Debt Sustainability Analysis
Bangladesh

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Debt Management Branch
Treasury and Debt Management Wing
Finance Division
Ministry of Finance

Prepared by

Hasan Khaled Foisal, Joint Secretary
Mst Masuda Begum, Deputy Secretary
Farid Ahmed, Deputy Secretary

Debt Sustainability Analysis (DSA) is prepared based on the historical as well as the projected debt & macroeconomic data of a country.

Correspondence: hfoisal@finance.gov.bd

Telephone: +88 (02) 223355042

The document is also available on the internet at: www.mof.gov.bd

A H M Mustafa Kamal, FCA, MP
Minister
Ministry of Finance

Message

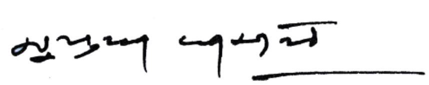
I am pleased to be informed that the Finance Division is publishing the Debt Sustainability Analysis (DSA) Report for Bangladesh. This comprehensive analysis is a pivotal step towards understanding and evaluating our nation's debt dynamics, fiscal health, and overall economic sustainability. The DSA report is not merely a compilation of figures and statistics rather it serves as a crucial tool that provides valuable insights into our country's debt profile, assesses potential risks, and assists in formulating policy recommendations to chart a path of fiscal resilience.

The macroeconomic overview presented in this report provides a comprehensive assessment of key economic indicators, including real Gross Domestic Product (GDP) growth rate, inflation rate, fiscal performance, and external trade dynamics. By understanding these fundamental aspects of our economy, we can make informed decisions and navigate the challenges that lie ahead. At the core of this analysis lies our commitment to ensuring the long-term sustainability of our national debt.

The Finance Division has collaborated closely with esteemed experts and institutions to produce this report, ensuring its accuracy and reliability. I extend my cordial appreciation to all those who have contributed to this critical endeavour.

I extend my gratitude to every stakeholder and institution whose relentless efforts have contributed to shaping our economic landscape. Together, we can build a resilient and prosperous nation, ensuring a brighter future for generations to come.

Joy Bangla, Joy Bangabandhu.
May Bangladesh Live Forever.



A H M Mustafa Kamal, FCA, MP

Dr. Md. Khairuzzaman Mozumder
Secretary
Finance Division
Ministry of Finance

Message

I am pleased to know that the Debt Management Wing has prepared the Debt Sustainability Analysis (DSA) of Bangladesh 2022. It is the first DSA report published by the Finance Division. This publication is not only a significant milestone in government debt management but also points to a growing capacity of the Ministry of Finance in the area.

The economy of Bangladesh is facing some headwinds since early 2020 with the onset of the COVID-19 pandemic. The government managed the impact of COVID-19 exceedingly well thanks to the visionary leadership of the Honourable Prime Minister. However, the war in Ukraine and the consequent supply-chain disruption & commodity price hike, among others, have caused some impact on the balance of payment situation in Bangladesh. The government has adopted several measures, *inter alia*, budgetary belt tightening and discouragement of non-essential imports to mitigate the situation. In addition, Finance Division is keeping a close watch on the actual movements of all debt indicators vis-à-vis their expected movements. We hope that the DSA would provide a glimpse into the debt situation of the country which in turn will enable us to plan for sustainable deficit financing going forward.

This DSA report is the result of a training workshop held in Dhaka by the International Monetary Fund and the Finance Division. The World Bank also extended support for the workshop. I deeply appreciate the continuing assistance of the Internation Monetary Fund & the World Bank in the capacity building of the FD. I also thank the IMF Dhaka Office for organizing the programme. Finally, my sincere appreciation to the officers of the Debt Management Branch for their hard work and timely preparation of an important analytical document. I hope this will continue in the future.

Dr. Md. Khairuzzaman Mozumder

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Abbreviations and Acronyms

ADB- Asian Development Bank

AIIB- Asian Infrastructure Investment Bank

BB- Bangladesh Bank

BBS- Bangladesh Bureau of Statistics

BDT-Bangladesh Taka

BGTB- Bangladesh Government Treasury Bond

CGA- Controller General of Accounts

DMFAS- Debt Management & Financial Analysis System

DSA- Debt Sustainability Analysis

ERD- Economic Relations Division

FD-Finance Division

GDP-Gross Domestic Product

GPF-General Provident Fund

IDA- International Development Association

IDB- Islamic Development Bank

IFAD- International Fund for Agricultural Development

IMF- International Monetary Fund

IRD- Internal Resources Division

LIC DSF- Debt Sustainability Framework for Low Income Countries

NSC- National Savings Certificate

NSD- Department of National Savings

PPG- Public and Publicly Guaranteed

SOE- State-Owned Enterprise

SPFMS- Strengthening Public Financial Management Program to Enable Service Delivery

SPTB- Special Purpose Treasury Bond

WB- World Bank

Bangladesh: Debt Sustainability Analysis

Risk of External Debt Distress	Low
Overall Risk of Debt Distress	Low
Granularity in the risk rating	Not applicable
Application of Judgment	No

Bangladesh remains at low risk of external and overall debt distress. External and overall debt indicators are lower than their respective thresholds under the baseline. As there was a huge difference between the datasets for exports in consecutive fiscal years (2019-20 & 2020-21), *i.e.*, owing to the negative growth (y-o-y) due to COVID-19 and big subsequent recovery, it had to be managed via a different approach. Subsequently, under a standard stress test, debt indicators stayed within their respective thresholds as well.

The PPG external debt-to-GDP ratio is on an increasing path and the overall public debt-to-GDP ratio is below the thresholds. Under these circumstances, financing the much-needed climate adaptive expenditure, as laid out in the 8th five-year plan (FYP) and Delta Plan, will be challenging unless financed with concessional or non-debt-creating flows (foreign direct investment). Improving the investment climate to attract FDI and raising the revenue-to-GDP ratio to boost social spending while limiting fiscal risks remain top priorities.

A) Introduction

The Debt Sustainability Analysis (DSA) report presented here aims to assess the debt dynamics and sustainability of Bangladesh. This analysis is based on the framework developed by the International Monetary Fund (IMF) and the World Bank specifically tailored for countries without external market access for government borrowing, known as the LIC-DSF template.

Bangladesh, with its growing economy and diverse demographic landscape, has made significant strides in recent years towards achieving sustainable development and poverty reduction. However, managing the country's debt and ensuring its long-term sustainability is of utmost importance to safeguard economic stability and further promote inclusive growth. This DSA report provides an in-depth examination of Bangladesh's debt profile, macroeconomic indicators, and associated risks, as well as policy implications for debt management.

B) Background

Total Public debt stock in Bangladesh was US$ 155.71 billion[1] at the end of FY22. The domestic and external debt stock constitute 60.73 per cent and 39.27 per cent, respectively, of the total public debt. If publicly guaranteed debt is taken into consideration, PPG stood at US$ 162.13 billion. Total debt servicing payment on PPG debt in FY2021-22 was US$24.84 billion, of which domestic debt servicing amounted to US$ 21.11 and external debt servicing amounted to US$3.73 billion.

Of the domestic debt stock, the banking sector constitutes 50 per cent of the total domestic debt in FY 22, followed by NSCs, 43 per cent, and the rest was financed from the GPF. 77 per cent of the banking sector financing is sourced from treasury bonds which reflects the government's preference for long-term instruments. Treasury bills are issued mostly for cash management purposes, and to create a balance between short- and long-term financing. The government has recently introduced Shariah-compliant Islamic Bond (Sukuk). It is expected that the ongoing reforms will help reduce the need for financing from the NSCs.

Table 1: Composition of Public Debt

Sources	At the end of 30 June 2019	At the end of 30 June 2020	At the end of 30 June 2021	At the end of 30 June 2022
Debt from Banking Sources	**2,101.6**	**2,902.9**	**3,342.5**	**4,196.3**
Treasury Bills	440.8	627.8	512.7	770.2
Treasury Bonds	1,660.9	2,275.1	2,749.8	3,246.0
Sukuk			80.0	180.0
Debt from Non-Bank Sources	**3,236.5**	**3,410.8**	**3,896.9**	**4,283.0**
Debt from National Savings Schemes	2,892.7	3,037.0	3,456.6	3,655.6
Others (GPF)	343.8	373.8	440.3	627.4
Domestic Debt	**5,338.1**	**6,313.7**	**7,239.4**	**8,479.3**
External Debt	**3,198.0**	**3,748.3**	**4,203.6**	**4,957.9**
Total Debt	**8,536.1**	**10,062.0**	**11,443.0**	**13,437.2**
GDP	***29,514.3***	***31,704.7***	***35,301.8***	***39,764.6***
Debt/GDP (%)	**28.92%**	**31.74%**	**32.41%**	**33.79%**
Domestic	18.09%	19.91%	20.51%	21.32%
External	10.84%	11.82%	11.91%	12.47%

[1] Domestic Debt has been converted into US Dollars for convenience. We have used the average USD-BDT exchange rate for the period 86.3.

Figure 1: Shares of the Outstanding Debt Stock

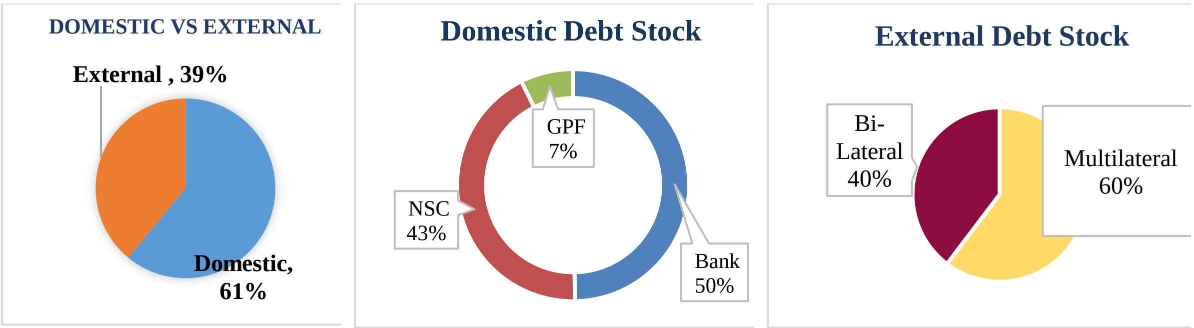
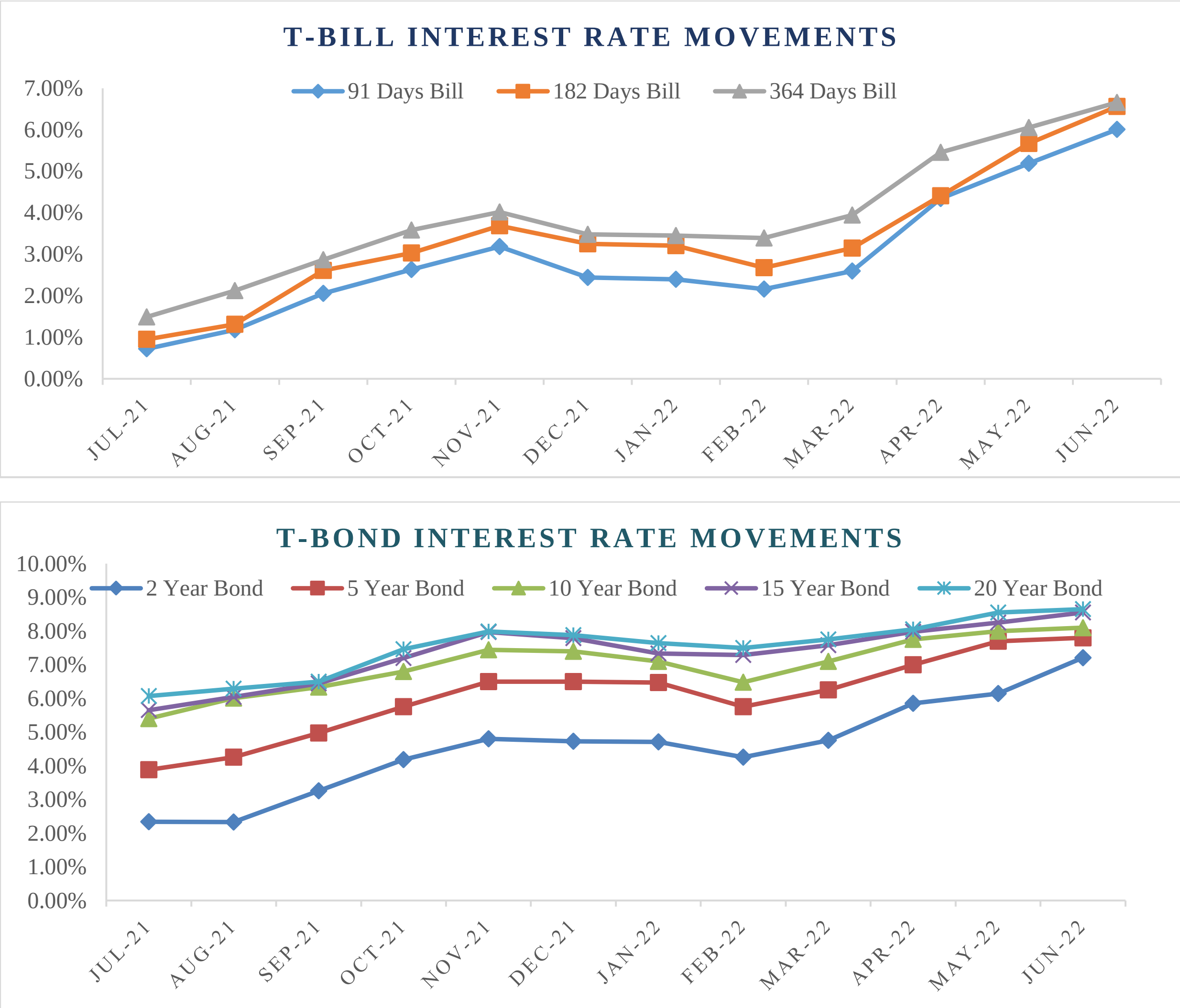


Table 2: NSC Interest Rates

Name of Schemes	Maturity Period	Previous Existing Int. Rate (%)	New interest rate (%) from 21 Sep 2021			Remarks
			1st slab	2nd slab	3rd slab	
5 years Bangladesh Sanchayapatra	5-Year	11.28	11.28	10.3	9.3	Note-1
3-Monthly Profit Basis Sanchayapatra	3-year	11.04	11.04	10	9	Note-1
Pensioner Sanchayapatra	5-Year	11.76	11.76	10.75	9.75	Note-1
Paribar Sanchayapatra	5-Year	11.52	11.52	10.5	9.5	Note-1
Post office Savings Bank- Ordinary A/C	-	7.5	7.5	7.5	7.5	Note-1
Post office Savings Bank- Fixed Deposit	3-Year	11.28	11.28	10.3	9.3	Note-1
Postal Life Insurance	5 Years	4.2	4.2	4.2	4.2	Note-1
Bangladesh Prize Bond	-	6.5	6.5	6.5	6.5	Note-1
Wage Earner Development Bond	5-Year	12	12	11	10	Note-2
US Dollar Premium Bond	3-Year	7.5	5.5	4.5	3.5	Note-3
US Dollar Investment Bond	3-Year	6.5	5	4	3	Note-3

Note-1 (In BDT): 1st slab: up to 1.5 million; 2nd slab: above 1.5 million to 3.0 million and 3rd slab: above 3.0 million;
Note-2 (In BDT): 1st slab: up to 1.5 million; 2nd slab: above 1.5 million to 3.0 million; 3rd slab: above 3.0 million to 5.0 million and 4th slab: above 5.0 million to 10 million (BDT).
Note-3 (In US$): 1st slab: up to 1 lac; 2nd slab: above 1 lac to 5 lac and 3rd slab: above 5 lacs.

Figure 2: T-bond & T-bill Rates



B. Debt Coverage

The DSA takes into account both domestic and external debt, encompassing not only the central government debt but also the debt guaranteed by the government for state-owned enterprises (SOEs). External debt of the private sector was also used in this analysis to assess the risk more precisely and accurately. The framework assumes a relatively stable ratio of guaranteed debt to GDP over the medium term. The debt data used in this study is based on currency as opposed to residency.

C. Macroeconomic and Financing Assumptions

Gross Domestic Product (GDP) Growth:

Bangladesh has witnessed steady and impressive GDP growth in recent years, contributing significantly to poverty reduction and overall economic development. Although the COVID-19 pandemic disrupted the trend in FY 2019-20, the country rebounded strongly with a sharp growth rate of 6.94 per cent in FY 2020-21, further accelerating to 7.10 per cent in FY 2021-22.

Looking ahead, Bangladesh's GDP growth is expected to continue its upward trajectory over the medium term. Factors such as easing inflationary pressure, improved external conditions, and successful implementation of economic reforms will remain important to drive this growth.

Inflation Rate:

In recent times, the economy experienced an upward trend in inflation due to various factors, including but not limited to the spillover effects of the Russia-Ukraine war and supply disruptions. Additionally, the devaluation of Bangladesh Taka (BDT) has contributed to these inflationary pressures. In FY22, 12 months average inflation rate was 6.15 per cent. However, the government and the Bangladesh Bank have implemented several policy interventions to address these issues, and as a result, inflation pressures are expected to ease in future.

Fiscal Performance:

Bangladesh's tax-GDP ratio is lower than its peers, even compared to countries in sub-Saharan Africa. However, the importance of adequate revenue collection is paramount as long as public investment is concerned. It also plays a critical role in keeping the country solvent and avoiding defaults which have a debilitating impact on the reputation and creditworthiness of the country. As a result, the government is planning to undertake initiatives aimed at improving revenue collection. These efforts include but are not limited to reforms in tax policy and revenue administration. The ambitious goal is to mobilize additional tax revenue, equivalent to about 1.7 per cent of GDP, by the end of FY 2025-26. In addition, the government is determined to maintain a fiscal deficit of around 5 per cent of GDP to ensure that the overall debt level remains at a manageable and comfortable level. However, successful implementation of tax reforms and efficient utilization of resources will be critical in achieving sustainable fiscal discipline and avoiding undue debt burdens.

External Trade and Balance of Payments

In the wake of the COVID-19 pandemic, Bangladesh experienced a huge surge in imports in FY22, leading to mounting pressure on the balance of payments (BOP) and the exchange rate. Responding to this, the Bangladesh Bank has intervened in areas such as allowing a gradual depreciation of the Bangladesh Taka (BDT), discouraging the import of luxury and non-essential goods, monitoring import prices, supporting import-substituting sectors, and facilitating remittance inflows through mobile financial services.

During FY22, exports showed a robust y-o-y growth of 34.38 per cent. However, import payments also surged, rising by 35.93 per cent during the same period. Remittance inflows decreased by 14.75 per cent.

Exchange Rate Policy and Reserves

Bangladesh is already tackling the pressure emanating from the BOP shortfall. The measures that are being undertaken to improve the situation will be instrumental and hence will need to be implemented carefully. If the current negative growth of imports continues and export growth remains stable, the stress on BOP will ease off. Furthermore, to increase exchange rate flexibility, Bangladesh Bank will use market-determined exchange rates for official foreign exchange transactions on behalf of the government.

Financing Assumptions

The government is actively engaged in efforts to reduce borrowing costs and enhance efficiency in debt management. While traditional external creditors remain the preferred source of funding, their concessional financing is falling short of meeting the total financing needs. As a result, the government is increasing its borrowing from domestic sources, mainly through the issuance of government securities.

To cultivate a healthy domestic debt market, the government is focused on increasing the proportion of marketable securities in the medium term. A Medium-Term Debt Strategy (MTDS) has been approved for the period from FY 2021-22 to FY 2023-24, which will serve as the blueprint for the financing mix. Among the strategies outlined in the MTDS, Strategy 2 takes precedence, aiming to elevate external financing to cover 36 per cent of the Gross Financing Need (GFN) by the end of FY 2023-24, while also slightly reducing the issuance of National Savings Certificates (NSC). Strategy 4 of the MTDS aims at reduction in financing from the NSC and concessional external financing with a larger financing from domestic long-term source such as treasury bonds. Government wants to bring down net NSC issuance to less than ¼ of the total net domestic financing by FY26. Hence, the current MTDS recommends a blend of both the strategies 2 and 4, i.e. strategy 2 should be adopted over the medium term in tandem with new and continuing reforms in the debt management so as to transition towards strategy 4 gradually in the long run. In the longer term, the share of domestic financing is projected to increase further while the reliance on concessional external financing will decline. This strategic approach will enable the government to strike a balance between external and domestic borrowing, fostering a stable and sustainable fiscal environment and optimizing borrowing costs.

D. Country Classification and Determination of Scenario Stress Tests

Based on the analysis, Bangladesh's debt-carrying capacity is categorized as medium, contingent on the World Bank's CPIA score. The indicators considered for solvency include ratios of debt to GDP, debt to revenue, and debt to exports, while for liquidity, debt service to revenue and debt service to exports are taken into account. In all cases, both the debt and the debt service ratios remain below the specified threshold levels. This suggests that Bangladesh's debt sustainability is currently manageable, and the country has a relatively low risk of facing difficulties in servicing its debt obligations. However, it is essential to monitor the World Bank's CPIA score and other relevant economic indicators closely to ensure that the country, at least, maintains its medium debt-carrying capacity and sustains a healthy debt management framework in the future.

Table 3: Country Classification and Stress Tests Thresholds

Debt Carrying Capacity and Thresholds	
Country	Bangladesh
Country Code	513

Debt Carrying Capacity	Medium

Final	Classification based on current vintage	Classification based on the previous vintage	Classification based on the two previous vintage
Medium	Medium 2.88	Medium 2.93	Medium 2.94

Applicable thresholds

APPLICABLE	
EXTERNAL debt burden thresholds	
PV of debt in % of	
Exports	180
GDP	40
Debt service in % of	
Exports	15
Revenue	18

APPLICABLE	
TOTAL public debt benchmark	
PV of total public debt in percent of GDP	55

E. External Debt Sustainability

All external debt indicators show favourable results, staying below their respective thresholds in both the baseline and stress-test scenarios (Annex-1/Figure 1). The projected external PPG debt-to-GDP ratio is expected to stabilize at approximately 11.6 per cent by FY33. The most severe shock affecting the external PPG debt-to-GDP ratio is related to non-debt flows, including official transfers, remittances, and foreign direct investment (FDI).

Despite potential shocks, the RMG (Ready-Made Garments) sector remains competitive, ensuring that the present value of debt-to-exports and debt service-to-exports ratios remain comfortably below their respective thresholds, even under the most extreme export-related shocks.

Moreover, the debt service-to-revenue ratio displays a declining trend and continues to stay below the threshold, even when subjected to the most extreme shock scenario of a one-time depreciation.

F. Public Debt Sustainability

The overall assessment of public debt indicators indicates a low risk of debt distress (Annex 1/Figure 2). The present value (PV) of the total public debt-to-GDP ratio remains below its indicative threshold. The primary shock affecting this indicator is a natural disaster, which has been kept at default calibrations, equivalent to a one-time 10 per cent of GDP shock.

It is worth noting that indicators as a percentage of revenues show a slight upward trend, underscoring the importance of increasing the revenue-to-GDP ratio. This ratio is assumed to remain stagnant at a low level throughout the projection period. However, if this situation persists, the government needs to ensure non-debt financing for growth-enhancing and climate-resilient infrastructure projects. This will help reduce reliance on debt and create a more sustainable fiscal environment.

To achieve this, implementing reforms to improve the investment climate becomes imperative, as it will play a significant role in attracting foreign direct investment (FDI). Attracting more FDI can positively impact revenue generation and contribute to overall economic growth and development.

G. Assessment

Bangladesh exhibits a low risk of external debt distress and a generally low overall risk of debt distress. All external debt indicators remain comfortably below their respective thresholds, even under extreme shocks. However, even though the overall public debt is below its indicative threshold, the projected path is slightly increasing.

The downgrade in debt-carrying capacity from strong to medium is attributed to a deterioration in the Country Policy and Institutional Assessment (CPIA) performance and the pandemic-induced global economic slowdown, which has slightly impacted debt sustainability. The prevailing risks are tilted to the downside, further emphasizing the urgency of mobilizing revenue to support essential spending for pro-poor growth recovery. It is imperative to note that the key factor that indicates the future trend of the debt level is the primary balance which needs to be observed and kept at a sustainable level.

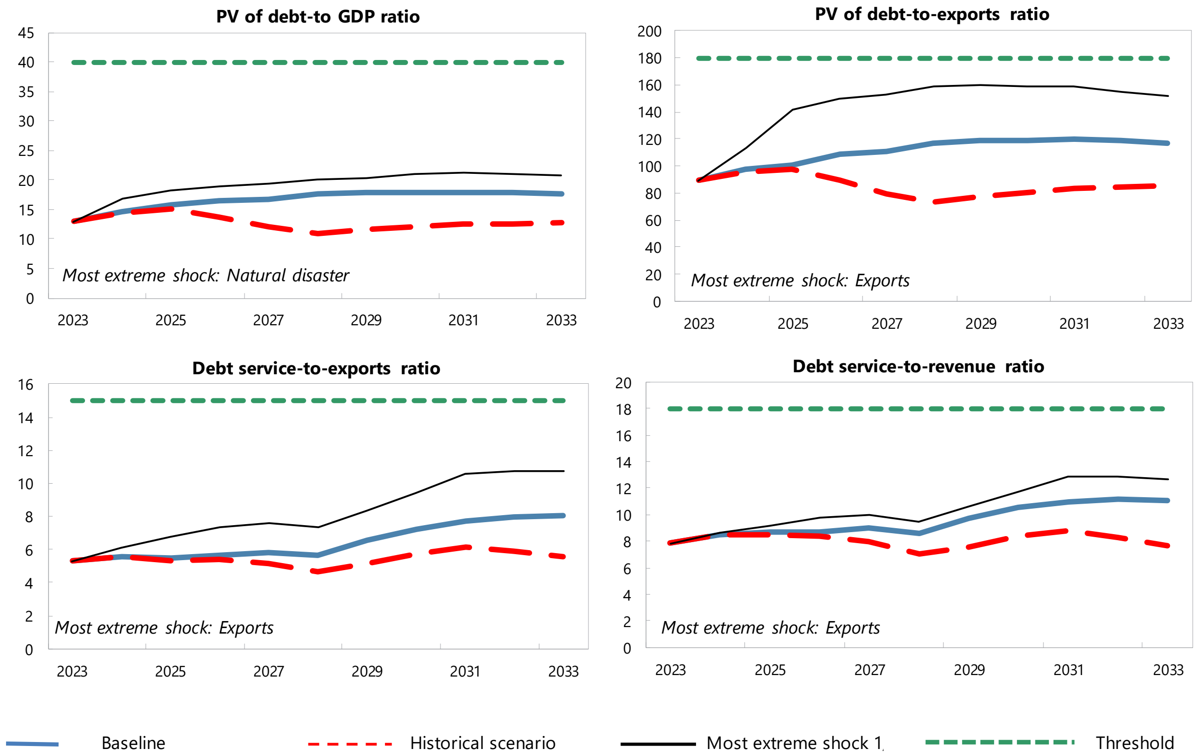
For climate-related expenditure, as outlined in the 8th Five Year Plan (8th FYP) and the Delta Plan, financing through concessional or non-debt-creating flows such as Foreign Direct Investment (FDI) will remain critically important. Seeking concessional financing and enhancing the investment climate to attract FDI financing should remain as the priorities for the government.

Furthermore, following the recommendations of the Medium-Term Debt Strategy (MTDS), reforms in NSCs need to continue to encourage the development of domestic debt and capital markets as well as to avoid interest burdens.

In conclusion, while Bangladesh's debt indicators remain relatively favourable, the challenges posed by the COVID-19 pandemic and other external economic factors necessitate proactive measures to strengthen revenue mobilization, seek more concessional financing, and attract non-debt-creating flows to support growth recovery and fiscal sustainability.

Annex 1

Figure 1. Bangladesh: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2023-2033



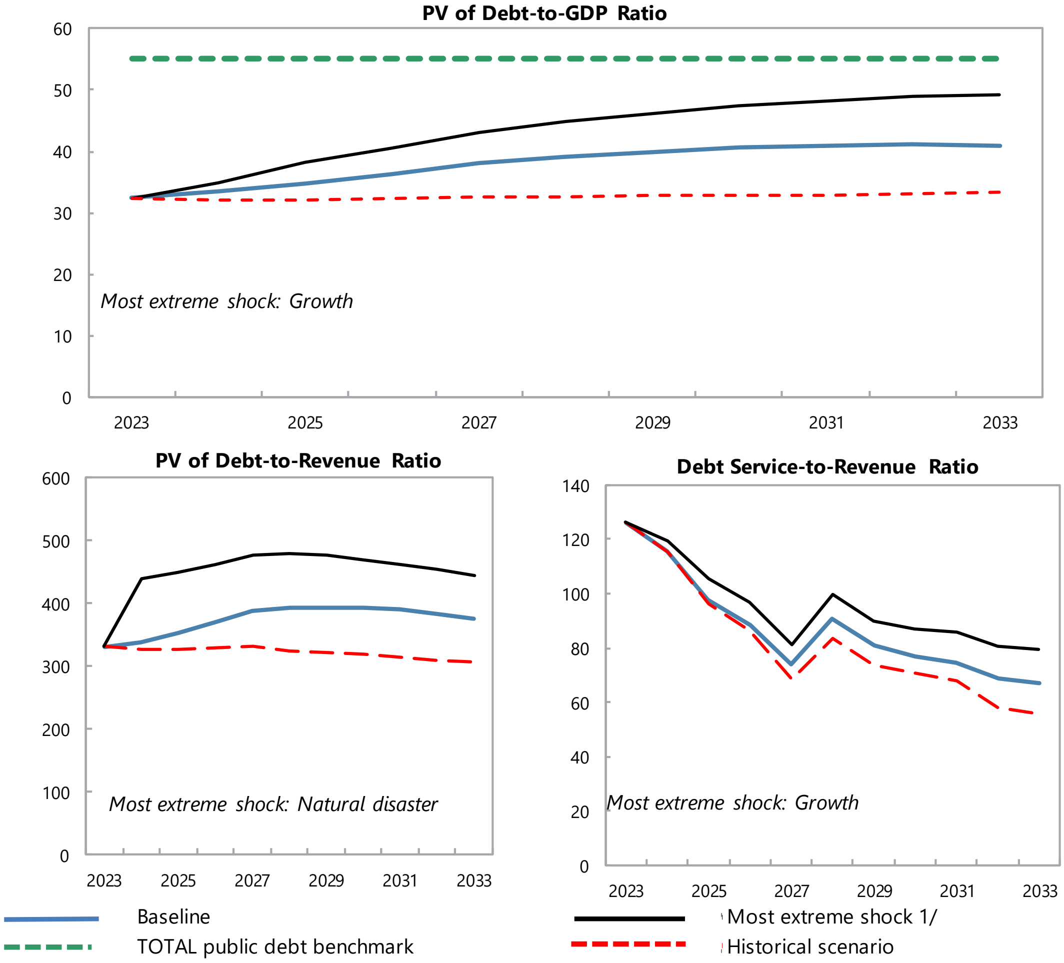
Customization of Default Settings		
	Size	Interactions
Tailored Stress		
Combined CL	No	
Natural disaster	No	No
Commodity price	n.a.	n.a.
Market financing	n.a.	n.a.

Note: "Yes" indicates any change to the size or interactions of the default settings for the stress tests. "n.a." indicates that the stress test does not apply.

Borrowing assumptions on additional financing needs resulting from the stress tests*		
	Default	User defined
Shares of marginal debt		
External PPG MLT debt	100%	
Terms of marginal debt		
Avg. nominal interest rate on new borrowing in USD	2.3%	2.3%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	24	24
Avg. grace period	5	5

* Note: All the additional financing needs generated by the shocks under the stress tests are assumed to be covered by PPG external MLT debt in the external DSA. Default terms of marginal debt are based on baseline 10-year projections.

Figure 2. Bangladesh: Indicators of Public Debt Under Alternative Scenarios, 2023-2033



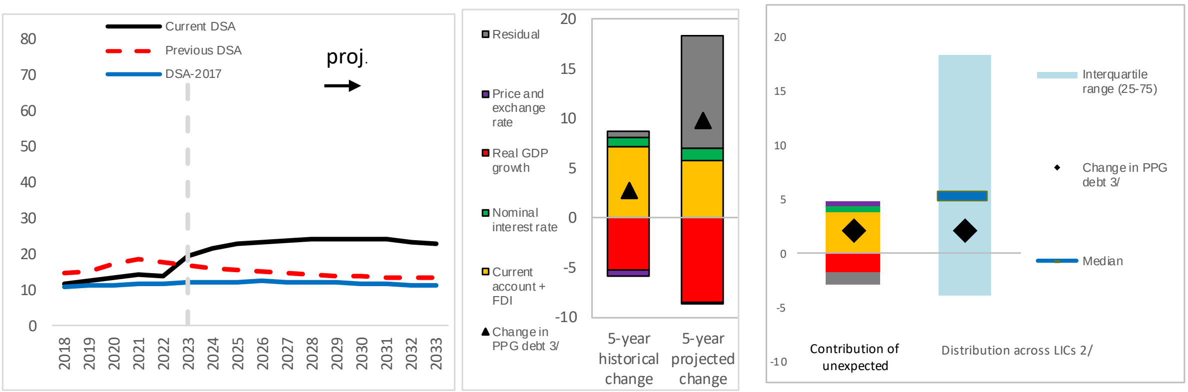
Borrowing assumptions on additional financing needs resulting from the stress tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	27%	27%
Domestic medium and long-term	56%	56%
Domestic short-term	17%	17%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	2.3%	2.3%
Avg. maturity (incl. grace period)	24	24
Avg. grace period	5	5
Domestic MLT debt		
Avg. real interest rate on new borrowing	3.3%	3.3%
Avg. maturity (incl. grace period)	6	6
Avg. grace period	5	5
Domestic short-term debt		
Avg. real interest rate	0.0%	0.0%

* Note: The public DSA allows for domestic financing to cover the additional financing needs generated by the shocks under the stress tests in the public DSA. Default terms of marginal debt are based on baseline 10-year projections.

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

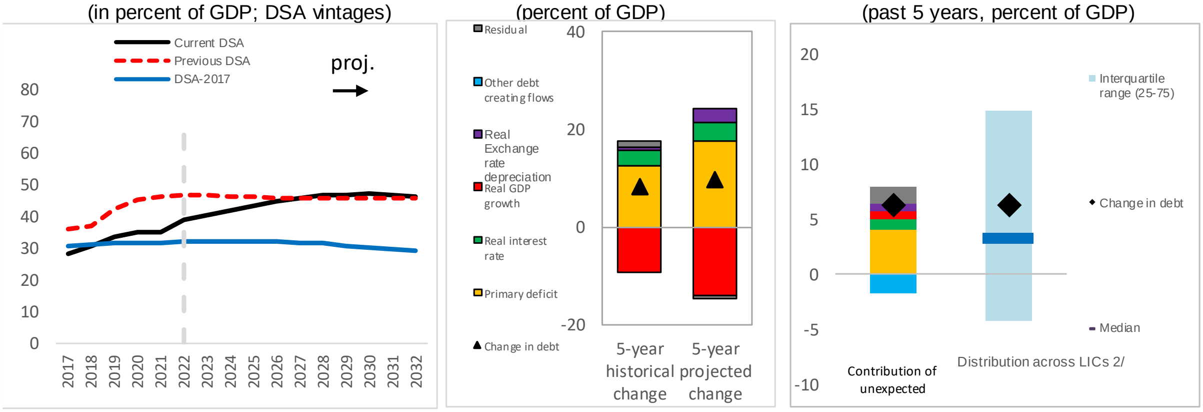
External debt

Gross Nominal PPG External Debt (in percent of GDP; DSA vintages) | Debt-creating flows (percent of GDP) | Unexpected Changes in Debt 1/ (past 5 years, percent of GDP)



Public debt

Gross Nominal Public Debt (in percent of GDP; DSA vintages) | Debt-creating flows (percent of GDP) | Unexpected Changes in Debt 1/ (past 5 years, percent of GDP)



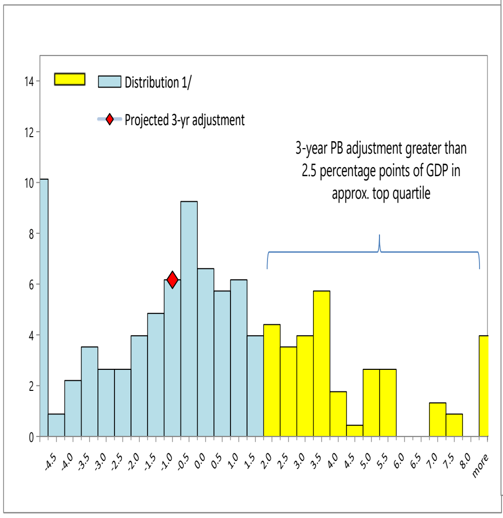
1/ Difference between anticipated and actual contributions on debt ratios.

2/ Distribution across LICs for which LIC DSAs were produced.

3/ Given the relatively low private external debt for average low-income countries, a ppt change in PPG external debt should be largely explained by the drivers of the external debt dynamics equation.

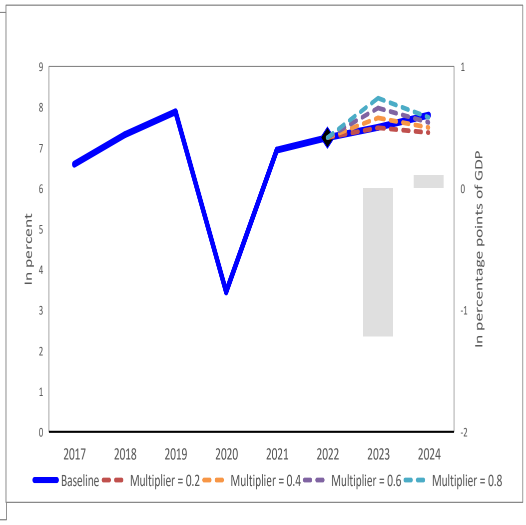
Figure 4. Bangladesh: Realism tools

3-Year Adjustment in Primary Balance
(Percentage points of GDP)



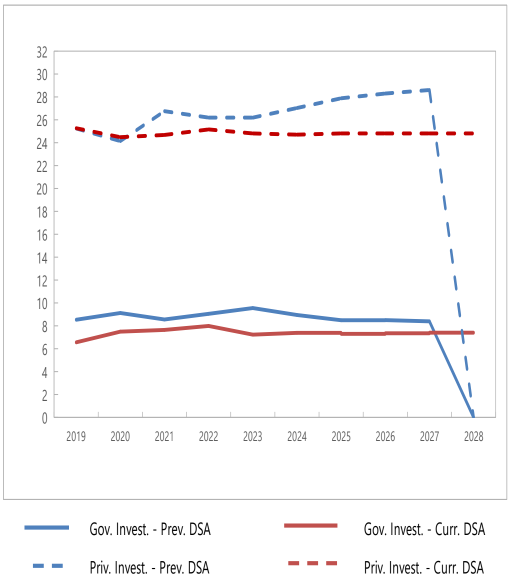
1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

Fiscal Adjustment and Possible Growth Paths 1/



1/ Bars refer to annual projected fiscal adjustment (right-hand side scale) and lines show possible real GDP growth paths under different fiscal multipliers (left-hand side scale).

Public and Private Investment Rates
(percent of GDP)



Contribution to Real GDP growth
(percent, 5-year average)

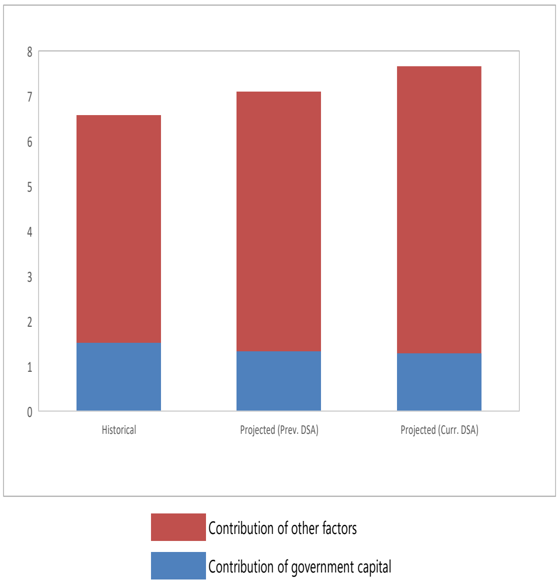
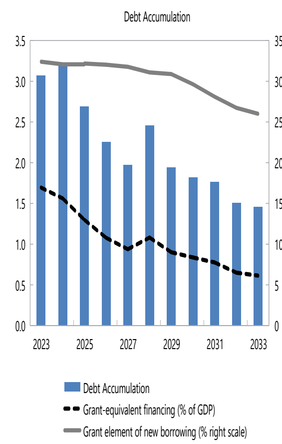


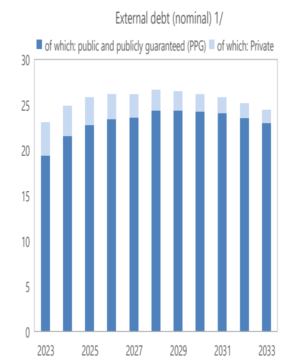
Table 1. Bangladesh: External Debt Sustainability Framework, Baseline Scenario, 2020-2043

(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 8/	
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2033	2043	Historical	Projections
External debt (nominal) 1/	17.6	20.0	19.9	23.1	24.9	25.8	26.2	26.1	26.6	24.5	14.1	16.7	25.5
of which: public and publicly guaranteed (PPG)	13.7	14.5	13.8	19.4	21.5	22.8	23.4	23.6	24.3	23.0	13.5	12.7	23.1
Change in external debt	1.2	2.4	-0.1	3.2	1.8	0.9	0.4	-0.1	0.5	-0.7	-1.4 `		
Identified net debt-creating flows	0.0	-1.1	3.3	-0.9	-1.3	-1.6	1.2	1.0	1.0	-1.7	-1.2	-1.6	-0.8
Non-interest current account deficit	1.1	0.8	4.1	1.0	0.6	0.5	3.2	3.0	3.0	0.6	0.6	0.4	1.2
Deficit in balance of goods and services	5.7	6.4	8.7	6.0	5.5	5.2	2.8	2.9	3.0	4.4	3.6	5.7	4.3
Exports	10.4	10.7	13.9	14.4	15.0	15.6	15.2	15.1	15.0	15.0	15.3		
Imports	16.0	17.1	22.6	20.4	19.5	20.8	18.0	18.0	18.0	19.4	18.8		
Net current transfers (negative = inflow)	-5.0	-6.1	-5.1	-5.5	-5.4	-5.2	-5.1	-5.0	-4.9	-4.3	-3.4	-5.9	-4.9
of which: official	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Other current account flows (negative = net inflow)	0.5	0.4	0.5	0.5	0.6	0.5	5.5	5.1	4.9	0.5	0.4	0.6	1.8
Net FDI (negative = inflow)	-0.3	-0.3	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-0.5	-1.0	-1.1	-0.6	-0.6
Endogenous debt dynamics 2/	-0.8	-1.6	-0.3	-1.4	-1.5	-1.6	-1.5	-1.5	-1.4	-1.3	-0.7		
Contribution from nominal interest rate	0.2	0.2	0.2	0.1	0.2	0.2	0.3	0.3	0.4	0.5	0.4		
Contribution from real GDP growth	-0.5	-1.1	-1.4	-1.5	-1.6	-1.8	-1.8	-1.8	-1.8	-1.7	-1.1		
Contribution from price and exchange rate changes	-0.5	-0.7	1.0	...	...	...	...	...	...	...	...		
Residual 3/	1.2	3.5	-3.4	4.1	3.1	2.5	-0.9	-1.1	-0.5	1.0	-0.1	1.9	1.3
of which: exceptional financing	0.0	0.0	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	...	...	9.6	12.9	14.6	15.8	16.4	16.8	17.6	17.5	10.9		
PV of PPG external debt-to-exports ratio	...	...	69.3	89.4	97.5	101.1	108.4	111.1	116.9	116.6	71.1		
PPG debt service-to-exports ratio	8.1	7.4	6.3	5.3	5.6	5.5	5.6	5.8	5.7	8.0	7.8		
PPG debt service-to-revenue ratio	10.1	8.5	10.3	7.8	8.5	8.7	8.7	9.0	8.6	11.1	9.1		
Gross external financing need (Million of U.S. dollars)	15799.6	16493.5	36157.6	25035.2	13876.0	13660.3	29031.9	29677.1	31331.9	17481.3	25835.6		
Key macroeconomic assumptions													
Real GDP growth (in percent)	3.4	6.9	7.2	7.5	7.8	8.0	7.5	7.5	7.5	7.5	7.5	6.8	7.6
GDP deflator in US dollar terms (change in percent)	2.9	4.1	-4.7	-8.2	2.1	1.8	1.9	1.9	2.0	2.0	2.0	3.8	1.0
Effective interest rate (percent) 4/	1.5	1.2	0.9	0.5	0.8	1.1	1.3	1.4	1.5	2.0	2.7	1.2	1.4
Growth of exports of G&S (US dollar terms, in percent)	-16.9	14.2	33.6	2.2	14.6	14.1	6.6	9.3	8.9	10.1	11.8	9.0	9.4
Growth of imports of G&S (US dollar terms, in percent)	-8.8	18.6	35.4	-11.1	10.3	11.9	-5.4	9.5	9.6	9.5	11.5	11.1	7.4
Grant element of new public sector borrowing (in percent)	...	...	...	32.4	32.1	32.2	32.0	31.8	31.1	26.0	24.5	...	30.3
Government revenues (excluding grants, in percent of GDP)	8.4	9.3	8.5	9.7	9.8	9.8	9.8	9.8	10.0	10.9	13.0	8.6	10.1
Aid flows (in Million of US dollars) 5/	297.2	276.9	233.5	9817.3	9753.9	8948.4	8076.7	8299.3	10319.5	9267.6	6923.6		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	1.7	1.6	1.3	1.1	0.9	1.1	0.6	0.2	...	1.0
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	33.4	33.0	33.1	33.0	32.7	31.7	26.4	24.5	...	31.0
Nominal GDP (Million of US dollars)	373,858	416,246	425,518	419,807	461,866	507,894	556,164	609,213	667,745	1,056,377	2,643,841		
Nominal dollar GDP growth	6.4	11.3	2.2	-1.3	10.0	10.0	9.5	9.5	9.6	9.6	9.6	10.8	8.7
Memorandum items:													
PV of external debt 7/	...	...	15.7	16.6	18.0	18.8	19.2	19.4	19.9	19.0	11.4		
In percent of exports	...	...	113.1	115.0	119.8	120.7	126.8	127.9	132.3	126.4	74.9		
Total external debt service-to-exports ratio	33.4	32.9	35.3	37.9	18.9	17.2	16.6	15.9	14.9	13.9	10.1		
PV of PPG external debt (in Million of US dollars)			41056.8	54113.0	67621.7	80032.1	91480.1	102445.6	117407.5	185110.8	287194.7		
(PVt-PVt-1)/GDPt-1 (in percent)				3.1	3.2	2.7	2.3	2.0	2.5	1.5	0.0		
Non-interest current account deficit that stabilizes debt ratio	-0.1	-1.6	4.2	-2.2	-1.2	-0.4	2.8	3.0	2.5	1.2	1.9		

Definition of external/domestic debt	Currency-based
Is there a material difference between the two criteria?	No





Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as [r - g - ρ(1+g)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = growth rate of GDP deflator in U.S. dollar terms.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Current-year interest payments divided by previous period debt stock.

5/ Defined as grants, concessional loans, and debt relief.

6/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

7/ Assumes that PV of private sector debt is equivalent to its face value.

8/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

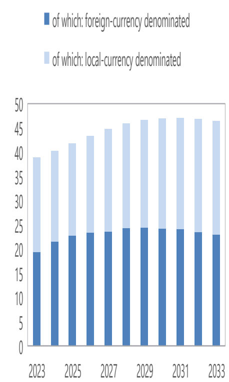
Table 2. Bangladesh: Public Sector Debt Sustainability Framework, Baseline Scenario, 2020-2043

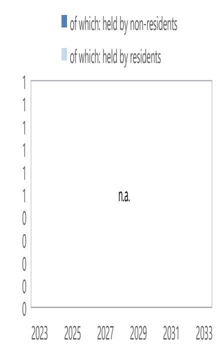
(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 6/	
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2033	2043	Historical	Projections
Public sector debt 1/	33.6	35.0	35.1	38.9	40.3	41.7	43.3	44.8	45.9	46.5	31.2	30.2	44.4
of which: external debt	13.7	14.5	13.8	19.4	21.5	22.8	23.4	23.6	24.3	23.0	13.5	12.7	23.1
Change in public sector debt	2.8	1.4	0.2	3.8	1.4	1.5	1.6	1.4	1.1	-0.4	-2.4		
Identified debt-creating flows	2.8	0.2	0.7	1.5	1.4	1.5	1.6	1.4	1.1	-0.4	-2.4	0.3	0.8
Primary deficit	2.9	1.7	2.4	3.6	3.5	3.5	3.4	3.4	3.1	2.0	-0.7	1.9	3.0
Revenue and grants	8.5	9.4	8.5	9.8	9.8	9.8	9.8	9.8	10.0	10.9	13.0	8.8	10.2
of which: grants	0.1	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.0		
Primary (noninterest) expenditure	11.4	11.0	11.0	13.4	13.4	13.3	13.3	13.2	13.1	12.8	12.3	10.6	13.1
Automatic debt dynamics	-0.1	-1.5	-1.8	-2.1	-2.2	-2.0	-1.9	-1.9	-2.0	-2.4	-1.6		
Contribution from interest rate/growth differential	0.1	-1.5	-2.2	-2.1	-2.2	-2.0	-1.9	-1.9	-2.0	-2.4	-1.6		
of which: contribution from average real interest rate	1.1	0.7	0.1	0.3	0.6	1.0	1.1	1.1	1.1	0.9	0.7		
of which: contribution from real GDP growth	-1.0	-2.2	-2.4	-2.4	-2.8	-3.0	-2.9	-3.0	-3.1	-3.3	-2.3		
Contribution from real exchange rate depreciation	-0.2	0.0	0.5	...	...	...	...	...	...	...	...		
Other identified debt-creating flows	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Privatization receipts (negative)	0.0	0.0	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	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	0.0	0.0		
Other debt creating or reducing flow (please specify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Residual	0.0	1.2	-0.5	2.3	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1	0.2
Sustainability indicators													
PV of public debt-to-GDP ratio 2/	...	...	30.2	32.4	33.4	34.7	36.4	38.0	39.1	41.0	28.5		
PV of public debt-to-revenue and grants ratio	...	...	354.2	330.9	339.1	353.0	370.1	386.9	391.9	376.5	219.4		
Debt service-to-revenue and grants ratio 3/	72.6	77.1	83.5	126.2	115.6	97.4	88.3	73.8	90.6	67.3	40.7		
Gross financing need 4/	9.1	8.9	9.5	16.0	14.9	13.1	12.1	10.6	12.2	9.3	4.6		
Key macroeconomic and fiscal assumptions													
Real GDP growth (in percent)	3.4	6.9	7.2	7.5	7.8	8.0	7.5	7.5	7.5	7.5	7.5	6.8	7.6
Average nominal interest rate on external debt (in percent)	1.6	1.3	1.1	0.0	0.5	0.9	1.1	1.2	1.4	2.0	2.7	1.2	1.2
Average real interest rate on domestic debt (in percent)	6.1	5.7	4.6	1.6	5.0	6.6	6.9	6.6	6.2	4.2	3.5	5.2	5.1
Real exchange rate depreciation (in percent, + indicates depreciation)	-1.6	0.0	3.8	...	...	...	...	...	...	...	...	-2.3	...
Inflation rate (GDP deflator, in percent)	3.8	4.2	5.0	4.1	4.0	4.0	4.0	4.0	4.0#	4.0	4.0	5.5	4.0
Growth of real primary spending (deflated by GDP deflator, in percent)	1.9	3.4	6.5	31.9	7.3	7.5	7.0	7.0	7.0	7.0	7.0	7.0	9.3
Primary deficit that stabilizes the debt-to-GDP ratio 5/	0.1	0.3	2.3	-0.2	2.2	2.0	1.8	1.9	2.0	2.4	1.6	0.9	2.0
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	0.0	0.0		

Definition of external/domestic debt	Currency-based
Is there a material difference between the two criteria?	No

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: The central government . Definition of external debt is Currency-based.

2/ The underlying PV of external debt-to-GDP ratio under the public DSA differs from the external DSA with the size of differences depending on exchange rates projections.

3/ Debt service is defined as the sum of interest and amortization of medium and long-term, and short-term debt.

4/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period and other debt creating/reducing flows.

5/ Defined as a primary deficit minus a change in the public debt-to-GDP ratio ((-): a primary surplus), which would stabilizes the debt ratio only in the year in question.

6/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

Table 3. Bangladesh: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2023-2033
(In percent)

	Projections 1/										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
PV of debt-to GDP ratio											
Baseline	13	15	16	16	17	18	18	18	18	18	18
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	13	14	15	14	12	11	12	12	12	13	13
B. Bound Tests											
B1. Real GDP growth	13	15	17	18	18	19	19	19	19	19	19
B2. Primary balance	13	15	16	17	17	18	18	18	18	18	18
B3. Exports	13	16	19	19	20	20	20	20	20	20	19
B4. Other flows 3/	13	16	18	19	19	19	20	20	19	19	19
B5. Depreciation	13	18	17	18	19	20	20	20	21	21	20
B6. Combination of B1-B5	13	17	18	19	20	20	21	20	20	20	20
C. Tailored Tests											
C1. Combined contingent liabilities	13	16	17	18	18	19	19	20	20	20	19
C2. Natural disaster	13	17	18	19	19	20	20	21	21	21	21
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
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	40	40	40	40	40	40	40	40	40	40	40
PV of debt-to-exports ratio											
Baseline	89	98	101	108	111	117	119	119	120	119	117
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	89	95	97	90	79	73	77	80	83	84	85
B. Bound Tests											
B1. Real GDP growth	89	98	101	108	111	117	119	119	120	119	117
B2. Primary balance	89	99	103	111	113	119	121	122	123	121	119
B3. Exports	89	114	142	150	152	159	160	159	159	155	151
B4. Other flows 3/	89	105	115	122	124	129	130	130	130	127	124
B5. Depreciation	89	98	86	94	97	104	106	107	110	109	108
B6. Combination of B1-B5	89	116	108	132	135	141	143	143	143	141	138
C. Tailored Tests											
C1. Combined contingent liabilities	89	107	111	119	121	127	128	131	133	131	129
C2. Natural disaster	89	114	119	127	130	136	138	142	144	142	140
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
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	180	180	180	180	180	180	180	180	180	180	180
Debt service-to-exports ratio											
Baseline	5	6	5	6	6	6	7	7	8	8	8
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	5	6	5	5	5	5	5	6	6	6	6
B. Bound Tests											
B1. Real GDP growth	5	6	5	6	6	6	7	7	8	8	8
B2. Primary balance	5	6	5	6	6	6	7	7	8	8	8
B3. Exports	5	6	7	7	8	7	8	9	11	11	11
B4. Other flows 3/	5	6	6	6	6	6	7	8	9	9	9
B5. Depreciation	5	6	5	5	5	5	6	7	7	7	7
B6. Combination of B1-B5	5	6	7	7	7	7	8	9	9	10	10
C. Tailored Tests											
C1. Combined contingent liabilities	5	6	6	6	6	6	7	7	8	8	8
C2. Natural disaster	5	6	6	6	6	6	7	8	8	9	9
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
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	15	15	15	15	15	15	15	15	15	15	15
Debt service-to-revenue ratio											
Baseline	8	9	9	9	9	9	10	11	11	11	11
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	8	8	8	8	8	7	8	8	9	8	8
B. Bound Tests											
B1. Real GDP growth	8	9	9	9	10	9	10	11	12	12	12
B2. Primary balance	8	9	9	9	9	9	10	11	11	11	11
B3. Exports	8	9	9	10	10	9	11	12	13	13	13
B4. Other flows 3/	8	9	9	9	10	9	10	11	12	12	12
B5. Depreciation	8	11	11	10	11	10	12	13	12	12	13
B6. Combination of B1-B5	8	9	10	10	10	10	11	12	13	13	13
C. Tailored Tests											
C1. Combined contingent liabilities	8	9	9	9	9	9	10	11	11	12	12
C2. Natural disaster	8	9	9	9	10	9	10	11	12	12	12
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
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	18	18	18	18	18	18	18	18	18	18	18

Sources: Country authorities; and staff estimates and projections.
1/ A bold value indicates a breach of the threshold.
2/ Variables include real GDP growth, GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
3/ Includes official and private transfers and FDI.

Table 4. Bangladesh: Sensitivity Analysis for Key Indicators of Public Debt , 2023-2033

	Projections 1/										
	2023	2024	2025	2026	2027	2028	2029	2030	2031	2032	2033
PV of Debt-to-GDP Ratio											
Baseline	32	33	35	36	38	39	40	41	41	41	41
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	32	32	32	32	32	32	33	33	33	33	33
B. Bound Tests											
B1. Real GDP growth	32	35	38	41	43	45	46	47	48	49	49
B2. Primary balance	32	34	36	38	39	40	41	42	42	42	42
B3. Exports	32	34	37	39	40	42	42	43	43	43	42
B4. Other flows 3/	32	35	37	38	40	41	42	42	42	42	42
B5. Depreciation	32	34	34	35	36	36	36	36	36	35	35
B6. Combination of B1-B5	32	33	35	36	38	39	40	40	41	41	40
C. Tailored Tests											
C1. Combined contingent liabilities	32	40	41	42	43	44	45	45	45	45	45
C2. Natural disaster	32	43	44	45	47	48	48	49	49	49	48
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
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	55	55	55	55	55	55	55	55	55	55	55
PV of Debt-to-Revenue Ratio											
Baseline	331	339	353	370	387	392	394	393	389	384	377
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	331	325	327	328	331	325	322	318	313	310	306
B. Bound Tests											
B1. Real GDP growth	331	354	389	413	438	448	455	459	459	458	453
B2. Primary balance	331	346	367	383	400	404	405	403	399	393	385
B3. Exports	331	349	381	397	412	416	416	413	407	400	390
B4. Other flows 3/	331	350	375	391	407	411	411	409	403	396	387
B5. Depreciation	331	348	348	354	362	359	354	348	340	331	321
B6. Combination of B1-B5	331	335	354	368	384	389	391	389	386	379	372
C. Tailored Tests											
C1. Combined contingent liabilities	331	405	415	429	443	444	443	437	431	423	413
C2. Natural disaster	331	439	448	463	477	478	476	470	462	454	443
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
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	126	116	97	88	74	91	81	77	75	69	67
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2023-2033 2/	126	115	96	86	68	83	73	71	68	58	56
B. Bound Tests											
B1. Real GDP growth	126	120	105	97	81	100	90	87	86	81	79
B2. Primary balance	126	116	99	91	75	91	82	80	78	71	68
B3. Exports	126	116	98	89	75	91	82	78	76	70	69
B4. Other flows 3/	126	116	98	89	74	91	82	78	76	70	68
B5. Depreciation	126	108	93	83	71	86	77	73	70	66	64
B6. Combination of B1-B5	126	113	96	88	73	90	80	76	75	68	67
C. Tailored Tests											
C1. Combined contingent liabilities	126	116	111	94	78	94	84	99	84	74	71
C2. Natural disaster	126	117	119	98	81	98	88	111	90	78	75
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
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.

Sources: Country authorities; and staff estimates and projections.

1/ A bold value indicates a breach of the benchmark.

2/ Variables include real GDP growth, GDP deflator and primary deficit in percent of GDP.

3/ Includes official and private transfers and FDI.