INTERNATIONAL DEVELOPMENT ASSOCIATION
INTERNATIONAL MONETARY FUND

SIERRA LEONE

Joint World Bank-IMF Debt Sustainability Analysis[1]
June 2020

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

and the International Monetary Fund (IMF)
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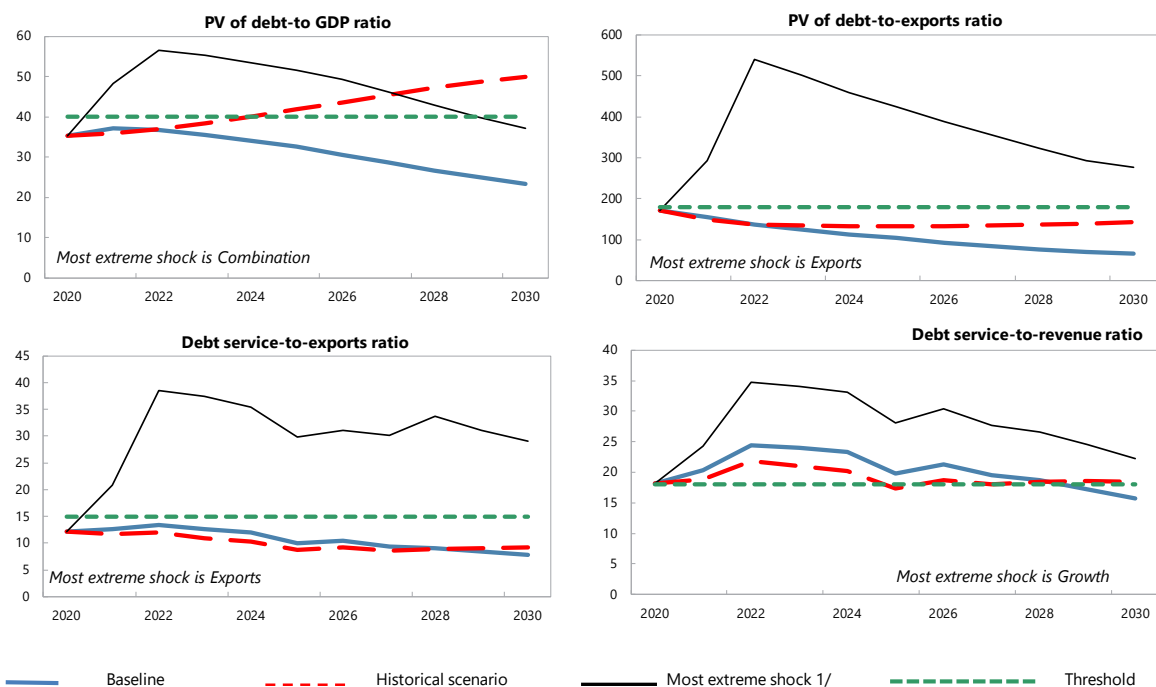| Sierra Leone: Joint Bank-Fund Debt Sustainability Analysis	
Risk of external debt distress	High
Overall risk of debt distress	High
Granularity in the risk rating	Sustainable
Application of judgment	No
Macroeconomic projections	This DSA incorporates the expected economic impact of the COVID-19 pandemic and policy response, with a sharp decline in growth (down more than 7 percentage points relative to pre-crisis projections) and exports (down one-third), and the fiscal deficit widens (by 3½ percentage points of GDP, including expected additional budget support grants and debt relief) in 2020. Growth is assumed to gradually rebound in 2021. The outlook is clouded with uncertainty and risks.
Financing strategy	With little fiscal space and a shallow domestic banking system, highly concessional financing and grants from development partners will be essential to meet the urgent and large financing gaps arising from the pandemic. This DSA incorporates a proposed RCF disbursement equivalent to 50 percent of quota.
Realism tools flagged	No
Mechanical risk rating under the external DSA	High
Mechanical risk rating under the public DSA	High

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[1] The DSA follows the IMF and World Bank Staff Guidance Note on the Bank-Fund Debt Sustainability Framework for Low-Income Countries (February 2018). The Composite Indicator (CI) score of 2.693 based on the October 2019 WEO and the World Bank's 2018 CPIA (released in July 2019) indicates a medium debt-carrying capacity. The corresponding external debt indicative thresholds are: 40 percent for the present value (PV) of debt-to-GDP ratio; 180 percent for the PV of debt-to-exports ratio; 15 percent for the debt service-to-exports ratio; and 18 percent for the debt service-to-revenue ratio. Debt coverage remains unchanged from the previous DSA.

While Sierra Leone's debt remains sustainable, the risk of external and overall debt distress remains high—and the COVID-19 shock has elevated risks. The baseline macroeconomic scenario reflects both the deleterious effects of the COVID-19 shock on growth, exports, and revenues, and measures to combat the health and socio-economic effects of the pandemic. External and domestic financing needs have widened sharply in 2020, worsening all external and public finance indicators relative to the last DSA in March 2020, despite additional grant assistance from development partners. This DSA also assumes that the external financing gap created by the shock will be almost entirely filled by disbursement of the Rapid Credit Facility (RCF) (which would be on-lent to support the budget) and additional budget and project support grants from the World Bank after the COVID-19 shock. It also assumes debt service relief under the IMF's Catastrophe Containment and Relief Trust (CCRT), and that the authorities are seeking temporary relief under the Debt Service Suspension Initiative supported by the G20 and Paris Club. The authorities are continuing discussions with development partners to finalize support to address the relatively small remaining gap.

The setback to revenue mobilization under the baseline is long-lasting, and results in a larger and more prolonged breach of the external-debt-service-to-revenue ratio relative to the previous DSA. The PV of public-debt-to-GDP tracks downward from 2021, but remains above the threshold until 2024. While other indicators also deteriorate with the COVID-19 shock, they remain below the thresholds. The public-debt-service-to-revenue ratio and gross financing need increase over the medium term, indicating vulnerabilities in liquidity. The stress scenarios highlight the sensitivities to shocks to exports and growth (and their combination), resulting in significant and persistent breaches in many indicators.

Reducing debt requires sustained adjustment underpinned by strengthened public financial management, effective expenditure prioritization, and redoubling structural reform efforts. The authorities remain committed to continuing revenue mobilization reforms in the wake of near-term COVID-19 setbacks, which is key for reducing risks to sustainability. Still, the required fiscal adjustment will be challenging and steadily reducing recourse to domestic debt limits the scope for public investment relative to the pre-crisis outlook. Thus, while external borrowing should continue to rely on concessional financing, substantial additional grant support will be essential to boosting post-COVID recovery efforts, maintaining sustainability, and continuing to meet Sierra Leone's large development needs.

Figure 1. Sierra Leone: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2020–30

PV of debt-to GDP ratio

Most extreme shock is Combination

PV of debt-to-exports ratio

Most extreme shock is Exports

Debt service-to-exports ratio

Most extreme shock is Exports

Debt service-to-revenue ratio

Most extreme shock is Growth

—— Baseline	– – – Historical scenario	—— Most extreme shock 1/	– – – Threshold

Customization of Default Settings		
	Size	Interactions
Tailored Tests		
Combined CLs	Yes	
Natural Disasters	n.a.	n.a.
Commodity Prices 2/	No	No
Market Financing	n.a.	n.a.

Borrowing Assumptions for 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	0.8%	0.8%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	29	29
Avg. grace period	5	5

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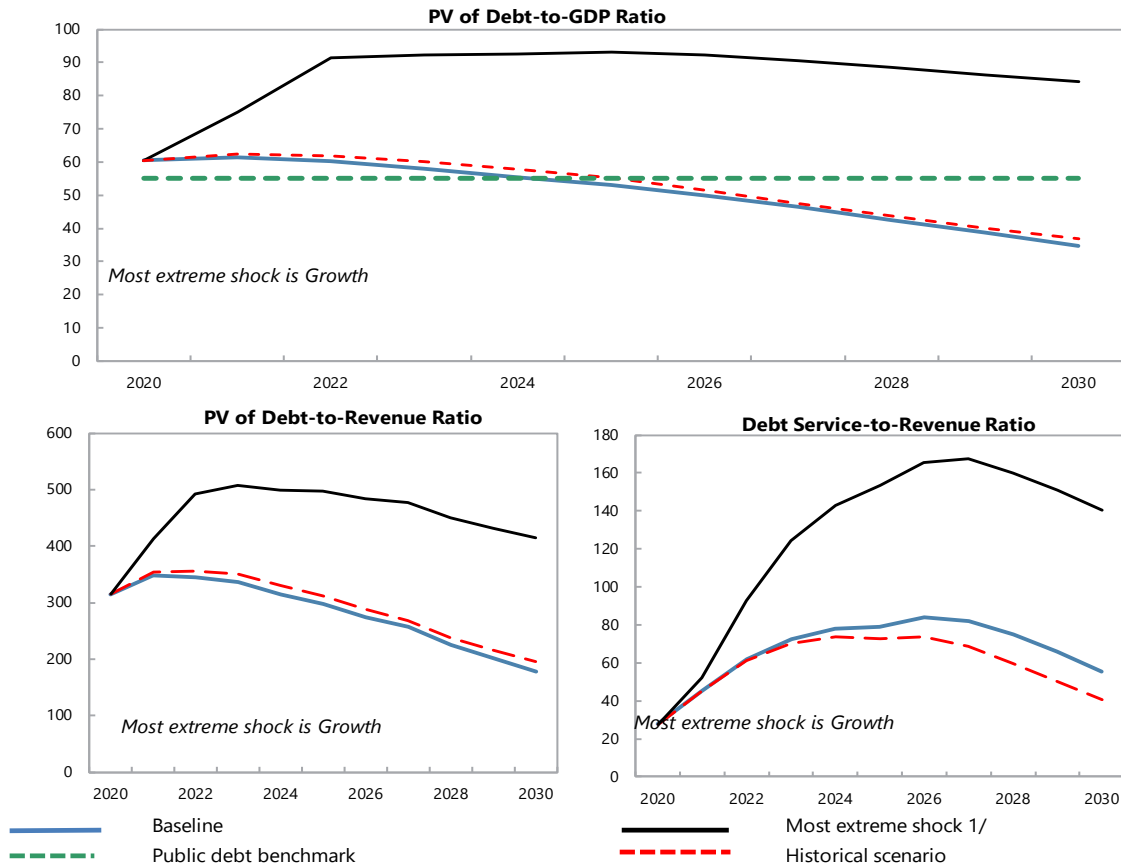
* Note: All the additional financing needs generated by the shocks under the stress tests are assumed to be covered by PPG external MLT debt in the external DSA. Default terms of marginal debt are based on baseline 10-year projections.

Sources: Sierra Leonean authorities; and IMF staff estimates and projections.

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

2/ The magnitude of shocks used for the commodity price shock stress test are based on the commodity prices outlook prepared by the IMF research department.

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Figure 2. Sierra Leone: Indicators of Public Debt Under Alternative Scenarios, 2020–30

PV of Debt-to-GDP Ratio

Most extreme shock is Growth

PV of Debt-to-Revenue Ratio

Most extreme shock is Growth

Debt Service-to-Revenue Ratio

Most extreme shock is Growth

Baseline	Most extreme shock 1/
Public debt benchmark	Historical scenario

Borrowing Assumptions for Stress Tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	32%	32%
Domestic medium and long-term	0%	0%
Domestic short-term	68%	68%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	0.8%	0.8%
Avg. maturity (incl. grace period)	29	29
Avg. grace period	5	5
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	2%	2%

* 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.

* 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: Sierra Leonean authorities; and IMF 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 (in any), while the one-breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most extreme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

Figure 3. Sierra Leone: Drivers of Debt Dynamics, Baseline Scenario, 2015–30
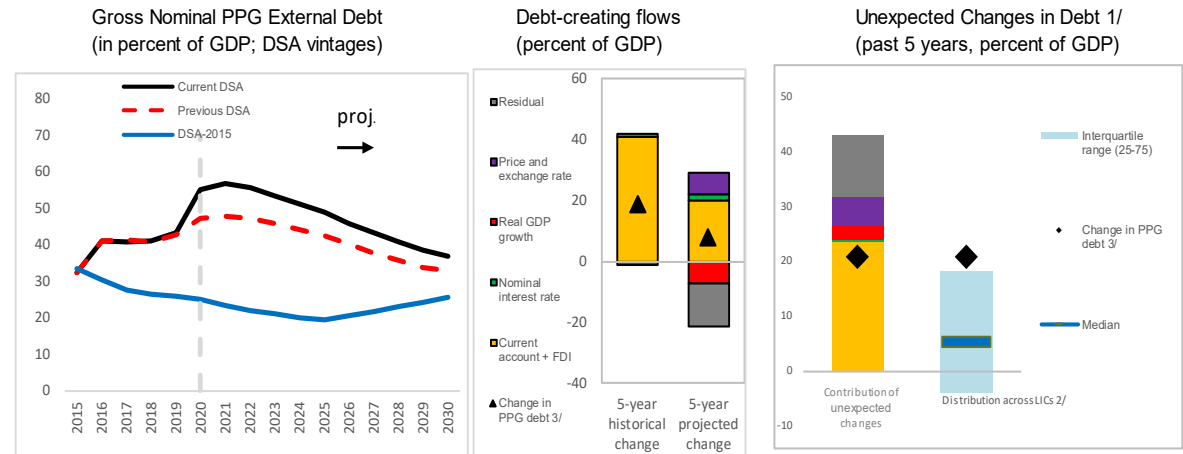
Public debt
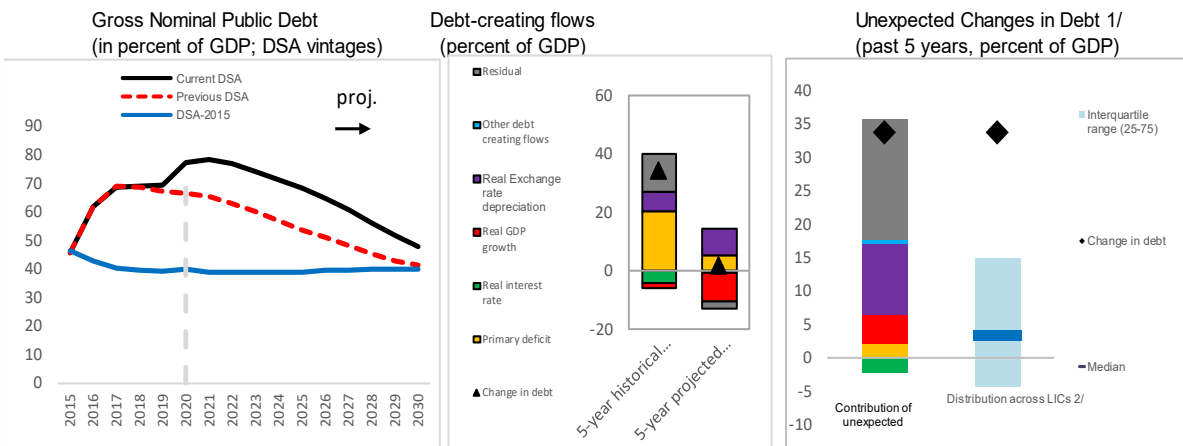
1/ Difference between anticipated and actual contributions on debt ratios.

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. Sierra Leone: Realism Tools

3-Year Adjustment in Primary Balance
(In Percent of GDP)

Distribution 1/

Projected 3-yr adjustment

3-year PB adjustment greater than 2.5 percentage points of GDP in approx. top quartile

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.
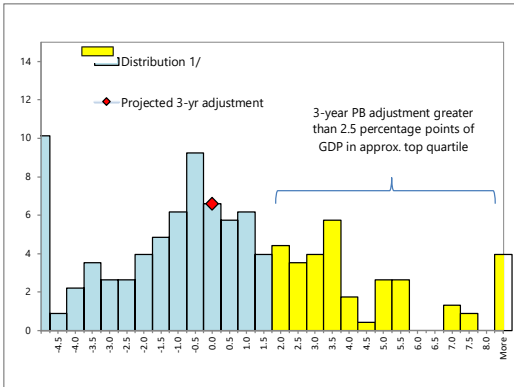
Fiscal Adjustment and Possible Growth Paths 1/
(In Percent)

In Percent of GDP

Baseline — Multiplier = 0.2 — Multiplier = 0.4
Multiplier = 0.6 — Multiplier = 0.8

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).
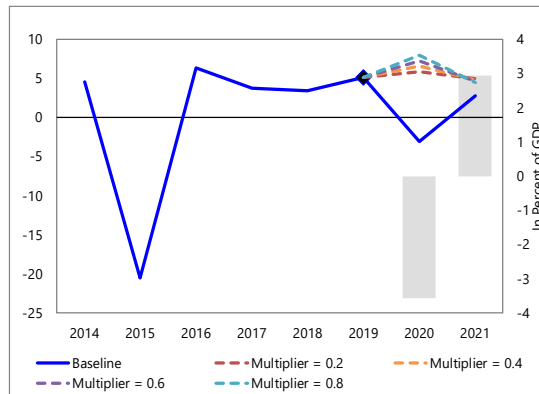
Public and Private Investment Rates
(% of GDP)

Gov. Invest. - Prev. DSA   Gov. Invest. - Current DSA
Priv. Invest. - Prev. DSA   Priv. Invest. - Current DSA

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

Historical   Projected (Prev. DSA)   Projected (Curr. DSA)

Contribution of other factors

Contribution of government capital

Table 1. Sierra Leone: External Debt Sustainability Framework, Baseline Scenario, 2017–40
(Percent of GDP, unless otherwise indicated)

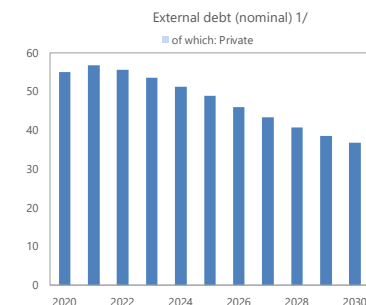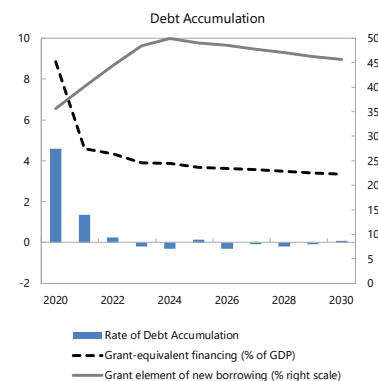|	Actual			Projections								Average 8/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2040	Historical	Projections
External debt (nominal) 1/	40.8	41.2	43.2	55.0	56.7	55.6	53.5	51.1	48.8	36.7	30.4	33.6	47.8
of which: public and publicly guaranteed (PPG)	40.8	41.2	43.2	55.0	56.7	55.6	53.5	51.1	48.8	36.7	30.4	33.6	47.8
Change in external debt	-0.3	0.4	2.0	11.8	1.7	-1.1	-2.1	-2.4	-2.3	-1.7	-1.1		
Identified net debt-creating flows	...	...	...	11.6	4.0	1.0	-1.0	-0.8	-0.7	0.4	1.0	...	1.1
Non-interest current account deficit	20.7	18.4	13.4	14.4	14.3	12.8	11.3	10.9	10.1	6.0	3.8	19.9	10.0
Deficit in balance of goods and services	22.5	21.0	19.1	21.0	19.9	18.5	16.4	15.9	14.9	10.4	7.6	25.5	15.1
Exports	20.3	18.1	22.1	20.4	24.0	26.7	28.2	29.9	31.3	35.0	31.4		
Imports	42.8	39.0	41.2	41.4	43.9	45.2	44.6	45.9	46.2	45.3	39.0		
Net current transfers (negative = inflow)	-4.2	-4.0	-7.3	-8.0	-6.9	-6.9	-6.6	-6.6	-6.3	-5.6	-4.5	-9.2	-6.5
of which: official	-1.4	-1.1	-3.6	-5.3	-3.4	-3.4	-3.1	-3.1	-2.9	-2.4	-1.7		
Other current account flows (negative = net inflow)	2.4	1.5	1.6	1.4	1.2	1.2	1.6	1.5	1.5	1.3	0.7	3.6	1.4
Net FDI (negative = inflow)	-11.1	-6.1	-8.9	-4.5	-9.1	-9.8	-10.2	-9.8	-8.9	-4.3	-1.7	-11.8	-7.6
Endogenous debt dynamics 2/	...	...	...	1.8	-1.2	-2.0	-2.1	-1.9	-1.9	-1.3	-1.1		
Contribution from nominal interest rate	0.3	0.3	0.3	0.3	0.4	0.4	0.4	0.4	0.4	0.3	0.3		
Contribution from real GDP growth	-1.6	-1.3	-2.1	1.4	-1.5	-2.4	-2.5	-2.3	-2.2	-1.6	-1.3		
Contribution from price and exchange rate changes	...	...	...	...	...	...	...	...	...	...	...		
Residual 3/	...	...	...	0.2	-2.3	-2.1	-1.1	-1.5	-1.6	-2.1	-2.1	...	-1.6
of which: exceptional financing	...	...	...	-0.8	-1.1	-0.3	0.1	0.1	0.0	0.0	0.0		
Sustainability indicators													
PV of PPG external debt-to-GDP ratio	...	...	28.0	35.2	37.0	36.7	35.5	33.9	32.5	23.4	19.9		
PV of PPG external debt-to-exports ratio	...	...	126.7	172.4	154.3	137.3	125.7	113.4	103.9	66.9	63.4		
PPG debt service-to-exports ratio	7.7	9.9	7.5	12.1	12.5	13.4	12.6	11.9	10.0	7.8	4.4		
PPG debt service-to-revenue ratio	12.8	13.1	11.6	18.1	20.4	24.4	24.0	23.3	19.8	15.7	7.2		
Gross external financing need (Million of U.S. dollars)	416.2	574.5	256.8	478.6	314.1	255.6	184.5	192.7	184.3	259.1	406.8		
Key macroeconomic assumptions													
Real GDP growth (in percent)	3.8	3.5	5.1	-3.1	2.7	4.2	4.5	4.5	4.6	4.5	4.6	5.0	3.8
GDP deflator in US dollar terms (change in percent)	-5.1	5.8	-2.5	-4.4	-3.9	-2.6	-1.6	-0.7	0.2	1.9	3.9	1.3	-0.5
Effective interest rate (percent) 4/	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.8	0.8	0.9	0.9	0.6	0.8
Growth of exports of G&S (US dollar terms, in percent)	1.7	-2.6	25.3	-14.5	16.1	13.1	8.7	9.9	9.6	5.8	6.5	18.7	7.9
Growth of imports of G&S (US dollar terms, in percent)	12.0	0.0	8.2	-6.9	4.7	4.5	1.5	6.7	5.5	5.3	5.9	18.0	4.2
Grant element of new public sector borrowing (in percent)	...	...	...	35.6	40.1	44.4	48.5	50.0	49.0	45.6	40.9	...	45.7
Government revenues (excluding grants, in percent of GDP)	12.2	13.7	14.2	13.6	14.8	14.7	14.8	15.3	15.7	17.5	19.3	11.6	15.7
Aid flows (in Million of US dollars) 5/	92.7	84.7	142.3	272.3	172.4	185.5	190.0	205.4	201.3	226.4	317.6		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	8.8	4.6	4.3	3.9	3.9	3.7	3.4	2.8	...	4.2
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	59.9	63.8	68.5	71.1	71.3	69.5	67.2	62.9	...	67.7
Nominal GDP (Million of US dollars)	3,729	4,082	4,186	3,877	3,826	3,883	3,996	4,145	4,346	5,919	11,803		
Nominal dollar GDP growth	-1.5	9.5	2.5	-7.4	-1.3	1.5	2.9	3.7	4.9	6.5	8.7	6.4	3.3
Memorandum items:													
PV of external debt 7/	...	...	28.0	35.2	37.0	36.7	35.5	33.9	32.5	23.4	19.9		
In percent of exports	...	...	126.7	172.4	154.3	137.3	125.7	113.4	103.9	66.9	63.4		
Total external debt service-to-exports ratio	7.7	9.9	7.5	12.1	12.5	13.4	12.6	11.9	10.0	7.8	4.4		
PV of PPG external debt (in Million of US dollars)			1171.9	1363.7	1416.6	1426.0	1418.8	1406.6	1411.7	1385.1	2349.9		
(PVt-PVt-1)/GDPt-1 (in percent)				4.6	1.4	0.2	-0.2	-0.3	0.1	0.1	1.3		
Non-interest current account deficit that stabilizes debt ratio	21.0	18.0	11.4	2.6	12.6	13.9	13.4	13.3	12.4	7.7	4.8		

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

Debt Accumulation

- Rate of 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) + 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. Sierra Leone: Public Sector Debt Sustainability Framework, Baseline Scenario, 2019–40

(Percent of GDP, unless otherwise indicated)

	Actual	Projections								Average 8/	
	2019	2020	2021	2022	2023	2024	2025	2030	2040	Historical	Projections
Public sector debt 1/	69.4	77.2	78.5	76.8	74.1	71.1	68.4	47.8	32.4	50.9	66.1
of which: external debt	43.2	55.0	56.7	55.6	53.5	51.1	48.8	36.7	30.4	33.6	47.8
Change in public sector debt	0.3	7.8	1.3	-1.6	-2.7	-3.0	-2.8	-4.1	-1.3		
Identified debt-creating flows	-1.7	9.0	0.7	-1.2	-1.9	-2.3	-2.3	-3.4	-4.5	0.9	-1.5
Primary deficit /2	0.2	3.8	0.9	0.4	0.2	0.1	0.5	-1.0	-1.9	3.3	0.2
Revenue and grants /3	17.6	19.2	17.6	17.4	17.2	17.6	17.9	19.5	21.0	15.4	18.3
of which: grants	3.4	5.6	2.8	2.8	2.4	2.3	2.1	2.0	1.7		
Primary (noninterest) expenditure	17.8	23.0	18.5	17.8	17.4	17.7	18.3	18.4	19.1	18.6	18.4
Automatic debt dynamics	-1.9	5.2	-0.2	-1.6	-2.1	-2.4	-2.8	-2.3	-2.6		
Contribution from interest rate/growth differential	-4.1	2.0	-2.0	-3.5	-3.5	-3.3	-3.2	-2.4	-1.8		
of which: contribution from average real interest rate	-0.8	-0.2	0.0	-0.3	-0.2	-0.1	-0.1	-0.1	-0.3		
of which: contribution from real GDP growth	-3.4	2.2	-2.1	-3.2	-3.3	-3.2	-3.1	-2.2	-1.5		
Contribution from real exchange rate depreciation	2.2	…	…	…	…	…	…	…	…		
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	2.0	2.0	2.5	1.5	0.6	0.3	0.0	-0.7	2.4	1.3	0.4
Sustainability indicators											
PV of public debt-to-GDP ratio 4/	56.3	60.5	61.5	60.1	57.9	55.4	53.1	34.8	22.1		
PV of public debt-to-revenue and grants ratio	319.9	315.1	348.6	345.0	336.5	314.3	297.4	178.6	105.1		
Debt service-to-revenue and grants ratio 5/	22.6	27.7	45.4	61.9	72.4	77.7	79.2	55.6	7.3		
Gross financing need 6/	4.2	9.1	8.9	11.2	12.6	13.8	14.6	9.8	-0.4		
Key macroeconomic and fiscal assumptions											
Real GDP growth (in percent)	5.1	-3.1	2.7	4.2	4.5	4.5	4.6	4.5	4.6	5.0	3.8
Average nominal interest rate on external debt (in percent)	0.7	0.7	0.7	0.7	0.8	0.8	0.8	0.9	0.9	0.6	0.8
Average real interest rate on domestic debt (in percent)	-1.4	-0.8	1.5	2.2	2.1	2.2	2.3	1.9	2.0	-0.4	2.0
Real exchange rate depreciation (in percent, + indicates depreciation)	5.8	…	…	…	…	…	…	…	…	0.1	…
Inflation rate (GDP deflator, in percent)	11.3	12.7	13.0	11.1	9.8	8.8	8.1	5.0	4.9	11.5	8.2
Growth of real primary spending (deflated by GDP deflator, in percent)	0.9	25.2	-17.4	0.4	2.0	6.5	8.2	6.5	4.6	6.3	4.5
Primary deficit that stabilizes the debt-to-GDP ratio 7/	-0.1	-4.0	-0.4	2.0	2.9	3.1	3.2	3.0	-0.6	0.7	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		

Definition of external/domestic debt	Residency-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

of which: held by residents
of which: held by non-residents

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/ Distinct from the *domestic* primary balance as shown in Staff Report tables 2a and 2b, which for program purposes exclude grants and foreign financed capital spending.

3/ Projections assume debt relief under the IMF's Catastrophy Containment and Relief Trust (CCRT) through April 2022, subject to the availability of resources.

4/ 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.

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

6/ 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.

7/ 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.

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.
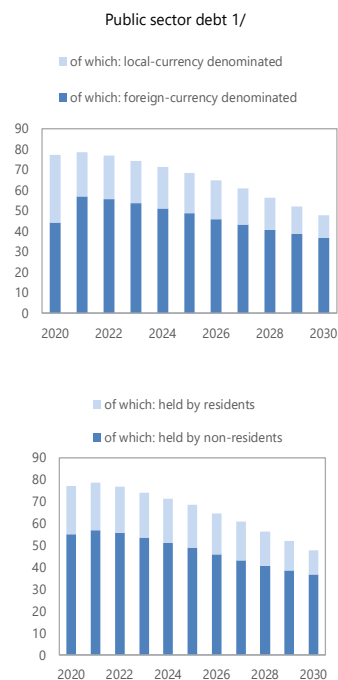
Table 3. Sierra Leone: Sensitivity Analysis, External Debt, 2020-2030

	Projections 1/										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PV of debt-to GDP ratio											
Baseline	35.2	37.0	36.7	35.5	33.9	32.5	30.6	28.7	26.7	24.8	23.4
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	35.2	36.0	36.8	38.4	39.9	**41.8**	**43.5**	**45.4**	**47.1**	**48.7**	**50.0**
B. Bound Tests											
B1. Real GDP growth	35.2	**44.2**	**52.2**	**50.5**	**48.2**	**46.2**	**43.5**	**40.8**	37.9	35.3	33.3
B2. Primary balance	35.2	37.8	39.0	38.7	37.8	36.8	35.1	33.3	31.1	29.1	27.5
B3. Exports	35.2	**44.3**	**56.1**	**55.0**	**53.4**	**51.7**	**49.5**	**46.9**	**43.4**	**40.2**	37.5
B4. Other flows 3/	35.2	**45.7**	**54.3**	**53.3**	**51.9**	**50.3**	**48.3**	**45.6**	**42.1**	39.0	36.4
B5. One-time 30 percent nominal depreciation	35.2	**47.4**	**43.5**	**41.9**	39.9	38.0	35.6	33.3	30.9	28.9	27.3
B6. Combination of B1-B5	35.2	**48.3**	**56.5**	**55.2**	**53.4**	**51.6**	**49.2**	**46.3**	**42.8**	39.7	37.2
C. Tailored Tests											
C1. Combined contingent liabilities	35.2	39.1	**40.3**	40.0	39.0	37.9	36.2	34.4	32.4	30.5	29.0
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	35.2	37.8	38.3	37.2	35.5	33.9	31.8	29.6	27.2	25.1	23.4
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	172.4	154.3	137.3	125.7	113.4	103.9	93.4	84.9	77.2	70.6	66.9
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	172.4	149.8	137.7	135.9	133.3	133.8	133.0	134.4	136.5	138.4	142.9
B. Bound Tests											
B1. Real GDP growth	172.4	154.3	137.3	125.7	113.4	103.9	93.4	84.9	77.2	70.6	66.9
B2. Primary balance	172.4	157.7	145.8	137.2	126.4	117.5	107.2	98.4	90.1	82.9	78.8
B3. Exports	172.4	**292.1**	**539.7**	**500.9**	**458.8**	**425.4**	**388.9**	**356.5**	**322.5**	**293.6**	**276.0**
B4. Other flows 3/	172.4	**190.4**	**203.1**	**188.8**	173.3	161.0	147.5	134.9	122.0	110.9	104.2
B5. One-time 30 percent nominal depreciation	172.4	154.3	127.1	115.9	104.1	95.0	85.0	76.9	70.0	64.2	61.0
B6. Combination of B1-B5	172.4	**230.5**	177.8	**258.2**	**235.8**	**218.1**	**198.8**	**180.9**	163.8	149.2	140.5
C. Tailored Tests											
C1. Combined contingent liabilities	172.4	163.0	150.5	141.6	130.4	121.4	110.7	101.9	93.7	86.7	82.9
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	172.4	162.9	147.0	134.2	120.4	109.5	97.5	87.9	79.1	71.7	67.3
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	12.1	12.5	13.4	12.6	11.9	10.0	10.5	9.3	9.1	8.4	7.8
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	12.1	11.6	12.0	11.0	10.3	8.7	9.2	8.6	8.9	9.0	9.2
B. Bound Tests											
B1. Real GDP growth	12.1	12.5	13.4	12.6	11.9	10.0	10.5	9.3	9.1	8.4	7.8
B2. Primary balance	12.1	12.5	13.4	12.7	12.1	10.1	10.7	9.6	9.6	9.1	8.5
B3. Exports	12.1	**20.8**	**38.5**	**37.4**	**35.5**	**29.8**	**31.1**	**30.2**	**33.6**	**31.1**	**29.1**
B4. Other flows 3/	12.1	12.5	13.9	13.5	12.8	10.7	11.2	11.5	12.5	11.6	10.8
B5. One-time 30 percent nominal depreciation	12.1	12.5	13.4	12.4	11.8	9.8	10.4	9.2	8.5	7.9	7.4
B6. Combination of B1-B5	12.1	**15.7**	**21.7**	**20.6**	**19.5**	**16.4**	**17.1**	**17.2**	**17.6**	**16.2**	**15.2**
C. Tailored Tests											
C1. Combined contingent liabilities	12.1	12.5	13.5	12.7	12.1	10.2	10.7	9.5	9.3	8.6	8.0
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	12.1	13.1	14.0	13.1	12.4	10.4	10.9	9.7	9.6	8.8	8.2
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	18.1	20.4	24.4	24.0	23.3	19.8	21.3	19.5	18.7	17.3	15.7
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	18.1	18.9	21.8	20.9	20.2	17.3	18.7	18.0	18.4	18.6	18.4
B. Bound Tests											
B1. Real GDP growth	18.1	24.3	34.7	34.1	33.1	28.1	30.3	27.7	26.5	24.5	22.2
B2. Primary balance	18.1	20.4	24.5	24.2	23.6	20.1	21.7	20.2	19.8	18.6	17.1
B3. Exports	18.1	21.4	27.3	27.8	27.0	23.0	24.6	24.7	26.9	24.8	22.6
B4. Other flows 3/	18.1	20.4	25.3	25.7	25.0	21.3	22.8	24.1	25.8	23.8	21.7
B5. One-time 30 percent nominal depreciation	18.1	26.1	31.2	30.3	29.5	25.0	27.0	24.7	22.4	20.7	18.8
B6. Combination of B1-B5	18.1	22.2	29.9	29.7	28.9	24.6	26.4	27.4	27.3	25.2	23.0
C. Tailored Tests											
C1. Combined contingent liabilities	18.1	20.4	24.6	24.3	23.7	20.2	21.8	20.0	19.1	17.7	16.0
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	18.1	22.2	26.9	26.7	25.5	21.2	22.4	20.3	19.6	18.1	16.3
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. Sierra Leone: Sensitivity Analysis, Public Debt, 2020-2030

					Projections 1/						
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PV of Debt-to-GDP Ratio											
Baseline	**60.5**	**61.5**	**60.1**	**57.9**	**55.4**	53.1	50.0	46.6	42.6	38.6	34.8
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	**61**	**62**	**62**	**60**	**58**	**55**	52	48	44	40	37
B. Bound Tests											
B1. Real GDP growth	**61**	**75**	**91**	**92**	**92**	**93**	**92**	**91**	**88**	**86**	**84**
B2. Primary balance	**61**	**66**	**68**	**65**	**62**	**59**	**56**	52	48	43	39
B3. Exports	**61**	**67**	**76**	**74**	**71**	**69**	**65**	**61**	**56**	51	46
B4. Other flows 3/	**61**	**71**	**79**	**77**	**74**	**72**	**68**	**64**	**58**	53	48
B5. One-time 30 percent nominal depreciation	**61**	**65**	**62**	**59**	**56**	53	49	45	40	35	31
B6. Combination of B1-B5	**61**	**66**	**68**	**63**	**61**	**59**	**56**	52	48	44	40
C. Tailored Tests											
C1. Combined contingent liabilities	**61**	**72**	**69**	**66**	**63**	**60**	**57**	53	49	45	41
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	**61**	**66**	**71**	**74**	**76**	**78**	**79**	**78**	**78**	**77**	**76**
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.
Public debt benchmark	55	55	55	55	55	55	55	55	55	55	55
PV of Debt-to-Revenue Ratio											
Baseline	315.1	348.6	345.0	336.5	314.3	297.4	274.5	256.6	225.9	201.6	178.6
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	315	354	356	351	330	312	288	268	238	216	195
B. Bound Tests											
B1. Real GDP growth	315	414	493	508	499	497	484	478	450	432	415
B2. Primary balance	315	372	390	377	350	330	305	286	253	227	202
B3. Exports	315	380	434	427	403	384	357	336	296	265	236
B4. Other flows 3/	315	401	452	445	420	401	374	351	309	277	246
B5. One-time 30 percent nominal depreciation	315	372	362	349	321	298	270	248	213	185	159
B6. Combination of B1-B5	315	374	387	360	341	326	303	286	254	229	205
C. Tailored Tests											
C1. Combined contingent liabilities	315	407	396	383	356	337	311	292	259	233	208
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	315	400	434	459	453	451	439	432	412	402	393
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	27.7	45.4	61.9	72.4	77.7	79.2	84.2	81.9	74.9	65.7	55.6
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	28	45	61	70	73	73	74	68	60	50	40
B. Bound Tests											
B1. Real GDP growth	28	52	93	125	143	153	165	167	160	151	141
B2. Primary balance	28	45	80	105	99	93	94	89	80	70	60
B3. Exports	28	45	62	74	79	80	85	85	80	71	60
B4. Other flows 3/	28	45	63	74	79	81	86	86	81	72	61
B5. One-time 30 percent nominal depreciation	28	45	62	71	77	78	83	80	73	64	54
B6. Combination of B1-B5	28	46	65	77	86	90	97	96	89	80	70
C. Tailored Tests											
C1. Combined contingent liabilities	28	45	108	103	98	93	93	88	79	69	58
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	28	49	85	124	143	151	159	158	149	141	133
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 threshold.

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

3/ Includes official and private transfers and FDI.