EXECUTIVE BOARD MEETING

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From:	The Secretary
Subject:	**Sudan—Staff-Monitored Program—Debt Sustainability Analysis**

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Prepared By:	The staffs of the Fund and the International Development Association
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Questions:	Mr. Kanda, MCD (ext. 35414) Ms. Chen, MCD (ext. 37642) Mr. Chaudry, MCD (ext. 38464)
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***The authorities have indicated that they consent to the Fund's publication of this paper.**

SUDAN

September 10, 2020

STAFF-MONITORED PROGRAM—DEBT SUSTAINABILITY ANALYSIS

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Prepared by the staffs of the International Monetary Fund (IMF) and the International Development Association (IDA)

Risk of external debt distress	*In debt distress*
Overall risk of debt distress	*In debt distress*
Granularity in the risk rating	*Debt is unsustainable*
Application of judgment	*No*

This debt sustainability analysis (DSA) confirms that Sudan continues to be in debt distress.[1] *Both public and external debt ratios remain high, and the bulk of external debt is in arrears. Consistent with the results of past DSAs, Sudan's external debt is assessed to be unsustainable. All external debt indicators breach their indicative thresholds under the baseline scenario and debt solvency indicators stay above the thresholds throughout the time horizon of the analysis. Restoring debt sustainability will require Sudan to implement needed reforms, undertake sound economic policies, and build a strong track record of policy implementation to remove obstacles as the country moves towards HIPC debt relief.*

[1] This DSA was prepared jointly by IMF and World Bank staff under the joint Fund-Bank Low-Income Country (LIC) Debt Sustainability Framework (DSF). Sudan's fiscal year runs from January 1 to December 31.

BACKGROUND AND RECENT DEVELOPMENTS

1. **Sudan's economy has never fully adjusted to the secession of South Sudan in 2011, which resulted in a sharp decline in its oil exports and fiscal revenues.** Sudan lost about 75 percent of oil production, 66 percent of exports, and half of fiscal revenues after the secession.[2] Despite the U.S. revocation of commercial sanctions in October 2017, Sudan remains on the U.S. list of state sponsors of terrorism, (SSTL), which hinders external investment, and presents challenges for progress toward the clearance of large arrears, including to the Fund, World Bank and AfDB, and toward HIPC debt relief.[3] The economy is shrinking, fiscal and external imbalances are large, inflation is high, the currency is overvalued, and competitiveness is weak. The humanitarian situation is dire with large numbers of internally displaced people and refugees. The new civilian-led government have undertaken efforts to reform and stabilize the shrinking economy and re-engage Sudan with the international community, but the social situation remains fragile.

2. **Economic performance deteriorated in 2019.** The economy contracted by 2.5 percent in 2019 after contracting by 2.3 percent in 2018. Inflation rose significantly after currency devaluation and reached 73 percent in end-2018. Following a reduction in January 2019 due to base effects, inflation continued to rise to 57 percent in December 2019 reflecting loose fiscal and monetary policies, as well as exchange rate depreciation. The fiscal deficit continued widening in 2019 to 10.8 percent of GDP, mainly financed through monetization.[4] The current account deficit (cash basis) widened mainly due to rising imports and currency depreciation to 10.9 percent of GDP in 2019. Gross usable reserves remained very low in 2019, coming in at $190 million.

3. **Prospects for debt relief.** Debt relief prospects are predicated on obtaining assurances of support from key creditors, normalizing relations with international financial institutions, and establishing a track record of cooperation with the IMF and the World Bank on policies. Outreach to the donors' community to raise the needed funds has intensified as has the dialogue with creditors to garner support for debt relief.

STRUCTURE OF DEBT

4. **Sudan's debt data quality and coverage remain limited.[5]** Historical debt data were provided by the Sudanese authorities, complemented by information obtained during the 2011 external debt

[2] Sudan and South Sudan also reached the so-called "zero option" agreement in September 2012, whereby Sudan would retain all external liabilities after the secession of South Sudan, provided that the international community gave firm commitments to the delivery of debt relief within two years. Absent such a commitment, Sudan's external debt would be apportioned with South Sudan based on a formula to be determined. The two parties have agreed to extend this agreement on several occasions.

[3] As of end-June 2020, arrears to the IMF and WB amounted to $1,325.6mn and $1,035.8mn, respectively. Arrears to the AfDB group amounted to $377.5mn as of June 15 2020.

[4] The difference between the on-budget and true fiscal deficits is the implicit subsidies not reported in the budget but financed through monetization by the central bank.

[5] External debt data were partially updated in December 2019 during the Article IV consultation mission.

reconciliation exercise, as well as Fund and World Bank staffs' estimates. The External Debt Unit at the Central Bank of Sudan (CBOS) produces comprehensive quarterly and annual report on external debt and data are collected by using primary information from both the Ministry of Finance and Economic Planning (MOFEP) and the lenders, but they are not always verified with actual cash flows in the corresponding bank accounts. The external debt reports are not consistent with other related fiscal report as well. There are considerable information gaps between the IMF maintained dataset and the external debt report, mostly due to difficulties in obtaining data on the terms of the loans and breakdown of existing debt. In case of data discrepancies projections were based on a prudential approach, to avoid underestimation of debt. Debt data covers mainly central government, as state and local governments are not allowed to borrow according to the Constitution, while other public entities in general government are still not captured in the debt coverage. Letter of guarantees (LG) are issued by the central bank on request of the Ministry of Finance and Economic Development (MOFEP) as a hybrid financing instrument used mainly to fund development projects. However, reporting issues of LGs were identified by the IMF technical assistance (TA) mission, where the central government budget recorded the full amount of LG as debt when they were issued only as commitment.[6] External debt is defined based on currency.

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

5. Sudan's external debt remains very high. External debt is estimated to amount to about $56.3 billion, or 199 percent of GDP at end-2019, rising from 182 percent of GDP in 2018 due to large currency depreciation from SDG 45/$ to SDG 72/$ on a weighted average basis.

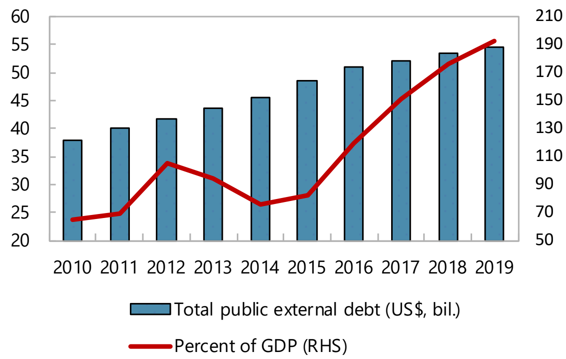
1 The country's coverage of public debt	The central, state, and local governments, government-guaranteed debt		
	Default	Used for the analysis	Reasons for deviations from the default settings
2 Other elements of the general government not captured in 1.	0 percent of GDP	0	
3 SoE's debt (guaranteed and not guaranteed by the government) 1/	0 percent of GDP	0	
4 PPP	35 percent of PPP stock	0	
5 Financial market (the default value of 5 percent of GDP is the minimum value)	5 percent of GDP	5	
Total (2+3+4+5) (in percent of GDP)		5.0	

1/ The default shock of 2% of GDP will be triggered for countries whose government-guaranteed debt is not fully captured under the country's public debt definition (1.). If it is already included in the government debt (1.) and risks associated with SoE's debt not guaranteed by the

6. The structure of external debt has been broadly stable over the last decade (Figures 1 and 2). About 85 percent of the external debt was in arrears in 2019. The bulk is public and publicly guaranteed (PPG) debt ($54.6 billion, of which 85 percent are in arrears), mainly owed to bilateral creditors and roughly equally divided between Paris Club and non-Paris Club credit. A large portion of the increase in these estimated total arrear amounts is due to assumed accumulation of interest arrears, in addition to relatively small new disbursements. About $1.8 billion is private debt owed to suppliers.

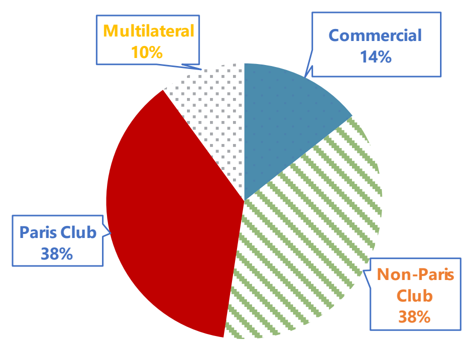
[6] The breakdown of individual components is not available.

Figure 1. Sudan: Stock of PPG External Debt, 2010–19



Source: Sudanese authorities, World Bank, and IMF staff estimates.

Figure 2. Sudan: Structure of PPG External Debt



Structure of Public and Publicly Guaranteed Debt

	2010		2019	
	In US$ million	In percent	In US$ million	In percent
Total PPG	37,927.00	100	54,560.09	100
Multilateral	5,196.00	13.7	5,467.50	10.0
Bilateral	27,762.56	73.2	41,258.60	75.6
Paris	13,957.14	36.8	20,500.08	37.6
Non-Paris	13,805.43	36.4	20,758.53	38.0
Commercial	4,968.44	13.1	7,833.90	14.4

Source: Sudanese authorities; and IMF staff estimates.

7. **Sudan's total public debt reached 201.6 percent of GDP by end-2019.** The bulk of the public debt is external debt. Domestic debt only accounts for 8 percent of GDP. Total external debt will continue to dominate public debt in Sudan. Despite very limited access to new external financing, the total estimated debt burden continues to grow at a very high rate due to the continued depreciation of the SDG and to rising outstanding interest and fee payments and charges maturing on the existing debt in arrears.

Debt Carrying Capacity

8. **Sudan's debt carrying capacity remains weak even after the introduction of a composite indicator in the new LIC-DSF to replace the World Bank CPIA scores.**[7] The Sudan's Composite Indicator (CI) index, has been calculated based on the October 2019 WEO and the World Bank's 2018 CPIA, is 1.882, indicating that the county's debt-carrying capacity is weak in the revised LIC-DSA framework. Corresponding thresholds changes are noted in the text table. PV of debt-to-exports threshold was increased compared to the previous DSF, from 100 to 140 percent. Debt service-to-export and to-revenue thresholds were lowered respectively from 15 to 10 percent and from 18 to 14 percent. Total public debt benchmark has been reduced from 38 percent to 35 percent of GDP.

Sudan: Debt Carrying Capacity and Thresholds

Debt Carrying Capacity

Final	based on current vintage	based on previous vintage
Weak	Weak 1.88	Weak 1.87
Applicable Thresholds and Benchmark		
External debt burden thresholds		
PV of debt in % of:		
Exports	140	100
GDP	30	30
Debt service in % of		
Exports	10	15
Revenue	14	18
Total public debt benchmark		
PV of total public debt in percent of GDP	35	38

DEBT SUSTAINABILITY ANALYSIS

A. Underlying Assumptions

9. **The macroeconomic assumptions underlying this DSA have been updated based on developments in 2020 (Box 1).** The baseline scenario assumes Sudan will embark on significant reforms under the Staff Monitored Program, including exchange rate liberalization and unification and fiscal consolidation and other structural reforms to improve governance and business environment. Against the severe impact from COVID-19, the authorities also increased social spending by 1.5 percent of GDP on healthcare, unemployment benefits and a Family Support Program. As in the past, this DSA does not assume arrears clearance, possible external debt relief, or debt apportionment between Sudan and South Sudan in its baseline or alternative scenarios.

[7] The CI captures the impact of the different factors through a weighted average of the country's real GDP growth, remittances, international reserves, and world growth and the CPIA score. The details on the methodology can be found in the new LIC-DSF guidance note:
https://www.imf.org/en/Publications/Policy-Papers/Issues/2018/02/14/pp122617guidance-note-on-lic-dsf

Box 1. Macroeconomic Assumptions 2020–40

Natural resources. Oil is increasingly less important for the Sudan economy, producing 72 thousand barrels/day in 2019. Ageing oil fields along with moderate exploration keep oil production flat over the medium term. Price projections are guided by the IMF's latest World Economic Outlook (WEO). The price of Sudan's crude oil is projected to average $42/barrel in the medium term.

Real sector. Real GDP is expected to contract by 8.4 percent in 2020 driven by weak economic activities due to the impact of COVID-19. Real growth is expected to recover to 0.8 and 1.4 percent in 2021 and 2022, respectively. The reform under the SMP will reduce macroeconomic imbalances and boost competitiveness in the medium term. Therefore, real GDP is expected to rebound and grow by 4.5 percent in 2025 and GDP will continue to grow at potential in the longer term. Inflation is projected to increase from about 51 percent in 2019 to approximately 142 percent in 2020 due to the sharp increase of domestic fuel prices and the gradual converging of the customs exchange rate to market exchange rate. Afterwards, inflation is projected to decline to around 17 percent in 2025, reflecting the reduction of monetization of fiscal deficit and increase of domestic supply of consumption goods. The nominal exchange rate will continue to depreciate, while the real exchange rate will be relatively constant.

Fiscal sector. The fiscal deficit is projected to reduce significantly to 1.3 percent of GDP in 2025, reflecting the result of exchange rate and fuel subsidy reforms. The authorities lifted the domestic price of diesel and gasoline to the cost of production/import level in 2020, which resulted in a reduction of the fuel subsidies by 8.4 percent of GDP. To shield the public from the resulting rise in inflation, the authorities increased the public wage bill by 2.2 percent of GDP and are in the process of enhancing the social safety net to provide 80 percent of the Sudanese population with direct cash transfer for 12 months through donor-funded Family Support Program.[1] Over the longer run and through 2040, the primary deficit is expected to stabilize at about 2 percent of GDP. Under these assumptions, the domestic debt-to-GDP ratio is projected to decline but debt to remain unsustainable.

External sector. The current account deficit is expected to decline over the medium term, to about 3 percent of GDP on a cash basis by end-2025, reflecting the improvement in competitiveness after the exchange rate liberalization. In the long run, the trade balance is expected to slowly improve as the economy stabilizes at its potential. The current account deficit will be financed mainly by foreign direct investment.

External debt. Reflecting continued limited access to international financing, disbursements of new loans are expected to continue to be limited, at about 0.12 percent of GDP during 2020–40. In line with the latest newly contracted debt, the share of new concessional loans is assumed at around one-third. It is also assumed that Sudan will continue not to service obligations arising from the stock of arrears. Consequently, the effective interest rate is declining because interest payments decrease overtime while the stock of debt continues to grow.

Financing assumption. Under the SMP, external donors and IFIs will provide about $1.5 billion financing to support the authorities' bold reform in 2020–2021. In the medium-term, staff assumes that with development of government securities market, central bank's monetization will be reduced. Staff also applied the latest available market interest rate (which in real terms is negative) on government bonds in the projections as commercial banks have limited investment options and investing in government bonds will help reduce losses relative to holding cash.

[1] With the technical assistance of the World Bank, the government announced the Family Support Program, which began in July 2020 and will progressively expand to cover 80 percent of population by February 2021. The monthly benefit per person would be SDG 500 in 2020, with an inflation adjustment implemented in 2021.

B. External Debt Sustainability

10. Sudan's external debt stock remains unsustainable under the baseline scenario (Figure 1 and Table 1). All PPG external debt ratios continue to breach their indicative thresholds and debt solvency indicators stay above the threshold throughout the 20-year projection period. The present value (PV) of PPG external debt is at about 164.6 percent of GDP at end-2019—more than fivefold the 30 percent threshold for weak policy performers—and is projected to stay above the threshold through the projection period.[8] Similarly, in 2019, the PV of debt-to-exports is about 1,028 percent, well above the respective threshold. Debt service to exports and debt service to revenue will gradually decline over the long-term under the SMP scenario, the debt path improves but remains unsustainable without debt relief. Debt service will increase in 2022 and 2023 due to the scheduled repayment of deposits of Saudi Arabia and U.A.E in the Central Bank of Sudan.

11. Sudan's external debt outlook is vulnerable to a range of shocks (Figure 1 and Table 3). The PV of debt-to-GDP and debt-to-revenue are most vulnerable if key variables remain at their historical average, whereas the PV of external debt-to-exports is most vulnerable to an export shock.

Overall Risk of Public Debt Distress

12. Public debt remains unsustainable and the public DSA continues to mirror the trends and results of the external DSA (Figure 2 and Table 2). The debt ratios remain at relatively high levels in the long term. The PV of public debt is about 262 percent of GDP at end of 2020 and will remain above the threshold through the projection period although it is projected to decline to 155 percent of GDP by 2040 due to the removal of fuel subsidies and elevated high real GDP growth. Similarly, the PV of public debt to revenue will decline from its current very high level of 3,850 percent by end of 2020 to about 1,016 percent by 2040. The rapidly rising historical scenario is in large part due to the structural break provoked in the debt path by the separation of South Sudan which led to negative historical averages.

13. Similar to the external DSA, the public DSA bound tests show that public debt path is most vulnerable to real GDP growth and a one-time 180 percent depreciation (Table 4).

14. There is a significant difference in the projections in the current DSA compared to the previous DSA (Figure 3 and Table 4). The main driver of the difference is the planned exchange rate and fuel subsidy reform, which significantly reduces the large macroeconomic imbalances and set the GDP to recover to its potential in the medium term.

Key Assumptions under Current and Previous DSA1/

	Current	Previous
GDP growth	4.5	1.5
Primary deficit that stablize debt-to-GDP ratio	1.3	5.7
Inflation	43	57.8

1/ Average of the first year projection and the next 10 years.

15. The realism tools highlight the magnitude of the fiscal adjustment and uncertainty around the baseline (Figure 4). The realism tool shows any adjustment that is greater than 2.5 percent of GDP

[8] Ratios in terms of GDP are calculated using a weighed exchange rate between the official and the parallel market rate.

over a 3-year period in the top quartile of adjustments within the sample. While the 3-year fiscal adjustment in Sudan is above 8 percent of GDP, higher than other LICs, the bulk of the adjustment is from the removal of fuel subsidies, which account for 10.5 percent of GDP in 2019. Other fiscal consolidation measures include broadening the tax base and improving tax administration. In addition, the exchange rate reform also contributes to fiscal consolidation. The large fiscal consolidation might create a temporary drag on growth; however, the exchange rate reform could level the playing field and boost competitiveness. Without reform, continued monetization of the costs deriving from huge implicit fuel subsidies by the central bank will lead to a severe decline in growth. The large residual highlights the difficulty in capturing the multiple distortions currently affecting the Sudanese economy, especially the multiple currency practices and continued depreciation of the parallel market exchange rate and the poor quality and timeliness of data, especially related to fiscal and balance of payment accounts.

CONCLUSIONS

16. Sudan's external debt remains in distress and unsustainable. The results of this DSA are significantly improved from previous DSAs, as—building in previous reform efforts—the authorities have initiated unprecedented reforms even in the absence of debt relief. The economy is expected to rebound, fiscal deficit is projected to decline, the authorities have committed to liberalize the exchange rate, and competitiveness is expected to improve. However, it is still impossible for Sudan to service its high debt without debt relief. In the long term, all public and public-guaranteed external debt burden ratios remain well above their respective indicative thresholds. Public debt remains unsustainable, driven mostly by external debt dynamics.

17. Further efforts are necessary for Sudan to obtain much-needed debt relief and regain access to external financing. Sudan needs to: (i) continue to step up outreach efforts to its creditors to garner broad support for debt relief; (ii) continue to cooperate with the IMF and the World Bank on economic policies with a view to establishing a track record of sound macro policies; and (iii) renew the commitment to develop a full-fledged PRSP. In addition, given the dire debt situation, the authorities should limit new borrowing on non-concessional terms since it further increases the future debt burden. Furthermore, the major shortcomings in macroeconomic data, in terms of quality and timeliness, need to be addressed as they impair economic analysis and create uncertainty on the potential reform outcome.

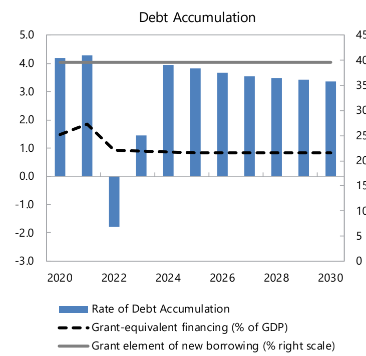
18. Authorities' views. The authorities concurred with staff that absent reforms, debt restructuring and access to debt relief, the current economic prospects appear bleak and debt will remain unsustainable. They are determined to conduct significant reform under the Staff Monitored Program which will help to reestablish macroeconomic stability and create conditions for stronger, broad-based economic growth. The authorities continue to engage with creditors and are intensifying outreach efforts to the donors' community to pave the way toward debt relief. They have been petitioning the US government to exclude Sudan from the SSTL.

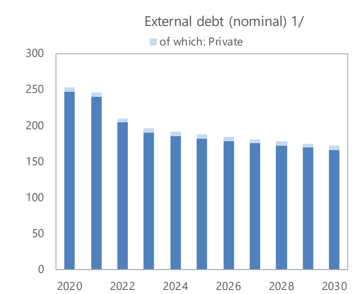
Table 1. Sudan: External Debt Sustainability Framework, Baseline Scenario, 2020–2040 1/

(In percent of GDP, unless otherwise indicated)

	Actual			Projections												Average 8/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2040	Historical	Projections
External debt (nominal) 1/	154.0	181.9	198.9	253.1	245.6	210.0	196.4	191.5	187.3	184.1	181.0	177.9	175.0	172.0	144.6	116.5	197.6
of which: public and publicly guaranteed (PPG)	150.4	177.1	193.6	247.6	240.0	204.2	190.6	185.7	181.6	178.6	175.5	172.5	169.5	166.6	139.2	113.2	192.0
Change in external debt	31.8	27.8	17.0	54.2	-7.5	-35.6	-13.7	-4.9	-4.2	-3.1	-3.1	-3.1	-3.0	-2.9	-2.6		
Identified net debt-creating flows	38.0	60.6	30.6	32.3	11.1	11.4	8.0	5.4	3.1	2.4	1.7	1.2	0.8	0.5	0.6	20.4	7.1
Non-interest current account deficit	9.8	12.8	14.8	12.5	9.6	9.1	8.8	8.0	7.0	6.0	5.2	4.4	3.8	3.2	0.7	8.7	7.1
Deficit in balance of goods and services	5.1	9.1	13.4	11.1	8.9	6.8	6.5	5.8	4.9	4.2	3.6	3.0	2.4	1.9	-3.0	4.4	5.4
Exports	12.8	14.0	16.0	18.4	21.4	24.4	24.7	24.7	24.8	24.7	24.6	24.5	24.4	24.4	23.5		
Imports	17.9	23.1	29.4	29.4	30.4	31.2	31.2	30.6	29.7	28.9	28.2	27.5	26.9	26.2	20.5		
Net current transfers (negative = inflow)	-2.1	-1.1	-3.2	-3.4	-4.3	-2.8	-2.5	-2.5	-2.4	-2.3	-2.2	-2.1	-2.1	-2.0	-1.4	-2.2	-2.6
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	0.0	0.0	0.0	0.0		
Other current account flows (negative = net inflow)	6.8	4.8	4.6	4.8	4.9	5.1	4.9	4.7	4.5	4.1	3.7	3.5	3.4	3.4	5.1	6.5	4.3
Net FDI (negative = inflow)	2.3	3.2	2.8	2.5	3.3	4.0	4.0	4.1	4.2	4.3	4.4	4.6	4.7	4.8	6.3	2.9	4.1
Endogenous debt dynamics 2/	25.8	44.6	12.9	17.3	-1.7	-1.8	-4.8	-6.8	-8.1	-8.0	-7.9	-7.8	-7.6	-7.5	-6.4		
Contribution from nominal interest rate	0.2	0.3	0.3	0.3	0.2	1.6	0.7	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.0		
Contribution from real GDP growth	-2.5	4.4	1.6	17.1	-1.9	-3.4	-5.5	-6.9	-8.3	-8.1	-8.0	-7.8	-7.7	-7.6	-6.4		
Contribution from price and exchange rate changes	28.1	39.9	11.1	...	...	...	...	...	...	...	...	...	...	...	...		
Residual 3/	-6.2	-32.8	-13.6	21.9	-18.6	-46.9	-21.7	-10.3	-7.3	-5.5	-4.9	-4.3	-3.8	-3.4	-3.2	-6.9	-9.5
of which: exceptional financing	-3.4	-4.4	-4.7	-4.9	-4.9	-5.0	-4.9	-4.7	-4.5	-4.3	-4.2	-4.0	-3.9	-3.7	-2.6		
Sustainability indicators																	
PV of PPG external debt-to-GDP ratio	...	...	164.6	172.9	177.7	179.3	176.1	173.9	170.2	167.5	164.6	161.9	159.2	156.5	130.6		
PV of PPG external debt-to-exports ratio	...	...	1028.1	941.1	828.8	735.8	711.9	703.3	687.0	678.2	669.1	660.2	651.4	642.7	555.5		
PPG debt service-to-exports ratio	7.6	9.1	8.2	7.1	6.1	30.8	15.4	4.3	3.9	3.7	3.4	2.9	2.4	2.0	0.2		
PPG debt service-to-revenue ratio	13.9	14.5	17.7	24.5	11.9	62.7	29.3	7.7	6.7	6.5	6.0	5.1	4.3	3.5	0.4		
Gross external financing need (Million of U.S. dollars)	6010.1	6164.0	6329.1	5306.5	4590.1	6576.6	5440.2	4475.8	4322.8	4132.4	3982.5	3841.9	3730.0	3649.1	4377.2		
Key macroeconomic assumptions																	
Real GDP growth (in percent)	1.7	-2.2	-0.8	-8.4	0.8	1.4	2.7	3.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5	-0.6	2.5
GDP deflator in US dollar terms (change in percent)	-18.7	-20.6	-5.7	6.6	-1.1	-3.2	-0.1	-0.1	-0.1	-0.6	-0.6	-0.6	-0.6	-0.6	-0.6	-3.3	-0.1
Effective interest rate (percent) 4/	0.2	0.1	0.1	0.1	0.1	0.6	0.4	0.1	0.1	0.1	0.1	0.0	0.0	0.0	0.0	0.3	0.1
Growth of exports of G&S (US dollar terms, in percent)	26.8	-15.1	6.9	12.0	16.4	11.5	4.2	3.5	4.6	3.5	3.5	3.5	3.5	3.5	3.5	-1.1	6.3
Growth of imports of G&S (US dollar terms, in percent)	9.9	0.2	19.2	-2.3	2.8	0.8	2.6	1.5	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.8	1.2
Grant element of new public sector borrowing (in percent)	...	...	...	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	39.6	...	39.6
Government revenues (excluding grants, in percent of GDP)	7.0	8.8	7.4	5.3	11.0	12.0	13.0	13.8	14.5	13.9	13.9	13.9	13.9	13.9	13.9	9.6	12.7
Aid flows (in Million of US dollars) 5/	137.8	102.2	202.4	483.7	601.3	291.3	291.3	291.3	291.3	302.5	314.1	326.2	338.7	351.7	512.6		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	1.5	1.8	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8	...	1.0
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	99.8	99.8	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.6	99.7	99.8	...	99.6
Nominal GDP (Million of US dollars)	45,944	35,680	33,359	32,576	32,476	31,868	32,706	33,857	35,354	36,717	38,131	39,600	41,126	42,711	62,333		
Nominal dollar GDP growth	-17.3	-22.3	-6.5	-2.3	-0.3	-1.9	2.6	3.5	4.4	3.9	3.9	3.9	3.9	3.9	3.9	-3.6	2.3
Memorandum items:																	
PV of external debt 7/	...	...	169.9	178.4	183.3	185.1	181.9	179.7	175.9	173.1	170.2	167.4	164.6	161.9	136.0		
In percent of exports	...	...	1060.8	970.9	855.0	759.8	735.5	726.6	709.9	700.8	691.6	682.6	673.7	664.8	578.2		
Total external debt service-to-exports ratio	7.6	9.1	8.2	7.1	6.1	30.8	15.4	4.3	3.9	3.7	3.4	2.9	2.4	2.0	0.2		
PV of PPG external debt (in Million of US dollars)			54914.1	56316.5	57711.6	57134.8	57594.1	58888.5	60184.3	61483.7	62780.2	64111.0	65461.2	66839.4	81431.8		
(PVt-PVt-1)/GDPt-1 (in percent)				4.2	4.3	-1.8	1.4	4.0	3.8	3.7	3.5	3.5	3.4	3.4	2.5		
Non-interest current account deficit that stabilizes debt ratio	-22.0	-15.0	-2.2	-41.8	17.1	44.7	22.5	12.9	11.2	9.2	8.3	7.5	6.8	6.2	3.3		

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





Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

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

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

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

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

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

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

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

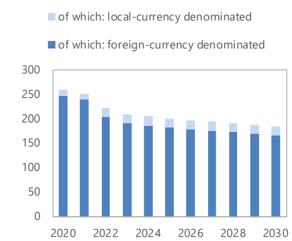
Table 2. Sudan: Public Sector Debt Sustainability Framework, Baseline Scenario, 2020–2040 1/

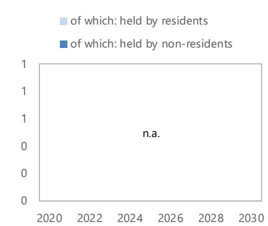
(In percent of GDP, unless otherwise indicated)

	Actual			Projections												Average 6/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2040	Historical	Projections
Public sector debt 1/	**159.2**	**186.7**	**201.6**	**259.4**	**250.7**	**221.2**	**210.0**	**204.9**	**200.2**	**197.1**	**194.1**	**190.9**	**187.7**	**184.5**	**154.3**	**122.9**	**209.1**
of which: external debt	**150.4**	**177.1**	**193.6**	**247.6**	**240.0**	**204.2**	**190.6**	**185.7**	**181.6**	**178.6**	**175.5**	**172.5**	**169.5**	**166.6**	**139.2**	**113.2**	**192.0**
Change in public sector debt	30.8	27.5	14.9	57.8	-8.7	-29.6	-11.1	-5.2	-4.7	-3.1	-3.0	-3.2	-3.2	-3.2	-2.8		
Identified debt-creating flows	**32.2**	**27.6**	**20.4**	**51.6**	**-14.7**	**-34.0**	**-15.9**	**-10.0**	**-9.3**	**-7.4**	**-7.3**	**-7.2**	**-7.1**	**-6.9**	**-5.4**	**12.1**	**-6.2**
Primary deficit	**6.0**	**7.7**	**10.7**	**6.9**	**4.2**	**2.6**	**2.4**	**1.9**	**1.4**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**2.0**	**4.7**	**2.7**
Revenue and grants	7.2	8.9	7.9	6.8	12.8	12.9	13.9	14.6	15.3	14.8	14.8	14.8	14.8	14.8	14.8	**10.0**	**13.7**
of which: grants	0.2	0.2	0.5	1.5	1.8	0.9	0.9	0.9	0.8	0.8	0.8	0.8	0.8	0.8	0.8		
Primary (noninterest) expenditure	13.1	16.6	18.6	13.7	17.1	15.5	16.3	16.5	16.8	16.8	16.8	16.8	16.8	16.8	16.8	**14.8**	**16.3**
Automatic debt dynamics	**26.3**	**19.9**	**9.7**	**44.7**	**-18.9**	**-36.6**	**-18.3**	**-11.9**	**-10.7**	**-9.4**	**-9.3**	**-9.2**	**-9.1**	**-8.9**	**-7.4**		
Contribution from interest rate/growth differential	-5.5	-3.1	-4.3	11.1	-13.0	-9.5	-12.1	-13.4	-14.3	-13.9	-13.7	-13.5	-13.3	-13.1	-10.9		
of which: contribution from average real interest rate	-3.4	-6.7	-5.8	-7.3	-11.1	-6.2	-6.3	-6.0	-5.5	-5.3	-5.2	-5.2	-5.1	-5.0	-4.1		
of which: contribution from real GDP growth	-2.1	3.6	1.5	18.4	-2.0	-3.3	-5.8	-7.4	-8.8	-8.6	-8.5	-8.4	-8.2	-8.1	-6.8		
Contribution from real exchange rate depreciation	31.8	23.0	14.0	...	...	...	...	...	...	...	...	...	...	...	...		
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**	**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	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	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	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	0.0	0.0	0.0	0.0		
Residual	**-1.4**	**0.0**	**-5.5**	**39.9**	**0.1**	**-22.6**	**-1.4**	**6.3**	**8.2**	**8.8**	**8.7**	**8.3**	**8.1**	**7.9**	**6.1**	**1.0**	**6.6**
Sustainability indicators																	
PV of public debt-to-GDP ratio 2/	**...**	**...**	**202.8**	**261.9**	**253.9**	**223.0**	**211.5**	**206.5**	**201.9**	**198.9**	**195.9**	**192.8**	**189.6**	**186.4**	**155.8**		
PV of public debt-to-revenue and grants ratio	**...**	**...**	**2569.7**	**3851.3**	**1977.6**	**1733.0**	**1522.6**	**1412.1**	**1316.5**	**1347.1**	**1327.1**	**1305.9**	**1284.2**	**1262.4**	**1055.4**		
Debt service-to-revenue and grants ratio 3/	**20.4**	**17.1**	**18.8**	**19.6**	**11.8**	**60.3**	**31.3**	**11.1**	**9.6**	**9.4**	**11.4**	**11.0**	**10.0**	**9.1**	**11.1**		
Gross financing need 4/	7.4	9.2	12.2	8.2	5.7	10.3	6.7	3.5	2.9	3.4	3.7	3.6	3.5	3.4	3.7		
Key macroeconomic and fiscal assumptions																	
Real GDP growth (in percent)	1.7	-2.2	-0.8	-8.4	0.8	1.4	2.7	3.6	4.5	4.5	4.5	4.5	4.5	4.5	4.5	**-0.6**	**2.5**
Average nominal interest rate on external debt (in percent)	0.2	0.2	0.2	0.2	0.1	0.9	0.4	0.1	0.1	0.1	0.1	0.1	0.0	0.0	0.0	**0.4**	**0.2**
Average real interest rate on domestic debt (in percent)	-17.0	-37.6	-31.4	-58.7	-55.6	-34.8	-19.4	-13.7	-11.9	-11.4	-11.2	-11.1	-11.1	-11.1	-10.3	**-18.2**	**-22.7**
Real exchange rate depreciation (in percent, + indicates depreciation)	27.6	15.3	7.9	...	...	...	...	...	...	...	...	...	...	...	...	**9.3**	**...**
Inflation rate (GDP deflator, in percent)	28.6	67.3	49.3	142.5	130.9	57.6	27.7	19.2	16.7	16.1	16.1	16.1	16.1	16.1	16.1	**32.9**	**43.2**
Growth of real primary spending (deflated by GDP deflator, in percent)	19.7	23.5	11.1	-32.7	25.8	-8.2	8.0	5.4	6.1	4.5	4.5	4.5	4.5	4.5	4.5	**0.6**	**2.4**
Primary deficit that stabilizes the debt-to-GDP ratio 5/	-24.8	-19.8	-4.2	-50.9	12.9	32.1	13.5	7.1	6.1	5.1	5.0	5.2	5.2	5.2	4.8	**-16.3**	**4.2**
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	0.0	0.0	0.0	0.0		

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

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: The central, state, and local governments, central bank. 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.

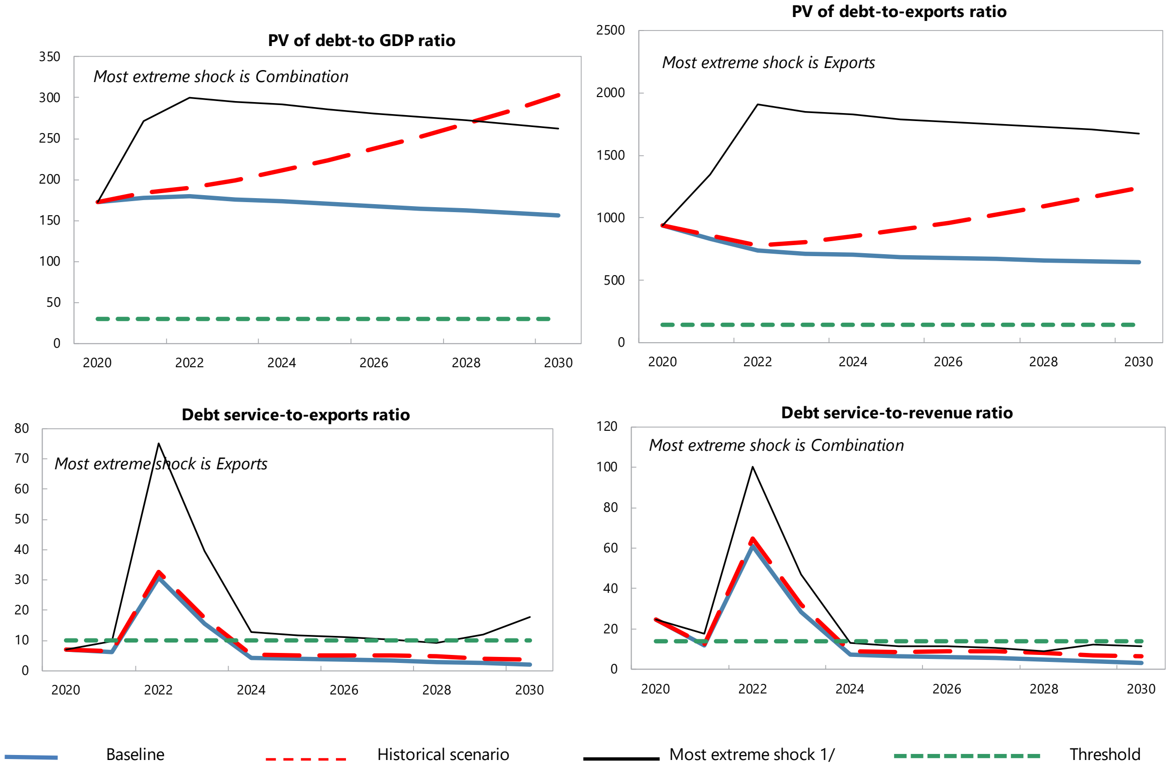
3/ Debt service is defined as the sum of interest and amortization of medium and long-term, and short-term debt.

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.

Figure 1. Sudan: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2020–2030 1/



Customization of Default Settings	Size	Interactions
Standardized Tests		Yes
Tailored Tests		
Combined CLs	Yes	
Natural Disasters	n.a.	n.a.
Commodity Prices [2/]	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 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	1.1%	1.1%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	22	22
Avg. grace period	7	7

* 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.

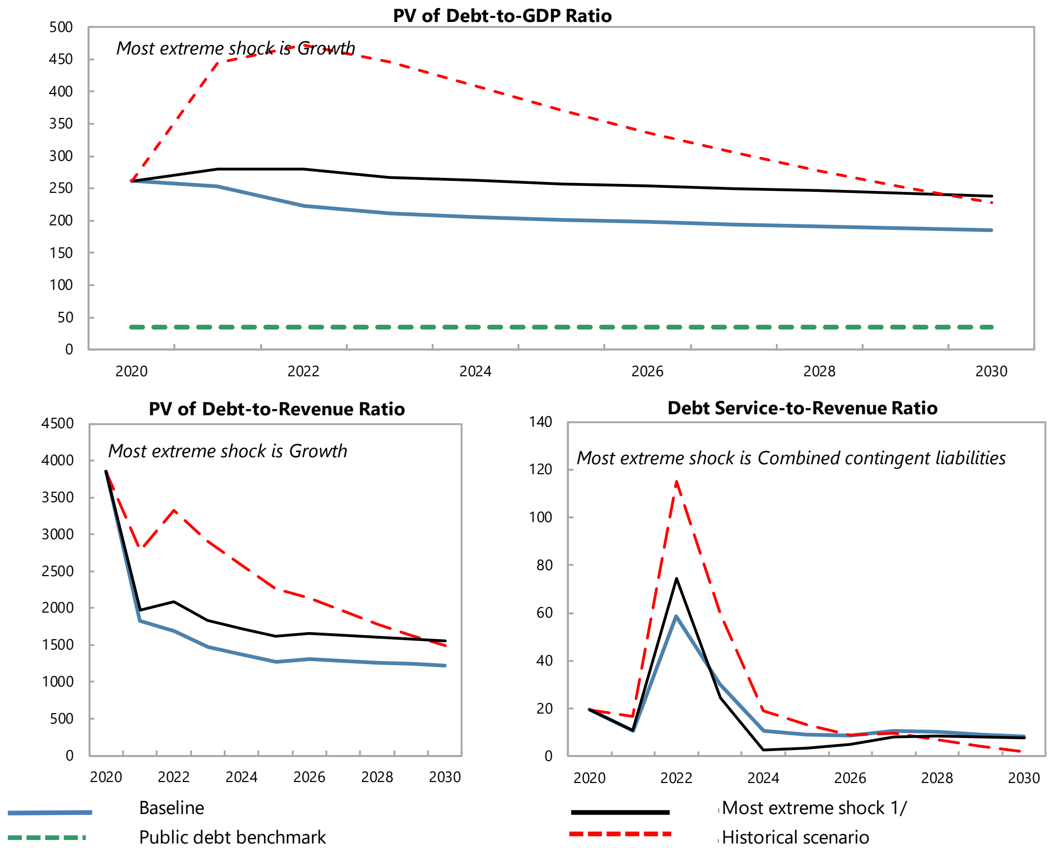
Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in or before 2030. Stress tests with one-off breaches are also presented (if any), while these one-off breaches are 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.

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.

Figure 2. Sudan: Indicators of Public Debt under Alternative Scenario, 2020–2030

(In percent)



Borrowing Assumptions for Stress Tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	0%	0%
Domestic medium and long-term	92%	92%
Domestic short-term	7%	7%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	1.1%	1.1%
Avg. maturity (incl. grace period)	22	22
Avg. grace period	7	7
Domestic MLT debt		
Avg. real interest rate on new borrowing	-40.4%	-40.4%
Avg. maturity (incl. grace period)	47	47
Avg. grace period	46	46
Domestic short-term debt		
Avg. real interest rate	-28.4%	-28.4%

* 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.

Table 3. Sudan: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2020–2030

(In percent)

	Projections 1/										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PV of debt-to GDP ratio											
Baseline	173	178	179	176	174	170	167	165	162	159	156
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	173	184	190	199	211	224	238	252	268	285	303
B. Bound Tests											
B1. Real GDP growth	173	202	233	229	226	221	218	214	211	207	204
B2. Primary balance	173	178	179	176	174	170	167	165	162	159	156
B3. Exports	173	190	207	204	202	198	195	192	189	186	182
B4. Other flows 3/	173	180	183	180	178	174	171	168	166	163	160
B5. Depreciation	173	216	219	215	213	208	205	201	198	195	191
B6. Combination of B1-B5	173	272	300	295	291	285	281	276	272	267	262
C. Tailored Tests											
C1. Combined contingent liabilities	173	178	179	176	174	170	167	165	162	159	156
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	941	829	736	712	703	687	678	669	660	651	643
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	941	857	779	804	853	903	962	1025	1093	1166	1243
B. Bound Tests											
B1. Real GDP growth	941	829	736	712	703	687	678	669	660	651	643
B2. Primary balance	941	829	736	712	703	687	678	669	660	651	643
B3. Exports	941	1349	1907	1850	1830	1790	1770	1750	1729	1705	1674
B4. Other flows 3/	941	839	751	727	719	702	694	685	676	666	657
B5. Depreciation	941	829	741	717	709	693	684	675	666	657	648
B6. Combination of B1-B5	941	1149	760	1286	1271	1243	1228	1212	1197	1179	1161
C. Tailored Tests											
C1. Combined contingent liabilities	941	829	736	712	703	687	678	669	660	651	643
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	7	6	31	15	4	4	4	3	3	2	2
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	7	6	33	17	5	5	5	5	5	4	4
B. Bound Tests											
B1. Real GDP growth	7	6	31	15	4	4	4	3	3	2	2
B2. Primary balance	7	6	31	15	4	4	4	3	3	2	2
B3. Exports	7	10	75	40	13	12	11	10	9	12	18
B4. Other flows 3/	7	6	31	16	5	4	4	4	3	3	3
B5. Depreciation	7	6	31	16	4	4	4	4	3	3	3
B6. Combination of B1-B5	7	8	54	28	8	8	7	7	6	8	7
C. Tailored Tests											
C1. Combined contingent liabilities	7	6	31	15	4	4	4	3	3	2	2
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	25	12	61	28	7	7	6	6	5	4	3
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	25	12	65	32	9	9	9	9	8	7	6
B. Bound Tests											
B1. Real GDP growth	25	13	79	37	10	9	8	8	7	5	4
B2. Primary balance	25	12	61	28	7	7	6	6	5	4	3
B3. Exports	25	12	66	32	10	9	8	8	7	9	13
B4. Other flows 3/	25	12	61	29	8	7	7	6	5	6	6
B5. Depreciation	25	14	74	35	9	8	8	7	6	5	5
B6. Combination of B1-B5	25	17	100	47	13	12	11	11	9	12	12
C. Tailored Tests											
C1. Combined contingent liabilities	25	12	61	28	7	7	6	6	5	4	3
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. Sudan: Sensitivity Analysis for Key Indicators of Public Debt, 2020–2030

	Projections 1/										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PV of Debt-to-GDP Ratio											
Baseline	**262**	**253**	**222**	**211**	**206**	**201**	**198**	**195**	**191**	**188**	**185**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	**262**	**445**	**473**	**446**	**409**	**372**	**337**	**305**	**277**	**251**	**228**
B. Bound Tests											
B1. Real GDP growth	**262**	**281**	**280**	**267**	**262**	**257**	**254**	**250**	**246**	**242**	**238**
B2. Primary balance	**262**	**258**	**232**	**217**	**210**	**204**	**199**	**196**	**192**	**189**	**185**
B3. Exports	**262**	**260**	**238**	**226**	**221**	**216**	**213**	**210**	**207**	**203**	**199**
B4. Other flows 3/	**262**	**256**	**227**	**215**	**210**	**205**	**202**	**199**	**196**	**192**	**189**
B5. Depreciation	**262**	**248**	**215**	**201**	**194**	**188**	**182**	**177**	**172**	**167**	**161**
B6. Combination of B1-B5	**262**	**202**	**187**	**173**	**168**	**164**	**161**	**159**	**156**	**153**	**151**
C. Tailored Tests											
C1. Combined contingent liabilities	**262**	**266**	**232**	**217**	**210**	**203**	**199**	**196**	**192**	**189**	**185**
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.
Public debt benchmark	35	35	35	35	35	35	35	35	35	35	35
PV of Debt-to-Revenue Ratio											
Baseline	3,850	1,822	1,686	1,469	1,368	1,276	1,304	1,284	1,262	1,241	1,219
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	3,850	2,786	3,327	2,912	2,581	2,264	2,143	1,958	1,786	1,629	1,486
B. Bound Tests											
B1. Real GDP growth	3,850	1,978	2,085	1,835	1,721	1,613	1,651	1,628	1,603	1,578	1,552
B2. Primary balance	3,850	1,857	1,760	1,516	1,397	1,294	1,316	1,291	1,267	1,244	1,222
B3. Exports	3,850	1,869	1,806	1,575	1,469	1,372	1,404	1,384	1,364	1,340	1,311
B4. Other flows 3/	3,850	1,844	1,718	1,498	1,395	1,302	1,331	1,311	1,290	1,267	1,243
B5. Depreciation	3,850	1,858	1,653	1,421	1,308	1,204	1,215	1,181	1,146	1,111	1,076
B6. Combination of B1-B5	3,850	1,521	1,436	1,219	1,129	1,051	1,074	1,057	1,040	1,022	1,003
C. Tailored Tests											
C1. Combined contingent liabilities	3,850	1,917	1,760	1,515	1,396	1,293	1,314	1,290	1,267	1,244	1,221
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	20	11	59	30	11	9	9	11	10	9	8
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	20	17	115	60	19	13	9	10	7	4	2
B. Bound Tests											
B1. Real GDP growth	20	12	73	36	8	4	1	3	2	1	(1)
B2. Primary balance	20	11	65	27	3	4	5	8	9	8	8
B3. Exports	20	11	59	32	12	11	10	12	12	13	17
B4. Other flows 3/	20	11	59	31	11	10	9	11	11	11	11
B5. Depreciation	20	10	58	29	9	8	7	9	8	6	4
B6. Combination of B1-B5	20	9	49	24	6	5	5	7	7	6	6
C. Tailored Tests											
C1. Combined contingent liabilities	20	11	75	25	3	4	5	8	9	8	8
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.

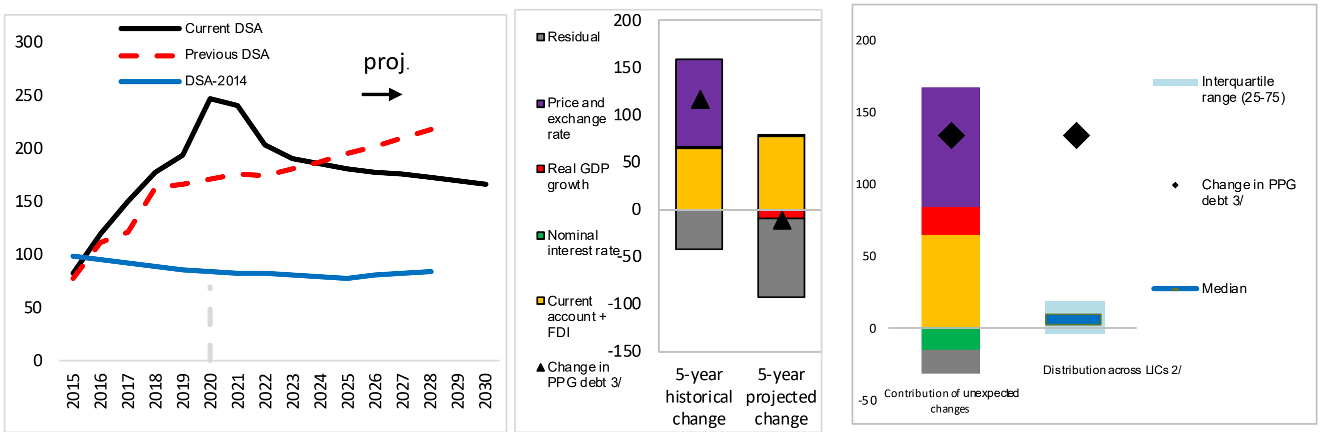
Figure 3. Sudan: Driver of Debt Dynamics – Baseline Scenario

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)

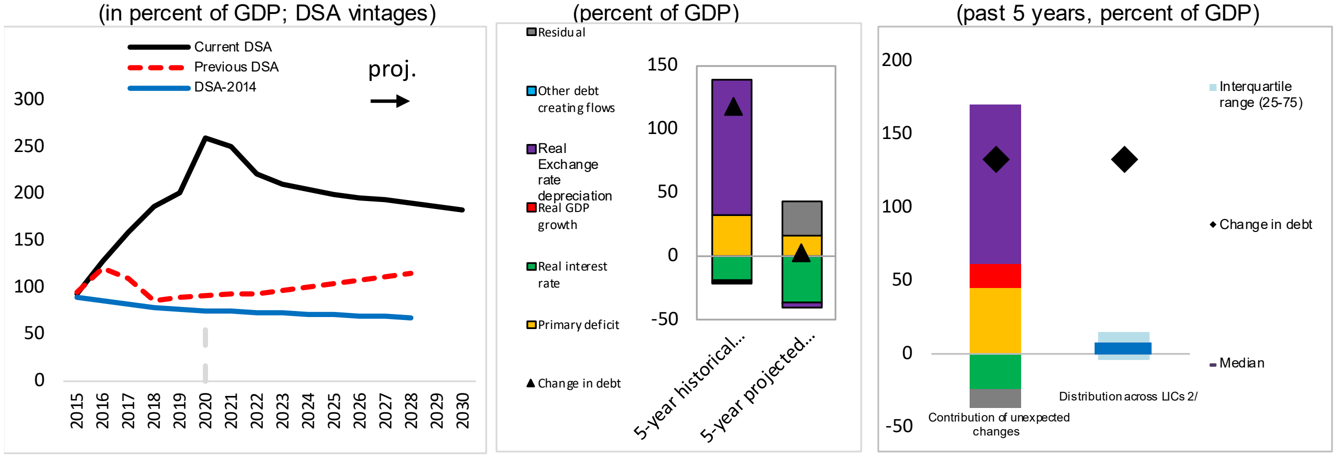


Public debt

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)



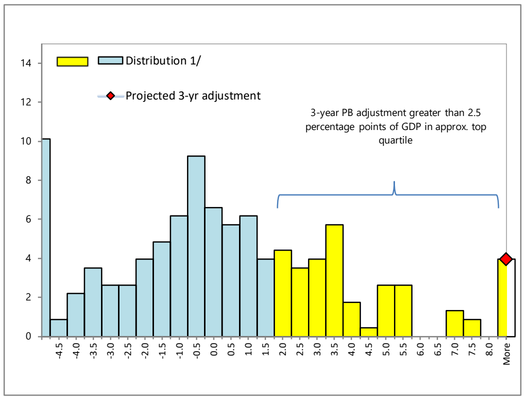
1/ Difference between anticipated and actual contributions on debt ratios.

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.

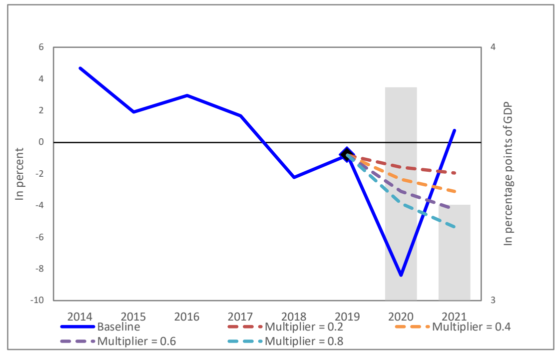
Figure 4. Sudan: Realism Tools

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).