INTERNATIONAL DEVELOPMENT ASSOCIATION

INTERNATIONAL MONETARY FUND

SOMALIA

Joint World Bank-IMF Debt Sustainability Analysis

August 2019

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

and the International Monetary Fund (IMF)

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Somalia: Joint Bank-Fund Debt Sustainability Analysis

Risk of external debt distress:	In debt distress
Overall risk of debt distress	In debt distress
Granularity in the risk rating	Unsustainable
Application of judgment	No

This report presents the first official debt sustainability analysis undertaken for Somalia. Based on both external and public debt indicators, Somalia is in debt distress. Total public debt is very high—at $4.8 billion, or 101 percent of GDP at end-2018—nearly all of which is external (100 percent of GDP) (Tables 1 and 2). The finding that Somalia is in debt distress reflects the high external arrears on debt relative to GDP, which now represent 96 percent of the debt stock. While Somalia has no capacity to access new financing, its debt burden will continue to increase as late interest on arrears continues to accumulate. Under broadly steady state assumptions, Somalia's total public debt is expected to increase to around 128 percent of GDP by 2039. Key risks that affect the outlook include external financing, security, and climate, further highlighting the unsustainability of Somalia's current debt burden. Consequently, in the absence of debt relief, Somalia will remain in debt distress.

PUBLIC DEBT COVERAGE

1. **Public debt data coverage is limited to the central government.** There is no government guaranteed debt, there are no known liabilities of state-owned enterprises or subnational governments, and public-private partnerships do not exist. Given the nascent state of domestic financial institutions and local capital markets, domestic public debt does not exist beyond the accumulation of government arrears. While external obligations are currently undergoing a reconciliation process, available information is sufficient to undertake a preliminary debt sustainability analysis.

2. **Somalia's debt-carrying capacity is classified as weak.** This classification is guided by the composite indicator score, as determined by the World Bank's CPIA, the country's real GDP growth, import coverage of foreign exchange reserves, remittances as percent of GDP, and growth of the world economy.

Text Table 1. Somalia: Composite Indicator and Threshold Tables

Debt Carrying Capacity and Thresholds

Country	Somalia
Country Code	**726**

Debt Carrying Capacity	**Weak**

Final	Classification based on current vintage	Classification based on the previous vintage
Weak	Weak	Weak
	1.23	0.57

EXTERNAL debt burden thresholds	
PV of debt in percent of	
Exports	140
GDP	30
Debt service in percent of	
Exports	10
Revenue	14

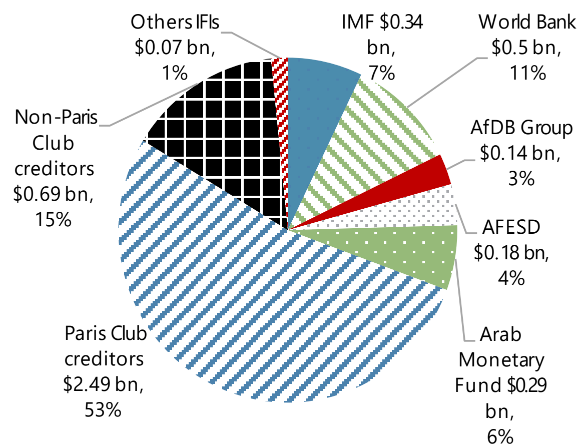
TOTAL public debt benchmark	
PV of total public debt in percent of GDP	35

Note: Calculated based on the most recent WEO vintage (April 2019).

BACKGROUND ON DEBT AND MACROECONOMIC DATA

3. **Somalia has not contracted any new external debt since the late 1980s; the existing debt is mainly due to official creditors.** The nominal level of indebtedness has risen steadily since 1991 reflecting the accumulation of arrears and late interest. Currently, of the $4.5 billion in arrears, $1.7 billion is composed of principal, $1.0 billion is unpaid interest, and $1.8 billion is late interest or fees.[1] Most is owed to Paris Club creditors (53 percent), followed by multilaterals (32 percent), and non-Paris Club bilateral creditors (15 percent) (see Text Figure 1). All domestic debt (1.5 percent of GDP) represents central government arrears.

Text Figure 1. External Debt Composition, end-2018



4. **Data limitation significantly constrain macroeconomic analysis, limiting the significance of the results provided by the standardized stress test in the LIC-DSF (see also paragraph 9).** The national accounts data contain only a relatively short time series (six years), which builds from expenditure-based estimates derived from household survey data (see staff report for further details). Substantial gaps are also present in balance-of-payments data, including on current account flows. Trade data are based on third party data and augmented by data for the Port of Mogadishu. Secondary transfers data are also derived from third parties and are cross-checked with Somali data which are improving. Direct investment data are derived from the real sector file but an FDI survey is under construction.

[1] Of the $191 million not in arrears, $31 million and $160 million are obligations to the African Development Fund and the International Development Fund, respectively.

MEDIUM- AND LONG-TERM ASSUMPTIONS

5. Somalia is a fragile state that is very vulnerable to security and climate shocks, although macroeconomic conditions are slowly improving. In the wake of a long civil war, Somalia's economic and human capital has been significantly degraded. The fragilities are accentuated by frequent climate shocks, which directly impact agricultural activities that account for the bulk of economic activity. These characteristics underpin staffs' tailored shocks. Nonetheless, important efforts have been made in recent years to improve social and macroeconomic stability, with substantial international support aiming to rebuild institutions. As a result, improving conditions have helped to ensure positive real growth rates, albeit at relatively modest average of about 2.5 percent (2013–18). These are expected to rise to around 3.5 percent over the medium term.

6. The baseline scenario broadly assumes a continuation of the status quo into the medium and long term. The baseline scenario assumes stable real growth of around 3.5 percent a year, moderately exceeding Somalia's 2.9 percent population growth rate since 2000,[2] and reflecting an anticipated positive impact of the successor SMP, which should help buttress macroeconomic stability and consolidate recent structural reforms. It is also assumed that the economy will remain fully dollarized, implying low inflation and no adverse nominal exchange rate movements. The trade balance is expected to remain highly negative, financed by official grants and remittances. The residual current account balance is assumed to be financed by foreign direct investment as Somalia has no access to other financing. Export growth will remain in line with overall economic growth. The fiscal stance is expected to remain in balance, given no access to new external or domestic debt financing, and no accumulation of new domestic arrears, as required under the new SMP. Even with these relatively benign assumptions, Somalia's debt stock would be expected to continue to increase in the absence of HIPC debt relief, given the accumulation of late interest and other penalties.[3]

EXTERNAL DEBT SUSTAINABILITY

7. Somalia's current external public debt is unsustainable and given the high share of debt relative to GDP in arrears, the country is in debt distress. Under the baseline assumptions, external debt will increase to about 128 percent of GDP by the end of the projection period.[4] Moreover, by 2039, external debt would reach around 480 percent of exports, and debt service would be over 80 percent of fiscal revenues. All these indicators substantially exceed Somalia's indicative thresholds (Tables 1 and 2, Text Figure 2).

8. The materialization of any risk scenarios would only aggravate the already unsustainable position. The application of the standard DSA stress test to Somalia is complicated by the short historical data series as well as severe structural breaks.

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[2] Derived from World Bank total population data for Somalia, 2000–2017.

[3] Staff currently have no specific information on penalties; this should be clarified through the debt reconciliation process.

[4] The projection period has been extended to 20 years from the standard 10 years.

9. Given the specifics of Somalia circumstances and, in particular, the binding financing constraint it faces, standard sensitivity tests have only limited relevance. The standardized tests embedded in the LIC-DSF generate a financing gap that is assumed to be filled by the accumulation of new debt. However, Somalia has no access to any formal debt financing so, in practice, any additional financing needs would be expected to be accommodated through lower fiscal expenditures, lower imports, or higher grants. In addition, the volatility and short time series of the data undermine the calculation of the standard deviations used to scale the tests. Nevertheless, the results of the standard tests are shown in Figures 1 and 2, and Tables 3 and 4.

10. Instead, staff have focused on assessing the potential impact of a number of tailored stress tests (Text Figure 2). These tailored tests reflect the risks identified in the risk assessment matrix (RAM) and focus instead on potential shocks to economic activity, but which take account of the financing constraint. These include the impact of a sustained deterioration in domestic security conditions and a climate shock. We also consider the impact of a general loss of confidence in reform momentum. For analytical purposes, the shocks are designed to materialize in the near term and would be expected to occur through changes in economic activity, export receipts, and fiscal revenues relative to the baseline, rather than in financing gaps.

- **External financing shock.** This scenario would be consistent with a loss of confidence in the government reform program, for example, if progress under the SMP or other reform programs were to deteriorate significantly, which would affect both donor engagement and investor confidence. In this scenario, development aid and FDI fall gradually to about half their current levels by 2024, thereafter stabilizing. Humanitarian aid and remittances, however, are assumed to remain stable. This loss of inflows reduces the scope for key development spending, leading to lower growth of about 2.0 percent by 2024, constraining fiscal revenues relative to the baseline. At this point, the lower level of GDP would imply that debt would be equivalent to 171 percent of GDP and 640 percent of exports, and debt service of around 120 percent of revenues by 2039.

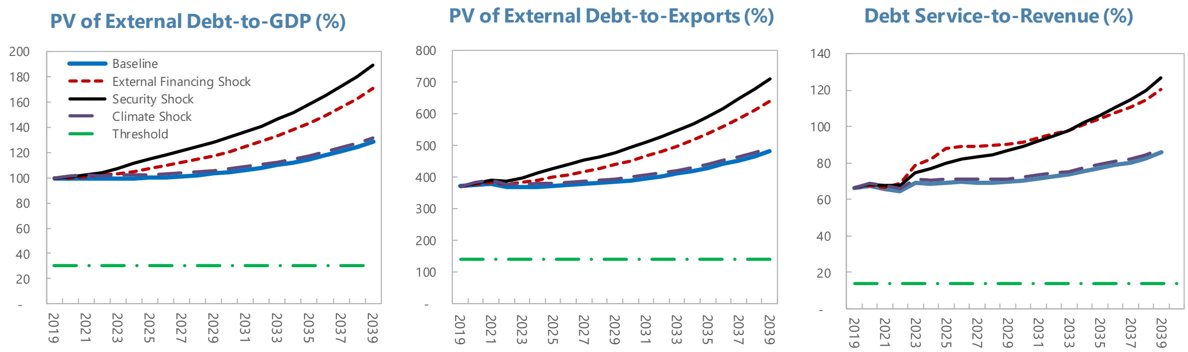
- **Security shock.** Under this scenario, a sustained deterioration in security conditions materializes and GDP slows even further to nil by 2024, followed by a modest recovery. Nonetheless, the effects of the security shock would continue to drag on longer-term growth, which would be weaker than under the baseline (at 1.8 percent). Continued donor support helps to support fiscal revenues in the short-run, but over the long run lower growth depresses the potential for domestic revenue mobilization. As a result, debt would reach 190 percent of GDP and 711 percent of exports, and debt service of 127 percent of revenues by 2039.

- **Climate shock.** Under this scenario, we assume a reoccurrence of drought akin to the 2017 episode. The effects of this shock are largely mitigated by increased mobilization of humanitarian aid. In this scenario, GDP growth slows immediately in the aftermath to 1 percent and then recovers to the baseline rate of growth (of 3.5 percent) after two years. With the shock dissipating quickly, the long-term impact on debt is small relative to the baseline (to 132 percent of GDP and 494 percent of exports, and debt service equivalent to 88 percent of fiscal revenues by 2039.

PUBLIC DEBT SUSTAINABILITY

11. Indicators of public debt are largely indistinguishable from the indicators for external debt. The conclusions with regards to external debt sustainability are relevant also for public debt sustainability, given that domestic debt is limited to a small stock of government arrears.

Text Figure 2. External Debt Shocks



CONCLUSION

12. Somalia external public debt and overall public debt are in distress. The assessment of external debt distress reflects the high level of external arrears relative to GDP, and indeed arrears are approaching the totality of the debt stock. The external debt and total public debt are already in breach of their indicative thresholds, and the trajectory deteriorates further in the medium and long term, even under relatively hopeful steady state assumptions. Key risks that affect the outlook include external financing, security, and confidence shocks, as well as the risk of higher interest rates, further highlighting the unsustainability of Somalia's current debt burden. Exiting this unsustainable debt situation will require debt relief, and the authorities should continue to pursue the HIPC debt relief process as a priority. Successful completion of that process holds the prospect of possibly renewed access to regular debt financing.

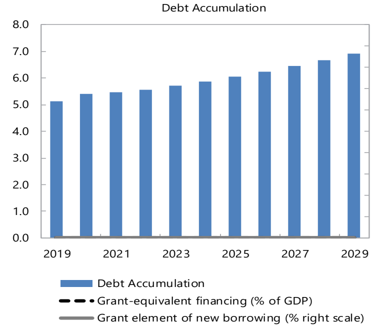
Authorities' Views

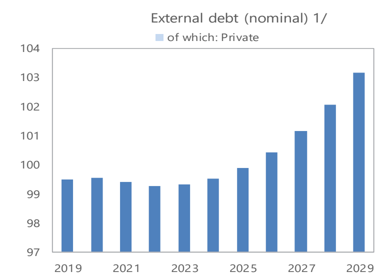
13. The authorities broadly agreed with the results of the DSA. They concurred with the underlying macroeconomic assumptions, the use of tailored shocks in response to data limitations, the projected debt paths within the analysis, and the headline debt sustainability rating. They stressed that restoring debt to a sustainable path and realizing poverty reducing real GDP growth will hinge upon completing the HIPC debt relief process. To make fast progress to that end, the authorities have prioritized efforts to fulfil the necessary prerequisites. The authorities also recognized the importance of early preparations to build debt management capacity to ensure that debt remains sustainable post-HIPC, and plan to intensify efforts to strengthen monitoring capacity, clarify the power to contract debt at the central and general government levels, and develop frameworks for the issuance of government guarantees.

Table 1. Somalia: External Debt Sustainability Framework, Baseline Scenario, 2018–2039 (in percent of GDP, unless otherwise indicated)

	Actual	Projections								Average 8/	
	2018	2019	2020	2021	2022	2023	2024	2029	2039	Historical	Projections
External debt (nominal) 1/	99.5	99.5	99.5	99.4	99.3	99.3	99.5	103.2	128.2	29.0	100.3
of which: public and publicly guaranteed (PPG)	99.5	99.5	99.5	99.4	99.3	99.3	99.5	103.2	128.2	29.0	100.3
Change in external debt	-3.8	0.0	0.1	-0.1	-0.1	0.0	0.2	1.1	3.9		
Identified net debt-creating flows	-5.0	-3.5	-3.9	-4.2	-3.5	-3.3	-3.3	-3.4	-4.1	-5.0	-3.5
Non-interest current account deficit	8.2	3.9	3.4	3.3	4.0	4.0	3.8	2.6	-1.6	5.5	3.5
Deficit in balance of goods and services	73.7	72.6	71.1	71.4	70.6	68.8	67.2	59.7	46.9	55.4	66.8
Exports	25.9	26.8	26.5	26.2	27.0	27.0	26.9	26.8	26.6		
Imports	99.6	99.4	97.6	97.6	97.6	95.8	94.1	86.5	73.6		
Net current transfers (negative = inflow)	-66.1	-65.0	-63.8	-64.1	-62.4	-59.8	-58.1	-50.7	-38.0	-50.7	-58.3
of which: official	-36.9	-36.3	-34.7	-34.7	-33.7	-32.5	-31.4	-26.4	-18.7		
Other current account flows (negative = net inflow)	0.6	-3.6	-3.9	-4.0	-4.1	-5.0	-5.2	-6.4	-10.5	0.1	-5.0
Net FDI (negative = inflow)	-8.6	-9.0	-8.9	-9.0	-9.0	-9.0	-9.0	-9.0	-8.9	-5.5	-9.0
Endogenous debt dynamics 2/	-4.6	1.6	1.6	1.4	1.5	1.7	1.9	3.0	6.4		
Contribution from nominal interest rate	0.1	4.3	4.6	4.7	4.8	5.0	5.2	6.4	10.5		
Contribution from real GDP growth	-2.8	-2.7	-3.0	-3.3	-3.3	-3.3	-3.3	-3.4	-4.1		
Contribution from price and exchange rate changes	-1.9	...	...	...	...	...	...	...	...		
Residual 3/	1.2	3.5	4.0	4.1	3.3	3.3	3.5	4.5	8.0	1.2	3.8
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	98.6	98.7	98.9	98.9	98.9	99.1	99.4	103.2	128.3		
PV of PPG external debt-to-exports ratio	380.1	368.3	373.1	377.5	366.7	367.4	368.9	384.9	481.7		
PPG debt service-to-exports ratio	2.0	17.7	18.9	19.4	19.1	19.7	20.4	24.4	39.5		
PPG debt service-to-revenue ratio	13.3	66.4	67.5	65.8	64.2	63.8	63.3	64.7	81.0		
Gross external financing need (Million of U.S. dollars)	3.5	-17.6	-27.0	-32.2	9.3	18.5	17.6	12.2	4.6		
Key macroeconomic assumptions											
Real GDP growth (in percent)	2.8	2.9	3.2	3.5	3.5	3.5	3.5	3.5	3.5	-3.5	3.4
GDP deflator in US dollar terms (change in percent)	1.8	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	1.3	2.0
Effective interest rate (percent) 4/	0.1	4.6	4.9	5.0	5.1	5.3	5.5	6.6	8.9	0.1	5.6
Growth of exports of G&S (US dollar terms, in percent)	23.1	8.6	4.1	4.3	8.7	5.6	5.5	5.5	5.5	5.8	5.9
Growth of imports of G&S (US dollar terms, in percent)	1.7	4.8	3.4	5.5	5.6	3.7	3.7	3.9	3.1	5.8	4.2
Grant element of new public sector borrowing (in percent)	...									...	...
Government revenues (excluding grants, in percent of GDP)	3.9	4.2	4.5	4.9	5.2	5.6	6.0	7.7	11.1	2.4	5.9
Aid flows (in Million of US dollars) 5/	86.7	147.9	152.8	157.7	162.9	168.3	173.9	204.6	283.3		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	...	...	...	...	...	...	...	...
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	...	...	...	...	...	...	...	...
Nominal GDP (Million of US dollars)	4,721	4,958	5,218	5,507	5,816	6,143	6,488	8,526	14,724		
Nominal dollar GDP growth	4.7	5.0	5.2	5.5	5.6	5.6	5.6	5.6	5.6	-2.0	5.5
Memorandum items:											
PV of external debt 7/	98.6	98.7	98.9	98.9	98.9	99.1	99.4	103.2	128.3		
In percent of exports	380.1	368.3	373.1	377.5	366.7	367.4	368.9	384.9	481.7		
Total external debt service-to-exports ratio	2.0	17.7	18.9	19.4	19.1	19.7	20.4	24.4	39.5		
PV of PPG external debt (in Million of US dollars)	4652.4	4894.8	5162.9	5448.5	5754.2	6085.8	6446.0	8802.0	18891.9		
(PVt-PVt-1)/GDPt-1 (in percent)		5.1	5.4	5.5	5.6	5.7	5.9	6.9	11.1		
Non-interest current account deficit that stabilizes debt ratio	12.0	3.9	3.3	3.4	4.2	4.0	3.6	1.5	-5.5		

Definition of external/domestic debt	Residency-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) + Ɛα (1+r)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, ρ = growth rate of GDP deflator in U.S. dollar terms, Ɛ=nominal appreciation of the local currency, and α= share of local currency-denominated external debt in total external debt.

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.

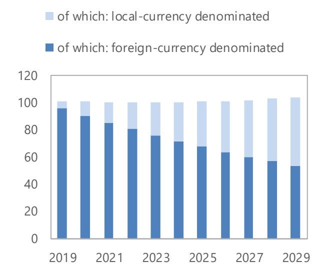
8/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

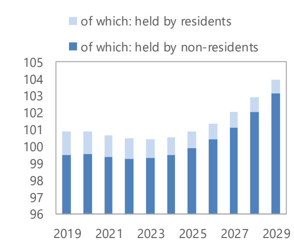
Table 2. Somalia: Public Sector Sustainability Framework, Baseline Scenario, 2018–2039 (in percent of GDP, unless otherwise indicated)

	Actual	Projections								Average 6/	
	2018	2019	2020	2021	2022	2023	2024	2029	2039	Historical	Projections
Public sector debt 1/	**101.0**	**100.9**	**100.9**	**100.6**	**100.5**	**100.4**	**100.6**	**104.0**	**128.7**	**30.2**	**101.4**
of which: external debt	**99.5**	**99.5**	**99.5**	**99.4**	**99.3**	**99.3**	**99.5**	**103.2**	**128.2**	**29.0**	**100.3**
Change in public sector debt	-3.9	-0.1	0.0	-0.2	-0.2	0.0	0.1	1.1	3.9		
Identified debt-creating flows	**-4.7**	**-0.7**	**-0.9**	**-1.3**	**-1.6**	**-1.5**	**-1.6**	**-2.3**	**-4.0**	**-4.7**	**-1.6**
Primary deficit	**0.0**	**-0.3**	**-0.3**	**-0.3**	**-0.4**	**-0.2**	**-0.3**	**-0.4**	**-0.1**	**0.1**	**-0.3**
Revenue and grants	5.7	7.2	7.4	7.7	8.0	8.3	8.7	10.1	13.0	**3.7**	**8.6**
of which: grants	1.8	3.0	2.9	2.9	2.8	2.7	2.7	2.4	1.9		
Primary (noninterest) expenditure	5.7	6.9	7.1	7.4	7.7	8.1	8.4	9.7	12.9	**3.8**	**8.3**
Automatic debt dynamics	**-4.6**	**-0.4**	**-0.6**	**-1.0**	**-1.2**	**-1.3**	**-1.4**	**-1.9**	**-3.9**		
Contribution from interest rate/growth differential	222.5	-9.5	6.0	1.2	-2.7	0.4	0.2	-0.7	-3.2		
of which: contribution from average real interest rate	225.3	-6.6	9.2	4.6	0.7	3.8	3.6	2.7	1.0		
of which: contribution from real GDP growth	-2.9	-2.8	-3.1	-3.4	-3.4	-3.4	-3.4	-3.5	-4.2		
Contribution from real exchange rate depreciation	-227.1	...	...	...	...	...	...	...	...		
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**
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)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Residual	**0.8**	**9.7**	**-5.7**	**-1.1**	**2.9**	**-0.2**	**0.2**	**2.2**	**7.2**	**0.8**	**1.2**
Sustainability indicators											
PV of public debt-to-GDP ratio 2/	**100.0**	**100.1**	**100.3**	**100.2**	**100.1**	**100.2**	**100.4**	**104.0**	**128.8**		
PV of public debt-to-revenue and grants ratio	**1,747.5**	**1,399.5**	**1,349.9**	**1,297.9**	**1,245.4**	**1,202.1**	**1,160.0**	**1,031.2**	**990.2**		
Debt service-to-revenue and grants ratio 3/	**9.1**	**66.4**	**67.5**	**65.8**	**64.2**	**63.8**	**63.3**	**64.7**	**81.0**		
Gross financing need 4/	0.5	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Key macroeconomic and fiscal assumptions											
Real GDP growth (in percent)	2.8	2.9	3.2	3.5	3.5	3.5	3.5	3.5	3.5	**-3.5**	**3.4**
Average nominal interest rate on external debt (in percent)	0.1	4.6	4.9	5.0	5.1	5.3	5.5	6.6	8.9	**0.1**	**5.6**
Average real interest rate on domestic debt (in percent)	-1.8	-2.0	-1.9	-1.9	-2.0	-2.0	-2.0	-2.0	-2.0	**-1.3**	**-2.0**
Real exchange rate depreciation (in percent, + indicates depreciation)	-69.4	...	...	...	...	...	...	...	...	**85.5**	**...**
Inflation rate (GDP deflator, in percent)	1.8	2.1	2.0	2.0	2.0	2.0	2.0	2.0	2.0	**2.1**	**2.0**
Growth of real primary spending (deflated by GDP deflator, in percent)	-10.8	24.3	6.7	8.0	7.0	9.3	7.3	7.1	5.3	**19.5**	**8.7**
Primary deficit that stabilizes the debt-to-GDP ratio 5/	3.8	-0.2	-0.3	-0.1	-0.2	-0.2	-0.4	-1.4	-4.0	**-32.9**	**-0.6**
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?	**No**

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: The central government plus social security, central bank, government-guaranteed debt . Definition of external debt is Residency-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.

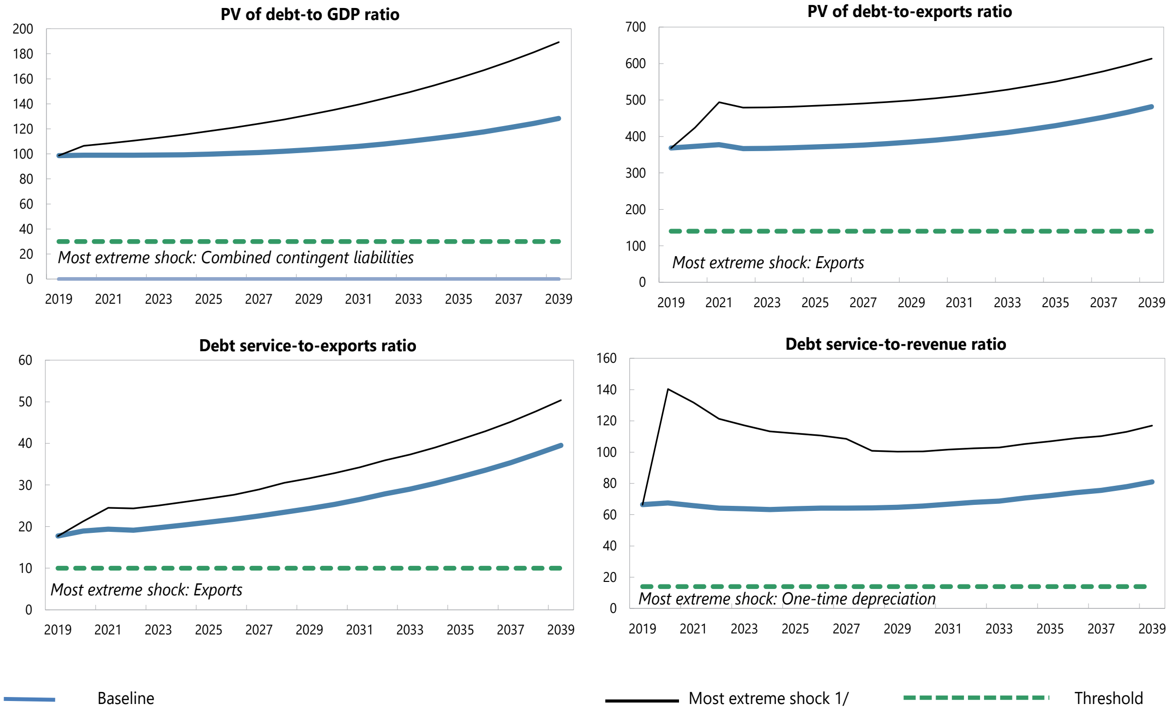
3/ Debt service is defined as the sum of interest and amortization of medium and long-term, and short-term debt.

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.

Figure 1. Somalia: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2019–2029



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

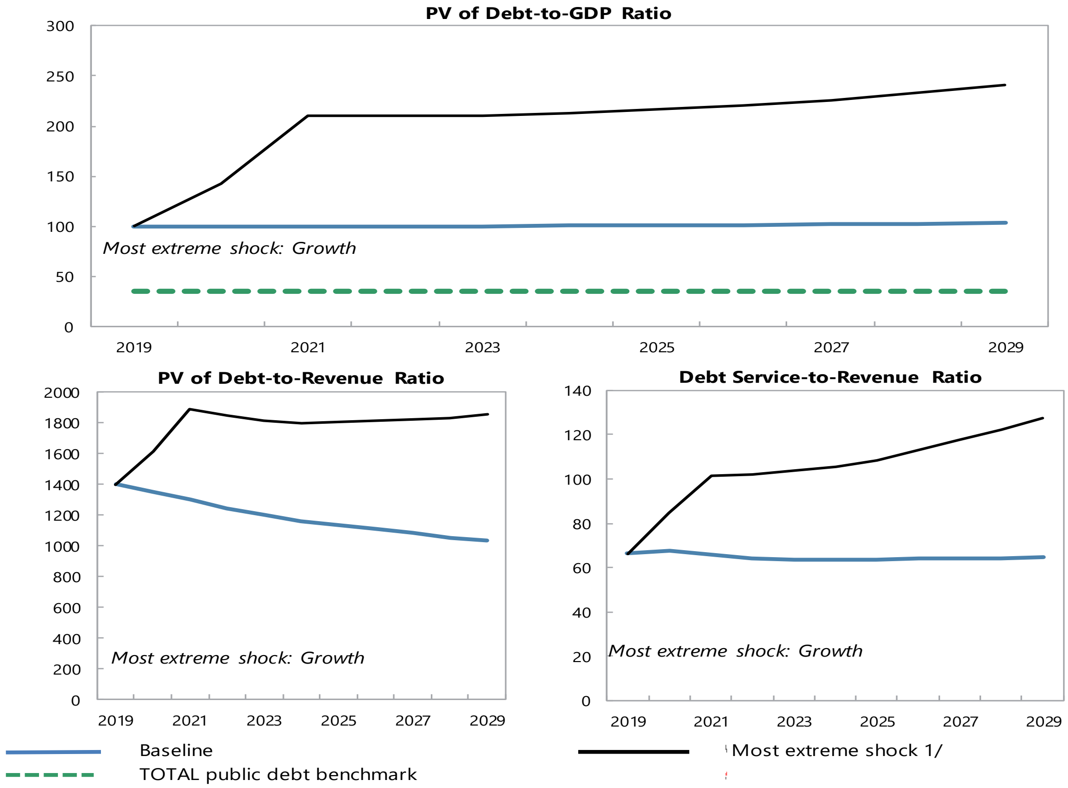
Borrowing assumptions on additional financing needs resulting from the stress tests*	Default	User defined
Shares of marginal debt		
External PPG MLT debt	100%	
Terms of marginal debt		
Avg. nominal interest rate on new borrowing in USD	0.0%	0.8%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	1	38
Avg. grace period	0	6

* 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 2029. 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. Somalia: Indicators of Public Debt under Alternative Scenarios, 2019–2029



Borrowing assumptions on additional financing needs resulting from the stress tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	100%	100%
Domestic medium and long-term	0%	0%
Domestic short-term	0%	0%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	0.0%	0.8%
Avg. maturity (incl. grace period)	1	38
Avg. grace period	0	6
Domestic MLT debt		
Avg. real interest rate on new borrowing	0.0%	0.0%
Avg. maturity (incl. grace period)	1	1
Avg. grace period	0	0
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.

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 2029. 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.

Table 3. Somalia: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2019–2029
(in percent)

	Projections 1/										
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
PV of debt-to GDP ratio											
Baseline	99	99	99	99	99	99	100	100	101	102	103
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2029 2/	99	102	105	108	111	114	117	121	125	129	134
B. Bound Tests											
B1. Real GDP growth	99	101	104	104	104	105	105	106	107	108	109
B2. Primary balance	99	103	106	108	110	113	116	119	122	125	128
B3. Exports	99	102	106	106	106	106	106	107	108	108	109
B4. Other flows 3/	99	101	104	104	104	104	104	105	106	106	107
B5. Depreciation	99	125	115	115	116	116	117	118	119	120	122
B6. Combination of B1-B5	99	110	114	114	114	114	114	115	115	116	117
C. Tailored Tests											
C1. Combined contingent liabilities	99	106	109	111	113	115	118	121	124	128	131
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	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	30	30	30	30	30	30	30	30	30	30	30
PV of debt-to-exports ratio											
Baseline	368	373	377	367	367	369	371	374	377	380	385
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2029 2/	368	383	400	399	410	422	436	450	466	482	499
B. Bound Tests											
B1. Real GDP growth	368	373	377	367	367	369	371	374	377	380	385
B2. Primary balance	368	390	404	401	410	420	430	441	453	465	478
B3. Exports	368	424	494	479	480	482	484	487	491	494	499
B4. Other flows 3/	368	382	396	384	385	386	388	390	393	396	399
B5. Depreciation	368	373	349	339	341	342	345	348	351	356	362
B6. Combination of B1-B5	368	411	398	432	433	434	436	439	441	444	448
C. Tailored Tests											
C1. Combined contingent liabilities	368	401	414	410	419	429	439	450	462	475	489
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	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	140	140	140	140	140	140	140	140	140	140	140
Debt service-to-exports ratio											
Baseline	18	19	19	19	20	20	21	22	23	23	24
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2029 2/	18	19	20	20	21	22	23	24	25	27	29
B. Bound Tests											
B1. Real GDP growth	18	19	19	19	20	20	21	22	23	23	24
B2. Primary balance	18	19	20	20	20	21	22	23	24	26	27
B3. Exports	18	21	24	24	25	26	27	28	29	31	32
B4. Other flows 3/	18	19	20	19	20	21	21	22	23	24	25
B5. Depreciation	18	19	19	19	19	20	21	21	22	22	23
B6. Combination of B1-B5	18	20	22	22	22	23	24	25	26	27	28
C. Tailored Tests											
C1. Combined contingent liabilities	18	19	20	20	20	21	22	23	24	25	26
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	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	10	10	10	10	10	10	10	10	10	10	10
Debt service-to-revenue ratio											
Baseline	66	67	66	64	64	63	64	64	64	64	65
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2029 2/	66	112	107	102	100	98	98	98	98	99	100
B. Bound Tests											
B1. Real GDP growth	66	114	110	104	100	97	95	94	92	90	89
B2. Primary balance	114	112	106	101	97	94	94	94	94	94	94
B3. Exports	66	113	108	102	99	95	94	93	92	91	90
B4. Other flows 3/	66	111	105	100	96	93	92	90	90	90	88
B5. Depreciation	66	140	132	121	117	113	112	111	109	101	100
B6. Combination of B1-B5	66	119	115	109	105	101	100	98	99	98	97
C. Tailored Tests											
C1. Combined contingent liabilities	114	112	107	101	98	95	94	93	92	90	89
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	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	14	14	14	14	14	14	14	14	14	14	14

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. Somalia: Sensitivity Analysis for Key Indicators of Public Debt, 2019–2029 (in percent)

	Projections 1/										
	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029
	PV of Debt-to-GDP Ratio										
Baseline	**100**	**100**	**100**	**100**	**100**	**100**	**101**	**101**	**102**	**103**	**104**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2029 2/	**100**	**102**	**108**	**114**	**122**	**130**	**140**	**151**	**164**	**178**	**195**
B. Bound Tests											
B1. Real GDP growth	**100**	**142**	**210**	**210**	**211**	**213**	**216**	**221**	**226**	**233**	**240**
B2. Primary balance	**100**	**96**	**95**	**93**	**92**	**92**	**92**	**92**	**93**	**95**	**96**
B3. Exports	**100**	**102**	**104**	**104**	**104**	**104**	**104**	**105**	**106**	**106**	**107**
B4. Other flows 3/	**100**	**103**	**105**	**105**	**105**	**105**	**105**	**106**	**106**	**107**	**108**
B5. Depreciation	**100**	**125**	**121**	**117**	**114**	**112**	**110**	**108**	**107**	**107**	**107**
B6. Combination of B1-B5	**100**	**108**	**121**	**118**	**114**	**111**	**108**	**106**	**104**	**104**	**103**
C. Tailored Tests											
C1. Combined contingent liabilities	**100**	**99**	**97**	**96**	**95**	**94**	**94**	**95**	**96**	**97**	**99**
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	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	35	35	35	35	35	35	35	35	35	35	35
	PV of Debt-to-Revenue Ratio										
Baseline	1,400	1,350	1,298	1,245	1,202	1,160	1,135	1,112	1,082	1,053	1,031
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2029 2/	1,400	1,344	1,327	1,318	1,321	1,331	1,366	1,408	1,451	1,500	1,563
B. Bound Tests											
B1. Real GDP growth	1,400	1,613	1,886	1,844	1,816	1,796	1,801	1,813	1,822	1,834	1,857
B2. Primary balance	1,400	1,293	1,225	1,159	1,106	1,059	1,034	1,012	988	967	954
B3. Exports	1,400	1,368	1,347	1,292	1,247	1,202	1,176	1,151	1,119	1,086	1,061
B4. Other flows 3/	1,400	1,382	1,361	1,305	1,258	1,214	1,187	1,162	1,128	1,095	1,069
B5. Depreciation	1,400	1,744	1,617	1,502	1,407	1,322	1,266	1,216	1,164	1,117	1,080
B6. Combination of B1-B5	1,400	1,390	1,410	1,321	1,241	1,167	1,114	1,069	1,024	985	954
C. Tailored Tests											
C1. Combined contingent liabilities	1,400	1,332	1,258	1,190	1,136	1,088	1,061	1,039	1,015	994	982
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	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	66	67	66	64	64	63	64	64	64	64	65
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2019-2029 2/	66	71	72	74	78	82	87	94	101	108	116
B. Bound Tests											
B1. Real GDP growth	66	84	101	102	104	105	108	113	117	122	127
B2. Primary balance	66	68	67	65	65	65	66	68	69	70	72
B3. Exports	66	67	66	65	64	64	64	65	65	67	67
B4. Other flows 3/	66	67	66	65	65	64	65	65	66	67	67
B5. Depreciation	66	78	90	89	88	88	89	92	94	96	98
B6. Combination of B1-B5	66	72	77	76	76	76	76	77	78	78	79
C. Tailored Tests											
C1. Combined contingent liabilities	66	68	67	66	66	66	66	67	67	68	68
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	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.