APPENDIX II: TOGO DEBT SUSTAINABILITY ANALYSIS USING THE LOW-INCOME COUNTRY FRAMEWORK

The analysis based on the joint IMF-World Bank debt sustainability framework for low-income countries shows that Togo is at moderate risk of debt distress*. After full HIPC assistance, MDRI and beyond HIPC assistance, Togo's external and public debt indicators improve significantly through the projection period, thanks to a stable economic, political and social climate and rehabilitation of key sectors. However, Togo remains vulnerable to certain shocks and could breach the policy-related thresholds for the PV of debt-to-GDP and PV of debt-to-exports ratios under some alternative scenarios in the latter years.*

A. Introduction

1. **This debt sustainability analysis (LIC-DSA) for Togo assesses its external and public debt using the forward-looking debt sustainability framework (DSF) for low-income country framework**.[1] The LIC-DSA uses the reconciled debt database prepared for the completion point HIPC-Debt Relief Analysis (DRA), and incorporates the impact of HIPC, additional multilateral and bilateral assistance beyond HIPC, and MDRI relief in the baseline scenario consistent with the DSF guidelines for LIC-DSAs done at the completion point.[2] The LIC-DSA and the DRA share the same macroeconomic assumptions in the baseline and alternative scenarios but differ in four key areas: (i) the discount rate for the LIC-DSA is fixed at 4 percent, compared to the currency-specific 6-month averages of commercial interest reference rates for the DRA; (ii) the LIC-DSA uses exchange rate projections from the *World Economic Outlook* instead of the actual exchange rate of end-2009 for the DRA; (iii) exports used for the debt burden indicators are the latest projections in the LIC-DSA rather than the three-year backward-looking averages; and (iv) the baseline in the LIC-DSA assumes that IDA assistance is delivered in the form of concessional loans rather than mainly grants as in the DRA.

---

[1] This DSA has been prepared jointly by the World Bank and Fund staffs using the Debt Sustainability Framework (DSF) for Low Income Countries (see "Applying the Debt Sustainability Framework for Low-Income Countries Post Debt Relief", (http://siteresources.worldbank.org/INTDEBTDEPT/PolicyPapers/21154573/DMSDR1S3149398v1DSFPaperforweb.pdf and SM/06/364, 11/08/06). Togo's quality of policies and institutions, as measured by the average World Bank's Country Policy and Institutional Assessment (CPIA) for the period 2007–09 (2.7), places it as a "weak performer". The corresponding indicative thresholds for the external debt indicators are 30 percent for the NPV of debt-to-GDP ratio, 100 percent of the debt-to-export ratio, 200 percent for NPV of debt-to-revenue ratio, 15 percent for the debt service-to-exports ratio, and 25 percent for the debt service-to-revenue ratio.

[2] See "Staff Guidance Note on the Application of the Joint Bank-Fund Debt Sustainability Framework for Low-Income Countries" (www.imf.org and IDA/SECM2007/0226, 03/05/2007).

2. **The last joint DSA for Togo was prepared in 2009 and concluded that Togo was in debt distress.** The outcome of this analysis was in line with the previous DSAs finding improvement in debt dynamics as a consequence of expected enhancements in the macroeconomic policy framework, notably greater fiscal discipline and solid implementation of growth-promoting structural reforms, large domestic arrears clearance operations and the HIPC initiative interim debt relief. Compared to the 2009 assessment, this DSA's results are in line with the earlier alternative scenario describing HIPC, MDRI and beyond HIPC relief. Since November 2008, Togo has been in the interim period of the HIPC Initiative. Upon reaching of the decision point, Togo was granted interim relief from several multilateral and bilateral creditors through concessional arrears clearance and loan rescheduling, and flow rescheduling on Cologne terms, respectively. As a result, the nominal debt stock fell from \$2.2 billion at end-2007 to \$1.7 billion at end-2009. Additionally, reaching the completion point at end 2010 will decrease further the nominal stock of debt to below \$0.4 billion.

3. **In the LIC-DSA framework, the present value of Togo's public and publicly guaranteed (PPG) external debt is \$392 million at end-2010, assuming full delivery of HIPC, MDRI and beyond HIPC assistance. Around 74 percent would be owed to multilateral creditors** and 26 percent to bilateral and commercial creditors.

B. Baseline Assumptions

4. **The baseline macroeconomic assumptions for the present DSA are consistent with the macroeconomic projections underlying the HIPC-DRA.**

a. Real GDP growth is projected to reach its estimated potential of 4 percent by 2012 and then vary around that level, driven by the rehabilitation of the phosphate and cotton sectors, growth in the agricultural sector (especially food production), an improved investment climate, increased financial intermediation; additional FDI and foreign aid; and growing regional integration, thanks to Togo's strategic geographical location and the role of the port of Lomé. This potential was estimated based on a population growth rate of 2.5 percent (which reflects the latest available information) and by building up sectoral growth rates under the assumptions outlined above and planned growth-enhancing reforms. The estimated potential exceeds historical growth rates, which were depressed by the dislocations caused by the protracted social, political, and economic crisis that the country experienced up to the mid-2000s.

b. The projections for key commodity prices (oil, cotton, cocoa, and coffee) through 2015 are based on WEO projections of September 2010 and are assumed constant in real terms afterwards.

c. Inflation over the long-term is projected to remain stable at 2.5 percent, reflecting sound monetary policy at the regional level.

d. The current account deficit will remain roughly stable over the medium-term, with higher exports of phosphates, cement and clinker being insufficient to compensate for a strong growth in imports as foreign aid is absorbed and foreign investment increases.

e. The domestic primary fiscal deficit is assumed to stay close to zero during the projected period, thereby providing a fiscal anchor to ensure fiscal sustainability over the long term.

f. FDI and donor flows are expected to increase over the medium-term reflecting improvements in the investment climate and overall governance.

g. External financing is initially mostly on grant terms, with less concessional financing gradually picking up, leading to a decrease in the grant element of new financing from 35 percent in 2010 to 22 percent at the end of the projection period. External financing is expected to come from Togo's traditional multilateral donors.

C. External Debt Sustainability Analysis

Baseline

5. **Under the baseline scenario, Togo's external debt indicators remain below their relevant indicative thresholds (Table 1a, Figure 1).** The present value (PV) of public and publicly guaranteed (PPG) debt equals to 12.8 percent of GDP in 2010 and remains below the 30 percent threshold until the end of the projected period. Both the PV of external debt relative to revenues and exports stay below their respective indicative threshold until 2030. However, the three PV ratios under the baseline scenario increase significantly toward the end of the projected period leading to ratios close to the thresholds. This result reflects conservative assumptions made, particularly for new financing where grant financing decreases from 5.6 percent of GDP in 2010 to 3.1 percent of GDP in 2030 and the concessionality of the loans decreases from nearly 35 percent to 21.6 percent over the same period.

Alternative Scenarios and Stress Tests

6. **Togo's external debt outlook remains vulnerable to numerous shocks especially toward the end of the projected period** (Table 1b, Figure 1). The PV of external debt to GDP indicators deteriorate significantly under the most extreme and new loans on less favorable terms shocks. In both cases, the threshold is breached near the end of the period, in 2024 for the most extreme shock and in 2026 for the new loans on less favorable terms shock. Additionally, the PV of debt-to-exports ratio shows the same pattern. Both scenarios breach the threshold at the end of the period, in 2026 for the new loans on less favorable terms shock and in 2030 for the most extreme shock.

7. **In light of the results from the baseline and alternative scenarios as well as the stress tests, IDA and IMF staffs conclude that Togo is at moderate risk of debt distress.**

D. Public Sector Debt Sustainability

Baseline

8. **The inclusion of Togo's large domestic public debt in the analysis emphasizes the vulnerability of the baseline scenario (Table 2a, Figure 2). Togo's domes**tic debt burden is comparatively large, reflecting years of weak fiscal management and domestic arrears accumulation, as well as the need to recapitalize ailing banks. Under the baseline scenario, the PV of total public debt ratios are projected to decrease until 2018 before picking up slowly until the end mo the projected period**,** averaging around 25 percent of GDP over the overall period. Given the assumed improvement in the macroeconomic outlook and the cautious debt strategy in the baseline scenario, debt ratios would remain at a reasonable level over the long-run, while debt service ratios would remain below their end-2010 levels.

Alternative Scenarios and Stress Tests

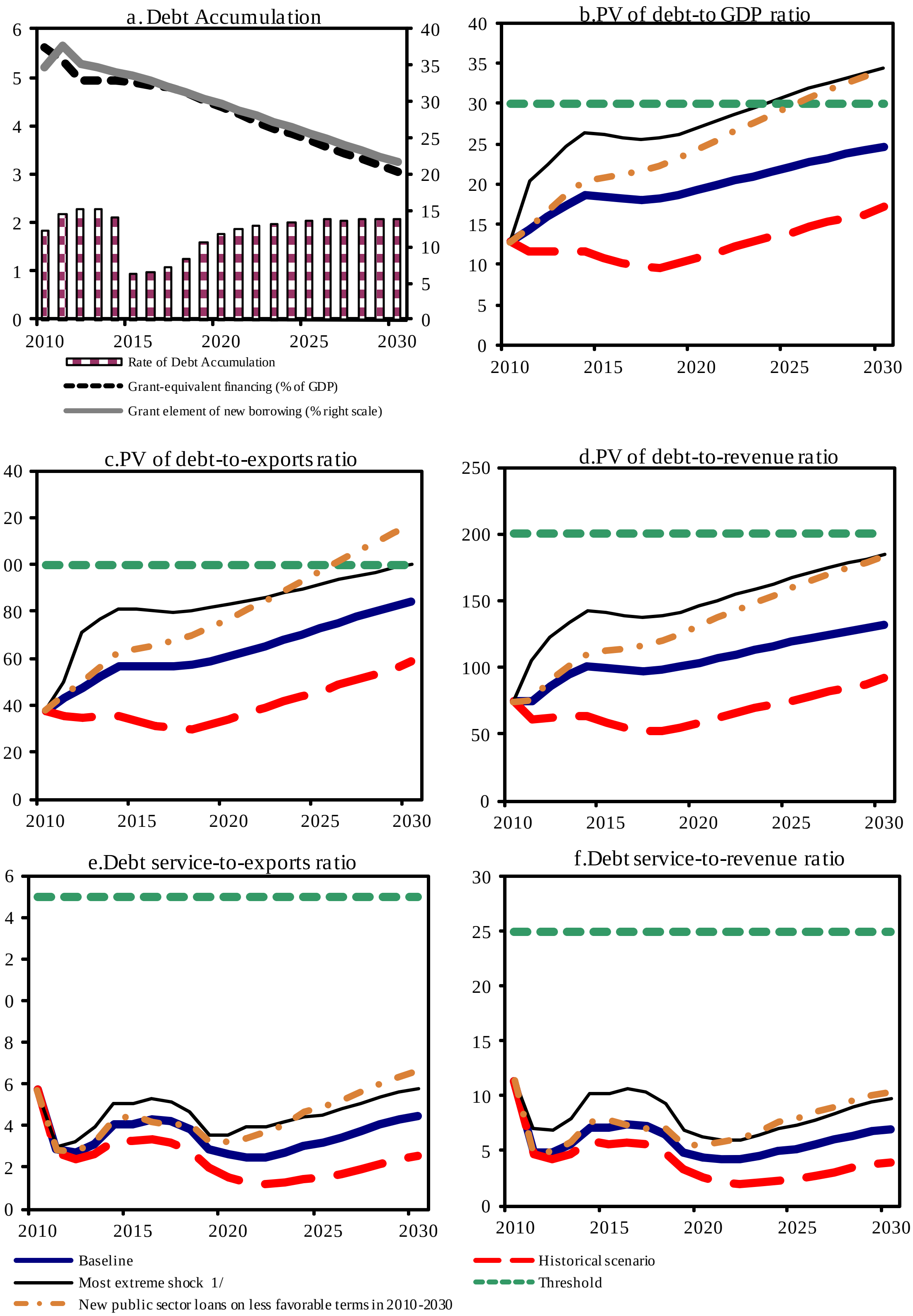
9. **The evolution of the debt indicators would be highly sensitive to the most extreme shock growth, which would increase the debt level and debt service over the long run**. Total public debt dynamics are particularly vulnerable to a growth shock keeping the PV of debt to GPD ratio over 30 percent over the entire projected period (Table 2b, Figure 2). This highlights the importance of a reform agenda that improves the business environment to support foreign investment and growth.

E. Conclusion

10. **The DSA shows that Togo will be at moderate risk of debt distress after reaching the completion point.** Under the baseline scenario, the debt ratios remain below the thresholds for the projected period, and the alternative scenarios would only breach the thresholds in the latter years. However, the upward trend of all scenarios is cause for concern, despite conservative assumptions, and stresses the need for a prudent approach to new borrowing as Togo is exiting the HIPC initiative. The assumptions and conclusions of the DSA were discussed with the authorities, who broadly concurred. The authorities also expressed strong interest in the consequences of the country's risk rating, particularly its implications for external borrowing policy.

11. **Maintaining a robust external debt outlook will depend on a sustained pick-up of real GDP growth, exports and foreign direct investment, as well as prudent debt management and solid fiscal performance.** Alternative scenarios and bound tests highlight the vulnerability of Togo's external debt outlook. The inclusion of Togo's large domestic debt in the analysis reinforces the conclusions of the external DSA and stresses the risks to Togo's debt prospects. In this context, it is essential that the Togolese authorities continue current efforts to strengthen public finance management, restructure the banking system and promote financial development, reform state-owned enterprises, and improve the investment climate, hence laying the foundation for accelerating growth prospects.

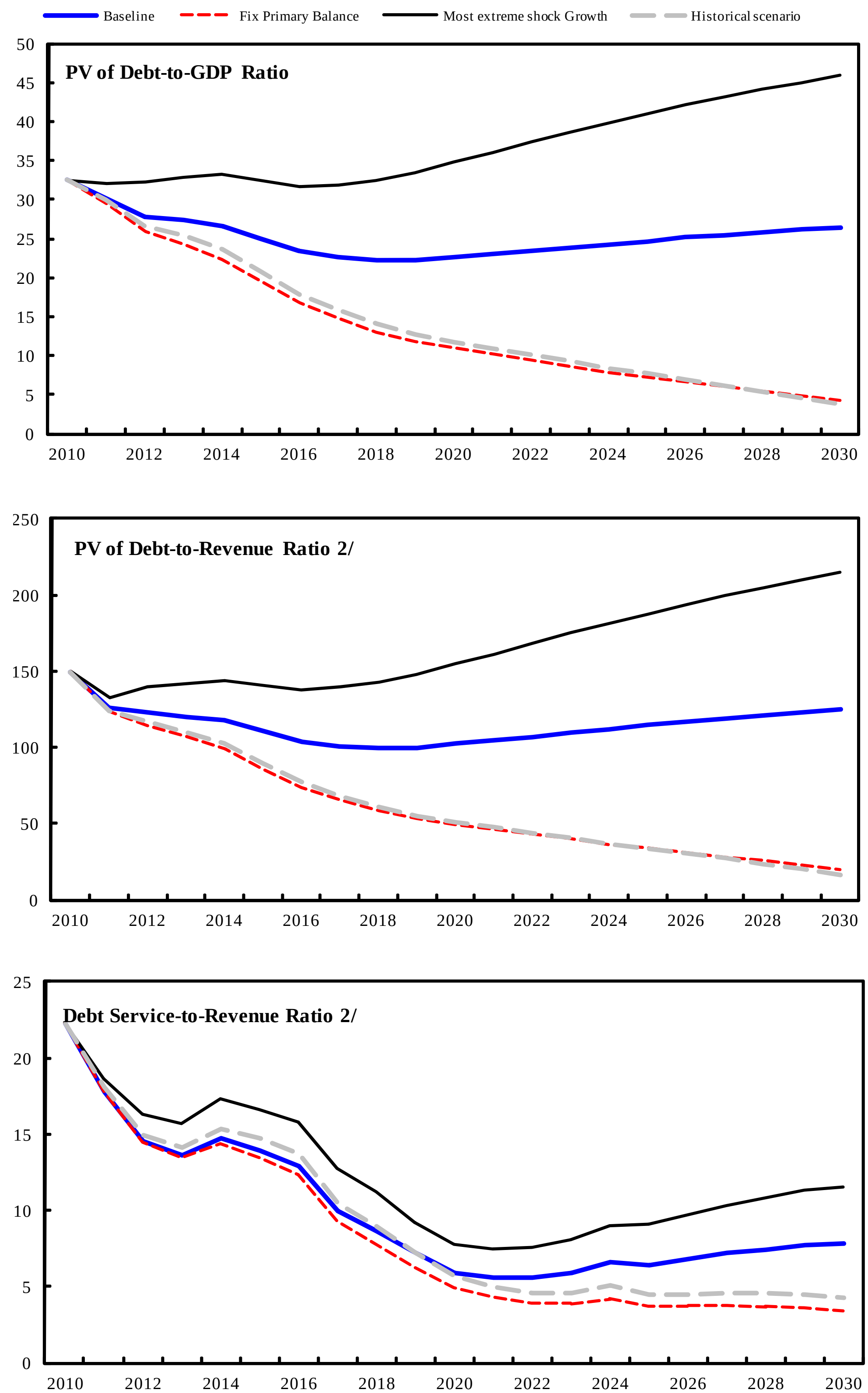
Figure 1. Togo: Indicators of Public and Publicly Guaranteed External Debt
under Alternatives Scenarios, 2010-2030 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2020. In figure b. it corresponds to a One-time depreciation shock; in c. to a Exports shock; in d. to a One-time depreciation shock; in e. to a Exports shock and in figure f. to a One-time depreciation shock

Figure 2.Togo: Indicators of Public Debt Under Alternative Scenarios, 2010-2030 1/



Sources: Country authorities; and staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio in 2020.
2/ Revenues are defined inclusive of grants.

Table 1a.: External Debt Sustainability Framework, Baseline Scenario, 2007-2030 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical 0 Average	Standard 0 Deviation	Projections									
	2007	2008	2009			2010	2011	2012	2013	2014	2015	2010-2015 Average	2020	2030	2016-2030 Average
External debt (nominal) 1/	**79.1**	**61.6**	**53.1**			**16.5**	**17.6**	**18.6**	**19.6**	**20.4**	**21.2**		**25.1**	**32.3**	
o/w public and publicly guaranteed (PPG)	79.1	60.9	51.8			14.6	15.1	15.6	16.2	16.7	17.1		20.3	27.8	
Change in external debt	-1.9	-17.5	-8.5			-36.5	1.0	1.0	1.1	0.8	0.7		1.1	0.4	
Identified net debt-creating flows	-3.4	-11.1	6.3			4.9	5.8	4.7	4.4	4.2	4.0		3.1	2.2	
Non-interest current account deficit	**7.1**	**5.9**	**6.8**	**6.5**	**1.0**	**7.4**	**7.2**	**6.7**	**6.5**	**6.4**	**6.4**		**6.0**	**6.9**	6.3
Deficit in balance of goods and services	15.4	10.8	9.9			12.2	13.3	13.3	13.2	13.5	13.8		13.8	15.4	
Exports	36.0	33.8	34.4			34.1	33.2	33.3	33.0	32.8	32.5		31.6	29.3	
Imports	51.4	44.5	44.2			46.2	46.4	46.6	46.2	46.3	46.2		45.4	44.6	
Net current transfers (negative = inflow)	-11.4	-9.6	-9.1	-9.2	1.9	-10.4	-11.2	-11.9	-11.7	-11.9	-12.1		-12.1	-13.0	-12.5
o/w official	-1.7	-1.4	-1.5			-2.4	-3.3	-4.3	-4.2	-4.2	-4.1		-3.6	-2.4	
Other current account flows (negative = net inflow)	3.1	4.7	6.0			5.6	5.2	5.3	5.0	4.7	4.6		4.4	4.5	
Net FDI (negative = inflow)	**-2.0**	**-1.3**	**-1.0**	**-3.1**	**1.4**	**-1.0**	**-1.0**	**-1.5**	**-1.7**	**-1.8**	**-2.0**		**-2.5**	**-4.0**	-2.6
Endogenous debt dynamics 2/	**-8.5**	**-15.8**	**0.6**			**-1.5**	**-0.4**	**-0.4**	**-0.4**	**-0.4**	**-0.4**		**-0.4**	**-0.7**	
Contribution from nominal interest rate	1.8	0.4	0.4			0.3	0.2	0.2	0.3	0.4	0.4		0.4	0.6	
Contribution from real GDP growth	-1.6	-1.5	-2.0			-1.8	-0.6	-0.7	-0.7	-0.7	-0.8		-0.9	-1.2	
Contribution from price and exchange rate changes	-8.7	-14.7	2.2			…	…	…	…	…	…		…	…	
Residual (3-4) 3/	**1.5**	**-6.5**	**-14.8**			**-41.4**	**-4.8**	**-3.7**	**-3.3**	**-3.5**	**-3.3**		**-2.1**	**-1.8**	
o/w exceptional financing	0.0	-2.3	-2.8			-48.8	-1.7	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	11.3			14.7	16.8	18.9	20.8	22.3	22.5		24.0	29.1	
In percent of exports	...	...	32.9			43.2	50.6	56.6	62.9	68.1	69.3		76.0	99.3	
PV of PPG external debt	**...**	**...**	**10.0**			**12.8**	**14.3**	**15.9**	**17.4**	**18.5**	**18.4**		**19.2**	**24.6**	
In percent of exports	**...**	**...**	**29.2**			**37.5**	**43.1**	**47.7**	**52.7**	**56.5**	**56.8**		**60.6**	**83.9**	
In percent of government revenues	**...**	**...**	**59.3**			**74.6**	**74.0**	**86.4**	**94.0**	**100.2**	**99.6**		**103.6**	**131.4**	
Debt service-to-exports ratio (in percent)	**9.4**	**5.7**	**4.4**			**5.7**	**2.9**	**2.7**	**3.1**	**4.0**	**4.1**		**2.6**	**4.4**	
PPG debt service-to-exports ratio (in percent)	**9.4**	**5.7**	**4.4**			**5.7**	**2.9**	**2.7**	**3.1**	**4.0**	**4.1**		**2.6**	**4.4**	
PPG debt service-to-revenue ratio (in percent)	**20.1**	**12.4**	**9.0**			**11.4**	**4.9**	**4.8**	**5.5**	**7.2**	**7.2**		**4.4**	**7.0**	
Total gross financing need (Billions of U.S. dollars)	0.2	0.2	0.2			0.3	0.3	0.2	0.3	0.3	0.3		0.4	0.6	
Non-interest current account deficit that stabilizes debt ratio	9.0	23.5	15.3			43.9	6.2	5.6	5.5	5.6	5.6		5.0	6.4	
Key macroeconomic assumptions															
Real GDP growth (in percent)	2.3	2.4	3.2	1.7	2.2	3.4	3.7	4.0	4.1	3.9	4.0	3.9	3.8	4.2	4.0
GDP deflator in US dollar terms (change in percent)	12.1	22.8	-3.4	6.3	10.3	-4.9	0.2	0.3	0.4	1.2	1.6	-0.2	2.5	2.4	2.5
Effective interest rate (percent) 5/	2.5	0.7	0.6	1.7	0.7	0.6	1.2	1.4	1.7	1.9	2.1	1.5	2.0	1.9	1.9
Growth of exports of G&S (US dollar terms, in percent)	19.8	17.9	1.4	9.2	13.7	-2.5	1.2	4.7	3.7	4.4	4.7	2.7	5.9	5.9	5.9
Growth of imports of G&S (US dollar terms, in percent)	34.8	8.9	-1.0	10.3	17.7	2.8	4.4	4.7	3.7	5.3	5.7	4.4	6.1	6.6	6.3
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	34.7	37.8	35.2	34.7	34.2	33.6	35.0	29.6	21.6	27.2
Government revenues (excluding grants, in percent of GDP)	16.8	15.6	16.9			17.1	19.3	18.4	18.5	18.5	18.5		18.5	18.7	18.6
Aid flows (in Billions of US dollars) 7/	0.1	0.1	0.1			0.2	0.2	0.2	0.2	0.2	0.2		0.3	0.3	
o/w Grants	0.0	0.1	0.1			0.1	0.1	0.1	0.1	0.2	0.2		0.2	0.2	
o/w Concessional loans	0.0	0.0	0.0			0.1	0.0	0.0	0.1	0.1	0.1		0.1	0.1	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			5.6	5.4	4.9	5.0	4.9	4.9		4.4	3.1	4.0
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			74.0	81.8	80.7	78.7	77.1	76.3		71.0	56.8	66.6
Memorandum items:															
Nominal GDP (Billions of US dollars)	2.5	3.2	3.2			3.1	3.2	3.4	3.5	3.7	3.9		5.4	10.2	
Nominal dollar GDP growth	14.6	25.7	-0.3			-1.7	3.9	4.4	4.6	5.2	5.7	3.7	6.4	6.7	6.6
PV of PPG external debt (in Billions of US dollars)			0.3			0.4	0.5	0.5	0.6	0.7	0.7		1.0	2.5	
(PVt-PVt-1)/GDPt-1 (in percent)						1.8	2.2	2.3	2.3	2.1	0.9	1.9	1.8	2.1	1.8
Gross workers' remittances (Billions of US dollars)	0.2	0.3	0.2			0.2	0.3	0.3	0.3	0.3	0.3		0.5	1.1	
PV of PPG external debt (in percent of GDP + remittances)	...	...	9.3			11.8	13.3	14.8	16.2	17.2	17.1		17.7	22.2	
PV of PPG external debt (in percent of exports + remittances)	...	...	24.0			30.4	34.8	38.8	43.0	45.8	45.6		47.8	61.6	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	3.6			4.6	2.3	2.2	2.5	3.3	3.3		2.0	3.3	

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 1b.Togo: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2010-2030
(In percent)

	Projections							
	2010	2011	2012	2013	2014	2015	**2020**	2030
PV of debt-to GDP ratio								
Baseline	13	14	16	17	19	18	**19**	25
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2010-2030 1/	13	12	12	12	12	11	**11**	17
A2. New public sector loans on less favorable terms in 2010-2030 2	13	15	17	19	20	21	**24**	34
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2011-2012	13	15	17	19	20	20	**21**	26
B2. Export value growth at historical average minus one standard deviation in 2011-2012 3/	13	16	20	22	23	23	**23**	25
B3. US dollar GDP deflator at historical average minus one standard deviation in 2011-2012	13	15	17	19	20	20	**21**	26
B4. Net non-debt creating flows at historical average minus one standard deviation in 2011-2012 4/	13	17	21	23	24	24	**23**	25
B5. Combination of B1-B4 using one-half standard deviation shocks	13	16	20	22	23	23	**23**	26
B6. One-time 30 percent nominal depreciation relative to the baseline in 2011 5/	13	20	23	25	26	26	**27**	34
PV of debt-to-exports ratio								
Baseline	38	43	48	53	57	57	**61**	84
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2010-2030 1/	38	35	35	35	35	33	**34**	59
A2. New public sector loans on less favorable terms in 2010-2030 2	38	44	50	57	62	64	**77**	117
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2011-2012	38	43	47	52	56	56	**60**	82
B2. Export value growth at historical average minus one standard deviation in 2011-2012 3/	38	50	71	77	81	81	**83**	100
B3. US dollar GDP deflator at historical average minus one standard deviation in 2011-2012	38	43	47	52	56	56	**60**	82
B4. Net non-debt creating flows at historical average minus one standard deviation in 2011-2012 4/	38	50	64	69	73	72	**74**	87
B5. Combination of B1-B4 using one-half standard deviation shocks	38	45	59	64	68	68	**70**	86
B6. One-time 30 percent nominal depreciation relative to the baseline in 2011 5/	38	43	47	52	56	56	**60**	82
PV of debt-to-revenue ratio								
Baseline	75	74	86	94	100	100	**104**	131
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2010-2030 1/	75	60	63	63	63	58	**58**	92
A2. New public sector loans on less favorable terms in 2010-2030 2	75	76	90	101	110	113	**131**	183
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2011-2012	75	77	94	102	109	108	**111**	141
B2. Export value growth at historical average minus one standard deviation in 2011-2012 3/	75	80	111	118	124	123	**122**	135
B3. US dollar GDP deflator at historical average minus one standard deviation in 2011-2012	75	77	93	102	108	108	**111**	141
B4. Net non-debt creating flows at historical average minus one standard deviation in 2011-2012 4/	75	86	116	123	128	127	**126**	136
B5. Combination of B1-B4 using one-half standard deviation shocks	75	81	111	119	125	123	**124**	140
B6. One-time 30 percent nominal depreciation relative to the baseline in 2011 5/	75	105	122	133	142	141	**146**	184

Table 1b.Togo: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2010-2030 (continued)
(In percent)

Debt service-to-exports ratio

Baseline	6	3	3	3	4	4	**3**	4
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2010-2030 1/	6	3	2	3	3	3	**2**	3
A2. New public sector loans on less favorable terms in 2010-2030 2	6	3	3	3	4	4	**3**	7
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2011-2012	6	3	3	3	4	4	**3**	4
B2. Export value growth at historical average minus one standard deviation in 2011-2012 3/	6	3	3	4	5	5	**4**	6
B3. US dollar GDP deflator at historical average minus one standard deviation in 2011-2012	6	3	3	3	4	4	**3**	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2011-2012 4/	6	3	3	3	4	4	**3**	5
B5. Combination of B1-B4 using one-half standard deviation shocks	6	3	3	3	4	4	**3**	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2011 5/	6	3	3	3	4	4	**3**	4

Debt service-to-revenue ratio

Baseline	11	5	5	6	7	7	**4**	7
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2010-2030 1/	11	5	4	5	6	6	**3**	4
A2. New public sector loans on less favorable terms in 2010-2030 2	11	5	5	6	8	8	**5**	10
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2011-2012	11	5	5	6	8	8	**5**	7
B2. Export value growth at historical average minus one standard deviation in 2011-2012 3/	11	5	5	6	8	8	**5**	8
B3. US dollar GDP deflator at historical average minus one standard deviation in 2011-2012	11	5	5	6	8	8	**5**	7
B4. Net non-debt creating flows at historical average minus one standard deviation in 2011-2012 4/	11	5	5	6	8	8	**6**	8
B5. Combination of B1-B4 using one-half standard deviation shocks	11	5	5	6	8	8	**5**	8
B6. One-time 30 percent nominal depreciation relative to the baseline in 2011 5/	11	7	7	8	10	10	**6**	10
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	29	29	29	29	29	29	**29**	29

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 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 2a.Togo: Public Sector Debt Sustainability Framework, Baseline Scenario, 2007-2030
(In percent of GDP, unless otherwise indicated)

	Actual			Average	Standard Deviation	Estimate	Projections								
	2007	2008	2009			2010	2011	2012	2013	2014	2015	2010-15 Average	2020	2030	2016-30 Average
Public sector debt 1/	105.6	89.3	72.8			34.3	30.9	27.6	26.2	24.8	23.6		23.7	29.6	
o/w foreign-currency denominated	79.1	60.9	51.8			14.6	15.1	15.6	16.2	16.7	17.1		20.3	27.8	
Change in public sector debt	-2.0	-16.3	-16.5			-38.5	-3.4	-3.3	-1.4	-1.4	-1.1		0.8	0.4	
Identified debt-creating flows	-10.5	-26.2	-7.5			-41.3	-0.4	0.9	0.7	0.7	0.8		1.0	0.9	
Primary deficit	0.0	-0.5	0.7	-0.6	2.0	-0.3	0.5	1.6	1.4	1.6	1.6	1.1	1.9	2.2	2.0
Revenue and grants	18.5	17.8	19.9			21.7	24.0	22.7	22.7	22.7	22.6		22.1	21.1	
of which: grants	1.7	2.2	3.0			4.6	4.6	4.3	4.2	4.2	4.1		3.6	2.4	
Primary (noninterest) expenditure	18.5	17.2	20.7			21.4	24.5	24.3	24.1	24.3	24.2		24.0	23.3	
Automatic debt dynamics	-10.4	-9.5	-8.2			4.3	-1.0	-0.7	-0.7	-0.8	-0.8		-0.9	-1.3	
Contribution from interest rate/growth differential	-3.1	-14.8	-3.8			-2.4	-1.1	-0.9	-0.8	-1.0	-0.9		-0.9	-1.3	
of which: contribution from average real interest rate	-0.7	-12.3	-1.0			0.0	0.1	0.3	0.3	0.0	0.0		-0.1	-0.1	
of which: contribution from real GDP growth	-2.4	-2.5	-2.8			-2.4	-1.2	-1.2	-1.1	-1.0	-1.0		-0.8	-1.2	
Contribution from real exchange rate depreciation	-7.3	5.3	-4.4			6.7	0.2	0.2	0.2	0.2	0.1		...	...	
Other identified debt-creating flows	0.0	-16.2	0.0			-45.4	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	-16.2	0.0			-45.4	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	8.5	9.9	-9.0			2.8	-3.0	-4.2	-2.1	-2.2	-1.9		-0.2	-0.5	
Other Sustainability Indicators															
PV of public sector debt	26.5	28.3	31.0			32.5	30.1	27.8	27.3	26.6	25.0		22.6	26.4	
o/w foreign-currency denominated	0.0	0.0	10.0			12.8	14.3	15.9	17.4	18.5	18.4		19.2	24.6	
o/w external	...	...	10.0			12.8	14.3	15.9	17.4	18.5	18.4		19.2	24.6	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	3.8	2.6	3.8			4.6	4.8	4.9	4.5	4.9	4.8		3.2	3.8	
PV of public sector debt-to-revenue and grants ratio (in percent)	143.3	159.7	155.9			149.6	125.5	122.6	120.2	117.5	110.4		102.2	125.1	
PV of public sector debt-to-revenue ratio (in percent)	157.7	182.0	183.3			189.6	155.6	151.3	147.8	144.0	135.0		122.3	141.3	
o/w external 3/	…	…	59.3			74.6	74.0	86.4	94.0	100.2	99.6		103.6	131.3	
Debt service-to-revenue and grants ratio (in percent) 4/	20.9	17.8	15.3			22.3	17.8	14.5	13.6	14.7	14.0		5.9	7.8	
Debt service-to-revenue ratio (in percent) 4/	23.0	20.3	18.0			28.2	22.1	17.9	16.8	18.0	17.1		7.1	8.8	
Primary deficit that stabilizes the debt-to-GDP ratio	1.9	15.8	17.2			38.2	4.0	4.9	2.8	3.0	2.7		1.1	1.8	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	2.3	2.4	3.2	1.7	2.2	3.4	3.7	4.0	4.1	3.9	4.0	3.9	3.8	4.2	4.0
Average nominal interest rate on forex debt (in percent)	2.5	0.7	0.6	1.7	0.7	0.7	1.3	1.5	1.9	2.2	2.4	1.6	2.2	2.0	2.1
Average real interest rate on domestic debt (in percent)	-2.4	-11.8	-0.8	-1.7	7.0	1.5	1.2	2.2	2.0	0.6	0.4	1.3	-0.7	-1.5	-1.3
Real exchange rate depreciation (in percent, + indicates depreciation)	-9.2	7.8	-7.6	-3.1	10.8	13.5	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	2.6	14.4	1.9	3.2	6.5	1.4	2.2	1.8	1.7	2.4	2.3	2.0	2.5	2.4	2.5
Growth of real primary spending (deflated by GDP deflator, in percent)	0.0	0.0	0.2	0.1	0.2	0.1	0.2	0.0	0.0	0.0	0.0	0.1	0.0	0.0	0.0
Grant element of new external borrowing (in percent)	...	...	...	…	…	34.7	37.8	35.2	34.7	34.2	33.6	35.0	29.6	21.6	...

Sources: Country authorities; and staff estimates and projections.

1/ Central government gross debt including debt by state-owned enterprises.

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 2b.Togo: Sensitivity Analysis for Key Indicators of Public Debt 2010-2030

	Projections							
	2010	2011	2012	2013	2014	2015	2020	2030
PV of Debt-to-GDP Ratio								
Baseline	32	30	28	27	27	25	23	26
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	32	30	27	25	24	21	12	4
A2. Primary balance is unchanged from 2010	32	30	26	24	22	19	11	4
A3. Permanently lower GDP growth 1/	32	30	28	28	28	26	27	40
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2011-2012	32	32	32	33	33	32	35	46
B2. Primary balance is at historical average minus one standard deviations in 2011-2012	32	31	28	28	27	25	23	27
B3. Combination of B1-B2 using one half standard deviation shocks	32	31	29	29	29	28	30	40
B4. One-time 30 percent real depreciation in 2011	32	36	34	33	33	31	26	28
B5. 10 percent of GDP increase in other debt-creating flows in 2011	32	37	35	34	33	32	28	30
PV of Debt-to-Revenue Ratio 2/								
Baseline	150	126	123	120	117	110	102	125
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	150	124	117	110	102	90	51	16
A2. Primary balance is unchanged from 2010	150	123	114	107	99	86	50	20
A3. Permanently lower GDP growth 1/	150	126	124	123	122	116	121	188
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2011-2012	150	132	139	142	144	141	155	215
B2. Primary balance is at historical average minus one standard deviations in 2011-2012	150	128	125	122	119	112	104	126
B3. Combination of B1-B2 using one half standard deviation shocks	150	128	125	126	127	123	132	186
B4. One-time 30 percent real depreciation in 2011	150	150	149	147	145	135	119	135
B5. 10 percent of GDP increase in other debt-creating flows in 2011	150	155	153	150	147	139	128	141
Debt Service-to-Revenue Ratio 2/								
Baseline	22	18	15	14	15	14	6	8
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	22	18	15	14	15	15	6	4
A2. Primary balance is unchanged from 2010	22	18	14	13	14	14	5	3
A3. Permanently lower GDP growth 1/	22	18	15	14	15	14	6	10
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2011-2012	22	18	16	15	16	15	7	12
B2. Primary balance is at historical average minus one standard deviations in 2011-2012	22	18	15	14	15	14	6	8
B3. Combination of B1-B2 using one half standard deviation shocks	22	18	15	14	15	15	7	10
B4. One-time 30 percent real depreciation in 2011	22	19	16	16	17	17	8	12
B5. 10 percent of GDP increase in other debt-creating flows in 2011	22	18	15	15	15	15	6	9

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.