DEMOCRATIC REPUBLIC OF SÃO TOMÉ AND PRÍNCIPE

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THIRD AND FOURTH REVIEWS UNDER THE EXTENDED CREDIT FACILITY ARRANGEMENT, EXTENSION OF THE ARRANGEMENT, AND MODIFICATION OF PERFORMANCE CRITERIA—DEBT SUSTAINABILITY ANALYSIS[1]

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São Tomé and Príncipe is at a high risk of debt distress according to this joint Bank-IMF low-income country debt sustainability analysis (DSA). *This assessment is unchanged from the previous DSA completed in May 2016. Similar to the previous DSA, the ratios of present value of debt to GDP, exports, and revenue under the baseline exceed their thresholds for high risk of debt distress early in the projection period with a declining trend in the long run. The debt service ratios stay below the thresholds under all scenarios. Domestic arrears were added for the first time to the public debt stock. The rapid increase in the debt ratios under the historical scenario underscores the importance of continuing fiscal consolidation, eschewing non-concessional loans, and working to diversify the economy and expand the export base. A customized scenario shows that it is vital to seek grant and equity financing for a large part of extremely large infrastructure projects because even concessional loans when contracted too rapidly would threaten debt sustainability.*

[1] The DSA update was prepared by IMF and World Bank staff in collaboration with the authorities of São Tomé and Príncipe. The analysis updates the previous Joint DSA dated May 20, 2016 (IMF Country Report No. 16/174). The DSA follows the IMF and World Bank Staff Guidance Note on the Application of the Joint Fund-Bank Debt Sustainability Framework for Low-Income Countries (November 5, 2013). The DSA uses the unified discount rate of 5 percent set out in Decision No. 15462 (October 11, 2013). For the purpose of defining debt burden thresholds under the Debt Sustainability Framework (DSF), São Tomé and Príncipe is classified as a weak policy performer. São Tomé and Príncipe's average rating on the World Bank's Country Policy and Institutional Assessment (CPIA) for the period 2014-16 is 3.07. The corresponding indicative thresholds are: 30 percent for the NPV of debt-to-GDP ratio; 100 percent for the net present value (NPV) of debt-to-exports ratio; 200 percent for NPV of debt-to-revenue ratio; 15 percent for the debt service-to-exports ratio; and 18 percent for the debt service-to-revenue ratio.

BACKGROUND

1. **The previous full debt sustainability analysis (DSA) for São Tomé and Príncipe was undertaken as part of the 2015 request for a three-year arrangement under the Extended Credit Facility (IMF Country Report No. 15/196). An updated DSA was subsequently completed in May 20, 2016, during the second review of the program (IMF Country Report No. 16/174).** Both DSAs concluded that São Tomé and Príncipe was at a high risk of debt distress.

2. **São Tomé and Príncipe reached the completion point under the enhanced Heavily Indebted Poor Country (HIPC) initiative in March 2007, received topping-up assistance in December 2007 and HIPC/Multilateral Debt Relief Initiative (MDRI) debt relief later.** The MDRI, in particular, brought substantial debt relief as 54 percent of the pre-HIPC-completion-point debt was with IDA, AfDB, and IMF. Paris Club members also helped improve the country's debt profile. The external debt ratio decreased from 415 percent of GDP in 2001 to 19 percent in 2008 (without pre-HIPC legacy arrears).

Text Table 1. São Tomé and Príncipe: Public Debt Stock

(As of end-June 2017)	Million USD	Share of GDP (%)
Total PPG debt	**225.4**	**59%**
Total PPG external debt	**176.5**	**46%**
Multilateral Creditors	**40.8**	**11%**
IDA	13.3	3%
BADEA	10.6	3%
FIDA	6.0	2%
AfDB	4.4	1%
IMF	4.3	1%
OPEC	2.2	1%
Bilateral Creditors	**123.9**	**32%**
Portugal	57.2	15%
Angola	50.0	13%
China[1]	10.0	3%
Brazil[1]	4.3	1%
Equatorial Guinea	1.6	0%
Belgium	0.8	0%
External suppliers' debt	**11.8**	**3%**
Domestic arrears	**48.9**	**13%**
ENCO (oil importing compan	41.9	11%
CST (telecom)	4.8	1%
EMAE (water and electricity)	2.2	1%
Memorandum items:		
Pre-HIPC legacy arrears	**55.1**	**14%**
Italy[1]	24.3	6%
Angola	30.8	8%
Arrears from EMAE to ENCO	**66.6**	**17%**

Sources: Country authorities and IMF staff estimates

[1] Commercial debt guaranteed by the government.

3. **Total public and publicly guaranteed (PPG) debt, including domestic arrears to suppliers, is estimated at 59 percent of GDP ($225.4 million) in June 2017, with medium and long-term PPG external debt accounting for 46 percent of GDP ($176.5 million) (Text Table 1).** The pre-HIPC initiative legacy arrears are excluded from the DSA on the assumption of expected forgiveness. These pre-HIPC legacy arrears amount to 14 percent of GDP. Similarly, a disputed loan from Nigeria was also excluded from the debt stock. On the other hand, the current DSA adds domestic arrears, mainly from the central government to the oil importing company ENCO, to the debt stock of 2016. At the time of the previous DSA update, these arrears were still being audited and were not yet recognized by the government. Text table 2 lists the types of arrears and how they are treated in the DSA. The World Bank is providing technical assistance to São Tomé and Príncipe to improve its debt and state-owned enterprise (SOE) management, which will help to reduce the incidence of external and domestic arrears. A peripatetic debt management expert is working together with the debt management unit to improve the weaknesses highlighted in the 2016 Debt Management Performance Assessment (DeMPA) report. At the same time, the World Bank has developed an SOE reform

plan and is implementing energy sector reform. Inefficiencies in the energy sector are the main source of the cross-arrears between SOEs and the government.

Text Table 2. Arrears and Disputed Debt

(As of end-June 2017)

Type	Description	DSA Treatment
Pre-HIPC legacy (14 percent of GDP)	São Tomé and Príncipe has pre-HIPC legacy arrears to Angola ($30.8 million) and Italy ($24.3 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 $18.4 million.	Not included in the DSA.
Post-HIPC bilateral arrears (2 percent of GDP)	São Tomé and Príncipe has post-HIPC arrears to Angola ($2 million), Brazil ($4.3 million), and Equatorial Guinea ($0.7 million). Negotiations on rescheduling agreements are already under way with Angola and Brazil, and São Tomé and Príncipe is actively seeking a rescheduling agreement with Equatorial Guinea. These arrears are the result of weak debt management and staff assesses that São Tomé and Príncipe has the capacity to repay them.	Included in the DSA.
Domestic arrears (13 percent of GDP)	São Tomé and Príncipe has domestic arrears to the oil-company ENCO ($41.9 million), the telecom company CST ($4.8 million), and the water and electricity company EMAE ($2.2 million). The government has a domestic arrears clearance plan.	Included in the DSA.
Disputed debt (8 percent of GDP)	A loan from Nigeria in the amount of $30 million was excluded from the debt stock as it is under dispute based on information provided by the São Tomé and Príncipe authorities. 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.	Not included in the DSA.

4. The largest disbursements during 2016 and the first half of 2017 were from Angola and Portugal ($9 million and $3 million, respectively). Disbursements in 2016 were lower than initially expected ($9.5 million vs $14.7 million), mainly due to the non-realization of the disbursements from Kuwait and Turkey. There are $75.7 million of debt already contracted which is expected to be disbursed between 2017 and 2021. The budget expects disbursements of $20.9 million in 2017, and Angola has already disbursed in the first semester. These expected disbursements are all included in the DSA. Preliminary information suggests that the economic agreement with China involves only grants in the near term.

Projected Loan Disbursement
(In USD millions)

	2017	2018-2021
Kuwait	1.7	14.7
EIB	0.0	12.7
AfDB	7.6	12.5
Portugal	2.2	6.8
BADEA	1.2	6.3
IMF	1.8	1.8
Angola	4.5	0.0
IFAD	1.9	0.0
Sum	**20.9**	**54.8**

5. In terms of composition, public sector debt is composed solely of debt contracted or guaranteed by the central government. SOEs do not have external debt. In terms of creditors, the composition has shifted after the HIPC completion point—the share of multilateral debt declined from nearly 60 percent before the completion point to 21 percent. Portugal and Angola are now the country's main bilateral creditors, and IDA is its main multilateral creditor.

MACROECONOMIC ASSUMPTIONS

6. The basic macroeconomic assumptions have changed slightly from those in the previous DSA. The key assumptions are:

Text Table 3. Macroeconomic Assumptions (Averages)

	2015 DSA[1]	2016 DSA[2]	2017 DSA		Historical	
	2015–35	2016–36	2016–36	2017-37	2006-16	2014-16
Real GDP growth (percent)	5.5	5.6	5.3	5.4	4.4	4.1
Inflation (percent average)	3.2	3.1	3.5	3.4	12.4	5.6
Domestic primary deficit (percent of GDP)	-1.3	-1.2	-1.4	-1.3	-4.3	-3.4
Grants (percent of GDP)	12.3	11.4	8.0	7.6	17.0	12.3
New borrowing (percent of GDP)	1.5	1.4	2.4	2.3	7.3	6.4
FDI (percent of GDP)	9.7	8.8	4.2	3.8	16.7	12.3
USD export growth (percent)	7.2	7.4	6.7	6.6	20.6	26.0
USD import growth (percent)	6.0	6.0	5.2	5.5	10.5	3.8
Current account balance, excluding grants (percent of GDP)	-25.0	-19.4	-13.8	-13.2	-37.7	-26.0
Current account balance, including grants (percent of GDP)	-12.7	-8.0	-5.8	-5.6	-20.6	-13.7

[1] IMF Country Report No. 15/196.
[2] IMF Country Report No. 16/174.

- ***Growth assumptions have remained largely unchanged from the last DSA.*** The economy is estimated to have grown by 4 percent in 2016, lower than previously assumed, as overall activity was constrained by lower-than-projected foreign-financed capital spending. Growth is expected to remain at 4 percent in 2017 and pick up to 5½ percent over the medium term. The main drivers of growth are expected to be construction, tourism, agriculture, and fisheries. Stronger macroeconomic policies, further measures to enhance the business climate, and successful implementation of a tourism development strategy would be needed to sustain growth at 5½ percent a year over the long term.

- **Inflation is assumed to remain around 3 percent over the long term**, reflecting continued fiscal prudence and the effects of the peg of the dobra to the euro, which has been in effect since January 2010. Inflation increased by 1.1 percentage points to 5.1 percent in 2016, driven by rising food prices and one-off factors, and is expected to increase further to 6 percent at the end of 2017. The GDP deflator in US dollar terms is projected to grow by 2.8 percent in 2017. It will, however, pickup to 6.1 percent in 2018 before settling at around 1.3 percent in the long run.

- ***A decline in the domestic primary deficit*** from 4.3 percent of GDP in 2016 to 1.8 percent of GDP in 2017 is consistent with the authorities' budgeted domestic primary deficit and with their commitment to enhancing revenue mobilization and limiting transfers and personnel expenditures. The domestic primary deficit is projected slightly higher than in the previous DSA and is expected to stay at 1.3 percent of GDP in the long run, financed by budget support grants and a drawdown of National Oil Account (NOA) deposits. Over the long term, expenditure bears the brunt of adjustment as budget support grants decline. No domestic borrowing is envisaged.

- ***Total grants are projected to remain at their current level*** of about 12 percent of GDP in 2017–22. In the long run, grants will decline in importance and average around 6 percent of GDP a year.

- Like the previous DSA, this assessment assumes a ***loan concessionality*** threshold of 35 percent. To fund the government's capital investment program, new borrowing will average about 3.4 percent of GDP a year from 2017–21 and about 2 percent of GDP thereafter. No financing from future privatization operations, commercial loans, domestic borrowing, and short-term loans are assumed throughout the DSA projection period.

- ***FDI* is projected to stabilize at around 4 percent of GDP** over the long term. The authorities expect continued investment in infrastructure projects to support tourism and agriculture development.

- The ***non-interest current account deficit*** (including official grants) is expected to maintain the low level of 6 percent of GDP observed in 2016 as the government further consolidates its position. Export growth will be driven by cocoa and palm oil production, and increased tourism as São Tomé and Príncipe rehabilitates its infrastructure (including the extension of the airport's runway) and benefits from the higher frequency of flights from Europe since 2014.

- ***Downside risks*** include difficulties in increasing revenue mobilization and in limiting spending, particularly that financed by non-concessional loans. The outlook could also be adversely impacted by supply shocks (leading to higher inflation and lower growth). A protracted period of slower growth in Europe could significantly depress exports, tourism, and FDI flows.

EXTERNAL DEBT SUSTAINABILITY

7. Like in the previous DSA, under the baseline scenario all three external debt stock indicators breach their indicative thresholds early in the projection period (Figure 1, blue lines).[2] The debt service ratios continue to stay below their thresholds under all scenarios. All indicators improve over time as a result of growth, fiscal consolidation, slower debt accumulation, expansion of the export base, and constrained imports.

8. Stress tests show that the most extreme shock extends the period of breach of thresholds for a few additional years beyond those observed in the baseline (Figure 1, solid black lines). As in the previous DSA, export based indicators are most sensitive to exports shocks, while the remaining indicators are most sensitive to a one-time depreciation shock. This highlights the need to keep future borrowing in check, maintain the credibility of the exchange rate peg, and maintain international reserves at prudent levels.

9. The external balance must improve through a combination of improved competitiveness and fiscal discipline to keep debt on a sustainable path. Slippages—for example, setting the non-interest current account deficit at their historical levels—would drastically worsen the debt trajectory relative to the baseline (Figure 1, red dotted line).

10. A customized DSA scenario shows that São Tomé and Príncipe has limited space for borrowing, even concessionally, particularly for extremely large infrastructure projects (Figure 1). This scenario assumes that $300 million (close to São Tomé and Príncipe's GDP) in concessional loans with a grant element of 35 percent are disbursed over the next four years (2017-20) to finance a part of the airport and deep sea port projects that have been reported in the media. Under these assumptions, the external debt-to-GDP ratio would reach 112 percent of GDP by 2020. In addition, under the baseline, the present value (PV) of debt ratios breach their respective thresholds during almost the entire projection period and the debt service ratios also breach their thresholds.

[2] São Tomé and Príncipe's quality of policies and institutions, as measured by the average World Bank's Country Policy and Institutional Assessment (CPIA) for the period 2014-16, is 3.07 (weak performer). The corresponding indicative thresholds are: 30 percent for the net present value (NPV) of debt-to-GDP ratio; 100 percent for the NPV of debt-to-export ratio; 200 percent for NPV of debt-to-revenue ratio; 15 percent for the debt service-to-exports ratio; and 18 percent for the debt service-to-revenue ratio.

PUBLIC DEBT SUSTAINABILITY

11. The assessment of São Tomé and Príncipe's public debt sustainability is largely unchanged relative to the last DSA despite the inclusion of domestic arrears. The PV of debt-to-GDP indicator breaches the threshold in the first four years of projection, but improves quickly and steadily afterwards, as depicted in the baseline scenario. As is the case in the previous DSA, the debt dynamics appear unsustainable under the historical and fixed primary balance scenarios, underscoring the importance of continued fiscal consolidation and fostering private sector led growth through structural reforms. All public debt indicators are most sensitive to a one-time 30 percent depreciation of the dobra.

DEBT DISTRESS QUALIFICATION AND CONCLUSIONS

12. São Tomé and Príncipe remains at a high risk of debt distress. The country is already in external arrears with some bilateral creditors, with whom it is actively seeking rescheduling agreements. Two other aggravating factors are that a large part of its domestic arrears, namely the ones to ENCO, is denominated in USD and there are considerable contingent liabilities coming from the state-owned enterprise EMAE,[3] which are not considered in this DSA as it focuses only on the central government. However, given that fiscal consolidation and prudence in contracting new debt are in place, all indicators improve in the long term. The current assessment is very similar to the previous one. In this context, the DSA underlines the need for measures to mitigate risks:

- Remain committed to maintaining the exchange rate peg and an adequate level of international reserves to boost confidence;
- Maintain fiscal prudence by enhancing revenue mobilization and expenditure control;
- Accelerate reforms to improve policy and institutional performance to enhance growth potential;
- Ensure favorable financing terms in the form of grants or highly concessional borrowing; and
- Develop and implement a comprehensive strategy to reduce the cost of doing business and attract private investment that can broaden the export base.

13. The biggest risks to external debt sustainability come from exchange rate, exports and primary balance shocks. Debt sustainability could deteriorate if protracted periods of slower growth in Europe significantly depress exports, tourism, and FDI flows. The risks appear manageable over the medium term if the authorities are able to move forward with the planned fiscal adjustment in the coming years and safeguard international reserves. These vulnerabilities also underscore the importance of sound macroeconomic policies to fulfill the country's growth potential on a sustained basis.
The development of sound public debt management, anchored in a medium-term debt management strategy and medium-term fiscal framework, will be essential to guide future development financing.

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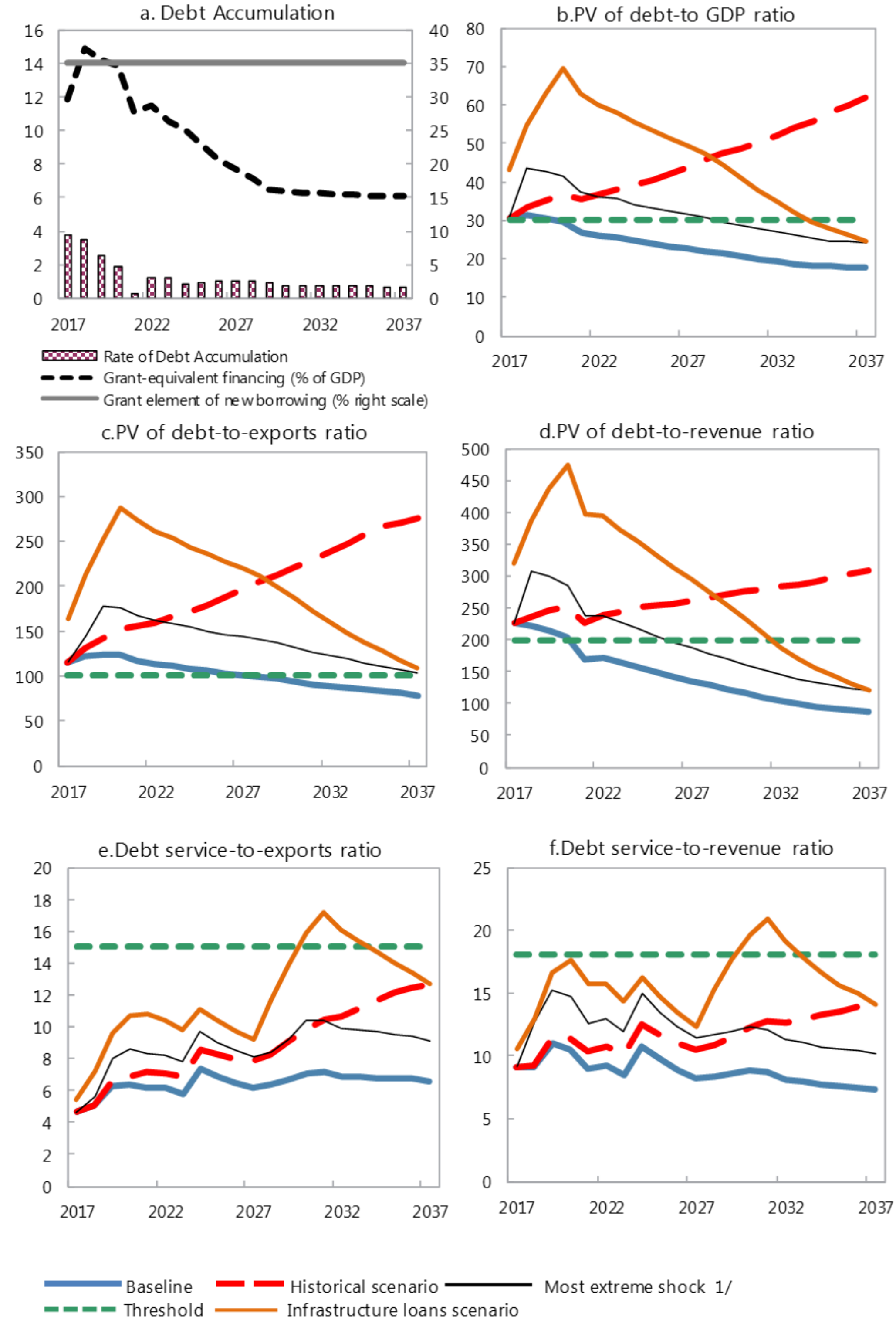
[3] EMAE's debt to ENCO is about 18 percent of GDP as of June 2017.

Additionally, with respect to the public investment plan, priority should be given to projects which would help generate high growth and employment as well as exports to help ensure debt service capacity in the future.

14. The existence of post-HIPC sovereign arrears (totaling 2 percent of GDP) to Angola, Brazil, and Equatorial Guinea would technically place São Tomé and Príncipe in debt distress. However, given assurances from these creditors that a regularization of the arrears, via a consensual process, is imminent, staff considers a high risk of debt distress rating to be more appropriate.

15. Authorities' views: In response to the staff presentation of this analysis in October 2017, the authorities reiterated their commitment to strive for debt sustainability and to actively seek restructuring of the current arrears. The authorities noted that the DSA results depend on uncertain macroeconomic assumptions and suggested that under a customized scenario with large infrastructure projects the growth rate could be higher than assumed, leading to a higher debt-carrying capacity. In this context, the authorities highlighted the need to allow for adjustment of the indicative limit for concessional borrowing for key projects that could unlock growth potential.

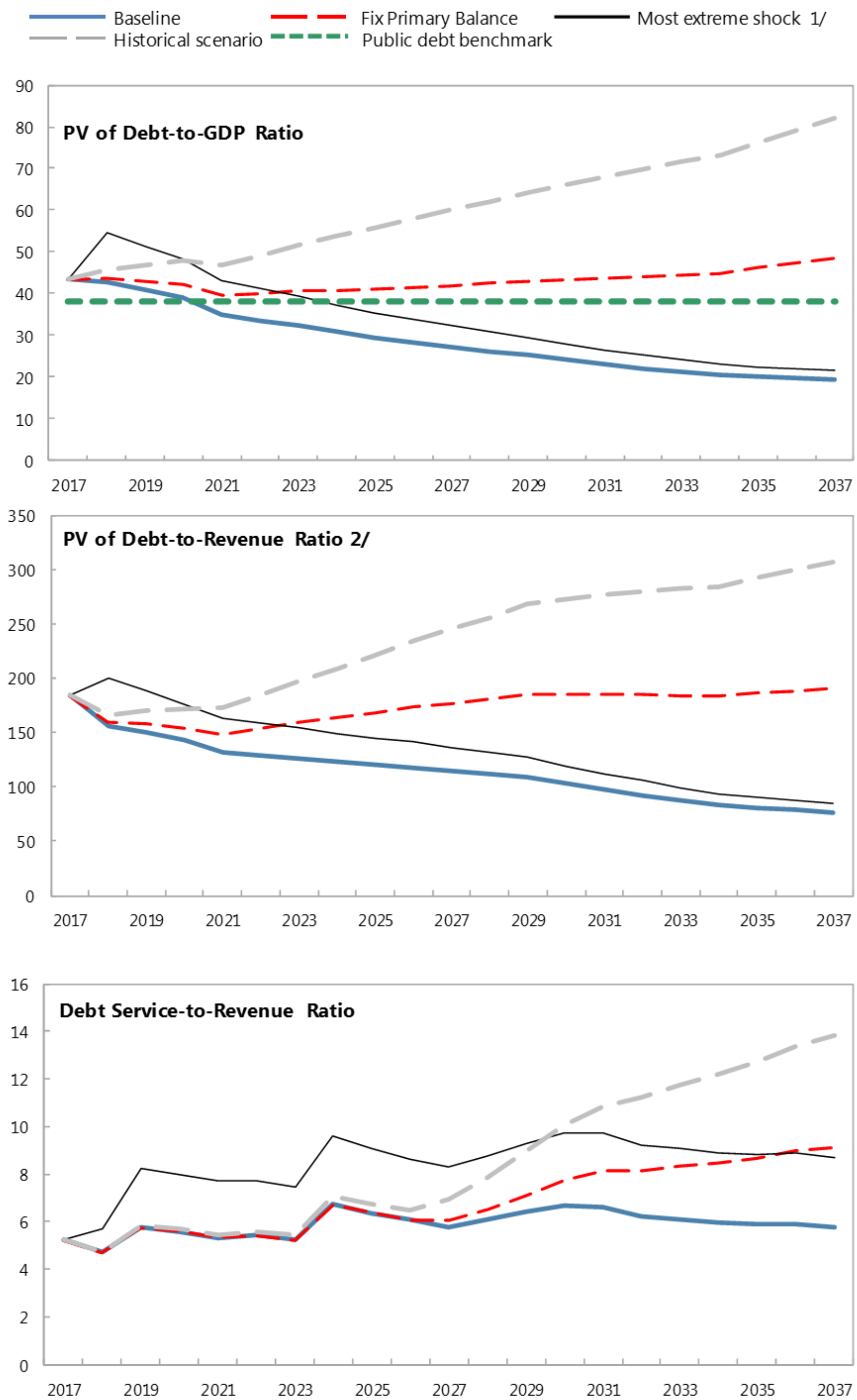
Figure 1. São Tomé and Príncipe: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2017–37



Sources: São Tomé and Príncipe's authorities, and IMF staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2027.

Figure 2. São Tomé and Príncipe: Indicators of Public Debt Under Alternative Scenarios, 2017–37



Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio on or before 2027.
2/ Revenues are defined inclusive of grants.

Table 1. São Tomé and Príncipe: External Debt Sustainability Framework, Baseline Scenario, 2014–37

(Percent of GDP, unless otherwise indicated)

	Actual			Historical 6/	Standard 6/	Projections									
				Average	Deviation							2017-2022			2023-2037
	2014	2015	2016			2017	2018	2019	2020	2021	2022	Average	2027	2037	Average
External debt (nominal) 1/	**51.4**	**62.4**	**53.0**			**49.9**	**49.7**	**48.0**	**45.9**	**40.5**	**38.8**		**31.8**	**24.3**	
of which: public and publicly guaranteed (PPG)	51.4	62.4	53.0			49.9	49.7	48.0	45.9	40.5	38.8		31.8	24.3	
Change in external debt	7.6	11.0	-9.4			-3.1	-0.2	-1.7	-2.1	-5.4	-1.7		-1.1	-0.2	
Identified net debt-creating flows	9.6	9.5	-5.8			-1.2	2.3	1.8	1.1	3.0	1.3		0.1	-2.4	
Non-interest current account deficit	**21.6**	**12.3**	**5.7**	**21.1**	**8.5**	**11.7**	**6.7**	**6.4**	**5.6**	**7.5**	**5.7**		**4.1**	**1.4**	3.4
Deficit in balance of goods and services	40.6	30.6	25.6			27.4	25.5	24.5	23.5	23.1	21.2		16.0	12.0	
Exports	25.4	28.3	27.5			26.4	25.5	24.9	24.2	22.9	23.0		22.4	22.5	
Imports	66.0	58.9	53.1			53.8	51.0	49.4	47.6	46.0	44.2		38.4	34.5	
Net current transfers (negative = inflow)	-17.0	-18.3	-19.3	-20.2	3.7	-14.6	-17.7	-17.0	-16.8	-14.7	-14.6		-11.0	-9.9	-10.7
of which: official	-10.3	-12.6	-14.8			-10.1	-13.3	-12.9	-12.8	-10.9	-10.7		-7.0	-5.3	
Other current account flows (negative = net inflow)	-2.0	0.0	-0.5			-1.1	-1.1	-1.1	-1.1	-1.0	-0.9		-0.9	-0.8	
Net FDI (negative = inflow)	**-6.6**	**-8.1**	**-5.9**	**-14.0**	**12.2**	**-11.4**	**-2.7**	**-2.7**	**-2.7**	**-2.8**	**-2.8**		**-2.8**	**-2.9**	-2.9
Endogenous debt dynamics 2/	**-5.4**	**5.3**	**-5.6**			**-1.5**	**-1.7**	**-1.9**	**-1.8**	**-1.7**	**-1.6**		**-1.2**	**-0.8**	
Contribution from nominal interest rate	0.3	0.3	0.3			0.5	0.5	0.6	0.6	0.5	0.5		0.5	0.4	
Contribution from real GDP growth	-1.6	-2.2	-2.3			-2.0	-2.2	-2.5	-2.4	-2.2	-2.1		-1.7	-1.3	
Contribution from price and exchange rate changes	-4.1	7.2	-3.6			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**-2.0**	**1.5**	**-3.6**			**-1.9**	**-2.5**	**-3.5**	**-3.2**	**-8.3**	**-3.0**		**-1.2**	**2.2**	
of which: exceptional financing	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	31.5			30.5	31.2	30.7	29.8	26.9	26.1		22.6	17.6	
In percent of exports	...	...	114.3			115.4	122.1	123.3	123.5	117.2	113.3		101.0	78.5	
PV of PPG external debt	**...**	**...**	**31.5**			**30.5**	**31.2**	**30.7**	**29.8**	**26.9**	**26.1**		**22.6**	**17.6**	
In percent of exports	**...**	**...**	**114.3**			**115.4**	**122.1**	**123.3**	**123.5**	**117.2**	**113.3**		**101.0**	**78.5**	
In percent of government revenues	**...**	**...**	**229.6**			**225.4**	**220.4**	**213.8**	**203.7**	**170.1**	**170.9**		**135.1**	**87.6**	
Debt service-to-exports ratio (in percent)	**3.7**	**3.8**	**3.3**			**4.7**	**5.1**	**6.3**	**6.4**	**6.2**	**6.1**		**6.1**	**6.5**	
PPG debt service-to-exports ratio (in percent)	**3.7**	**3.8**	**3.3**			**4.7**	**5.1**	**6.3**	**6.4**	**6.2**	**6.1**		**6.1**	**6.5**	
PPG debt service-to-revenue ratio (in percent)	**6.5**	**7.8**	**6.6**			**9.1**	**9.1**	**10.9**	**10.5**	**9.0**	**9.2**		**8.2**	**7.3**	
Total gross financing need (Billions of U.S. dollars)	0.1	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Non-interest current account deficit that stabilizes debt ratio	13.9	1.3	15.1			14.8	6.9	8.1	7.8	12.8	7.4		5.3	1.5	
Key macroeconomic assumptions															
Real GDP growth (in percent)	4.1	4.0	4.1	4.3	1.8	4.0	5.0	5.5	5.5	5.5	5.5	5.2	5.5	5.5	5.5
GDP deflator in US dollar terms (change in percent)	10.5	-12.3	6.1	5.5	9.1	2.8	6.1	4.3	3.8	6.5	2.1	4.3	1.7	-0.4	1.3
Effective interest rate (percent) 5/	0.8	0.6	0.5	0.7	0.3	1.1	1.2	1.2	1.3	1.3	1.3	1.2	1.6	1.9	1.7
Growth of exports of G&S (US dollar terms, in percent)	64.3	1.7	7.4	21.9	25.4	2.7	7.6	7.3	6.3	6.5	8.4	6.5	6.7	6.7	6.7
Growth of imports of G&S (US dollar terms, in percent)	28.8	-18.6	-0.4	9.6	19.6	8.4	5.6	6.5	5.6	8.6	3.5	6.4	4.5	5.3	5.1
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9
Government revenues (excluding grants, in percent of GDP)	14.5	13.9	13.7			13.5	14.1	14.4	14.7	15.8	15.3		16.8	20.1	17.8
Aid flows (in Billions of US dollars) 7/	0.1	0.1	0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	
of which: Grants	0.0	0.0	0.1			0.0	0.1	0.1	0.1	0.1	0.1		0.1	0.1	
of which: Concessional loans	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			11.8	14.9	14.2	13.8	11.1	11.4		7.7	6.0	7.3
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			78.2	83.1	85.1	88.1	96.8	89.8		85.5	82.3	84.4
Memorandum items:															
Nominal GDP (Billions of US dollars)	0.3	0.3	0.4			0.4	0.4	0.5	0.5	0.6	0.6		0.9	1.7	
Nominal dollar GDP growth	15.0	-8.8	10.4			6.9	11.4	10.1	9.5	12.3	7.7	9.7	7.3	5.0	6.9
PV of PPG external debt (in Billions of US dollars)			0.1			0.1	0.1	0.1	0.2	0.2	0.2		0.2	0.3	
(PVt-PVt-1)/GDPt-1 (in percent)						3.7	3.5	2.6	1.9	0.3	1.2	2.2	1.1	0.7	0.9
Gross workers' remittances (Billions of US dollars)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.1	
PV of PPG external debt (in percent of GDP + remittances)	...	...	30.1			29.2	29.9	29.5	28.7	25.9	25.2		21.8	16.9	
PV of PPG external debt (in percent of exports + remittances)	...	...	98.1			98.5	104.0	105.9	106.2	100.5	97.2		85.7	65.2	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	2.8			4.0	4.3	5.4	5.5	5.3	5.3		5.2	5.4	

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

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

6/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

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

8/ 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).

Table 2a. São Tomé and Príncipe: Sensitivity Analysis of Key Indicators of Public and Publicly Guaranteed External Debt, 2017–37
(Percent)

	Projections							
	2017	2018	2019	2020	2021	2022	**2027**	2037
PV of debt-to GDP ratio								
Baseline	31	31	31	30	27	26	**23**	18
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	31	34	35	37	36	37	**44**	62
A2. New public sector loans on less favorable terms in 2017-2037 2	31	32	33	32	29	29	**27**	26
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	31	32	32	31	28	27	**24**	18
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	31	33	36	34	31	30	**26**	19
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	31	34	37	36	32	31	**27**	21
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	31	33	33	32	29	28	**24**	18
B5. Combination of B1-B4 using one-half standard deviation shocks	31	30	28	27	24	24	**21**	18
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	31	44	43	42	37	36	**31**	24
PV of debt-to-exports ratio								
Baseline	115	122	123	123	117	113	**101**	79
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	115	131	141	152	155	159	**195**	275
A2. New public sector loans on less favorable terms in 2017-2037 2	115	127	131	134	128	126	**122**	114
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	115	122	123	123	117	113	**101**	77
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	115	144	177	176	168	162	**144**	103
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	115	122	123	123	117	113	**101**	77
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	115	127	132	132	125	121	**107**	80
B5. Combination of B1-B4 using one-half standard deviation shocks	115	109	97	97	92	88	**79**	68
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	115	122	123	123	117	113	**101**	77
PV of debt-to-revenue ratio								
Baseline	225	220	214	204	170	171	**135**	88
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	225	237	245	251	225	240	**262**	307
A2. New public sector loans on less favorable terms in 2017-2037 2	225	229	228	221	186	189	**163**	127
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	225	226	226	214	179	179	**142**	91
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	225	233	247	234	196	197	**155**	93
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	225	243	255	242	202	203	**160**	103
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	225	230	229	217	181	182	**144**	89
B5. Combination of B1-B4 using one-half standard deviation shocks	225	213	195	186	155	155	**123**	88
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	225	308	299	284	237	237	**188**	120

Table 2b. São Tomé and Príncipe: Sensitivity Analysis of Key Indicators of Public and Publicly Guaranteed External Debt, 2017–2037 (concluded)

(Percent)

	Projections							
	2017	2018	2019	2020	2021	2022	**2027**	2037
Debt service-to-exports ratio								
Baseline	5	5	6	6	6	6	**6**	7
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	5	5	7	7	7	7	**8**	13
A2. New public sector loans on less favorable terms in 2017-2037 2	5	5	6	7	7	7	**7**	9
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	5	5	6	6	6	6	**6**	7
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	5	6	8	9	8	8	**8**	9
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	5	5	6	6	6	6	**6**	7
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	5	5	6	7	6	6	**6**	7
B5. Combination of B1-B4 using one-half standard deviation shocks	5	5	6	6	5	5	**5**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	5	5	6	6	6	6	**6**	7
Debt service-to-revenue ratio								
Baseline	9	9	11	11	9	9	**8**	7
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	9	9	11	11	10	11	**11**	14
A2. New public sector loans on less favorable terms in 2017-2037 2	9	9	11	11	10	10	**10**	10
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	9	9	12	11	9	10	**9**	8
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	9	9	11	11	10	10	**9**	8
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	9	10	13	13	11	11	**10**	9
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	9	9	11	11	9	10	**8**	8
B5. Combination of B1-B4 using one-half standard deviation shocks	9	10	12	11	9	9	**8**	7
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	9	13	15	15	13	13	**11**	10
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	35	35	35	35	35	35	**35**	35

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.

2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.

3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).

4/ Includes official and private transfers and FDI.

5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.

6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 3. São Tomé and Príncipe: Public Sector Debt Sustainability Framework, Baseline Scenario, 2014–2037

(Percent of GDP, unless otherwise indicated)

	Actual			Average 5/	Standard Deviation 5/	Estimate	Projections								
	2014	2015	2016			2017	2018	2019	2020	2021	2022	2017-22 Average	2027	2037	2023-37 Average
Public sector debt 1/	51.4	62.4	68.2			62.8	61.3	58.4	55.2	48.6	46.2		36.4	26.1	
of which: foreign-currency denominated	51.4	62.4	53.0			49.9	49.7	48.0	45.9	40.5	38.8		31.8	24.3	
Change in public sector debt	7.6	11.0	5.9			-5.5	-1.4	-3.0	-3.2	-6.5	-2.5		-1.6	-0.3	
Identified debt-creating flows	5.3	10.0	0.1			-2.4	-1.7	-1.6	-1.8	-4.1	-2.5		-1.1	-0.6	
Primary deficit	5.6	8.6	3.3	9.3	6.1	5.4	2.8	3.4	2.5	1.1	0.5	2.6	1.0	0.3	0.5
Revenue and grants	24.5	25.4	28.5			23.6	27.4	27.2	27.5	26.7	26.0		23.7	25.5	
of which: grants	10.0	11.5	14.8			10.1	13.3	12.9	12.8	10.9	10.7		7.0	5.3	
Primary (noninterest) expenditure	30.1	34.0	31.8			29.0	30.2	30.6	30.0	27.8	26.5		24.7	25.8	
Automatic debt dynamics	-0.3	1.4	-3.2			-7.8	-4.5	-5.0	-4.4	-5.2	-2.9		-2.1	-0.9	
Contribution from interest rate/growth differential	-2.1	-2.2	-2.7			-3.3	-3.8	-4.0	-3.7	-3.5	-3.0		-2.3	-1.5	
of which: contribution from average real interest rate	-0.3	-0.2	-0.2			-0.6	-0.8	-0.8	-0.7	-0.6	-0.5		-0.3	-0.1	
of which: contribution from real GDP growth	-1.7	-2.0	-2.5			-2.6	-3.0	-3.2	-3.0	-2.9	-2.5		-2.0	-1.4	
Contribution from real exchange rate depreciation	1.7	3.5	-0.5			-4.5	-0.7	-1.0	-0.7	-1.8	0.1		...	...	
Other identified debt-creating flows	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, 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	
Residual, including asset changes	2.3	1.0	5.7			-3.1	0.3	-1.3	-1.4	-2.4	0.0		-0.4	0.2	
Other Sustainability Indicators															
PV of public sector debt	...	...	46.7			43.4	42.8	41.0	39.1	34.9	33.5		27.2	19.4	
of which: foreign-currency denominated	...	...	31.5			30.5	31.2	30.7	29.8	26.9	26.1		22.6	17.6	
of which: external	...	...	31.5			30.5	31.2	30.7	29.8	26.9	26.1		22.6	17.6	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	6.6	9.7	4.2			6.7	4.1	4.9	4.1	2.5	1.9		2.4	1.8	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	163.9			183.9	156.0	150.7	142.3	130.9	128.6		114.8	76.4	
PV of public sector debt-to-revenue ratio (in percent)	...	...	341.0			320.6	302.5	285.8	266.9	221.2	219.0		162.5	96.6	
of which: external 3/	...	...	229.6			225.4	220.4	213.8	203.7	170.1	170.9		135.1	87.6	
Debt service-to-revenue and grants ratio (in percent) 4/	3.9	4.3	3.2			5.2	4.7	5.8	5.6	5.3	5.4		5.8	5.8	
Debt service-to-revenue ratio (in percent) 4/	6.5	7.8	6.6			9.1	9.1	10.9	10.5	9.0	9.2		8.2	7.3	
Primary deficit that stabilizes the debt-to-GDP ratio	-2.0	-2.4	-2.5			10.9	4.2	6.3	5.7	7.7	2.9		2.6	0.7	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	4.1	4.0	4.1	4.3	1.8	4.0	5.0	5.5	5.5	5.5	5.5	5.2	5.5	5.5	5.5
Average nominal interest rate on forex debt (in percent)	0.8	0.6	0.5	0.7	0.3	1.1	1.2	1.2	1.3	1.3	1.3	1.2	1.6	1.9	1.7
Average real interest rate on domestic debt (in percent)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Real exchange rate depreciation (in percent, + indicates depreciation)	4.2	7.2	-0.9	-3.0	7.7	...	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	10.6	4.9	6.3	11.5	6.6	2.7	3.5	4.0	3.7	3.0	2.8	3.3	2.6	2.6	2.6
Growth of real primary spending (deflated by GDP deflator, in percent)	0.6	17.2	-2.4	1.6	5.5	-5.1	9.3	6.8	3.5	-2.2	0.5	2.1	4.3	6.7	5.3
Grant element of new external borrowing (in percent)	...	...	...	...	...	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	34.9	...

Sources: Country authorities; and staff estimates and projections.

1/ Public debt consists of central government debt. Gross debt is considered.

2/ 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.

3/ Revenues excluding grants.

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

5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 4. São Tomé and Príncipe: Sensitivity Analysis of Key Indicators of Public Debt, 2017–37

	Projections							
	2017	2018	2019	2020	2021	2022	2027	2037
PV of Debt-to-GDP Ratio								
Baseline	43	43	41	39	35	33	27	19
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	43	46	47	48	47	49	60	82
A2. Primary balance is unchanged from 2017	43	44	43	42	39	40	42	49
A3. Permanently lower GDP growth 1/	43	43	41	40	36	34	29	26
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	43	44	44	42	38	37	32	26
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	43	48	51	49	44	42	35	24
B3. Combination of B1-B2 using one half standard deviation shocks	43	47	50	48	43	42	36	27
B4. One-time 30 percent real depreciation in 2018	43	55	51	48	43	41	32	22
B5. 10 percent of GDP increase in other debt-creating flows in 2018	43	47	45	43	38	37	30	21
PV of Debt-to-Revenue Ratio 2/								
Baseline	184	156	151	142	131	129	115	76
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	184	166	170	171	173	185	245	306
A2. Primary balance is unchanged from 2017	184	160	158	153	148	153	177	191
A3. Permanently lower GDP growth 1/	184	156	151	144	133	131	123	101
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	184	158	156	149	139	138	131	102
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	184	175	187	177	164	162	147	93
B3. Combination of B1-B2 using one half standard deviation shocks	184	171	180	171	160	158	149	106
B4. One-time 30 percent real depreciation in 2018	184	199	189	176	162	158	136	85
B5. 10 percent of GDP increase in other debt-creating flows in 2018	184	171	165	156	144	142	127	83
Debt Service-to-Revenue Ratio 2/								
Baseline	5	5	6	6	5	5	6	6
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	5	5	6	6	5	6	7	14
A2. Primary balance is unchanged from 2017	5	5	6	6	5	5	6	9
A3. Permanently lower GDP growth 1/	5	5	6	6	5	5	6	6
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-2019	5	5	6	6	5	6	6	7
B2. Primary balance is at historical average minus one standard deviations in 2018-2019	5	5	6	6	5	5	7	7
B3. Combination of B1-B2 using one half standard deviation shocks	5	5	6	6	5	6	7	7
B4. One-time 30 percent real depreciation in 2018	5	6	8	8	8	8	8	9
B5. 10 percent of GDP increase in other debt-creating flows in 2018	5	5	6	6	5	5	7	6

Sources: Country authorities; and staff estimates and projections.

1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of the length of the projection period.

2/ Revenues are defined inclusive of grants.