DEMOCRATIC REPUBLIC OF SÃO TOMÉ AND PRÍNCIPE

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JOINT IMF/WORLD BANK DEBT SUSTAINABILITY ANALYSIS[1]

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Prepared by:
International Monetary Fund and International Development Association staffs in collaboration with the authorities of São Tomé and Príncipe.

São Tomé and Príncipe is at a high risk of debt distress according to this update of the joint Bank-IMF low-income country debt sustainability analysis (DSA). The update reflects recent economic data and forecast, including for the oil sector. Despite the revised projections, the assessment of high risk of debt distress is unchanged from the DSA published in February 2012. Under the baseline scenario, the PV of debt-to-exports ratio remains above the country-specific indicative threshold for an extended period due to the country's narrow export base. Taking into account expected commercial oil production beginning in 2015 and associated foreign direct investment, the projected debt profile is consistent with manageable – if high risk – debt dynamics. Stress scenarios show that reduced availability of concessional financing could undermine debt sustainability. Under an alternative, non-oil scenario, all indicators deteriorate when compared to the baseline results, and reaching a sustainable debt level would require an additional fiscal adjustment of 1 percent of GDP by 2015 and further efforts to diversify the economy and expand the export base over the medium term.

[1] The DSA 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 February 8, 2012 (IMF Country Report No. 12/34). 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 (January 22, 2010).

BACKGROUND

1. The previous DSA for São Tomé and Príncipe was undertaken as part of the 2011 Article IV consultation and published in February 2012.[2] It concluded that São Tomé and Príncipe was at a high risk of debt distress. At the same time, it showed a more favorable dynamics of debt indicators than those in earlier assessments, reflecting fiscal revenue improvements and more up-to-date information on future oil production.

2. São Tomé and Príncipe reached the completion point under the enhanced HIPC initiative in March 2007, received topping-up assistance in December 2007, and later on benefited from HIPC/MDRI debt relief. MDRI, in particular, brought substantial debt service savings, since 54 percent of total debt before the HIPC completion point was with IDA, AfDB, and IMF. Debt relief from Paris Club members also helped improve the country's debt profile.

3. São Tomé and Príncipe's medium- and long-term public and publicly guaranteed external debt was estimated at $200.9 million (81 percent of GDP) as of December 2011 (Table 1).[3] The debt burden increased from $157.1 million at end-2010 but remains significantly below the pre-debt relief high of $359.5 million at end-2006. Total public sector debt is composed solely of debt contracted or guaranteed by the central government, and there is currently no state-owned enterprise external debt. Debt composition has shifted after the HIPC completion point. The share of multilateral debt declined from nearly 60 percent before the completion point to around 20 percent. Portugal is now the country's main bilateral creditor, and IDA is its main multilateral creditor.

Table 1. São Tomé and Príncipe: External Debt Stock

(As of end-December 2011)

	Million USD	Share
Multilateral Creditors	42.1	21%
IDA	14.9	7%
FIDA	7.9	4%
BADEA	5.8	3%
OPEC	5.5	3%
IMF	4.9	2%
AfDB	2.2	1%
EIB	0.9	0%
Bilateral Creditors	158.8	79%
Portugal	45.6	23%
Angola [1]	35.4	18%
Italy [1]	25.8	13%
Nigeria	20.0	10%
China [1]	17.3	9%
Yugoslavia [1]	8.8	4%
Brazil[1]	5.0	2%
Belgium	0.9	0%
Total	200.9	100%

Sources: Country authorities and IMF staff estimates

[1] Includes debt in dispute.

4. To implement the terms of the May 2007 Agreed Minutes, the authorities have signed bilateral agreements with all its Paris Club creditors, except Russia, with whom agreement has been reached but not formally signed yet.[4] São Tomé and Príncipe received debt relief from Algeria in 2011. Efforts are underway to conclude additional debt relief with other non-Paris club creditors.

[2] IMF (2012), Country Report for São Tomé and Príncipe 12/34.

[3] $82.3 million of this debt consists of technical arrears (including accrued interest) to Angola ($25.4million), China ($17.3 million), Italy ($25.8 million), Yugoslavia ($8.8 million), and Brazil ($5 million).

[4] The signing of the agreement has been delayed due to the Russian authorities' request that an official signing ceremony take place in Moscow.

MACROECONOMIC ASSUMPTIONS

5. The assumptions in the baseline scenario for 2012–32 are as follows:

- A subdued recovery from the global economic crisis, with annual non-oil output averaging 5 percent through 2013, 6 percent from 2014–22, and 5½ percent thereafter. The main drivers of growth are expected to be construction, tourism, and agriculture. Oil production is expected to begin in 2015 in Block 1 of the Joint Development Zone (JDZ) shared with Nigeria, boosting GDP growth to 38 percent in that year and 48 percent in 2016 as oil production approaches its peak.

- A decline in average annual inflation from 14.3 percent in 2011 to 9.6 percent in 2012, and further to around 3.5 percent in 2015. Inflation is then assumed to remain around 3 percent over the longer term. This reflects continued fiscal prudence and the effects of the peg of the dobra to the euro, which has been in effect since January 2010.

- A domestic primary deficit that is in line with available non-debt creating financing. Any domestic financing needs are assumed to be met via a drawdown of government National Oil Account (NOA) deposits. No domestic borrowing is envisaged.

- A recovery in capital inflows, including in FDI to the oil sector. The authorities expect investment in infrastructure projects to support tourism development, and work on a deepwater port (expected to start in 2014). After the conclusion of these large projects, FDI is projected to return to about 6 percent of GDP.

- The non-interest current account deficit (including official grants) is expected to remain over 21 percent of GDP until oil exports start. The current account deficit is then projected to decline sharply to 12 percent of GDP in 2015, reaching a surplus of 14 percent in 2017 before gradually trending toward balance over the longer term. Non-oil export growth will be driven by increases in cocoa production and re-exports of fuel to airline and shipping companies as São Tomé and Príncipe rehabilitates its airport and expands its connectivity.

- A level of loan concessionality of 50 percent during the new IMF program period. In the baseline, concessional financing is phased out as the country becomes an oil producer: first moving from IDA grants to IDA loans, and then to seeking market financing as needed after oil production starts. No financing from future privatization operations, no commercial loans, no domestic borrowing, and no short-term loans are assumed throughout the DSA projection period.

- Total grants are projected to decline from their current level of 17 percent of GDP in 2011 to an average of 12 percent of GDP through 2015, and to virtually disappear after NOA transfers to the budget become more substantial from 2016 onward.

6. The baseline scenario includes revisions to the oil related assumptions applied under the previous DSA. Production and exports of oil are assumed to commence in 2015 in the JDZ. Production is assumed to be about 8,200 barrels per day in 2015 and peak at about 29,700 barrels per day in 2017–18. Production will average about 13,000 barrels per day over the 20-year life of the project. This is expected to yield, on average, $460 million of annual export earnings, of which $325 million would go to the JDZ partners, with 40 percent ($130 million) belonging to São Tomé and Príncipe.[5] In accordance with the Oil Revenue Management Law (ORML), oil signature bonuses will be accumulated in the NOA from which resources will be drawn up to a maximum of 20 percent of the balance per year to finance the annual budget. Once oil production starts, the bulk of current revenues are to be transferred into a sub-account of the NOA—the Permanent Fund of São Tomé and Príncipe. Resources in the Permanent Fund are to be invested with a view to generating a permanent income stream for the NOA. In steady state, all revenues are deposited in the Permanent Fund while a long-term real rate of return (capped at 5 percent) applied to the previous year's closing balance will be used to determine the amount annually transferred to the budget.

7. The main risk to the macroeconomic framework arises from the uncertainty about the prospects for oil. For illustrative purposes, the DSA expands the analysis under an alternative, non-oil scenario to assess the debt outlook in the event that the quantities produced are not substantial. The details of the alternative medium-to long-term assumptions are as follows:

- Real GDP growth is assumed to be lower than in the baseline by ½ percentage point in 2013–14 as the government slows its public investment program absent funding from oil revenues. Over the long term, growth is projected to be sustained at around 5½ percent per year, similar to the historical norm. However, stronger macroeconomic policies, further measures to enhance the business climate, and successful implementation of a tourism development strategy would be needed to achieve this potential. Investment would have to be supported by grant inflows in the absence of oil revenues.

- The domestic primary deficit is adjusted by an additional 1 percent of GDP by 2015 and ½ percent of GDP by the end of the projection period to keep it in line with projected non-debt creating financing. The fiscal adjustment would come through measures to enhance revenue mobilization (i.e., broaden the tax base by consolidating tax revenue reforms) and to reduce non-priority spending.

- The projected non-interest current account deficit (including grants) would decline from around 25 percent of GDP in 2011 to around 16 percent in 2015, reflecting a decline in imports while FDI flows will subside toward 5 percent of GDP, consistent with the average for Sub-Saharan countries.

- Concessional borrowing would decline from the unusually high levels of 2009–11, beginning with a reduction of planned

[5] The DSA assumes an oil price averaging $96 a barrel. The previous DSA prepared by Fund staff assumed that oil production volumes were fixed at about 12,700 barrels per day beginning in 2015 at a (discounted) price of $82 per barrel due to early concerns about the quality of the hydrocarbon reserves.

borrowing during 2013–15. All borrowing during the DSA projection period would occur on highly concessional terms. Capital investment of about US$12 million currently projected to be financed by concessional loans over 2013 and 2014 would have to be postponed to keep the PV of debt-to GDP ratio around the threshold. Grant financing is expected to remain around historical norms, but additional grant mobilization could mitigate the impact of lower borrowing for capital investment.

EXTERNAL DEBT SUSTAINABILITY

A. Baseline

8. **Under the baseline scenario, some external debt indicators remain above their relevant indicative thresholds over the medium term** (Figure 1, blue lines).[6] Reflecting São Tomé and Príncipe's narrow export base, the present value (PV) of public and publicly guaranteed external debt-to-exports ratio is almost three times the indicative threshold of 100 percent and is expected to remain above the threshold until 2015 when oil exports begin. External debt indicators improve dramatically once oil production begins and remain below all thresholds for the duration of the projection period.

9. **São Tomé and Príncipe's net creditor position becomes positive in 2017.** The DSA is conducted using gross debt indicators. However, when the assets deposited in the NOA are taken into account, the country is projected to become a net creditor 2 years after oil production starts. The accumulation of deposits in the Permanent Fund of the NOA is responsible for the large residuals appearing from 2016 onward (Table 1).

B. Sensitivity Analysis and Alternative Scenario

10. **Stress tests show the highest vulnerability of debt sustainability to a shock to non-debt creating flows in which new borrowing is assumed to be 200 basis points more expensive** (Figure 1, red lines).[7] In this case, the projected PV of debt-to-GDP, debt-to-revenue, and debt-to-exports ratios would exceed their respective thresholds for an extended period.

11. **Under an alternative, non-oil scenario, São Tomé and Príncipe's projected debt indicators would remain close to their thresholds, with one exception** (Figure 1, green lines). Significant breaches would occur throughout the projection period only for the PV of debt-to-exports ratio due to São Tomé and Príncipe's narrow export base. Redressing the breach of the PV of debt-to-GDP threshold over the longer term would require that the domestic primary deficit remain in line with available non-debt creating financing.

[6] 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 2007–10 is 2.97 (weak performer). The corresponding indicative thresholds are 30 percent for the NPV of debt-to-GDP ratio, 100 percent for the 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.

[7] The country was most vulnerable to an exports shock in the previous DSA.

12. There is essentially no difference between the external and public sector DSAs. This is because the government of São Tomé and Príncipe does not issue domestic debt and is not projected to issue debt in the baseline scenario. The dynamics of debt appear unsustainable when the primary balance is unchanged from 2012 (Figure 2, red lines). This highlights the importance of continued fiscal prudence to ensure debt sustainability, and in structural reforms to improve the business environment and thus support private investment and achieve rapid growth.

PUBLIC DEBT SUSTAINABILITY

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CONCLUSION AND THE AUTHORITIES' VIEW

14. São Tomé and Príncipe remains at a high risk of external debt distress. However, the country is able to service its current obligations and, while some external debt indicators are projected remain above their respective thresholds, they show a clear downward trend in the long term. The authorities will need to monitor the adequacy of the fiscal stance and be prepared to tighten it if the non-oil scenario were to materialize. In this context, the DSA underlines the need for measures to mitigate risks:

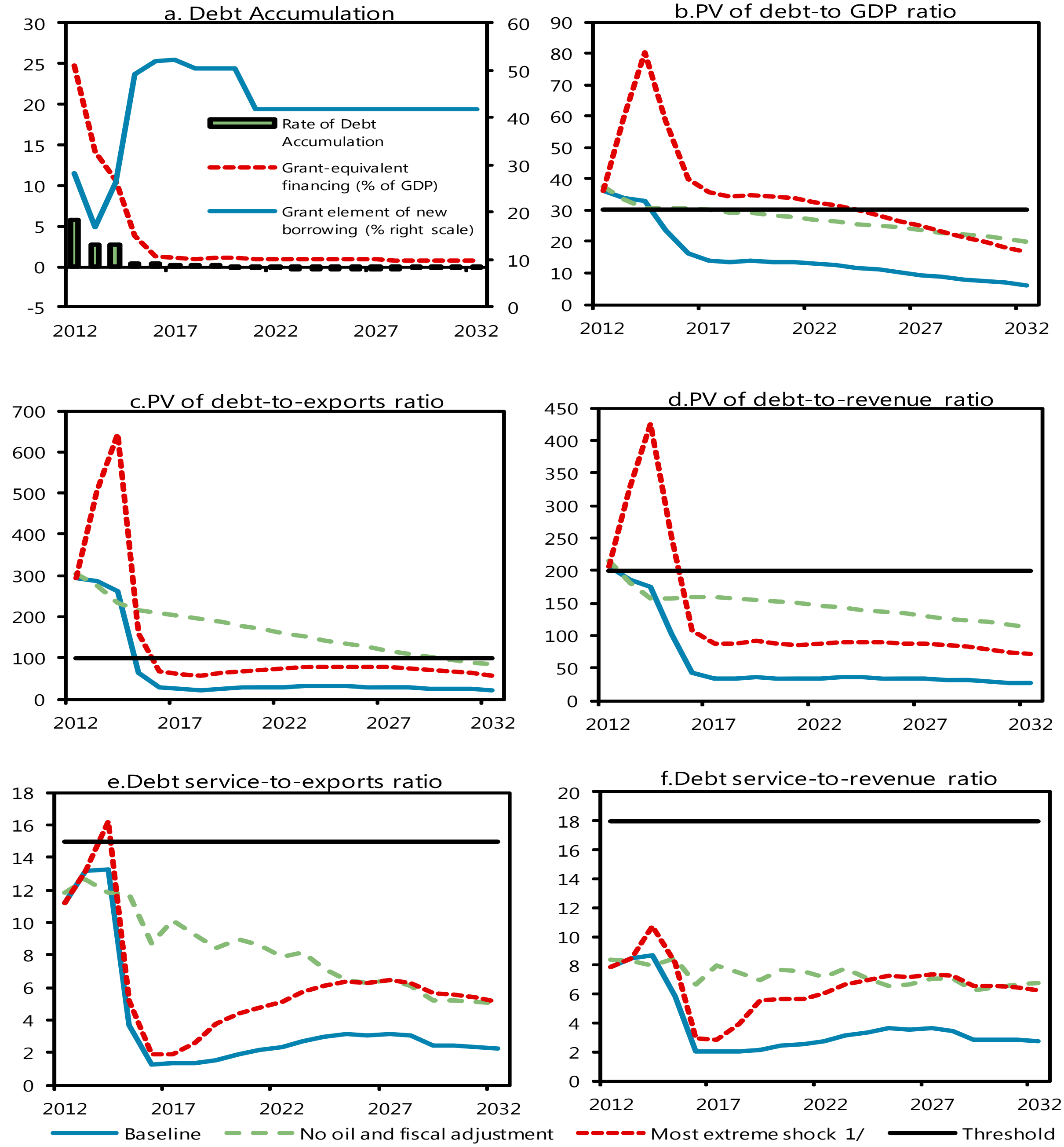
- Maintain fiscal prudence, particularly in the run-up to oil production;
- Accelerate reforms to improve policy and institutional performance to enhance the growth potential of the country;
- Ensure favorable financing terms in the form of grants or highly concessional borrowing; and
- Develop a comprehensive strategy to reduce the cost of doing business and attract investments that can broaden the export base.

15. Key medium-term vulnerabilities include lower GDP growth, external shocks, and borrowing on less concessional terms. These vulnerabilities underscore the importance of sound macroeconomic policies to improve the 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. 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.

16. The authorities broadly agreed with the key macroeconomic assumptions and

analysis underpinning the joint DSA. The authorities carefully guarded their optimism about the prospects for future oil production and welcomed the discussion of a non-oil scenario. While acknowledging that São Tomé and Príncipe remains at high risk of falling back into debt distress, they highlighted that supporting growth and diversification requires mobilizing sufficient resources to implement the country's public investment program, which will continue to require highly-concessional borrowing to the extent that sufficient grant financing is not available. Finally, the authorities noted that additional borrowing did not pose an immediate concern as debt service levels are currently well below the thresholds.

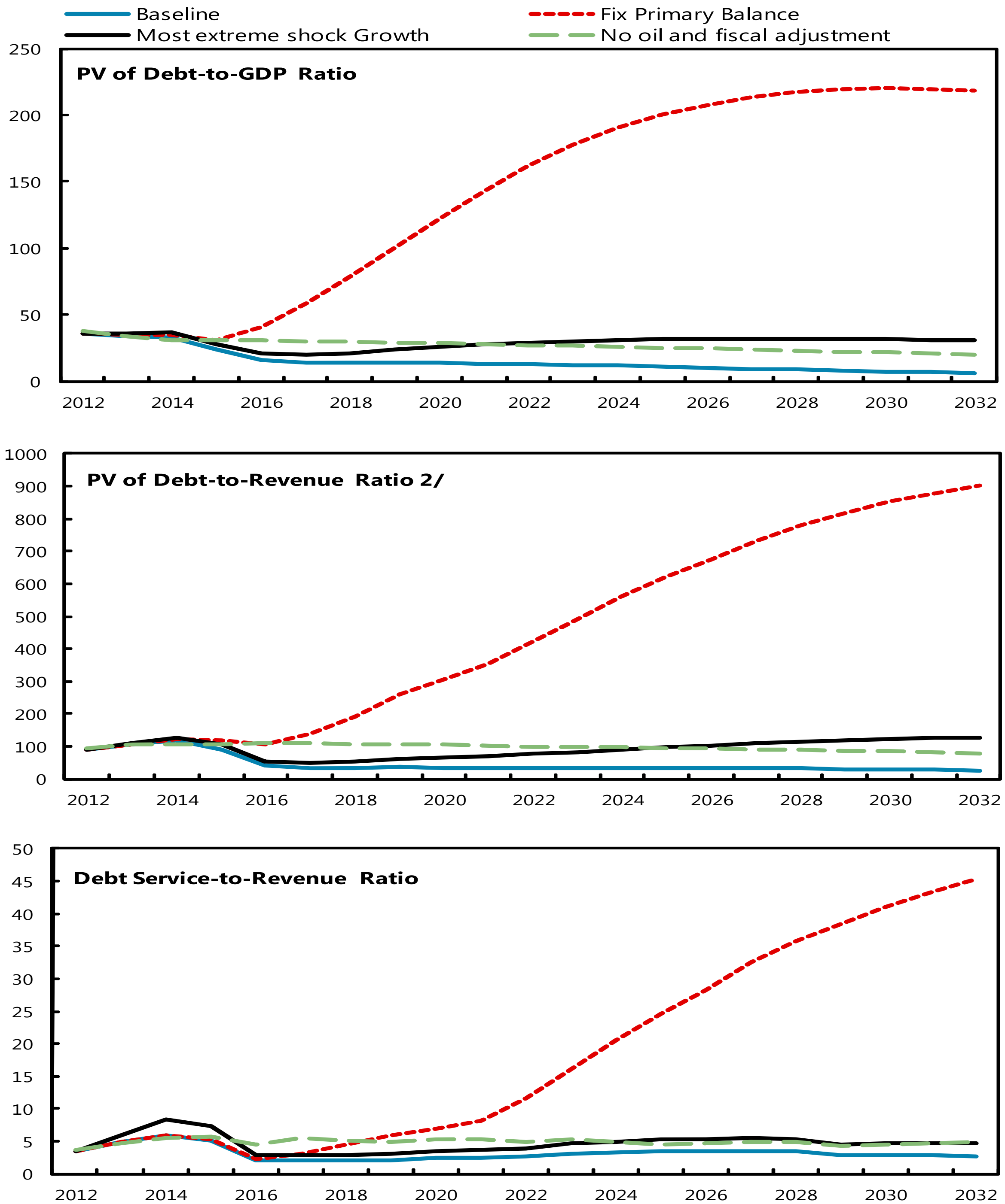
Figure 1. São Tomé and Príncipe: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2012–32[1/]



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2022. In figure b. it corresponds to a Non-debt flows shock; in c. to a Non-debt flows shock; in d. to a Non-debt flows shock; in e. to a Non-debt flows shock and in figure f. to a Non-debt flows shock

Figure 2. São Tomé and Príncipe: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2012-2032 1/



Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio in 2022.
2/ Revenues are defined inclusive of grants.

Table 1. São Tomé and Príncipe: External Debt Sustainability Framework, Baseline Scenario, 2009–32 1/

(Percent of GDP, unless otherwise indicated)

	Actual			Historical 6/ Average	Standard 6/ Deviation	Projections									
	2009	2010	2011			2012	2013	2014	2015	2016	2017	2012-2017 Average	2022	2032	2018-203 Average
External debt (nominal) 1/	**30.4**	**38.3**	**53.7**			**54.1**	**49.6**	**47.3**	**34.1**	**22.9**	**20.1**		**18.3**	**9.4**	
o/w public and publicly guaranteed (PPG)	30.4	38.3	53.7			54.1	49.6	47.3	34.1	22.9	20.1		18.3	9.4	
Change in external debt	11.2	7.9	15.4			0.4	-4.5	-2.2	-13.3	-11.2	-2.8		-0.6	-0.8	
Identified net debt-creating flows	27.9	1.2	-14.0			-5.1	-2.4	-2.5	-18.8	-24.4	-21.6		-12.2	1.4	
Non-interest current account deficit	**25.0**	**27.3**	**24.9**	**19.9**	**7.1**	**21.4**	**22.6**	**22.6**	**11.3**	**-8.3**	**-14.5**		-5.2	**8.3**	0.2
Deficit in balance of goods and services	42.3	52.2	46.9			47.4	39.3	35.0	15.1	-15.1	-22.8		-8.5	11.7	
Exports	10.0	12.1	11.7			12.3	11.9	12.5	36.7	58.3	61.0		43.8	29.3	
Imports	52.3	64.3	58.6			59.7	51.2	47.6	51.7	43.1	38.3		35.3	41.0	
Net current transfers (negative = inflow)	-17.0	-24.3	-21.4	-22.6	4.5	-25.3	-16.0	-11.7	-5.0	-1.4	-1.5		-1.5	-1.1	-1.4
o/w official	-17.5	-22.9	-20.3			-24.2	-15.0	-10.8	-4.3	-1.0	-1.1		-1.1	-0.7	
Other current account flows (negative = net inflow)	-0.3	-0.6	-0.6			-0.7	-0.7	-0.8	1.2	8.2	9.7		4.8	-2.3	
Net FDI (negative = inflow)	**3.6**	**-25.8**	**-32.1**	**-7.4**	**30.0**	**-24.7**	**-22.8**	**-22.8**	**-17.9**	**-5.6**	**-5.0**		**-7.2**	**-6.6**	-7.3
Endogenous debt dynamics 2/	**-0.8**	**-0.4**	**-6.8**			**-1.8**	**-2.2**	**-2.2**	**-12.3**	**-10.5**	**-2.1**		**0.2**	**-0.3**	
Contribution from nominal interest rate	0.5	0.3	0.5			0.4	0.5	0.5	0.4	0.3	0.2		0.2	0.1	
Contribution from real GDP growth	-0.7	-1.3	-1.5			-2.3	-2.6	-2.7	-12.6	-10.8	-2.3		0.0	-0.4	
Contribution from price and exchange rate changes	-0.6	0.7	-5.8			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**-16.6**	**6.7**	**29.4**			**5.5**	**-2.1**	**0.2**	**5.6**	**13.2**	**18.8**		**11.6**	**-2.2**	
o/w exceptional financing	5.2	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/	...	...	34.7			36.0	34.0	33.0	23.7	16.0	14.1		12.9	6.3	
In percent of exports	...	...	296.2			292.1	286.1	263.3	64.7	27.5	23.1		29.5	21.3	
PV of PPG external debt	**...**	**...**	**34.7**			**36.0**	**34.0**	**33.0**	**23.7**	**16.0**	**14.1**		**12.9**	**6.3**	
In percent of exports	**...**	**...**	**296.2**			**292.1**	**286.1**	**263.3**	**64.7**	**27.5**	**23.1**		**29.5**	**21.3**	
In percent of government revenues	**...**	**...**	**192.6**			**206.6**	**185.1**	**174.1**	**102.3**	**42.7**	**34.1**		**34.6**	**26.3**	
Debt service-to-exports ratio (in percent)	**11.3**	**7.3**	**10.2**			**11.2**	**13.1**	**13.2**	**3.7**	**1.3**	**1.4**		**2.3**	**2.2**	
PPG debt service-to-exports ratio (in percent)	**11.3**	**7.3**	**10.2**			**11.2**	**13.1**	**13.2**	**3.7**	**1.3**	**1.4**		**2.3**	**2.2**	
PPG debt service-to-revenue ratio (in percent)	**6.8**	**4.8**	**6.6**			**7.9**	**8.5**	**8.7**	**5.8**	**2.0**	**2.0**		**2.7**	**2.8**	
Total gross financing need (Billions of U.S. dollars)	0.1	0.0	0.0			0.0	0.0	0.0	0.0	-0.1	-0.1		-0.1	0.0	
Non-interest current account deficit that stabilizes debt ratio	13.7	19.4	9.5			21.0	27.1	24.8	24.6	2.9	-11.8		-4.6	9.1	
Key macroeconomic assumptions															
Real GDP growth (in percent)	4.0	4.5	4.9	5.2	3.5	4.5	5.5	6.0	37.7	47.5	11.5	18.8	0.2	4.3	1.7
GDP deflator in US dollar terms (change in percent)	2.9	-2.1	17.7	7.2	7.0	2.1	7.0	5.2	2.4	1.9	1.9	3.4	1.5	1.5	1.5
Effective interest rate (percent) 5/	2.8	1.0	1.6	1.5	1.1	0.9	1.0	1.1	1.1	1.1	1.1	1.0	1.1	0.8	1.0
Growth of exports of G&S (US dollar terms, in percent)	12.0	24.0	19.5	11.5	17.6	12.3	8.7	17.7	312.4	138.8	19.1	84.8	-5.7	5.3	-1.6
Growth of imports of G&S (US dollar terms, in percent)	-9.5	25.8	12.5	13.6	17.9	8.8	-3.3	3.6	53.3	25.4	0.8	14.8	6.3	5.7	3.9
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	28.4	16.9	26.5	49.3	52.1	52.3	37.6	41.8	41.8	43.5
Government revenues (excluding grants, in percent of GDP)	16.6	18.2	18.0			17.4	18.4	19.0	23.2	37.5	41.4		37.4	23.8	32.0
Aid flows (in Billions of US dollars) 7/	0.1	0.1	0.1			0.1	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
o/w Grants	0.0	0.0	0.0			0.1	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
o/w 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/	...	...	...			24.8	14.2	10.5	3.9	1.2	1.1		1.0	0.7	0.9
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			81.8	83.9	78.1	84.0	77.9	79.1		75.4	76.3	76.4
Memorandum items:															
Nominal GDP (Billions of US dollars)	0.2	0.2	0.2			0.3	0.3	0.3	0.5	0.7	0.8		0.9	1.3	
Nominal dollar GDP growth	7.1	2.3	23.5			6.6	12.8	11.5	41.0	50.3	13.6	22.6	1.7	5.8	3.2
PV of PPG external debt (in Billions of US dollars)			0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	
(PVt-PVt-1)/GDPt-1 (in percent)						5.8	2.7	2.8	0.5	0.3	0.0	2.0	-0.2	-0.2	-0.2
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	0.0	
PV of PPG external debt (in percent of GDP + remittances)	...	...	34.3			35.6	33.6	32.7	23.6	15.9	14.0		12.9	6.2	
PV of PPG external debt (in percent of exports + remittances)	...	...	269.5			268.1	264.1	245.6	63.6	27.3	23.0		29.3	21.1	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	9.3			10.3	12.1	12.3	3.6	1.3	1.4		2.3	2.2	

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt. Technical arrears which are currently being renegotiated are excluded.
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 2. São Tomé and Príncipe: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012–32
(Percent)

	Projections							
	2012	2013	2014	2015	2016	2017	**2022**	2032
PV of debt-to GDP ratio								
Baseline	36	34	33	24	16	14	**13**	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	36	42	47	54	65	78	**114**	88
A2. New public sector loans on less favorable terms in 2012-2032 2	36	34	35	26	18	16	**16**	10
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	36	35	36	26	17	15	**14**	7
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	36	35	36	26	18	16	**14**	7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	36	36	37	27	18	16	**14**	7
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	36	60	80	59	40	36	**33**	17
B5. Combination of B1-B4 using one-half standard deviation shocks	36	53	69	50	34	31	**28**	14
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	36	47	46	33	22	20	**18**	9
PV of debt-to-exports ratio								
Baseline	292	286	263	65	27	23	**30**	21
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	292	350	377	148	111	128	**261**	300
A2. New public sector loans on less favorable terms in 2012-2032 2	292	290	278	70	30	26	**36**	34
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	292	286	263	65	27	23	**29**	21
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	292	340	419	103	44	37	**47**	34
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	292	286	263	65	27	23	**29**	21
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	292	505	642	160	69	59	**75**	57
B5. Combination of B1-B4 using one-half standard deviation shocks	292	449	612	152	65	56	**71**	54
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	292	286	263	65	27	23	**29**	21
PV of debt-to-revenue ratio								
Baseline	207	185	174	102	43	34	**35**	26
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	207	226	249	233	173	188	**305**	371
A2. New public sector loans on less favorable terms in 2012-2032 2	207	188	184	111	47	38	**42**	42
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	207	192	188	110	46	37	**37**	28
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	207	190	191	112	47	38	**38**	29
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	207	197	195	114	48	38	**38**	29
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	207	326	425	252	106	87	**87**	71
B5. Combination of B1-B4 using one-half standard deviation shocks	207	289	365	216	91	74	**74**	60
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	207	257	242	142	59	47	**48**	36

Table 2. São Tomé and Príncipe: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012–32 (concluded)

(Percent)

	Projections							
	2012	2013	2014	2015	2016	2017	**2022**	2032
Debt service-to-exports ratio								
Baseline	11	13	13	4	1	1	**2**	2
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	11	13	14	5	3	3	**9**	14
A2. New public sector loans on less favorable terms in 2012-2032 2	11	13	12	4	1	1	**2**	2
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	11	13	13	4	1	1	**2**	2
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	11	15	19	5	2	2	**4**	4
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	11	13	13	4	1	1	**2**	2
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	11	13	16	5	2	2	**5**	5
B5. Combination of B1-B4 using one-half standard deviation shocks	11	14	18	6	2	2	**5**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	11	13	13	4	1	1	**2**	2
Debt service-to-revenue ratio								
Baseline	8	9	9	6	2	2	**3**	3
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	8	9	9	8	4	5	**10**	18
A2. New public sector loans on less favorable terms in 2012-2032 2	8	9	8	6	2	2	**3**	3
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	8	9	9	6	2	2	**3**	3
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	8	9	9	6	2	2	**3**	3
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	8	9	10	7	2	2	**3**	3
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	8	9	11	8	3	3	**6**	6
B5. Combination of B1-B4 using one-half standard deviation shocks	8	9	11	8	3	3	**5**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	8	12	12	8	3	3	**4**	4
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	40	40	40	40	40	40	**40**	40

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, 2009–32

(Percent of GDP, unless otherwise indicated)

	Actual			Average 5/	Standard Deviation 5/	Estimate	Projections								
	2009	2010	2011			2012	2013	2014	2015	2016	2017	2012-17 Average	2022	2032	2018-32 Average
Public sector debt 1/	30.4	38.3	53.7			54.1	49.6	47.3	34.1	22.9	20.1		18.3	9.4	
o/w foreign-currency denominated	30.4	38.3	53.7			54.1	49.6	47.3	34.1	22.9	20.1		18.3	9.4	
Change in public sector debt	11.2	7.9	15.4			0.4	-4.5	-2.2	-13.3	-11.2	-2.8		-0.6	-0.8	
Identified debt-creating flows	17.1	9.6	8.0			6.5	5.6	6.1	-11.3	-31.3	-27.6		-16.5	-0.4	
Primary deficit	18.9	10.8	12.6	9.8	4.7	12.5	11.9	10.7	2.0	-20.2	-25.1	-1.4	-16.4	0.0	-10.1
Revenue and grants	29.2	37.4	35.3			40.0	32.0	28.4	26.4	38.4	42.1		38.1	24.3	
of which: grants	12.6	19.1	17.3			22.6	13.6	9.5	3.2	0.8	0.7		0.7	0.5	
Primary (noninterest) expenditure	48.1	48.2	47.9			52.6	43.8	39.1	28.4	18.2	17.0		21.7	24.3	
Automatic debt dynamics	-0.7	-1.2	-4.6			-6.0	-6.2	-4.6	-13.4	-11.1	-2.5		-0.1	-0.5	
Contribution from interest rate/growth differential	-0.4	-1.4	-2.0			-2.5	-3.1	-3.0	-13.1	-11.1	-2.5		-0.2	-0.5	
of which: contribution from average real interest rate	0.3	0.0	-0.2			-0.2	-0.3	-0.2	-0.2	-0.1	-0.2		-0.2	-0.1	
of which: contribution from real GDP growth	-0.7	-1.3	-1.8			-2.3	-2.8	-2.8	-13.0	-11.0	-2.4		0.0	-0.4	
Contribution from real exchange rate depreciation	-0.3	0.1	-2.6			-3.5	-3.1	-1.6	-0.2	-0.1	0.0		...	...	
Other identified debt-creating flows	-1.1	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	-1.1	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	-5.9	-1.8	7.4			-6.2	-10.1	-8.3	-1.9	20.2	24.9		15.9	-0.3	
Other Sustainability Indicators															
PV of public sector debt	...	...	34.7			36.0	34.0	33.0	23.7	16.0	14.1		12.9	6.3	
o/w foreign-currency denominated	...	...	34.7			36.0	34.0	33.0	23.7	16.0	14.1		12.9	6.3	
o/w external	...	...	34.7			36.0	34.0	33.0	23.7	16.0	14.1		12.9	6.3	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	20.1	11.7	13.8			13.9	13.4	12.3	3.4	-19.4	-24.3		-15.4	0.7	
PV of public sector debt-to-revenue and grants ratio (in percent)	…	…	98.3			89.9	106.2	116.1	90.0	41.8	33.5		33.9	25.8	
PV of public sector debt-to-revenue ratio (in percent)	…	…	192.6			206.6	185.1	174.1	102.3	42.7	34.1		34.6	26.3	
o/w external 3/	…	…	192.6			206.6	185.1	174.1	102.3	42.7	34.1		34.6	26.3	
Debt service-to-revenue and grants ratio (in percent) 4/	3.9	2.4	3.4			3.4	4.9	5.8	5.1	2.0	2.0		2.6	2.7	
Debt service-to-revenue ratio (in percent) 4/	6.8	4.8	6.6			7.9	8.5	8.7	5.8	2.0	2.0		2.7	2.8	
Primary deficit that stabilizes the debt-to-GDP ratio	7.7	3.0	-2.8			12.2	16.4	12.9	15.3	-9.0	-22.3		-15.8	0.8	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	4.0	4.5	4.9	5.2	3.5	4.5	5.5	6.0	37.7	47.5	11.5	18.8	0.2	4.3	1.7
Average nominal interest rate on forex debt (in percent)	2.8	1.0	1.6	1.5	1.1	0.9	1.0	1.1	1.1	1.1	1.1	1.0	1.1	0.8	1.0
Average real interest rate on domestic debt (in percent)	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Real exchange rate depreciation (in percent, + indicates depreciation)	-1.7	0.4	-7.2	-3.7	5.5	-6.8	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	13.6	11.7	12.1	14.7	4.6	10.7	8.6	5.5	2.8	2.3	2.4	5.4	2.9	2.9	2.9
Growth of real primary spending (deflated by GDP deflator, in percent)	0.8	0.0	0.0	0.1	0.3	0.1	-0.1	-0.1	0.0	-0.1	0.0	0.0	0.0	0.0	0.0
Grant element of new external borrowing (in percent)	...	...	...	…	…	28.4	16.9	26.5	49.3	52.1	52.3	37.6	41.8	41.8	...

Sources: Country authorities; and staff estimates and projections.

1/ Includes gross debt of the general government. Technical arrears which are currently being renegotiated are excluded.

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 for Key Indicators of Public Debt, 2012–32

(Percent)

		Projections						
	2012	2013	2014	2015	2016	2017	2022	2032
PV of Debt-to-GDP Ratio								
Baseline	36	34	33	24	16	14	13	6
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	36	33	32	34	60	92	191	195
A2. Primary balance is unchanged from 2012	36	34	34	31	40	58	162	219
A3. Permanently lower GDP growth 1/	36	34	34	25	17	16	22	33
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	36	36	37	28	20	20	29	31
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	36	36	37	26	18	16	15	8
B3. Combination of B1-B2 using one half standard deviation shocks	36	35	35	26	18	17	22	20
B4. One-time 30 percent real depreciation in 2013	36	48	45	32	22	19	18	10
B5. 10 percent of GDP increase in other debt-creating flows in 2013	36	40	38	28	19	17	16	8
PV of Debt-to-Revenue Ratio 2/								
Baseline	90	106	116	90	42	33	34	26
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	90	102	111	124	153	214	498	800
A2. Primary balance is unchanged from 2012	90	107	121	117	105	138	424	900
A3. Permanently lower GDP growth 1/	90	107	118	93	45	38	59	135
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	90	110	127	104	53	48	76	127
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	90	111	129	100	47	37	39	31
B3. Combination of B1-B2 using one half standard deviation shocks	90	107	122	97	48	41	57	82
B4. One-time 30 percent real depreciation in 2013	90	150	159	122	57	45	47	40
B5. 10 percent of GDP increase in other debt-creating flows in 2013	90	125	135	105	49	39	41	34

Table 4. São Tomé and Príncipe: Sensitivity Analysis for Key Indicators of Public Debt, 2011–31 (concluded)

(Percent of Revenue)

	Projections							
	2012	2013	2014	2015	2016	2017	2022	2032
Debt Service-to-Revenue Ratio 2/								
Baseline	3	5	6	5	2	2	3	3
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	3	5	6	6	4	5	14	41
A2. Primary balance is unchanged from 2012	3	5	6	5	2	3	12	45
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	3	5	6	6	2	2	4	7
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	3	5	6	5	2	2	3	3
B3. Combination of B1-B2 using one half standard deviation shocks	3	5	6	5	2	2	3	5
B4. One-time 30 percent real depreciation in 2013	3	6	8	7	3	3	4	5
B5. 10 percent of GDP increase in other debt-creating flows in 2013	3	5	6	6	2	2	3	3

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.

Common Indicators Required for Surveillance

(As of June 15, 2012)

	Date of latest observation	Date received	Frequency of Data[6]	Frequency of Reporting	Frequency of publication
Exchange rates	May 2012	June 2012	D	D	D
International reserve assets and reserve liabilities of the monetary authorities [1]	April 2012	May 2012	D	D	D
Reserve/base money	April 2012	May2012	D	D	D
Broad money	March 2012	May 2012	M	M	M
Central bank balance sheet	April 2012	May 2012	M	M	M
Consolidated balance sheet of the banking system	April 2012	May 2012	M	M	M
Interest rates [2]	May 2012	May 2012	M	M	M
Consumer Price Index	May 2012	June 2012	M	M	M
Revenue, expenditure, balance and composition of financing [3] – general government [4]	March 2012	May 2012	Q	Q	Q
Revenue, expenditure, balance and composition of financing [3]– central government	March 2012	May 2012	Q	Q	Q
Stocks of central government and central government-guaranteed debt [5]	Dec. 2011	May 2012	Q	I	M
External current account balance	Dec. 2011	May 2012	A	I	A
Exports and imports of goods	March 2012	May 2012	M	M	A
GDP/GNP	2010	Aug 2011	A	I	A
Gross external debt	Dec. 2011	May 2012	Q	I	A

[1] Includes reserve asset pledged or otherwise encumbered as well as net derivative positions.
[2] Central bank's reference rate.
[3] Foreign, domestic bank, and domestic nonbank financing.
[4] The general government consists of the central government (budgetary funds, extra-budgetary funds, and social security funds) and state and local governments.
[5] Including currency and maturity composition.
[6] Daily (D); weekly (W); monthly (M); quarterly (Q); annually (A); irregular (I); not available (NA).