INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL MONETARY FUND

BANGLADESH

Joint World Bank-IMF Debt Sustainability Analysis[1]

May 2020

Prepared Jointly by the staffs of the International Development Association (IDA)

and the International Monetary Fund (IMF)

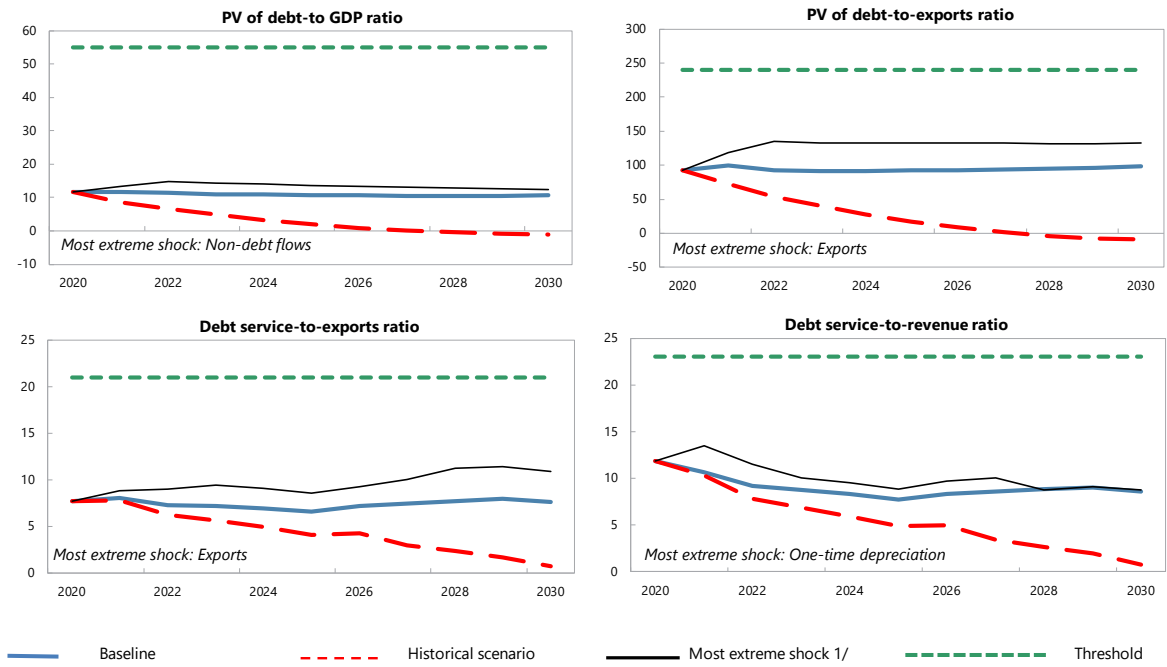Approved by Marcello Estevão (IDA), Anne-Marie Gulde-Wolf and Kevin Fletcher (IMF)

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[1] This joint World Bank/IMF Debt Sustainability Analysis (DSA) has been prepared in the context of the 2020 request for emergency financing from the Fund. The macroeconomic framework underlying this DSA update is the same as that included in the staff report of the 2020 RFI/RCF request which reflects recent global and domestic developments. The current macroeconomic framework reflects currently available information. However, updates with respect to the economic impact and policy response to the COVID-19 crisis are rapidly evolving and risks are heavily tilted to the downside.

Bangladesh: Joint Fund-Bank Debt Sustainability Analysis[1]	
Risk of external debt distress	Low[2]
Overall risk of debt distress	Low
Granularity in the risk rating	Tool not applicable
Application of judgement	No
Macroeconomic projections	Growth is projected at 3.8 percent in FY20 compared with a pre-pandemic projection above 7 percent. The current account deficit (CAD) is projected at 2.2 percent compared to around 1 percent before the pandemic. The CAD deterioration is due to lower exports, as ready-made garment (RMG) orders are being cancelled into the summer, and remittances decline, as workers are being asked to return to Bangladesh and as economic activity declines in their destination economies. COVID-19 will also impact FY21 through the same channels with growth projected at 5.7 percent (compared to 7.3 percent pre-pandemic) and the CAD projected at 3.5 percent (compared to 1.5 percent pre-pandemic).The fiscal deficit is projected to worsen to around 6.3 percent of GDP in FY20 due to lower revenues and higher expenditure as the government increases expenditures in an effort to counter the negative economic impact from COVID-19.
Financing strategy	The COVID-19 shock is projected to disrupt the execution of externally financed projects in FY20 but external PPG debt-to-GDP ratios over the long run are broadly similar to the last DSA. Domestic financing is projected to remain an important source of deficit financing as in the past and as assumed in the last DSA. Financing-gap-filling funds from the IMF, World Bank, ADB, and other unidentified sources are included in this DSA.[3] Unidentified funds are assumed to be semi-concessional with a grant element around 14 percent.
Realism tools flagged	No

[1] Debt coverage includes debt guaranteed by the government.
[2] The composite indicator for Bangladesh is 3.06 based on the October 2019 WEO and suggests a strong debt-carrying capacity.
[3] The authorities do not plan to apply for the Debt Service Suspension Initiative supported by the G20 and Paris Club at this time. The initiative provides a time-bound suspension of official bilateral debt service payments to IDA-eligible and least developed countries.

Bangladesh remains at a low risk of external and a low overall risk of debt distress. This assessment stands despite the economic shock caused by COVID-19. External debt indicators are below their thresholds and the public debt level is below the benchmark under the baseline and stress test scenarios. Risks to the baseline are tilted downward. Under the baseline, the impact from COVID-19 is concentrated in Q4 of FY20[2] and Q1 of FY21 with some recovery in Q2 of FY21 and growth gradually resumes thereafter though output remains below pre-pandemic projections. Should the impact from COVID-19 be more protracted, debt indicators will worsen but are expected to remain below thresholds. Future infrastructure projects will be financed with external debt, but favorable debt dynamics in the medium-term keep PPG external debt stable. The authorities should continue to increase tax revenues and seek concessional financing to the extent possible. Staff commend recent reforms to the sale of National Savings Certificates (NSCs) and advise further reform to pricing so that the domestic debt market has more space to develop.

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[2] The fiscal year begins in July and ends in June. The years in tables and charts refer to fiscal years.

Figure 1. Bangladesh: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2020−2030

PV of debt-to GDP ratio

Most extreme shock: Non-debt flows

PV of debt-to-exports ratio

Most extreme shock: Exports

Debt service-to-exports ratio

Most extreme shock: Exports

Debt service-to-revenue ratio

Most extreme shock: One-time depreciation

| Baseline | Historical scenario | Most extreme shock 1/ | Threshold |

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.
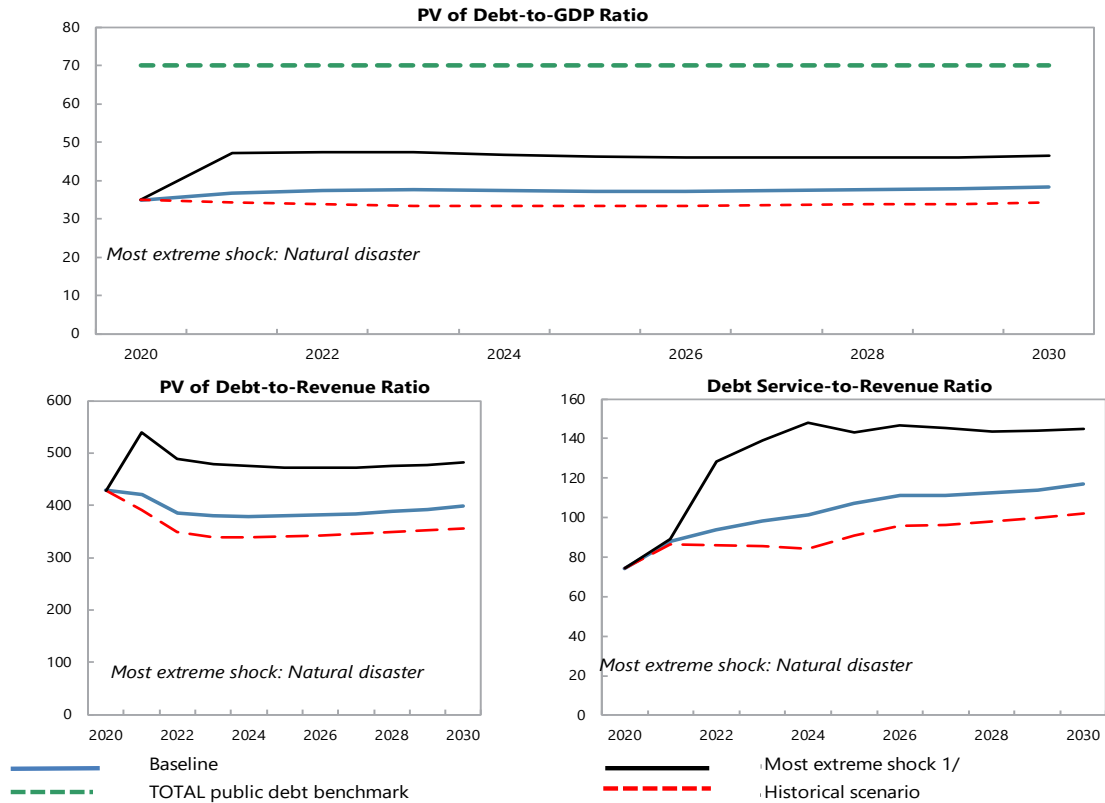
Borrowing assumptions on additional financing needs resulting from the stress tests*		
	Default	User defined
Shares of marginal debt		
External PPG MLT debt	100%	
Terms of marginal debt		
Avg. nominal interest rate on new borrowing in USD	2.9%	2.9%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	19	19
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.

Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2030. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

Figure 2. Bangladesh: Indicators of Public Debt Under Alternative Scenarios, 2020−2030

PV of Debt-to-GDP Ratio

Most extreme shock: Natural disaster

PV of Debt-to-Revenue Ratio

Most extreme shock: Natural disaster

Debt Service-to-Revenue Ratio

Most extreme shock: Natural disaster

Legend:
- Baseline
- TOTAL public debt benchmark
- Most extreme shock 1/
- Historical scenario

Borrowing assumptions on additional financing needs resulting from the stress tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	13%	13%
Domestic medium and long-term	59%	59%
Domestic short-term	28%	28%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	2.9%	2.9%
Avg. maturity (incl. grace period)	19	19
Avg. grace period	5	5
Domestic MLT debt		
Avg. real interest rate on new borrowing	3.8%	3.8%
Avg. maturity (incl. grace period)	3	3
Avg. grace period	1	1
Domestic short-term debt		
Avg. real interest rate	1.4%	1.4%

* 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.

Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2030. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

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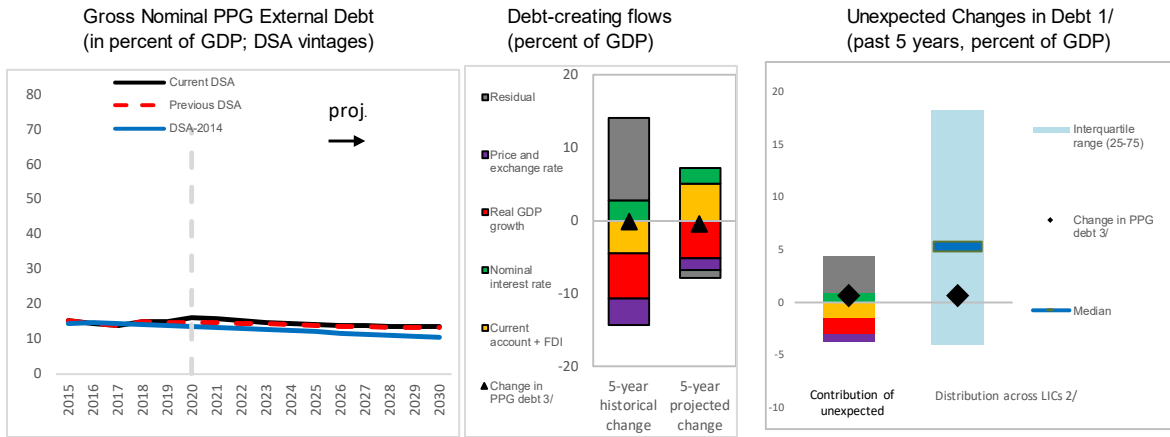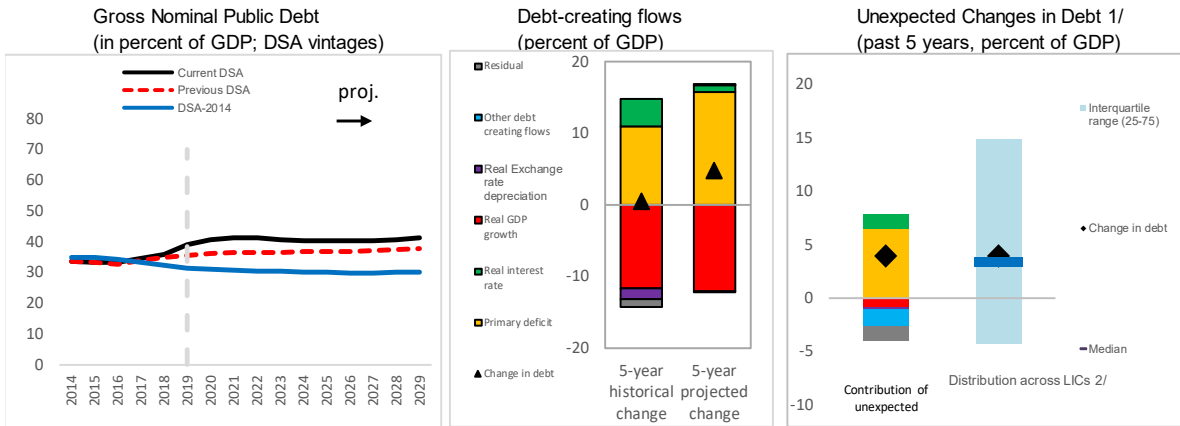
1/ Difference between anticipated and actual contributions on debt ratios.

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.
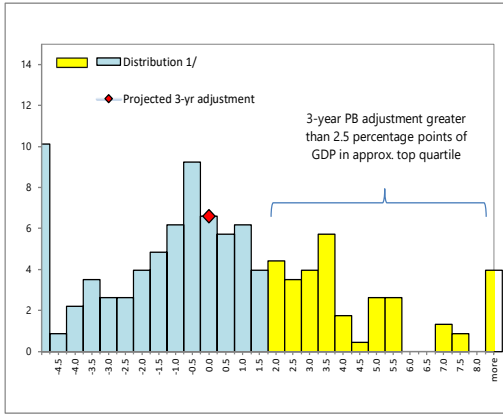
Fiscal Adjustment and Possible Growth Paths 1/

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).
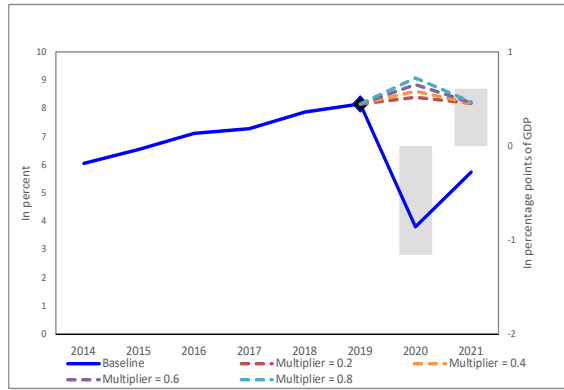
Public and Private Investment Rates
(percent of GDP)
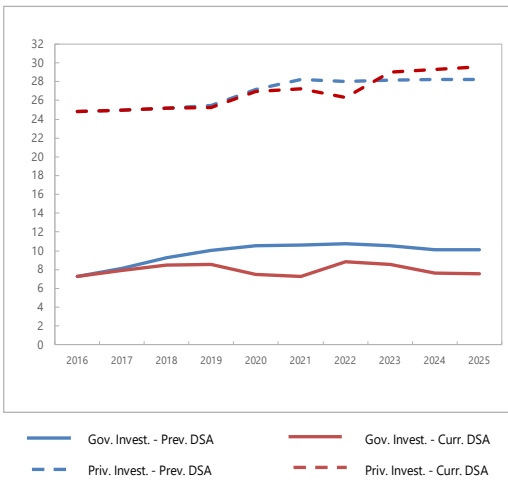
Contribution to Real GDP growth
(percent, 5-year average)

Table 1. Bangladesh: External Debt Sustainability Framework, Baseline Scenario, 2017−2040 1/

(In percent of GDP, unless otherwise indicated)

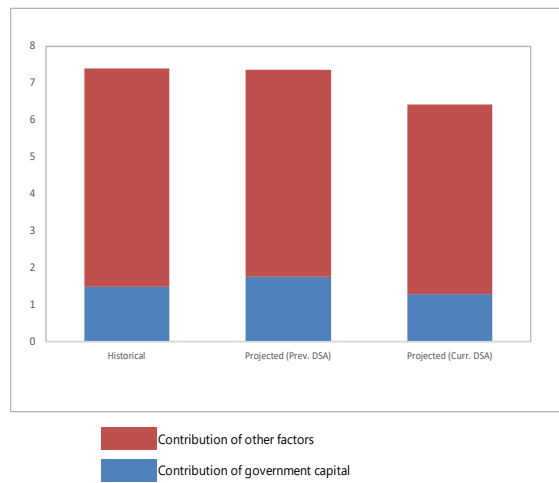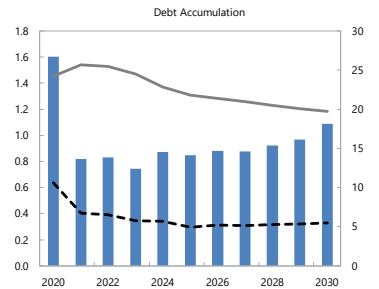|	Actual			Projections								Average 8/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2040	Historical	Projections
External debt (nominal) 1/	18.0	20.0	18.5	18.7	18.3	16.2	15.6	15.2	14.8	14.1	16.5	18.7	15.4
of which: public and publicly guaranteed (PPG)	13.7	14.9	14.9	16.0	15.8	15.3	14.7	14.4	14.0	13.6	16.3	15.9	14.4
Change in external debt	-0.5	2.0	-1.4	0.2	-0.5	-2.1	-0.6	-0.4	-0.4	0.0	0.0		
Identified net debt-creating flows	-2.2	1.2	-1.0	1.0	1.7	-0.4	0.0	-0.1	-0.2	-0.5	1.5	-2.9	0.0
Non-interest current account deficit	-0.1	2.8	1.1	1.7	2.9	1.4	1.5	1.5	1.5	1.6	4.5	-0.5	1.6
Deficit in balance of goods and services	5.1	8.2	6.3	7.0	7.5	5.4	5.3	5.1	4.9	4.2	5.7	6.8	5.2
Exports	15.1	14.9	15.4	12.6	11.6	12.2	12.0	11.8	11.6	10.8	11.4		
Imports	20.2	23.1	21.8	19.6	19.1	17.7	17.3	16.9	16.5	15.0	17.0		
Net current transfers (negative = inflow)	-5.3	-5.6	-5.6	-5.4	-4.6	-4.3	-4.0	-3.9	-3.7	-3.1	-1.6	-8.0	-3.9
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)	0.2	0.2	0.3	0.0	0.1	0.2	0.3	0.3	0.3	0.4	0.5	0.7	0.2
Net FDI (negative = inflow)	-0.7	-0.7	-0.9	-0.5	-0.8	-0.8	-0.8	-0.9	-1.0	-1.5	-2.5	-0.8	-1.0
Endogenous debt dynamics 2/	-1.5	-0.9	-1.2	-0.1	-0.5	-0.9	-0.7	-0.7	-0.6	-0.5	-0.5		
Contribution from nominal interest rate	0.6	0.7	0.6	0.5	0.5	0.4	0.4	0.3	0.4	0.4	0.5		
Contribution from real GDP growth	-1.2	-1.3	-1.5	-0.7	-1.0	-1.3	-1.1	-1.0	-1.0	-0.9	-1.0		
Contribution from price and exchange rate changes	-0.9	-0.3	-0.4	...	...	...	...	...	...	...	...		
Residual 3/	1.7	0.8	-0.4	-0.8	-2.1	-1.7	-0.6	-0.3	-0.3	0.5	-1.5	2.5	-0.4
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	...	...	10.7	11.7	11.6	11.3	11.0	10.8	10.7	10.6	13.9		
PV of PPG external debt-to-exports ratio	...	...	69.5	92.7	99.9	92.2	91.5	91.9	92.2	98.8	122.8		
PPG debt service-to-exports ratio	4.4	5.1	5.3	7.7	8.0	7.2	7.2	6.9	6.6	7.6	10.0		
PPG debt service-to-revenue ratio	6.5	7.9	8.4	11.9	10.7	9.2	8.8	8.3	7.8	8.6	11.5		
Gross external financing need (Million of U.S. dollars)	9043.8	18626.3	17297.3	16506.2	17600.9	12158.9	7997.3	7992.6	7698.1	8371.8	57151.8		
Key macroeconomic assumptions													
Real GDP growth (in percent)	7.3	7.9	8.2	3.8	5.7	8.0	7.3	7.3	7.3	6.8	6.5	6.8	6.7
GDP deflator in US dollar terms (change in percent)	5.1	1.7	2.1	1.6	2.0	2.0	2.0	2.0	2.0	2.0	2.6	4.4	2.0
Effective interest rate (percent) 4/	3.6	4.4	3.5	3.1	3.1	2.2	2.4	2.4	2.8	2.8	3.2	2.3	2.9
Growth of exports of G&S (US dollar terms, in percent)	1.8	8.5	14.5	-13.9	-0.8	16.1	7.5	7.5	7.5	7.5	9.7	10.7	5.6
Growth of imports of G&S (US dollar terms, in percent)	9.3	25.4	4.3	-5.0	4.8	2.0	7.0	7.0	7.0	7.0	12.0	11.4	5.3
Grant element of new public sector borrowing (in percent)	...	...	...	24.2	25.7	25.4	24.5	22.9	21.8	19.7	17.9	...	22.5
Government revenues (excluding grants, in percent of GDP)	10.2	9.6	9.7	8.2	8.7	9.7	9.9	9.8	9.8	9.6	9.9	10.1	9.5
Aid flows (in Million of US dollars) 5/	3358.0	6092.7	5977.0	1556.3	1571.3	1581.3	1581.3	1591.3	1591.3	1595.3	1607.3		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	0.6	0.4	0.4	0.3	0.3	0.3	0.3	0.4	...	0.4
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	24.4	26.1	26.0	25.0	23.4	22.4	20.1	18.0	...	22.9
Nominal GDP (Million of US dollars)	249,695	274,006	302,524	318,955	344,009	378,784	414,564	453,724	496,583	767,534	1,767,004		
Nominal dollar GDP growth	12.8	9.7	10.4	5.4	7.9	10.1	9.4	9.4	9.4	8.9	9.3	11.5	8.8
Memorandum items:													
PV of external debt 7/	...	...	14.4	14.4	14.1	12.3	11.9	11.7	11.4	11.1	14.1		
In percent of exports	...	...	93.1	114.2	121.6	100.1	98.8	98.7	98.5	103.2	124.6		
Total external debt service-to-exports ratio	24.7	29.2	32.4	31.3	25.8	21.5	10.4	9.9	9.3	9.6	10.7		
PV of PPG external debt (in Million of US dollars)			32457.2	37307.4	39923.9	42786.2	45609.9	49221.0	53059.3	81566.2	246348.2		
(PVt-PVt-1)/GDPt-1 (in percent)				1.6	0.8	0.8	0.7	0.9	0.8	1.1	1.7		
Non-interest current account deficit that stabilizes debt ratio	0.5	0.8	2.5	1.5	3.4	3.4	2.1	1.9	1.9	1.5	4.5		

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

Debt Accumulation

- Debt Accumulation
- Grant-equivalent financing (% of GDP)
- Grant element of new borrowing (% right scale)

External debt (nominal) 1/
of which: Private

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, 2017−2040

(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 6/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2040	Historical	Projections
Public sector debt 1/	**33.4**	**34.6**	**35.9**	**39.1**	**40.7**	**41.1**	**41.1**	**40.7**	**40.3**	**41.1**	**43.5**	**35.0**	**40.5**
of which: external debt	**13.7**	**14.9**	**14.9**	**16.0**	**15.8**	**15.3**	**14.7**	**14.4**	**14.0**	**13.6**	**16.3**	**15.9**	**14.4**
Change in public sector debt	0.0	1.2	1.3	3.2	1.6	0.4	0.0	-0.5	-0.3	0.4	-0.4		
Identified debt-creating flows	**-0.2**	**1.3**	**1.1**	**3.0**	**1.7**	**0.4**	**0.0**	**-0.4**	**-0.3**	**0.4**	**0.0**	**-0.1**	**0.5**
Primary deficit	**1.6**	**2.8**	**3.2**	**4.4**	**3.7**	**3.1**	**2.6**	**1.9**	**1.9**	**2.3**	**1.8**	**1.8**	**2.6**
Revenue and grants	10.2	9.7	9.7	8.2	8.7	9.7	9.9	9.8	9.8	9.6	9.9	10.2	9.5
of which: grants	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Primary (noninterest) expenditure	11.8	12.4	12.9	12.5	12.5	12.8	12.5	11.8	11.7	11.9	11.6	12.0	12.1
Automatic debt dynamics	**-1.9**	**-1.5**	**-2.1**	**-1.3**	**-2.1**	**-2.7**	**-2.5**	**-2.3**	**-2.2**	**-1.9**	**-1.7**		
Contribution from interest rate/growth differential	-1.6	-1.6	-2.1	-1.3	-2.1	-2.7	-2.5	-2.3	-2.2	-1.9	-1.7		
of which: contribution from average real interest rate	0.7	0.8	0.5	0.0	0.1	0.3	0.3	0.5	0.6	0.7	1.0		
of which: contribution from real GDP growth	-2.3	-2.4	-2.6	-1.3	-2.1	-3.0	-2.8	-2.8	-2.8	-2.6	-2.7		
Contribution from real exchange rate depreciation	-0.2	0.1	0.0	...	...	...	...	...	...	...	...		
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	**0.3**	**-0.1**	**0.2**	**0.2**	**-0.1**	**0.0**	**-0.1**	**-0.1**	**0.0**	**0.0**	**-0.4**	**-0.2**	**0.0**
Sustainability indicators													
PV of public debt-to-GDP ratio 2/	**...**	**...**	**31.9**	**35.0**	**36.7**	**37.4**	**37.6**	**37.3**	**37.2**	**38.4**	**41.1**		
PV of public debt-to-revenue and grants ratio	**...**	**...**	**327.7**	**428.6**	**420.2**	**385.2**	**380.0**	**379.2**	**379.6**	**399.3**	**416.9**		
Debt service-to-revenue and grants ratio 3/	**57.8**	**50.1**	**54.6**	**74.3**	**87.9**	**93.9**	**98.5**	**101.3**	**107.3**	**116.8**	**110.3**		
Gross financing need 4/	8.2	8.0	9.0	10.4	11.4	12.2	12.3	11.9	12.4	13.6	12.6		
Key macroeconomic and fiscal assumptions													
Real GDP growth (in percent)	7.3	7.9	8.2	3.8	5.7	8.0	7.3	7.3	7.3	6.8	6.5	6.8	6.7
Average nominal interest rate on external debt (in percent)	1.3	1.8	2.1	1.9	2.0	2.0	2.0	2.0	2.4	2.6	3.2	1.3	2.4
Average real interest rate on domestic debt (in percent)	3.9	4.9	2.8	-0.4	0.1	1.3	1.1	1.8	2.1	2.5	3.0	4.3	1.6
Real exchange rate depreciation (in percent, + indicates depreciation)	-1.8	0.5	-0.1	...	...	...	...	...	...	...	...	-2.4	...
Inflation rate (GDP deflator, in percent)	6.3	5.6	4.5	5.2	5.6	5.5	6.2	6.2	6.2	6.7	7.0	6.5	6.1
Growth of real primary spending (deflated by GDP deflator, in percent)	10.1	13.4	12.5	0.4	5.4	10.7	4.6	1.5	6.3	8.3	6.2	9.2	6.0
Primary deficit that stabilizes the debt-to-GDP ratio 5/	1.6	1.6	1.9	1.1	2.2	2.7	2.6	2.4	2.2	1.9	2.1	1.7	2.1
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/

- of which: local-currency denominated
- of which: foreign-currency denominated
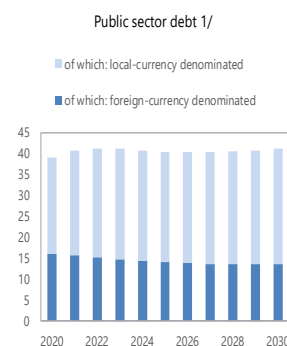
Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: The central government, central bank, government-guaranteed debt. 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, 2020-2030

	Projections 1/										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PV of debt-to GDP ratio											
Baseline	12	12	11	11	11	11	11	10	10	10	11
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	12	8	7	5	3	2	1	0	0	-1	-1
B. Bound Tests											
B1. Real GDP growth	12	12	12	11	11	11	11	11	11	11	11
B2. Primary balance	12	12	11	11	11	11	11	11	11	11	11
B3. Exports	12	13	14	14	13	13	13	13	12	12	12
B4. Other flows 3/	12	13	15	14	14	14	13	13	13	13	12
B5. Depreciation	12	15	11	11	11	11	11	11	11	11	12
B6. Combination of B1-B5	12	14	13	13	13	13	12	12	12	12	12
C. Tailored Tests											
C1. Combined contingent liabilities	12	12	12	12	12	12	12	12	12	12	13
C2. Natural disaster	12	13	13	13	13	13	13	13	13	14	14
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	55	55	55	55	55	55	55	55	55	55	55
PV of debt-to-exports ratio											
Baseline	93	100	92	92	92	92	93	94	95	96	99
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	93	73	54	40	28	17	8	1	-4	-8	-9
B. Bound Tests											
B1. Real GDP growth	93	100	92	92	92	92	93	94	95	96	99
B2. Primary balance	93	101	94	93	94	95	96	97	98	100	102
B3. Exports	93	118	135	133	133	133	133	132	132	132	133
B4. Other flows 3/	93	115	120	119	118	118	118	117	116	115	116
B5. Depreciation	93	100	73	72	73	74	75	77	79	82	86
B6. Combination of B1-B5	93	118	104	113	113	113	113	113	113	114	116
C. Tailored Tests											
C1. Combined contingent liabilities	93	106	100	101	103	105	107	109	111	113	116
C2. Natural disaster	93	113	107	109	113	115	118	121	124	127	131
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	240	240	240	240	240	240	240	240	240	240	240
Debt service-to-exports ratio											
Baseline	8	8	7	7	7	7	7	7	8	8	8
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	8	8	6	6	5	4	4	3	2	2	1
B. Bound Tests											
B1. Real GDP growth	8	8	7	7	7	7	7	7	8	8	8
B2. Primary balance	8	8	7	7	7	7	7	8	8	8	8
B3. Exports	8	9	9	9	9	9	9	10	11	11	11
B4. Other flows 3/	8	8	8	8	8	7	8	9	10	10	10
B5. Depreciation	8	8	7	7	6	6	7	7	6	6	6
B6. Combination of B1-B5	8	8	8	8	8	8	8	9	9	10	9
C. Tailored Tests											
C1. Combined contingent liabilities	8	8	7	7	7	7	8	8	8	8	8
C2. Natural disaster	8	8	8	8	8	7	8	8	9	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	21	21	21	21	21	21	21	21	21	21	21
Debt service-to-revenue ratio											
Baseline	12	11	9	9	8	8	8	9	9	9	9
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	12	10	8	7	6	5	5	3	3	2	1
B. Bound Tests											
B1. Real GDP growth	12	11	9	9	9	8	9	9	9	9	9
B2. Primary balance	12	11	9	9	8	8	8	9	9	9	9
B3. Exports	12	11	10	10	9	9	9	10	11	11	10
B4. Other flows 3/	12	11	10	10	9	9	9	10	11	11	11
B5. Depreciation	12	13	12	10	10	9	10	10	9	9	9
B6. Combination of B1-B5	12	11	10	10	9	9	9	10	10	11	10
C. Tailored Tests											
C1. Combined contingent liabilities	12	11	9	9	9	8	9	9	9	10	9
C2. Natural disaster	12	11	10	9	9	8	9	9	10	10	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	23	23	23	23	23	23	23	23	23	23	23

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, 2020-2030

	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PV of Debt-to-GDP Ratio											
Baseline	35	37	37	38	37	37	37	37	38	38	38
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	35	34	34	33	33	33	33	34	34	34	34
B. Bound Tests											
B1. Real GDP growth	35	37	39	39	39	39	39	40	40	41	41
B2. Primary balance	35	37	39	39	39	38	38	38	39	39	39
B3. Exports	35	38	40	40	40	39	39	39	39	39	40
B4. Other flows 3/	35	38	41	41	41	40	40	40	40	40	40
B5. Depreciation	35	37	37	36	35	35	34	33	33	33	33
B6. Combination of B1-B5	35	36	37	36	36	36	36	36	36	36	37
C. Tailored Tests											
C1. Combined contingent liabilities	35	44	44	44	43	43	43	42	42	43	43
C2. Natural disaster	35	47	47	47	47	46	46	46	46	46	46
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	70	70	70	70	70	70	70	70	70	70	70
PV of Debt-to-Revenue Ratio											
Baseline	429	420	385	380	379	380	382	384	388	392	399
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	429	392	348	338	339	340	343	345	349	352	356
B. Bound Tests											
B1. Real GDP growth	429	427	399	395	397	399	404	408	414	420	429
B2. Primary balance	429	428	400	393	392	392	394	396	399	403	409
B3. Exports	429	430	411	404	403	402	404	404	406	408	414
B4. Other flows 3/	429	441	421	414	411	410	412	412	413	414	419
B5. Depreciation	429	427	380	367	359	352	348	344	342	340	341
B6. Combination of B1-B5	429	410	377	367	365	364	366	368	372	376	383
C. Tailored Tests											
C1. Combined contingent liabilities	429	498	452	442	439	436	437	436	438	441	446
C2. Natural disaster	429	539	488	478	475	472	473	473	475	477	483
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	74	88	94	99	101	107	111	111	113	114	117
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	74	86	86	86	84	91	96	96	98	100	102
B. Bound Tests											
B1. Real GDP growth	74	89	97	102	106	113	118	119	121	123	127
B2. Primary balance	74	88	96	104	107	113	116	116	117	118	121
B3. Exports	74	88	94	99	102	108	112	112	114	116	118
B4. Other flows 3/	74	88	94	100	102	108	112	113	115	117	119
B5. Depreciation	74	83	90	92	95	100	105	104	105	106	108
B6. Combination of B1-B5	74	85	91	96	99	105	107	107	109	110	113
C. Tailored Tests											
C1. Combined contingent liabilities	74	88	117	125	132	130	133	132	131	131	133
C2. Natural disaster	74	89	128	139	148	143	147	145	144	144	145
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.