

## CONTEXT

### 1. **The impact of the pandemic appears to be receding, despite a recent upsurge in cases.**

After a peak in January 2022, the situation was improving, but in early June the government declared the beginning of a fifth COVID wave. Nevertheless the fatality rate remains relatively low, at 0.1 percent. Almost 56 percent of the eligible population is fully vaccinated, while 67 percent have received at least one dose. The Russian Sputnik-V and the Chinese Sinopharm were the first and most used vaccines in Bolivia, followed by AstraZeneca, Pfizer, Moderna, and Johnson & Johnson doses that were received through Covax.

**2. Political tensions remain elevated.** Opposition leaders have accused the government of political persecution, demanded the release of incarcerated former officials including the former interim president Jeanine Áñez, and protested against laws that are seen as increasing the government's discretionary power. There have been frequent demonstrations and strikes, including over financial privacy, the timing of an upcoming census, and whether to loosen COVID restrictions.

**3. Economic activity has recovered more rapidly than expected and is close to pre-pandemic levels** (Figure 1). Following a pandemic-induced contraction of 8.7 percent in 2020, the economy recorded growth of 6.1 percent in 2021, supported by mining, construction, and agriculture. The commodity boom that began in 2021 has boosted export receipts of minerals (notably gold) and agricultural products (mainly soy), easing external imbalances. The current account recorded a surplus of 2 percent of GDP in 2021. International reserves have declined from US\$5.28 billion at end-2020 to US\$4.3 billion at end-July 2022. Bolivia's real exchange rate is assessed as moderately overvalued.

**4. Price controls and subsidies for food and fuel have kept inflation at the lowest rate in Latin America (1.8 percent yoy in June).** However, supply pressures have increased the fiscal cost of maintaining stable prices (Box 1) and staff expect inflation to increase steadily in the coming months, rising above 4 percent in 2022.

**5. Bolivia has made great strides in reducing poverty.** The rate of extreme poverty has fallen from 45 to 11 percent over the last 17 years, reflecting the impact of real wage increases for the poorer deciles of the population, strong and sustained economic growth, and redistributive policies. Nonetheless, Bolivia remains one of the poorest countries in the Western Hemisphere.

**6. Fiscal imbalances remain large.** The deficit fell from 12.7 to 9.3 percent of GDP in 2021 as COVID-related social spending measures were wound down and the commodity boom raised mining revenues. Higher world energy prices have, though, had little net effect on the fiscal position as higher revenues have been offset by increased subsidies to domestic consumption. Food subsidies and price controls intended to counter the impact of Russia's war in Ukraine on domestic food prices have had limited fiscal costs but have distorted markets. About 40 percent of the deficit was financed by central bank credit in 2021. Private domestic sources, mostly pension funds, financed another 40 percent, with the remainder coming from external sources. In February 2022,

a market-based swap operation extended the maturity of sovereign bonds maturing in 2022 and 2023. Bolivia's SDR allocation, of 240.1 million SDR (US\$337), has been retained in reserves but, in the context of the fixed exchange rate, a drawdown of reserves has been the counterpart to central bank financing of the budget.

### Box 1. Bolivia: Low Inflation

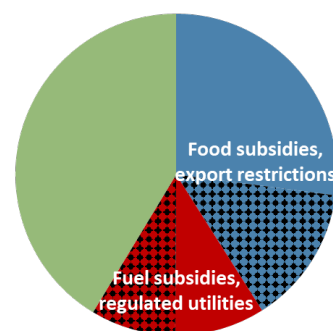
Inflation in Bolivia has been remarkably low compared to the rest of the world. Price increases have been modest in almost all major components of the CPI (table). The peg to the U.S. dollar has been an important force in stabilizing inflation, leading the boliviano to appreciate in nominal terms against the currencies of several regional trading partners. Strong agricultural production, price controls, subsidies, and export restrictions have also helped contain inflation.

CPI Component	Weight	2021 Change	Contribution
CPI	100.0	0.9	0.9
Food	41.0	0.5	0.2
Food and Nonalcoholic Beverages	27.1	0.5	0.1
Food and Beverages Consumed Outside the Home	14.0	0.7	0.1
Transportation, Housing, and Basic Services	17.6	1.3	0.2
Transportation	9.1	2.3	0.2
Housing and basic services	8.6	0.3	0.0
Other Goods and Services	41.3	1.0	0.4

The price of bread, for example, is fixed at the equivalent of US\$0.07 per loaf, supported by the provision of subsidized wheat and flour to producers. Other food staples are subject to price controls, with intermediate goods subsidized and supplied by the government. The authorities restrict certain food exports to increase supply to the local market. The retail prices of gasoline and diesel have been frozen for several years despite significant global price changes (local prices for diesel and gasoline are about one-quarter of the current global price). Such price controls and fiscal subsidies affect around 60 percent of the CPI basket. Despite the various controls and interventions, price pressures have been rising with some shortages of diesel and grains in recent months.

#### CPI Composition

- Food and Nonalcoholic Beverages
- Food and Beverages Consumed Outside the Home
- Transportation
- Housing and basic services
- Other Goods and Services



Sources: INE, and IMF staff calculations.

## 7. Bolivia's large gross fiscal financing needs represent a chronic vulnerability.

Bolivia's credit rating is well below investment grade and its sovereign spread is near 700 bps, indicating limited appetite for Bolivia's external debt. With little scope to mobilize domestic savings beyond the pension funds, the government must rely on the central bank for financing. With a fixed exchange rate, the counterpart to the ongoing monetization of the deficit has been—and is likely to continue to be—a steady decline in international reserves (from US\$6.5 billion at end-2019 to

US\$4.3 billion in end-July 2022). Bolivia has no exchange restrictions, but does employ some capital flow measures, including limits on foreign asset holdings, and a small tax on domestic dollar deposits. In 2021, Bolivia lowered the ceilings on foreign asset holdings for banks (from 15 to 10 percent of assets) and for insurance companies (from 7 to 5 percent).

**8. The central bank has cut reserve requirements, swapped foreign currency for domestic currency, and purchased government bonds from private pension funds.** Despite these measures, private sector credit growth has been weak, at 4.6 percent yoy at end-2021. The deferral of debt service payments during the pandemic provided a reprieve to firms and households; loan deferrals have now mostly expired with little impact on the NPL ratio. The average capital adequacy ratio of 12.9 percent appears sufficient, but caution is warranted, particularly with regard to measured bank profitability, which has been adversely affected by interest rate caps and regulator-imposed directed lending requirements.<sup>1</sup> Foreign currency assets and liabilities are generally matched throughout the banking system, while banks indicate that they are often pressed to obtain desired amounts of domestic liquidity.

## OUTLOOK AND RISKS

**9. The economy is projected to grow by 3.8 percent in 2022.** Elevated commodity prices will boost mining and agricultural receipts. GDP is projected to exceed its pre-pandemic level in late 2022, although is not expected to return to its pre-pandemic trend within the forecast horizon. Inflation is projected to rise to 4.2 percent by end-2022 as international prices partially feed through to food and energy, and domestic demand strengthens. The impact of the war in Ukraine on economic activity is expected to be felt mostly through improved terms-of-trade (see text table), increased commodity revenues, and higher fiscal costs for fuel and food subsidies.

Commodity	Share of Exports (2019)	Price week before Invasion	June 24 price	Impact of the war (US dollars, mln)	Impact of the war (% of GDP)
Natural Gas	30.8	4.61	5.95	935	2.3
Gold	19.8	1897.20	1828.00	-75	-0.2
Zinc	15.2	3600.25	3485.00	-51	-0.1
Soy	8.1	15.68	17.50	98	0.2
Silver	6.7	23.97	21.16	-82	-0.2
Tin	3.2	19.82	12.15	-130	-0.3
Lead	1.9	143.92	121.50	-32	-0.1
Oil Imports (2021, US dollars, mln)	2250.4	91.07	107.62	409	-1.0
<b>ToT Shock</b>				<b>1072</b>	<b>0.6</b>

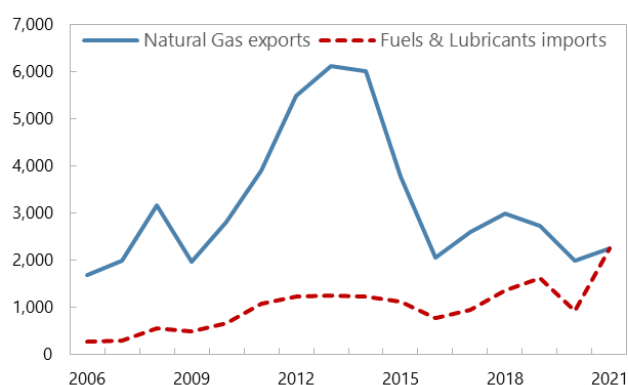
<sup>1</sup> While staff have advocated reduction and a gradual phasing-out of interest rate caps and lending quotas, the authorities view these measures as essential to achieving a socially desirable distribution of investment. See 2021 Bolivia Article IV staff report, paragraph 29 (Country Report No. 2021/180).

**10. The budget deficit is projected to narrow slightly to 8½ percent of GDP in 2022.** Higher fuel and food subsidies and investment spending will mostly offset the fiscal benefit of the better terms-of-trade.<sup>2</sup> Downside risks include a possible *doble aguinaldo* year-end wage bonus and additional fuel subsidies (which could increase the deficit closer to 10 percent of GDP in 2022). Financing of the deficit is expected to be split broadly equally between the central bank, domestic pension funds, and external funding sources. Over the medium term, based on current policy plans, the fiscal deficit is expected to fall modestly, to around 6 percent of GDP by 2027.

**11. Despite the favorable terms-of-trade, the current account is projected to weaken to a deficit of 3½ percent of GDP over the medium term.**

The large fiscal deficit and declining private sector savings will be reflected in greater external imbalances. Higher international energy prices will provide a relatively small net benefit to the external position, given that Bolivia is now only a modest net exporter of hydrocarbons. The 2021 external position is assessed to be moderately weaker than the level implied by fundamentals and desirable policies. The real exchange rate is assessed to be moderately overvalued.

**Natural Gas Exports and Fuels & Lubricants Imports**  
(In Millions of USD)



**12. Bolivia's macro stability is at risk under current policies, and the economy faces significant downside risks ahead.**<sup>3</sup> Under current policies, international reserves will continue to decline, public debt will rise, and policy buffers will diminish. Against this background, monetary tightening in advanced economies is expected to raise the cost of external financing and reduce its availability, potentially resulting in shortfalls of budgetary financing and/or a faster depletion of international reserves. Anticipation of these stresses could lead to deposit outflows or increased dollarization, putting further downward pressure on reserves and the exchange rate. This could potentially lead to a sudden stop in capital flows and/or a speculative attack on the exchange rate peg. The war in Ukraine will increase food and energy prices that will either be met with increased fiscal subsidies (with uncertainty about the sources of financing for such subsidies and a negative effect on the debt dynamics) or, if domestic prices are allowed to adjust, lead to higher inflation and possible social unrest. A resurgence of Covid would negatively affect public health and economic growth (although the economy's vulnerability to successive Covid waves appears to be diminishing). Declines in output of natural gas may be sharper than anticipated, particularly if current exploration efforts fail to yield profitable deposits.

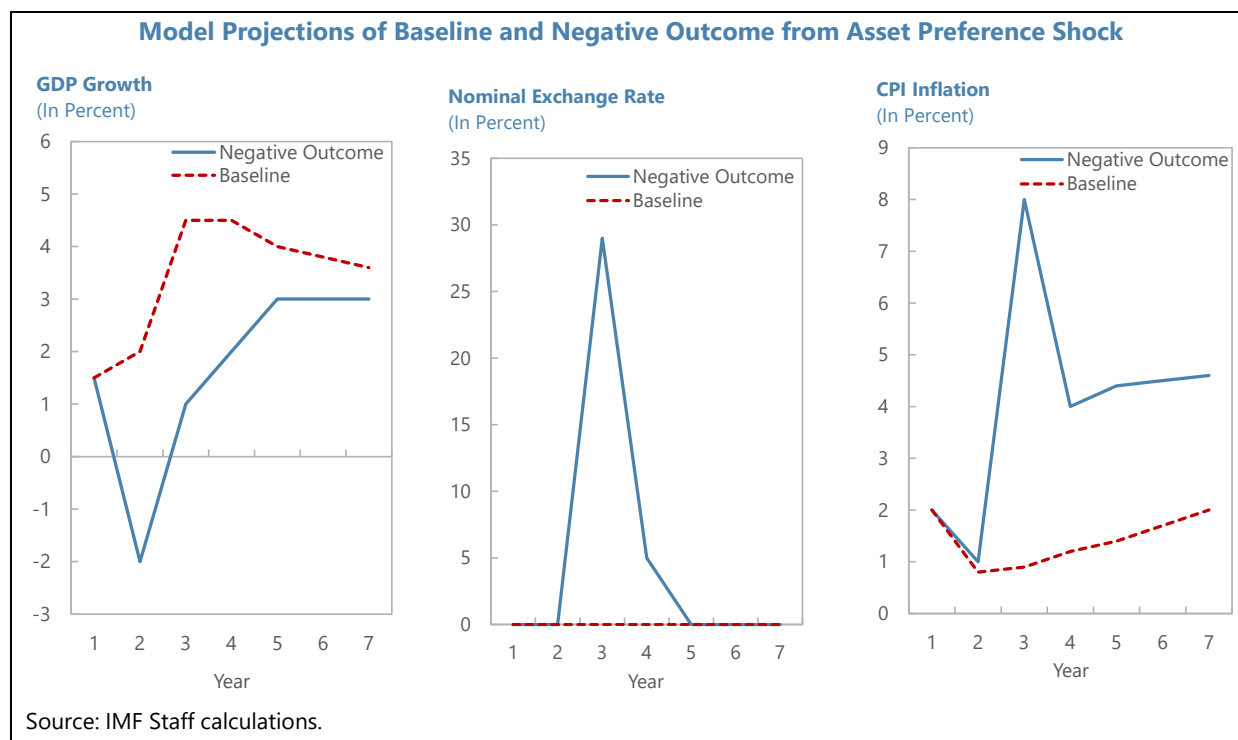
<sup>2</sup> Tax revenues from the sale of natural gas are the most important source of hydrocarbon revenues for the Bolivian government but changes in international prices take 6-9 months to feed into tax revenues. However, retail fuel prices are fixed so higher international oil prices immediately increase fiscal costs through higher government transfers to the state hydrocarbons company. The cost of fuel subsidies is expected to rise from around 1.5 percent of GDP in 2021 to 3.7 percent of GDP in 2022.

<sup>3</sup> See also Annex I, Risk Assessment Matrix.

## POLICY ISSUES

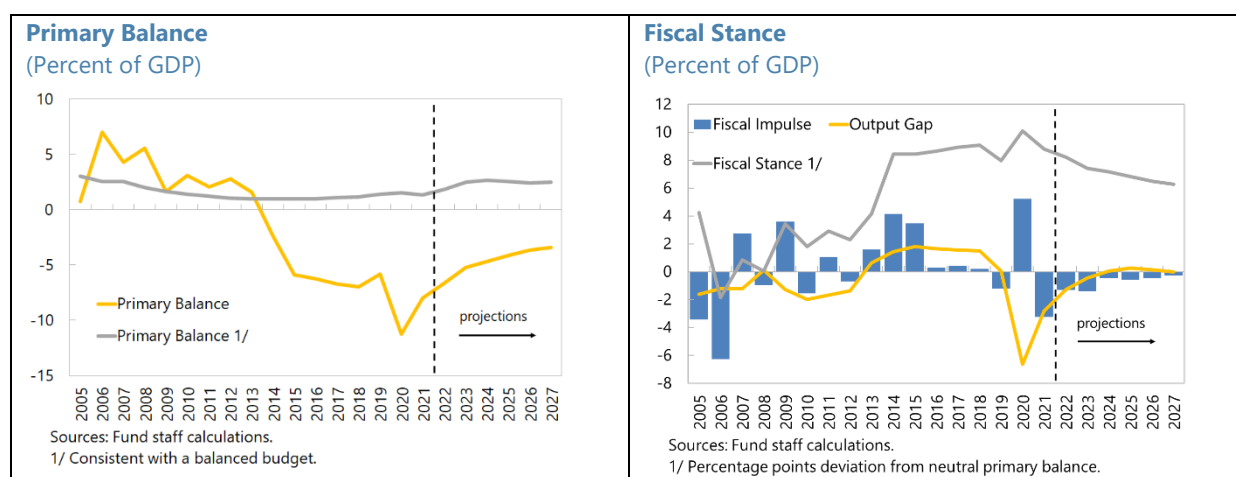
### A. Reducing Fiscal Imbalances

**13. Bolivia's current policy mix is unsustainable.** The combination of a sustained large fiscal deficit monetized by the central bank and a *de facto* fixed exchange rate regime is steadily depleting reserves. In addition, public debt sustainability is subject to high risks and debt levels have risen rapidly from below 60 percent of GDP prior to the pandemic to over 80 percent of GDP today (see DSA Annex III). At some uncertain point, this dynamic could change rapidly, eventually triggering a disorderly and economically costly adjustment in the external position. The positive shift in Bolivia's terms-of-trade in 2021 has helped slow the decline in reserves, but they nevertheless remain on a downward trajectory. The longer the current constellation of macroeconomic imbalances remains in place, the bigger the risk that such a downside scenario materializes. For example, in a general equilibrium model simulation, a sudden change in investors' portfolio preferences could force the peg to be abandoned, which would cause a sizable (34 percent) nominal depreciation and—outside of the pandemic—the largest contraction in output seen since the mid-1980s<sup>4</sup>. A plan is needed to forestall this disruptive downside scenario by reducing the fiscal deficit and rebuilding international reserves.



<sup>4</sup> See also Andres Gonzalez, Etibar Jafarov, Diego Rodriguez, and Chris Walker, "Fixed vs. Float: Evaluating the Transition to a Sustainable Equilibrium in Bolivia" IMF Working Paper WP/22/43.

**14. Planned and anticipated fiscal adjustments will be insufficient to address the underlying macroeconomic imbalances facing the country<sup>5</sup>.** Under current policies, the primary balance is expected to remain around 4.1 percent of GDP in 2025 as a result of the net impact from improvements in tax administration, a declining public sector work force (as a result of attrition), the phasing out of COVID-related spending, higher subsidies, and lower hydrocarbon revenues. However, staff modeling<sup>6</sup> indicates that in order to eliminate monetary financing, prevent a continued drawdown of international reserves, and put the public debt ratio on a downward path, Bolivia will need to reduce its primary deficit to 1.5 percent of GDP over the medium term. Consequently additional fiscal measures will be needed.



**15. More ambitious policies will be needed to reduce the primary deficit to 1.5 percent of GDP by 2025, eliminate monetary financing, and put debt-to-GDP on a downward path.** Key measures include a reduction in fuel subsidies, a slower growth in public investment, and the introduction of new tax measures:

- **Phasing out energy subsidies.** The authorities should implement a clear plan to phase out energy subsidies and gradually eliminate the gap between the market price and the regulated price for each fuel category. A portion of the budgetary savings would need to be allocated to cash transfer programs to compensate poorer households for the withdrawal of subsidies, potentially providing a net welfare benefit to such households from the subsidy withdrawal. A public communications campaign should link these increases in the cash transfers directly to the subsidy reform. The strategy should raise awareness over the regressive nature of energy subsidies and the benefits of targeted cash transfers, helping to reduce political and public resistance to the reforms.

<sup>5</sup> In the absence of an official medium-term fiscal framework, staff's baseline is based on stated government priorities and incorporates an implicit cap on the growth rate of public wages and salaries and a decline in public investment (relative to pre-Covid levels).

<sup>6</sup> See IMF WP/22/43 (footnote 4).

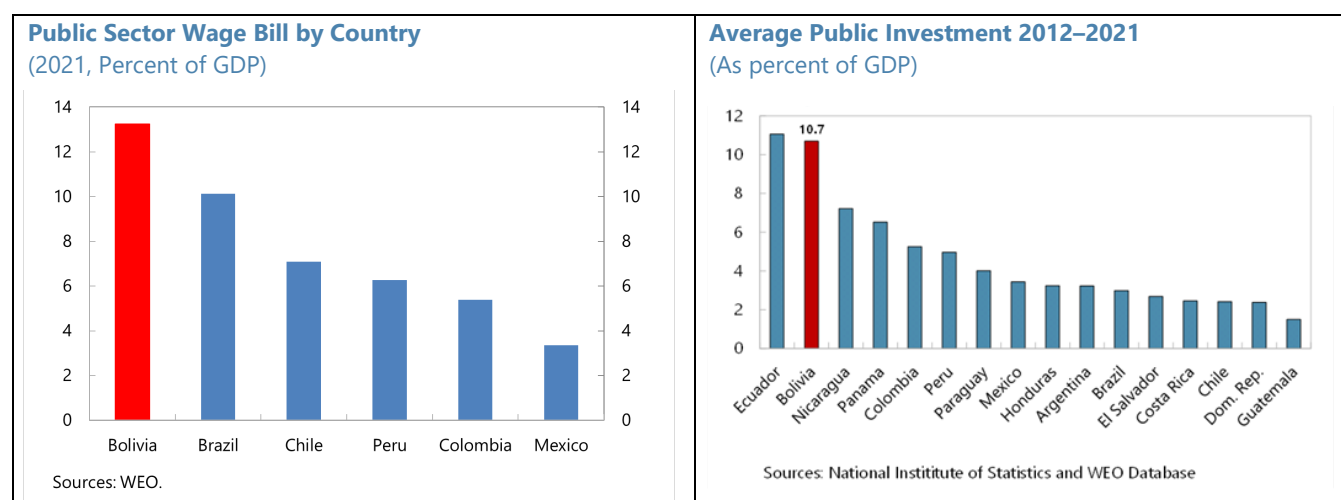
Reform Scenario and Contingent Measures									
				Projections					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
(in percent of GDP unless noted otherwise)									
Baseline									
Real GDP (percent)	2.2	-8.7	6.1	3.8	3.2	3.0	2.8	2.6	2.5
Nominal GDP (percent)	1.5	-10.4	10.3	7.1	6.4	6.6	6.4	6.2	6.1
CPI inflation (period average, percent)	1.8	0.9	0.7	3.2	3.6	3.5	3.5	3.5	3.5
Public investment	9.8	5.0	6.2	6.8	6.6	6.2	6.0	6.0	6.1
Primary balance	-5.8	-11.2	-8.0	-6.6	-5.2	-4.7	-4.1	-3.7	-3.4
Total gross NFPS debt	59.3	78.0	80.5	82.3	84.3	86.1	87.6	88.5	89.4
Current account	-3.3	-0.7	2.0	-1.6	-1.7	-1.9	-2.1	-2.6	-3.6
Central Bank gross foreign reserves	15.7	14.3	11.7	9.6	7.8	6.1	4.6	3.3	2.0
Reform Scenario									
Contribution of measures to fiscal adjustment									
Limiting public investment to 6 percent of GDP until 2025				-0.8	-0.6	-0.2	0.0	0.4	0.9
Customs and tax administration reforms				0.0	-0.5	-1.0	-1.3	-1.3	-1.5
Increasing fuel prices by 2.5 percent each quarter until 2025				0.0	-0.4	-0.8	-1.3	-1.3	-1.3
Real GDP (percentage change)	2.2	-8.7	6.1	3.5	3.0	2.9	2.8	2.8	2.9
Nominal GDP (percentage change)	1.5	-10.4	10.3	6.8	8.2	8.1	7.9	6.7	6.5
CPI inflation (period average, percentage change)	1.8	0.9	0.7	3.2	5.1	5.0	5.0	3.8	3.5
Public investment	9.8	5.0	6.2	6.0	6.0	6.0	6.0	6.4	6.9
Primary balance	-5.8	-11.2	-7.8	-5.8	-3.7	-2.7	-1.5	-1.5	-1.5
Total gross NFPS debt	59.3	78.0	80.5	81.5	80.3	78.6	77.6	76.6	75.8
Current account	-3.3	-0.7	2.0	-1.1	-1.4	-1.8	-2.1	-2.0	-2.0
Central Bank gross foreign reserves	15.7	14.3	11.7	10.4	10.2	10.5	11.3	11.8	12.0
Contingent Measures									
Contribution of measures to adjustment beyond the reform scenario									
Limiting public investment to 5 percent of GDP				-1.0	-1.0	-1.0	-1.0	-1.4	-1.9
Tax reforms (including PIT, and higher property taxes)				0.0	-1.5	-1.5	-1.5	-1.5	-1.5
More front-loaded phasing out of energy subsidies				-0.5	-1.0	-1.5	-1.5	-1.5	-1.5

- **Rationalizing public investment.** Bolivia should limit public investment – which is easier to adjust than current expenditure – to 6 percent of GDP under the reform scenario, until the introduction of other revenue and expenditure measures creates enough fiscal space to bring public investment back to its pre-pandemic level. Better prioritization of investment projects would increase efficiency and help minimize the negative effects on growth from this adjustment. An upcoming Public Investment Management Assessment is scheduled in 2022 and can help improve the planning, allocation, and implementation of public investment.
- **Introducing tax revenue measures.** Bolivia should develop a revenue mobilization strategy to broaden the tax base and strengthen tax and customs administration. This includes modernization and digitalization of tax administration, strengthening of customs administration, and introduction of a new tax framework to formalize the increasingly important gold mining sector.

**16. Under this active reform policy scenario (see text table), GDP growth would slow initially as fiscal imbalances are reduced, but then accelerate over the medium term as confidence returns and investment rises.** Rationalization of public investment would be the key measure in the shorter term to reduce the deficit, while the fuel subsidy reduction and new taxes



would yield fiscal gains over a longer timeline, given the need for careful design and implementation. Combined, these measures could amount to an additional adjustment of 2.6 percentage points of GDP relative to the baseline. The improvement of Bolivia's fiscal and external position will allow for an elimination of monetary financing and stop the drain in international reserves. As greater credibility of the macro-policy framework is established, the government should have increased access to external financing which will, eventually, help rebuild reserve coverage to 60 percent of the ARA metric by end-2025 (although still well below the levels prevailing prior to the pandemic). If the listed measures under the reform scenario prove insufficient to reach the fiscal goal, due either to political factors or to a more hostile external environment than anticipated, further fiscal measures should be prepared on a contingency basis (listed under Contingent Measures in text table). On the expenditure side, these could include larger reductions in public investment or a faster phaseout of fuel and food subsidies, while additional revenue measures could include the introduction of a progressive personal income tax, a higher property tax, and an expanded application of the wealth tax.



**17. The authorities recognize the mounting fiscal pressures caused by higher subsidies, but do not believe there is a real risk of a disorderly adjustment.** They see no need to reduce fuel and food subsidies, which they view as crucial to social equity and to the protection of the most vulnerable, given the important role of subsidies in stabilizing the prices of consumer goods. They also expect the investments contained in the public investment plan (PDES 2021–25), which focuses on industrialization and import substitution, to increase competitiveness, support growth, and, ultimately, generate trade and fiscal surpluses that would alleviate financing pressures over the medium term. The authorities expect the debt-to-GDP ratio to converge to an acceptable level over the medium-term, with reserves remaining above three months of imports.



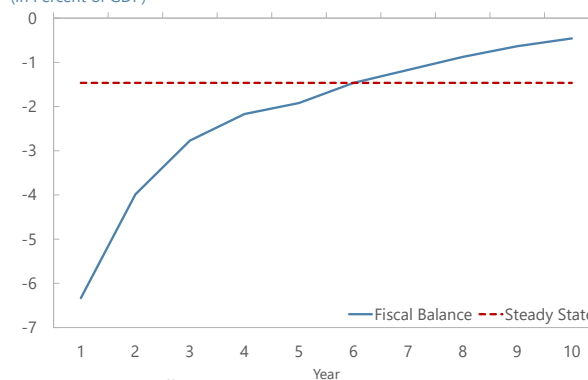
## Box 2. Bolivia: DSGE Model Estimates of Welfare Impact of Fiscal Reforms

To better understand fiscal policy tradeoffs as they apply to Bolivia's needed fiscal reform, a country-specific DSGE model is used to assess the impact on the economy of three distinct fiscal consolidation strategies. All three are predicated on an adjustment in the primary deficit to 1.5 percent of GDP under a fixed exchange rate (blue line in the figure). The scenarios, however, differ in the instrument employed to achieve the fiscal adjustment (i.e., higher consumption taxes, reductions in direct transfers to households, or lower public investment).

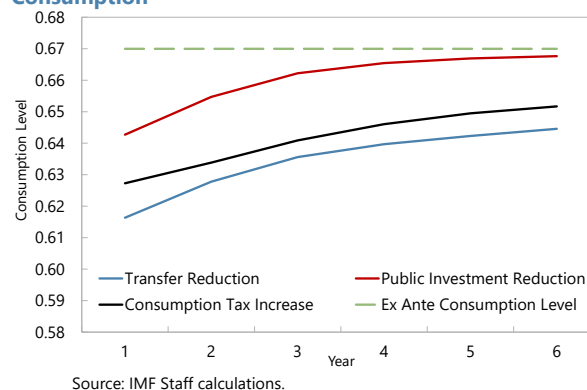
Implied fiscal multipliers for public spending and for consumption taxes are similar, at about 0.9 on impact; the implied multiplier for transfers is greater than 1. However, a reduction in public investment has less of an impact on consumption than a persistent though slowly diminishing increase in consumption taxes or a permanent reduction in transfers (figure). These results accord broadly with recent research on the dynamic effects of fiscal measures.<sup>1</sup> In the exercise, cutting transfers to households has the largest impact on output and consumption, reflecting both the direct effect of lower household income on consumption and a drop in private investment, which is provided by households in the model. A reduction in public investment has the least direct impact on consumption. In practice, a combination of fiscal measures will likely be the right design to achieving a 1.5 percent of GDP primary balance.

### Primary Fiscal Balance

(In Percent of GDP)



### Model Estimates of Impact of Fiscal Adjustments on Consumption



<sup>1</sup>Based on theoretical and empirical work on OECD countries, Avenasi et al (2017) conclude that the fiscal multiplier associated with a temporary tax change is less than that associated with public spending or transfers (close to one on impact), but the tax multiplier becomes greater than the spending (or transfers) multiplier as the tax change becomes more persistent.

## B. Reforming the Pension System

**18. The increasing interdependence of Bolivia's pension system and the fiscal authority, and the low rate of return on pension assets, pose long-term macro risks.** Bolivia's two private, defined contribution pension funds have around 50 percent of GDP in assets, mostly in fixed term deposits and government bonds. The share of government bonds rose in 2021 as the government sourced more of its financing from private domestic sources. Foreign assets are limited to no more than 10 percent of the pension funds' portfolio, and any offshore investment requires the prior approval of the pension supervisor. The share of foreign currency instruments in assets under management has been declining since 2006.

**19. Pension fund returns have been declining since 2002.** Due in part to asset allocation restrictions,<sup>7</sup> an estimated 80 percent of the funds' US\$23 billion in assets are invested in low-yielding domestic deposit receipts and government debt. Bolivia's two private pension funds together are financing 30-40 percent of the fiscal deficit at long-term local currency interest rates of 4 to 5 percent.

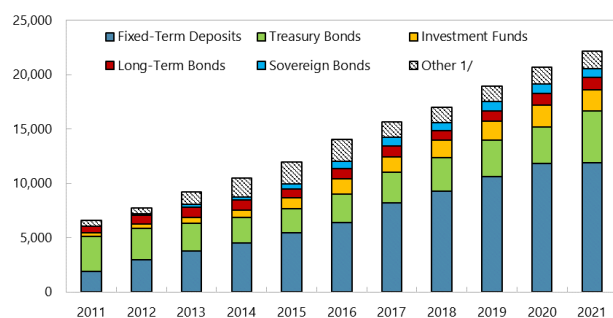
**Annual Pension Fund Return (In Percent)**



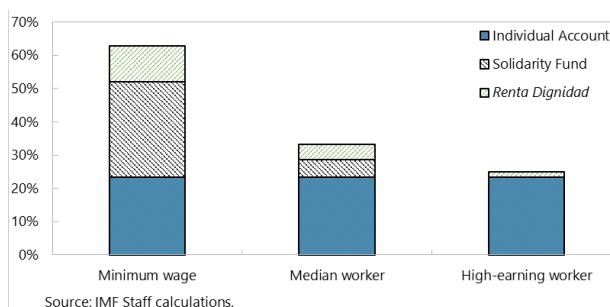
**20. Pension fund assets have increased by about US\$1.5 billion per year since 2010, resulting in an overall increase in the investment account of more than 300 percent over this period.** An 85 percent increase in the number of pension fund members (due to favorable demographics, increasing employment and the pension reform of 2010, which incentivized contributions) has been the principal force behind the increase in assets under management. However, deadlines announced last year aim to facilitate the full nationalization of domestic pensions – as envisaged in a 2010 law – by the end of 2023. This will improve the flow deficit position of the general government but also add to future expenditure obligations.

**21. To improve pension outcomes and reduce macro risks, restrictions on investments could be relaxed.** The combination of a relatively low contribution rate, the lowest statutory pensionable age in the region, and declining returns on pension system assets, has made the replacement rate of Bolivia's private pension system one of the lowest in Latin America. For lower income households, this replacement rate is supplemented by transfers from the Solidarity Fund and

**Pension Fund Investments by Instrument (In US\$ Millions)**



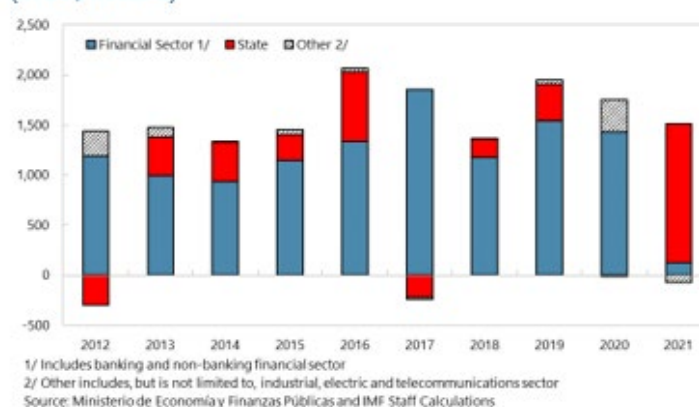
**Pension System Replacement Rate (In percent)**



<sup>7</sup> Investments must be in fixed income instruments having credit risk ratings of A- or better and there are limits on investments in foreign assets.

*Renta Dignidad* (where the former is funded by pension fund contributions and the latter from taxes on hydrocarbons and dividends from state-owned enterprises). Raising the contribution rate is constrained by the ability of workers to move to the informal sector. Participating in the system could be made more attractive by allowing greater scope for portfolio diversification into different asset classes, including foreign currency assets. However, any liberalization of foreign asset acquisition by the pension system should be conditioned on the establishment of an independent and professional process for asset allocation and, even then, would need to be pursued carefully given the balance of payments risks posed by the existing external imbalances.

**Change in Pension Fund Investments by Sector**  
(In US\$ Millions)



**22. The authorities do not regard the reliance on fiscal financing from private pension funds as a concern and believe that the pension funds' current portfolio has a conservative and prudential risk profile.** They note that the decision to acquire government bonds is voluntary and that the bonds are available to all financial institutions, and they make the case that adequate levels of liquidity in the financial system indicate there is no crowding-out. They judge that the financial system as a whole remains solid, noting Bolivia's low NPL rates, including on loans that were deferred during the pandemic.

## C. Monetary and Exchange Rate Policy

**23. Bolivia would benefit from a carefully sequenced transition to a more flexible exchange rate.** As outlined in the 2021 Article IV<sup>8</sup>, Bolivia would realize important benefits through a phased transition to a market-determined exchange rate. Doing so would help preserve international reserves, erode the current exchange rate overvaluation, help the economy adapt to external shocks, and provide net welfare gains. Adoption of a flexible exchange rate within the context of an inflation targeting framework would substantially reduce the risk of an eventual disorderly adjustment. A separate but related goal should be granting institutional independence to the central bank, including strengthening the operational and analytical underpinnings for the conduct of monetary policy. Increasing the central bank's institutional capacity is a prerequisite for a successful transition to a more flexible exchange rate, and is desirable in any case to increase the resilience of the financial system.

<sup>8</sup> See also IMF Working Paper WP/22/43 (footnote 4).

**24. Short-term claims on Bolivia's gross international reserves may limit their future usability.** Bolivia's stock of gross international reserves has been bolstered by short-term FX swaps with commercial banks, through a facility designated CPVIS<sup>9</sup>. More than half of the central bank's gross international reserves are currently obtained through such swaps but these reserves would not normally constitute net international reserves (given the counterpart claim through the swap). In the event of a withdrawal of FX deposits, commercial banks would be unable to fully renew these swaps and would, instead, take back the foreign currency to meet deposit outflows. This could accelerate the ongoing decline in reserves associated with the monetization of the fiscal deficit. As such, the BCB should reduce its dependence on the CPVIS swaps as a source of reserves. To do so, though will require addressing the underlying external imbalances in the system that are leading to a depletion of international reserves (notably through a reduction in the fiscal deficit). Once these reforms are in place, the central bank could try to both reduce the reliance on, and extend the maturity of, these swap arrangements.

**25. The authorities believe that exchange rate stability has served Bolivia well and should be maintained.** They note the benefits of low inflation, a low rate of dollarization in the formal economy, and strong demand for local currency as evidence of public confidence in the boliviano. They consider that a phased move to a floating exchange rate could be destabilizing, with harmful effects on key macroeconomic indicators. Similarly, they do not perceive an important risk of local banks reversing their swap positions with the central bank, given the policy instruments that the BCB has available and the levels of liquidity in the financial system.

## D. Raising Growth

**26. Growth in Bolivia has exceeded the regional average over the past 17 years.** Growth has been driven almost entirely by increases in public investment (which averaged over 10 percent of GDP from 2010-19). Private investment has been weak (less than 11 percent of GDP in 2021) and net foreign direct investment has fallen close to zero. Bolivia's average incremental capital-output ratio<sup>10</sup> is 5.7, pointing to a relatively inefficient utilization of

Growth Regression 1991-2021			
	Value	Std Error	T-Statistic
Fixed Term	-0.51	0.49	-1.03
Time Period (2005-21)	-2.06	0.74	-2.79
Labor Coefficient*	0.5335		
Priv Capital Coefficient	-0.2448	0.0971	-2.52
Pub Capital Coefficient	0.7113	0.0848	8.39
Mean dependent variable	3.74		
R-squared	0.78805		
Adjusted R-squared	0.7645		
F-statistic	33.46277		
Prob (F-statistic)	0		
Durbin-Watson stat	2.282399		
* Coefficients are presented for the structural equation as calculated from a reduced form regression. Dependent variable is annual percentage GDP growth. Independent variables are annual percentage changes in labor force, private capital stock, and public capital stock, plus an intercept term and binary time variable (2005-21)			

<sup>9</sup> Fondo para Créditos destinados al Sector Productivo y a Vivienda de Interés Social (Fondo CPVIS). Under the arrangement, commercial banks lend U.S. dollars at zero interest rates to the BCB, which lends the banks an equivalent amount of local currency, also at zero interest rates. The implicit cost to the BCB is the net of the domestic local currency interest rate, currently about 6 percent, and the rate at which those FX assets can be invested abroad.

<sup>10</sup> The ICOR is normally measured as the ratio of gross investment to the change in GDP. A higher figure therefore denotes less efficiency. Agénor and Montiel (1996) give an average ICOR for all developing countries of 3.7.

new capital. This is mirrored in the fact that total factor productivity growth has been negative for more than a decade and increases in output have almost entirely been attributable to public capital formation.

**27. Bolivia should undertake a program of supply-side reforms to encourage private investment and raise productivity.** Bolivia has a large number of restrictions, quotas, and mandates that limit productivity growth and reduce the returns to capital<sup>11</sup>. Key sector-specific constraints include:

- **The hydrocarbons law** should be designed to provide greater incentives for new exploration, reduce the cost of compliance with labor and other restrictions while maintaining environmental and workplace safeguards, minimize regulatory uncertainty, and eliminate requirements for producers to sell below cost to the domestic market.
- **The mining law** should permit a greater role for foreign capital and know-how, particularly in the development of Bolivia's lithium resources.
- **Export ceilings and price controls** should be phased out to incentivize new investment and efficiency improvements in agriculture.
- **Credit quotas and interest rate caps for banks** lead to a misallocation of credit and reduced bank capital levels and should be eliminated<sup>12</sup>.

**28. There is scope to increase the efficiency of public investment.** Investments in transportation and renewable energy offer considerable potential for efficiency gains which would benefit overall productivity. Streamlining the operations of the many SOEs would improve resource allocation and support better growth and productivity. Finally, exporters – particularly those outside the hydrocarbons industry – would benefit from increased exchange rate flexibility that, over time, would lead to a realignment of the exchange rate with economic fundamentals, strengthening Bolivia's competitiveness.

**29. Strengthening governance and combating corruption remain central to raising productivity and fostering inclusive growth.** Progress in addressing governance challenges has been limited, and Bolivia should renew efforts to implement the governance priorities identified in the 2018 Article IV consultation (Box 3). Areas of concern include customs enforcement, protection of natural resources, bribery, potential money laundering, criminal justice, the rule of law, and the administration of public enterprises. Bolivia's planned PIMA assessment will be instrumental in detailing reforms needed to improve productivity in public enterprises, and programs to reduce smuggling and curtail informality could help in discouraging bribery and improving tax compliance.

<sup>11</sup> See, for example, "Going Beyond Efficiency: Bolivia", World Bank 2015.

<sup>12</sup> See Dyna Heng, "Impact of the New Financial Services Law in Bolivia on Financial Stability and Inclusion," IMF Working Paper WP/15/267.

### Box 3. Bolivia: Governance Priorities from the 2018 Article IV Report

The 2018 Bolivia staff report identifies a range of governance reform priorities aimed at improving productivity and supporting the rule of law. To encourage private investment, which lags regional averages, the report recommends updating and streamlining procedures used to grant a business license, get a company deed, and register employees with the national health and pension systems. Reforms aimed at bolstering the rule of law and improving the predictability of the investment environment include aligning investor protections with international standards, and liberalizing the labor market with the adoption of a labor code that guarantees workers' rights and benefits but takes wage and employment decisions away from the government. To improve the accountability and productivity of public investment, the legislative framework governing SOE's and SOE oversight should be revised, and SOE's should be required to submit financial statements to independent auditors, among other reforms. Central bank independence should be enhanced to improve monetary policy formulation and implementation, promote transparency, and strengthen the resilience of the financial sector. The report also recommends strengthening the AML/CFT framework to discourage corruption and money laundering, consistent with the FATF review now underway.

**30. The authorities view existing policies on prices, quotas, subsidies, and investment as being conducive to growth and to more equal income distribution.** They regard credit quotas and interest rate limits as essential for promoting lending to the sectors most crucial to the country's social and economic development. They believe that public investment will continue to support economic growth and job creation in Bolivia. They are optimistic about the prospects for higher exports of mineral resources with added value, such as lithium, which they regard as a strategic resource. The authorities also stress their strong commitment to the fight against smuggling and to improvements in tax administration.

## E. Emissions Mitigation and the Green Transition

**31. Bolivia should build upon its recent efforts to reduce emissions and temper the effects of climate change.** In 2021, Bolivia lost more tropical forest than all but two other countries in the world, largely due to a series of severe forest fires. Climate change is likely to accelerate the loss of forests and glaciers, making investments in climate adaptation a critical priority. According to the ND-GAIN index, which measures climate vulnerability (the exposure to climate change) and climate readiness (the ability to leverage investments and convert them into adaptation actions) Bolivia ranks poorly compared to other countries in the region. Bolivia's recent submission of Nationally Determined Contributions in April 2022 represents an important step toward reducing emissions and containing deforestation. The updated goals include reaching 100 percent access to electricity and clean drinking water and an achieving 80 percent reduction of deforestation (compared to the average of 2016–2020). Announcing quantifiable greenhouse gas emissions goals would be essential for focusing domestic efforts and tracking Bolivia's contribution to reducing global emissions.

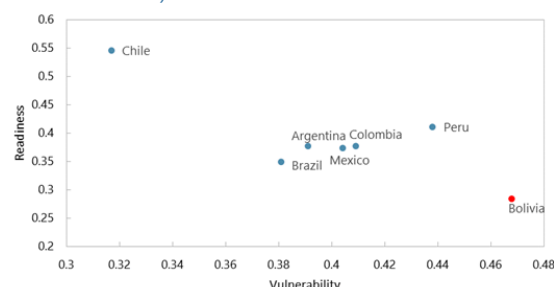


### Electricity Generation by Source (Percent)

	2020	2021	2022Q1
<b>Total</b>	<b>100.0</b>	<b>100.0</b>	<b>100.0</b>
Hydro	31.9	32.4	35.7
Wind	0.7	1.2	4.0
Solar	2.6	3.5	3.1
Thermal	64.7	62.9	57.3

Sources: Bolivia CNC.

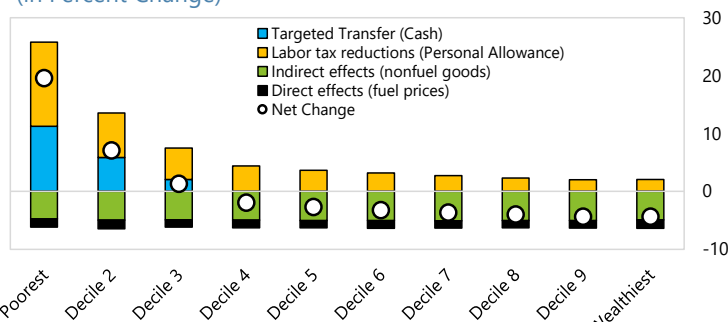
### Vulnerability and Readiness to Climate Change (ND-GAIN Index)



**32. The gradual introduction of a carbon price combined with targeted cash transfers would effectively reduce greenhouse gas emissions while avoiding negative impacts on the poorest households.**<sup>13</sup> An increase in the carbon price to US\$75/ton is estimated to reduce emissions in metric tons of carbon dioxide equivalent (mtCO<sub>2</sub>e)<sup>14</sup> by about 25 percent in 2030, compared to a baseline scenario without intervention. Under a carbon tax scenario, renewables would rise from 40 to 50 percent of electricity generation by 2030. To protect the vulnerable, fiscal revenues generated from a carbon tax could be used to fund health, education, and social transfers (or labor tax reductions) for low-income groups. Emissions reductions would also disproportionately benefit vulnerable groups by increasing life expectancy as air and water pollution dissipates.

**33. Bolivia should access new financing sources to expand green investments.** In addition to incentivizing foreign investment in lithium through a revision of the mining law, the government should accelerate the bidding process that is now underway to identify an advisor for the development of Bolivia's lithium resources. The government's strong support for environmental measures gives Bolivia the opportunity to market itself as a green investment destination, potentially attracting ESG capital for environmentally oriented projects in agriculture, reforestation, or tourism. In light of its financing needs and climate ambitions, Bolivia could consider the sale of green bonds linked to specific policy goals (e.g., scaling back fuel subsidies or reducing greenhouse gas emissions).

### Estimated Consumption Impact in 2030 Due to Introduction of Carbon Tax and Revenue Recycling 1/ (in Percent Change)



1/ Assuming 85% of revenues go to labor tax reduction and 15% to transfers that target the bottom 25% of the income distribution.

Source: IMF Staff Calculations

<sup>13</sup> Estimates are based on projections using the Carbon Pricing and Assessment Tool (CPAT), developed by the World Bank and IMF, updating analysis in IMF Country Report No. 21/180. See also IMF October 2021: Climate Change Challenges in Latin America and the Caribbean for a regional comparison.

<sup>14</sup> This includes carbon dioxide, methane, nitrous oxide and fluorinated gases and excludes land use, land-use change and forestry.



**34. The authorities agree with the importance of protecting the environment and fighting climate change.** They do not believe that reducing fuel subsidies is currently socially feasible. They recognize the potential benefit of green investment, and seek potential new financing instruments that are consistent with their broader economic and social goals, as laid out in the PDES. They note substantial progress on environmentally friendly public investment projects in hydro, solar and wind power, and in lithium, as demonstrating their commitment to green policies.

## STAFF APPRAISAL

**35. Bolivia has made great strides in reducing poverty.** Per capita GDP has more than tripled since 2005, while social programs and higher wages have improved income distribution. From 2000 to 2021, the poverty rate fell from 66.4 to 36.3 percent, extreme poverty declined from 45.3 to 11.1 percent, life expectancy rose from 62 to 72 years, and the primary school completion rate increased from 84 to 99 percent. These were major and enduring achievements.

**36. The recovery from the pandemic has been faster than expected.** While the pandemic has not ended, the situation has improved and two-thirds of the eligible population have received at least one dose of vaccine. Following the pandemic-induced contraction of 8.7 percent in 2020, the economy recorded growth of 6.1 percent in 2021 and the current account moved to a surplus of 2 percent of GDP.

**37. The economy is expected to grow by 3.8 percent in 2022.** Continued strong commodity prices are expected to boost receipts from mining and agriculture, bringing output back to its pre-pandemic level later in 2022. Inflation is projected to rise from its current low level of 1.4 percent to 4.2 percent by the end of 2022 and the current account is projected to shift to a small deficit as stronger domestic demand boosts imports. The fiscal deficit is projected to remain high, at 8.5 percent of GDP in 2022.

**38. The persistence of large macroeconomic imbalances has raised the risk of a disorderly adjustment.** Recurrent large fiscal deficits have resulted in sustained monetary financing from the central bank which is inconsistent with the central bank's commitment to maintaining a pegged exchange rate. The liquidity provided to the government has been sterilized through a steady drawdown of international reserves (which stand at US\$4.4 billion, or 55 percent of the Fund's reserve adequacy metric in August 2022.). This increases Bolivia's vulnerability to a speculative attack on the currency, particularly in the current context of tightening global financial conditions and uncertainty about future prospects for the terms-of-trade. This risk is exacerbated by Bolivia's heavy reliance on callable overnight currency swaps—which now make up more than two-thirds of gross reserves—and by overvaluation of the real exchange rate. Public debt is assessed to be sustainable, but with high risk, and Bolivia's external position is moderately weaker than the level implied by fundamentals and desirable policies.

**39. A meaningful fiscal adjustment will be required to restore debt sustainability, eliminate monetary financing, and rebuild international reserves.** If Bolivia chooses to retain its exchange rate peg, restoration of macro sustainability will require reducing the primary deficit to

around 1.5 percent of GDP through a credible medium-term plan. The government would need to restrain expenditures, including by eliminating the *doble aguinaldo* year-end wage bonus, constraining the growth in public sector wages, limiting the growth in public investment, and scaling back subsidies. The tax base can be broadened by addressing informality, strengthening tax and customs administration (through IT modernization and improved governance), and adjusting tax policy to increase personal income taxes on higher income households.

**40. Fuel subsidy reductions will need to be combined with compensation for the poorest deciles of the population.** Successful implementation of an increase in domestic fuel prices will require recycling a portion of the budgetary savings to cash transfer programs that are targeted to the poorest deciles of the populations. An effective communication strategy will be critical to raise awareness of the regressive nature of energy subsidies and the benefits of shifting to market-based pricing of energy combined with targeted cash transfers.

**41. Bolivia would benefit from greater central bank independence and a carefully sequenced transition to a more flexible exchange rate.** Greater central bank independence and institutional capacity would support macro and financial stability, and facilitate exchange rate adjustments, when needed. Increased exchange rate flexibility would help preserve international reserves, reduce the current exchange rate overvaluation, and provide net welfare gains. Adoption of a flexible exchange rate alongside an inflation targeting monetary framework would substantially reduce the risk of a speculative attack and a disorderly adjustment. This transition should be prepared and communicated carefully, coordinated with other macroeconomic policy measures, and accompanied by institutional independence for the central bank.

**42. The BCB should reduce its dependence on currency swaps as a source of reserves.** If fiscal reforms can be put in place, balance of payments pressures should subside and reserves can be built from external sovereign borrowing and direct purchases on the market so as to reduce the reliance on swap arrangements with commercial banks. In addition, steadily lengthening the maturity of those swaps that do remain would help lessen vulnerabilities. If needed, other mechanisms could be adopted to ensure that domestic liquidity remains adequate.

**43. The growing interdependence of the pension system and the government should be monitored.** Consideration should be given to diversifying pension fund assets into a wider range of assets – potentially including foreign currency assets – to raise average returns and diversify exposure. However, this would need to be preceded by for a transition to professional and independent management of pension fund portfolios and would, even then, need to be pursued carefully, in line with the institutional view, so as not to exacerbate external imbalances and vulnerabilities.

**44. In the wake of the substantial loan restructuring during the pandemic, banks' loan books should be carefully monitored, to quickly identify signs of a deterioration in credit quality.** In addition, a range of credit quotas and interest rate caps continue to constrain bank profitability and distort resource allocation; they should be gradually phased out. The regulator

should closely monitor banks' capital adequacy and liquidity positions and further progress in identified AML/CFT shortcomings should be pursued ahead of the FATF assessment that is expected to begin later this year.

**45. Programs to reduce smuggling and informality would help to improve governance, where progress has lagged.** The aim should be to shift this activity into the formal economy, broaden the tax base, and improve the ability to track economic developments. Reforms to tax and customs administration can help by tracking goods and improving compliance with import procedures. These efforts will play an important role in reducing corruption and improving governance, where several priority reform areas still need to be addressed.

**46. Supply side reforms are needed to boost investment in hydrocarbons and mining and encourage the development of new industries.** The hydrocarbons law should be reformed to incentivize new investments and to scale back existing requirements for producers to sell below cost to the domestic market. The mining laws should be revised to incentivize private investment in lithium and other sectors. Other reforms, including the loosening of export limits and price controls, the use of international arbitration, the development of a one-stop shop to assist foreign investors, and the removal of credit quotas and interest rate ceilings would all be welcome (see the 2021 Article IV consultation).

**47. Bolivia should increase the share of electricity generation from renewable energy and facilitate an increase in green investments.** Bolivia can expand on its recent NDC commitments by setting clear emissions targets, accelerating the development of the nation's lithium resources, and presenting itself as a destination for green investment.

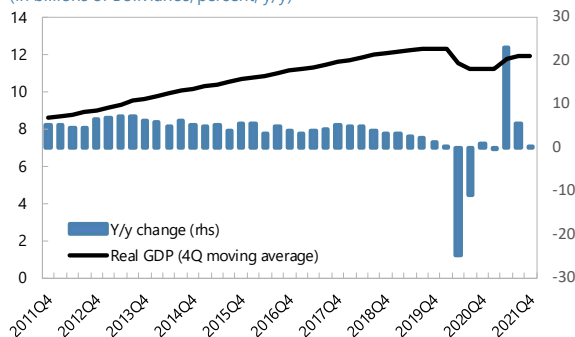
**48. It is proposed that the next Article IV consultation with Bolivia be held on the standard 12-month cycle.**

**Figure 1. Bolivia: Real Sector Developments**

*Economic activity has recovered in 2021...*

#### Real GDP and GDP growth

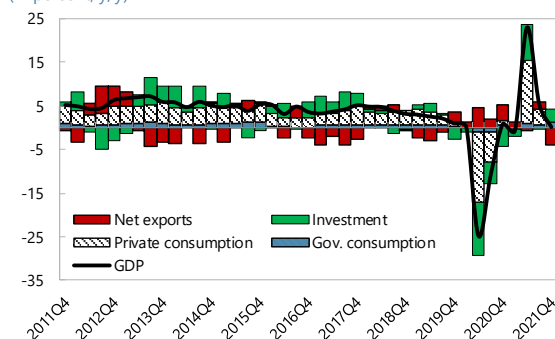
(In billions of Bolivianos; percent, y/y)



*On the demand side, private consumption continues to be the main driver of growth...*

#### Contributions to Real GDP Growth, Demand Side

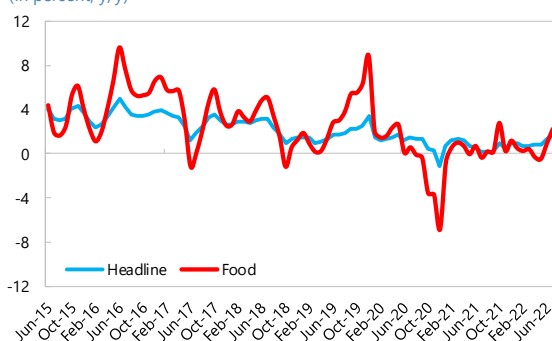
(In percent, y/y)



*Inflation has remained at low levels despite the rise in international commodity prices,*

#### CPI Inflation

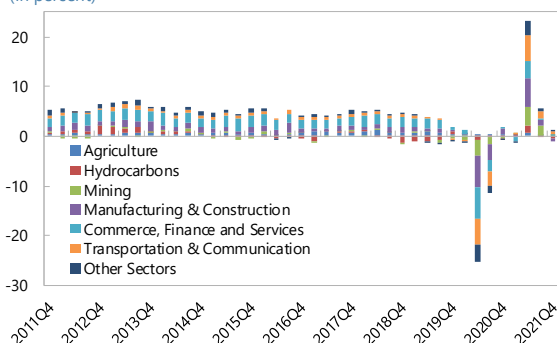
(In percent, y/y)



*...driven by mining, construction, and transportation sectors.*

#### Contributions to GDP Growth, Supply Side

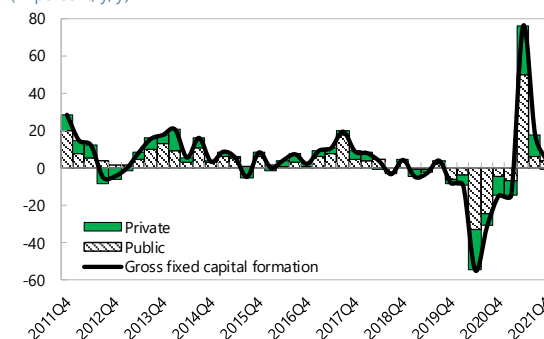
(In percent)



*...accompanied by the gradual recovery of public investment.*

#### Contributions to Real Investment Growth

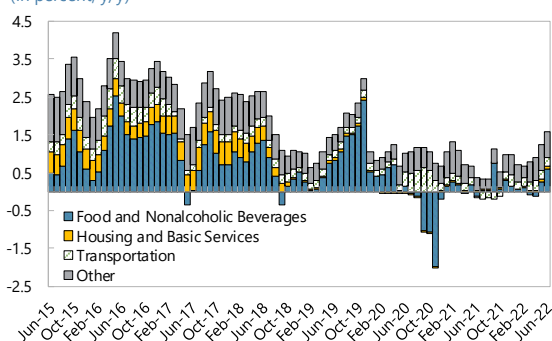
(In percent, y/y)



*...driven by subsidies and price controls on key energy and food items that constitute a large component of the CPI basket.*

#### Contribution to CPI Inflation

(In percent, y/y)

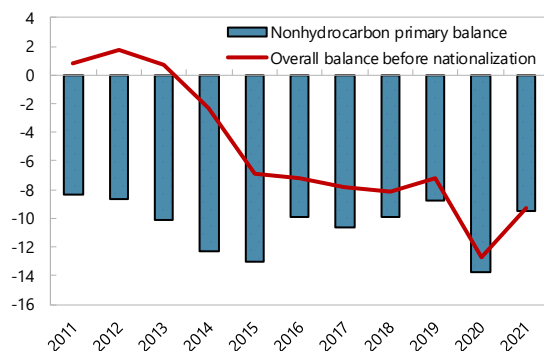


Sources: National Institute of Statistics, Central Bank of Bolivia, Haver Analytics, Inc., SEDLAC, World Bank, and Fund staff calculations.

**Figure 2. Bolivia: Fiscal Sector Developments**

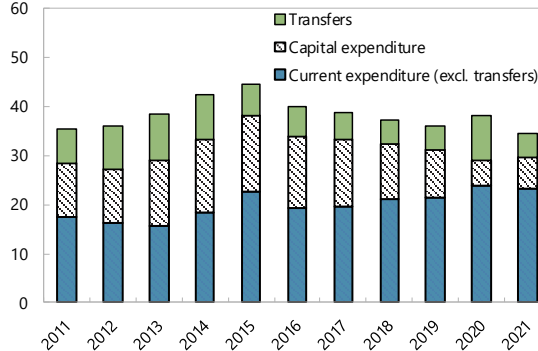
While the fiscal deficit remains higher than prepandemic levels, it has narrowed in 2021...

#### Fiscal Balance (In percent of GDP)



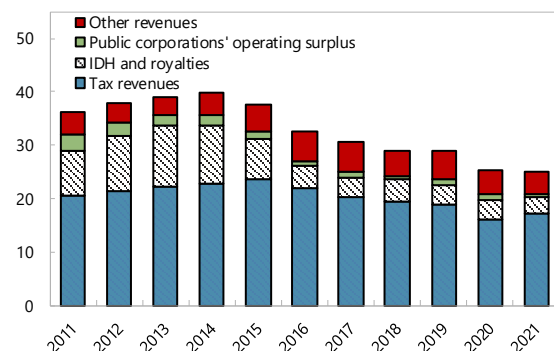
... reflecting the gradual phasing out of covid-19 related social transfers....

#### Expenditure Composition (In percent of GDP)



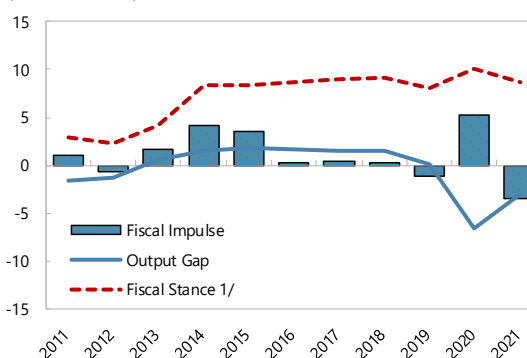
... while there was little improvement in revenues, particularly in the hydrocarbon sector.

#### Total Revenue Composition (In percent of GDP)



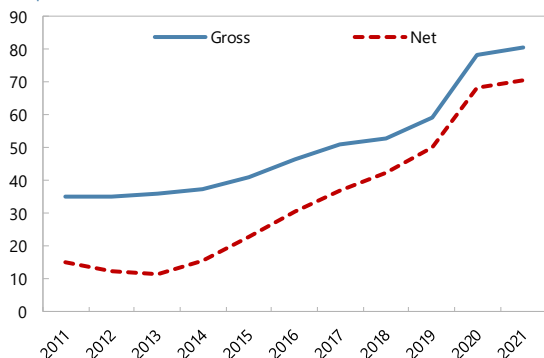
The policy stance remains expansionary until 2021.

#### Output Gap and Fiscal Impulse (Percent of GDP)



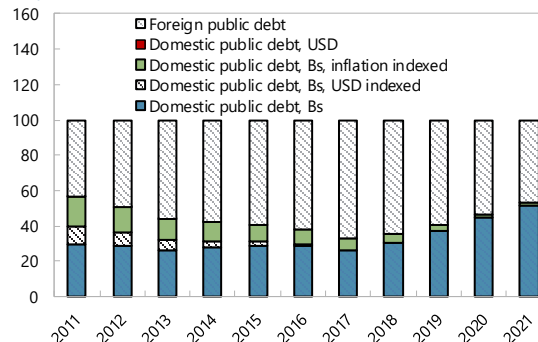
Public debt continues to increase after the sharp rise in 2020.

#### Public Sector Debt (In percent of GDP)



The composition of general government debt has become more tilted to domestic debt in the past two

#### Public Debt (excluding BCB loans to SOEs) (In percent of total)



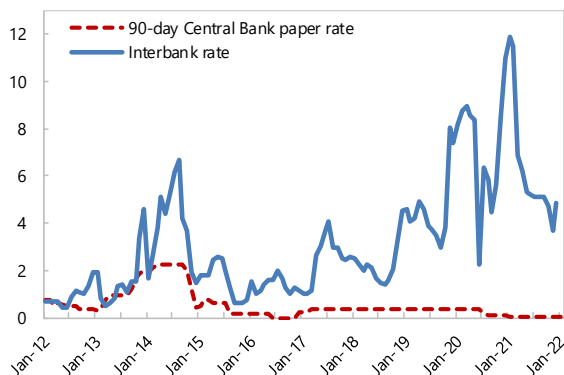
Sources: Ministry of the Economy and Public Finances, Central Bank of Bolivia and Fund staff calculations.

1/ Percentage points deviation from neutral primary balance.

**Figure 3. Bolivia: Monetary Sector Developments**

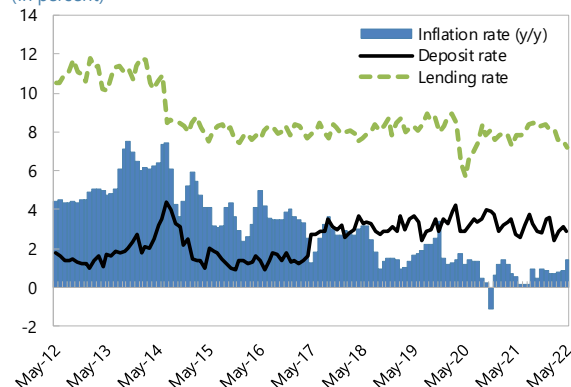
Rates on Central Bank paper have remained low while interbank rates have dropped significantly in the past year.

#### Policy Rate (In percent)



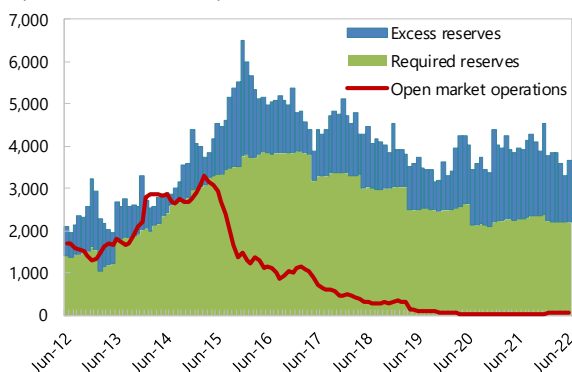
Deposit and lending rates have been stable in the last year.

#### Interest Rates and Inflation (In percent)

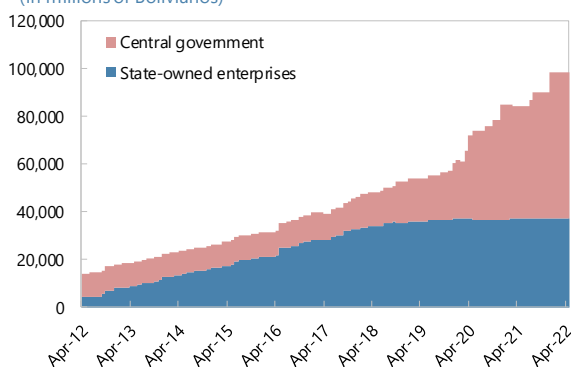


Banks' excess reserves have markedly increased in the past year while BCB open market operations have been limited in recent years.

#### Bank Reserves and Open Market Operations (In millions of US dollars)

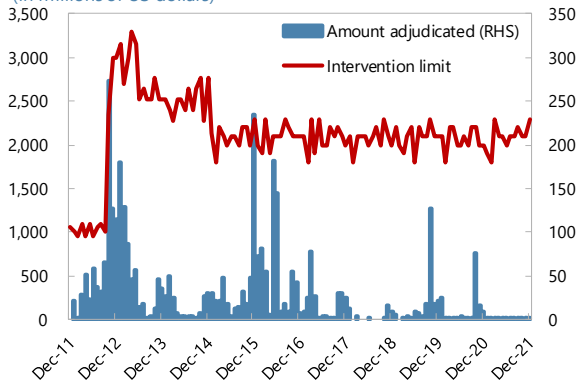


#### Central Bank Lending to the Public Sector (In millions of Bolivianos)



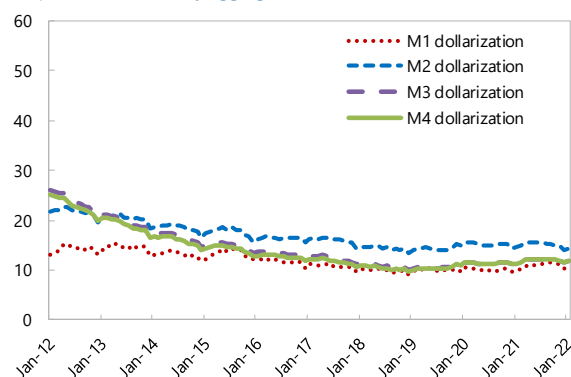
Central bank foreign exchange interventions remain low.

#### Central Bank Intervention in FX Market (In millions of US dollars)



Dollarization ratios continue to be stable at low levels.

#### Monetary Aggregates Dollarization (In percent of monetary aggregate)

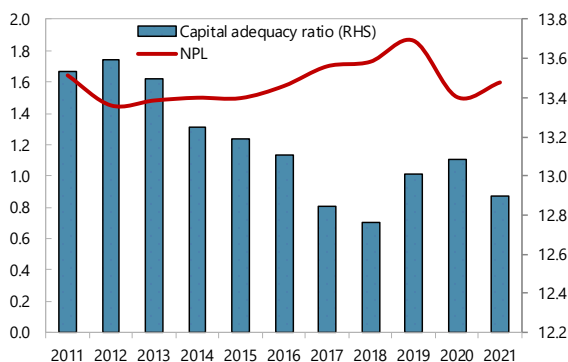


Sources: Central Bank of Bolivia, National Institute of Statistics, and Fund staff calculations.

**Figure 4. Bolivia: Financial Sector Developments**

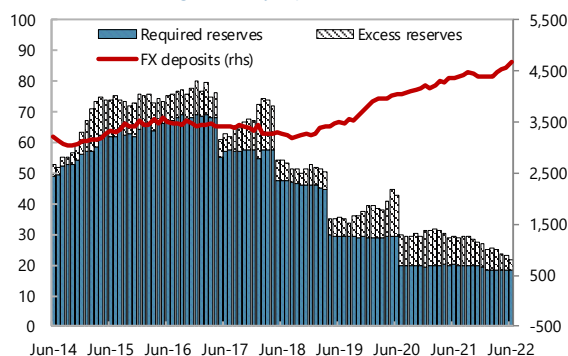
*Capital adequacy ratios are above the regulatory minimum, while NPLs remain low...*

**Capital Adequacy Ratio and Nonperforming Loans**  
(In percent)



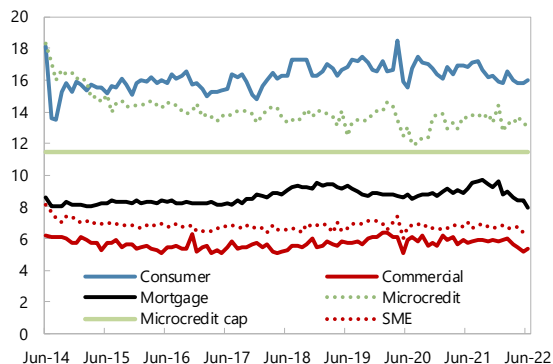
*The authorities reduced reserve requirements on FX deposits three times to support liquidity and lending...*

**Bank's Foreign Currency Reserves**  
(Percent of total foreign currency deposits; millions of US Dollars)



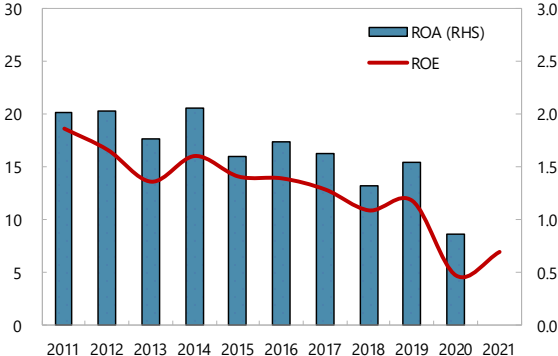
*The microcredit lending rate is the most affected by the Financial Services law...*

**Bank Lending Rate by Type of Credit 2/**  
(In percent, effective rate)



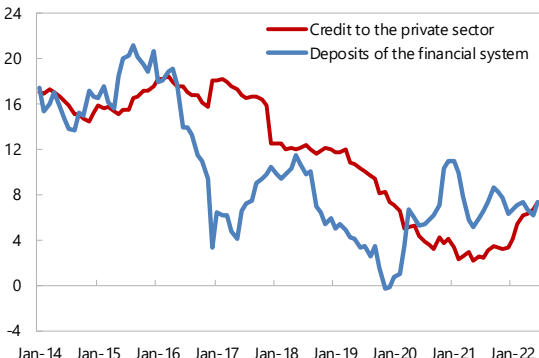
*...however, bank profitability has been declining.*

**Rates of Return**  
(In percent)



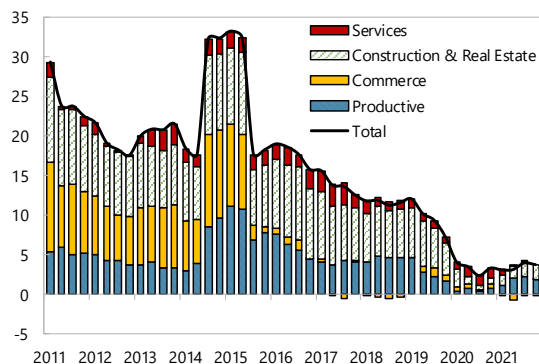
*...but credit growth remains at relatively low levels.*

**Deposits and Credit Growth 1/**  
(In percent, y/y)



*...while lending to "non-productive sectors" had stalled in the past few years.*

**Contribution to Credit Growth by Destination**  
(In percent, 4 quarter percent change)



Sources: ASFI and Fund staff calculations.

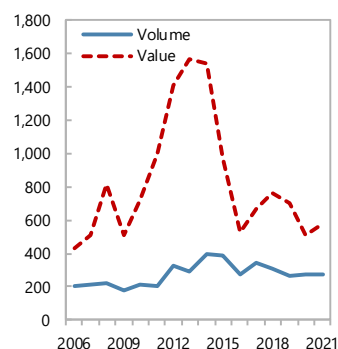
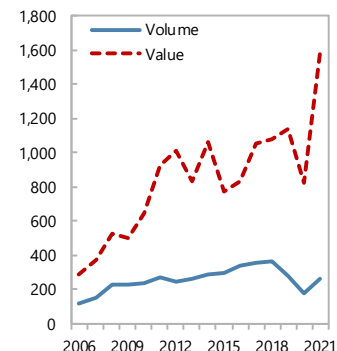
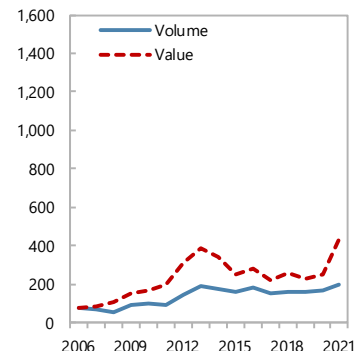
1/ Licensed institutions only.

2/ The estimations include credit extended by the addition of new financial institutions created during the period, including development institutions (Instituciones Financieras de Desarrollo).

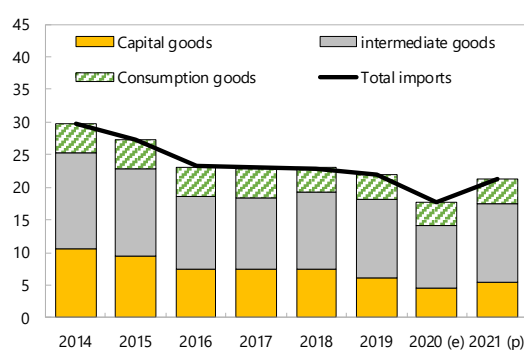


**Figure 5. Bolivia: External Sector Developments**

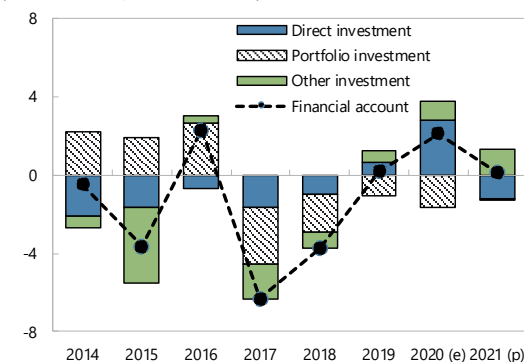
*In 2021, Bolivia's exports of natural gas were little changed, whereas minerals and agricultural products shot up.*

**Natural Gas**  
 (Indexes, 2003=100)

**Minerals, incl. Gold**  
 (Indexes, 2003=100)

**Soybeans and Derivatives**  
 (Indexes, 2003=100)


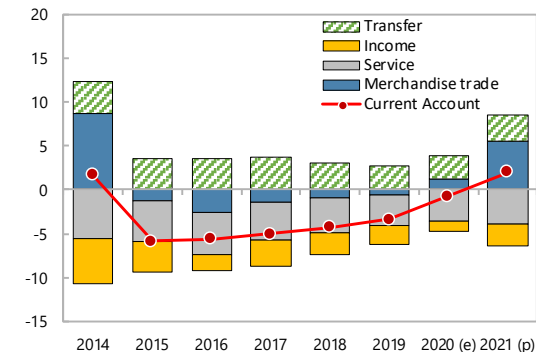
*Imports have broadly recovered to close to pre-pandemic levels relative to GDP.*

**Imports of Goods**  
 (In percent of GDP)


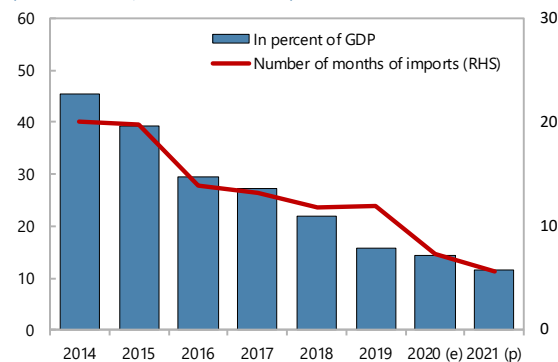
*Financial outflows moderated in 2021 ...*

**Financial Account**  
 (Percent of GDP; += net outflows)


*The current account balance tilted into surplus in 2021, a first since 2014.*

**Current Account**  
 (In percent of GDP)


*...but international reserves continued their decline.*

**Gross Reserves**  
 (Percent of GDP; Number of months)


Sources: Central Bank of Bolivia, National Institute of Statistics, and Fund staff calculations.

**Table 1. Bolivia: Selected Economic Indicators**

(In percent of GDP, unless noted otherwise)

			Est.	Proj.					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
Income and prices									
Real GDP	2.2	-8.7	6.1	3.8	3.2	3.0	2.8	2.6	2.5
Nominal GDP	1.5	-10.4	10.3	7.1	6.4	6.6	6.4	6.2	6.1
CPI inflation (period average)	1.8	0.9	0.7	3.2	3.6	3.5	3.5	3.5	3.5
CPI inflation (end of period)	1.5	0.7	0.9	4.2	3.6	3.5	3.5	3.5	3.5
Investment and savings 1/									
Total investment	19.9	15.8	16.8	17.9	17.5	16.9	16.4	16.1	16.1
Of which: Public sector	9.8	5.0	6.2	6.8	6.6	6.2	6.0	6.0	6.1
Gross national savings	14.2	12.5	13.9	10.7	10.4	10.0	9.5	9.0	8.5
Of which: Public sector	2.6	-7.7	-3.1	-1.6	-1.0	-1.0	-0.6	0.0	0.3
Combined public sector									
Revenues and grants	28.8	25.3	25.1	26.6	27.2	26.8	26.7	26.6	26.6
Of which: Hydrocarbon related revenue	4.8	4.7	3.6	3.5	4.2	3.8	3.5	3.3	3.2
Expenditure	36.1	38.0	34.4	35.0	34.9	34.2	33.3	32.7	32.5
Current	26.3	33.0	28.2	28.3	28.3	27.9	27.3	26.7	26.4
Capital 2/	9.8	5.0	6.2	6.8	6.6	6.2	6.0	6.0	6.1
Net lending/borrowing (overall balance)	-7.2	-12.7	-9.3	-8.5	-7.7	-7.3	-6.7	-6.1	-5.9
Of which: Non-hydrocarbon balance	-10.1	-15.2	-10.9	-10.1	-10.1	-9.4	-8.5	-8.7	-8.4
Total gross NFPS debt 3/	59.3	78.0	80.5	82.3	84.3	86.1	87.6	88.5	89.4
External sector									
Current account 1/	-3.3	-0.7	2.0	-1.6	-1.7	-1.9	-2.1	-2.6	-3.6
Exports of goods and services	24.9	20.0	28.1	30.7	28.9	27.6	26.4	25.2	24.1
Of which: Natural gas	6.6	5.4	5.5	6.0	5.9	5.6	5.2	4.6	4.0
Imports of goods and services	29.0	22.4	26.5	32.2	30.8	30.1	29.3	28.6	28.3
Capital account	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account	0.2	2.1	-0.4	-0.3	-0.5	-0.7	-0.9	-1.5	-2.5
Of which: Direct investment net	0.6	2.8	-1.2	-0.8	-0.7	-0.8	-0.8	-1.0	-1.2
Net errors and omissions	-3.4	-1.9	-3.3	0.0	0.0	0.0	0.0	0.0	0.0
Terms of trade index (percent change)	-0.7	2.9	4.0	-2.7	-0.5	-0.2	0.3	0.3	0.4
Central Bank gross foreign reserves 4/ 5/									
In millions of U.S. dollars	6,468	5,276	4,753	4,200	3,621	3,039	2,442	1,819	1,164
In months of imports of goods and services	9.4	5.9	4.1	3.5	2.9	2.4	1.8	1.3	1.0
In percent of GDP	15.7	14.3	11.7	9.6	7.8	6.1	4.6	3.3	2.0
In percent of ARA	92.4	70.7	58.3	46.8	37.9	29.8	22.6	15.9	9.8
Money and credit									
Credit to the private sector	6.7	9.1	4.6	7.1	6.4	6.6	6.4	6.2	6.1
Credit to the private sector (percent of GDP)	65.8	80.2	76.0	76.0	76.0	76.0	76.0	76.0	76.0
Broad money (percent of GDP)	79.1	97.6	94.3	96.6	98.6	100.4	101.7	103.6	106.2
Memorandum items:									
Nominal GDP (in billions of U.S. dollars)	41.2	36.9	40.7	43.6	46.4	49.4	52.6	55.9	59.3
Bolivianos/U.S. dollar (end-of-period) 6/	6.9	6.9	6.9	...	...	...	...	...	...
REER, period average (percent change) 7/	4.6	5.2	-4.2	...	...	...	...	...	...
Oil prices (in U.S. dollars per barrel)	61.4	41.3	69.1	103.9	91.1	82.3	76.3	72.3	69.9
Energy-related subsidies to SOEs (percent of GDP) 8/	1.4	1.7	1.3	1.6	1.4	1.2	1.1	1.0	0.9

Sources: Bolivian authorities (MEFP, Ministry of Planning, BCB, INE, UDAPE); IMF; Fund staff calculations.

1/ The discrepancy between the current account and the savings-investment balance reflects methodological differences. For the projection years, the discrepancy is assumed to remain constant in dollar value.

2/ Includes nationalization costs and net lending.

3/ Public debt includes SOE's borrowing from the BCB (but not from other domestic institutions) and BCB loans to FINPRO and FNDP.

4/ Excludes reserves from the Latin American Reserve Fund (FLAR) and Offshore Liquidity Requirements (RAL).

5/ All foreign assets valued at market prices.

6/ Official (buy) exchange rate.

7/ The REER based on authorities' methodology is different from that of the IMF (see 2018 and 2017 Staff Reports).

8/ Includes incentives for hydrocarbon exploration investments in the projection period, but excludes the cost borne by public enterprises.

**Table 2. Bolivia: Operations of the Combined Public Sector, 2019–2027 1/**  
(Bs million)

	Est.			Proj.					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
<b>Total Revenues</b>	<b>81,512</b>	<b>63,921</b>	<b>70,001</b>	<b>79,460</b>	<b>86,639</b>	<b>91,051</b>	<b>96,166</b>	<b>101,882</b>	<b>108,097</b>
Tax Revenues	63,629	49,692	56,672	68,609	72,472	74,998	78,138	81,783	86,126
IDH and royalties	10,155	9,076	8,584	12,902	13,312	11,709	10,549	9,583	8,936
Direct Taxes	12,702	8,406	9,374	10,558	11,223	12,075	12,964	13,906	14,942
Indirect Taxes	40,773	32,210	38,714	45,149	47,936	51,214	54,625	58,294	62,248
o/w VAT	20,391	15,143	19,237	22,590	23,867	25,351	26,897	28,493	30,205
o/w Excise tax on fuel	2,504	2,462	2,434	2,627	2,820	3,020	3,167	3,412	3,637
Grants	190	90	104	108	111	115	119	123	127
Other revenue	17,693	14,139	13,225	10,743	14,056	15,938	17,908	19,977	21,845
Nontax revenue	12,533	9,964	11,013	12,210	13,044	13,955	14,910	15,909	16,964
Public enterprises operating balance	3,546	2,810	1,385	-2,294	185	1,156	2,171	3,189	3,949
Central bank operating balance	1,613	1,365	827	827	827	827	827	878	931
<b>Total Expenditures</b>	<b>101,917</b>	<b>96,122</b>	<b>96,047</b>	<b>104,767</b>	<b>111,058</b>	<b>115,951</b>	<b>120,227</b>	<b>125,159</b>	<b>132,157</b>
Current Expenditure	74,190	83,529	78,695	84,519	90,099	94,778	98,580	102,273	107,176
Compensation of employees	35,125	36,580	37,298	38,715	40,093	41,495	42,946	44,449	46,005
Purchases of goods and services	10,798	9,608	12,623	12,272	13,185	14,196	14,953	15,720	16,510
Interest	3,883	3,782	3,771	5,468	7,877	8,983	9,255	9,231	10,200
Domestic	1,392	1,405	1,644	3,216	5,287	6,183	6,248	6,057	6,678
Foreign	2,491	2,378	2,126	2,252	2,590	2,800	3,007	3,174	3,522
Energy-related subsidies to SOEs 2/	4,072	4,195	3,729	4,795	4,338	4,039	3,849	3,742	3,710
Social benefits 3/	17,150	26,391	17,799	19,553	20,666	21,880	23,131	24,420	25,762
Other expense	3,162	2,974	3,475	3,715	3,940	4,185	4,444	4,711	4,989
Net acquisition of nonfinancial assets 4/	27,728	12,593	17,352	20,249	20,959	21,173	21,647	22,886	24,981
o/w Public Enterprises	6,138	2,175	4,073	4,683	4,871	4,968	5,117	5,373	5,507
<b>Gross operating balance</b>	<b>7,322</b>	<b>-19,608</b>	<b>-8,694</b>	<b>-5,059</b>	<b>-3,460</b>	<b>-3,727</b>	<b>-2,414</b>	<b>-392</b>	<b>921</b>
<b>Primary Balance</b>	<b>-16,522</b>	<b>-28,419</b>	<b>-22,275</b>	<b>-19,839</b>	<b>-16,542</b>	<b>-15,917</b>	<b>-14,807</b>	<b>-14,047</b>	<b>-13,860</b>
<b>Net lending/borrowing (Fiscal Balance)</b>	<b>-20,405</b>	<b>-32,201</b>	<b>-26,046</b>	<b>-25,308</b>	<b>-24,419</b>	<b>-24,900</b>	<b>-24,062</b>	<b>-23,277</b>	<b>-24,060</b>
<b>Net financial transactions</b>	<b>-20,405</b>	<b>-32,201</b>	<b>-26,046</b>	<b>-25,308</b>	<b>-24,419</b>	<b>-24,900</b>	<b>-24,062</b>	<b>-23,277</b>	<b>-24,060</b>
<b>Net incurrence of liabilities</b>	<b>20,405</b>	<b>32,201</b>	<b>26,046</b>	<b>25,308</b>	<b>24,419</b>	<b>24,900</b>	<b>24,062</b>	<b>23,277</b>	<b>24,060</b>
External	7,547	7,413	3,212	7,741	6,213	6,981	7,160	5,611	6,120
Disbursements	10,427	8,589	9,368	17,292	11,759	11,796	12,126	12,441	12,752
Amortizations	-2,800	-3,119	-3,435	-9,225	-5,220	-4,489	-4,640	-6,504	-6,306
Other external	-81	1,942	-2,720	-326	-326	-326	-326	-326	-326
Domestic	12,858	24,789	22,834	17,567	18,206	17,920	16,901	17,666	17,940
Banking system	11,217	24,215	10,720	8,533	8,642	8,740	7,595	8,013	8,325
Central Bank	9,640	23,953	11,047	8,960	9,168	9,367	8,322	8,840	9,252
Commercial banks	1,577	262	-327	-427	-527	-627	-727	-827	-927
Pension funds	1,497	1,489	10,835	8,668	8,755	8,843	8,931	9,020	9,110
Other domestic	145	-915	1,278	366	810	337	375	633	504
<b>Memorandum items:</b>									
Hydrocarbon related revenue 5/	13,701	11,887	9,969	10,608	13,497	12,865	12,720	12,773	12,885
Nonfinancial public sector gross public debt 6/	167,453	197,355	224,705	246,013	268,131	291,932	315,993	339,270	363,330
o/w gross foreign public debt	77,296	81,641	84,512	92,253	98,465	105,446	112,606	118,217	124,337
NFPS deposits	25,492	25,102	27,553	23,553	21,253	20,153	20,153	20,153	20,153
Nominal GDP (Bs million)	282,587	253,112	279,221	299,081	318,148	339,154	360,845	383,185	406,511

Sources: Ministry of Finance; Bolivia Central Bank; and Fund staff estimates and projections.

1/ The operation of mixed-ownership companies, primarily in the telecom, electricity and hydrocarbon sectors, are not included.

2/ Includes incentives for hydrocarbon exploration investments in the projection period.

3/ Includes pensions, cash transfers to households, and social investment programs (previously classified as capital expenditure).

4/ Includes net lending.

5/ Hydrocarbon related revenues are defined as direct hydrocarbon tax (IDH), royalties, and the operating balance of the state oil/gas company (YPFB)

6/ Public debt includes SOE's borrowing from the BCB but not from other domestic institutions.

**Table 3. Bolivia: Operations of the Combined Public Sector, 2019–2027 1/**  
(Percent of GDP)

	2019	2020	Est.		Proj.				
			2021	2022	2023	2024	2025	2026	2027
<b>Total Revenues</b>	<b>28.8</b>	<b>25.3</b>	<b>25.1</b>	<b>26.6</b>	<b>27.2</b>	<b>26.8</b>	<b>26.7</b>	<b>26.6</b>	<b>26.6</b>
Tax Revenues	22.5	19.6	20.3	22.9	22.8	22.1	21.7	21.3	21.2
IDH and royalties	3.6	3.6	3.1	4.3	4.2	3.5	2.9	2.5	2.2
Direct Taxes	4.5	3.3	3.4	3.5	3.5	3.6	3.6	3.6	3.7
Indirect Taxes	14.4	12.7	13.9	15.1	15.1	15.1	15.1	15.2	15.3
o/w VAT	7.2	6.0	6.9	7.6	7.5	7.5	7.5	7.4	7.4
o/w Excise tax on fuel	0.9	1.0	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Grants	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other revenue	6.3	5.6	4.7	3.6	4.4	4.7	5.0	5.2	5.4
Nontax revenue	4.4	3.9	3.9	4.1	4.1	4.1	4.1	4.2	4.2
Public enterprises operating balance	1.3	1.1	0.5	-0.8	0.1	0.3	0.6	0.8	1.0
Central bank operating balance	0.6	0.5	0.3	0.3	0.3	0.2	0.2	0.2	0.2
<b>Total Expenditures</b>	<b>36.1</b>	<b>38.0</b>	<b>34.4</b>	<b>35.0</b>	<b>34.9</b>	<b>34.2</b>	<b>33.3</b>	<b>32.7</b>	<b>32.5</b>
Current Expenditure	26.3	33.0	28.2	28.3	28.3	27.9	27.3	26.7	26.4
Compensation of employees	12.4	14.5	13.4	12.9	12.6	12.2	11.9	11.6	11.3
Purchases of goods and services	3.8	3.8	4.5	4.1	4.1	4.2	4.1	4.1	4.1
Interest	1.4	1.5	1.4	1.8	2.5	2.6	2.6	2.4	2.5
Domestic	0.5	0.6	0.6	1.1	1.7	1.8	1.7	1.6	1.6
Foreign	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.9
Energy-related subsidies to SOEs 2/	1.4	1.7	1.3	1.6	1.4	1.2	1.1	1.0	0.9
Social benefits 3/	6.1	10.4	6.4	6.5	6.5	6.5	6.4	6.4	6.3
Other expense	1.1	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Net acquisition of nonfinancial assets 4/	9.8	5.0	6.2	6.8	6.6	6.2	6.0	6.0	6.1
o/w Public Enterprises	2.2	0.9	1.5	1.6	1.5	1.5	1.4	1.4	1.4
<b>Gross operating balance</b>	<b>2.6</b>	<b>-7.7</b>	<b>-3.1</b>	<b>-1.7</b>	<b>-1.1</b>	<b>-1.1</b>	<b>-0.7</b>	<b>-0.1</b>	<b>0.2</b>
<b>Primary Balance</b>	<b>-5.8</b>	<b>-11.2</b>	<b>-8.0</b>	<b>-6.6</b>	<b>-5.2</b>	<b>-4.7</b>	<b>-4.1</b>	<b>-3.7</b>	<b>-3.4</b>
<b>Net lending/borrowing (Fiscal Balance)</b>	<b>-7.2</b>	<b>-12.7</b>	<b>-9.3</b>	<b>-8.5</b>	<b>-7.7</b>	<b>-7.3</b>	<b>-6.7</b>	<b>-6.1</b>	<b>-5.9</b>
<b>Net financial transactions</b>	<b>-7.2</b>	<b>-12.7</b>	<b>-9.3</b>	<b>-8.5</b>	<b>-7.7</b>	<b>-7.3</b>	<b>-6.7</b>	<b>-6.1</b>	<b>-5.9</b>
<b>Net incurrence of liabilities</b>	<b>7.2</b>	<b>12.7</b>	<b>9.3</b>	<b>8.5</b>	<b>7.7</b>	<b>7.3</b>	<b>6.7</b>	<b>6.1</b>	<b>5.9</b>
External	2.7	2.9	1.2	2.6	2.0	2.1	2.0	1.5	1.5
Disbursements	3.7	3.4	3.4	5.8	3.7	3.5	3.4	3.2	3.1
Amortizations	-1.0	-1.2	-1.2	-3.1	-1.6	-1.3	-1.3	-1.7	-1.6
Other external	0.0	0.8	-1.0	-0.1	-0.1	-0.1	-0.1	-0.1	-0.1
Domestic	4.6	9.8	8.2	5.9	5.7	5.3	4.7	4.6	4.4
Banking system	4.0	9.6	3.8	2.9	2.7	2.6	2.1	2.1	2.0
Central Bank	3.4	9.5	4.0	3.0	2.9	2.8	2.3	2.3	2.3
Commercial banks	0.6	0.1	-0.1	-0.1	-0.2	-0.2	-0.2	-0.2	-0.2
Pension funds	0.5	0.6	3.9	2.9	2.8	2.6	2.5	2.4	2.2
Other domestic	0.1	-0.4	0.5	0.1	0.3	0.1	0.1	0.2	0.1
<b>Memorandum items:</b>									
Hydrocarbon related revenue 5/	4.8	4.7	3.6	3.5	4.2	3.8	3.5	3.3	3.2
Nonfinancial public sector gross public debt 6/	59.3	78.0	80.5	82.3	84.3	86.1	87.6	88.5	89.4
o/w gross foreign public debt	27.4	32.3	30.3	30.8	30.9	31.1	31.2	30.9	30.6
NFPS deposits	9.0	9.9	9.9	7.9	6.7	5.9	5.6	5.3	5.0
Nominal GDP (Bs million)	282,587	253,112	279,221	299,081	318,148	339,154	360,845	383,185	406,511

Sources: Ministry of Finance; Bolivia Central Bank; and Fund staff estimates and projections.

1/ The operation of mixed-ownership companies, primarily in the telecom, electricity and hydrocarbon sectors, are not included.

2/ Includes incentives for hydrocarbon exploration investments in the projection period.

3/ Includes pensions, cash transfers to households, and social investment programs (previously classified as capital expenditure).

4/ Includes net lending.

5/ Hydrocarbon related revenues are defined as direct hydrocarbon tax (IDH), royalties, and the operating balance of the state oil/gas company (YPFB)

6/ Public debt includes SOE's borrowing from the BCB but not from other domestic institutions.

**Table 4. Bolivia: Non-Financial Public Sector Debt, 2014–2021**

	2014	2015	2016	2017	2018	2019	2020	2021
Bs million								
<b>Internal Debt 1/</b>	<b>28,664</b>	<b>28,209</b>	<b>29,645</b>	<b>31,143</b>	<b>37,422</b>	<b>44,277</b>	<b>71,039</b>	<b>95,253</b>
Public Financial Sector	9,484	9,897	9,794	11,234	14,858	20,045	41,824	55,196
Private Sector	19,177	18,311	19,850	19,907	22,563	24,231	29,214	40,057
Public Non-Financial Sector	3	1	1	1	1	1	1	1
Short Term	13	11	12	12	12	12	15,899	7,392
Long Term	28,651	28,198	29,633	31,130	37,411	44,266	55,140	87,861
<b>Foreign debt 2/ 3/</b>	<b>39,350</b>	<b>41,567</b>	<b>48,030</b>	<b>62,748</b>	<b>67,994</b>	<b>77,296</b>	<b>81,641</b>	<b>84,512</b>
Central Government	34,590	39,075	43,424	54,058	60,892	69,336	75,330	79,914
Commercial Banks	0	0	0	0	0	0	0	0
Bilateral	4,162	3,865	4,209	4,483	6,249	8,631	9,029	10,588
Multilateral	23,568	28,350	32,355	35,855	40,923	46,986	52,581	55,605
Private	6,860	6,860	6,860	13,720	13,720	13,720	13,720	13,720
Other	0	0	0	0	0	0	0	0
Other NFPS	4,760	2,492	4,606	8,690	7,101	7,959	6,311	4,598
<b>BCB loans to SOEs</b>	<b>16,383</b>	<b>20,974</b>	<b>27,545</b>	<b>33,015</b>	<b>35,319</b>	<b>37,321</b>	<b>36,251</b>	<b>36,505</b>
<b>BCB loans to FNDR</b>	<b>0</b>	<b>160</b>	<b>892</b>	<b>1,764</b>	<b>2,006</b>	<b>2,587</b>	<b>2,347</b>	<b>2,334</b>
<b>BCB loans to FINPRO</b>	<b>1,339</b>	<b>2,366</b>	<b>2,921</b>	<b>4,189</b>	<b>5,015</b>	<b>5,972</b>	<b>6,077</b>	<b>6,101</b>
<b>Total NFPS Debt</b>	<b>85,736</b>	<b>93,275</b>	<b>109,034</b>	<b>132,859</b>	<b>147,756</b>	<b>167,453</b>	<b>197,355</b>	<b>224,705</b>
Percent of GDP								
<b>Internal Debt 1/</b>	<b>12.6</b>	<b>12.4</b>	<b>12.6</b>	<b>12.0</b>	<b>13.4</b>	<b>15.7</b>	<b>28.1</b>	<b>34.1</b>
Public Financial Sector	4.2	4.3	4.2	4.3	5.3	7.1	16.5	19.8
Private Sector	8.4	8.0	8.5	7.7	8.1	8.6	11.5	14.3
Public Non-Financial Sector	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Short Term	0.0	0.0	0.0	0.0	0.0	0.0	6.3	2.6
Long Term	12.6	12.4	12.6	12.0	13.4	15.7	21.8	31.5
<b>Foreign debt 1/</b>	<b>17.3</b>	<b>18.2</b>	<b>20.5</b>	<b>24.2</b>	<b>24.4</b>	<b>27.4</b>	<b>32.3</b>	<b>30.3</b>
Central Government	15.2	17.1	18.5	20.9	21.9	24.5	29.8	28.6
Commercial Banks	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Bilateral	1.8	1.7	1.8	1.7	2.2	3.1	3.6	3.8
Multilateral	10.3	12.4	13.8	13.8	14.7	16.6	20.8	19.9
Private	3.0	3.0	2.9	5.3	4.9	4.9	5.4	4.9
Other	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other NFPS	2.1	1.1	2.0	3.4	2.6	2.8	2.5	1.6
<b>BCB loans to SOEs</b>	<b>7.2</b>	<b>9.2</b>	<b>11.7</b>	<b>12.7</b>	<b>12.7</b>	<b>13.2</b>	<b>14.3</b>	<b>13.1</b>
<b>BCB loans to FNDR</b>	<b>0.0</b>	<b>0.1</b>	<b>0.4</b>	<b>0.7</b>	<b>0.7</b>	<b>0.9</b>	<b>0.9</b>	<b>0.8</b>
<b>BCB loans to FINPRO</b>	<b>0.6</b>	<b>1.0</b>	<b>1.2</b>	<b>1.6</b>	<b>1.8</b>	<b>2.1</b>	<b>2.4</b>	<b>2.2</b>
<b>Total NFPS Debt</b>	<b>37.6</b>	<b>40.9</b>	<b>46.5</b>	<b>51.3</b>	<b>53.1</b>	<b>59.3</b>	<b>78.0</b>	<b>80.5</b>
<b>Memorandum items:</b>								
NFPS Deposits at the BCB (Bs million)	50,023	41,354	37,556	36,407	29,270	25,492	25,102	27,553
NFPS Net Debt (Bs million)	35,713	51,921	71,479	96,451	118,485	141,961	172,252	197,152
Nominal GDP (Bs million)	228,004	228,031	234,533	259,185	278,388	282,587	253,112	279,221

Sources: Ministry of Finance; Bolivia Central Bank; and Fund staff estimates and projections.

1/ Debt in local currency issued by the Treasury.

2/ Including domestic debt in FX held by residents.

3/ Foreign debt is all long term debt.

Table 5. Bolivia: Balance of Payments, 2019–2027

	Est.			Proj.					
	2019	2020	2021	2022	2023	2024	2025	2026	2027
(US\$ million)									
Current account balance	-1,366	-269	802	-705	-799	-946	-1,079	-1,479	-2,123
Goods and services	-1,686	-878	639	-657	-892	-1,224	-1,503	-1,886	-2,470
Goods	-258	436	2,226	1,042	895	670	480	123	-440
Exports	8,828	6,953	10,966	12,750	12,612	12,716	12,866	12,918	12,996
Imports	9,086	6,517	8,740	11,708	11,717	12,046	12,386	12,796	13,436
Services	-1,428	-1,314	-1,586	-1,699	-1,787	-1,894	-1,983	-2,009	-2,030
Credit	1,443	430	473	629	797	923	1,031	1,155	1,292
Debit	2,871	1,744	2,059	2,328	2,584	2,816	3,014	3,164	3,322
Interest Payments, net	-836	-417	-1,040	-1,386	-1,287	-1,159	-1,060	-1,132	-1,248
Remittances, net	1,156	1,026	1,202	1,338	1,379	1,437	1,483	1,538	1,595
Capital Account	2	12	3	3	3	3	3	3	3
Financial account (+ = net outflows)	73	780	-165	-149	-218	-361	-479	-853	-1,466
Foreign direct investment, net	265	1,018	-501	-328	-347	-376	-431	-543	-713
Portfolio investment, net	-440	-613	20	0	115	-84	-120	219	164
Financial derivatives, net	0	0	4	0	0	0	0	0	0
Other investment, net	248	375	312	179	15	100	71	-528	-917
Net errors and omissions	-1,402	-714	-1,324	0	0	0	0	0	0
Financing	2,839	1,752	354	553	579	582	597	624	654
Change in reserve assets (increase = -)	2,839	1,752	354	553	579	582	597	624	654
(percent of GDP)									
Current account balance	-3.3	-0.7	2.0	-1.6	-1.7	-1.9	-2.1	-2.6	-3.6
Goods and services	-4.1	-2.4	1.6	-1.5	-1.9	-2.5	-2.9	-3.4	-4.2
Goods	-0.6	1.2	5.5	2.4	1.9	1.4	0.9	0.2	-0.7
Exports	21.4	18.8	26.9	29.2	27.2	25.7	24.5	23.1	21.9
Imports	22.1	17.7	21.5	26.9	25.3	24.4	23.5	22.9	22.7
Services	-3.5	-3.6	-3.9	-3.9	-3.9	-3.8	-3.8	-3.6	-3.4
Credit	3.5	1.2	1.2	1.4	1.7	1.9	2.0	2.1	2.2
Debit	7.0	4.7	5.1	5.3	5.6	5.7	5.7	5.7	5.6
Interest Payments, net	-2.0	-1.1	-2.6	-3.2	-2.8	-2.3	-2.0	-2.0	-2.1
Remittances, net	2.8	2.8	3.0	3.1	3.0	2.9	2.8	2.8	2.7
Capital Account	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Financial account	0.2	2.1	-0.4	-0.3	-0.5	-0.7	-0.9	-1.5	-2.5
Foreign direct investment, net	0.6	2.8	-1.2	-0.8	-0.7	-0.8	-0.8	-1.0	-1.2
Portfolio investment, net	-1.1	-1.7	0.0	0.0	0.2	-0.2	-0.2	0.4	0.3
Financial derivatives, net	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Other investment, net	0.6	1.0	0.8	0.4	0.0	0.2	0.1	-0.9	-1.5
Net errors and omissions	-3.4	-1.9	-3.3	0.0	0.0	0.0	0.0	0.0	0.0
Financing	6.9	4.7	0.9	1.3	1.2	1.2	1.1	1.1	1.1
Change in reserve assets (increase = -)	6.9	4.7	0.9	1.3	1.2	1.2	1.1	1.1	1.1
Memorandum items:									
Exports, c.i.f. (in millions of U.S. dollars)	8,819	6,953	10,966	12,750	12,612	12,716	12,866	12,918	12,996
o/w Natural gas	2,720	1,989	2,249	2,606	2,730	2,744	2,720	2,580	2,356
o/w Minerals	4,208	3,038	5,837	6,346	6,100	6,198	6,255	6,313	6,475
o/w Soy-related	716	784	1,369	1,798	1,684	1,651	1,677	1,737	1,799
Imports, c.i.f. (in millions of U.S. dollars)	9,785	7,115	9,618	12,508	12,417	12,646	12,986	13,396	14,036
o/w Combustibles	1,604	920	2,250	3,118	2,848	2,698	2,641	2,605	2,667
Gross BCB international reserves	6,468	5,276	4,753	4,200	3,621	3,039	2,442	1,819	1,164
In percent of GDP	15.7	14.3	11.7	9.6	7.8	6.1	4.6	3.3	2.0
In months of next year's imports of goods and services	9.4	5.9	4.1	3.5	2.9	2.4	1.8	1.3	1.0
In percent of ARA	92.4	70.7	58.3	46.8	37.9	29.8	22.6	15.9	9.8
APSP oil prices (U.S. dollars per barrel)	61.4	41.3	69.1	103.9	91.1	82	76	72	70
Nominal GDP (in millions of U.S. dollars)	41,193.4	36,896.8	40,702.7	43,597.9	46,377.3	49,439	52,601	55,858	59,258

Sources: Central Bank of Bolivia, National Institute of Statistics, and Fund staff calculations.

Table 6. Bolivia: Monetary Survey, 2019–2027

			Est.			Proj.			
	2019	2020	2021	2022	2023	2024	2025	2026	2027
(Bs million, unless otherwise indicated)									
<b>Central Bank</b>									
Net international reserves	44,367	36,193	36,275	32,484	28,515	24,520	20,427	16,149	11,660
Net international reserves (US\$ million)	6,468	5,276	5,288	4,735	4,157	3,574	2,978	2,354	1,700
Net domestic assets	29,262	58,318	70,023	81,074	92,557	104,268	116,329	128,812	141,870
Net credit to the nonfinancial public sector	21,067	46,708	59,542	68,302	77,254	86,388	94,464	103,041	112,013
Net credit to financial intermediaries	16,642	22,702	23,521	25,981	28,669	31,384	35,488	39,756	44,354
Other items net	-8,447	-11,092	-13,041	-13,209	-13,366	-13,504	-13,623	-13,984	-14,497
Net medium and long-term foreign assets	1,537	-842	-4,212	-4,212	-4,212	-4,212	-4,212	-4,212	-4,212
Base money	75,166	93,669	102,086	109,346	116,860	124,576	132,544	140,749	149,318
Base money (percentage change)	3.5	24.6	9.0	7.1	6.9	6.6	6.4	6.2	6.1
Currency in circulation	49,177	53,616	56,119	60,109	64,240	68,482	72,862	77,373	82,083
Bank reserves	25,989	40,053	45,967	49,236	52,620	56,094	59,682	63,377	67,235
o/w legal reserves	12,917	19,917	20,049	21,474	22,950	24,465	26,030	27,642	29,324
<b>Financial System 1/</b>									
Net short-term foreign assets	54,994	45,630	45,523	42,972	40,322	37,732	35,135	32,446	29,642
Net short-term foreign assets (US\$ million)	8,017	6,652	6,636	6,264	5,878	5,500	5,122	4,730	4,321
Net domestic assets	169,131	204,107	224,454	253,797	282,177	312,799	342,774	376,572	415,183
Net credit to the public sector	22,340	48,243	60,750	69,509	78,462	87,596	95,671	104,248	113,221
Credit to the private sector	186,050	202,909	212,177	227,269	241,758	257,720	274,203	291,179	308,905
Credit to the private sector (percentage change)	6.7	9.1	4.6	7.1	6.4	6.6	6.4	6.2	6.1
Other items net	-39,259	-47,045	-48,473	-42,982	-38,042	-32,517	-27,100	-18,856	-6,942
Net medium and long-term foreign liabilities	522	2,697	6,730	7,779	8,828	9,876	10,925	11,974	13,022
Broad money	223,603	247,039	263,246	288,989	313,671	340,655	366,984	397,044	431,802
Liabilities in domestic currency	217,895	241,401	255,023	282,254	306,304	332,581	358,232	384,336	410,875
Foreign currency deposits	5,708	5,639	8,224	6,736	7,367	8,074	8,752	12,708	20,927
(Changes in percent of broad money at the beginning of the period)									
Net short-term foreign assets	-9.0	-4.2	0.0	-1.0	-0.9	-0.8	-0.8	-0.7	-0.7
Net domestic assets	6.5	15.6	8.2	11.1	9.8	9.8	8.8	9.2	9.7
Net credit to the public sector	5.3	11.6	5.1	3.3	3.1	2.9	2.4	2.3	2.3
Credit to the private sector	5.1	7.5	3.8	5.7	5.0	5.1	4.8	4.6	4.5
Other items net	-3.9	-3.5	-0.6	2.1	1.7	1.8	1.6	2.2	3.0
Net medium and long-term foreign liabilities	-0.5	1.0	1.6	0.4	0.4	0.3	0.3	0.3	0.3
Broad money	-2.0	10.5	6.6	9.8	8.5	8.6	7.7	8.2	8.8
Liabilities in domestic currency	-2.2	10.5	5.5	10.3	8.3	8.4	7.5	7.1	6.7
Foreign currency deposits	0.2	0.0	1.0	-0.6	0.2	0.2	0.2	1.1	2.1
Sources: Central Bank of Bolivia, and Fund staff calculations.									
1/ The financial system comprises the central bank, commercial banks and nonbanks, and the Banco de Desarrollo Productivo (BDP), which is a state-owned second-tier bank.									



**Table 7. Bolivia: Financial Stability Indicators**  
(Percent)

	2015	2016	2017	2018	2019	2020	2021Q1	2021Q2	2021Q3
<b>Capital Adequacy</b>									
Regulatory capital to risk-weighted assets	13.2	13.1	12.8	12.8	13.0	13.1	13.3	13.3	N.A.
Regulatory Tier 1 capital to risk-weighted assets	11.7	11.2	10.4	10.3	10.6	10.9	11.1	11.2	N.A.
Capital to assets	7.0	7.3	6.6	6.7	6.9	6.8	6.8	7.0	N.A.
Nonperforming loans net of provisions to capital	11.6	12.4	14.0	14.7	15.7	12.2	14.8	13.6	N.A.
Large Exposures to Capital	5.4	3.2	8.9	6.8	11.7	7.8	8.8	10.9	11.0
<b>Asset Quality</b>									
Nonperforming loans to total gross loans	1.5	1.6	1.7	1.7	1.9	1.5	1.9	1.7	N.A.
Loan loss provisions to Nonperforming loans	35.7	34.2	43.8	35.1	31.1	63.9	4.6	10.0	14.0
<b>Earnings and Profitability</b>									
Return on Assets	1.6	1.7	1.6	1.3	1.5	0.9	0.5	0.6	0.8
Return on Equity	14.1	14.0	12.9	10.9	11.8	4.8	3.6	5.0	6.0
Interest margin to gross income	74.2	70.4	68.5	71.2	70.9	73.3	72.7	71.1	71.7
<b>Liquidity</b>									
Liquid assets to short-term liabilities	65.3	59.1	56.7	50.4	42.8	44.8	46.1	43.9	N.A.
Liquid assets to total assets	32.9	27.3	25.2	22.3	16.9	17.6	18.0	17.1	N.A.
<b>FX Risks</b>									
Net open position in foreign exchange to capital	-4.3	-9.6	-3.0	-8.5	-4.6	4.9	5.7	8.4	N.A.
Foreign Currency Loans to Total Loans	4.8	3.0	2.1	1.5	1.2	1.1	1.1	1.0	N.A.
Foreign Currency Liabilities to Total Liabilities	17.9	16.6	14.1	12.4	12.9	12.5	13.2	13.3	N.A.

Sources: Central Bank of Bolivia and Fund staff calculations.

## Annex I. Risk Assessment Matrix<sup>1</sup>

Risks	Likelihood
<b>Conjunctural shocks and scenarios</b>	
<b>Intensifying spillovers from Russia's war on Ukraine.</b> Further sanctions resulting from the war and related uncertainties exacerbate trade and financial disruptions and commodity price volatility, with Europe, LICs, and commodity-importing EMs among the worst hit. As a net commodity exporter, Bolivia has a dampened exposure to this risk.	High
<b>Commodity price shocks.</b> A combination of continuing supply disruptions (e.g., due to conflicts and export restrictions) and negative demand shocks causes recurrent commodity price volatility and social and economic instability.	High
<b>Systemic social unrest.</b> Rising inflation, declining incomes, and worsening inequality amplify social unrest and political instability, causing capital outflows from EMDEs, slowing economic growth, and giving rise to economically damaging populist policies (e.g., preserving fossil fuel subsidies).	High
<b>De-anchoring of inflation expectations and stagflation.</b> Supply shocks to food and energy prices sharply increase headline inflation and pass through to core inflation, de-anchoring inflation expectations and triggering a wage-price spiral in tight labor markets. Central banks tighten monetary policy more than envisaged leading to weaker global demand, currency depreciations in EMDEs, and sovereign defaults. Together, this could lead to the onset of stagflation.	Medium
<b>Abrupt global slowdown or recession.</b> Global and idiosyncratic risk factors combine to cause a synchronized sharp growth slowdown, with outright recessions in some countries, spillovers through trade and financial channels, and downward pressures on some commodity prices, which would magnify Bolivia's external imbalances.	Medium
<b>Local Covid-19 outbreaks.</b> Outbreaks in slow-to-vaccinate countries, such as Bolivia, or emergence of more contagious vaccine-resistant variants force new lockdowns or inhibit commerce. This results in extended supply chain disruptions, slower growth, capital outflows, and debt distress in some EMDEs.	Medium
<b>Structural risks</b>	
<b>Deepening geo-economic fragmentation and geopolitical tensions.</b> Broadening of conflicts and reduced international cooperation accelerate deglobalization, resulting in a reconfiguration of trade, supply disruptions, technological and payments systems fragmentation, rising input costs, financial instability, a fracturing of international monetary and financial system, and lower potential growth.	High
<b>Cyberthreats.</b> Cyberattacks on critical physical or digital infrastructure (including digital currency platforms) trigger financial instability and disrupt economic activities.	Medium
<b>Natural disasters related to climate change.</b> More frequent natural disasters deal severe damage to infrastructure (especially in smaller vulnerable economies) and amplify supply chain disruptions and inflationary pressures, causing water and food shortages and reducing medium-term growth.	Medium
<b>Domestic risks</b>	
<b>Speculative attack/sudden stop risk.</b> The confluence of inadequate reserves, a fixed exchange rate, and a recurring fiscal deficit, raises the risk that a drop in money demand could lead to reserve depletion and a disorderly adjustment.	Medium
<b>Failure to discover new natural gas fields.</b> Production from the existing fields is declining and the success of ongoing exploration activities is uncertain.	Medium

<sup>1</sup> The Risk Assessment Matrix (RAM) shows events that could materially alter the baseline path. The relative likelihood is the staff's subjective assessment of the risks surrounding the baseline ("low" is meant to indicate a probability below 10 percent, "medium" a probability between 10 and 30 percent, and "high" a probability between 30 and 50 percent). 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. The conjunctural shocks and scenarios highlight risks that may materialize over a shorter horizon (between 12 to 18 months) given the current baseline. Structural risks are those that are likely to remain salient over a longer horizon.

## Annex II. Debt Sustainability Analysis

*Public debt is assessed to be sustainable, but with high risks. The trajectory of public debt has deteriorated since 2020 and debt levels are now projected to remain above the 80 percent of GDP during the projection period. A slight improvement in the prospects for public debt relative to the 2021 DSA reflects a better-than-expected GDP outturn in 2021 and higher revenues from the 2021 commodity boom. Public gross financing needs exceed the 15-percent-of-GDP debt burden benchmark for EMs, but are projected to fall over time in the baseline. The debt profile is largely benign, aided by the successful debt swap, in February 2022, that reduced amortization payments in 2022 and 2023. External debt is mostly held by multilaterals, most debt is long-term, and average interest rates are low. Risks to the debt outlook include a further tightening of external financing conditions, inadequate fiscal consolidation, a forced depreciation of the real exchange rate, or weaker-than-expected hydrocarbon exports.*

### A. Definitions and Recent Evolution of Public Debt Stock

1. **This annex covers the non-financial public sector (NFPS) fiscal perimeter.** This is derived by adding lending by the BCB to state owned enterprises (SOEs), to the National Fund for Regional Development (FNDR), to the Fund for the Productive Industrial Revolution (FINPRO) to the central government debt published by the BCB.
2. **At the end of 2021, NFPS debt was at 80.5 percent of GDP, or 224.7 billion bolivianos (US\$32.8 billion)** (see Table 4 for the decomposition of public debt changes and Figure 1 in this annex for projections). By end-2021, domestic debt, including BCB loans to SOEs, FNDR, and FINPRO, amounted to 140.2 billion bolivianos (US\$20.5 billion), or about 62.5 percent of total NFPS debt. Foreign-currency debt, including domestic debt issued in FX, amounts to US\$12.3 billion (84.5 billion bolivianos), 37.6 percent of total NFPS debt. Multilateral and bilateral creditors hold 65.8 and 12.5 percent of foreign debt, respectively, in the form of loans. The remaining 18 percent consists mostly of Eurobonds.
3. **The ratio of NFPS debt to GDP has increased by 20 percentage points since end-2019, when it stood at 59.4 percent.** Domestic debt has increased from 31.9 to 50.2 percent of GDP during this period, largely due to BCB lending to SOEs and the central government during the pandemic. Foreign debt rose more moderately from 27.4 to 30.3 percent of GDP.

### B. Economic Assumptions

4. **The specific assumptions used in this annex are:**
  - **Growth and Inflation.** In 2022, GDP is projected to grow by 3.8 percent and average inflation is projected to rise to 3.2 percent. Over the medium term, growth is expected to slow, stabilizing at the potential rate of 2.5 percent while average inflation is expected to return to its long-run average.

- **Primary Balance.** In 2022, the primary balance is projected at -5.6 percent of GDP. Subsequently the primary deficit is assumed to gradually tighten to 3.1 percent by 2027. The fiscal multiplier used is 1 reflecting the FAD methodology staff's guidance on fiscal multipliers.
- **Debt management strategy.** Over the projection period, the public debt management strategy assumes limited access to the external capital markets with tighter financing conditions and heavier reliance on the BCB and domestic pension funds for domestic financing and multilateral and bilateral creditors for external financing.

## C. Public Debt Projections

**5. Public debt is projected to reach 82.3 percent of GDP in 2022, rising to 89. percent of GDP by 2027 with heightened risks to debt sustainability** (Figure 1). Debt is projected to continue increasing without stabilizing in the projection period, despite a moderately favorable interest rate growth differential. Primary deficits remain elevated, pointing to the need for a faster and stronger fiscal adjustment for debt to stabilize. (Figure 1).

- Local currency debt is projected to increase by 9.1 percent of GDP to 59.3 percent of GDP by the end of the projection period, mainly driven by BCB and AFP lending to the public sector. Funding costs on newly issued domestic debt are assumed to increase slightly. This reflects higher reliance on domestic financing sources, including domestic private pension funds, and an expected pick-up in inflation. The implicit interest rate on domestic debt is projected to increase from 1.4 percent in 2021 to an average of 2.4 percent in the projection period.
- Foreign currency debt is projected to remain stable at around 30 percent of GDP in the projection period, reflecting continued limited access to external financing. This includes a Eurobond issuance of US\$850 million placed in February 2022 at a rate of 7.5 percent, 2.5 percent wider than the average of previous issues. The operation succeeded in exchanging US\$850 million worth of Eurobonds maturing in 2022 and 2023, but did not help to finance the 2022 deficit. Reflecting this, the implicit interest rate on external debt is assumed to increase from 2.6 percent in 2021 to an average of 4.2 percent in the projection period. Nevertheless, the largely multilateral nature of new external funding sources keeps interest burdens on external debt relatively low for Bolivia.

## D. Stress Tests and Risks to the Projections

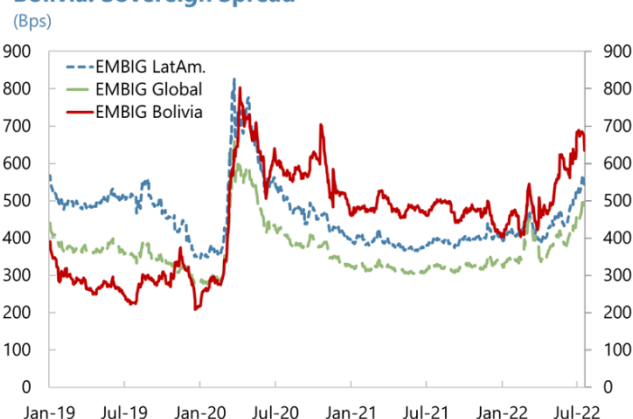
**6. Elevated risks associated with the debt burden persist in Bolivia with debt levels and gross financing needs exceeding the risk assessment benchmarks under stress test and baseline scenarios.**

- **Debt remains well above the 70 percent of GDP risk benchmark under all scenarios,** reflecting the high and increasing level of debt under the baseline. The impact of the real growth stress test is particularly large (1 standard deviation equivalent to 4.5 percent of GDP in

2023 and 2024), raising projected debt to over 98 percent of GDP by the end of the projection period.

- **Gross financing needs surpassed the 15 percent of GDP benchmark in 2020 and 2021 and are projected to surpass it in the projection period under the baseline and all stress test scenarios.** While in the baseline scenario gross financing needs are expected to moderate starting in 2022, they are projected to peak in the medium term (2023-2025) under all stress tests.
- **Debt risks associated with the possibility of a departure from the exchange rate peg are assessed as moderate.** While a departure from the peg would lead to a devaluation and increase in the local currency value of public external debt, the sovereign's ability to repay is primarily determined by the level of international reserves. Under a disorderly adjustment (seen as a moderate risk over the short term) during which the central bank attempts to defend the peg, this would be expected to decline, weakening the sovereign's capacity to repay.
- **Debt profile vulnerabilities are low.** The maturity structure poses only moderate risks following the refinancing operation in February 2022. The limited share of short-term debt (less than 2 percent of GDP by the end of the projection period) helps contain gross financing needs. Market perception of external debt risks has been deteriorating as the EMBIG spread has surpassed the upper early warning threshold of 600 basis points, although its 3-months average is at 538 bps. External debt held by non-residents and the share of FX debt remain lower than the respective high risk assessment benchmarks. The share of external debt is expected to decrease over time as financing tilts to domestic sources, with the tightening of external financing conditions.

**Bolivia: Sovereign Spread**



Sources: Bloomberg and Fund staff calculations.

**Figure 1. Bolivia: Public Debt Sustainability Analysis (DSA)**  
(In percent of GDP, unless otherwise indicated)

Debt, Economic and Market Indicators <sup>1/</sup>													
	Actual			Projections							As of July 08, 2022		
	2011-2019 <sup>2/</sup>	2020	2021	2022	2023	2024	2025	2026	2027				
Nominal gross public debt	43.9	78.0	80.5	82.3	84.3	86.1	87.6	88.5	89.4	Sovereign Spreads EMBIG (bp) 3/ 673 Ratings Foreign Local Moody's B2 B2 S&Ps B+ B+ Fitch B B			
Public gross financing needs	5.3	16.7	18.1	15.8	13.7	12.9	13.9	11.8	11.2				
Real GDP growth (in percent)	4.7	-8.7	6.1	3.8	3.2	3.0	2.8	2.6	2.5				
Inflation (GDP deflator, in percent)	3.6	-1.9	4.0	3.3	3.0	3.1	3.4	3.3	3.3				
Nominal GDP growth (in percent)	8.5	-10.4	10.3	7.1	6.4	6.6	6.4	6.2	6.1				
Effective interest rate (in percent) <sup>4/</sup>	2.9	2.3	1.9	2.4	3.2	3.3	3.2	2.9	3.0				

Contribution to Changes in Public Debt												
	Actual			Projections							cumulative	debt-stabilizing primary balance <sup>9/</sup>
	2011-2019	2020	2021	2022	2023	2024	2025	2026	2027			
Change in gross public sector debt	2.4	18.7	2.5	1.8	2.0	1.8	1.5	1.0	0.8	8.9		
Identified debt-creating flows	1.0	19.6	2.0	1.7	2.1	2.1	1.6	1.2	1.0	9.6		
Primary deficit	3.1	11.2	8.0	6.6	5.2	4.7	4.1	3.7	3.4	27.7	-2.4	
Primary (noninterest) revenue + grants	34.7	25.3	25.1	26.6	27.2	26.8	26.7	26.6	26.6	160.5		
Primary (noninterest) expenditure	37.7	36.5	33.0	33.2	32.4	31.5	30.8	30.3	30.0	188.2		
Automatic debt dynamics <sup>5/</sup>	-1.9	8.4	-5.9	-3.6	-2.4	-2.2	-2.5	-2.5	-2.4	-15.7		
Interest rate/growth differential <sup>6/</sup>	-1.9	8.4	-5.9	-3.6	-2.4	-2.2	-2.5	-2.5	-2.4	-15.7		
Of which: real interest rate	-0.2	2.6	-1.6	-0.8	0.1	0.2	-0.3	-0.4	-0.3	-1.5		
Of which: real GDP growth	-1.7	5.8	-4.3	-2.9	-2.5	-2.4	-2.3	-2.1	-2.1	-14.2		
Exchange rate depreciation <sup>7/</sup>	0.0	0.0	0.0	...	...	...	...	...	...	...		
Other identified debt-creating flows	-0.1	0.0	0.0	-1.3	-0.7	-0.3	0.0	0.0	0.0	-2.4		
Drawdown on deposits (negative)	-0.1	0.0	0.0	-1.3	-0.7	-0.3	0.0	0.0	0.0	-2.4		
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Please specify (2) (e.g., ESM and Euroarea loans)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Residual, including asset changes <sup>8/</sup>	1.4	-0.9	0.5	0.1	0.0	-0.4	-0.1	-0.2	-0.2	-0.7		

Source: IMF staff.

1/ Public sector is defined as the consolidated public sector. Public debt includes SOEs' borrowing from the BCB but not from other domestic institutions.

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  $[(r - \pi(1+g) - g + ae(1+r))/(1+g+\pi+g\pi)]$  times previous period debt ratio, with  $r$  = interest rate;  $\pi$  = 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  $r - \pi(1+g)$  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 changes in the stock of guarantees, 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.

Source: IMF staff.

1/ Public sector is defined as the consolidated public sector. Public debt includes SOEs' borrowing from the BCB but not from other domestic institutions.

2/ Based on available data.

3/ EMBIG.

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

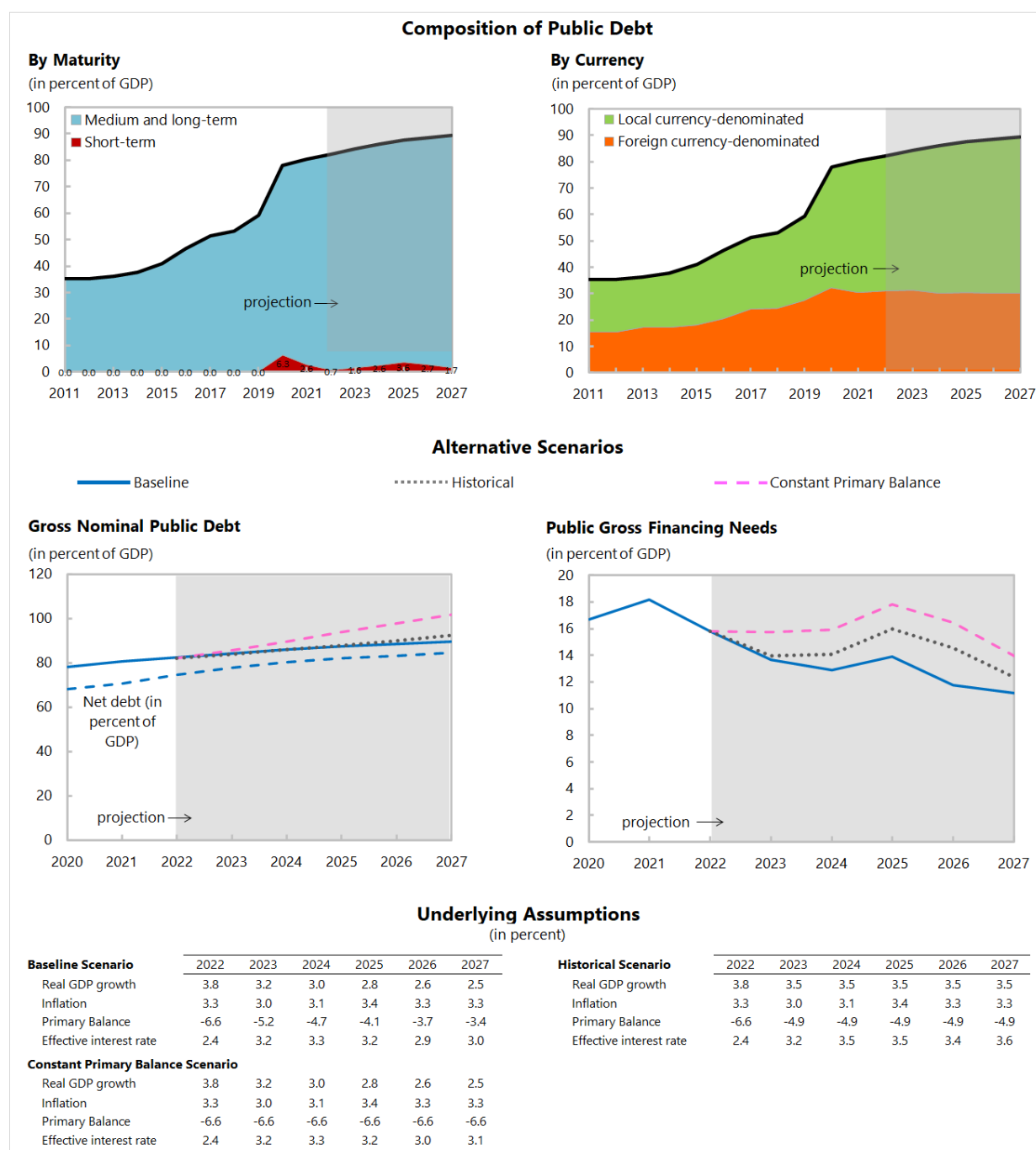
5/ Derived as  $[(r - \pi(1+g) - g + ae(1+r))/(1+g+\pi+g\pi)]$  times previous period debt ratio, with  $r$  = interest rate;  $\pi$  = growth rate of GDP deflator;  $g$  = real GDP growth rate;  $a$  = share of foreign-currency denominated debt; and  $e$  = nominal exchange rate depreciation (measured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

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

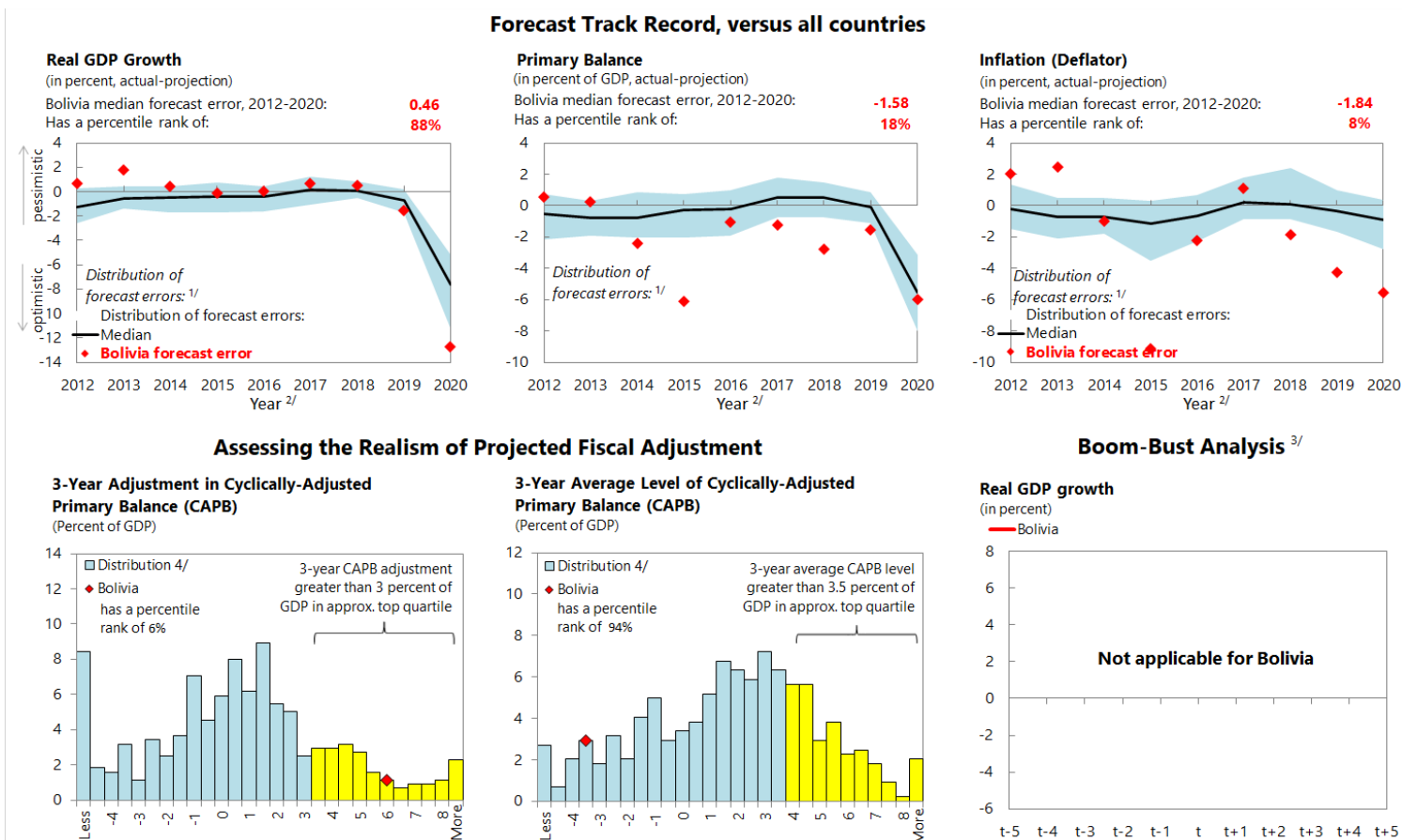
9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

**Figure 2. Bolivia: Public DSA – Composition of Public Debt and Alternative Scenarios**

Source: IMF staff.



Figure 3. Bolivia: Public DSA – Realism of Baseline Assumptions



Source : IMF Staff.

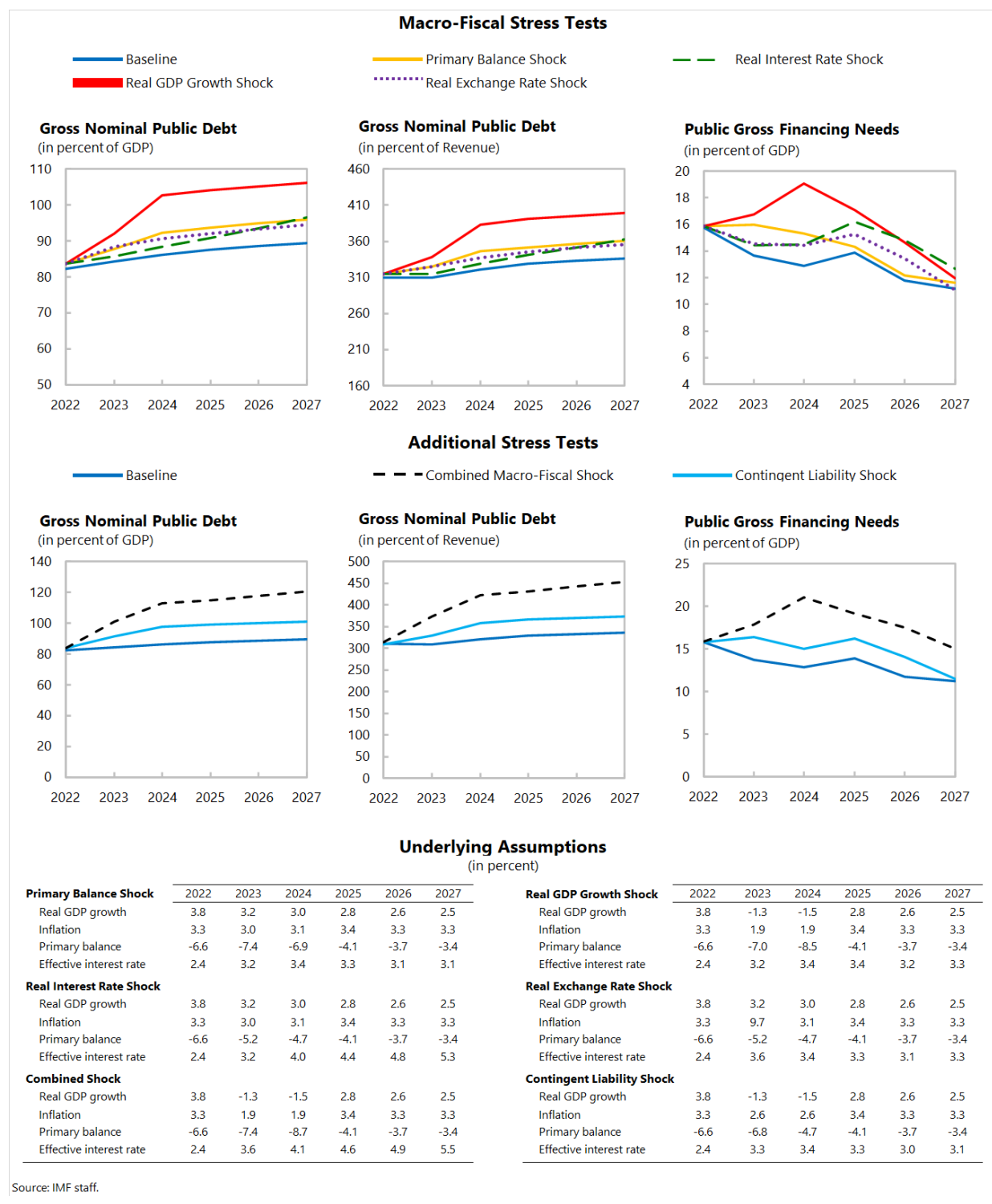
1/ Plotted distribution includes all countries, percentile rank refers to all countries.

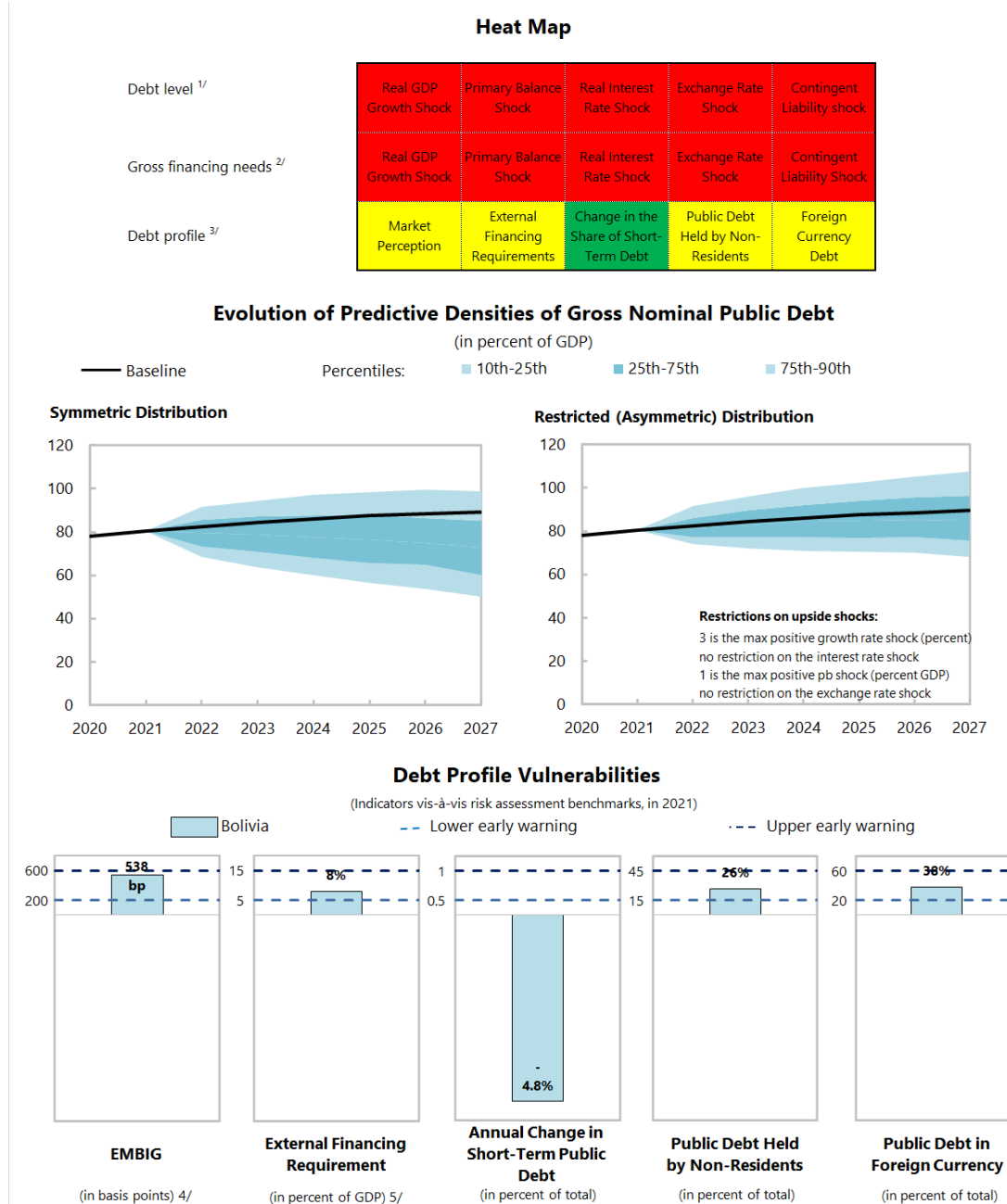
2/ Projections made in the spring WEO vintage of the preceding year.

3/ Not applicable for Bolivia, as it meets neither the positive output gap criterion nor the private credit growth criterion.

4/ Data cover annual observations from 1990 to 2011 for advanced and emerging economies with debt greater than 60 percent of GDP. Percent of sample on vertical axis.

Figure 4. Bolivia: Public DSA – Stress Tests



**Figure 5. Bolivia: Public DSA Risk Assessment**

Source: IMF staff.

1/ The cell is highlighted in green if debt burden benchmark of 70% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

2/ The cell is highlighted in green if gross financing needs benchmark of 15% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white. Lower and upper risk-assessment benchmarks are:

200 and 600 basis points for bond spreads; 5 and 15 percent of GDP for external financing requirement; 0.5 and 1 percent for change in the share of short-term debt; 15 and 45 percent for the public debt held by non-residents; and 20 and 60 percent for the share of foreign-currency denominated debt.

4/ EMBIG, an average over the last 3 months, 09-Apr-22 through 08-Jul-22.

5/ External financing requirement is defined as the sum of current account deficit, amortization of medium and long-term total external debt, and short-term total external debt at the end of previous period.

**Figure 6. Bolivia: External Debt Sustainability Framework**  
(In percent of GDP, unless otherwise indicated)

Debt, Economic and Market Indicators <sup>1/</sup>										As of July 08, 2022			
	Actual			Projections									
	2011-2019 <sup>2/</sup>	2020	2021	2022	2023	2024	2025	2026	2027				
Nominal gross public debt	43.9	78.0	80.5	82.3	84.3	86.1	87.6	88.5	89.4	Sovereign Spreads			
Public gross financing needs	5.3	16.7	18.1	15.8	13.7	12.9	13.9	11.8	11.2	EMBIG (bp) 3/ 673			
Real GDP growth (in percent)	4.7	-8.7	6.1	3.8	3.2	3.0	2.8	2.6	2.5	Ratings	Foreign	Local	
Inflation (GDP deflator, in percent)	3.6	-1.9	4.0	3.3	3.0	3.1	3.4	3.3	3.3	Moody's	B2	B2	
Nominal GDP growth (in percent)	8.5	-10.4	10.3	7.1	6.4	6.6	6.4	6.2	6.1	S&Ps	B+	B+	
Effective interest rate (in percent) <sup>4/</sup>	2.9	2.3	1.9	2.4	3.2	3.3	3.2	2.9	3.0	Fitch	B	B	

Contribution to Changes in Public Debt												
	Actual			Projections								
	2011-2019	2020	2021	2022	2023	2024	2025	2026	2027	cumulative	debt-stabilizing	
Change in gross public sector debt	2.4	18.7	2.5	1.8	2.0	1.8	1.5	1.0	0.8	8.9	primary	
Identified debt-creating flows	1.0	19.6	2.0	1.7	2.1	2.1	1.6	1.2	1.0	9.6	balance <sup>9/</sup>	
Primary deficit	3.1	11.2	8.0	6.6	5.2	4.7	4.1	3.7	3.4	27.7	-2.4	
Primary (noninterest) revenue + grants	34.7	25.3	25.1	26.6	27.2	26.8	26.7	26.6	26.6	160.5		
Primary (noninterest) expenditure	37.7	36.5	33.0	33.2	32.4	31.5	30.8	30.3	30.0	188.2		
Automatic debt dynamics <sup>5/</sup>	-1.9	8.4	-5.9	-3.6	-2.4	-2.2	-2.5	-2.5	-2.4	-15.7		
Interest rate/growth differential <sup>6/</sup>	-1.9	8.4	-5.9	-3.6	-2.4	-2.2	-2.5	-2.5	-2.4	-15.7		
Of which: real interest rate	-0.2	2.6	-1.6	-0.8	0.1	0.2	-0.3	-0.4	-0.3	-1.5		
Of which: real GDP growth	-1.7	5.8	-4.3	-2.9	-2.5	-2.4	-2.3	-2.1	-2.1	-14.2		
Exchange rate depreciation <sup>7/</sup>	0.0	0.0	0.0	...	...	...	...	...	...	...		
Other identified debt-creating flows	-0.1	0.0	0.0	-1.3	-0.7	-0.3	0.0	0.0	0.0	-2.4		
Drawdown on deposits (negative)	-0.1	0.0	0.0	-1.3	-0.7	-0.3	0.0	0.0	0.0	-2.4		
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Please specify (2) (e.g., ESM and Euroarea loans)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Residual, including asset changes <sup>8/</sup>	1.4	-0.9	0.5	0.1	0.0	-0.4	-0.1	-0.2	-0.2	-0.7		

Source: IMF staff.

1/ Public sector is defined as the consolidated public sector. Public debt includes SOEs' borrowing from the BCB but not from other domestic institutions.

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  $[(r - \pi(1+g) - g + ae(1+r))/(1+g+\pi+grt)]$  times previous period debt ratio, with  $r$  = interest rate;  $\pi$  = 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).

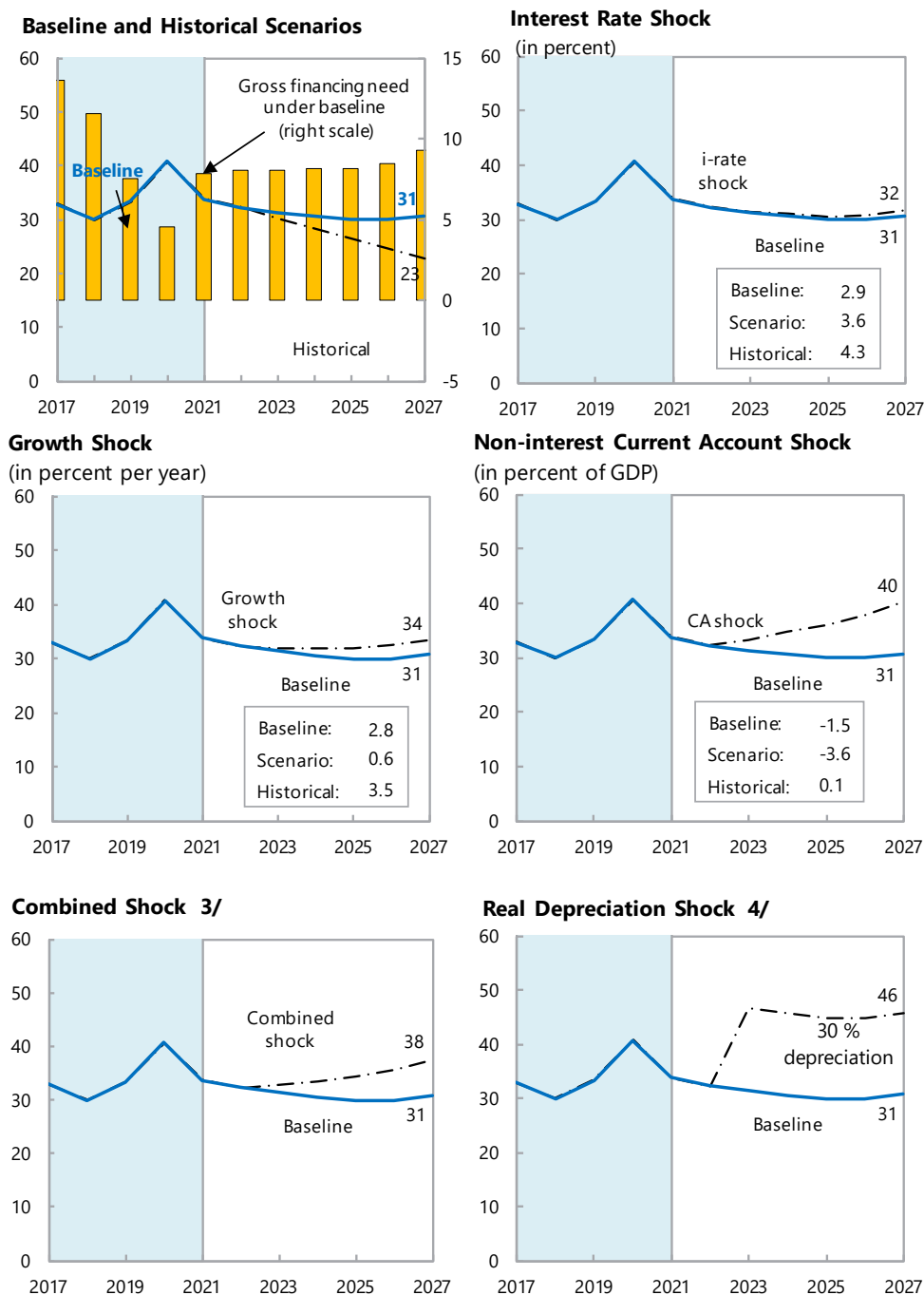
6/ The real interest rate contribution is derived from the numerator in footnote 5 as  $r - \pi(1+g)$  and the real growth contribution as  $-g$ .

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

8/ Includes changes in the stock of guarantees, 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.

**Figure 7. External Debt Sustainability: Bound Tests 1/ 2/**  
(External debt in percent of GDP)



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.

4/ One-time real depreciation of 30 percent occurs in 2022.

## Annex III. External Sector Assessment

**Overall Assessment:** *The external position of Bolivia in 2021 was moderately weaker than the level implied by fundamentals and desirable policies.* This assessment relies on the persistent decline of Bolivia's international reserves in the context of a *de facto* fixed exchange rate regime and the shortfall in the adequacy of reserves. Bolivia has run persistent current account deficits, with diminishing international reserves, and has experienced a substantial real exchange rate appreciation since 2015. These external imbalances have matched a deteriorating fiscal position. At end-June 2022, reserves stand at US\$4.5 billion, which is 3.8 months of projected 2023 imports, or 55 percent of the Fund's 2021 reserve adequacy metric.

**Potential Policy Responses:** There should be a commitment to implementing fiscal reforms while protecting the most vulnerable, and to reinvigorate structural reforms to improve productivity and competitiveness. Under a pegged exchange rate regime, this will imply internal adjustments to public and private demand—most notably through a reduction in the fiscal deficit—to reduce the pressures on international reserves.

### Foreign Assets and Liabilities: Position and Trajectory

**Background.** Bolivia has been a net debtor since 2016Q4. The net international position (NIIP) has weakened from a net surplus of US\$4.5 billion (13.6 percent of GDP) in 2014 to a net deficit of US\$7.5 billion (-18.5 percent of GDP) at end-2021. The decline in net foreign assets reflects persistent current account deficits, coinciding with the commodity boom-bust cycle (2012–2017) and the accompanying fiscal expansion. Over half of foreign liabilities are in the form of loans and debt instruments, with the remaining share in equity, primarily as direct investment.

**Assessment.** Over the medium term the NIIP is expected to continue to deteriorate by 1 to 2 percent of GDP per year, owing to sustained current account deficits. To maintain the NIIP at the 2021 level of -18.5 percent of GDP would require a current account balance of about -1.3 percent of GDP over the coming years. Bolivia's short-term gross external financing needs are limited, as much of its external debt is long-term, with relatively favorable financing terms.

2021 (% GDP)	NIIP: -18.5	Gross Assets: 43.4	Res. Assets: 11.7	Gross Liab.: 61.9	Debt Liab.: 36.0
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### Current Account

**Background:** The current account in Bolivia follows commodity price swings and, relatedly, fiscal policy. With the collapse in commodity prices in 2015 and associated increase in the budget deficit, the current account swung sharply into deficit, after a 10-year period of recurring surpluses. The commodity boom eased external imbalances in 2021. However, net errors and omissions, which are likely to represent unreported imports and capital outflows, accounted for 3.3 percent of GDP.

**Assessment.** The cyclically adjusted CA balance stood at 1.6 percent of GDP in 2021. The EBA-lite CA regression estimates a norm of -0.4 percent of GDP, thus implying a CA gap of 2 percent of GDP. However, the overall assessment considers the inadequate reserves, the appreciated level of the real

exchange rate, and the loss of market share in non-energy exports. As such, the external position is assessed to be moderately weaker than fundamentals and desired policies.

### Bolivia: EBA-lite Model Results, 2021

	CA model 1/ (in percent of GDP)	REER model 1/
<b>CA-Actual</b>	<b>2.0</b>	
Cyclical contributions (from model) (-)	0.7	
COVID-19 adjustor (-) 2/	0.0	
Natural disasters and conflicts (-)	-0.2	
<b>Adjusted CA</b>	<b>1.6</b>	
<b>CA Norm</b> (from model) 3/	<b>-0.4</b>	
Adjustments to the norm (-)	0.0	
<b>Adjusted CA Norm</b>	<b>-0.4</b>	
<b>CA Gap</b>	<b>2.0</b>	<b>-5.8</b>
o/w Relative policy gap	-2.2	
Elasticity	-0.19	
<b>REER Gap</b> (in percent)	<b>-10.7</b>	<b>30.8</b>
1/ Based on the EBA-lite 3.0 methodology		
2/ Additional cyclical adjustment to account for the temporary impact of the tourism (-0.02 percent of GDP) and remittances (0.06 percent of GDP).		
3/ Cyclically adjusted, including multilateral consistency adjustments.		

### Real Exchange Rate

**Background.** CPI-based real effective exchange rate (REER) has been on an appreciating trend since end-2017. As of end-2021, the REER has appreciated by 48 percent since the boliviano was pegged to the U.S. dollar in 2011.

**Assessment.** The CA gap implies a REER undervaluation of -10.7 percent (applying an estimated elasticity of 0.19). However, the REER regression model indicates an overvaluation of 30.8 percent. The REER regression is judged to be a more accurate assessment of the exchange rate misalignment. To realign the exchange rate with fundamentals, policies should focus on fiscal consolidation, improving productivity and competitiveness.

### Capital and Financial Accounts: Flows and Policy Measures

**Background.** A refinancing operation conducted in February 2022 succeeded in extending the maturity of most of Bolivia's US\$1 billion in sovereign debt maturing in 2022 and 2023 but provided little additional net financing to help cover the 2022 fiscal deficit. The net FDI inflow is projected at -0.8 percent of GDP compared to a three-year average of 0.6 percent of GDP net inflow prior to the pandemic. According to the Chinn-Ito index,<sup>1</sup> using data for 2019, Bolivia's capital account is less open than the LAC average. The World Bank, IDB and CAF provided net new external funding totaling \$841.3 million in 2021.

**Assessment.** The current account deficit has been mainly financed by running down international reserves. Declining reserves, and continued fiscal and current account deficits, together with the tightening of global financial conditions, are expected to raise the cost of external funding, limiting prospects for further external sovereign bond issuance. To support sustainable and durable growth, the authorities need to put in place policies that attract larger FDI inflows.

### FX Intervention and Reserves Level

**Background.** Bolivia has a stabilized exchange rate regime, with the boliviano pegged at a rate of 6.9 to the U.S. dollar. Net international reserves fell from US\$6.5 billion at end-2019 to US\$4.5 billion in June 2022. Bolivian commercial banks have swapped over US\$3 billion to the BCB over the past two years under a program known as CPVIS, constituting more than half of the BCB's US\$4.5 billion in gross international reserves. Most of these funds are provided on an overnight basis, implying that they may not be available to the BCB in the event of a crisis.

**Assessment.** Reserves are not adequate according to standard Fund metrics. They currently stand at 3.8 months of projected 2023 imports or 55 percent of the ARA metric. Reserves have diminished from over 50 percent of GDP to about 12 percent of GDP in the last decade, and are projected to continue falling. To preserve the stabilized exchange rate, there is a need to correct internal imbalances including through fiscal consolidation and supply side reforms.

<sup>1</sup>The Chinn-Ito index (KAOPEN) of Chinn and Ito (2006) is an index measuring a country's degree of capital account openness based on restrictions on cross-border financial transactions quantified in IMF's Annual Report on Exchange Arrangements and Exchange Restrictions (AREAER).