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ROYAL GOVERNMENT OF BHUTAN
MINISTRY OF FINANCE
TASHICHHO DZONG

IN-HOUSE DEBT SUSTAINABILIT ANALYSIS REPORT

2023 Bhutan In-House Debt Sustainability Analysis Overall Risk Rating	
Mechanical overall debt distress rating	High
Final overall debt distress rating	Moderate
Judgement was applied	Yes

Bhutan's risks of external and overall debt distress continue to be assessed as high mechanically because its external and total public debt indicators breach their respective thresholds and benchmarks under the baseline scenarios. However, judgement is applied to the unique characteristics of Bhutan's debt, which is dominated by hydropower debt extended by the Government of India (GoI) with several risk mitigating factors. As such, debt is assessed to have a ***moderate risk of external and overall debt distress.*** *The external debt indicators are most vulnerable to shocks to exports and depreciation of the currency. Furthermore, the low and declining level of international reserves adds to these vulnerabilities. On the contrary, factors such as the large share of electricity export earning under the long-term intergovernmental power purchase agreement, a ready market for growing electricity exports and revision of power tariffs every after three years help mitigate risks, keeping debt outlook sustainable. Rebuilding fiscal space, adopting new public financing policy covering domestic debt issuance, comprehensive direction on the issuance of government guarantees and on-lending to SOEs pay immediate high importance on the public debt management. Going forward, the baseline is subject to important risks, including uncertainties related to the pandemic and geopolitical tensions, further delays in the completion of hydropower plants, and the materialization of financial sector contingent liabilities. At the same time, assessing and targeting infrastructure projects with high growth and social returns and financing these with concessional financing would benefit debt sustainability. Increasing the export base, continuing to maximize the proportion of concessional loans and improving primary deficits would help to keep the debt burden contained. Similarly, a gradual fiscal consolidation and revenue mobilization, a stable peg with the Indian rupee, and reforms to improve productivity and competitiveness of the non-hydropower sector, could help support debt sustainability.*

FINANCE MINISTER

FORWARD

Bhutan has achieved remarkable socioeconomic progress since the launch of its first five-year plan in 1961. The country is now close to graduating from the Least Developed Countries (LDC) group, thanks to the visionary leadership of its monarchs and the contributions of bilateral and multilateral development partners. Grants, concessional borrowing, and commercial loans have been used to finance developmental economic activities and social infrastructure projects. However, these investments have also led to a surge in public debt levels.

Given Bhutan's resource-constrained economy, debt financing will continue to be necessary to meet the growing demand for infrastructure and human capital until the country can find independent sources of financing. If managed transparently and carefully, debt financing can promote socioeconomic development and wealth generation. Innovative financing options are also available to supplement conventional financing.

The main purposes of borrowing, as per Article 126 of the PFA 2007 (Amendment 2012), are to finance the budget deficit, maintaining credit balances, and on-lending to state enterprises and legal entities, among others. To ensure sustainable socioeconomic growth without falling into debt distress, it is important to periodically assess the risks of public debt. The Debt Sustainability Analysis (DSA) report is a tool to assess the sustainability of public debt, inform policy makers and the public, and revise the Medium-term Debt Management Strategy (MTDS) and the annual borrowing plan. This second series of in-house DSA publication by the MoF of Bhutan can be useful for domestic and international agencies to assess Bhutan's debt carrying capacity.

Namgay Tshering

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PUBLIC DEBT COVERAGE, COUNTRY CLASSIFICATION AND METHODOLOGY

1. The coverage of public sector debt used in the DSA is both external and domestic debt of the central government debt, general government debt, government guarantees including to State Enterprises and Central bank borrowings. It also includes non-guaranteed debt contracted by the non-financial State Enterprises directly based on their balance sheet strength. The cutoff date for the debt data is 30 June 2022 and debt stock and debt servicing projections start from 1 July 2022. At present, there is no outstanding debt to the IMF.

Table 1: Coverage of Public Sector Debt

	Subsectors of the public sector	Check Box
1	Central government	X
2	State and local government	X
3	Other elements in the general government	X
4	o/w: Social security fund	X
5	o/w: Extra budgetary funds (EBFs)	X
6	Guarantees (to other entities in the public and private sector, including to SOEs)	X
7	Central bank (borrowed on behalf of the government)	X
8	Non-guaranteed SOE debt	X

2. Based on the country Composite Indicator (CI) classification, Bhutan's debt carrying capacity is strong. The CI is calculated based on the World Bank's Country Policy and Institutional Assessment (CPIA) score and the country's real GDP growth, remittances, international reserves, and global growth rate as estimated in the most recent WEO vintage (DSA Guidance note, page 27). At present, the latest CPIA rating for Bhutan is 3.9 (2021), which combined with macroeconomic variables from the October 2022 WEO, leads to a score of 3.06 which is greater than CI >3.05.

Components	Coefficients (A)	10-year average values (B)	CI Score components (A*B) = (C)	Contribution of components
CPIA	0.385	3.900	1.50	49%
Real growth rate (in percent)	2.719	3.409	0.09	3%
Import coverage of reserves (in percent)	4.052	57.963	2.35	77%
Import coverage of reserves^2 (in percent)	-3.990	33.597	-1.34	-44%
Remittances (in percent)	2.022	3.294	0.07	2%
World economic growth (in percent)	13.520	2.898	0.39	13%
CI Score			3.06	100%
CI rating			Strong	

3. ***Methodology:*** The DSA was conducted using the revised Debt Sustainability Framework for Low-Income countries (LIC- DSF) developed jointly by the IMF and the World Bank. The LIC DSF is a standard methodology for conducting standardized debt sustainability analysis, and it is anchored on debt burden indicator thresholds based on the country's debt carrying capacity, measured by a composite indicator (CI).

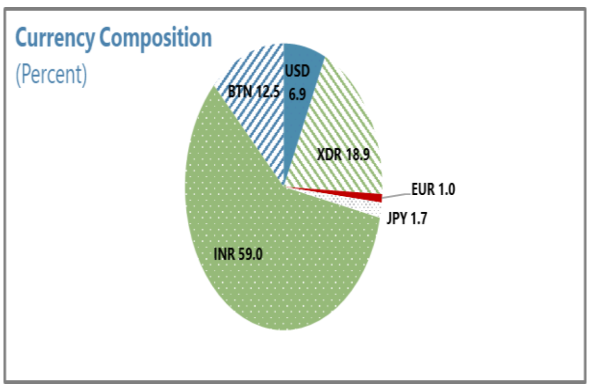
PUBLIC DEBT PORTFOLIO

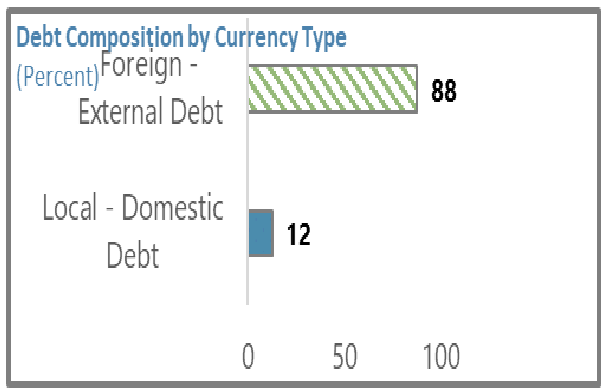
1. The total public and publicly guaranteed (PPG) debt stock as of 30 June 2022 stood at Nu. 257,519.952 million. The debt stock comprises external debt of Nu. 229,458.685 million and domestic debt of Nu. 28,061.267 million. Scaled by GDP estimate for FY 2021-22, the total public debt stood at 125.2%.

2. Total external debt is categorized into hydro and non-hydro debt. The hydropower debt stood at Nu. 163,043.913 million, constituting 71.1% of total external debt and 79.3% of FY 2021-22 GDP. The non-hydro debt stood at Nu. 66,414.772 million, constituting 28.9% of total external debt and 32.3% of GDP. Furthermore, it is also segregated into INR and CC debt.

3. With the inclusion of non-guarantee SOEs debt, the domestic debt is increased by 14.7% amounting to Nu. 32,895.567 million, thus, resulting total public debt of Nu. 263,255.778 million accounting 14.7% of estimated GDP.

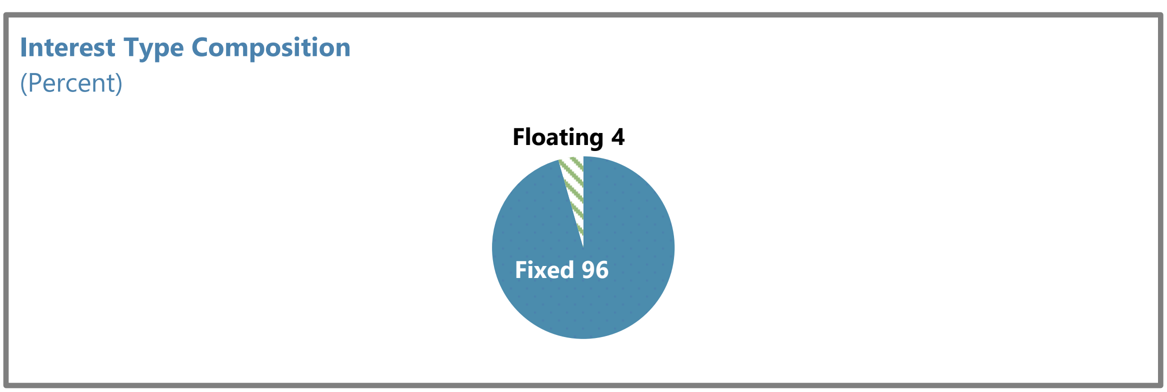
4. Public Debt by Currency Composition and its Currency type





Most of the public debt is denominated in Indian Rupee (59%), followed by denomination in SDR (18.9%), local currency BTN (12.5%), USD (6.9%), JPY (1.7%) and EUR (1%) respectively. Further, 88% is denominated in foreign currency debt and 12% in domestic debt.

5. Interest type: About 96% of the total debt is in fixed rate and remaining balance is variable debt.



6. As of 30 June 2022, the government guaranteed outstanding loan stood at Nu. 5,025.876 million, accounting for 2.4% of estimated GDP. This included the sovereign guarantee of Nu. 561.320 million provided for credits sanctioned under the National Credit Guarantee Scheme (NCGS). The sovereign guarantee was within the threshold of 5% of GDP prescribed by Public Debt Policy 2016.

CONTEXT AND RECENT DEVELOPMENT

1. The pandemic has had a significant impact on the economy, reverting pre-pandemic gains in growth and poverty reduction. Prior to the pandemic, Bhutan had made substantial strides in improving per capita income and reducing poverty, gearing towards its smooth transition and graduation from the Least Developed Country (LDC) status in 2023. Going forward, along with the major transformation, Bhutan faces the persistent challenges of diversifying its economy and building back better from the adverse impact of the COVID-19 pandemic.

- **Economic Performance:** The economy grew at 4.1 percent in 2021, an increase of 14.1 percentage points compared to a decline of -10.0 percent in 2020 supported by expansionary fiscal policy, monetary support and progressive relaxation of pandemic containment measures. All the sectors exhibited a robust growth due to strong domestic demand and in tandem with the global economic recovery. Industrial output grew by 1.9 percent after an all-time low of -12.9 percent in 2020. With the gradual easing of mobility restrictions and resumption of economic activities, the service sector recorded a positive growth of 6.3 percent in 2021. Agriculture growth decelerated to 2.1 percent in 2021 compared to 4.6 percent in 2020 attributable to reduced production in livestock and forestry sector.

2. This section describes the underlying assumptions used for the projection of key macro-fiscal indicators for the DSA. The projections are based on the 2nd quarter update for the FY 2022-23, which was endorsed by the Macroeconomic Framework Coordination Committee (MFCC).

- **Real Sector:** The economy is projected to grow by 4.5 percent in 2022 supported by expansionary fiscal policy, and accommodative monetary policy. With the resumption of economic activities, the industry sector is estimated to grow at 4.1 percent in 2022, an increase of 2.1 percentage points from 2021. With the revival in retail trade, hotels and restaurants, and other domestic businesses, the service sector is estimated to grow by 4.7 percent in 2022, contributing around 45.0 percent to the GDP. The resumption of tourism in September 2022 is also anticipated to spur growth in the services industry. Agriculture sector is projected to maintain a steady growth of 2.4 percent.

  Economic growth will follow a positive trajectory over the medium-term period supported by commissioning of various hydropower projects; Nikachhu hydro power (expected for

December 2023), PHPA-ll (expected for December 2024) and PHPA-I (expected January 2028). With the tourism sector on its path to recovery, both international and regional arrivals is expected to increase contributing positively to the economic growth. With this, the economy is estimated to grow at 4.5 percent in 2023 and on average sustain a growth rate of 5.2 percent over the next five years.

- **Inflation:** Overall inflation for FY 2021-22 was recorded at 5.9 percent, a decrease of 2.3 percentage point compared to the last FY. The decline is attributable to slowdown in food inflation (primarily vegetables and meat) as price were regulated by the concerned authority, and also due to rationalization of customs duties for the imports from COTI. Under the baseline scenario, inflation for the FY 2022-23 is estimated at 4.4 percent and 3.9 percent in the next FY. Inflation is expected to decelerate gradually as global commodity prices moderate and slower currency depreciation eases imported inflation. However, as 80 percent of Bhutan's import is associated with India, any inflationary pressure in India is expected to transmit to domestic inflation though with a time lag. Thus, estimates of inflation remains highly uncertain and volatile.

- **Fiscal sector:** The domestic revenue will grow gradually over the medium-term period on account of broad-based improvement in all the sources. The revision of sales tax and customs duty on number of commodities and implementation of new Property Tax Act 2022 is estimated to bring in more tax revenue. Additionally, with the revival of tourism sector, the receipts from its allied sectors are estimated to return to pre-pandemic level thereby increasing the overall revenue. While the growth in external grants is estimated to be around 6 percent for the next five years and expected to decline gradually with the graduation of Bhutan from an LDC status.

  Overall expenditure will also be on a rise to support various economic activities underpinned by persistent rise of inflationary pressure owing to supply chain disruption and higher commodity prices. Fiscal deficit will remain elevated as resource mobilization will be much lower compared to increased spending requirements. Therefore, to contain the fiscal path on a more sustainable level, fiscal consolidation measures are being pursued.

- **External sector:** With the resumption of economic activities, trade flows picked up surpassing the pre-pandemic level. However, the increase in imports was much high than the growth in exports leading to a huge trade deficit. With this, the current account balance (CAB) widened significantly from -11.9 percent of the GDP to -33.4 percent in the FY 2021-22.

  In the medium term, the balance of payment situation is expected to worsen as CAB remains elevated and export promotion/import substitution measures takes time to materialize. Further, the net financial inflows which are used to finance the current account deficits over the period has been decreasing due to limited inflows of grants and loans for new investments besides budgetary grants. As such, these external vulnerabilities could lead to further depletion of gross international reserves.

- **Monetary Sector:** The monetary and credit situation remained favorable supported by accommodative monetary and expansionary fiscal policies. With the relaxation of various prudential regulations in-terms of extension of loan tenure, enhancement of Loan-to-Value (LTV) and reduction of Loan-to-Income (LTI), the domestic credit witnessed a growth of 8.6 percent in the FY 2021-22 from 6.5 percent in the FY 2020-23. Going forward, domestic credit is projected to grow steadily in tandem with economic growth and supportive monetary measures.

  The claims of the private sector which form the majority of money supply will witness a positive growth over the medium-term. Since the construction sector is booming with the ease of labour import restriction, it has led to higher demand for private credit. Additionally, to promote homeownership, housing affordability and availability, the central bank has increased loan repayment tenure to 30 years from 20 years. These combined factors will lead to credit growth.

- **Main risks for macroeconomic outlook:** As the global growth slows down with growth forecast further downgraded by the IMF and WB, downside risks to growth in Bhutan are heightened. Many countries are facing the impact of central bank rate hikes, no signs of geopolitical conflict receding and the world's major economic engines sputter. In addition, considering the structural imbalance within the economy, risks to economic growth and recovery could emanate from both external and domestic developments. Besides the broad macroeconomic challenges such as economic diversification, vulnerabilities from climate change and unemployment, some of the possible risks and challenges to economic recovery based on the current update are listed below:

  a. Widening current account deficit will put further strain on the overall reserves of the economy. As the economy returned to normalcy with the relaxation of pandemic containment measures, economic activities including public infrastructure as well as hydropower projects resumed resulting in significant imports. The growth in imports was much stronger than that of exports, leading to a marked deterioration of the trade balance and the CAB.

     As the financial inflows are not adequate to meet the current account deficit, the negative balance of payments will lead to depletion of overall reserve assets posing risk to the constitutional mandate of meeting 12 months of essential imports. The macroeconomic imbalance emanating from the external sector is likely to spillover to other sectors of the economy eventually impacting growth prospects.

b. The rising geopolitical tension will aggravate the already existing inflationary pressure. Against the already turbulent backdrop of global inflationary pressures following the COVID-19 pandemic, the war between Russia and Ukraine has exacerbated supply chain disruptions leading to a spike in commodity prices and broadening price pressures. The geopolitical conflict is likely to have a prolonged impact especially on food and energy prices leading to demand-supply imbalances.

   With the war-induced commodity price increase, the impact will be felt mostly through higher cost-push inflation weighing on all the economic sectors including households, businesses and government. As an import-dependent economy, higher energy and food prices will increase the import prices resulting in an increase in prices of domestic production. Therefore, surge in prices combined with low growth and high unemployment may lead to stagflation crippling the economy.

COUNTRY CLASSIFICATION AND SCENARIO STRESS TESTS WITH DEBT INDICATOR THRESHOLDS

1. The LIC DSF classifies a country's debt carrying capacity into three categories – Weak, Medium and Strong based on the CI score. The CI "captures the impact of different factors through a weighted average of the World Bank's CPIA score, the country's real GDP growth, remittances, international reserves and world growth".

2. As per the World Bank communication to the MoF in October 2022, Bhutan's debt carrying capacity for 2021 was classified as "STRONG". As such, following debt stock and debt servicing thresholds were applied for external DSA in current DSA. The benchmark for the public debt – PPG external debt plus PPG domestic debt for the country with strong debt carrying capacity is 70 per cent (PV of total public debt in percent of GDP).

Table 2: Applicable Thresholds

Debt Carrying Capacity	Strong		
Final	Classification based on current vintage	Classification based on the previous vintage	Classification based on the two previous vintage
Strong	Strong 3.06	Strong 3.07	Strong 3.08
EXTERNAL debt burden thresholds	**Weak**	**Medium**	**Strong**
PV of debt in % of			
Exports	140	180	240
GDP	30	40	55
Debt service in % of			
Exports	10	15	21
Revenue	14	18	23
TOTAL public debt benchmark			
PV of total public debt in percent of GDP	35	55	70

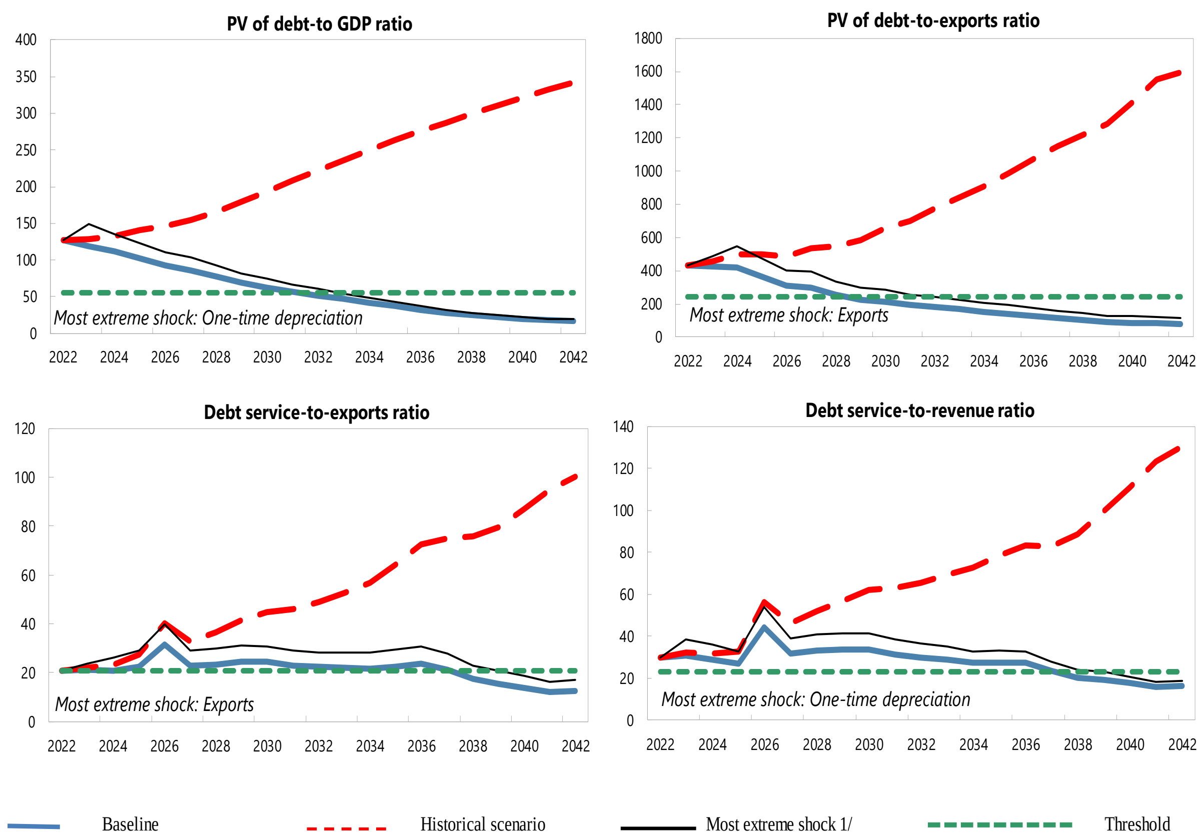
3. Stress tests are useful tools applied in the DSA to gauge the sensitivity of the debt burden indicators with respect to changes in assumptions used in the present DSA. The following six standardized stress test outlined in the LIC DSF were applied:

- **i.** **Real GDP:** Set to historical average minus one standard deviation, or baseline projection one minus standard deviation, whichever is lower for the second and third years of the projection period.
- **ii.** **Primary balance:** Primary balance-to-GDP ratio set to its historical average minus one standard deviation, or baseline projection minus one standard deviation, whichever is lower in the second and third year of the projection period.
- **iii.** **Exports:** Nominal export growth (in USD) set to its historical average minus one standard deviation, or the baseline projection minus one standard deviation, which ever is lower in the second and third year of the projection period.
- **iv.** **Other flows:** Current transfer-to-GDP and FDI-to-GDP ratios set to their historical average minus one standard deviation, or baseline projection minus one standard deviation, whichever is lower in the second and third years of the projection period.
- **v.** **Depreciation:** One-time 30 percent nominal depreciation of the domestic currency in the second year of the projection period, or the size needed to close the estimated real exchange rate overvaluation gap, whichever is larger.
- **vi.** **Combination of i – v:** Apply all individual shock (i through v) at half of the magnitude.

ASSESSMENT OF RISK RATING AND RESULT

1. **External DSA:** The external DSA charts presents the evolution of Bhutan's external debt under four different debt indicators. All charts depict breach in their indicative debt thresholds under both baseline and stress test as presented below:

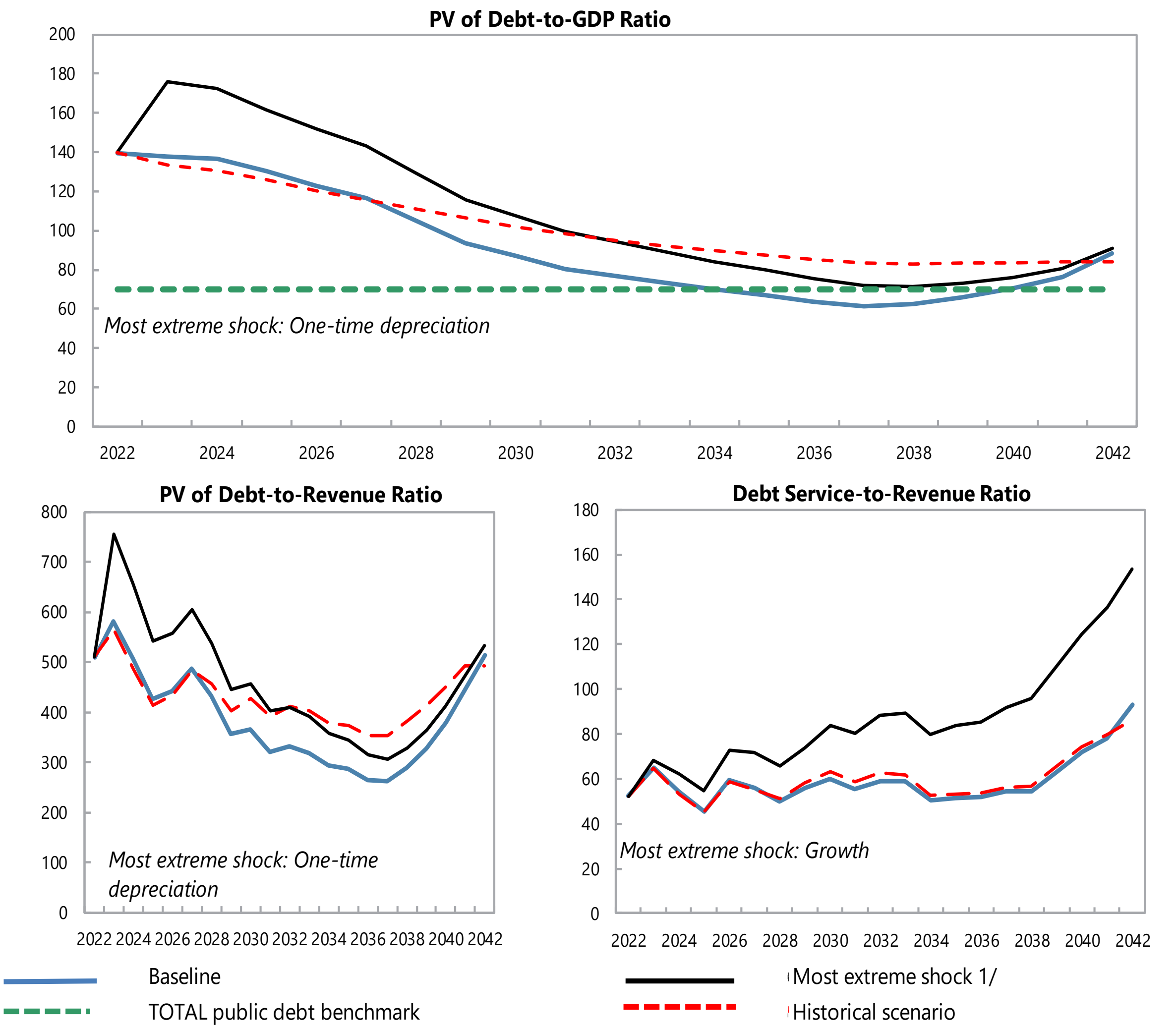
Figure 1. Bhutan: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2022-2042



2. As resonated by the latest Article IV DSA, prepared jointly by the IMF and World Bank in 2022, all graphs depict under the stress tests show that the Bhutan's external debt is vulnerable to exchange rate and export shocks. At the current level of external debt and projected external borrowings, the PV of external debt-to-GDP ratio is projected to fall to the threshold level by FY2032-33, and remain below the threshold level thereafter it. Similarly, the PV of debt-to-exports ratio could come below the threshold level by FY2031-32, ahead of earlier indicator. The other two flows indicators – debt service-to-revenue and export ratios, under the baseline scenario are expected to remain elevated and above the threshold for the foreseeable future.

3. **Public DSA:** The PV of public debt-to-GDP ratio also breaches the benchmark under both baseline and the stress test scenarios as presented in the chart below:

Figure 2. Bhutan: Indicators of Public Debt Under Alternative Scenarios, 2022-2042



4. As presented in the chart above, the PV of public debt-to-GDP ratio is projected to fall to the benchmark level of 70 percent by FY2033-34 under the baseline scenario. In tandem, under the extreme shock, the PV of public debt-to-GDP is projected to decline over the period going forward and fall below the benchmark level by FY2037-38.

5. **Final Risk Rating:** Despite the significant breaches in the baseline scenario for all indicators, a judgement is applied to arrive at the final ratings of ***moderate risk of external and overall debt distress*** owing to following reasons:

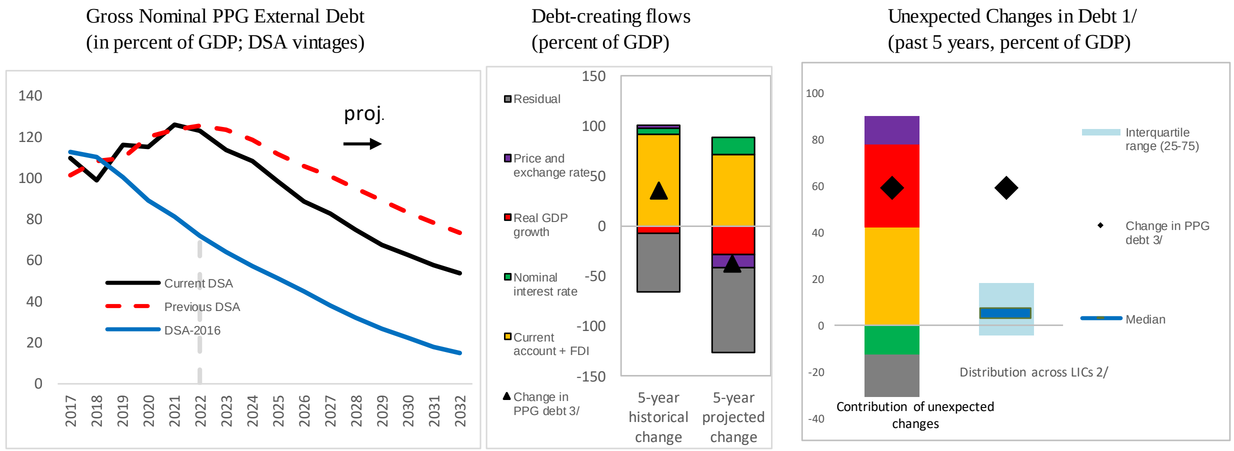
- Most external debt is on account of hydropower projects which are deemed commercially viable, with a ready export market in India. These loans are governed by an intergovernmental agreement in which India commits to provide financing and to buy all excess electricity. In addition, more that 95 percent of the hydro debt is denominated in INR, which does not pose any exchange rate risks as Ngultrum is pegged at par with INR.
- Hydropower debt carries low risk as debt servicing for hydropower loans from the India starts only a year after the commissioning of the project. This ensures revenue inflow before debt servicing starts, thus mitigating liquidity risk. And so, debt sustainability is not jeopardized in case of project delays.
- The electricity export tariff is fixed based on the total cost of the projects plus some margin. It is set by considering the overall cost of the project, including the projected debt servicing cost and a profit margin. This implies that the revenue from the sale of electricity would provide adequate funding for debt servicing. Moreover, such tariff rates are revised every three years to incorporate changes in costs.
- Hydropower projects are insured and reinsured against natural risks. So, the only remaining uninsured risk is hydrological (that is, if there is no enough water to produce electricity).
- While the majority of domestic debt (mostly T-Bills) would be maturing within one year, the refinancing risks is low due to current liquidity position in financial institutions- the main investors of T-Bills.
- Almost 98 percent of public debt is fixed rate debt. Similarly, all those external debts of CC denominated debt are concessional loans with nominal interest rates (from 0% to 1.5%), long grace periods (8 to 10 years), and repayment periods up to 40 years. The concessional nature of the CC-denominated debt has ensured that the impact of debt servicing on the government’s cash flow and the forex reserve is spread over a long period, thus mitigating the liquidity risks.
- One-time extreme shock of 30 percent depreciation in terms of domestic currency denominated is distorting the analysis. Since most debt is hydropower debt in INR which is pegged with the BTN and converting it to USD for DSA simulation and further shock imposition is making analysis challenging.

ANNEXURE 1: OUTPUT CHARTS FROM REALISM TOOLS

1. **Driver of External Debt Dynamics:** Following charts depicts the main drivers of external debt dynamics

Figure 3. Bhutan: Drivers of Debt Dynamics - Baseline Scenario

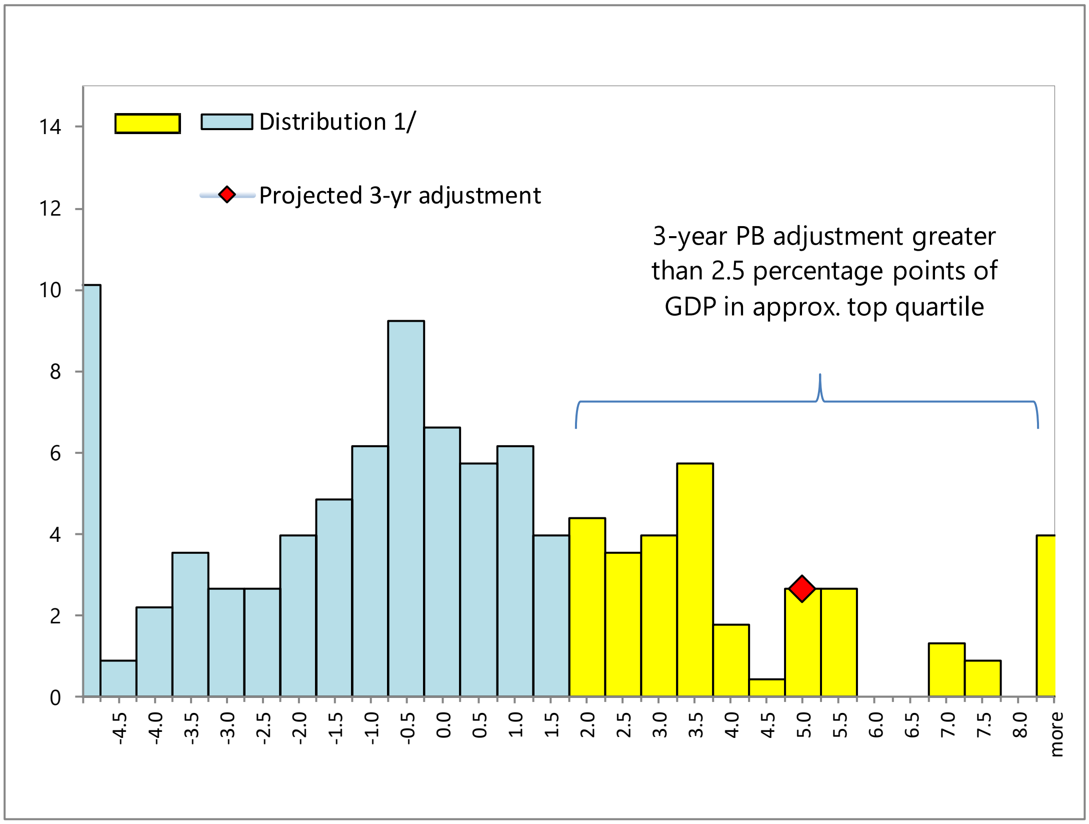
External debt



- In 2022, both the current DSA and previous DSA depicts external debt to GDP hovering around 121percent with marginal differences where current DSA showing little uptick as compared to previous DSA. However, the DSA of 2016 had a much lower debt compared to current and previous DSA this is because during the 2016 DSA, there was less inclusion of pipeline new disbursement, meaning no much of new projects considered for future disbursement. At the same time, in the current and previous DSA there are latest updates in pipeline borrowings. All in all, going forward, all are showing a downward debt trajectory.
- Both the past 5 years and projected years presents the main driver of the external debt is associated with the current account and FDI. This directly explains Bhutan being import-driven country, any major economic activities take up could translate into imports and directly or indirectly, worsen external account of the balance of payments.
- On the contrary, the residual part in both past and projected years supports to improve the debt creation through on-lending mechanism and its net lending effects associated with the public corporations with high recovery inflows. At the same time, for the projected years, the real GDP growth is contributing to lowering of the debt-to-GDP ratio.
- Since Bhutan’s economy is vulnerable to currency depreciation and export shocks, we could foresee unexpected change in debt stemming out of it. Similarly, nominal interest rate and current account will be other drivers for such unexpected growth contribution in future debt path.
- As compared to other LICs, Bhutan is much away from the 75-percentile change, meaning highest change in debt trajectory from initial projections.

2. **Realism of Planned Fiscal Adjustment**: The chart below shows the country's 3-year primary balance adjustment, compared to other low-income countries in the sample:

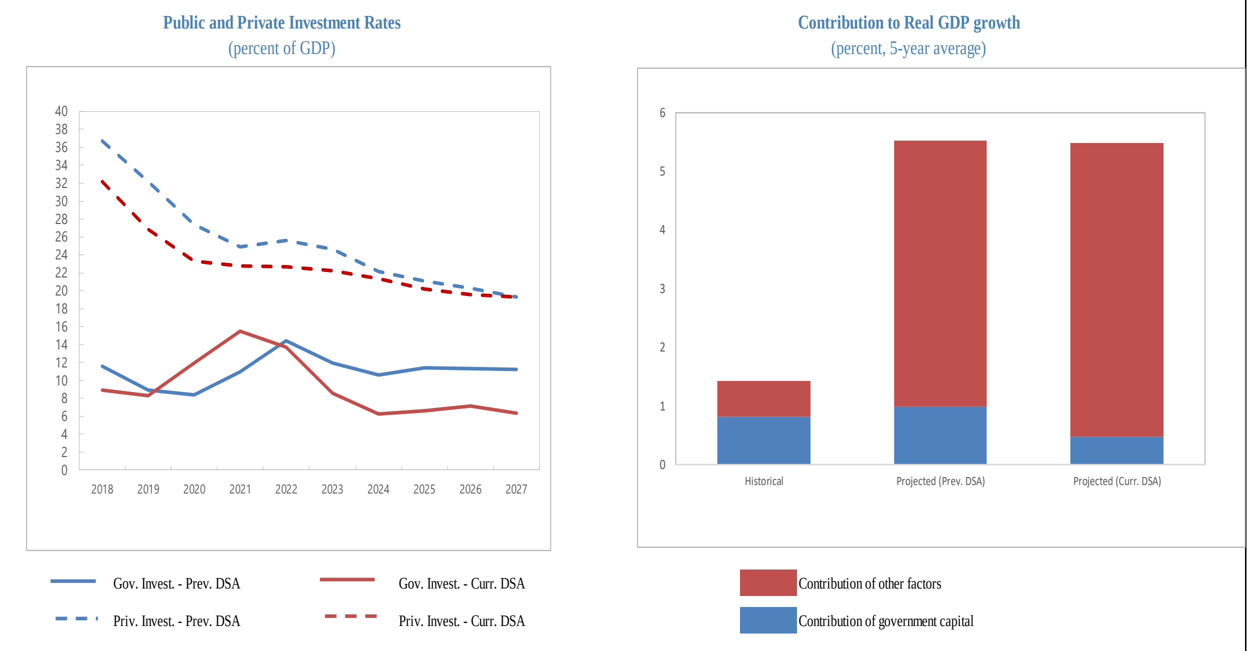
Figure 4: 3-Year Adjustment in Primary Balance (% GDP)



- The primary balance, as a percent of GDP, is expected to improve by 2.5 percentage points by 2023-24 compared to the primary balance in FY2021-22. Such a significant adjustment of 2.5 percentage point in upper quartile of distribution is a very large adjustment. With the end of 12 FYP in FY2022-23 and after the commencement of 13 FYP, in the beginning, beside spill over activities, new capital activities will be very limited, contributing to an improvement in primary balance. In tandem, the nominal GDP is projected to grow with the continuous concerted efforts from the government to build back better as recovery mechanism from adverse effect of Covid-19. Furthermore, two hydropower projects – Nikachhu (Dec 2023) and Puna II (Dec 24) are expected to be commission before end of December 2024 with the drastic increase in electricity generation and exports, thus, resulting acceptable primary balance adjustment thanks to higher royalties and dividends paid to the government.

3. **Public Investment-Growth Relationship**

Figure 5: Public Investment Growth Relationship



- Under both the DSAs – in previous DSA & current DSA, the private investment is dominating than government investment.
- With respective to the private investment, the previous DSA is showing marginally higher than current DSA and reaching to same level in 2027 hovering around 20 percent of GDP.
- Similarly, the government investment for current DSA is lower than previous DSA owing to outbreak of Covid-19 where capital activities could not pursue as planned.
- Historically, contribution from government investment is much higher than private investment.
- However, when compared between projection of previous and current DSA contribution, both presents a small contribution of government investment to growth.

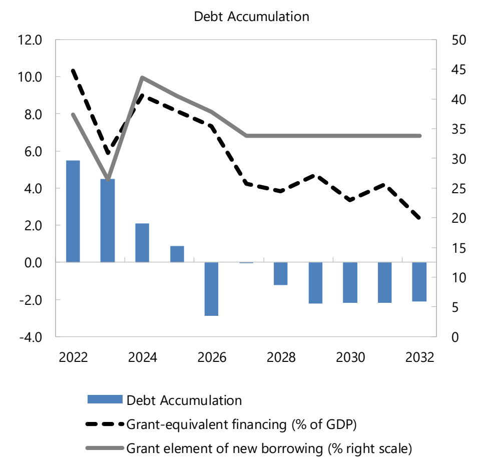
ANNEXURE II: BASELINE AND SENSITIVITY ANALYSIS SCENARIO TABLES

Table 1. Bhutan: External Debt Sustainability Framework, Baseline Scenario, 2019-2042

(In percent of GDP, unless otherwise indicated)

	Actual	Projections								Average 8/	
	2021	2022	2023	2024	2025	2026	2027	2032	2042	Historical	Projections
External debt (nominal) 1/	126.2	123.0	113.8	108.3	98.5	88.6	82.7	53.5	25.4	103.5	84.6
of which: public and publicly guaranteed (PPG)	126.2	123.0	113.8	108.3	98.5	88.6	82.7	53.5	25.4	101.4	84.6
Change in external debt	9.3	-3.2	-9.2	-5.5	-9.8	-9.9	-5.9	-4.0	-0.2		
Identified net debt-creating flows	32.3	28.1	15.8	9.4	3.9	3.1	5.9	-1.1	0.5	19.3	5.2
Non-interest current account deficit	31.5	30.7	17.4	12.4	7.6	4.6	6.0	-2.3	-0.6	21.4	6.4
Deficit in balance of goods and services	31.1	33.2	18.6	14.8	11.3	8.8	8.9	1.3	1.5	22.1	9.7
Exports	30.6	29.3	28.1	26.8	28.2	30.2	29.0	28.8	21.4		
Imports	61.8	62.6	46.7	41.6	39.6	39.0	37.9	30.1	22.9		
Net current transfers (negative = inflow)	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.2	-0.2	-0.2	-0.3
of which: official	-1.8	-2.2	-1.1	-1.6	-1.6	-1.6	-0.7	-0.4	-0.1		
Other current account flows (negative = net inflow)	0.7	-2.2	-0.9	-2.1	-3.4	-4.0	-2.7	-3.4	-1.8	-0.5	-3.0
Net FDI (negative = inflow)	0.0	0.0	0.0	-0.3	-0.3	-0.2	-0.2	-0.1	-0.1	-0.2	-0.2
Endogenous debt dynamics 2/	0.8	-2.7	-1.6	-2.7	-3.5	-1.2	0.1	1.4	1.1		
Contribution from nominal interest rate	1.4	3.3	3.2	3.1	3.5	3.9	3.6	3.4	1.1		
Contribution from real GDP growth	-5.3	-6.0	-4.8	-5.8	-7.0	-5.1	-3.5	-2.0	0.0		
Contribution from price and exchange rate changes	4.7	...	...	...	...	...	...	...	...		
Residual 3/	-22.9	-31.3	-24.9	-15.0	-13.7	-13.1	-11.8	-2.9	-0.8	-14.1	-11.8
of which: exceptional financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Sustainability indicators											
PV of PPG external debt-to-GDP ratio	126.3	126.9	119.3	112.5	102.8	92.5	86.3	51.8	17.4		
PV of PPG external debt-to-exports ratio	412.1	432.9	424.3	419.8	364.0	306.9	298.0	180.2	81.1		
PPG debt service-to-exports ratio	11.3	20.7	21.1	20.9	22.6	31.4	22.8	22.3	12.4		
PPG debt service-to-revenue ratio	15.7	30.0	30.7	28.8	27.0	44.1	31.9	29.8	16.1		
Gross external financing need (Million of U.S. dollars)	860.0	940.2	655.0	539.2	461.0	499.8	478.8	220.3	190.6		
Key macroeconomic assumptions											
Real GDP growth (in percent)	4.5	4.9	4.3	5.5	7.1	5.6	4.2	3.6	0.0	3.5	5.3
GDP deflator in US dollar terms (change in percent)	-3.8	-1.0	5.6	2.3	3.0	2.3	2.9	2.0	0.0	1.1	2.3
Effective interest rate (percent) 4/	1.2	2.7	2.8	3.0	3.6	4.2	4.3	6.2	4.5	2.2	4.5
Growth of exports of G&S (US dollar terms, in percent)	2.7	-0.7	5.6	2.9	16.2	15.3	2.9	2.2	0.0	1.9	7.2
Growth of imports of G&S (US dollar terms, in percent)	49.4	5.2	-17.8	-3.7	4.8	6.4	4.2	4.1	0.0	4.6	1.1
Grant element of new public sector borrowing (in percent)	...	37.4	26.4	43.6	40.5	37.8	33.8	33.8	33.8	...	35.3
Government revenues (excluding grants, in percent of GDP)	22.0	20.3	19.3	19.5	23.6	21.5	20.7	21.5	16.5	21.6	21.2
Aid flows (in Million of US dollars) 5/	180.2	331.1	203.1	308.6	308.6	294.5	194.0	159.5	130.9		
Grant-equivalent financing (in percent of GDP) 6/	...	10.3	5.9	9.0	8.1	7.3	4.2	2.3	1.1	...	5.8
Grant-equivalent financing (in percent of external financing) 6/	...	65.6	58.4	82.8	80.9	79.9	67.5	62.1	56.1	...	70.8
Nominal GDP (Million of US dollars)	2,460	2,554	2,813	3,036	3,349	3,616	3,877	5,564	9,411		
Nominal dollar GDP growth	0.5	3.8	10.1	7.9	10.3	8.0	7.2	5.7	0.0	4.6	7.7
Memorandum items:											
PV of external debt 7/	126.3	126.9	119.3	112.5	102.8	92.5	86.3	51.8	17.4		
In percent of exports	412.1	432.9	424.3	419.8	364.0	306.9	298.0	180.2	81.1		
Total external debt service-to-exports ratio	11.3	20.7	21.1	20.9	22.6	31.4	22.8	22.3	12.4		
PV of PPG external debt (in Million of US dollars)	3106.7	3242.0	3356.5	3415.8	3442.8	3346.1	3344.7	2882.4	1636.7		
(PVt-PVt-1)/GDPt-1 (in percent)		5.5	4.5	2.1	0.9	-2.9	0.0	-2.1	-0.7		
Non-interest current account deficit that stabilizes debt ratio	22.2	34.0	26.5	18.0	17.4	14.5	11.9	1.7	-0.3		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**Yes**



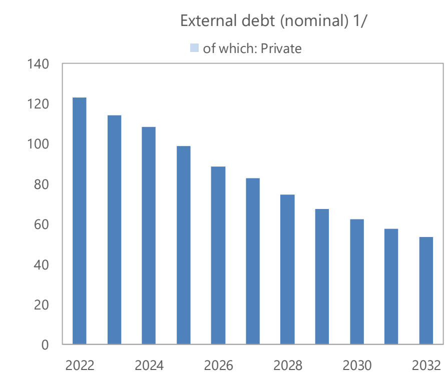


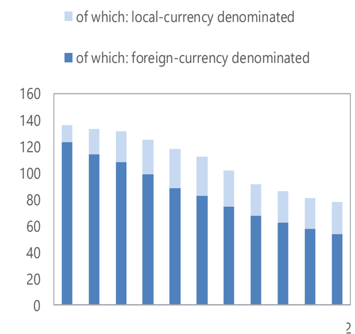
Table 2. Bhutan: Public Sector Debt Sustainability Framework, Baseline Scenario, 2019-2042

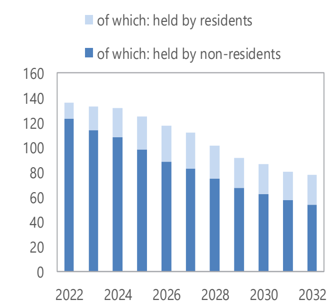
(In percent of GDP, unless otherwise indicated)

	Actual							Projections			
	2021	2022	2023	2024	2025	2026	2027	2032	2042	Historical	Projections
Public sector debt 1/	133.0	136.1	133.2	131.6	124.8	117.8	112.0	77.9	96.1	102.5	108.5
of which: external debt	126.2	123.0	113.8	108.3	98.5	88.6	82.7	53.5	25.4	101.4	84.6
Change in public sector debt	15.6	3.1	-2.8	-1.7	-6.8	-7.0	-5.9	-2.6	12.3		
Identified debt-creating flows	11.4	-1.8	0.2	-3.5	-5.6	-6.6	-5.0	-2.6	12.3	-0.3	-5.1
Primary deficit	8.1	10.3	6.8	3.2	2.9	-0.6	-0.6	-0.3	7.8	2.2	1.0
Revenue and grants	29.3	27.4	23.7	27.0	30.5	27.7	23.9	23.1	17.1	30.8	25.7
of which: grants	7.3	7.1	4.4	7.5	6.8	6.2	3.2	1.6	0.6		
Primary (noninterest) expenditure	37.4	37.7	30.5	30.2	33.4	27.1	23.3	22.8	25.0	33.0	26.7
Automatic debt dynamics	5.3	-10.9	-6.0	-5.3	-6.4	-3.5	-1.9	0.1	4.4		
Contribution from interest rate/growth differential	-8.0	-10.9	-6.0	-5.3	-6.4	-3.5	-1.9	0.1	4.4		
of which: contribution from average real interest rate	-2.9	-4.6	-0.4	1.7	2.3	3.1	2.8	2.9	4.4		
of which: contribution from real GDP growth	-5.1	-6.3	-5.6	-7.0	-8.7	-6.6	-4.7	-2.8	0.0		
Contribution from real exchange rate depreciation	13.3	...	...	...	...	...	...	...	...		
Other identified debt-creating flows	-2.0	-1.3	-0.6	-1.4	-2.1	-2.6	-2.5	-2.4	0.0	-0.2	-2.2
Privatization receipts (negative)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Recognition of contingent liabilities (e.g., bank recapitalization)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Debt relief (HIPC and other)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other debt creating or reducing flow (please specify)	-2.0	-1.3	-0.6	-1.4	-2.1	-2.6	-2.5	-2.4	0.0		
Residual	4.1	4.9	-3.1	1.8	-1.1	-0.4	-0.9	-0.1	0.0	6.1	0.1
Sustainability indicators											
PV of public debt-to-GDP ratio 2/	137.6	139.7	137.6	136.8	130.1	122.6	116.4	76.7	88.2		
PV of public debt-to-revenue and grants ratio	469.4	510.1	581.8	506.3	427.0	442.8	486.8	331.4	514.5		
Debt service-to-revenue and grants ratio 3/	12.3	52.3	64.7	54.2	45.3	59.4	55.7	59.1	93.2		
Gross financing need 4/	9.8	23.4	21.5	16.4	14.6	13.3	10.2	11.0	23.8		
Key macroeconomic and fiscal assumptions											
Real GDP growth (in percent)	4.5	4.9	4.3	5.5	7.1	5.6	4.2	3.6	0.0	3.5	5.3
Average nominal interest rate on external debt (in percent)	1.2	2.8	2.8	2.9	3.6	4.3	4.4	6.2	4.5	2.0	4.5
Average real interest rate on domestic debt (in percent)	8.4	2.4	3.5	4.5	2.9	3.8	2.9	2.5	5.6	141.9	3.0
Real exchange rate depreciation (in percent, + indicates depreciation)	12.4	...	...	...	...	...	...	...	...	0.7	...
Inflation rate (GDP deflator, in percent)	-1.7	5.9	4.4	2.3	3.8	3.0	3.7	4.0	0.0	5.4	3.9
Growth of real primary spending (deflated by GDP deflator, in percent)	-0.3	5.7	-15.7	4.6	18.4	-14.2	-10.6	4.7	0.0	3.8	1.2
Primary deficit that stabilizes the debt-to-GDP ratio 5/	-7.4	7.3	9.7	4.8	9.7	6.4	5.2	2.3	-4.4	-5.8	6.0
PV of contingent liabilities (not included in public sector debt)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**Yes**

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.

Table 3. Bhutan: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2022-2032

(In percent)

	Projections 1/										
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
PV of debt-to GDP ratio											
Baseline	127	119	112	103	93	86	77	69	63	57	52
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2022-2032 2/	127	129	133	140	147	155	166	180	193	208	222
B. Bound Tests											
B1. Real GDP growth	127	128	131	120	108	101	90	81	73	66	61
B2. Primary balance	127	120	114	105	95	88	79	71	65	59	54
B3. Exports	127	124	122	112	101	95	85	76	70	64	58
B4. Other flows 3/	127	120	113	103	93	87	78	69	63	57	52
B5. Depreciation	127	149	135	123	111	103	92	82	74	67	61
B6. Combination of B1-B5	127	132	129	118	106	99	89	79	72	65	59
C. Tailored Tests											
C1. Combined contingent liabilities	127	121	115	105	95	89	80	72	66	60	55
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	127	119	112	103	93	86	77	69	63	57	52
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	55	55	55	55	55	55	55	55	55	55	55
PV of debt-to-exports ratio											
Baseline	433	424	420	364	307	298	255	225	214	191	180
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2022-2032 2/	433	458	496	496	486	535	547	587	657	699	773
B. Bound Tests											
B1. Real GDP growth	433	424	420	364	307	298	255	225	214	191	180
B2. Primary balance	433	427	427	371	314	305	261	231	222	200	189
B3. Exports	433	487	547	475	402	392	336	298	285	257	243
B4. Other flows 3/	433	425	422	366	309	300	257	226	215	193	182
B5. Depreciation	433	424	404	350	294	285	243	213	202	180	169
B6. Combination of B1-B5	433	465	417	409	345	335	286	252	240	214	202
C. Tailored Tests											
C1. Combined contingent liabilities	433	432	429	373	315	307	263	234	224	202	191
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	433	424	420	364	307	298	255	225	214	191	180
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	240	240	240	240	240	240	240	240	240	240	240
Debt service-to-exports ratio											
Baseline	21	21	21	23	31	23	23	25	24	23	22
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2022-2032 2/	21	22	23	27	40	33	37	42	45	46	49
B. Bound Tests											
B1. Real GDP growth	21	21	21	23	31	23	23	25	24	23	22
B2. Primary balance	21	21	21	23	32	23	24	25	25	23	23
B3. Exports	21	24	26	29	40	29	30	31	31	29	28
B4. Other flows 3/	21	21	21	23	31	23	24	25	24	23	22
B5. Depreciation	21	21	21	22	31	22	23	24	24	22	22
B6. Combination of B1-B5	21	23	24	25	35	26	26	28	28	26	25
C. Tailored Tests											
C1. Combined contingent liabilities	21	21	21	23	32	23	24	25	25	23	23
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	21	21	21	23	31	23	23	25	24	23	22
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	21	21	21	21	21	21	21	21	21	21	21
Debt service-to-revenue ratio											
Baseline	30	31	29	27	44	32	33	34	34	31	30
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2022-2032 2/	30	32	32	33	56	46	52	57	62	63	66
B. Bound Tests											
B1. Real GDP growth	30	33	34	32	52	37	39	39	39	37	35
B2. Primary balance	30	31	29	27	44	32	34	34	34	32	30
B3. Exports	30	31	30	29	46	34	35	36	35	33	32
B4. Other flows 3/	30	31	29	27	44	32	33	34	34	31	30
B5. Depreciation	30	38	36	33	54	39	41	41	41	38	36
B6. Combination of B1-B5	30	34	34	31	51	37	38	39	39	36	34
C. Tailored Tests											
C1. Combined contingent liabilities	30	31	29	27	45	32	34	34	34	32	30
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	30	31	29	27	44	32	33	34	34	31	30
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	23	23	23	23	23	23	23	23	23	23	23

Table 4. Bhutan: Sensitivity Analysis for Key Indicators of Public Debt , 2022-2032

	Projections 1/										
	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032
					PV of Debt-to-GDP Ratio						
Baseline	**140**	**138**	**137**	**130**	**123**	**116**	**105**	**94**	**87**	**80**	**77**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2022-2032 2/	**140**	**133**	**131**	**126**	**120**	**115**	**111**	**106**	**102**	**98**	**95**
B. Bound Tests											
B1. Real GDP growth	**140**	**149**	**164**	**160**	**154**	**150**	**140**	**129**	**124**	**119**	**117**
B2. Primary balance	**140**	**141**	**143**	**136**	**129**	**122**	**111**	**99**	**92**	**85**	**82**
B3. Exports	**140**	**140**	**144**	**136**	**129**	**122**	**111**	**99**	**93**	**86**	**82**
B4. Other flows 3/	**140**	**138**	**137**	**131**	**123**	**117**	**106**	**94**	**88**	**81**	**77**
B5. Depreciation	**140**	**176**	**173**	**162**	**152**	**143**	**129**	**116**	**108**	**99**	**94**
B6. Combination of B1-B5	**140**	**137**	**141**	**134**	**127**	**121**	**109**	**98**	**91**	**85**	**81**
C. Tailored Tests											
C1. Combined contingent liabilities	**140**	**146**	**145**	**138**	**130**	**124**	**112**	**100**	**93**	**86**	**83**
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	**140**	**140**	**142**	**138**	**134**	**130**	**121**	**113**	**110**	**106**	**105**
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TOTAL public debt benchmark	70	70	70	70	70	70	70	70	70	70	70
					PV of Debt-to-Revenue Ratio						
Baseline	510	582	506	427	443	487	433	356	366	321	331
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2022-2032 2/	510	565	485	413	435	484	456	402	427	391	411
B. Bound Tests											
B1. Real GDP growth	510	620	581	506	537	614	563	478	512	464	501
B2. Primary balance	510	596	531	447	465	511	455	376	388	341	352
B3. Exports	510	593	531	448	465	512	456	377	389	342	354
B4. Other flows 3/	510	583	509	429	445	489	435	358	368	323	334
B5. Depreciation	510	755	653	541	557	605	537	445	456	401	409
B6. Combination of B1-B5	510	582	520	439	456	503	449	371	383	337	349
C. Tailored Tests											
C1. Combined contingent liabilities	510	618	536	452	469	517	461	380	392	345	357
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	510	590	526	457	487	548	503	433	463	427	457
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
					Debt Service-to-Revenue Ratio						
Baseline	52	65	54	45	59	56	50	56	60	56	59
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2022-2032 2/	52	65	53	45	59	55	51	58	63	59	63
B. Bound Tests											
B1. Real GDP growth	52	68	62	55	73	72	66	74	84	80	88
B2. Primary balance	52	65	58	50	62	58	52	61	67	60	62
B3. Exports	52	65	55	46	60	57	51	57	61	56	60
B4. Other flows 3/	52	65	54	45	60	56	50	56	60	56	59
B5. Depreciation	52	66	60	52	72	68	62	67	73	69	74
B6. Combination of B1-B5	52	64	55	48	62	58	52	58	64	59	63
C. Tailored Tests											
C1. Combined contingent liabilities	52	65	64	49	62	58	52	66	67	60	62
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	52	65	56	50	67	65	59	66	76	75	81
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

***************** THANK YOU *****************