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STAFF REPORT FOR 2022 ARTICLE IV CONSULTATION, FOURTH REVIEW UNDER THE EXTENDED CREDIT FACILITY ARRANGEMENT, REQUEST FOR WAIVERS FOR NONOBSERVANCE OF PERFORMANCE CRITERIA, MODIFICATION OF PERFORMANCE CRITERIA AND FINANCING ASSURANCES REVIEW—DEBT SUSTAINABILITY ANALYSIS

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São Tomé and Príncipe: 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	*Sustainable*
Application of judgement	*No*

The country remains in debt distress due to prolonged unsettled external arrears of more than 2 percent of GDP. Staff assesses that the country has the capacity to repay the external arrears over time, as indicated by the moderate external debt ratios. While the present value (PV) of the external public and publicly guaranteed (PPG) debt-to-exports ratio breaches its threshold from 2021 to 2023 due to the COVID-19 shock and debt service-to-exports ratio marginally breaches its threshold from 2022 to 2026, all other external PPG debt burden indicators remain below their thresholds throughout the projection horizon in the baseline scenario. The PV of total PPG debt (after accounting for the concessional terms of EMAE (a state-owned utility company) and central government debt and arrears to the country's fuel supplier, ENCO) is projected to breach the benchmark associated with a weak debt-carrying capacity (35 percent of GDP) through 2025. As the downward trajectory of the public debt remains intact, predicated on the authorities' commitment to implement EMAE's planned reforms and borrow externally only on concessional terms at a measured pace, public debt sustainability is preserved but subject to large risks. The likelihood of contingent liabilities

materializing, particularly ENCO's arrears to its parent company Sonangol (a state-owned company of Angola), remains low.

PUBLIC DEBT COVERAGE

1. **For the purpose of the DSA for São Tomé and Príncipe, PPG debt includes central government and EMAE (Empresa de Agua e Electricidade, a state-owned utility company) debt[1,2] , and the public-sector debt coverage is comprehensive albeit not yet complete.** EMAE has been accumulating arrears over the years to its fuel supplier, ENCO (Empresa Nacional de Combustíveis e Óleos), totaling 26 percent of GDP at end-2020. Three state owned enterprises (SOEs) besides EMAE— ENAPORT, ENASA, and *Correios*—are not included in the analysis due to lack of reliable data.[3] The DSA uses the residency-based assumption on debt. The use of the currency criterion would trigger substantial differences in results as EMAE's arrears denominated in USD are classified as domestic debt.[4]

Text Table 1. São Tomé and Príncipe: Public Debt Coverage Under the Baseline Scenario[1]

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

Sources: IMF and World Bank staff.
[1] Include the large loss-making utility company EMAE.

2. **Contingent liabilities are captured in the contingent liability stress test (Text Table 2)**. Additional potential liabilities from the other SOEs are assumed with the default value of 2 percent of GDP. Contingent liabilities from financial markets are also set at their default value of 5 percent of GDP. In addition, the contingent liability stress test includes disputable debt of $30 million owed to Nigeria. The authorities maintain that its repayment was conditional on oil revenues, which have no near-term prospect for materialization. Estimated fines of $12.4 million (2.4 percent of GDP) imposed by the Permanent Court of Arbitration after its ruling on the country's seizure of a Maltese ship in 2013 are also included in the shock. Pre-HIPC arrears are excluded. Finally, for the external DSA, the contingent liability shock also includes assumptions on ENCO's external arrears to

[1] The DSA includes the concessional terms of the recent restructuring of EMAE's debt to the country's fuel supplier, ENCO. ENCO is a private company owned by Sonangol (77.6 percent of capital), an Angolan state-owned company, with the government of Sao Tome and Principe owning about 16 percent of the company's share capital. In 2019, EMAE and ENCO signed an agreement on the regularization of EMAE's arrears to ENCO in the amount of $104.4 million.

[2] Consistent with the previous DSA, pre-HIPC initiative arrears to Angola ($36 million) and to Italy ($24.3 million) are excluded, since the country is making best efforts to reach an agreement consistent with the representative Paris Club agreement. It also excludes the disputable Nigeria debt (30 million), as there is no signed contract with repayment conditions between the two countries.

[3] ENAPORT and ENASA continue to improve data collection efforts, and the scope of the debt coverage is expected to be expanded in the DSAs in the future.

[4] ENCO, majority-owned by an Angolan SOE, is registered domestically.

Sonangol, estimated at $35.5 million (7.4 percent of GDP) for the public DSA and $136 million (28.5 percent of GDP) for the external DSA[5].

Text Table 2. São Tomé and Príncipe: Coverage of the Contingent Liabilities' Stress Test

1	**The country's coverage of public debt**	The central government, central bank, and government-guaranteed debt. There is no debt by social security or borrowing by extra budgetary entities.			
		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	16.3 for public; 37.4 for external	Includes the loan from Nigeria (6.3 percent of GDP), which is under dispute and Permanent Court of Arbitration fine (2.6 percent of GDP) for public and external DSAs to be prudent. Includes assumptions of ENCO's arrears to Sonangol in external DSA (28.5 percent of GDP) and in public DSA (7.4 percent of GDP).
3	**SoE's debt (guaranteed and not guaranteed by the government) 1/**	2	percent of GDP	2	
4	**PPP**	35	percent of PPP stock	0	The PPP project is pre-HIPC and is excluded from the DSA analysis.
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)	23.3 percent of GDP for the public DSA and 44.4 percent of GDP for the external DSA.			

1/ The default shock of 2 percent of GDP will be triggered for countries whose government-guaranteed debt is not fully captured under the country's public debt definition (1).

Sources: IMF and World Bank staff.

[5] ENCO's external arrears to Sonangol is estimated at $205 million. For the stress test of the public DSA, the shock of $35.5 million is based on the government's direct ownership of about 16 percent in ENCO. For the external DSA, the shock of $136 million is the sum of the $35.5 million (described above) and the share of EMAE's debt and arrears to ENCO that would be reclassified as external debt in the extreme scenario where the government buys out ENCO from Sonangol.

BACKGROUND

A. Debt

3. Total PPG debt reached 87 percent of GDP in 2020, including external debt of 43 percent of GDP (Text Table 3).[6] Total PPG debt is projected to reach around 96 percent of GDP in 2021, with external debt of 46 percent of GDP. PPG debt includes the arrears of the state-owned utility company, EMAE, to its fuel supplier ENCO, which rose to around $123 million in 2020 (26 percent of GDP or nearly 30 percent of total PPG debt) from $43 million in 2015. The expansion of the electricity distribution network and the associated large losses are key drivers for the rise in PPG debt. The presence of significant arrears of EMAE to its supplier also reflects severe liquidity constraints in the public sector. Staff assesses that São Tomé and Príncipe has the capacity to repay these arrears over time as long as the country implements reforms to the lossmaking state-owned enterprise, EMAE, and continues to borrow externally at concessional terms.

Text Table 3. São Tomé and Príncipe: Decomposition of Public Debt and Debt Service by Creditor, 2020-22[1,2]

	Debt Stock (end of period)			Debt Service					
	2020			2020	2021	2022	2020	2021	2022
	(In US$ mil)	*(Percent total debt)*	*(Percent GDP)*	*(In US$ mil)*			*(Percent GDP)*		
Total	415.7	100.0	87.1	5.1	7.8	12.3	1.1	1.5	2.2
External	205.6	49.5	43.1	2.6	4.6	7.6	0.5	0.9	1.4
Multilateral creditors[4]	76.9	18.5	16.1	1.7	2.8	2.8	0.4	0.5	0.5
IMF	25.5	6.1	5.3						
World Bank	11.5	2.8	2.4						
ADB/AfDB/IADB	18.7	4.5	3.9						
Other Multilaterals	21.3	5.1	4.5						
o/w: Arab Bank for Economic Development in Africa	12.4	3.0	2.6						
o/w : International Fund for Agricultural Development	5.2	1.3	1.1						
Bilateral Creditors	118.7	28.6	24.9	0.8	1.8	4.8	0.2	0.3	0.9
Paris Club	0.8	0.2	0.2	0.0	0.0	0.0	0.0	0.0	0.0
o/w: Belgium	0.8	0.2	0.2						
Non-Paris Club	117.9	28.4	24.7	0.8	1.8	4.8	0.2	0.3	0.9
o/w: Angola	52.7	12.7	11.0						
o/w: Portugal	61.2	14.7	12.8						
o/w: Nigeria[3]	0.0	0.0	0.0						
Bonds	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Commercial creditors	10.0	2.4	2.1	0.0	0.0	0.0	0.0	0.0	0.0
o/w: China	10.0	2.4	2.1						
o/w: Italy [7]	0.0	0.0	0.0						
Domestic	210.1	50.5	44.0	2.5	3.2	4.7	0.5	0.7	1.0
Held by residents, total	NA	NA	NA						
Held by non-residents, total	NA	NA	NA						
T-Bills	27.6	6.6	5.8						
Bonds	0.0	0.0	0.0						
Loans	182.5	43.9	38.2						
Memo items:									
Collateralized debt[5]	0.0	0.0	0.0						
o/w: Related	0.0	0.0	0.0						
o/w: Unrelated	0.0	0.0	0.0						
Contingent liabilities [8]	61.6	14.8	12.9						
o/w: Public guarantees	0.0	0.0	0.0						
o/w: Other explicit contingent liabilities[6]	0.0	0.0	0.0						
Nominal GDP	477.3			477.3	524.0	556.7			

1/As reported by Country authorities according to their classification of creditors, including by official and commercial. Debt coverage is the same as the DSA.
2/Some public debt is not shown in the table due to [confidentiality clauses/capacity constraints].(Include for all creditor groups where applicable)
3/ Individual creditors accounting for more than 5 percent of total debt. The debt with Nigerian is disputable so it is not included in the DSA.
4/ "Multilateral creditors" are simply institutions with more than one official shareholder and may not necessarily align with creditor classification under other IMF policies (e.g. Lending Into Arrears)
5/ Debt is collateralized when the creditor has rights over an asset or revenue stream that would allow it, if the borrower defaults on its payment obligations, to rely on the asset or revenue stream to secure repayment of the debt. Collateralization entails a borrower granting liens over specific existing assets or future receivables to a lender as security against repayment of the loan. Collateral is "unrelated" when it has no relationship to a project financed by the loan. An example would be borrowing to finance the budget deficit, collateralized by oil revenue receipts. See the joint IMF-World Bank note for the G20 "Collateralized Transactions: Key Considerations for Public Lenders and Borrowers" for a discussion of issues raised by collateral.
6/ Includes other-one off guarantees not included in publicly guaranteed debt (e.g. credit lines) and other explicit contingent liabilities not elsewhere classified (e.g. potential legal claims, payments resulting from PPP arrangements).
7/ Commercial loans with Italy are classified as technical external arrears and excluded in the DSA.
8/ As defined in the contingent liabilities stress test, contingent liabilities are estimated at 12.9 percent of GDP for public DSA and 55.7 for external DSA.

[6] Due to the broadened debt coverage discussed above, the "central government direct and guaranteed debt" in this DSA has the same coverage as the "total PPG debt" in the previous DSA. Consistent with the new DSF framework, the term "total PPG debt" refers to the coverage that includes the central government and EMAE (the government's arrears to EMAE are excluded during the consolidation)

4. **The country continues to engage actively with bilateral creditors to regularize post-HIPC arrears, with the amount remaining unchanged.** In total, such arrears stood at 2.2 percent of 2020 GDP (US$10.7 million), which are to Angola (US$4.8 million), Brazil (US$4.3 million), and Equatorial Guinea (US$1.7 million). An agreement with the Brazilian government was reached, pending ratification by the Brazilian Senate. The government has also actively sought debt rescheduling agreements with Angola and Equatorial Guinea through correspondence and high-level meetings and reached good progress with technical steps completed, pending the final signed agreements. These post-HIPC arrears are reflected in the debt stock. Text Table 4 provide details on the situation of arrears.

Text Table 4. São Tomé and Príncipe: Arrears and Disputable Debt
(As of End-2020)

Type	Description	DSA Treatment
Pre-HIPC legacy arrears (12.6 percent of GDP)	São Tomé and Príncipe has pre-HIPC legacy arrears to Angola (US$36 million[1/]) and Italy (US$24.3 million), in total US$60.3 million. São Tomé and Príncipe is making best efforts to reach an agreement consistent with the representative Paris Club agreement. In 2017 São Tomé and Príncipe was able to secure relief from pre-HIPC legacy arrears to China of US$18.4 million.	Not included in the DSA on the assumption of expected forgiveness.
Post-HIPC bilateral arrears (2.2 percent of GDP)	São Tomé and Príncipe has post-HIPC arrears to Angola (US$4.8 million), Brazil (US$4.3 million), and Equatorial Guinea (US$1.7 million), in total $10.7 million. The negotiations with Angola and Equatorial Guinea are progressing well with technical steps completed, pending the final signed agreements. An agreement with the Brazilian government was reached, pending ratification by the Brazilian Senate. These arrears are the result of weak debt management, and staff assesses that São Tomé and Príncipe has the capacity to repay them over time.	Included in the baseline scenario at end-2020.
Domestic arrears[2/] (15.8 percent of GDP)	São Tomé and Príncipe has domestic arrears to the telecom company CST (US$6.1 million), EMPRESAS (US$7 million), fuel price differentials (US$31.8 million), and other private suppliers (US$30.5 million, mostly construction companies). In total, the domestic arrears amount to US$75.4 million.	Included in the baseline scenario.
Disputable debt (6.3 percent of GDP)	A loan from Nigeria in the amount of US$30 million was excluded from the debt stock, as there is no signed contract with repayment conditions between the two countries. Nonetheless, the authorities acknowledged the receipt of the funds, which were spent as evidenced by budget documents. This loan was extended as advances on oil revenues in the context of the joint development zone between these two countries, but this project has stalled. According to São Tomé and Príncipe authorities, this loan is under dispute since it should only be repaid in case revenues from oil materialize.	Included in the contingent liability stress tests for both the public DSA and external DSA.

[1/] The amount increased from US$30.6 million to US$36 million in 2019, reflecting the fact to include Angola Arrears Commercial Debt in the amount of Arrears debts to Angola from the month of October 2019, after the reconciliation meeting held in May 2019.

[2/] The domestic arrears in Text Table 4 DSA reflect the latest actual data compilations by the authorities for 2019 and 2020, updating previous staff projections. Based on the latest compilations from the authorities, the stock of domestic arrears was US$88.3 million in 2019 and declined to US$75.4 million in 2020, which also contributed to the decline in debt levels in 2020.

B. Macroeconomic Forecast

5. The macroeconomic assumptions are updated, relative to the September 2021 DSA.

- **Growth and inflation:** The 3 percent GDP growth rate in 2020 was supported by externally financed public spending, despite the negative impacts of the pandemic. Transfers to vulnerable households and businesses provided relief to the service sector which made surprisingly positive contribution to growth. Similarly, expansion of externally financed public spending, including on education and health boosted construction growth. The improvement in current account in 2020 was mainly due to lower imports and higher official transfers. Major externally financed projects in 2020 include Drinking Water Supply Project, Project of Infraction Support to Food Industry, Project of Study of the National Land Use Plan, Payment and Inclusion System Infrastructure Financing Project, and Project to Support Marketing, Agricultural Productivity and Nutrition. The projections assume that the residual of financing needs will be filled with short-term locally issued debt, while the actual domestic financing needs are significantly lower with the concessional terms of the EMAE debt and arrears to ENCO. The public and external debt levels improved in 2020 compared to 2019, mainly due to higher growth outturn. The real GDP growth is projected to decline to 1.8 percent in 2021 as a result of power shortages, the pandemic, and lower external financing, which would contribute to the slight increase in debt levels in 2021. Average real growth stays at 3.7 percent throughout the 2021-41 projection horizon (Text Table 5). Inflation (GDP deflator) was 5.6 percent in 2020 and is projected to decline to 3.1 percent in 2021. Inflation rates are forecasted to decline to an average of 2.8 percent throughout the 2021-41 projection horizon.

- **External:** Exports are expected to accelerate over the medium term, as the tourism strategy is being implemented with World Bank support, and the sector boosted gradually by improvement of infrastructure, a new international payment system (currently expected to be completed in about three years), and a new tourism school. Cocoa and palm oil exports are expected to contribute also to the export growth given the high quality of this product in STP, and the positive effects of the recovery of the direct exports to Europe.

- **Fiscal:** The domestic primary budget deficit improved to 0.6 percent of GDP through the projection horizon, lower than the average of 1.3 percent of GDP of the previous DSA. The authorities aim to achieve a domestic primary surplus by 2025. Medium-term fiscal consolidation would be supported by the introduction of the VAT at a 15 percent rate with minimum exemptions in 2022, strengthening of revenue administration, management of the impact of rapidly rising world prices on revenues and implicit subsidies, implementation of PFM reforms, and strengthening of fiscal transparency and governance. In line with the IMF Extended Credit Facility arrangement, it is assumed that the budget deficit will be mainly financed by grants and concessional loans. In addition, the current account will also be financed by FDI. The economy is expected to recover with the implementation of long- delayed construction projects and a recovery in tourism and global demand of commodities.

Text Table 5. São Tomé and Príncipe: Macroeconomic Assumptions

	Historical		Forecasts	
	Sep 2021 DSA	Last 4 years	Sep 2021 DSA[1]	This DSA
	2017-20	2017-20	2021-41	2021-41
Real GDP growth (percent)	3.0	3.0	3.8	3.7
Inflation (percent average)	4.3	4.3	2.6	2.8
Domestic primary balance (percent of GDP)	-4.7	-4.6	-1.3	-0.6
Grants (percent of GDP)	8.7	8.9	4.6	7.2
FDI (percent of GDP)	6.2	6.6	4.9	5.4
USD export growth (percent)	-11.3	-11.9	9.0	8.5
USD import growth (percent)	-1.5	-1.7	5.2	5.7
Current account balance, including grants (percent of GDP)	-12.9	-12.0	-4.3	-5.9
Current account balance, excluding grants (percent of GDP)	-21.9	-21.1	-9.6	-13.2

1 IMF Country Report No. 2021/202

6. **The realism tool outputs compared the projections to cross-country experiences and to São Tomé and Príncipe's own historical experience (Figures 3 and 4).** Drivers of debt dynamics suggest some changes in the decomposition of debt-creating flows. The decomposition of debt-creating flows indicates that the projected contribution of the current account deficit will have a lower impact on external debt accumulation as a result of projected improvements on current account deficits over the medium term with the recovery of tourism sector. While lower growth and lower impact of price and exchange rate will contribute to slower debt reduction compared to historical drivers. For the total public debt, lower primary deficits than in the past will be key drivers of public debt dynamics. The worsening in the primary balance over the next 3-years is in the bottom quartile of the distribution, reflecting the unwinding of temporary external support which supported the fiscal surplus in 2020. The projected scaling-up of public investment is expected to yield a growth dividend in line with historical factors. This will be supported by the authorities' intentions to improve public investment management and enact reforms which will allow for additional domestic financing.

C. Country Classification and Determination of Scenario Stress Tests

7. **The country's debt carrying capacity is assessed to remain weak under the Composite Index, as in the Sep 2021 DSA of the Third Review of ECF**. The new Composite Index (CI) of debt carrying capacity reflects macroeconomic variables, such as real GDP growth, remittances, reserves, and world growth, in addition to CPIA. The CI is 2.673, reflecting to a weak debt carrying capacity, and is estimated based on the October 2021 WEO and 2020 WB's CPIA (Text Table 6). This along with other revisions to the framework confirms São Tomé and Príncipe as a weak debt-carrying capacity country. The applicable thresholds for the ratios of PV of PPG external debt relative to GDP and exports are 30 percent and 140 percent. The benchmark for the PV of total PPG debt is to 35 percent of GDP. The thresholds for PPG external debt service are 10 percent of exports and 14 percent of revenue.

Text Table 6. São Tomé and Príncipe: Classification of Debt Carrying Capacity

Final	Classification based on current vintage	Classification based on the previous vintage	Classification based on the two previous vintages
Weak	Weak	Weak	Weak
	2.673	2.663	2.678

8. The DSA incorporates the costs and risks of natural disasters in the tailored natural disaster stress test. São Tomé and Príncipe is vulnerable to natural disasters that are influenced by climatic factors. Floods frequently affect this island nation with heavy rainfall events and storms, which could cause soil erosion, landslides, increase the risk of waterborne diseases, and decrease crop production. The tailored stress test assumes a one-off natural disaster shock of 10 percent of GDP to external PPG debt-GDP ratio in the second year of the projection period, with associated real GDP growth shock of 1.5 percent of GDP and associated exports growth shock of 3.5 percent of GDP. The results of our analysis indicate that, by the end of 2026, a natural disaster shock may increase PV of public debt-to-GDP ratio from 57 percent of GDP under the baseline scenario to 65 percent of GDP under the stress-test scenario, and PV of external debt-to-GDP ratio will increase from 21 percent of GDP under the baseline scenario to 26 percent of GDP under the stress-test scenario.

DEBT SUSTAINABILITY

A. External Debt Sustainability

9. Despite in the debt distress rating, the DSA indicates that total external PPG debt is sustainable under the program baseline scenario. Under the baseline scenario[7], the external PPG debt stock and debt service ratios remain below the DSA threshold values throughout the projection horizon, except for some temporary breaches (Figure 1). The PV of PPG external debt-to-GDP ratio remains below the threshold of 30 percent throughout the period, and the PV of PPG external debt-to-exports ratio remains below the threshold of 140 percent of GDP from 2024 onward. The improvement of the solvency indicators over the medium term reflects fiscal consolidation, cautious external borrowing, economic growth, and an improved current account balance. The liquidity indicators remain below their threshold values of 10 and 14 percent for the debt service-to-exports and debt service-to-revenue ratios respectively, except temporary breaches of the debt service-to-exports ratio related to the projected IMF and deferred DSSI repayments from 2022 to 2026. Like the solvency indicators, the liquidity ratios also improve over time reflecting higher exports and revenues. These results suggest that the external PPG debt is sustainable. While risks of external debt are considerable as the baseline scenario for external debt is dangerously close to thresholds under the indicators of external debt to exports ratio and external debt service to exports ratio, and

[7] The debt projections reflect the updated assumption that part of the future disbursements of annual IDA allocations are assumed to be under credit terms (with interest rate of 0.75 percent for small economy) instead of grant terms.

baseline scenarios diverge considerably from historical scenarios, as historical scenarios suggesting an upward trend of debt path without fiscal consolidation and energy reforms.

10. While the baseline scenario is sustainable, stress tests suggest the vulnerability of external debt in the presence of extreme shocks. The solvency indicators breach their threshold values under the most extreme shock scenario. One of the most extreme shock scenarios is the combined contingent liability shock (for external debt-to-GDP ratio). This shock scenario includes the potential repayment of the Nigeria loan (US$30 million), payment of Permanent Court of Arbitration fine (US$12.4 million), and ENCO's arrears to Sonangol (US$136 million) which may ultimately fall on the government, as well as the standard assumption of a financial market bailout. As Text Table 2 indicates, ENCO's external arrears to Sonangol represent the primary contingent liability in this extreme shock scenario.[8] These results highlight the importance of developing plans for contingent liabilities and arrears. The most extreme shock for debt service-to-revenue ratio is a one-time depreciation shock. The most extreme shock for debt-to-exports ratio and for debt service-to-exports ratio is an exports shock and, which also suggests the importance of promoting strong export growth. The PV of debt-to-exports ratio and the debt service-to-exports ratio breach their respective thresholds throughout all of the projection horizon but decline over time under the exports shock scenario.

B. Public Debt Sustainability

11. Total PPG debt can be deemed sustainable under the baseline scenario. Under the baseline, the PV of PPG debt is projected to have a downward trajectory, while the levels breach the DSA benchmark of 35 percent throughout the period. After accounting for the concessional terms of EMAE's and central government's debt to ENCO governed by a 2019 repayment agreement[9] (with fixed annual payments, no interest and a grant element over 80 percent), the PV of PPG debt is projected to breach the DSA threshold of 35 percent through 2025 before gradually declining to around 19 percent of GDP by 2031 (Figure 2). As its downward trajectory remains intact, predicated on the authorities' commitment to continue its fiscal consolidation, implement EMAE's planned reforms[10], and borrow externally only on concessional terms at a measured pace, public debt sustainability is preserved but now subject to large risks. In this regard, it would be important to develop an active plan to gradually strengthen São Tomé and Príncipe's debt-carrying capacity against a very uncertain global economic backdrop and preserve debt sustainability. Should downside risks materialize and lead to a further deterioration of the debt situation (compared to

[8] The size of the Sonangol shock (US$136 million) is calibrated to capture the maximum amount of liabilities that would be assumed by the government should the contingency materialize. The payment terms are assumed to have a grant element of about 37 percent, broadly consistent with the concessionality of PPG external debt.

[9] Presented as the black dash line in Figure 2.

[10] As discussed in the staff report, resolving energy sector inefficiencies requires a multi-pronged reform approach. Key measures include: i) implement short-term measures to contain EMAE's losses such as installing new meters, improving payment discipline, rolling out LED bulbs program (SB), and fostering a transition to renewable energy sources; ii) rely on the automatic fuel price adjustment mechanism and maintaining retail fuel prices aligned with international markets (continuous SB) to prevent implicit fuel subsidies and contain fiscal risks; and iii) strengthen targeted social transfer programs for the most vulnerable, supported by development partners.

staff's baseline), additional fiscal efforts and an improved financing mix (geared toward more grants and highly concessional borrowing) would be needed to safeguard debt sustainability.

12. Two total PPG debt ratios (PV of debt-to-GDP, PV of debt-to-revenue) and debt service-to-revenue ratio are sensitive to a combined contingent liabilities shock. Under such shocks, the three ratios would rise in the near term before declining gradually in the medium-to-long term. The dotted purple line in Figure 2 shows the shock scenario applied to the debt path after accounting for the concessional terms of EMAE's and central government's debt to ENCO, which the debt level will also rise to above the benchmark under the most extreme shock scenario which is the non-debt creating flows shock. In addition, given that EMAE's arrears to ENCO are denominated in foreign currency, the country's debt is subject to currency risk, even though such arrears are treated as domestic debt under the residency-based definition.

DEBT DISTRESS QUALIFICATION AND CONCLUSIONS

13. São Tomé and Príncipe's remains to be in debt distress as in the previous DSA. This is because the regularization of São Tomé and Príncipe's post-HIPC sovereign arrears (to Angola, Brazil, and Equatorial Guinea, totaling around 2.2 percent of GDP) is still ongoing. The significant arrears of EMAE to its supplier also reflect the severe liquidity constraints of the public sector. Staff assesses that São Tomé and Príncipe has the capacity to repay these arrears over time. São Tomé and Príncipe continues to actively seek rescheduling agreements with the creditors.

14. Despite the weak debt-carrying capacity and the in-debt distress rating, PPG external and total debt remain sustainable. The weak debt carrying capacity implies that lower debt burden indicator thresholds and some temporary threshold breaches of external and total PPG debt are observed. The PV of external debt-to-GDP remains below its thresholds from 2021 through the projection horizon, and the PV of discounted PPG debt-to-GDP declines to below its threshold from 2025 through the projection horizon.

15. Risks around the baseline are substantial. In particular, stress tests indicate that the country's debt is especially vulnerable to shocks to exports and combined contingent liabilities. A particular stress test based on an extreme scenario where the government needs to buy out ENCO and be responsible for ENCO's significant external arrears to Sonangol reveals that the associated risks could be high if the extreme scenario materializes. However, key external debt ratios are expected to recover to below their thresholds in the medium term and the likelihood of materialization of the extreme scenario remains low due to the strong diplomatic ties between São Tomé and Príncipe and Angola.

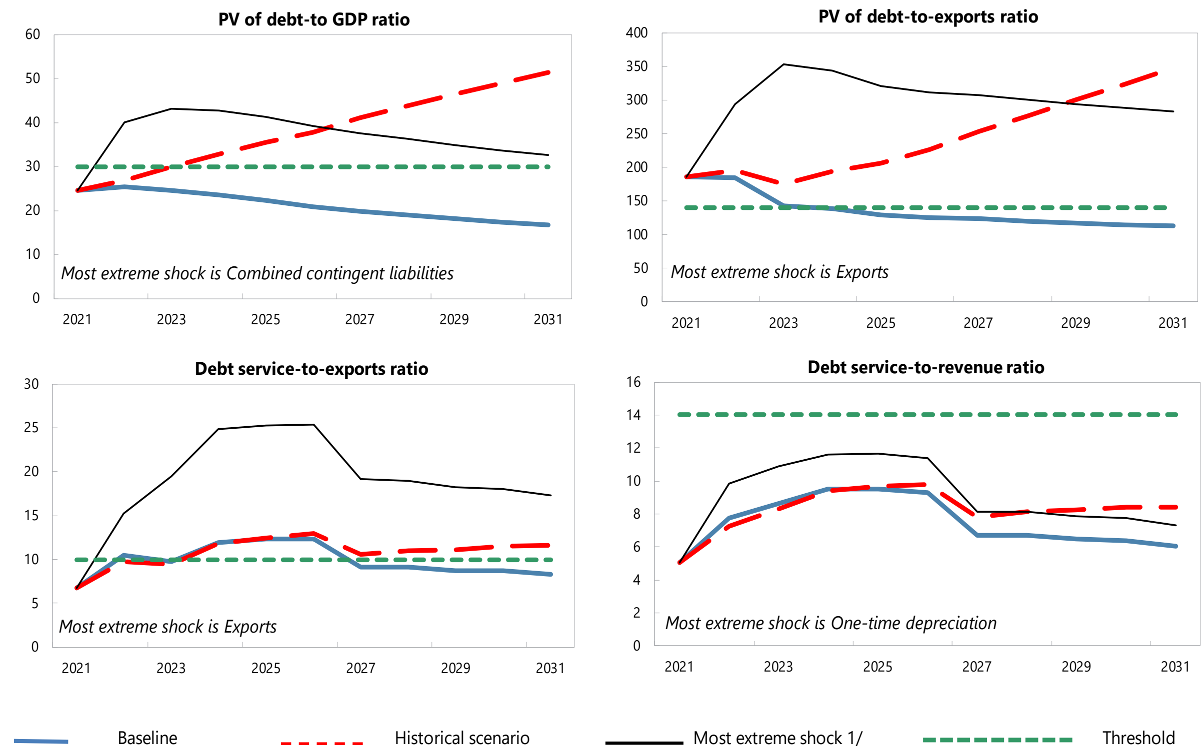
16. Overall, the DSA highlights the importance of continuing fiscal reforms and maintaining strong policies in order to reduce debt-related risks and ensure debt sustainability. To mitigate fiscal risks, the country needs to continue with policies including deepening and prioritizing EMAE reforms (such as systematized least cost electricity planning, which supports clean transition by increasing renewable energy sources, a reform supported by the World Bank budget operation), continuing fiscal consolidation and revenue mobilization, eschewing non-concessional loans, improving the business climate to attract non-debt flows, strengthening

macroeconomic policies as envisaged under the program to support the exchange rate peg, and promoting tourism and private sector-led growth. It is also important to continue reforms on strengthening public financial management systems and avoiding the accumulation of new domestic arrears, including measures such as improving macro-fiscal framework projections, strengthening cash management coordination mechanism and expenditure control, preventing the accumulation of arrears and updating the arrears clearance plan to cover all domestic arrears. In addition, contracting new concessional loans and external debt disbursements need to be carefully planned to balance debt sustainability concerns while addressing the country's large investment needs. Contracting of new concessional loans should be limited to 3 percent of GDP, and external debt disbursements should not exceed 2 percent of GDP per annum. These parameters can be adjusted according to debt developments and relaxed as debt vulnerability decreases. In this context, the country should strive to finance large projects with non-debt generating means, including by grants.

Authorities' Views

17. The authorities broadly agreed with the assessment. They are committed to continuing the effort to regularize the long-standing external arrears. They also recognized the significant risk to debt sustainability from the large and persistent loss by EMAE, which have translated to large arrears to ENCO, and are committed to implementing EMAE reforms to achieve debt sustainability. They also pledge to borrow only at concessional terms and at a measured pace to reduce debt vulnerability over time.

Figure 1. São Tomé and Príncipe: Indicators of Public and Publicly Guaranteed External Debt Under Alternatives Scenarios, 2021–2031



Customization of Default Settings		
	Size	Interactions
Tailored Tests		
Combined CLs	Yes	
Natural Disasters	No	No
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.

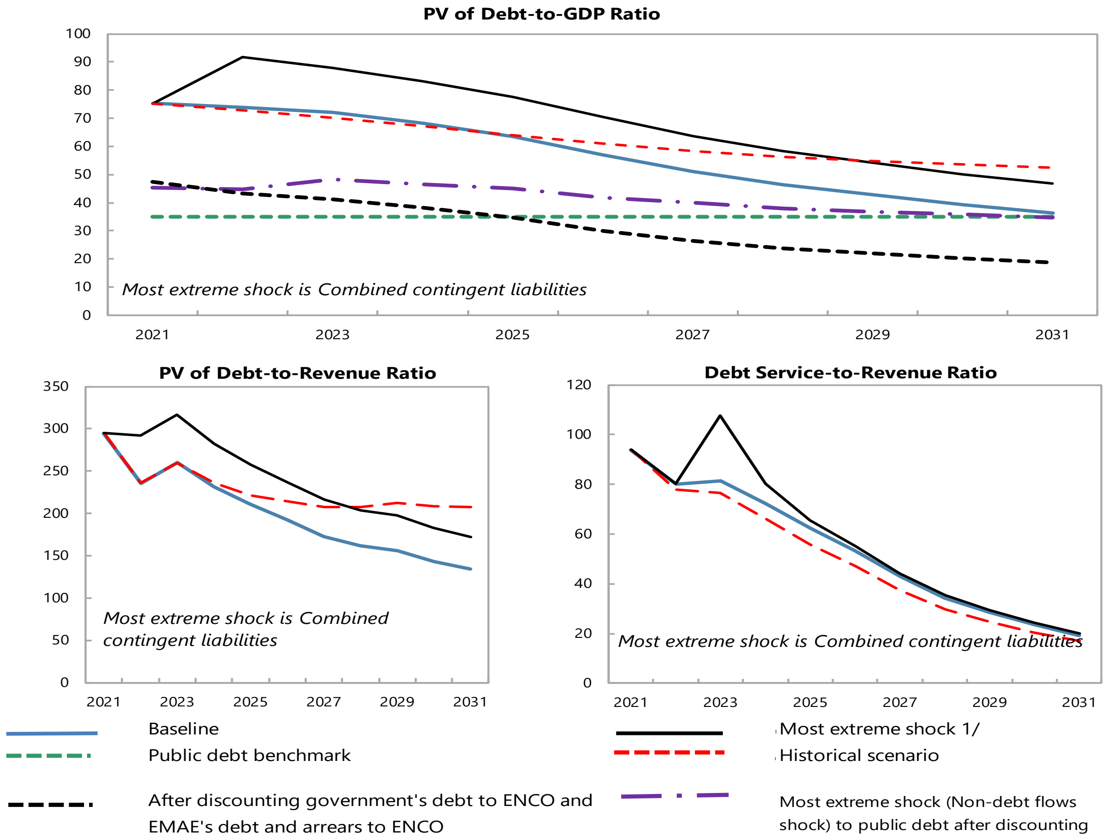
Borrowing Assumptions for Stress Tests*		
	Default	User defined
Shares of marginal debt		
External PPG MLT debt	100%	
Terms of marginal debt		
Avg. nominal interest rate on new borrowing in USD	1.3%	1.3%
USD Discount rate	5.0%	5.0%
Avg. maturity (incl. grace period)	30	30
Avg. grace period	9	9

* 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 2031. 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.

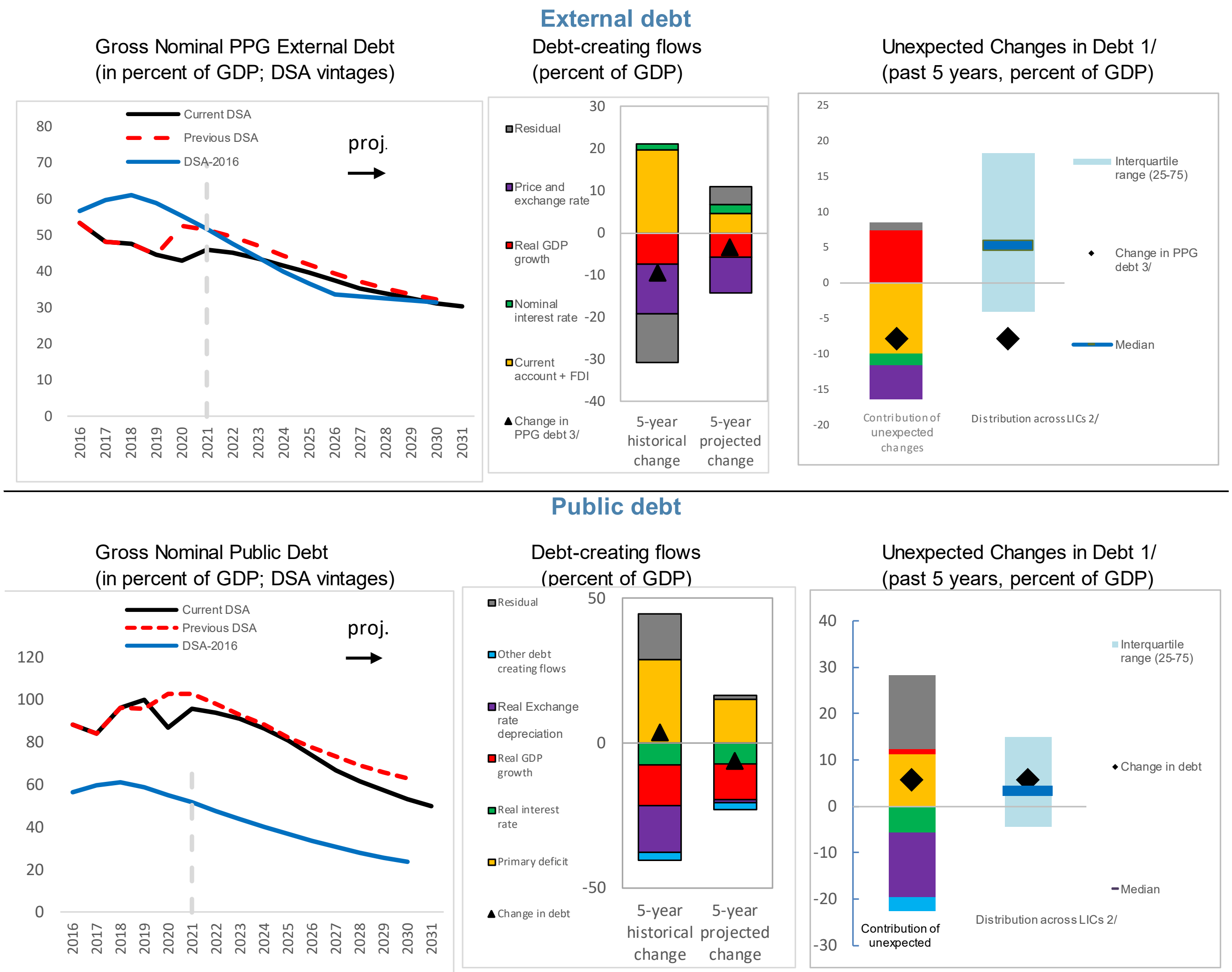
Figure 2. São Tomé and Príncipe: Indicators of Public Debt Under Alternative Scenarios, 2021– 2031



Borrowing Assumptions for Stress Tests*	Default	User defined
Shares of marginal debt		
External PPG medium and long-term	24%	60%
Domestic medium and long-term	9%	9%
Domestic short-term	109%	31%
Terms of marginal debt		
External MLT debt		
Avg. nominal interest rate on new borrowing in USD	1.3%	1.3%
Avg. maturity (incl. grace period)	30	30
Avg. grace period	9	9
Domestic MLT debt		
Avg. real interest rate on new borrowing	-3.3%	-3.3%
Avg. maturity (incl. grace period)	100	100
Avg. grace period	99	99
Domestic short-term debt		
Avg. real interest rate	-1.0%	-1.0%

* 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 2031. The stress test with a one-off breach is also presented (if any), while the one-off breach is deemed away for mechanical signals. When a stress test with a one-off breach happens to be the most exterme shock even after disregarding the one-off breach, only that stress test (with a one-off breach) would be presented.

Figure 3. São Tomé and Príncipe: Drivers of Debt Dynamics – Baseline Scenario–External Debt



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

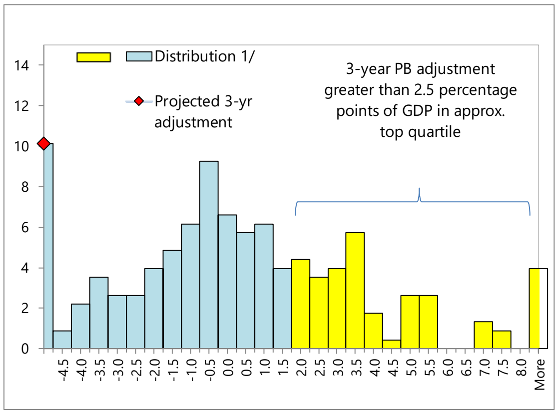
2/ Distribution across LICs for which LIC DSAs were produced.

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.

Sources: Country authorities; and staff estimates and projections.

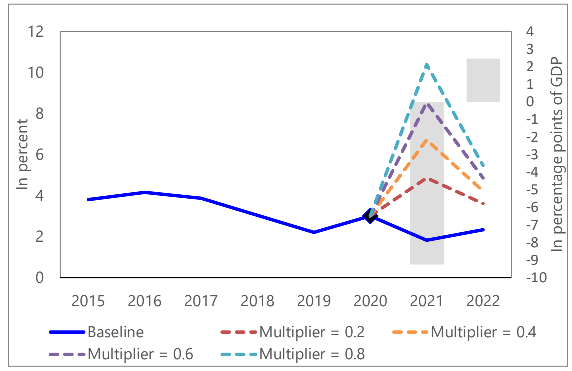
Figure 4. São Tomé and Príncipe: Realism Tools

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



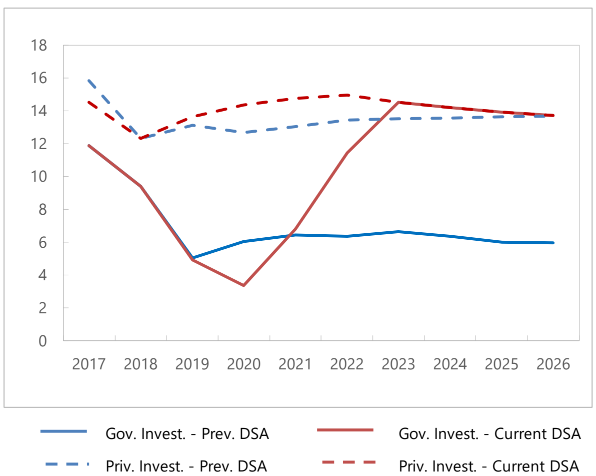
1/ Data cover Fund-supported programs for LICs (excluding emergency financing) approved since 1990. The size of 3-year adjustment from program inception is found on the horizontal axis; the percent of sample is found on the vertical axis.

Fiscal Adjustment and Possible Growth Paths 1/

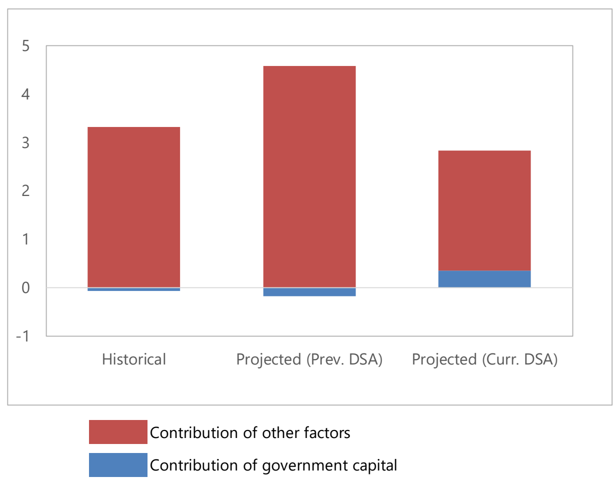


1/ Bars refer to annual projected fiscal adjustment (right-hand side scale) and lines show possible real GDP growth paths under different fiscal multipliers (left-hand side scale).

Public and Private Investment Rates
(% of GDP)



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



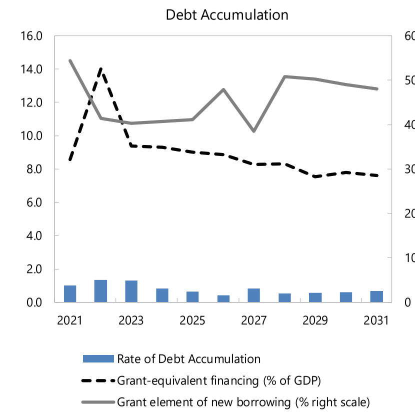
Sources: Country authorities; and staff estimates and projections.

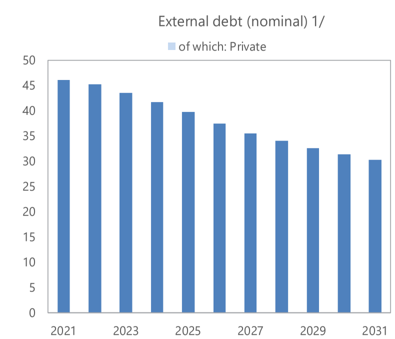
Table 1. São Tomé and Príncipe: External Debt Sustainability Framework, Baseline Scenario, 2019-2041

(In percent of GDP, unless otherwise indicated)

	Actual		Projections								Average 8/	
	2019	2020	2021	2022	2023	2024	2025	2026	2031	2041	Historical	Projections
External debt (nominal) 1/	44.7	43.1	46.0	45.2	43.4	41.6	39.7	37.4	30.3	29.0	43.7	37.9
of which: public and publicly guaranteed (PPG)	44.7	43.1	46.0	45.2	43.4	41.6	39.7	37.4	30.3	29.0	43.7	37.9
Change in external debt	-2.9	-1.7	2.9	-0.8	-1.7	-1.8	-2.0	-2.2	-1.1	0.2		
Identified net debt-creating flows	3.5	-1.0	1.7	1.6	-0.3	-1.0	-1.1	-1.0	-1.6	0.3	4.9	-0.9
Non-interest current account deficit	11.6	10.0	9.4	9.5	7.0	6.1	5.8	5.6	4.6	4.9	14.8	6.0
Deficit in balance of goods and services	22.0	-10.3	21.2	26.6	19.8	19.3	18.4	17.7	15.4	14.6	29.3	18.3
Exports	22.3	10.3	13.2	13.7	17.2	16.9	17.2	16.7	14.8	13.2		
Imports	44.3	...	34.4	40.3	36.9	36.2	35.6	34.3	30.2	27.7		
Net current transfers (negative = inflow)	-10.2	-13.8	-10.5	-15.7	-11.3	-11.5	-11.2	-10.9	-9.9	-9.1	-17.6	-11.1
of which: official	-6.4	-10.5	-7.8	-12.9	-8.2	-8.2	-7.9	-7.6	-6.7	-6.0		
Other current account flows (negative = net inflow)	-0.2	34.2	-1.3	-1.4	-1.5	-1.6	-1.4	-1.2	-0.9	-0.6	3.1	-1.2
Net FDI (negative = inflow)		-6.8	-7.2	-7.1	-6.7	-6.3	-5.9	-5.6	-5.3	-3.9	-6.8	-6.0
Endogenous debt dynamics 2/	-1.1	-4.2	-0.5	-0.7	-0.6	-0.9	-0.9	-1.0	-0.8	-0.7		
Contribution from nominal interest rate	0.6	0.2	0.2	0.4	0.5	0.5	0.5	0.4	0.3	0.4		
Contribution from real GDP growth	-1.0	-1.2	-0.7	-1.0	-1.2	-1.4	-1.4	-1.4	-1.1	-1.1		
Contribution from price and exchange rate changes	-0.6	-3.2	...	...	...	...	...	...	...	...		
Residual 3/	-6.4	-0.7	1.2	-2.5	-1.4	-0.8	-0.9	-1.3	0.5	0.0	-4.5	-0.3
of which: exceptional financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Sustainability indicators												
PV of PPG external debt-to-GDP ratio	...	25.7	24.5	25.3	24.5	23.5	22.3	20.8	16.7	16.3		
PV of PPG external debt-to-exports ratio	...	248.5	185.5	184.4	143.0	138.8	129.5	125.1	112.8	123.7		
PPG debt service-to-exports ratio	4.5	5.2	6.8	10.4	9.8	12.0	12.3	12.3	8.3	6.7		
PPG debt service-to-revenue ratio	5.6	2.9	5.0	7.8	8.6	9.5	9.5	9.3	6.0	4.8		
Gross external financing need (Million of U.S. dollars)	24.2	17.9	16.1	19.9	11.4	11.8	13.3	15.5	5.3	36.6		
Key macroeconomic assumptions												
Real GDP growth (in percent)	2.2	3.0	1.8	2.3	2.8	3.5	3.7	4.0	3.9	4.1	3.9	3.5
GDP deflator in US dollar terms (change in percent)	1.4	7.6	6.9	-0.2	5.6	4.2	4.2	5.0	3.7	1.9	5.4	4.1
Effective interest rate (percent) 4/	1.2	0.5	0.6	0.8	1.3	1.3	1.4	1.1	1.1	1.3	0.8	1.1
Growth of exports of G&S (US dollar terms, in percent)	-1.9	-48.7	39.3	6.0	35.6	6.5	10.0	5.4	5.5	0.0	12.2	11.9
Growth of imports of G&S (US dollar terms, in percent)	-5.3	-11.4	5.9	19.7	-0.6	5.7	6.3	5.2	5.8	0.0	4.6	6.2
Grant element of new public sector borrowing (in percent)	...	...	54.4	41.4	40.2	40.7	41.2	47.9	48.0	34.5	...	45.7
Government revenues (excluding grants, in percent of GDP)	18.0	18.3	17.8	18.5	19.5	21.3	22.2	22.1	20.4	18.3	17.2	20.6
Aid flows (in Million of US dollars) 5/	33.8	89.1	50.6	76.8	50.9	54.8	57.4	65.5	82.7	115.3		
Grant-equivalent financing (in percent of GDP) 6/	...	...	8.6	14.0	9.4	9.3	9.0	8.9	7.6	6.6	...	9.0
Grant-equivalent financing (in percent of external financing) 6/	...	...	92.9	90.2	84.5	84.9	84.8	86.4	88.0	84.3	...	87.6
Nominal GDP (Million of US dollars)	431	477	520	531	576	621	672	733	1,078	1,930		
Nominal dollar GDP growth	3.6	10.8	8.9	2.2	8.5	7.8	8.1	9.1	7.8	6.1	9.5	7.7
Memorandum items:												
PV of external debt 7/	...	25.7	24.5	25.3	24.5	23.5	22.3	20.8	16.7	16.3		
In percent of exports	...	248.5	185.5	184.4	143.0	138.8	129.5	125.1	112.8	123.7		
Total external debt service-to-exports ratio	4.5	5.2	6.8	10.4	9.8	12.0	12.3	12.3	8.3	6.7		
PV of PPG external debt (in Million of US dollars)		122.6	127.5	134.4	141.3	146.0	150.0	152.6	179.9	314.3		
(PVt-PVt-1)/GDPt-1 (in percent)			1.0	1.3	1.3	0.8	0.6	0.4	0.7	1.2		
Non-interest current account deficit that stabilizes debt ratio	14.5	11.7	6.5	10.3	8.7	7.9	7.7	7.9	5.7	4.6		

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**Yes**





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.

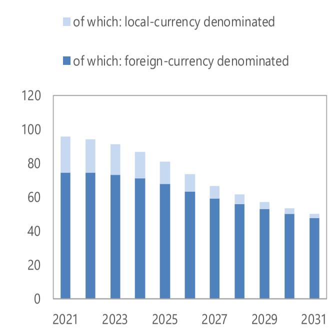
Table 2. São Tomé and Príncipe: Public Sector Debt Sustainability Framework, Baseline Scenario, 2019-2041

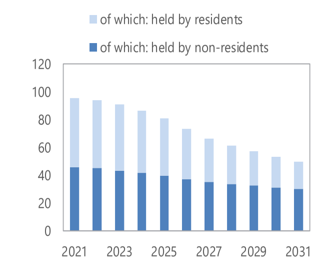
(In percent of GDP, unless otherwise indicated)

	Actual		Projections								Average 6/	
	2019	2020	2021	2022	2023	2024	2025	2026	2031	2041	Historical	Projections
Public sector debt 1/	99.9	87.1	95.6	94.0	91.3	86.6	80.8	73.7	50.0	32.1	76.3	73.7
of which: external debt	44.7	43.1	46.0	45.2	43.4	41.6	39.7	37.4	30.3	29.0	43.7	37.9
Change in public sector debt	3.8	-12.8	8.5	-1.5	-2.8	-4.6	-5.8	-7.1	-3.4	-2.2		
Identified debt-creating flows	0.3	-16.9	7.3	-2.3	-2.5	-4.4	-5.6	-7.0	-3.4	-2.5	-0.1	-3.5
Primary deficit	6.9	-3.0	6.3	3.8	3.8	1.3	0.1	-0.9	0.2	-1.0	6.5	1.1
Revenue and grants	24.4	28.7	25.6	31.4	27.7	29.5	30.1	29.7	27.1	24.3	29.3	28.5
of which: grants	6.4	10.5	7.8	12.9	8.2	8.2	7.9	7.6	6.7	6.0		
Primary (noninterest) expenditure	31.4	25.8	31.8	35.2	31.5	30.8	30.2	28.8	27.2	23.3	35.8	29.7
Automatic debt dynamics	-5.8	-13.6	1.2	-5.6	-5.8	-5.3	-5.3	-5.7	-3.3	-1.4		
Contribution from interest rate/growth differential	-4.1	-4.7	-4.0	-3.9	-3.8	-4.0	-4.0	-4.1	-2.6	-1.5		
of which: contribution from average real interest rate	-2.0	-1.8	-2.4	-1.7	-1.2	-1.0	-0.9	-1.0	-0.6	-0.1		
of which: contribution from real GDP growth	-2.1	-2.9	-1.6	-2.2	-2.5	-3.1	-3.1	-3.1	-2.0	-1.3		
Contribution from real exchange rate depreciation	-1.7	-8.8	...	...	...	...	...	...	...	...		
Denominator = 1+g	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0		
Other identified debt-creating flows	-0.8	-0.4	-0.2	-0.5	-0.5	-0.5	-0.5	-0.4	-0.2	-0.1	-0.7	-0.4
Privatization receipts (negative)	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		
Debt relief (HIPC and other)	-0.8	-0.4	-0.2	-0.5	-0.5	-0.5	-0.5	-0.4	-0.2	-0.1		
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		
Residual	3.4	4.1	6.5	-1.0	-2.2	-1.4	-1.5	-1.8	-0.8	0.3	4.9	-0.6
Sustainability indicators												
PV of public debt-to-GDP ratio 2/	...	68.1	75.3	74.0	72.2	68.4	63.4	57.0	36.4	19.3		
PV of public debt-to-revenue and grants ratio	...	236.9	294.5	235.5	260.5	232.1	210.6	192.0	134.6	79.5		
Debt service-to-revenue and grants ratio 3/	...	...	93.8	80.2	81.5	72.3	62.5	53.4	19.3	-13.6		
Gross financing need 4/	7.4	-2.4	30.0	28.5	25.8	22.1	18.4	14.5	5.2	-4.4		
Key macroeconomic and fiscal assumptions												
Real GDP growth (in percent)	2.2	3.0	1.8	2.3	2.8	3.5	3.7	4.0	3.9	4.1	3.9	3.5
Average nominal interest rate on external debt (in percent)	1.3	0.5	0.6	0.8	1.3	1.3	1.3	1.1	1.1	1.3	0.9	1.1
Average real interest rate on domestic debt (in percent)	-6.5	-5.3	-2.5	-1.7	-2.5	-1.7	-2.0	-3.0	-3.0	-4.2	-6.1	-2.6
Real exchange rate depreciation (in percent, + indicates depreciation)	-2.5	-12.4	...	...	...	...	...	...	...	...	-3.7	...
Inflation rate (GDP deflator, in percent)	7.0	5.6	3.1	3.2	3.9	3.0	3.2	4.1	3.7	1.9	6.8	3.6
Growth of real primary spending (deflated by GDP deflator, in percent)	-3.4	-15.4	25.8	13.3	-8.1	1.2	1.7	-0.7	3.1	-1.9	-1.5	4.3
Primary deficit that stabilizes the debt-to-GDP ratio 5/	3.2	9.9	-2.2	5.3	6.5	6.0	5.9	6.3	3.6	1.2	3.1	4.5
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		
Memorandum Item												
Primary deficit with HIPC grants and without EMAE loss	2.4	-9.6	6.0	-0.7	-0.4	-1.8	-2.1	-2.3	-0.1	-1.1	3.4	-0.4
EMAE loss	3.7	6.3	0.0	4.0	3.7	2.6	1.7	1.0	0.0	0.0	1.7	1.2

Definition of external/domestic debt	**Residency-based**
Is there a material difference between the two criteria?	**Yes**

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: The central government plus social security and extra budgetary funds, 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.

Table 3. São Tomé and Príncipe: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2021–2031

	Projections 1/										
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
PV of debt-to GDP ratio											
Baseline	25	25	25	24	22	21	20	19	18	17	17
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2021-2031 2/	25	27	30	**33**	**35**	**38**	**41**	**44**	**46**	**49**	**51**
B. Bound Tests											
B1. Real GDP growth	25	26	25	24	23	22	21	20	19	18	17
B2. Primary balance	25	28	**30**	**30**	29	27	26	25	24	23	23
B3. Exports	25	28	**32**	**31**	29	28	26	25	24	23	
B4. Other flows 3/	25	30	**33**	**32**	**30**	29	27	26	25	24	23
B5. One-time 30 percent nominal depreciation	25	**32**	27	25	24	22	21	20	19	19	18
B6. Combination of B1-B5	25	**31**	**31**	**30**	29	27	26	24	23	22	22
C. Tailored Tests											
C1. Combined contingent liabilities	25	**40**	**43**	**43**	**41**	**39**	**38**	**36**	**35**	**34**	**33**
C2. Natural disaster	25	29	29	29	27	26	25	24	23	22	22
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	**185**	**184**	**143**	139	129	125	123	120	117	115	113
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2021-2031 2/	**185**	**195**	**175**	**194**	**206**	**226**	**254**	**277**	**300**	**324**	**347**
B. Bound Tests											
B1. Real GDP growth	**185**	**184**	**143**	139	129	125	123	120	117	115	113
B2. Primary balance	**185**	**203**	**177**	**178**	**169**	**165**	**163**	**160**	**157**	**154**	**152**
B3. Exports	**185**	**294**	**353**	**343**	**321**	**312**	**307**	**300**	**294**	**288**	**283**
B4. Other flows 3/	**185**	**218**	**194**	**188**	**176**	**171**	**169**	**165**	**162**	**158**	**156**
B5. One-time 30 percent nominal depreciation	**185**	**184**	122	119	110	106	105	102	99	97	95
B6. Combination of B1-B5	**185**	**254**	**172**	**226**	**212**	**205**	**202**	**198**	**193**	**189**	**186**
C. Tailored Tests											
C1. Combined contingent liabilities	**185**	**292**	**251**	**252**	**240**	**235**	**233**	**229**	**225**	**222**	**220**
C2. Natural disaster	**185**	**216**	**174**	**172**	**162**	**159**	**158**	**155**	**153**	**151**	**150**
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	**10**	10	**12**	**12**	**12**	9	9	9	9	8
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2021-2031 2/	7	10	9	**12**	**12**	**13**	**11**	**11**	**11**	**11**	**12**
B. Bound Tests											
B1. Real GDP growth	7	**10**	10	**12**	**12**	**12**	9	9	9	9	8
B2. Primary balance	7	**10**	**10**	**13**	**13**	**13**	**10**	10	10	9	9
B3. Exports	7	**15**	**20**	**25**	**25**	**25**	**19**	**19**	**18**	**18**	**17**
B4. Other flows 3/	7	**10**	**10**	**13**	**13**	**13**	**10**	**10**	10	10	9
B5. One-time 30 percent nominal depreciation	7	**10**	10	**12**	**12**	**12**	9	9	8	8	8
B6. Combination of B1-B5	7	**12**	**14**	**17**	**17**	**17**	**13**	**13**	**12**	**12**	**12**
C. Tailored Tests											
C1. Combined contingent liabilities	7	**10**	**12**	**14**	**15**	**15**	**11**	**11**	**11**	**11**	**10**
C2. Natural disaster	7	**11**	**11**	**13**	**13**	**13**	**10**	**10**	10	10	9
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	10	10	10	10	10	10	10	10	10	10	10
Debt service-to-revenue ratio											
Baseline	5	8	9	10	10	9	7	7	6	6	6
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2021-2031 2/	5	7	8	9	10	10	8	8	8	8	8
B. Bound Tests											
B1. Real GDP growth	5	8	9	10	10	10	7	7	7	7	6
B2. Primary balance	5	8	9	10	10	10	7	7	7	7	7
B3. Exports	5	8	9	11	10	10	7	7	7	7	7
B4. Other flows 3/	5	8	9	10	10	10	7	7	7	7	7
B5. One-time 30 percent nominal depreciation	5	10	11	12	12	11	8	8	8	8	7
B6. Combination of B1-B5	5	8	10	11	11	10	8	8	7	7	7
C. Tailored Tests											
C1. Combined contingent liabilities	5	8	10	11	11	11	8	8	8	8	7
C2. Natural disaster	5	8	9	10	10	10	7	7	7	7	6
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. São Tomé and Príncipe: Sensitivity Analysis for Key Indicators of Public Debt, 2021–2031

	Projections 1/										
	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031
					PV of Debt-to-GDP Ratio						
Baseline	**75**	**74**	**72**	**68**	**63**	**57**	**51**	**46**	**43**	**39**	**36**
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2021-2031 2/	**75**	**73**	**70**	**67**	**64**	**61**	**58**	**56**	**55**	**54**	**53**
B. Bound Tests											
B1. Real GDP growth	**75**	**76**	**77**	**74**	**69**	**63**	**57**	**52**	**49**	**45**	**43**
B2. Primary balance	**75**	**80**	**84**	**79**	**74**	**67**	**60**	**55**	**51**		**44**
B3. Exports	**75**	**76**	**79**	**75**	**70**	**63**	**57**	**52**	**48**	**45**	**41**
B4. Other flows 3/	**75**	**79**	**81**	**77**	**71**	**65**	**58**	**54**	**50**	**46**	**43**
B5. One-time 30 percent nominal depreciation	**75**	**78**	**74**	**70**	**63**	**56**	**49**	**43**	**38**	34	30
B6. Combination of B1-B5	**75**	**77**	**76**	**69**	**63**	**56**	**50**	**46**	**42**	**39**	**36**
C. Tailored Tests											
C1. Combined contingent liabilities	**75**	**92**	**88**	**83**	**77**	**70**	**64**	**58**	**54**	**50**	**47**
C2. Natural disaster	**75**	**83**	**81**	**77**	**72**	**65**	**59**	**54**	**50**	**47**	**43**
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	295	235	260	232	211	192	173	162	156	144	135
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2021-2031 2/	295	236	260	236	222	214	208	208	212	208	208
B. Bound Tests											
B1. Real GDP growth	295	241	274	247	227	210	191	181	177	164	156
B2. Primary balance	295	256	303	268	244	225	204	192	186	172	162
B3. Exports	295	243	285	254	232	212	193	182	176	162	153
B4. Other flows 3/	295	250	292	261	237	218	198	187	181	168	158
B5. One-time 30 percent nominal depreciation	295	256	275	241	215	192	169	154	144	127	114
B6. Combination of B1-B5	295	250	278	236	211	191	172	161	155	142	132
C. Tailored Tests											
C1. Combined contingent liabilities	295	292	317	282	257	237	216	204	198	183	173
C2. Natural disaster	295	264	291	260	238	219	199	188	183	169	160
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	94	80	81	72	62	53	43	34	29	23	19
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2021-2031 2/	94	78	77	66	56	47	38	30	25	20	17
B. Bound Tests											
B1. Real GDP growth	94	81	84	75	65	56	46	37	31	26	21
B2. Primary balance	94	80	90	83	66	55	44	35	29	24	20
B3. Exports	94	80	82	73	63	54	43	35	29	24	20
B4. Other flows 3/	94	80	82	73	63	54	43	35	29	24	20
B5. One-time 30 percent nominal depreciation	94	77	79	70	62	53	42	34	28	24	20
B6. Combination of B1-B5	94	78	80	76	62	52	42	33	28	23	19
C. Tailored Tests											
C1. Combined contingent liabilities	94	80	108	80	66	55	44	35	30	24	20
C2. Natural disaster	94	81	94	77	65	55	44	36	30	25	21
C3. Commodity price	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.

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.