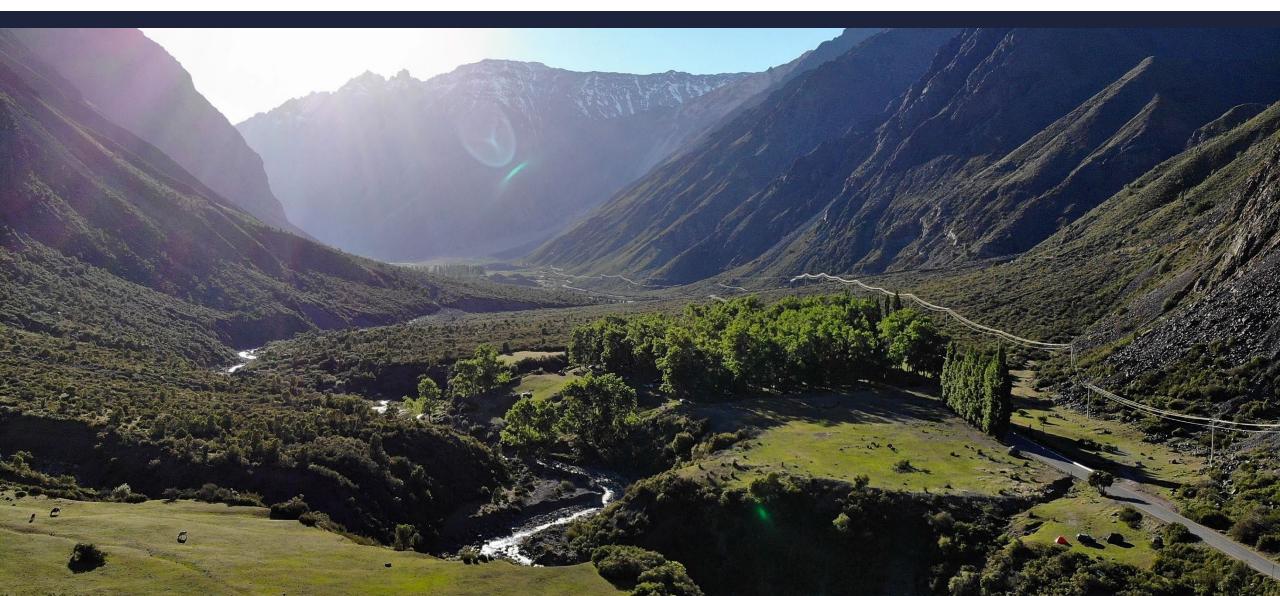
Recent developments and prospects of the Chilean economy

Mario Marcel, Governor of the Central Bank of Chile

December 01, 2021





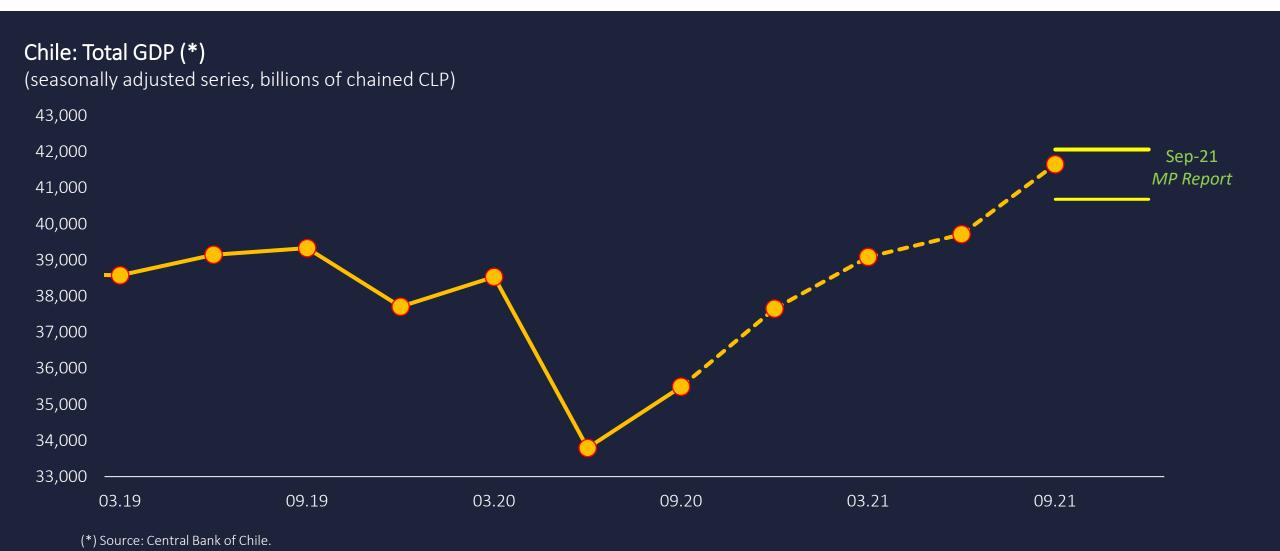
Preview



- In the last 2½ years, the Chilean economy suffered the impact of three major, unprecedented shocks: the social crisis of end-2019, the external impact of the Covid-19 pandemic, and the internal shock caused by the measures to contain the local spread of the virus.
- The buffers accumulated over the years, the effectiveness of the policy framework and the ability to innovate allowed
 authorities to articulate a powerful response to these shocks that reduced by more than half their impact on output and
 employment.
- Combined with the resilience of the economy and progress in vaccination, Chile has recovered from this crisis at a faster pace than ever before, outpacing most of its peers. By 2021Q3, per capita GDP had already exceeded its pre-crisis levels, bringing the recession to a technical ending.
- Nevertheless, the recovery has been unbalanced, given the scale of the expansion of private consumption due the continuing impulse of government transfers and three pension fund withdrawals. The pressure this has exerted over prices, on top of supply-side disruptions, has driven the CBC to raise the interest rate throughout the second half of 2021.
- The weakening of the capitals market by pension withdrawals, political tensions, fiscal deterioration and persistent uncertainty have taken their toll on long-term interest rates, the exchange rate and stock prices, further denting economic prospects for 2022 and 2023.
- The positive response of financial markets to policy action by the CBC, the passing of a responsible budget for 2022 and the outcome of the General Election last week, suggest that part of these developments may be transitory. Still, the authorities—continuing and new—have important challenges ahead, albeit with a good basis to build from.

The recession caused by Covid-19 has ended according by all technical standards.





This has been the most abrupt, intense, but also the shortest crisis in living memory.





⁽¹⁾ Respective t_0 periods: 1981, IV, 1998, IV, 2008, IV and 2020.I. (2) Official seasonally adjusted spliced series for all periods except 1982-83. For that period, the series contained in the volume "Economic and Social Indicators 1960-1988" was seasonally adjusted. Source: Central Bank of Chile.

On balance, Chile fared better than many other countries, either by contracting less in 2020 or by recovering faster in 2021.

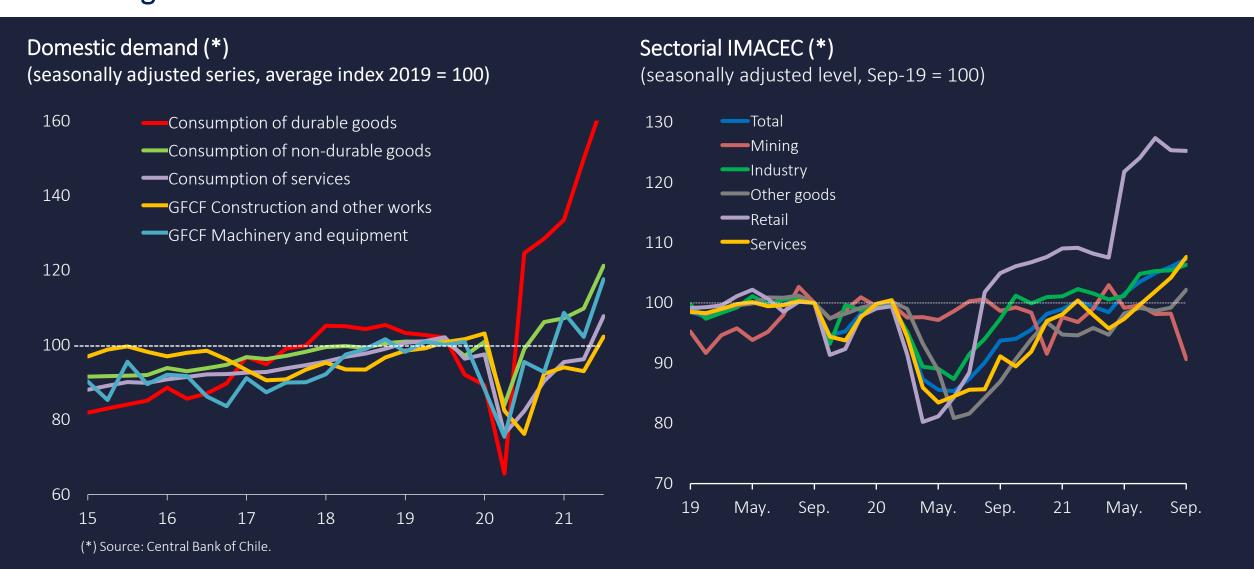




⁽¹⁾ Dotted lines represent the projections based on Bloomberg latest survey. For Latin America (ex Chile), the dots represents the projection based on the average percent change on the previous calendar year from the latest *Consensus Forecast* (November) for 2021- and 2022-year average. (2) For India, GDP data corresponds to the FY. Source: *Consensus Forecast* November 2021.

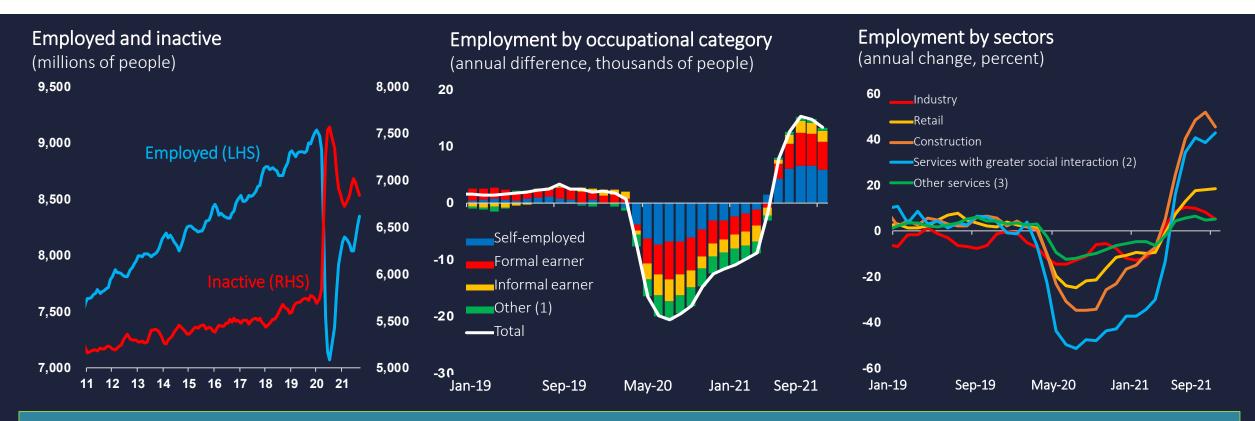
Recovery has been led by private consumption of goods, followed by investment in machinery and equipment. Retail trade suffered the deepest contraction, only to experience the strongest reboot afterwards.





The recovery is still heterogeneous, especially in the labor market.



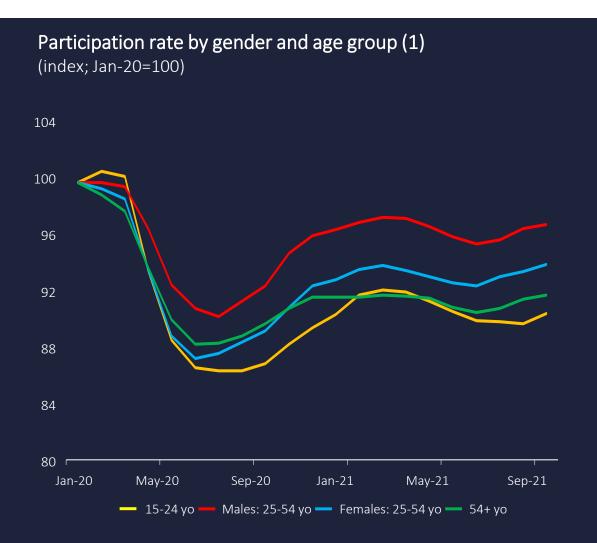


- According with administrative records, formal salaried employment has been recovered pre pandemic levels, but there are around 30% of informal and self-employments to recover.
- All in all, near 20% of employment yet to be to recover.
- Real labor income has evolved positively.

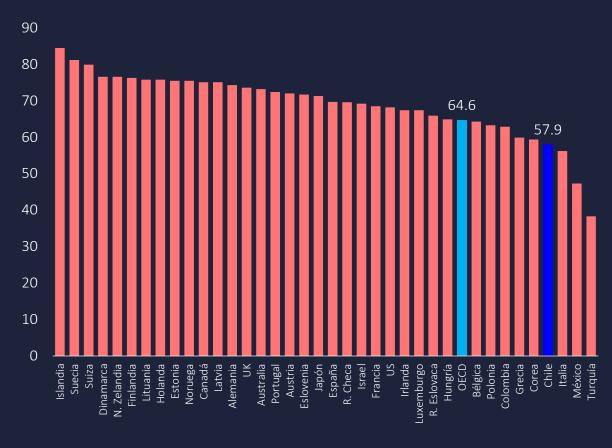
⁽¹⁾ Includes employers, unpaid domestic and family service personnel. Source: National Institute of Statistics. (2) Includes accommodation and food service activities; and artistic, entertainment and recreational. (3) Includes financial and insurance activities; real estate; professional, scientific and technical; of extraterritorial organizations and bodies; administrative and support services; of households as employers; human health care and social assistance; public administration and defense; teaching; and other service activities. Source: National Institute of Statistics.

The labor market responded partly by people exiting the labor force. This is especially marked for women, young and older workers. Some may not return to paid work.





Women's labor participation rates (2) (15-64 yo; percentage of total labor force 2018)



(1) Source: National Statistics Institute. (2) Source: Organization for the Economic Co-operation and Development.

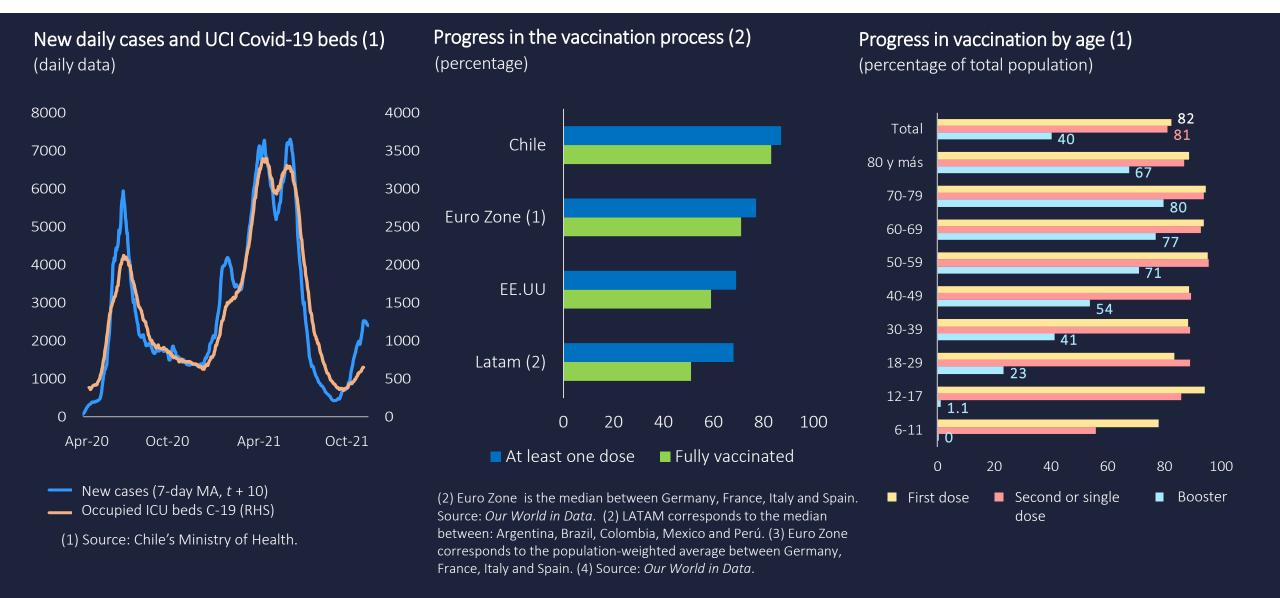
How did Chile fare better on the Covid-19 crisis while starting from the prior social crisis?



- Evolution and control of the pandemic
- Adaptation capacity of companies and households
- External conditions
- Local policies
- Monetary policy
- Credit stimulus policies
- Fiscal policy
- Pension savings withdrawals

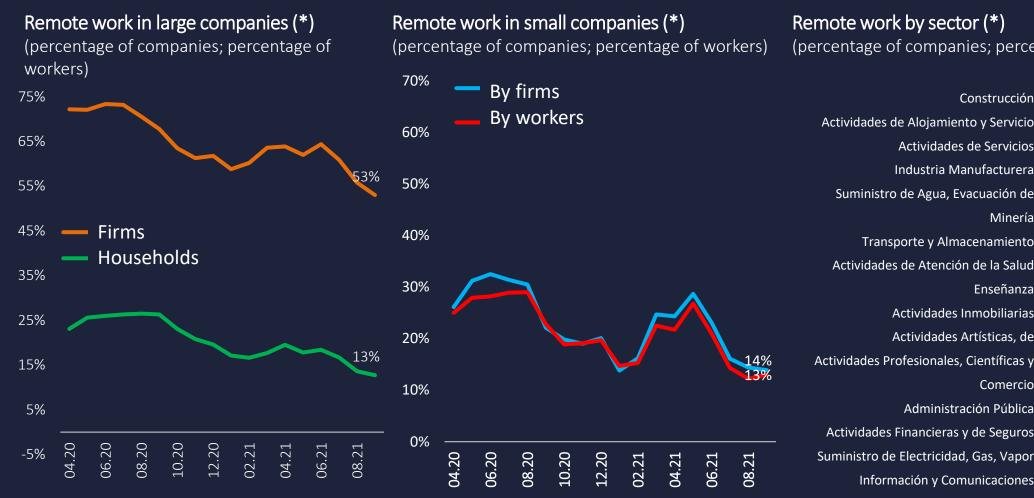
National management of the pandemic has contributed to a faster recovery of the economy.





Adaptation of firms: teleworking.





(percentage of companies; percentage of workers; June 2021)



^(*) Source: National Institute of Statistics.

Businesses adaptation: online commerce and retail.

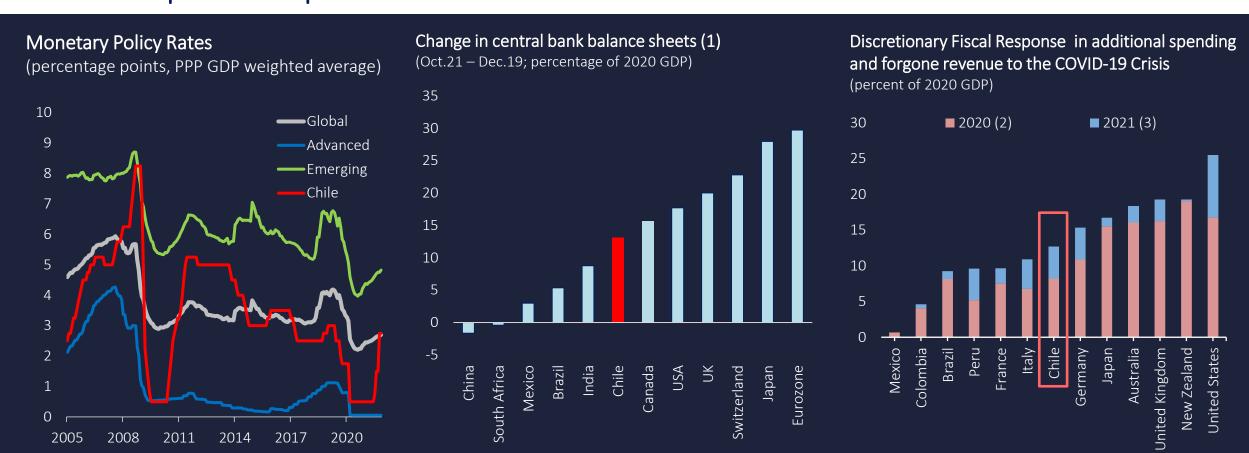




^(*) Source: National Chamber of Commerce, Online Retail Sales Report, 2021.III.

The crisis provoked a historical policy response, both in magnitude and synchronicity worldwide. This made local policies more effective and prevented a financial crisis. The Chilean response compares well with that of advanced economies.



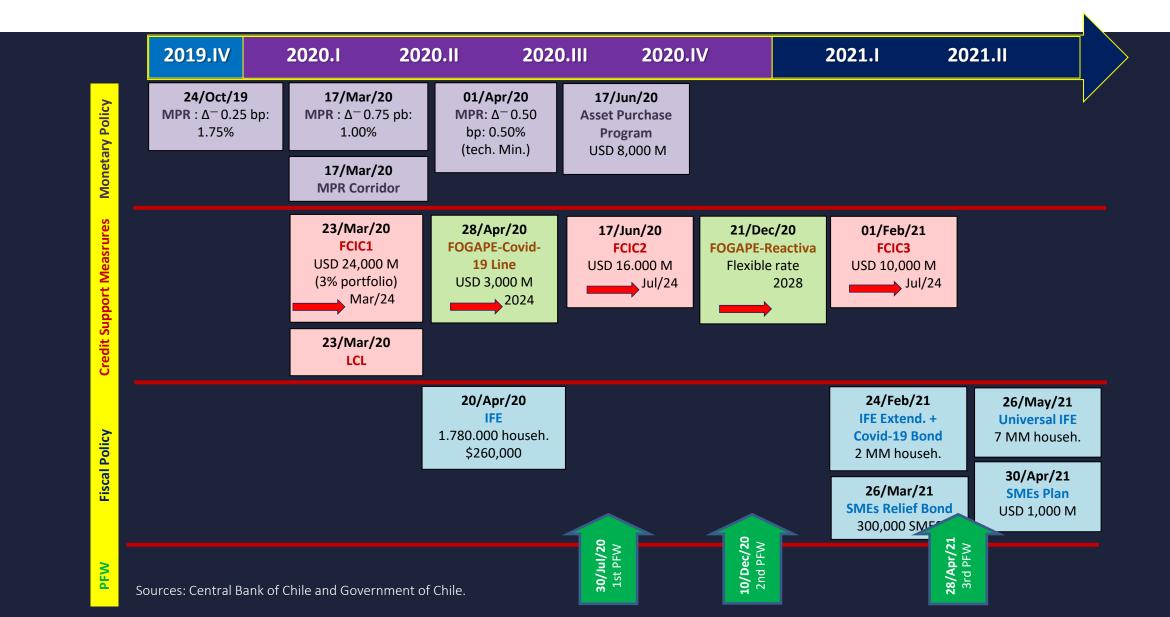


"IMF staff estimates suggest that policy actions—including automatic stabilizers, discretionary measures, and financial sector measures—contributed about 6 percentage points to global growth in 2020. While difficult to pin down precisely, absent these actions, the global growth contraction last year could have been three times worse than it was" (IMF WEO April 2021)

(1) Rolling yearly GDP used in calculation. For Switzerland, balance sheet data up to Sep-21; for Brazil and South Africa, up to Aug-21. (2) IMF Fiscal Monitor database January 2021. (3) Difference between IMF Fiscal Monitor database of October 2021 and January 2021. Sources: IMF, Ministry of Finance, Superintendence of Pensions, Bloomberg and Central Bank of Chile.

A wide range of policy measures were implemented since end-2019.





This has been the largest deployment of policy measures ever known in Chile in the face of an exogenous shock. Preliminary evidence indicates that they were effective in containing it.



Effects on GDP of the measures adopted during the Covid-19 crisis

(percentage with respect to the same period of the previous year)

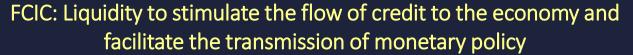
	2020	2021 Q1-Q2-Q3
Conventional monetary policy (1)	[0.2 / 0.8]	[0.5 / 2.8]
Unconventional credit monetary policy (2)	[2.2 / 4.8]	[3.1/4.8]
Fiscal policy	0.7	2.3
Fiscal and monetary policy total	[3.1 / 6.3]	[5.9 / 9.9]
Pension fund withdrawals	1.2	2.2
Total	[4.3 / 7.5]	[8.1 / 12.1]
Actual GDP	-5.8	11.7
Counterfactual GDP	[-10.1 / -13.3]	[3.6 / -0.4]

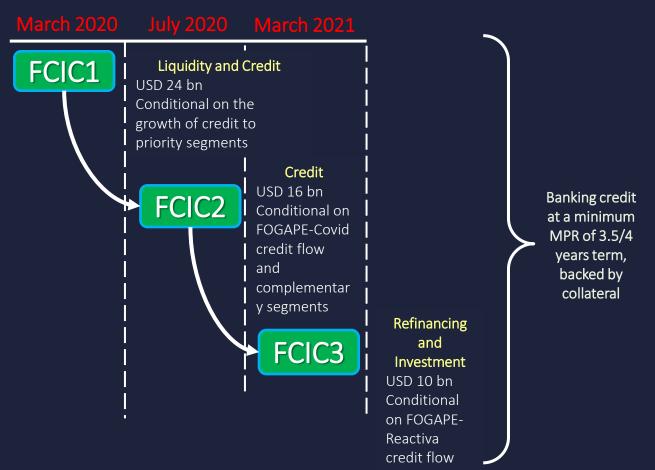
- Without domestic policy actions, the GDP contraction in 2020 would have more than doubled its effective value
- Credit policies made the greatest contribution to limiting the impact of the crisis
- The impact of fiscal policy was much greater in the three quarters of 2021 than in 2020
- Pension fund withdrawals helped boost demand and output, but at considerably higher cost
- External financial conditions, marked by an unprecedented political response, increased the impact and sustainability of local policies
- Foreign and domestic policy responses jointly helped prevent the epidemic and economic crisis from turning into a financial crisis
- The negative spill-over effects on the financial sector would have made the crisis much deeper and longer

⁽¹⁾ Conventional monetary policy is associated with the MPR. (2) It encompasses monetary and sovereign guarantee policies that sought to stabilize financial markets, including the FCIC-FOGAPE program, the purchase of bonds, and liquidity programs in local and foreign currency. Source: Central Bank of Chile.

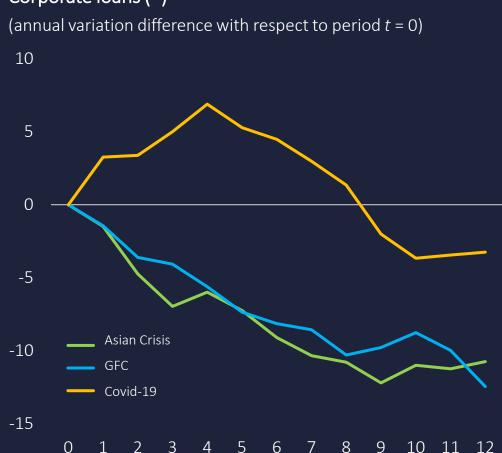
Credit-enhancing measures made corporate lending to behave in a countercyclical way for the first time ever.







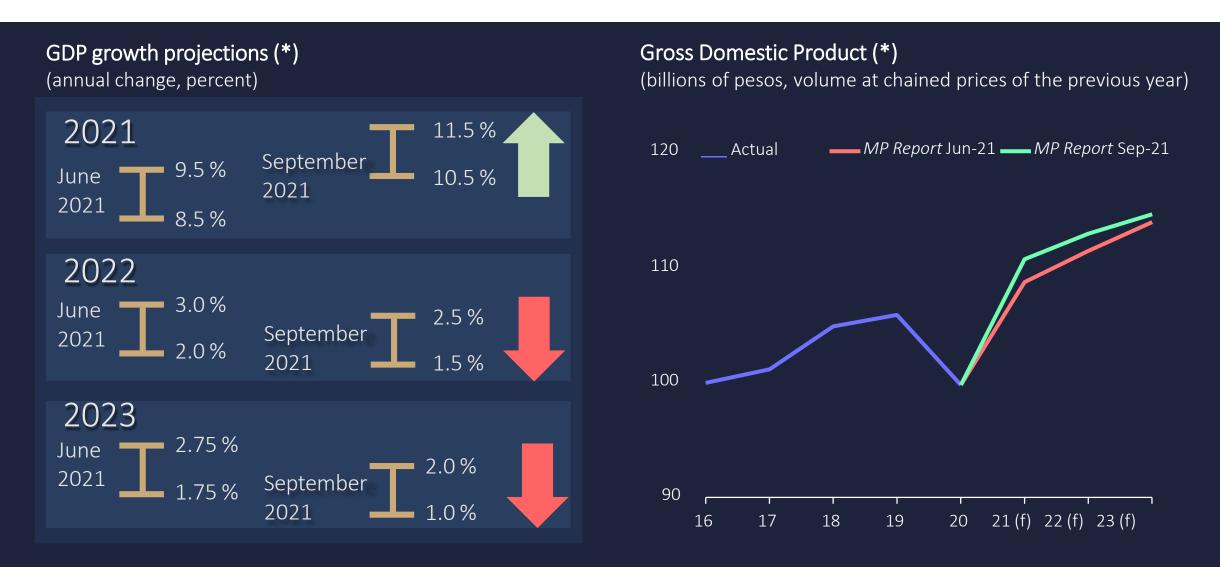
Corporate loans (*)



^(*) Horizontal axis indicates months. Period 1 is the first month with negative IMACEC. Real data constructed by linking the 2018 CPI annual base. Source: Central Bank of Chile based on information from the CMF.

However, towards 2022 and 2023 the economy will slow down significantly.





(f)=Forecast. It considers the midpoint of the growth ranges contained in the June and September 2021 Monetary Policy Report. (*) Source: Central Bank of Chile.

This is due to the rollback of expansionary measures, the need to rein-in consumption to contain inflation pressures and the slowdown of investment due to less favorable financial conditions.



Economic growth and Current Account (*)

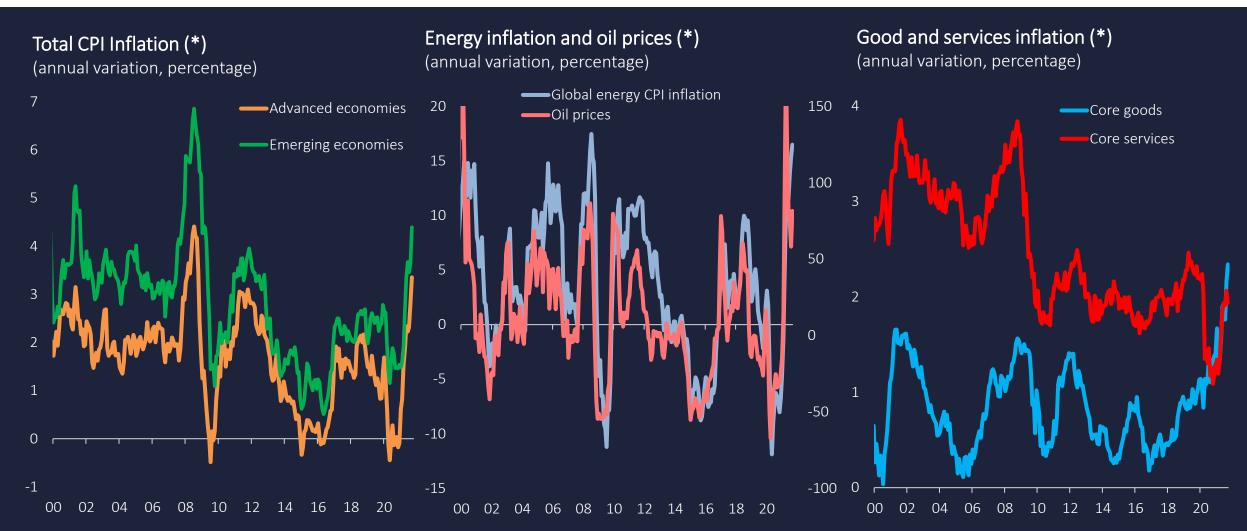
(annual variation, percentage)

<i>MP Report</i> September 2021	2020	2021 (f)	2022 (f)	2023 (f)
GDP	-5.8	10.5/11.5	1.5/2.5	1.0/2.0
Domestic demand	-9.1	18.5	0.9	0.5
Domestic demand (w/o Inv. Ch.)	-7.9	16.7	0.5	0.2
Gross Fixed Capital Formation	-11.5	15.9	0.3	0.6
Total Consumption	-6.8	16.9	0.5	0.1
Private Consumption	-7.5	18.1	1.1	-0.4
Exports of goods and services	-1.0	0.1	5.7	5.0
Imports of godos and services	-12.7	24.6	2.3	1.8
Current Account (% GDP)	1.4	-2.2	-2.1	-2.3
GFCF (% of Nominal GDP)	19.8	21.3	21.5	22.1

⁽f)=Forecast. (*) Source: Central Bank of Chile.

In part, inflation is currently a global phenomenon, with similar factors affecting many countries simultaneously. Yet this is not the same as *imported inflation*.

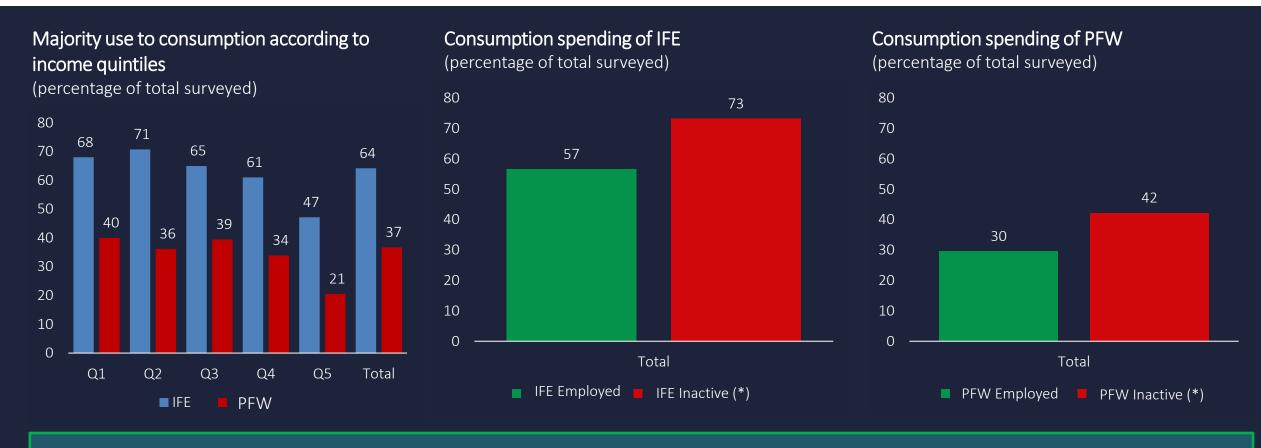




^(*) Sample considers 40 countries. Measures corresponds to median between countries. Source: database based on Bajraj, Carlomagno and Wlasiuk (2021).

Chile has articulated a number of measures to boost household liquidity. Government transfers have contributed more to consumption as they are more evenly distributed across the population.



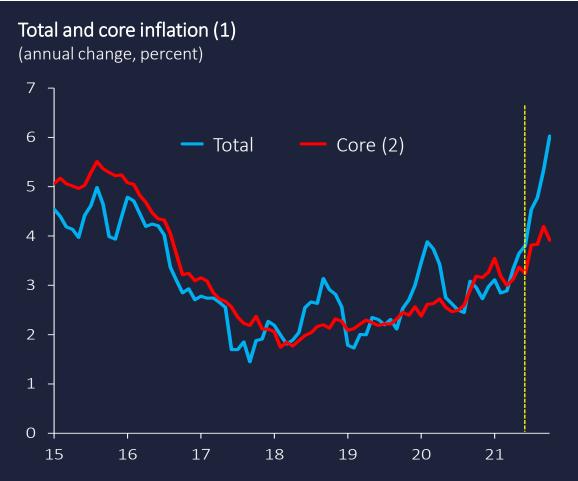


Among people who report having used these support measures, those who are "Non-Employed", allocate a greater proportion of these to consumption than those who are employed. This suggests greater needs for sources of income once these benefits end.

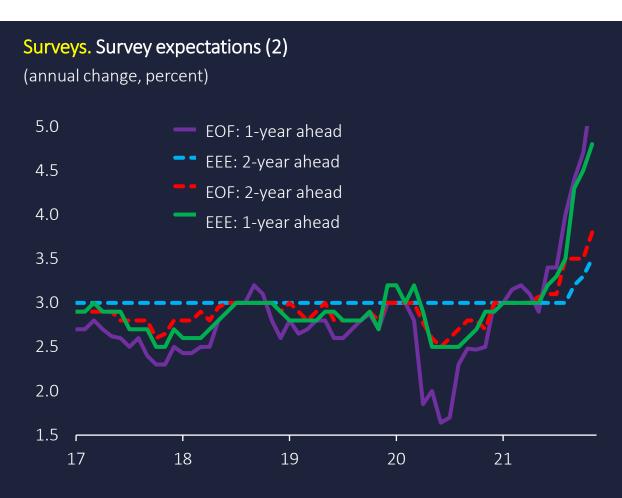
^(*) Non-Employed correspond to those surveyed who are unemployed, looking for work for the first time or inactive. Source: Occupation and Unemployment Survey (EOD), University of Chile.

Combining these forces, inflation has risen fast, led by highly demanded goods. Inflation expectations are rising as well.





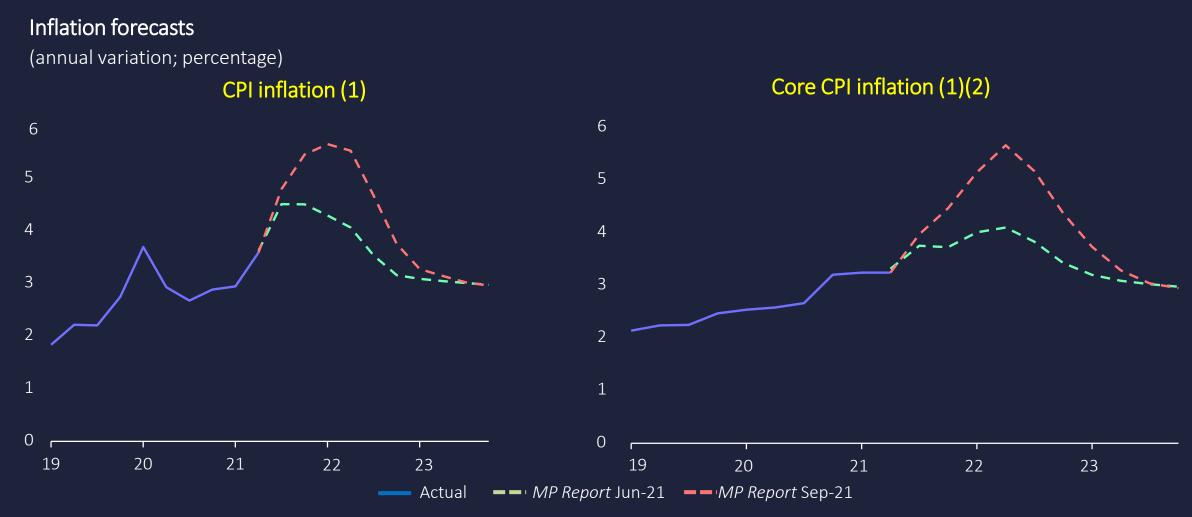
(1) Vertical line corresponds to the statistical closing of the September 2021 *Monetary Policy Report*. (2) CPI without volatiles has a 65.1% share in the total CPI basket. (3) Shows the evolution of the CPI price indices of the selected groupings of goods. Sources: Central Bank of Chile and National Institute of Statistics.



(2) In the case of the EOF, consider the survey of the first fortnight of each month until January 2018. Thereafter, consider the last survey published in the month, including the one published on 08/26/2021. In the months with no survey, the latest survey available is considered. Sources: Central Bank of Chile, ICAP, and Tradition Chile.

MPR projected annual headline inflation to end at 5.7% this year, remaining above 5% during the first half of 2022. Core CPI will reach its maximum by mid-2022.





⁽¹⁾ Segmented lines correspond to the projection in the respective *Monetary Policy Report*. (2) Measured by the CPI without volatiles. Sources: Central Bank of Chile and National Institute of Statistics.

Upward correction of end-2021 inflation forecasts are mostly explained by the fast increase in private consumption. They may adjust further up in the December *Monetary Policy Report*.



Incidence in the revision of the inflation forecast to December 2021 (*) (percentage points)



The main factors behind the higher inflation projected to December 2021 are:

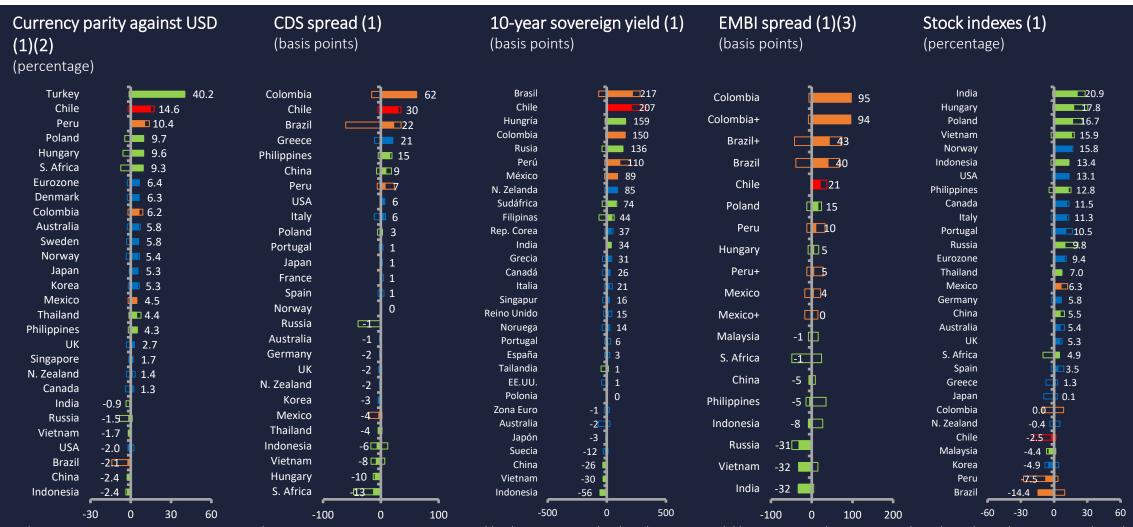
- Higher projected growth in consumption
- The idiosyncratic depreciation that the peso has accumulated in recent months
- The rise in fuel prices
- An offer that has failed to fully recover

^(*) Constructed considering the projection for inflation of the total CPI of the June and September 2021 *Monetary Policy Report*. Sources: Central Bank of Chile and National Institute of Statistics.

Chilean financial assets have depreciated more than their peers as a consequence of idiosyncratic factors.



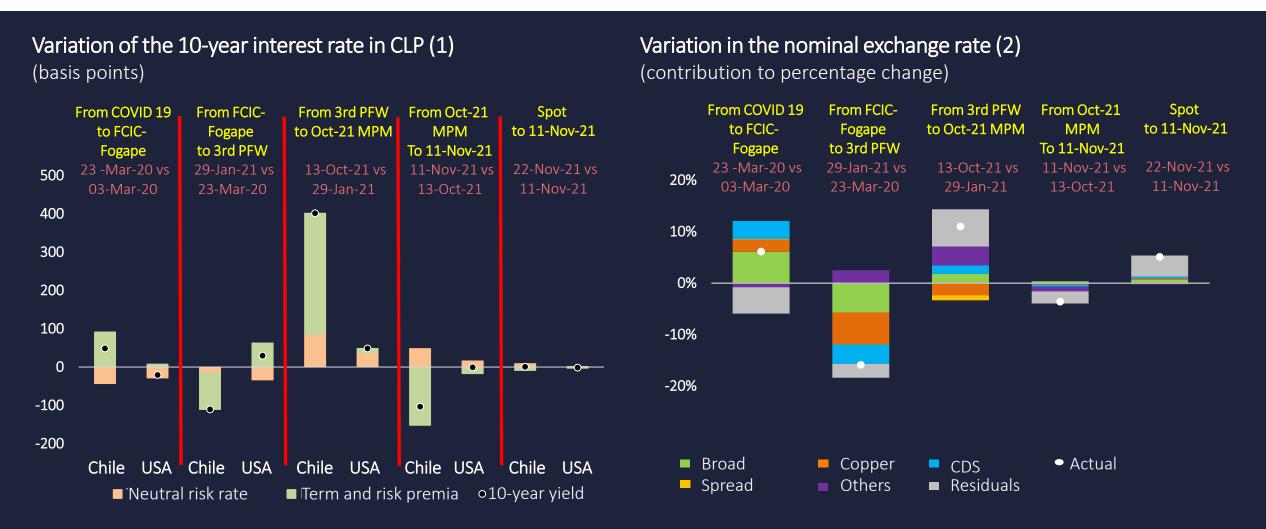
Sample: 13-Apr-21 to 22-Nov-21



⁽¹⁾ Green bars represent emerging countries; orange bars represent Latin American countries; blue bars represent developed countries. Solid bars represent the variation in the indicated sample; transparent bars show the minimum and maximum variation achieved within the same sample. (2) Increase (decrease) shows depreciation (appreciation). (3) For the US, the broad dollar index is shown. Numbers correspond to the total variation. (3) Indices denoted with a "+" symbol correspond to EMBI+, which excludes quasi-sovereign issuers. Source: Bloomberg.

Local factors explain the increase in long-term interest rates and the depreciation of the exchange rate, especially after the third early withdrawal of pension funds.

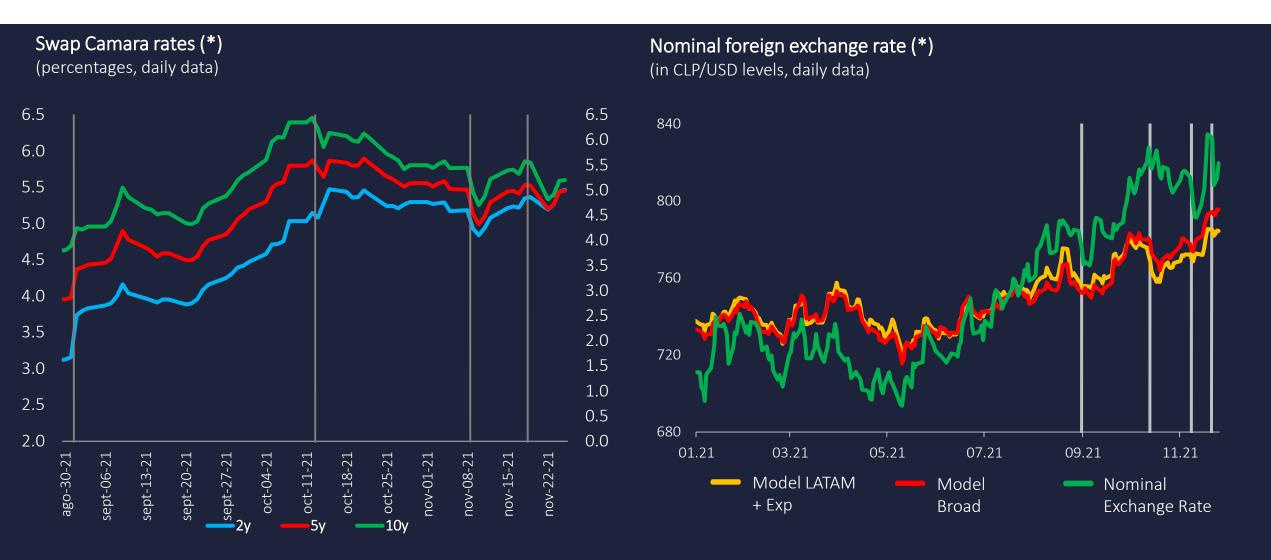




⁽¹⁾ The RN and TP components are extracted from the SPC rates using the strategy proposed by Krippner (2015) that contemplates the existence of a lower limit for the MPR. (2) Captures the movement or trend that the TCN should follow according to its fundamentals, such as the price of copper, domestic price level, among others. For more detail see "Use of macroeconomic models in the Central Bank of Chile" (2020). Source: Central Bank of Chile based on Bloomberg and RiskAmerica.

Still, after the last rate hike of October 2021 and recent developments on the 4th pension withdrawal and the General Election, financial prices have tended to moderate.

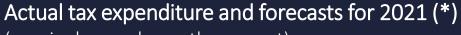




^(*) From left to right: September 2021 Monetary Policy Report, October MPM, rejection of the fourth pension withdrawal in the Senate, and General Elections. Last Update: November 25, 2021.

Fiscal policy will begin a consolidation path in 2022, as established in the recently approved Budget. This considers a spending contraction of public spending close to - 20% and a reduction of the structural balance from 11% to 3.9% of GDP.





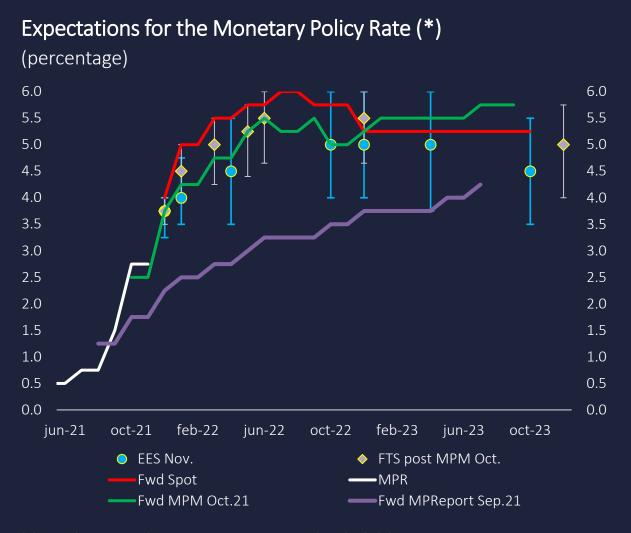
(nominal annual growth, percent)



^(*) Sources: Central Bank of Chile and Public Finance Report, Budget Office (DIPRES) of the Ministry of Finance.

The CBC started to withdraw the monetary policy impulse in July 2021, intensifying with the rise in medium-term inflation forecasts. Forward guidance points to return to the neutral rate in December and market expectations point to a forward trajectory above the upper CBC MPR Corridor until mid-2022.





Expectations for the Monetary Policy Rate (*) (percentage)

	Forward	EES	FTS
MPM Dec-21	4	3.75	3.75
MPM Jan-22	5	4	4.5
MPM Mar-22	5.5	4.5	5
MPM May-22	5.75	-	5.25

(1) Spot date: November 25, 2021. Source: Central Bank of Chile.

Risks and opportunities.



Risks

- Disorderly macroeconomic exit and unwinding of emergency measures.
- Uncertain fiscal convergence.
- New massive asset liquidations.
- Reversals in risk appetite due to changes in AEs' monetary policy stance
- Persistent political uncertainty.
- Credit contraction due to higher risk perception.

Opportunities

- Broader policy space than in other EMEs, comparative lower risk of local assets (IG)
- New lasting social contract from a Legitimized Constitution
- Intensifying developments in the digital economy
- Environment-friendly global and local policies
- New prospects for financial development (payments, internationalizing CLP)

Adjustments forced by the crisis can have a positive impact on productivity. When it comes to digitization, Chile has a relatively favorable starting point.

Estonia

20

40

60

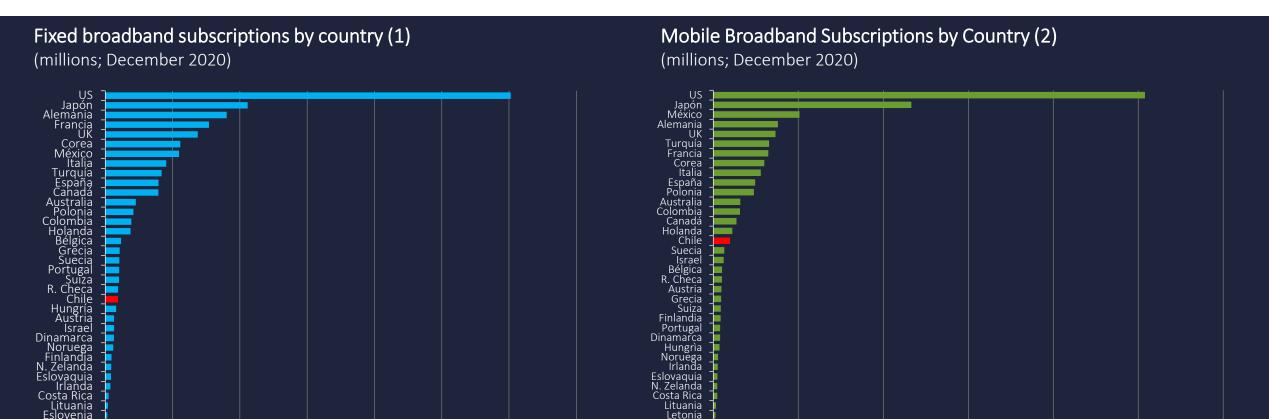
80

100

120

Luxemburgo





(1) Australia: Data reported for December 2018 and beyond is being collected by a new entity using a different methodology. Figures reported as of December 2018 comprise a serial break and are unmatched by previous data for any broadband measure Australia reports to the OECD. Mexico and Switzerland: the data are preliminary. Source: OECD, Broadband Portal. (2) Australia: The data reported for December 2018 and beyond is being collected by a new entity using a different methodology. Figures reported as of December 2018 comprise a serial break and are unmatched by previous data for any broadband measure Australia reports to the OECD. Canada: There was a change in methodology starting in the second quarter of 2020. Costa Rica: At the moment, only 'data-only subscriptions' are available. France: Data for active subscriptions that have only made 4G connections in the last three months is not included. Switzerland: data are preliminary. United States: Data are temporary estimates. Final data will be available shortly. Source: OECD, Broadband Portal.

Estonia

100

300

400

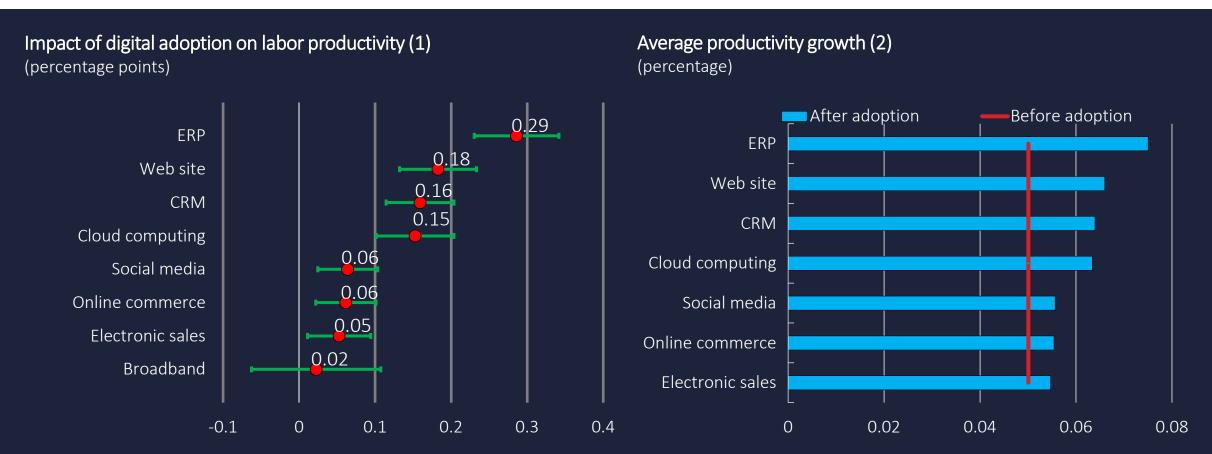
500

Eslovenia

Luxemburgo Islandia

Digital adoption leads to higher productivity at the firm level.

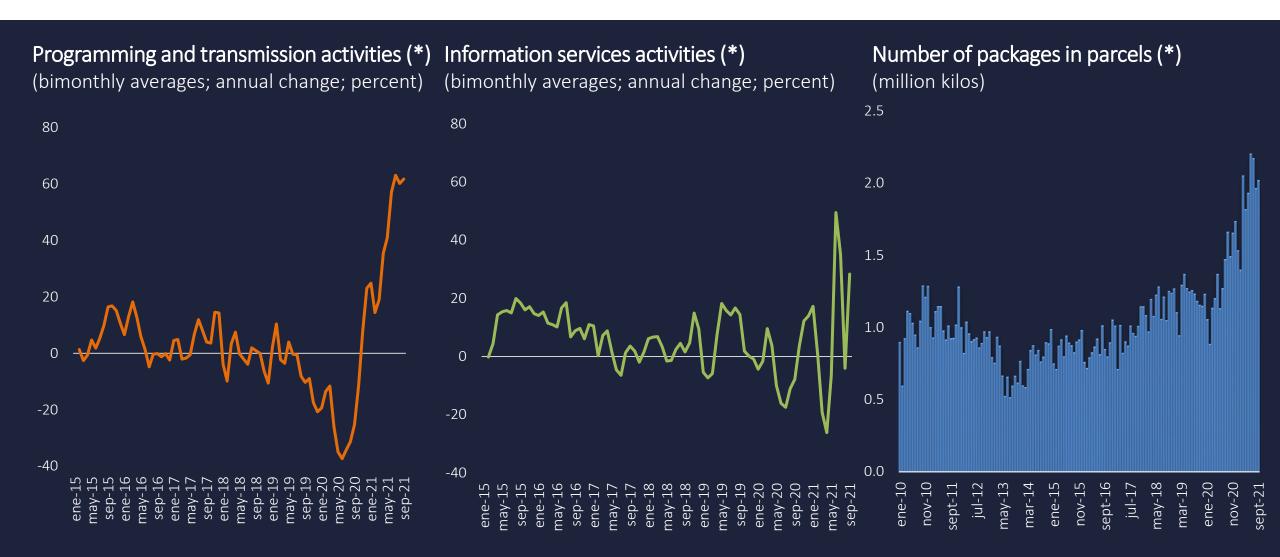




⁽¹⁾ Productivity is defined as labor productivity calculated as total operating income over total workers and the adoption of each digital technology is measured through binary variables (dummy variables) at the company level. Broadband is defined as any fixed, ADSL or cable broadband, dedicated Internet (fiber optic or private IP network), and mobile broadband over USB. A pooled OLS model was used on a sample that includes all possible observations after a defined cleanup (unbalanced panel). Productivity growth at the firm level declines as a function of average productivity growth across the border, the firm's lagged gap with respect to the productivity frontier, age and size, sector fixed effects, and labor force. dummy variable indicating the adoption of individual digital technologies. The border is defined as the 2 percent of companies with the highest productivity in each sector-year cell. The horizontal peaks correspond to the 95% confidence interval. (2) A company "does not adopt" if it has not adopted that technology. The line shows the average labor productivity growth for the sample before adoption. The blue bars show the average labor productivity growth in the sample after all "non-adopters" adopt that technology. Standard errors are grouped at the company level. Source: OECD calculations based on the last three waves of the Longitudinal Survey of Companies (ELE).

In the course of the crisis, digital activities and complementary logistics have expanded significantly.





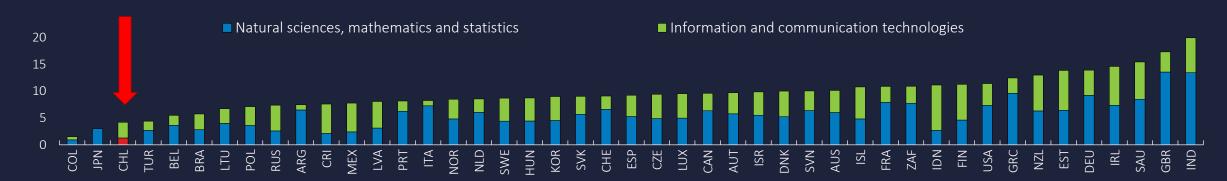
^(*) Source: National Statistics Institute.

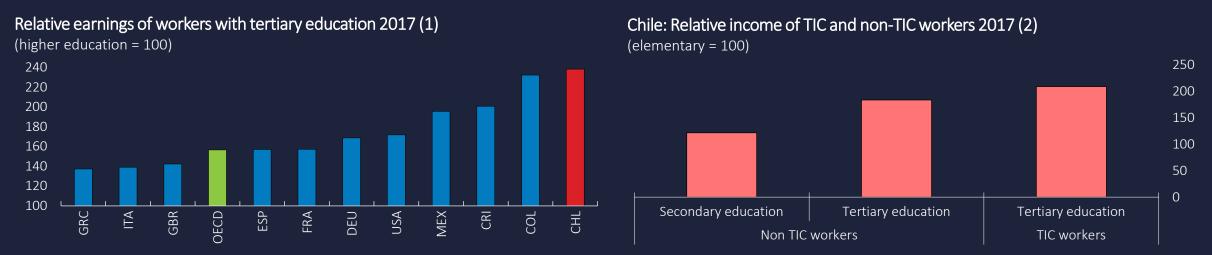
However, Chile has a clear shortage of TIC workers.



Tertiary Education Professionals by Field: IT and STEM 2017

(percentage of total new professionals, 2017 or latest year available)

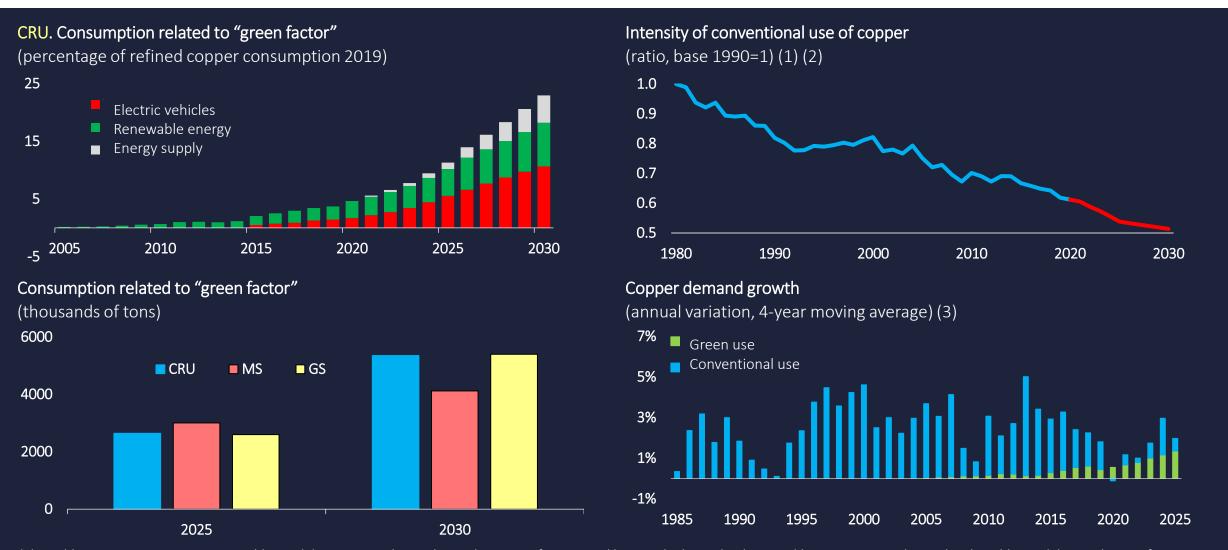




⁽¹⁾ Refers to people aged 25 to 64 with income from full and part-time employment. (2) People ages 25 to 64 with income from full-time employment. The bars show the estimated effect on labor income. The estimates are obtained through a Mincer regression controlling for age, gender, education, temporary contract, informal work (defined as those that do not contribute to the pension system), own account and regional effects. Source: OECD Economic Surveys: Chile 2021.

Harnessing the benefits of a greening economy: electromobility and demand for Chilean commodities.

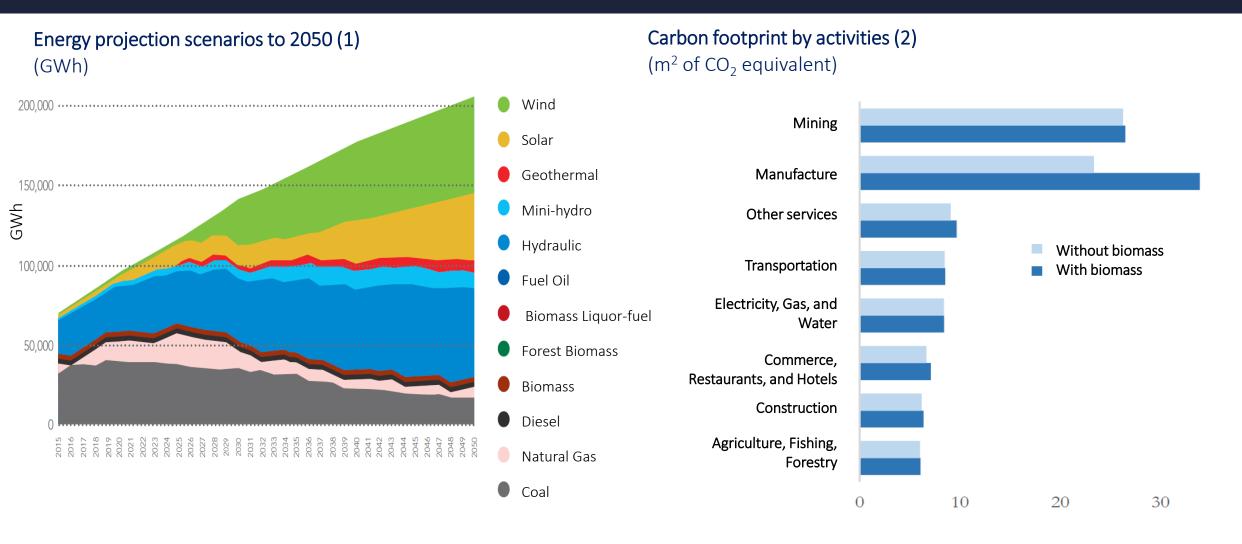




⁽¹⁾ World copper consumption over world GDP. (2) Forecast is obtained considering CRU forecast and historical relationship (concave) between copper demand and world GDP. (3) Consider CRU forecasts. Source: CRU, Morgan Stanley (MS), Goldman Sachs (GS).

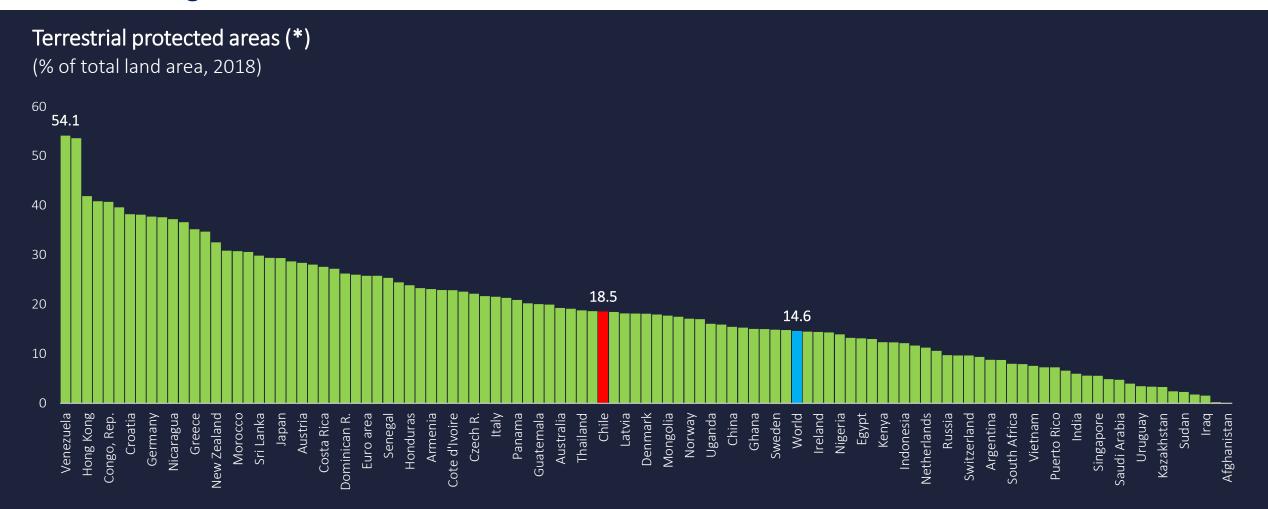
Harnessing the benefits of a greening economy: changing the energy matrix and carbon emissions.





Harnessing the benefits of the greening economy: protected areas and carbon absorption. Protected Areas reach 140,000 km2 (18.5% of the territory), well above the World average.





^(*) Source: UNEP-WCMC and IUCN (2021), Protected Planet: The World Database on Protected Areas (WDPA), December 2021, Cambridge, UK: UNEP-WCMC and IUCN. Available at: www.protectedplanet.net and The World Bank.

Contributions by the Central Bank of Chile.



Build policy space

- Reserve accumulation program
- FX liquidity facilities
- Constitutional reform allowing purchase of government bonds in special circumstances
- Countercyclical capital buffer

New Constitution

- Special studies on mandates, removal of Board, and transparency
- Portfolio of documents on Central Banks around the World
- Presentation to Constitutional Commission

Environment and Economics

- Full recycling of CB notes
- NGFS membership and join to the Pledge in the context of the COP26
- Integrating Natural Capital
 Committee of the Ministry of the Environment

Digital Economy

- Regulation on compensation for retail payments, interoperable platforms
- Stablecoins regulation in FinTech Law
- Motivations and requirements of CLP CBDC
- Digital payments white paper that explores motivations and requirements of CLP CBDC (March 2022)

<u>Financial Development</u>

- Gradual implementation of NFSR as regulatory requirement
- Full implementation of Basel III capital requirements starting December 2021
- Modernization of FX regulations
- Strengthening of financial infrastructures

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