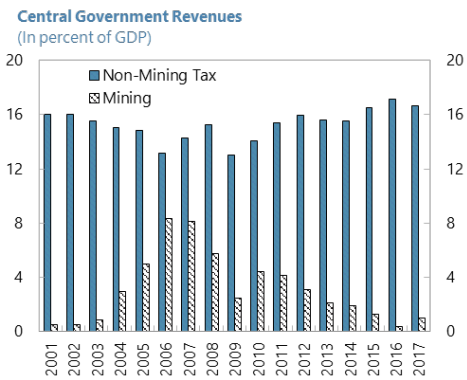
Sources: Central Bank of Chile, Haver Analytics, and IMF staff calculations.

Figure 4. Chile: Fiscal Policy and Public Finances

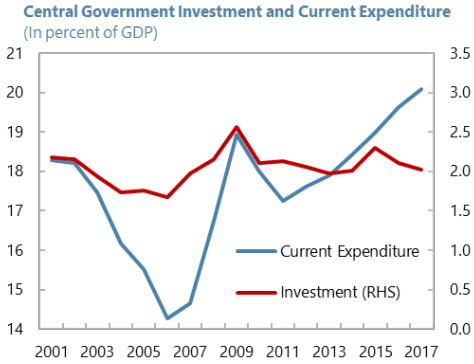
Overall fiscal balance has been deteriorating since 2011...



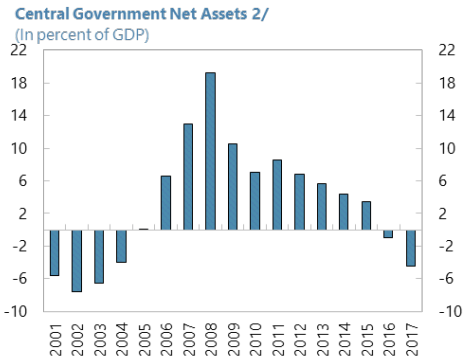
...due in part to subdued mining revenues...



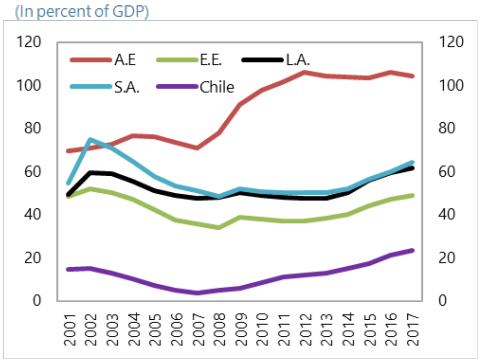
... but also to higher spending.



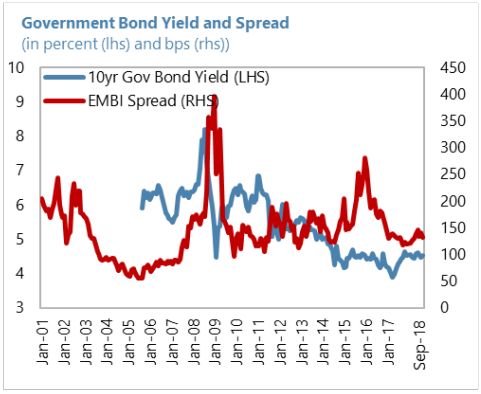
The central government has, thus, turned into a net debtor...



...but gross debt remains low compared to other countries...



...and borrowing costs remain at a manageable level.

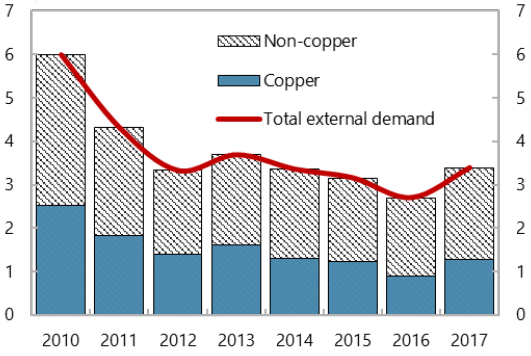


Sources: Ministry of Finance, Central Bank of Chile, Bloomberg, and IMF staff calculations.
1/ Based on the authorities' structural balance, at current or constant parameters.
2/ Authorities' definition of net assets.
3/ Source: World Economic Outlook; A.E = Advance Economies; E.E. = Emerging and Developing Ecomomies; L.A. = Latin America and the Caribbean: Excluding Venezuela; S.A. = South America.

Figure 5. Chile: External Sector

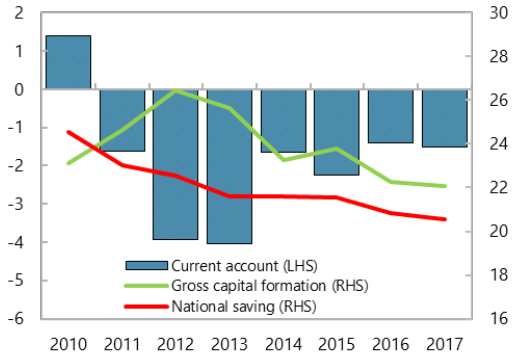
Despite a recovery in external demand...

External Demand Growth from Trading Partners 1/
(In percent)



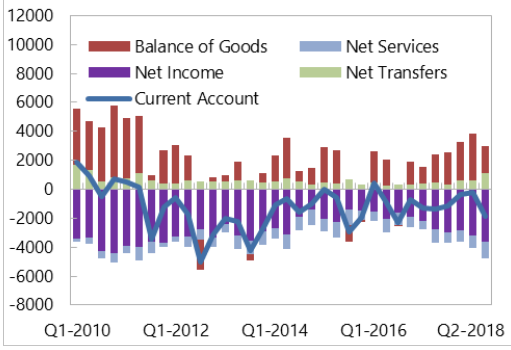
... the current account deficit has widened slightly...

Savings, Investment, and the Current Account
(In percent of GDP)



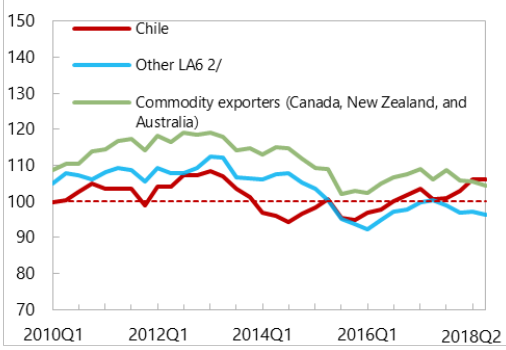
... largely owing to higher net income payments abroad.

Current Account Decomposition
(In millions of US dollars)



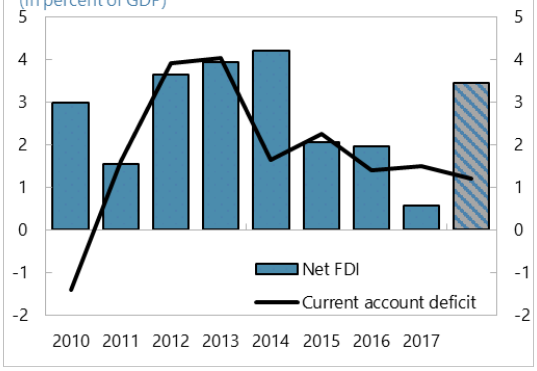
The peso gained ground relative to other commodity exporters and LA6.

Real Effective Exchange Rate
(Index avg. 1996-2016=100)



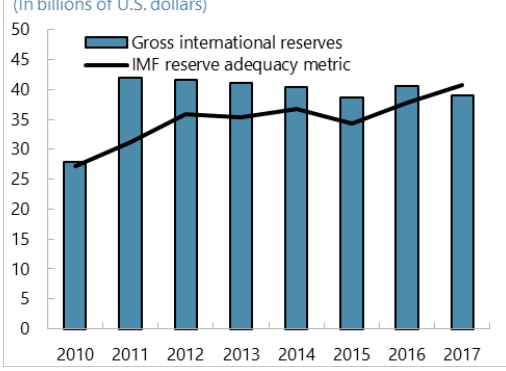
Despite a decline in 2017, the current account deficit remains mostly financed by FDI...

Balance of Payments and Foreign Direct Investment
(In percent of GDP)



...and gross international reserves are broadly adequate.

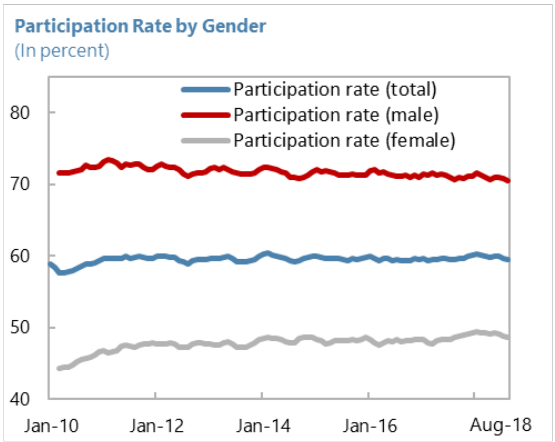
Gross Reserves and Reserve Adequacy Metric 3/
(In billions of U.S. dollars)



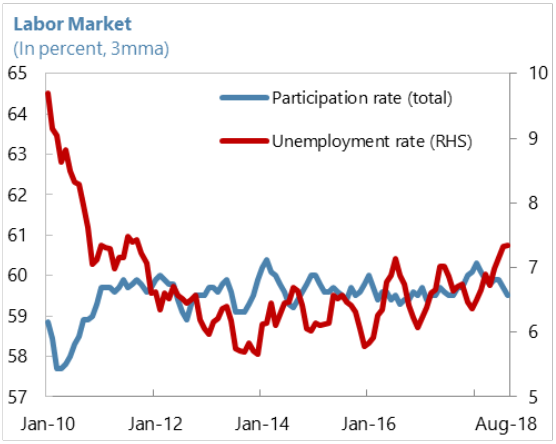
Sources: Central Bank of Chile, Haver Analytics, and IMF staff calculations.
1/ Calculated as average real GDP growth of trading partners, weighted by their respective share in Chilean exports.
2/ LA6 includes Brazil, Colombia, Mexico, Peru and Uruguay.
3/ *Assessing Reserve Adequacy*, IMF.

Figure 6. Chile: The Softening of the Labor Market

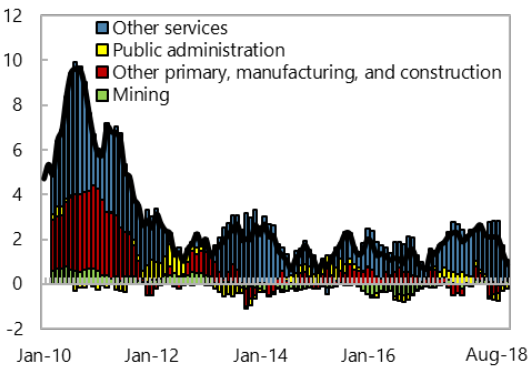
Participation rate has been stable in recent years...



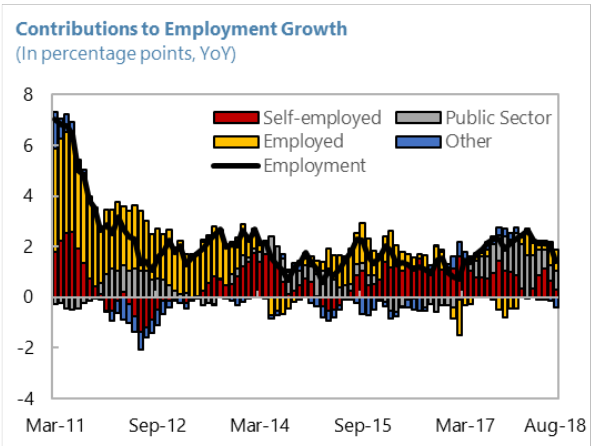
...and unemployment has increased recently, despite a pickup in economic activity.



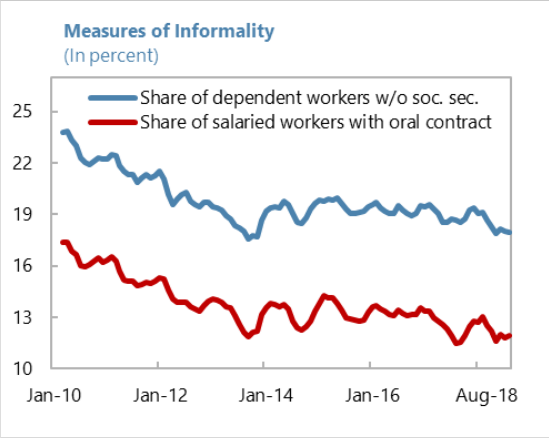
Employment was driven by strong jobs growth in services...



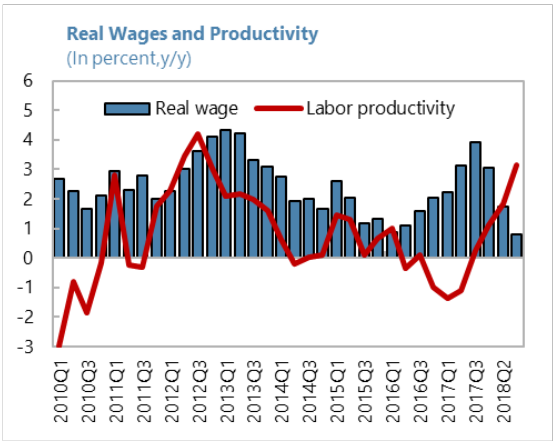
... and salaried employment gained ground recently...



...while informality share declined.



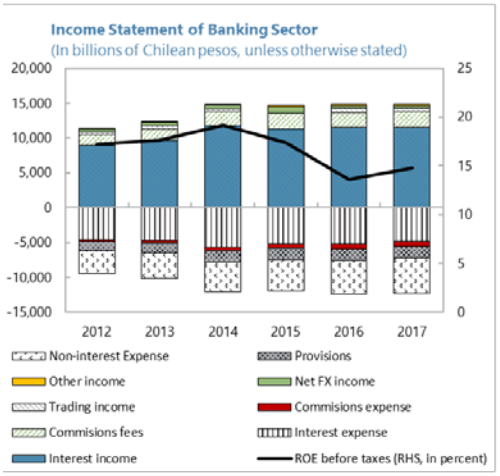
Real wage growth declined despite a pick-up in productivity.



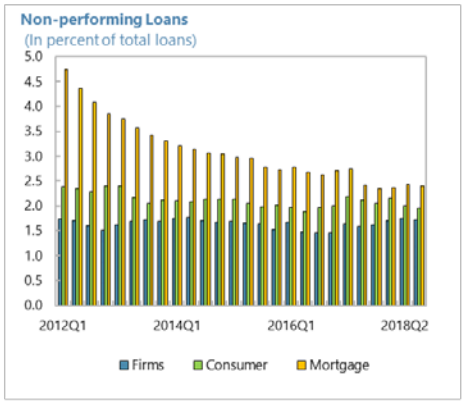
Sources: Central Bank of Chile, Haver Analytics, and IMF staff calculations.

Figure 7. Chile: Financial Sector

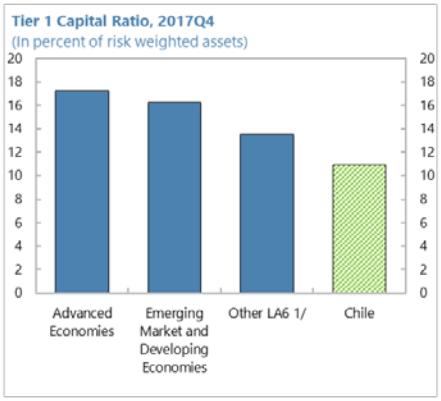
Banks' profitability has improved...



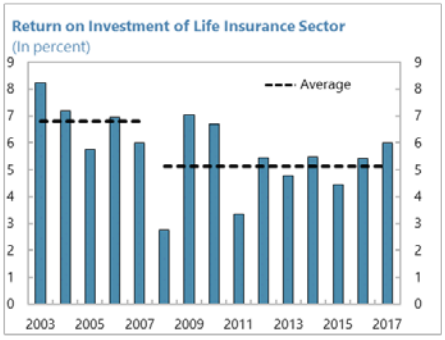
... and overall non-performing loans have remained stable



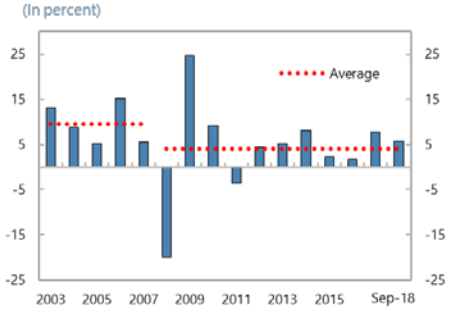
While capital ratios are lower than in other countries, 60 percent of Tier 1 capital is made of common equity.



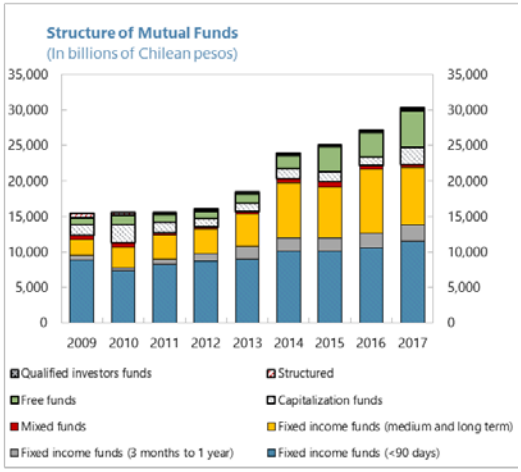
Due to low interest rates, life insurance companies are facing low returns on their investments...



...and so are pension funds.



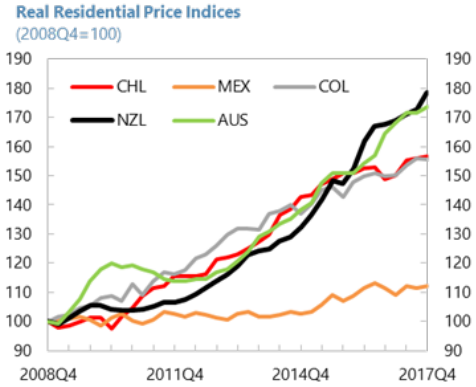
Mutual funds that invest in medium and long-term instruments have grown rapidly.



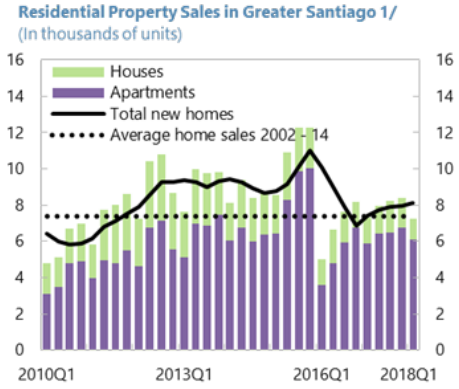
Sources: Superintendiencia Valores y Seguros (SVS), Superintendencia de Bancos e Instituciones Financieras (SBIF), Central Bank of Chile, IMF Financial Soundness Indicators 2015, and Fund staff calculations.
1/ Includes Argentina, Brazil, Colombia, Mexico, and Peru.

Figure 8. Chile: Housing Market Developments

Housing prices grew at a relatively fast pace prior to the VAT increase in 2016.



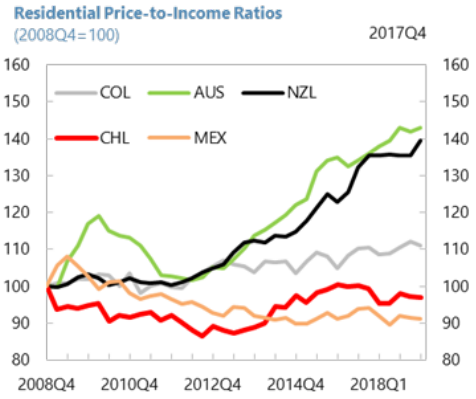
Residential property sales have recovered somewhat, following a sharp decline in 2016.



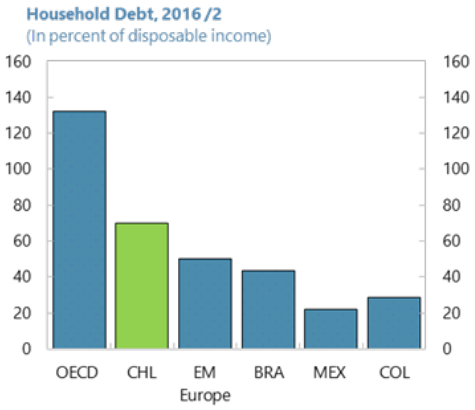
Growth in housing prices improved after a significant decline.

Household debt has been increasing in most segments.

The price-to-income ratio has stabilized recently ...



... and, the debt-to-income ratio remains low relative to advanced economies.



Sources: Central Bank of Chile, Superintendence of Banks and Financial Institutions, Chilean Chamber of Construction, Global Property Guide, SuSeso, SVS and Fund staff calculations.
1/ Includes purchase commitments.
2/ Latest data available for OECD are 2015.

Table 1. Chile: Selected Social and Economic Indicators 1/

GDP (2017), in billions of pesos	179,727	Quota	
GDP (2017), in billions of U.S. dollars	277.0	in millions of SDRs	1,744
Per capita (U.S. dollars)	15,068	in % of total	0.37
Population (2017), in millions	18.4	Poverty rate (2015)	11.70
Main products and exports	Copper	Gini coefficient (2015)	49.50
Key export markets	China, Euro area, U.S.	Literacy rate (2015)	99.2

						Proj.	
	2013	2014	2015	2016	2017	2018	2019
	(Annual percentage change, unless otherwise specified)						
Output							
Real GDP	4.1	1.8	2.3	1.3	1.5	4.0	3.4
Consumption	4.4	2.9	2.6	2.8	2.8	3.7	3.0
Investment 2/	1.0	-10.3	2.6	-3.6	5.0	5.6	2.5
Net exports 3/	0.4	2.2	-0.2	-0.1	-1.6	-0.2	0.5
Employment							
Unemployment rate (annual average)	5.9	6.4	6.2	6.5	6.7	6.9	6.5
Consumer prices							
Inflation (End of period, %)	3.0	4.6	4.4	2.7	2.3	2.9	3.0
Inflation (average, %)	1.8	4.7	4.3	3.8	2.2	2.4	3.0
	(In percent of GDP, unless otherwise specified)						
Public sector finances							
Central government revenue	20.9	20.6	21.0	20.8	21.0	21.7	21.2
Central government expenditure	21.5	22.2	23.2	23.5	23.7	23.3	23.2
Central government fiscal balance	-0.6	-1.6	-2.1	-2.7	-2.8	-1.7	-2.0
Structural Fiscal Balance 4/	-0.5	-0.5	0.5	-1.1	-2.0	-1.8	-1.6
Central Government Gross Debt	12.7	15.0	17.3	21.0	23.6	24.7	26.0
of which, FX-denominated Debt	1.6	2.4	3.2	3.7	4.1	4.7	4.8
Central Government Net Debt	-5.6	-4.3	-3.4	0.9	4.4	5.8	7.7
Public sector gross debt 5/	33.9	37.6	40.1	42.8	42.6	43.7	45.1
	(Annual percentage change, unless otherwise specified)						
Money and credit							
Broad money	11.1	9.5	11.0	7.3	6.2	5.3	5.5
Credit to the private sector	10.0	10.2	10.7	5.2	4.8	n.a.	n.a.
3-month central bank bill rate (%)	4.9	4.0	2.7	3.5	2.6	2.8	3.3
Balance of payments							
Current account (% of GDP)	-4.0	-1.7	-2.3	-1.4	-1.5	-2.5	-2.7
Current account (in billions of U.S. dollars)	-11.3	-4.4	-5.6	-3.5	-4.1	-7.4	-8.3
Foreign direct investment net flows (% of GDP)	-3.9	-4.2	-2.1	-2.0	-0.6	-2.2	-2.2
Gross international reserves (in billions of U.S. dollars)	41.1	40.4	38.6	40.5	39.0	37.0	37.0
Gross Reserves (Months of next year import)	5.9	6.8	6.8	6.5	5.5	5.1	4.9
Gross external debt (% of GDP)	48.4	57.9	65.6	66.2	63.0	61.0	62.2
Public	2.7	3.3	3.9	4.8	5.3	5.5	5.7
Private	45.6	54.6	61.7	61.5	57.7	55.5	56.5
	(Annual percentage change)						
Relative prices							
Real effective exchange rate (real appreciation +)	-0.6	-8.8	1.4	2.0	2.9	...	...
Terms of trade	-3.0	-2.0	-3.1	4.6	10.6	-2.7	-3.1
Memorandum items							
Nominal GDP (in billions of pesos)	137,879	148,595	159,569	169,180	179,727	189,239	199,631

Sources: Central Bank of Chile, Ministry of Finance, Haver Analytics, and Fund 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/ The output gap used for the structural adjustment calculation is measured as the difference from the potential GDP of the committee of experts.

5/ Include liabilities of the central government, the central bank of Chile and public enterprises. Excludes Recognition bonds.

Table 2. Chile: Summary Operations of the Central Government

(In percent of GDP; unless otherwise specified)

	2013	2014	2015	2016	2017	Proj. 2018	Proj. 2019
Revenues	**20.9**	**20.6**	**21.0**	**20.8**	**21.0**	**21.7**	**21.2**
Taxes	16.6	16.5	17.3	17.1	17.1	17.5	17.3
Private mining companies	1.1	1.0	0.8	0.0	0.5	0.7	0.6
Other tax revenues, non-mining	15.6	15.5	16.5	17.1	16.7	16.8	16.8
Social contributions	1.4	1.4	1.4	1.4	1.5	1.5	1.5
Grants	0.1	0.0	0.1	0.1	0.1	0.2	0.2
Other revenue	2.8	2.6	2.2	2.2	2.3	2.6	2.3
Codelco revenues	1.0	0.9	0.4	0.4	0.5	0.8	0.5
Income on assets	0.5	0.5	0.4	0.5	0.4	0.4	0.4
Operating income	0.5	0.5	0.5	0.5	0.5	0.5	0.5
Other income	0.8	0.8	0.8	0.8	0.9	0.8	0.8
Expenditures	**21.5**	**22.2**	**23.2**	**23.5**	**23.7**	**23.3**	**23.2**
Expense	19.6	20.2	20.9	21.4	21.7	21.4	21.4
Compensation of employees	4.3	4.4	4.5	4.7	4.8	4.5	4.6
Purchases of goods and services	2.0	2.2	2.1	2.1	2.1	1.8	1.8
Interest payments	0.6	0.6	0.7	0.7	0.8	0.9	0.8
Subsidies and grants	7.0	7.2	7.6	8.1	8.3	8.9	8.7
Social benefits	4.0	4.1	4.1	4.0	4.0	3.6	3.7
Other expense	1.7	1.8	1.9	1.8	1.7	1.7	1.7
Capital transfers	1.7	1.8	1.9	1.8	1.6	1.7	1.7
Net acquistion of nonfinancial assets	1.9	2.0	2.3	2.1	2.0	2.0	1.9
Investment	2.0	2.0	2.3	2.1	2.0	2.0	1.9
Sale of physical assets	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Net lending/borrowing	**-0.6**	**-1.6**	**-2.1**	**-2.7**	**-2.8**	**-1.7**	**-2.0**
Non-mining overall balance	-2.7	-3.5	-3.4	-3.1	-3.7	-3.2	-3.1
Net financial transactions	**-0.6**	**-1.6**	**-2.1**	**-2.7**	**-2.8**	**-1.7**	**-2.0**
Net acquistion of financial assets	-0.5	0.2	-0.2	0.6	0.4	0.0	0.3
Net incurrence of liabilities	0.1	1.8	1.9	3.3	3.1	1.7	2.3
Domestic	1.1	1.7	1.8	2.9	2.7	1.4	2.3
External	-0.3	0.6	0.5	0.8	0.8	0.6	0.3
Recognition bonds	-0.6	-0.5	-0.5	-0.4	-0.4	-0.3	-0.3
Memorandum items							
Primary balance	-0.5	-1.5	-1.9	-2.4	-2.4	-1.3	-1.6
Structural Fiscal Balance 1/	-0.5	-0.5	0.5	-1.1	-2.0	-1.8	-1.6
Structural Revenue 1/	21.0	21.7	23.7	22.5	21.7	21.5	21.6
Fiscal Impulse 2/	-0.2	0.3	-0.5	0.2	0.2	0.1	-0.1
Expenditure growth (in real terms; annual percent change)	3.9	6.5	7.4	3.8	4.8	1.2	1.8
Central Government Net Debt	-5.6	-4.3	-3.4	0.9	4.4	5.8	7.7
Gross debt	12.7	15.0	17.3	21.0	23.6	24.7	26.0
Peso-denominated assets	6.5	6.2	6.8	7.2	7.3	6.9	6.7
Foreign currency-denominated assets	11.8	13.1	14.0	12.9	11.9	12.0	11.6
Central Government Net Debt (Excl Pension Reservation Fund)	-2.8	-1.1	0.2	4.4	7.8	9.4	11.4
Public Sector Gross Debt 3/	33.9	37.6	40.1	42.8	42.6	43.7	45.1
Public Sector Net Debt 3/	-1.0	0.5	1.0	6.1	8.9	10.3	12.3
Nominal GDP (trillions of pesos)	137.9	148.6	159.6	169.2	179.7	189.2	199.6
General Government Fiscal Balance 4/	-0.5	-1.5	-2.1	-2.7	-2.6	-1.6	-1.9

Sources: Ministry of Finance and Fund staff calculations and projections.

1/ The output gap used for the structural adjustment calculation is measured as the difference from the potential GDP of the committee of experts.

2/ The Fiscal Impulse is defined as the negative of the annual change of the structural non-mining primary balance.

3/ Includes liabilities of the central government, the cental bank of Chile and non-financial public enterprises. Excludes Recognition bonds.

4/ Includes the central government and municipality governments.

Table 3. Chile: Balance of Payments 1/

(In millions of USD; unless otherwise specified)

	2013	2014	2015	2016	2017	Proj. 2018	Proj. 2019
Current account	-11,263	-4,356	-5,579	-3,484	-4,102	-7,417	-8,347
Trade balance of Goods	1,989	6,396	3,357	5,457	7,968	6,044	5,004
Exports	76,812	75,090	62,009	60,717	69,256	76,302	77,834
Copper	39,964	37,377	30,032	28,002	34,660	37,065	36,572
Non-copper	36,848	37,713	31,978	32,715	34,597	39,237	41,261
Imports	74,823	68,694	58,652	55,260	61,288	70,258	72,830
Net services	-3,426	-3,729	-3,575	-3,280	-3,059	-4,337	-4,868
Net income	-12,034	-9,140	-7,219	-7,046	-10,803	-12,067	-11,451
Net transfers	2,208	2,117	1,858	1,385	1,792	2,944	2,969
Capital account balance	12	11	674	8	68	0	0
Financial account balance	-12,880	-6,718	-5,328	-4,386	-345	-5,417	-8,347
Foreign direct investment	-10,937	-10,936	-5,026	-4,909	-1,595	-6,602	-6,743
Portfolio investment	-4,724	-3,842	-1,211	1	4,378	-178	788
Financial derivatives	1,005	1,610	722	715	-90	-90	-90
Other investments	1,775	6,449	186	-193	-3,039	1,454	-2,302
Change in reserves assets	311	1,057	211	1,805	-2,750	-2,000	0
Errors and omissions	-1,317	-1,317	-213	895	939	0	0
Gross official international reserves	5.9	6.8	6.8	6.5	5.5	5.1	4.9
(In months of imports of goods and services)							
			(In percent of GDP)				
Current account	-4.0	-1.7	-2.3	-1.4	-1.5	-2.5	-2.7
Trade balance of Goods	0.7	2.5	1.4	2.2	2.9	2.0	1.6
Exports	27.6	28.8	25.4	24.3	25.0	25.4	25.5
Copper	14.4	14.3	12.3	11.2	12.5	12.4	12.0
Non-copper	13.2	14.5	13.1	13.1	12.5	13.1	13.5
Imports	26.9	26.4	24.0	22.1	22.1	23.4	23.8
Net services	-1.2	-1.4	-1.5	-1.3	-1.1	-1.4	-1.6
Net income	-4.3	-3.5	-3.0	-2.8	-3.9	-4.0	-3.7
Net transfers	0.8	0.8	0.8	0.6	0.6	1.0	1.0
Financial account balance 2/	-4.6	-2.6	-2.2	-1.8	-0.1	-1.8	-2.7
			(Annual change in percent)				
Total export volume	3.9	1.6	-1.3	-0.2	-1.9	7.8	4.3
Total import volume	1.5	-6.5	-0.6	0.1	5.5	7.7	2.9
Terms of trade	-3.0	-2.0	-3.1	4.6	10.6	-2.7	-3.1
Total export prices	-5.2	-3.8	-16.3	-1.7	16.1	2.6	-2.3
Copper export prices	-9.9	-8.3	-19.2	-3.5	27.5	0.7	-5.4
Total import price	-2.3	-1.8	-13.8	-6.0	4.9	5.4	0.8
Memorandum items							
Copper price (WEO; U.S. cents per pound)	333	311	250	221	280	297	282
Volume of copper exports (2004=100)	106	108	107	104	100	107	112

Sources: Central Bank of Chile, Haver Analytics, and Fund 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/ Excluding change in reserves.

Table 4. Chile: Monetary Survey

(In billions of pesos; unless otherwise specified)

	2013	2014	2015	2016	2017
Central bank					
Net foreign assets	20,943	23,937	26,645	26,391	23,332
Net international reserves	21,523	24,567	27,333	27,021	23,983
Net international reserves (in millions of US$)	41,094	40,447	38,643	40,494	38,983
Other foreign assets, net	-580	-630	-688	-630	-651
Net domestic assets	-12,646	-15,222	-16,943	-16,219	-12,099
Net credit to general government	738	-1,102	-124	-476	-9
Net claims on banks and financial corporations	-4,370	-5,854	-6,306	-5,028	-3,403
Credit to the private sector	609	518	406	319	189
Other items (net)	-9,166	-9,317	-11,469	-10,863	-9,003
Monetary base	8,297	8,715	9,702	10,172	11,233
Currency	4,693	5,161	5,679	6,058	6,365
Required reserves	3,604	3,555	4,023	4,114	4,868
Other depository institutions					
Net foreign assets	-6,232	-5,085	-6,120	-5,394	-7,237
Net foreign assets (in millions of US$)	-11,899	-8,372	-8,652	-8,083	-11,763
Net domestic assets	102,461	112,450	126,310	132,992	139,488
Net credit to general government	445	890	-532	-256	2,965
Credit to the private sector	106,586	117,658	130,465	137,324	144,061
Other items (net)	-4,570	-6,098	-3,623	-4,076	-7,538
Liabilities to the private sector	96,229	107,365	120,190	127,598	132,251
Demand deposits	17,799	20,453	23,562	24,044	27,038
Quasi-money	78,430	86,912	96,628	103,554	105,213
Banking system					
Net foreign assets	14,712	18,852	20,526	20,997	16,053
Net domestic assets	95,731	102,556	113,683	120,876	129,294
Net credit to general government	1,183	-212	-656	-732	2,956
Credit to the private sector	107,195	118,176	130,871	137,643	144,250
Other items (net)	-12,647	-15,408	-16,531	-16,035	-17,912
Liabilities to the private sector	110,443	121,408	134,209	141,873	145,347
Money	22,780	25,824	29,420	30,319	33,566
Quasi-money	87,663	95,584	104,789	111,554	111,781
Memorandum items					
		(Annual percentage change)			
Monetary base	8.3	5.0	11.3	4.8	10.4
Liabilities to the private sector	8.8	9.9	10.5	5.7	2.4
Credit to the private sector (banking system)	10.0	10.2	10.7	5.2	4.8
		(In percent of GDP)			
Monetary base	6.0	5.9	6.1	6.0	6.2
Liabilities to the private sector	80.1	81.7	84.1	83.9	80.9
Credit to the private sector (banking system)	77.7	79.5	82.0	81.4	80.3

Sources: Central Bank of Chile and Haver Analytics.

Table 5. Chile: Medium-Term Macroeconomic Framework 1/

	2013	2014	2015	2016	2017	Proj. 2018	2019	2020	2021	2022	2023
National accounts	(Annual percentage change, unless otherwise specified)										
Real GDP	4.1	1.8	2.3	1.3	1.5	4.0	3.4	3.2	3.0	3.0	3.0
Total domestic demand	3.5	-0.5	2.6	1.4	3.3	4.1	2.9	3.1	2.9	2.8	3.1
Consumption	4.4	2.9	2.6	2.8	2.8	3.7	3.0	3.0	3.0	2.8	3.0
Private	4.6	2.7	2.1	2.2	2.4	4.4	3.1	3.3	3.2	2.9	3.1
Public	3.1	3.8	4.7	6.3	4.1	1.4	1.8	1.6	1.6	2.5	2.7
Investment	1.0	-10.3	2.6	-3.6	5.0	5.6	2.5	3.3	2.8	2.9	3.2
Fixed	3.9	-5.0	-0.4	-0.6	-1.3	4.5	2.4	3.6	2.8	2.8	3.2
Private	4.4	-5.4	-2.0	-0.1	-1.4	4.6	3.1	3.9	3.3	3.0	3.4
Public	-0.8	-0.2	14.5	-4.9	-0.7	3.5	-3.4	0.4	-1.3	0.8	0.8
Inventories 2/	-0.7	-1.4	0.7	-0.7	1.4	0.3	0.0	0.0	0.0	0.0	0.0
Net exports 2/	0.4	2.2	-0.2	-0.1	-1.6	-0.2	0.5	0.1	0.1	0.2	0.0
Exports	3.4	0.3	-1.7	-0.1	-0.9	6.0	4.4	4.2	4.3	4.6	3.8
Imports	2.1	-6.5	-1.2	0.2	4.7	6.8	2.7	3.8	4.1	4.0	3.9
Consumer prices											
End of period	3.0	4.6	4.4	2.7	2.3	2.9	3.0	3.0	3.0	3.0	3.0
Consumer prices (average)	1.8	4.7	4.3	3.8	2.2	2.4	3.0	3.0	3.0	3.0	3.0
Output gap	0.8	-0.7	-0.6	-1.3	-1.8	-0.4	0.1	0.3	0.2	0.2	0.1
Potential growth	4.3	3.2	2.2	2.0	2.0	2.5	2.9	3.0	3.1	3.1	3.1
Memo items:											
Nominal GDP	6.1	7.8	7.4	6.0	6.2	5.3	5.5	6.5	6.2	6.1	6.1
Balance of payments	(In percent of GDP)										
Current account	-4.0	-1.7	-2.3	-1.4	-1.5	-2.5	-2.7	-2.5	-2.2	-1.9	-1.8
Trade balance	0.7	2.5	1.4	2.2	2.9	2.0	1.6	1.9	2.0	2.1	2.1
Financial account balance	-4.6	-2.6	-2.2	-1.8	-0.1	-1.8	-2.7	-2.5	-2.2	-1.9	-1.8
Of which, foreign direct investment (net)	-3.9	-4.2	-2.1	-2.0	-0.6	-2.2	-2.2	-3.0	-2.9	-2.7	-2.8
Change in reserves assets	0.1	0.4	0.1	0.7	-1.0	-0.7	0.0	0.0	0.0	0.0	0.0
Errors and omissions	-0.5	-0.5	-0.1	0.4	0.3	0.0	0.0	0.0	0.0	0.0	0.0
REER (in percent y/y, +=appreciation)	-0.6	-8.8	1.4	2.0	2.9	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
	(Annual percentage change)										
Total export volume	3.9	1.6	-1.3	-0.2	-1.9	7.8	4.3	4.2	4.3	4.6	3.8
Of which, copper export volume	6.2	1.8	-0.7	-3.1	-3.7	7.2	4.2	3.4	2.9	2.1	2.0
Total import volume	1.5	-6.5	-0.6	0.1	5.5	7.7	2.9	3.8	4.1	4.0	3.9
Terms of trade	-3.0	-2.0	-3.1	4.6	10.6	-2.7	-3.1	0.7	0.4	-0.1	-0.1
Total export prices	-5.2	-3.8	-16.3	-1.7	16.1	2.6	-2.3	0.5	0.0	-0.5	-0.5
Copper export price index	-9.9	-8.3	-19.2	-3.5	27.5	0.7	-5.4	1.1	0.6	0.1	0.0
Total import price	-2.3	-1.8	-13.8	-6.0	4.9	5.4	0.8	-0.2	-0.4	-0.4	-0.4
External debt	(In percent of GDP)										
Gross external debt	48.4	57.9	65.6	66.2	63.0	61.0	62.2	61.7	60.3	59.6	58.4
Public	2.7	3.3	3.9	4.8	5.3	5.5	5.7	6.4	6.2	6.5	6.3
Private	45.6	54.6	61.7	61.5	57.7	55.5	56.5	55.3	54.1	53.1	52.1
Gross int. reserves (in billions of U.S. dollars)	41.1	40.4	38.6	40.5	39.0	37.0	37.0	37.0	37.0	37.0	37.0
Savings and investment											
Gross domestic investment	25.7	23.3	23.8	22.3	22.0	22.4	22.5	22.5	22.4	22.4	22.4
Public	2.3	2.3	2.6	2.4	2.3	2.3	2.1	2.1	2.0	1.9	1.9
Private	23.5	21.0	21.2	19.9	19.8	20.2	20.4	20.4	20.5	20.5	20.5
National saving	21.7	21.6	21.4	20.9	20.5	20.5	19.8	20.0	20.2	20.5	20.6
Public	1.8	0.8	0.5	-0.3	-0.4	0.7	0.2	0.5	0.9	1.0	1.2
Private	19.9	20.9	20.9	21.2	20.9	19.8	19.6	19.6	19.4	19.5	19.5
Public sector finance											
Central government gross debt	12.7	15.0	17.3	21.0	23.6	24.7	26.0	26.7	26.9	26.6	26.1
Central government net debt	-5.6	-4.3	-3.4	0.9	4.4	5.8	7.7	9.1	10.0	10.4	10.6
Central government balance	-0.6	-1.6	-2.1	-2.7	-2.8	-1.7	-2.0	-1.7	-1.2	-1.0	-0.8
Total revenue	20.9	20.6	21.0	20.8	21.0	21.7	21.2	21.1	21.2	21.1	21.0
Total expenditure	21.5	22.2	23.2	23.5	23.7	23.3	23.2	22.8	22.4	22.1	21.8
Central government structural balance 3/	-0.5	-0.5	0.5	-1.1	-2.0	-1.8	-1.6	-1.4	-1.2	-1.0	-0.8
Employment	(Annual percentage change, unless otherwise specified)										
Working age population	1.6	1.6	1.6	1.7	1.8	1.1	2.3	1.7	1.7	1.7	1.7
Labor force	1.6	2.0	1.4	1.4	2.2	1.5	2.2	1.8	1.7	1.6	1.6
Employment	2.1	1.5	1.6	1.1	2.0	1.2	2.7	2.1	1.9	1.6	1.6
Unemployment rate (in percent)	5.9	6.4	6.2	6.5	6.7	6.9	6.5	6.2	6.0	6.0	6.0

Sources: Central Bank of Chile, Ministry of Finance, National Statistics Institute, Haver Analytics, and Fund 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/ Contribution to growth.

3/ The output gap used for the structural adjustment calculation is measured as the difference between staff's real GDP and the potential GDP of the committee of experts for years for which it is available and binding. Beyond those years, the output gap is progressively closed over time taking into account staff's assessment of the state of the economy.

Table 6. Chile: Indicators of External Vulnerabilities 1/

(In percent; unless otherwise specified)

	2013	2014	2015	2016	2017
Financial indicators					
M3 (percent change)	11.4	11.1	12.4	8.7	4.8
Less pension funds' deposits (annual percentage change)	12.1	9.2	13.2	9.4	
Private sector credit to GDP	77.7	79.5	82.0	81.4	80.3
90-day central bank promissory note (nominal) interest rate (avg.)	4.9	4.0	2.7	3.5	2.6
Share of foreign currency deposits in total deposits	14.0	16.6	15.4	15.2	13.0
Share of foreign currency loans in total credit	13.5	13.7	13.9	13.0	11.4
External indicators					
Exports of goods, U.S. dollars (annual percentage change)	-1.5	-2.2	-17.4	-2.1	14.1
Imports of goods, U.S. dollars (annual percentage change)	-0.7	-8.2	-14.6	-5.8	10.9
Terms of trade (annual percentage change)	-3.0	-2.0	-3.1	4.6	10.6
REER (annual percent change, period average)	-0.6	-8.8	1.4	2.0	2.9
Exchange rate (pesos per U.S. dollar, period average)	495.3	570.4	654.1	676.9	648.9
Current account balance (percent of GDP)	-4.0	-1.7	-2.3	-1.4	-1.5
Financial account less reserves accumulation (percent of GDP)	-4.6	-2.6	-2.2	-1.8	-0.1
Gross official reserves (in billions of U.S. dollars) 2/	41.1	40.4	38.6	40.5	39.0
Gross official reserves, months of imports of goods and services	5.9	6.8	6.8	6.5	5.6
Gross official reserves to M3	14.6	15.0	14.9	13.6	11.5
Gross official reserves to short-term external debt 3/	112.9	98.6	106.3	92.5	104.9
Gross official reserves (percent of GDP) 4/	14.8	15.5	15.8	16.2	14.1
IMF reserve adequacy metric (percent of GDP) 4/	13.2	14.0	14.0	14.6	14.6
Total external debt (percent of GDP)	48.4	57.9	65.6	66.2	63.0
Of which: External public sector debt	1.9	2.5	3.2	4.0	4.6
Total external debt to exports of goods and services	151.4	175.9	223.7	235.9	219.9
External interest payments to exports of goods and services	3.4	3.9	6.1	5.4	7.0
External amortization payments to exports of goods and services	52.4	49.9	57.4	51.8	55.2
Financial market indicators					
Stock market index (in U.S. dollars; period average) 5/	2173	1726	1465	1409	1731
Sovereign long-term foreign currency debt rating (end of period)					
Moody's	Aa3	Aa3	Aa3	Aa3	Aa3
S&P	AA-	AA-	AA-	AA-	A+
Fitch ratings	A+	A+	A+	A+	A

Sources: Central Bank of Chile, Haver Analytics, WEO and Staff calculations

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/ Gold valued at end-period market prices.

3/ Includes amortization of medium/long-term debt due during the following year.

4/ Assessing Reserve Adequacy (IMF, 2011 Policy Paper).

5/ Morgan-Stangley Capital International Index (Dec/1987 = 100).

Table 7. Chile: Financial Soundness Indicators
(In percent; unless otherwise specified)

	2013	2014	2015	2016	2017
Total Assets					
Total assets 1/	158,746	180,846	203,609	211,687	220,365
Percent of GDP	115.1	121.7	127.6	125.1	122.6
Capital Adequacy					
Regulatory Capital to Risk-Weighted Assets	13.3	13.4	12.6	13.8	13.8
Regulatory Tier 1 Capital to Risk-Weighted Assets	9.9	10.0	9.4	10.9	11.0
Capital to Assets	8.1	8.0	7.6	8.4	8.4
Credit Risk					
NPLs Net of Provisions to Capital	-1.6	-2.1	-3.3	-5.2	-4.6
NPLs to Gross Loans	2.1	2.1	1.9	1.8	1.9
Profitability					
Return on Assets	1.5	1.5	1.3	1.2	1.3
Return on Equity	18.3	19.3	17.7	13.8	15.4
Interest Margin to Gross Income	64.3	67.8	66.6	66.8	67.1
Trading Income to Gross Income	12.0	10.8	10.6	10.1	8.5
Non-interest Expenses to Gross Income	47.8	47.4	48.6	52.1	51.1
Liquidity					
Liquid Assets to Total Assets	13.2	13.6	13.8	14.7	15.3
FX and Derivative Risk					
FX Loans to Total Loans	18.4	18.4	20.0	18.2	16.6
FX Liabilities to Total Liabilities	24.3	25.5	27.1	25.8	24.0

Sources: IMF Financial Soundness Indicators, Moody's Investor Service and Fund staff calculations.
1/ In billions of Chilean pesos.

Annex I. Recommendations of 2016 Article IV Consultation and Authorities' Actions

Fund Recommendation	Policy action
Monetary Policy	
The central bank should lower rates if disinflation becomes broad based and more persistent, and if growth risks intensify.	Amidst weak growth and steady disinflation, the central bank cut rates by 100 bps from January 2016 to May 2017.
Fiscal Policy	
Fiscal consolidation should commence, but Chile can proceed slowly.	The government announced its fiscal target as an improvement of the structural balance by 0.2 percentage point per year over the next four years.
The Advisory Fiscal Council could be given financial independence and its mandate broadened to assessing annual and medium-term fiscal targets.	New draft legislation is under consideration in Congress that envisages strengthening of the institutional basis, resources, mandate, and responsibilities of the fiscal council.
Fiscal policy needs to remain geared toward growth-enhancing education and infrastructure spending.	The last education reform's bill (on free tertiary education) was passed in January 2018.
Structural Reforms	
The pension reform should strengthen the private and the public solidarity pillars, while mitigating negative implication for growth.	The pension reform proposal did not pass in the Congress. The new administration is expected to present a new proposal.
Workers' skills should be enhanced further through improved and more specialized education and training programs.	The government aims to focus on improving professional-technical institutes and sent draft legislation to Congress.
Legal and regulatory uncertainties related to the new labor bill should be tackled.	Ongoing. Labor Directorate issued an opinion to clarify some uncertainties, but it is being challenged through the judicial system.
Financial Sector	
Improve corporate governance, investor protection, and market transparency. Corporate governance could be improved through the introduction of a voluntary stewardship code.	
Key Basel III regulations and risk-based supervision of insurers should be adopted swiftly.	A Banking law that closes many gaps with Basel III has recently been approved. New bank resolution tools are not in the law. The authorities are working on legislation to provide legal basis for risk-based insurance supervision.
Improve the oversight of financial conglomerates.	
Broaden the scope of supervision to shadow banking activities.	

	Chile	Overall Assessment
Foreign asset and liability position	**Background**. Chile's net international investment position (NIIP) is stronger than other countries in the region and is expected to slightly deteriorate in 2018 to -23 percent of GDP (by about 2 p.p.). Chile has a net negative FDI position reflecting large inflows in the mining sector, and a net positive equity position, with financial institutions (pension funds, mutual funds, and insurance companies) being the main holders of foreign assets. The NIIP is projected to worsen by about 10 percentage points in the next few years amid moderate current account deficits (abstracting from valuation effects). **Assessment**. Gross external debt, which has increased by about 15 p.p. since 2013, partly due to exchange-rate-related valuation effects, is projected to decline to about 61 percent of GDP in 2018. External debt remains sustainable under a range of adverse scenarios including to interest rates, growth and the exchange rate (Figure A.1 and Table A.1).	*The external position is broadly consistent with medium-term fundamentals and desirable policy settings.*
Current account	**Background**. Chile's 2017 current account (CA) came at -1.5 percent of GDP, significantly improved from 2013, reflecting, initially, a significant peso depreciation, then a marked contraction in investment-related capital goods imports and a rebound in copper prices. The CA deficit is projected to widen in 2018 to 2.5 percent of GDP, mainly due to weaker terms-of-trade and strong investment-related import demand. In terms of savings-investment balance, national savings have declined mildly by about 1 p.p. since 2013, against about 4 p.p. drop in the investment ratio reflecting lower copper prices, weak global demand, and a fall in business confidence. **Assessment**. The 2018 current account gap rose from about ½ percent of GDP to 1½ percent in 2018, of which 0.3 percent of GDP is due to policy gaps. The overall gap was mainly due to the factors discussed above, while the policy gap associated with the fiscal stance is expected to be absorbed by the planned fiscal consolidation, and the structural reform agenda will help improve competitiveness. Hence, the current account is deemed to be broadly consistent with medium-term fundamentals and desirable policy settings.	
Real exchange rate and competitiveness	**Background**. The Chilean peso appreciated in 2017 both bilaterally and multilaterally (about 3 percent in REER terms), supported by stronger copper prices and better domestic economy outlook alongside country-specific factors (sound macroeconomic fundamentals and policy track record). Following a nominal appreciation of about 8 percent from the average of 2017 to April 2018, the exchange rate depreciated by 12 percent from April till August 2018. **Assessment**. EBA CA and REER index methodologies indicate that the exchange rate is in line with fundamentals (based on June 2018 estimates, the four methodologies indicate an average gap of about 0, a range from 6.7 to -11.5 percent and a mid-point -2.4). Even when considering the recent depreciation, the Chilean peso is assessed to be broadly in line with its medium-term fundamentals and policy settings.	
Capital and financial accounts	**Background**. The CA deficit is mostly financed from a relatively stable source of FDI net inflows, largely related to mining activities. Chile has been resilient to copper price fluctuations and the taper tantrum episode, experiencing less capital flow volatility than other EMs. Throughout, the corporate sector has maintained access to external funding. **Assessment**. Chile has a fully open capital account. Vulnerabilities are overall limited by a credible commitment to a floating exchange rate, strong macroeconomic policies, and a well-developed financial market for hedging.	
FX intervention and reserves level	**Background**. Chile has a free floating exchange rate regime. The central bank generally does not intervene in the foreign exchange market. Nonetheless, Chile had two intervention programs in 2008 and 2011, both aimed at weakening the peso and both based on purchases of USD. FX reserves cover over 5 months of imports in 2017, and are close to the lower bound of the IMF reserve adequacy metric. **Assessment**. A flexible exchange rate is the first line of defense in a small economy exporting commodities like Chile, with a large exposure to international shocks. Reserves are estimated as broadly adequate, in light also of the large buffers available to the central government (with assets at about 19 percent of GDP in 2017) and the pure floating regime.	

Annex III. Chile's Structural Revenues and Structural Balance Calculations

This annex briefly highlights the key aspects and properties of the structural adjustment envisaged by the Chilean fiscal rule and describes the staff methodology for forecasting structural revenues and balances.

Key aspects and properties of the structural adjustment envisaged by Chile's fiscal rule

1. The structural fiscal balance in Chile is defined as the difference between the structurally-adjusted revenues and total expenditure (the latter is not subject to adjustments). Structural revenues are defined as the actual revenues minus the structural adjustment, which applies to four categories of revenue items: i) non-mining tax revenue, ii) healthcare-related social security contributions, iii) private mining tax revenue, and iv) gross copper revenue from the state-owned company (the actual revenues from these four categories were 16.7, 1.2, 0.5 and 0.5 percent of GDP in 2017, respectively). The remaining revenue items are not adjusted. The former two categories of revenue items are adjusted for the business cycle (i.e., the output gap) and the latter two categories are adjusted for the copper cycle (i.e., the copper price gap).

2. The structural adjustments in any given year hinge on four parameters: the current and the previous year output gaps (which depend on trend GDP estimates), and the current and the previous year copper price gaps (which depend on a reference price for copper over the long-term—hereafter *copper reference price*—defined as the average forecast of future spot prices over the next 10 years). The estimates for the trend GDP level and the copper reference price to be used for the structural adjustment of each budget year (*t*) are based on projections provided by two independent expert committees the year before (*t-1*, in August). These two inputs, together with the authorities' forecast for real GDP and spot copper price for year *t*, allow the authorities in year *t-1* to estimate the output gap and copper price gap that will be used to design their year *t* budget in order to meet the structural target. The same two inputs, together with the actual realization of real GDP and copper price for year *t*, would allow the authorities in year *t+1* to calculate the final structural adjustment, and hence the structural balance, for year *t*.[1]

3. The structural adjustment and the structural revenues exhibit the following properties (see the section on technical details later). Other things being equal:

[1] Operationally, the authorities also distinguish the copper price for Codelco and for private mining companies. In addition, prior to 2015, the revenue from molybdenum was also subject to structural adjustment.

a) Current year gaps usually have a dominant effect compared to the gaps from the previous year. In addition, the signs of the impact of the previous year's gaps are ambiguous and depend on the sign of the net tax credit for that year.[2]
b) A positive (negative) current-year output gap[3] (based on the authorities' definition, i.e. the actual GDP is lower (higher) than the trend GDP) implies a negative (positive) structural adjustment to the business cycle and structural revenues higher (lower) than actual revenues.[4] The rule of thumb is that a 1 percent of GDP output gap implies a structural revenue adjustment in the order of about ¼ percent of GDP. As the positive (negative) current-year output gap closes, the size of the structural adjustment to the business cycle shrinks and the structural revenues converge from above (below) to the actual revenues.
c) A positive (negative) current year copper price gap (i.e., the actual copper price is higher (lower) than the reference long-term price of copper) implies a positive (negative) structural adjustment to the copper cycle and structural revenues that are lower (higher) than actual revenues. The rule of thumb is that a 10-cent copper price gap implies a structural revenue adjustment in the order of about 0.1-0.2 percent of GDP.[5] As the positive (negative) current-year copper price gap closes, the size of the structural adjustment to the copper cycle shrinks and the structural revenues converge from below (above) to the actual revenues

4. The text chart and table show, respectively, the historical decomposition of the structural adjustment into output and copper price gaps, with the corresponding parameters.

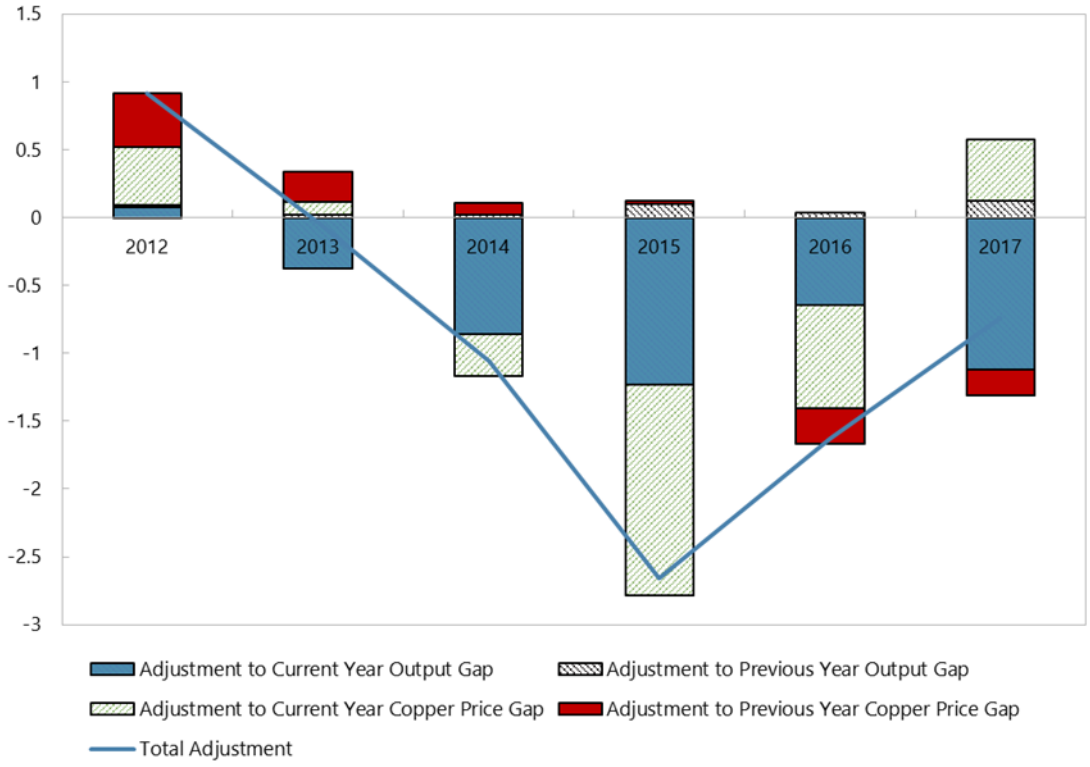
[2] The net tax credit corresponds to the difference between the actual tax declared for the previous year that should be paid in the current year and the amount of the provisional tax payment (for the previous year) paid in the previous year.

[3] This output gap definition follows the authorities one. It is defined as percentage deviation of the trend GDP from actual GDP. Note that this is opposite to the standard IMF definition (actual minus potential).

[4] Structural revenues are defined as actual revenues *minus* the structural adjustment.

[5] The authorities' calculation for the effect of a possible 10 cent copper price change in 2019 is $450mn, or about 0.15 percent of GDP.

Decomposition of the Structural Adjustment (as percent of GDP, 2012-17)



	2012	2013	2014	2015	2016	2017
Output Gap (t; %-devation of GDP from PGDP)	-0.3	1.5	3.4	4.5	2.3	4.1
Output Gap (t-1; %-devation of GDP from PGDP)	0.5	0.6	0.5	2.3	1	2.7
Copper Price Gap (t; US Cents/lb)	59	26	7	-57	-29	59
Copper Price Gap (t-1; US Cents/lb)	141	59	26	7	-57	-36
Codelco Price Gap (US Cents/lb; Period Average)	29	14	-12	-83	-44	27

Source: Indicador del balance cíclicamente ajustado, Metodología y resultados (2014-2018), DIPRES; and Staff Calculations.

Note: Output gap follows the authorities' definition.

The Staff approach to the estimation of the structural balance

5. The design of fiscal policy in Chile is anchored on choosing an expenditure path that ensures meeting the structural balance target ex-ante. Fiscal discipline is assessed on the basis of whether the structural balance target is met ex-post. Over the medium term, it is also essential to assess the implications of fiscal policy for the overall deficit, as this would allow to forecast the debt path. For these purposes, the staff calculations for the structural balance over the projection horizon have to: 1) employ a methodology, formulae, and parameters that are as close as possible to the authorities' ones, which will govern the final calculation of the structural balance; 2) but rely on the IMF projections for actual GDP, copper prices, and exchange rates, which may differ from the authorities' ones, and, thus, inform the policy dialogue. With respect to the parameters, this implies that, for the current and following year projections, staff will make use of the series of trend GDP and the long-

term copper reference price announced by the two independent expert committees, which are the ones binding for the final structural balance calculations for those years.

6. By doing so, the differences in structural revenue estimates between staff and the authorities for those years reflect different projections for real GDP growth, copper prices and the exchange rates, and not different assumptions about parameters (as would be the case if staff were to use its own trend output projection or its own long-term copper price). For projections beyond next year, staff uses an error-correction model to forecast the long-term reference copper price that can be expected to be announced by the committee (see below for the methodology) and closes the output gap progressively over time taking into account its assessment of the state of the economy. This ensures that, to the extent the staff's and the authorities' macroeconomic projections tend to converge, then the staff's and the authorities' projections of the structural balance would also tend to converge; and their calculations of the structural balance will be the same when actual data is released.

7. This methodology implies that for the current and the next year, staff does not use the output gap published in its medium-term framework, which reflects the staff's assessment of the state of the economy in these years. This would have been an appropriate calculation if the objective were to offer an alternative structural adjustment to the one envisaged by the fiscal rule, for example under alternative parameter configurations. However, the objective is to forecast the official measure of the structural balance as closely as possible, which requires employing the parameters as designed by the fiscal rule. This includes employing the trend GDP as announced by the committee in August each year, which is binding for the structural adjustment calculation for the following year. Using staff's output gap in the calculations would imply that the structural balance would not coincide with the authorities' structural balance even ex-post, once GDP data are final; indeed, even ex-post, the output gap of the authorities and of staff would differ.

8. The staff calculations can be illustrated by describing the projections discussed in paragraph 17 of the Staff Report. In 2018, staff expects the fiscal balance to improve substantially vis-à-vis 2017 by about 1 percentage point of GDP to minus 1.7 percent of GDP, due to an increase in actual mining revenues and a decline in expenditure as a share of GDP. Despite the increase of actual revenues (from 21.0 percent of GDP in 2017 to 21.7 percent of GDP in 2018), structural revenues decline as share of GDP from 21.7 percent in 2017 to 21.5 percent in 2018 due to a significant change in the structural adjustment (from -0.7 percent of GDP in 2017 to +0.1 percent of GDP in 2018), mainly as a result of a smaller output gap (which contributes about 0.7 percent of GDP to the change in the structural adjustment). Given lower structural revenues (by about 0.2 percent GDP), expenditure will need to decline as well (by about 0.4 percent of GDP) in order to attain the authorities' target of a 0.2 percent improvement in the structural balance.

Staff Forecast of Structural Balance
(In percent of GDP)

	2012	2013	2014	2015	2016	2017	Proj. 2018	2019	2020	2021	2022	2023
Total Revenue	22.1	20.9	20.6	21.1	20.8	21.0	21.7	21.2	21.2	21.2	21.1	21.0
Total Expenditure	21.6	21.5	22.2	23.2	23.6	23.7	23.4	23.2	22.8	22.4	22.1	21.8
Overall Balance (OB)	0.6	-0.6	-1.6	-2.1	-2.7	-2.8	-1.7	-2.0	-1.7	-1.2	-1.0	-0.8
Structural Adjustment	0.9	0.0	-1.1	-2.7	-1.6	-0.7	0.1	-0.4	-0.3	0.0	0.0	0.0
Adjustment to Output Gap 1/	0.1	-0.4	-0.8	-1.1	-0.6	-1.0	-0.3	-0.3	-0.1	0.1	0.0	0.0
Adjustment to Copper Price Gap	0.8	0.3	-0.2	-1.5	-1.0	0.3	0.4	-0.1	-0.2	-0.1	-0.1	0.0
Structural Revenue	21.2	21.0	21.7	23.7	22.5	21.7	21.5	21.6	21.4	21.2	21.1	21.0
Structural Balance	-0.4	-0.6	-0.6	0.5	-1.1	-2.0	-1.8	-1.6	-1.4	-1.2	-1.0	-0.8

Sources: Ministry of Finance, DIPRES and Staff estimate
1/ The output gap used for the structural adjustment calculation is measured as the difference between staff's real GDP and the potential GDP of the committee of experts for the years for which it is available and binding. Beyond those years, the output gap is progressively closed over time taking into account staff's assessment of the state of the economy.

Technical Details on the structural adjustment formulae.[6]

I) Business cycle adjustment

9. The structural adjustment to the six components of non-mining tax revenue and to healthcare-related social security contributions (SRA_i) are calculated using the following formula applied to these seven categories of revenues (i):

$$SRA_i = AR_i - (AR_i - T_i)\left(\frac{Y^*}{Y}\right)^{\varepsilon_i},$$

where ARi is the actual revenue of category i, Ti stands for the temporary policy measures that affect revenue item i, Y* is the level of trend GDP, Y is the level of actual GDP (thus, Y*/Y is the measure of the output gap), and ε_i is the elasticity to the output gap for category i, which is generally larger than 1 in the official calculations. Two of the components relate to the net amount between tax owed for the previous year and the associated credit for the payment already made the previous year. As such, these two components are adjusted via the output gap in the previous year and tend to balance out each other, implying that the impact of the previous year output gap has an undetermined sign and anyhow a small size relative to the impact of the current year output gap.

II) Copper price cycle adjustment

a. Gross copper revenue (from the state-owned company)

[6] The material presented here is a summary from various issues of the "*Indicador del balance cíclicamente ajustado. Metodología y resultados*", published by DIPRES.

10. The structural adjustment of gross copper revenues to the copper price gap is calculated with the following formula:

$$SRA_{Gross\ Copper\ Revenue} = Q(P - P^*)Ek$$

where *Q* is the copper production volume (in metric tons) of Codelco (the state-owned mining company), *P* is the spot price of copper (U.S. dollar/pound), *P** is the copper reference price announced by the expert committee, *E* is the Peso-US dollar exchange rate, and *k* is a scaling constant.

b. Private mining tax revenue

11. The private mining tax revenue consists of three components, the mining specific tax, the general corporate income tax, and the profit repatriation tax. The total mining tax is paid on a provisional basis (i.e., companies pay the tax for the current year based on profits expected for the year) and mining companies need to declare the actual taxable profits for the previous year each April. Depending on the provisional tax payment made in the previous year, companies may be eligible for a refund or be subject to additional tax payment.

12. The structural adjustment to the mining tax revenue is done at the component level and aimed at capturing the impact of the cyclical movement of copper prices on the cash flow of tax payment. Specifically, for the first two types of tax (indexed by *i*), the adjustment formula takes the following form:

$$SRA_i = \left(\frac{P - P^*}{P}\right) PPM_{i,t} + \left[\left(P_{-1}t_{i,-1} - P^*_{-1}t^*_{i,-1}\right)Q_{-1}k - C_{-1}\left(t_{i,-1} - t^*_{i,-1}\right)\right]\tilde{E}_{0,-1} - \left(\frac{P_{-1} - P^*_{-1}}{P_{-1}}\right) PPM_{i,-1}$$

where PPM_i is the provisional tax payment, t_i is the effective tax rate for that tax category (and t_i^* is the effective tax rate when profits are evaluated at the copper price reference price), *C* is the tax-deductible cost, and $\tilde{E}_{0,-1}$ is the exchange rate in the previous year adjusted by the inflation from the previous to the current year. Variables with "-1" in the subscript refer to values in the previous year. The first term in the equation captures the impact of the copper price gap on the provisional tax payment for the current year, the second term refers to the structural adjustment to the taxable profit for the previous year declared in the current year, and the last term captures the impact of the copper price gap on the previous year's provisional tax payment (the difference between the two terms is the structural adjustment to the net tax credit/payment). As such, the last two terms are adjusted for the previous year copper price gap and tend to balance out each other, leaving the sign of the impact of the previous year copper price gap undetermined but its size anyhow small relative to the impact of the current year copper price gap.

13. The adjustment to the last component is done as follow:

$$SRA = zE\left[Qk\left(P\left(t_{ia} - t_{ir,-1}\right) - P^*\left(t^*_{ia} - t^*_{ir,1}\right)\right) - C\left(\left(t_{ia} - t_{ir,-1}\right) - \left(t^*_{ia} - t^*_{ir,1}\right)\right)\right]$$

where *z* is the portion of profit that the mining companies repatriate back to the parent companies outside Chile and $t_{ia}$is the tax rate on repatriated profit. Mining companies can claim credit from the general corporate income tax paid against the tax on repatriated profit. Therefore, the tax rate on corporate income tax ($t_{ir,-1}$) enters the equation with a negative sign.

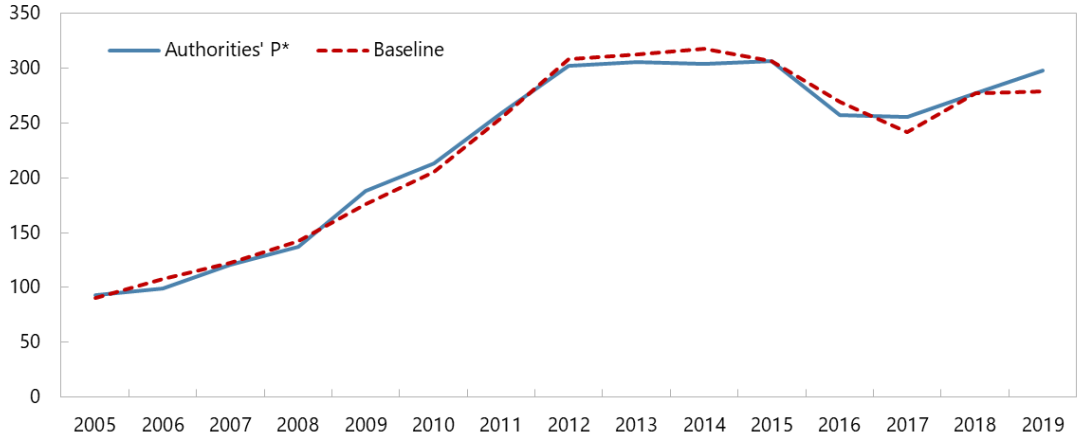
Technical Details on the Error Correction Model for forecasting the copper reference price

14. Historically, the World Economic Outlook (WEO) copper price forecast tracks the copper reference price announced by the expert committee reasonably well, through a dynamic equation. To capture the relationship formally, an empirical model is fitted over the available historical data, in order to forecast the long-term copper reference price via the World Economic Outlook copper price forecast. Based on a sample between 2004 and 2018, the estimated baseline empirical model follows an error-correction model (where P_t* is the expert committee's copper reference price published in August of year *t-1*, P_t is the average of the WEO forecasts at year *t-1* of the international copper price for the next 5 years, and E_{t-j} is the j-periods ahead forecast operator, figures in parentheses are p-values of the coefficient estimates):

$$\ln P_t^* - lnP_{t-1}^* = \frac{0.48}{(0.000)}(lnE_{t-1}[P_t] - lnE_{t-2}[P_{t-1}]) - \frac{0.37}{(0.000)}(lnP_{t-1}^* - lnE_{t-2}[P_{t-1}])$$

In-Sample Fitted P* vs Actual P*

(US Cents/lb)



Source: WEO, committe of experts, and IMF staff calculations.

15. For historical data and up until 2019 staff uses as long-term reference copper price the one published by the committee the year before, in line with the authorities' calculation, in order to match the structural balance calculation of the authorities. For 2020 onward, such price is not available, hence staff starts from the 2019 expert committee's long-term copper reference price (announced in August 2018) and employs the error-correction model described above, together with the WEO forecast copper prices, in order to forecast the future long-term copper reference prices that can be expected to be announced by the expert committee every year past 2019.

Annex IV. Debt Sustainability Analysis

Chile Public Sector Debt Sustainability Analysis (DSA) - Baseline Scenario

(in percent of GDP unless otherwise indicated)

Debt, Economic and Market Indicators [1/]

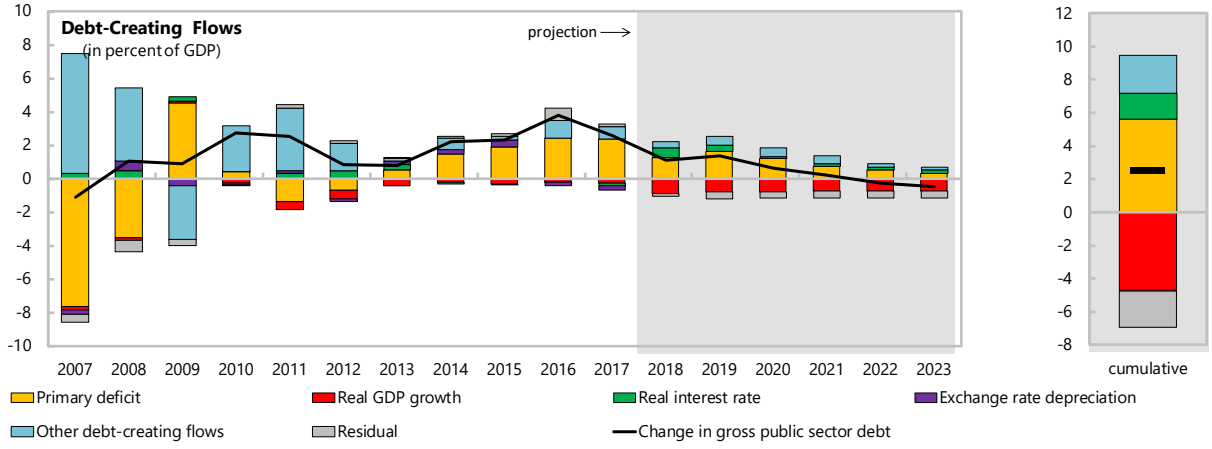
	Actual			Projections					
	2007-2015 [2/]	2016	2017	2018	2019	2020	2021	2022	2023
Nominal gross public debt (EoP)	10.1	21.0	23.6	24.7	26.0	26.7	26.9	26.6	26.1
Public gross financing needs	0.4	10.8	3.9	2.9	2.3	2.7	4.8	1.3	1.0
Net public debt (excludes Pension Reserve Fund)	-7.0	4.4	7.8	9.4	11.4	12.8	13.6	14.1	14.3
Real GDP growth (in percent)	3.6	1.3	1.5	4.0	3.4	3.2	3.0	3.0	3.0
Inflation (GDP deflator, in percent)	4.0	4.7	4.7	1.3	2.0	3.2	3.1	3.0	3.0
Nominal GDP growth (in percent)	7.7	6.0	6.2	5.3	5.5	6.5	6.2	6.1	6.1
Effective interest rate (in percent) [4/]	8.1	4.6	4.1	3.9	3.6	3.9	3.8	3.8	3.8

As of September 20, 2018

Sovereign Spreads		
EMBIG (bp) 3/		131
5Y CDS (bp)		48
Ratings	Foreign	Local
Moody's	A1	A1
S&Ps	A+	AA-
Fitch	A	A+

Contribution to Changes in Public Debt

	Actual			Projections							
	2007-2015	2016	2017	2018	2019	2020	2021	2022	2023	cumulative	debt-stabilizing primary balance [9/]
Change in gross public sector debt	1.4	3.8	2.5	1.1	1.3	0.6	0.2	-0.3	-0.5	2.5	
Identified debt-creating flows	1.5	3.0	2.4	1.3	1.8	1.0	0.6	0.1	-0.1	4.7	
Primary deficit	-0.5	2.4	2.4	1.3	1.6	1.2	0.7	0.5	0.3	5.6	-0.4
Primary (noninterest) revenue and grants	21.4	20.4	20.5	21.2	20.8	20.7	20.7	20.6	20.5	124.6	
Primary (noninterest) expenditure	20.9	22.8	22.9	22.5	22.4	21.9	21.4	21.1	20.9	130.2	
Automatic debt dynamics [5/]	0.0	-0.4	-0.7	-0.3	-0.4	-0.6	-0.6	-0.6	-0.6	-3.2	
Interest rate/growth differential [6/]	-0.1	-0.2	-0.4	-0.3	-0.4	-0.6	-0.6	-0.6	-0.6	-3.2	
Of which: real interest rate	0.2	0.0	-0.1	0.6	0.4	0.1	0.1	0.2	0.2	1.6	
Of which: real GDP growth	-0.3	-0.2	-0.3	-0.9	-0.8	-0.8	-0.8	-0.8	-0.8	-4.7	
Exchange rate depreciation [7/]	0.1	-0.2	-0.3	...	...	...	...	...	...	...	
Other identified debt-creating flows	1.9	1.0	0.7	0.3	0.6	0.5	0.5	0.2	0.2	2.3	
Net acquistion of Financial Assets (negative)	1.3	0.6	0.4	0.0	0.3	0.3	0.3	0.2	0.2	1.3	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Net Repayment of Recognition Bond	0.6	0.4	0.4	0.3	0.3	0.2	0.2	0.0	0.0	1.0	
Residual, including asset changes [8/]	-0.1	0.7	0.2	-0.2	-0.4	-0.4	-0.4	-0.4	-0.4	-2.2	



Source: IMF staff.

1/ Public sector is defined as central government.

2/ Based on available data.

3/ EMBIG.

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as [(r - π(1+g) - g + ae(1+r)]/(1+g+π+gπ)) times previous period debt ratio, with r = interest rate; π = growth rate of GDP deflator; g = real GDP growth rate; a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

6/ The real interest rate contribution is derived from the numerator in footnote 5 as r - π (1+g) and the real growth contribution as -g.

7/ The exchange rate contribution is derived from the numerator in footnote 5 as ae(1+r).

8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

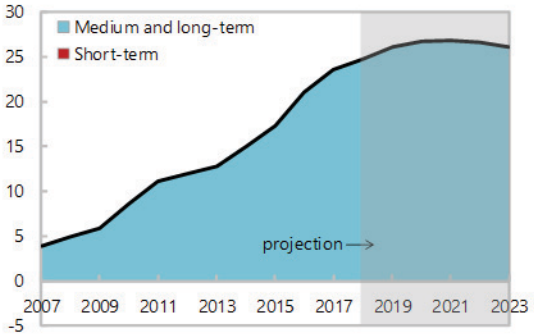
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Chile Public DSA - Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

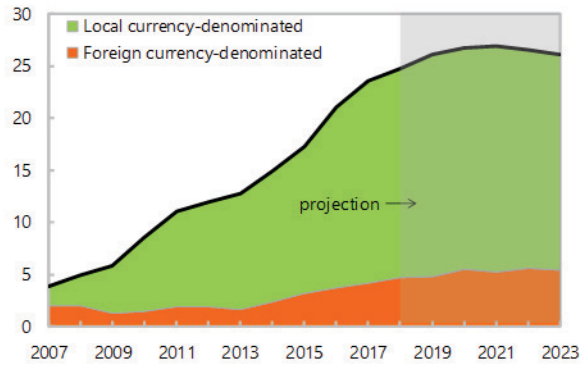
By Maturity

(in percent of GDP)



By Currency

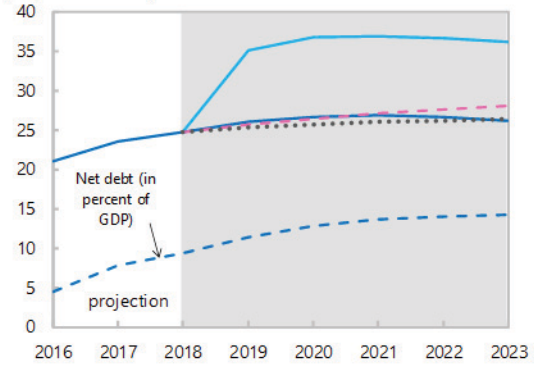
(in percent of GDP)



Alternative Scenarios

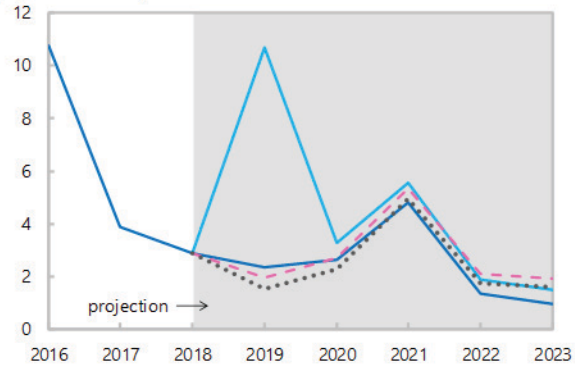
Gross Nominal Public Debt

(in percent of GDP)



Public Gross Financing Needs

(in percent of GDP)



Underlying Assumptions

(in percent)

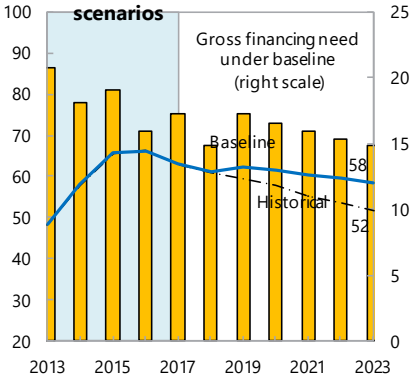
Baseline Scenario	2018	2019	2020	2021	2022	2023
Real GDP growth	4.0	3.4	3.2	3.0	3.0	3.0
Inflation	1.3	2.0	3.2	3.1	3.0	3.0
Primary Balance	-1.3	-1.6	-1.2	-0.7	-0.5	-0.3
Effective interest rate	3.9	3.6	3.9	3.8	3.8	3.8
Constant Primary Balance Scenario						
Real GDP growth	4.0	3.4	3.2	3.0	3.0	3.0
Inflation	1.3	2.0	3.2	3.1	3.0	3.0
Primary Balance	-1.3	-1.3	-1.3	-1.3	-1.3	-1.3
Effective interest rate	3.9	3.6	3.9	3.8	3.8	3.8

Historical Scenario	2018	2019	2020	2021	2022	2023
Real GDP growth	4.0	3.0	3.0	3.0	3.0	3.0
Inflation	1.3	2.0	3.2	3.1	3.0	3.0
Primary Balance	-1.3	-0.8	-0.8	-0.8	-0.8	-0.8
Effective interest rate	3.9	3.6	4.0	4.1	4.4	4.5
Contingent Liability Shock						
Real GDP growth	4.0	0.9	0.8	3.0	3.0	3.0
Inflation	1.3	1.4	2.6	3.1	3.0	3.0
Primary Balance	-1.3	-9.8	-1.2	-0.7	-0.5	-0.3
Effective interest rate	3.9	4.4	4.5	4.4	4.3	4.3

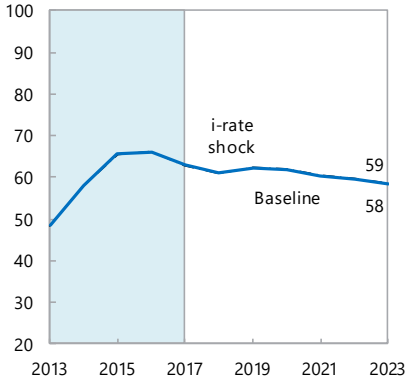
Source: IMF staff.

Chile: External Debt Sustainability: Bound Test 1/ 2/
(External debt in percent of GDP)

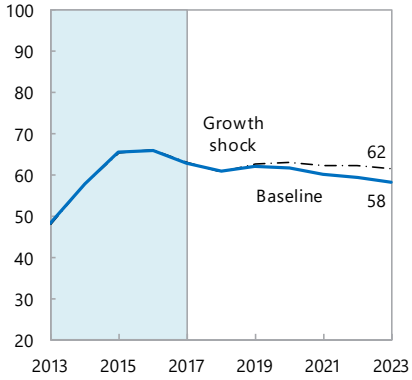
Baseline and historical scenarios



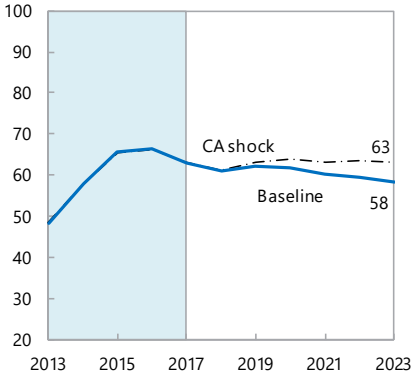
Interest rate shock (in percent)



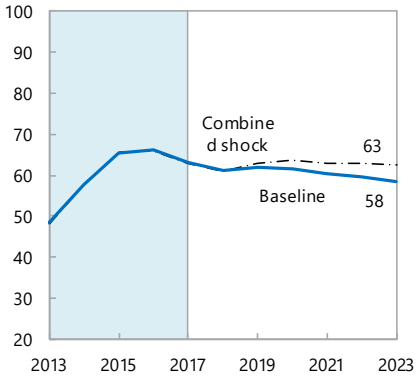
Growth shock
(in percent per year)



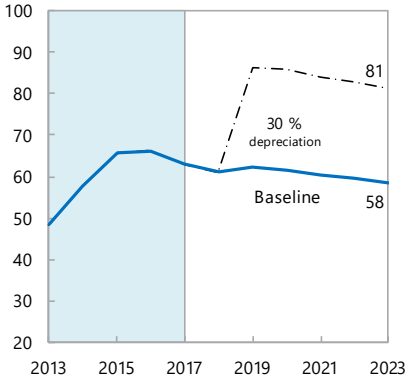
Non-interest current account shock



Combined shock 3/



Real depreciation shock 4/



Sources: International Monetary Fund, Country desk data, and staff estimates.
1/ Shaded areas represent actual data. Individual shocks are permanent one-half standard deviation shocks. Figures in the boxes represent average projections for the respective variables in the baseline and scenario being presented. Ten-year historical average for the variable is also shown.
2/ For historical scenarios, the historical averages are calculated over the ten-year period, and the information is used to project debt dynamics five years ahead.
3/ Permanent 1/4 standard deviation shocks applied to real interest rate, growth rate, and current account balance.

Chile: External Debt Sustainability Framework

(In percent of GDP, unless otherwise indicated)

	Actual							Projections						
	2013	2014	2015	2016	2017			2018	2019	2020	2021	2022	2023	Debt-stabilizing non-interest current account 6/
Baseline: External debt	48.4	57.9	65.6	66.2	63.0			**61.0**	**62.2**	**61.7**	**60.3**	**59.6**	**58.4**	**-0.6**
Change in external debt	2.6	9.5	7.7	0.7	-3.2			-2.0	1.2	-0.5	-1.4	-0.7	-1.2	
Identified external debt-creating flows (4+8+9)	0.9	4.5	3.5	0.1	-3.9			0.3	1.1	1.7	1.9	1.4	1.2	
Current account deficit, excluding interest payments	3.0	0.4	0.5	-0.1	-0.5			0.9	1.2	1.0	0.9	0.7	0.6	
Deficit in balance of goods and services	-0.5	1.0	-0.1	0.9	1.8			0.6	0.0	0.4	0.6	0.7	0.7	
Exports	31.9	32.9	29.3	28.1	28.6			28.8	28.8	28.5	28.2	28.0	27.4	
Imports	-32.5	-31.9	-29.4	-27.2	-26.9			-28.2	-28.7	-28.1	-27.7	-27.2	-26.7	
Net non-debt creating capital inflows (negative)	-1.3	0.0	-2.3	0.4	0.9			0.1	0.3	1.1	1.4	1.2	1.2	
Automatic debt dynamics 1/	-0.8	4.2	5.3	-0.1	-4.3			-0.7	-0.5	-0.5	-0.4	-0.4	-0.5	
Contribution from nominal interest rate	1.1	1.3	1.8	1.5	2.0			1.6	1.5	1.4	1.4	1.3	1.2	
Contribution from real GDP growth	-1.8	-0.9	-1.4	-0.8	-0.9			-2.3	-2.0	-1.9	-1.7	-1.7	-1.7	
Contribution from price and exchange rate changes 2/	-0.1	3.8	4.9	-0.8	-5.5			...	...	...	...	...	...	
Residual, incl. change in gross foreign assets (2-3) 3/	1.7	5.0	4.2	0.6	0.7			-2.3	0.1	-2.2	-3.3	-2.1	-2.5	
External debt-to-exports ratio (in percent)	151.4	175.9	223.7	235.9	219.9			212.2	216.1	216.5	213.6	213.2	212.8	
Gross external financing need (in billions of US dollars) 4/	57.9	47.1	46.6	39.8	47.9			**44.6**	**52.8**	**53.5**	**54.3**	**54.9**	**56.1**	
in percent of GDP	20.8	18.1	19.1	15.9	17.3	10-Year	10-Year	14.9	17.3	16.6	16.0	15.3	14.8	
Scenario with key variables at their historical averages 5/								**61.0**	**59.3**	**57.8**	**55.2**	**53.6**	**51.8**	**-1.2**
Key Macroeconomic Assumptions Underlying Baseline						Historical Average	Standard Deviation							
Real GDP growth (in percent)	4.1	1.8	2.3	1.3	1.5	3.0	2.4	4.0	3.4	3.2	3.0	3.0	3.0	
GDP deflator in US dollars (change in percent)	0.2	-8.0	-8.5	1.2	9.2	2.1	8.5	4.1	-1.5	2.4	2.4	2.3	2.2	
Nominal external interest rate (in percent)	2.4	2.5	2.9	2.4	3.4	2.7	0.3	2.8	2.5	2.4	2.3	2.2	2.2	
Growth of exports (US dollar terms, in percent)	-1.5	-3.5	-16.6	-1.9	13.1	1.1	13.8	8.7	1.9	4.7	4.5	4.3	3.4	
Growth of imports (US dollar terms, in percent)	0.2	-8.0	-13.7	-5.2	9.5	5.2	20.6	13.5	3.8	3.5	3.7	3.5	3.5	
Current account balance, excluding interest payments	-3.0	-0.4	-0.5	0.1	0.5	-0.5	2.1	-0.9	-1.2	-1.0	-0.9	-0.7	-0.6	
Net non-debt creating capital inflows	1.3	0.0	2.3	-0.4	-0.9	-0.1	2.0	-0.1	-0.3	-1.1	-1.4	-1.2	-1.2	

1/ Derived as [r - g - r(1+g) + ea(1+r)]/(1+g+r+gr) times previous period debt stock, with r = nominal effective interest rate on external debt; r = change in domestic GDP deflator in US dollar terms, g = real GDP growth rate, e = nominal appreciation (increase in dollar value of domestic currency), and a = share of domestic-currency denominated debt in total external debt.

2/ The contribution from price and exchange rate changes is defined as [-r(1+g) + ea(1+r)]/(1+g+r+gr) times previous period debt stock. r increases with an appreciating domestic currency (e > 0) and rising inflation (based on GDP deflator).

3/ For projection, line includes the impact of price and exchange rate changes.

4/ Defined as current account deficit, plus amortization on medium- and long-term debt, plus short-term debt at end of previous period.

5/ The key variables include real GDP growth; nominal interest rate; dollar deflator growth; and both non-interest current account and non-debt inflows in percent of GDP.

6/ Long-run, constant balance that stabilizes the debt ratio assuming that key variables (real GDP growth, nominal interest rate, dollar deflator growth, and non-debt inflows in percent of GDP) remain at their levels of the last projection year.

Annex V. Risk Assessment Matrix[1]

Source of Risks	Likelihood	Impact	Horizon	Policy Advice
External Risk				
Sharp tightening of global financial conditions triggered by a sharper-than-expected increase in U.S. interest rates (prompted by higher-than-expected inflation) or the materialization of other risks.	High	Medium	ST	Allow the exchange rate to play its role as shock absorber. Provide liquidity. If necessary, to contain temporary disorderly conditions, undertake exchange rate intervention.
Rising protectionism and retreat from multilateralism could disrupt the global trade system and international policy and regulatory collaboration, as well as increase financial market volatitity. In particular, this could increase the downside risks for the outlook of copper prices, exports, and access to international finanical markets.	High	High	ST, MT	Allow the exchange rate to play its role as shock absorber. Ease monetary policy, and if necessary provide liquidity. If needed, allow temporary fiscal expansion as countercyclical measure. Speed up reforms to reduce trade barriers, improve diversification on export destination and products, enhance productivity growth.
Weaker-than-expected U.S. growth and its spillovers could slow down domestic growth.	Medium	Medium	MT	
Weaker-than-expected China growth and its spillovers could slow down domestic growth, in particular, through the copper export channel.	Low/Medium	High	ST,MT	
Unsustainable macroeconomic policies in systemically important countries could exacerbate underlying vulnerabilities and, in some cases, backfire by hurting confidence and global growth.	Medium	Medium	ST, MT	
Sizeable deviations from baseline oil prices increase uncertainty to growth and inflation prospects.	Medium	Low	ST,MT	
Domestic Risk				
Cyber-attacks on critical financial infrastructure may trigger financial instability or disruptions in socio-economic activities.	High	Medium	ST,MT	Modernize and strengthen the regulatory framework to close regulatory gaps. Develop continuity plans to ensure orderly and speedy recovery of the financial insfrastructure. Incentivze private sector investment in cyber security.
Risk of default of leveraged non-financial corporates due to diminished earnings and impairment on assets.	Low	High	ST,MT	Ease monetary policy, manage impaired debt to maintain confidence and low funding costs of healthy corporates. Preventive measures encompass speeding up adoption of Basel III capital requirements.
Rapid implementation of structural reforms agenda, leading to improved medium-term growth prospects and higher economic diversification.	Medium	Medium	ST, MT	In case of overheating, allow the exchange rate to play its role as shock absorber and tighten monetary policy, if necessary.
Stronger-than-expected rebound in the non-mining investment could pose upside risks to growth and inflation, and potentially increase financial risk.	Low	Medium	ST,MT	Allow the exchange rate to play its role as a shock absorber and tighten monetary and macroprudential policy, if necessary. Ensure that banks do adequate screening and provisioning of new lending.

[1] The Risk Assessment Matrix (RAM) shows events that could materially alter the outlook (both the current policies and staff's proposal scenarios). The relative likelihood of risks listed is the staff's subjective assessment of the risks surrounding the scenarios projections ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability of 30 percent or more). The RAM reflects staff 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.