



BURKINA FASO

June 14, 2013

SIXTH REVIEW UNDER THE THREE-YEAR ARRANGEMENT UNDER THE EXTENDED CREDIT FACILITY, REQUESTS FOR EXTENSION OF THE ARRANGEMENT, MODIFICATION OF CONTINUOUS PERFORMANCE CRITERION, AND REPHASING OF DISBURSEMENT—DEBT SUSTAINABILITY ANALYSIS

Approved By
**Michael Atingi-Ego and
Peter Allum (IMF) and
Marcelo Giugale and
Jeffrey D. Lewis (WB)**

Prepared by the International Monetary Fund and the World Bank

This joint World Bank/IMF Debt Sustainability Analysis (DSA) has been prepared in the context of the Sixth Review under the program supported by the IMF's Three-Year Extended Credit Arrangement (ECF). It is based on higher debt risk thresholds and new end-2012 debt data. This DSA includes proposed new borrowing for four large development projects, assumed to be implemented over the next four years. In order to isolate the impact of the new borrowing on debt sustainability, most macroeconomic assumptions remain unchanged from the 2012 DSA. Notably, a conservative assumption has been taken to keep long term growth projections as in the previous DSA. None of the external debt ratios under the baseline scenario breach their respective indicative debt distress thresholds. Under the stress test scenarios, two ratios breach the thresholds in the outer years (including a country-specific stress test to better reflect the effect of the falling gold prices). As a result, Burkina Faso's risk rating for external debt distress remains moderate. Under an alternative scenario where investment spending is assumed to result in gradually higher growth over the long term, there are no breaches of the debt distress thresholds.

BACKGROUND AND UNDERLYING DSA ASSUMPTIONS

1. Burkina Faso's nominal stock of debt as of end-2012 was 28.7 percent of GDP, equivalent to around US\$3.2 billion (Table 1). A large portion of this debt (81 percent) is external debt while domestic debt which is comprised of government bonds and short term treasury bills is relatively small (19 percent).

Table 1. Stock of Public Debt 2009–12

	<i>CFAF billions</i>				
	2009	2010	2011	2012	Percent
Public Debt	1150.8	1365.7	1508.2	1615.6	100
External Debt	964.1	1164.4	1216.2	1305.4	81
Domestic Debt	186.8	201.3	291.9	310.2	19
	<i>(percent of GDP)</i>				
	2009	2010	2011	2012	
Public Debt	29.2	30.7	30.5	28.7	
External Debt	24.5	26.1	24.6	23.2	
Domestic Debt	4.7	4.5	5.9	5.5	

2. Table 2 summarizes the main differences in assumptions between the previous DSA and this one. The main changes in underlying assumptions in this DSA compared to the 2012 DSA are: use of end-2012 data; a stronger institutional capacity assessment; lower discount rate; higher gold production; higher domestic revenues; lower gold prices and inclusion of the authorities' proposal for non-concessional borrowing tied to four projects.

Table 2. Changes in Assumptions for the April 2013 DSA vs the April 2012 DSA

		2012	2013	2014	2015	2016	2022	2030
Gold (tons)	2013 DSA	42.4	45.4	48.6	52.0	54.6	72.4	90.8
	2012 DSA	35.0	40.0	46.1	49.1	51.8	69.1	86.6
Gold (USD / ounce)	2013 DSA	1407.0	1418.1	1432.3	1451.0	1467.8	1625.4	1844.0
	<i>Memo: World Bank projs.</i>	<i>1670.0</i>	<i>1500.0</i>	<i>1450.0</i>	<i>1400.0</i>	<i>1390.0</i>	-	-
Exports (% of GDP)	2013 DSA	24.9	25.0	25.2	25.1	24.2	22.7	21.9
	2012 DSA	27.1	28.4	29.7	29.6	29.3	27.4	26.7
GDP Growth (y/y)	2013 DSA	9.0	7.0	7.0	7.0	6.9	6.4	6.0
	2012 DSA	7.0	7.0	7.0	7.0	6.9	6.4	6.0
Revenue (% of GDP)	2013 DSA	17.7	18.7	18.5	18.6	18.9	18.7	19.4
	2012 DSA	16.1	16.3	17.0	17.5	18.3	18.5	19.2

3. Other basic macroeconomic assumptions (Box 1) remain unchanged from the 2012 DSA. The GDP growth rate is projected at 7 percent and this robust rate relies on continued improvements in the agricultural sector and anticipated growth in the mining sector. A recent drop in food prices and mostly unchanged retail fuel prices has kept inflation low (projected at 2 percent for 2013) while the current account balance is expected to fall to 1.5 percent of GDP in 2015 from the projected 2 percent in 2013.

Box 1. Burkina Faso: Macroeconomic Assumptions Underlying the DSA

Real GDP growth is projected at 7 percent per year until 2015. Growth for 2012 has been revised upward to 9 percent. The revisions stem from the use of gold production figures from Customs rather than those of the Ministry of Mines. The growth rate in 2012 captures a 30 percent growth in the agricultural sector and a strong growth in gold production (11.5 percent growth). Longer term real growth is averaged slightly above 6 percent to account for a slowdown in the production of gold and the frequency of weather and other shocks.

Inflation in 2012 was 3.8 percent and year-on-year inflation in March 2012 was 3.6 percent. Inflation is expected to converge to an average of 2 percent over the medium-term.

The current account deficit in 2012 was 2.2 percent of GDP and is expected to stay relatively constant through 2015, reflecting higher imports for public investment offset by growing gold exports. Over the longer term, it is projected to increase gradually to 4.7 percent by 2033, as gold exports decelerate but imports remain relatively constant.

Fiscal deficits (including grants) are projected to increase very gradually, from 2.4 percent of GDP in 2013 to around 2.9 percent in 2032. The reliance on grants drops from 5.4 percent of GDP in 2013 to 1.9 percent of GDP over the projection period.

External debt (24.3 percent of GDP in 2013) includes the new anticipated concessional and non-concessional borrowing totaling CFA 292 billion (US\$590.6 million) in the baseline scenario.

Domestic debt assumptions have been changed slightly from the 2012 DSA, that is, there is small constant change in the nominal stock of domestic in the medium term, which is gradually increased in the long term to account for development of domestic and regional bond markets.

4. **This DSA is based on end-2012 debt data.** Also, historical data has also been revised back to 2008 to harmonize with the authorities' data.

- 5. Burkina Faso’s three year average CPIA score increased the institutional capacity classification from medium to strong.**¹ This raised the indicative thresholds for assessing debt distress. Thresholds corresponding to strong policy performers are the highest, indicating good policies and debt accumulation being less risky.
- 6. The discount rate used for the DSA has been lowered from 4 percent to 3 percent due to the decrease in the U.S. dollar long-term CIRR.**² Although the net present value of the debt stock increases given the decrease in the discount rate, the simultaneous increase in the thresholds due to the CPIA score keeps the debt ratios in the baseline well below the thresholds. The drop in the discount rate (combined with the terms assumed for the anticipated new borrowing) also affects the average grant element for disbursements when compared to the 2012 DSA. In this DSA, the average grant element drops from 43 to 23 percent in the medium term and is an average of 20 percent over the long term.
- 7. Export projections are lower in the current DSA compared to the 2012 DSA, reflecting lower gold price projections.** In fact, projections for the production of gold are larger than those projected in the previous DSA, due to an upward revision in the base series. The historical series was revised due to new information on gold production provided by Customs, which constitutes a significant upward revision (40 percent in 2012).
- 8. Gold prices have been on a decline over the last six months, with a sharp drop in April.** The price of gold used to project exports in the baseline scenario of this DSA assumes a lower figure compared to the 2012 DSA, in line with variations in WEO projections for international gold prices. World Bank projections for gold in the medium term are somewhat lower. Over the medium term, the lower gold price assumptions have a stronger impact on exports than the upward revision in the base for production projections.
- 9. New anticipated external borrowing totaling CFA 292 billion (US\$590.6 million over 4 years) has been included in the baseline scenario (Box 2).** New financing for four large development projects is currently being negotiated by the authorities, who continue to seek external financing on the best terms possible. Investment levels are expected to be maintained at relatively high levels close to 13 percent of GDP over the medium term before gradually declining to 11 percent by the end of the projection period. Growth assumptions remain constant, however. In the medium term, the public investment should have some direct impact on growth, but this DSA includes a conservative assumption that longer term growth rates remain unchanged. Of the total amount of anticipated new borrowing, CFA 156.4 billion (US\$ 316.1 million) is expected to be borrowed on concessional terms, and CFA 135.9 billion (US\$ 274.5 million) on non-concessional terms. For this, the authorities have requested a modification of

¹ The 2011 CPIA was 3.77, bringing the 3 year average to 3.78.

² The U.S. dollar long term discount rate is used to derive the net present value of debt stocks in the LIC DSF. This has fallen from 4 percent (its level since September 2009) to 3 percent. This decrease is mandated by IMF policy, which calls for adjusting the discount rate used in the LIC DSF if the six-month average of the long-term CIRR deviates from the prevalent rate in the LIC DSF by more than 100 basis points for a period of six months or more. See Operational Framework for Debt Sustainability Assessments in Low-Income Countries—Further Considerations (<http://www.imf.org/External/np/pp/eng/2005/032805.htm>).

the ceiling on non-concessional borrowing from zero to CFA 135.9 billion (US\$274.5 million, or 2.2 percent of GDP). The baseline assumes that this amount will be disbursed in four equal amounts starting in 2014 through 2017.

Box 2. Non-concessional Borrowing

The authorities have identified financing needs totaling CFA 402 billion (6.6 percent of the projected 2013 nominal GDP) for the development of infrastructure in: (i) hydro agriculture; and (ii) transportation.

Two-thirds of the amount is expected to be financed by concessional borrowing (CFA 156.4 billion), domestic resources (CFA 45 billion) and public private partnerships (CFA 65 billion). The remainder will be financed by non-concessional borrowing in an amount of CFA 135.9 billion (2.2 percent of projected 2013 nominal GDP). It is assumed that this borrowing will take place over a period of four years.

The hydro agriculture project involves building a canal 53 kilometers downstream from a dam in Samendeni which would help irrigate approximately 1500 hectares in the regions of western Burkina Faso. The estimated cost for this project is CFA 10 billion. The Islamic Development Bank is expected to be the major creditor for this project.

The infrastructure in transportation includes the development of a new airport at Donsin, located 35 kilometers northwest of Ouagadougou. Various feasibility studies have determined that the cost of construction of the new airport and its related access roads will be CFA 306 billion. CFA 91.5 billion is expected to be borrowed on non-concessional terms. Creditors are expected to be the Islamic Development Bank, the West African Development Bank, the ECOWAS Bank for Investment and Development, and the French Development Agency.

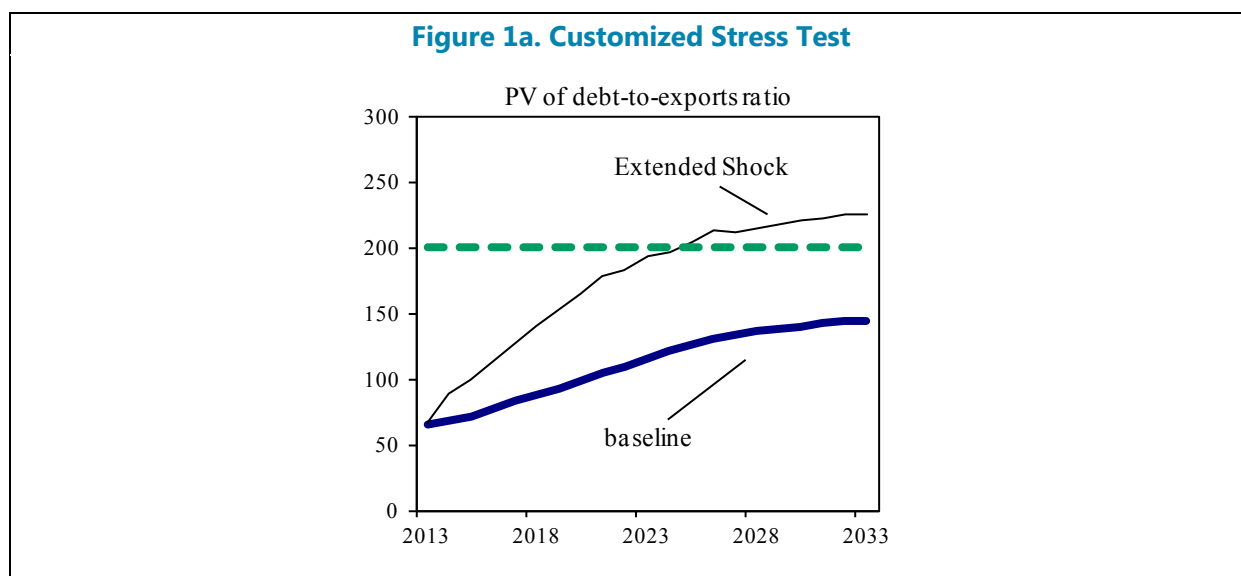
Other transportation infrastructure projects include building highways and urban links. The two road projects are estimated to cost CFA 86 billion, with CFA 34 billion to be financed on non-concessional terms. Main creditors are expected to be the West African Development Bank and the Islamic Development Bank.

EXTERNAL DEBT DSA RESULTS

10. The 2013 DSA highlights the inclusion of the anticipated new borrowing into the baseline scenario. In the baseline scenario, all debt ratios remain comfortably below the risk thresholds, mainly due to the higher thresholds, but also due to higher gold production and higher domestic revenues. The analysis shows an increase in PV of debt-to-exports, from 65.9 percent in 2013 to 72 percent in 2015 in the short term, followed by a steady increase to a maximum of 144.6 percent in 2033. This is attributed to the worsening of the PV of debt due to the lower discount rate (3 percent), changes in borrowing and the lower projections of exports as compared to the previous DSA (Table 2).

11. Of the two cases where the threshold is breached in the standardized stress tests, the PV of debt of exports is more pronounced and relevant. The stress test showing stricter terms for public sector borrowing breaches the debt distress threshold for PV of debt-to-exports, slightly at the end of the forecast period. This stress test assumes that, over the period of 2013–2033, the interest rate on new borrowing is 2 percentage points higher than in the baseline with the grace and maturity periods remaining the same. There is also a breach of the PV of debt to GDP after 2028 due to a onetime exchange rate depreciation shock—the 1994 CFAF devaluation notwithstanding, application of this stress test in the context of a monetary union with a pegged currency would not be a valid reason to maintain a debt risk rating of “moderate.”

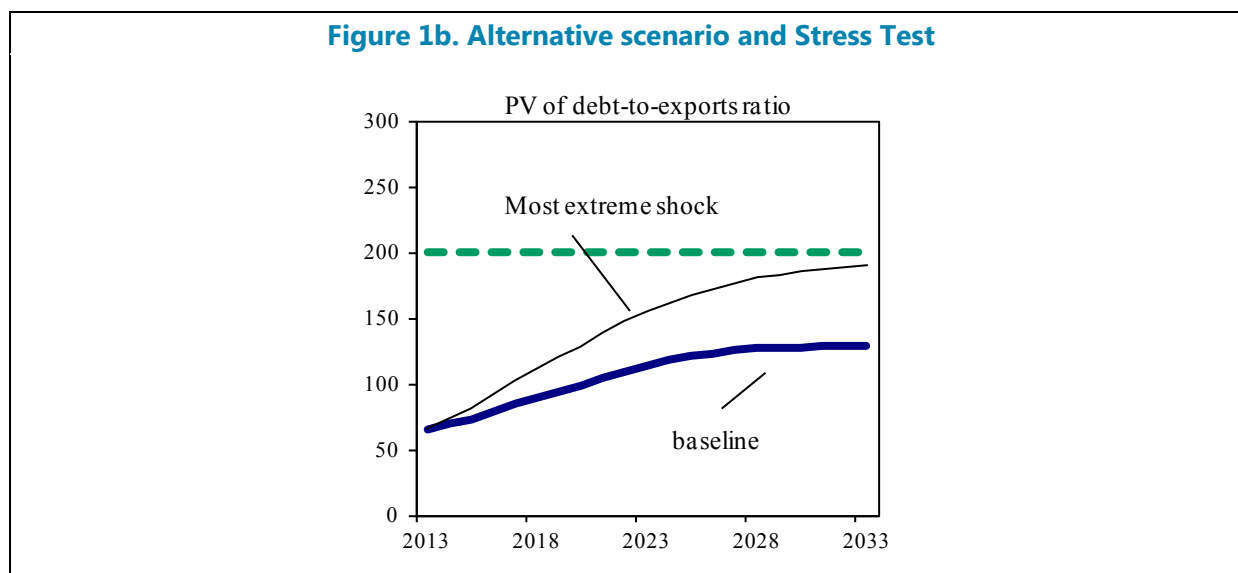
12. In addition, a customized stress test was conducted to test the sensitivity of the analysis to changes in underlying gold production and price assumptions (Figure 1a). The customized stress test was the same one conducted for the 2012 DSA. The effect of this change on export values was approximated by extending the standardized export shock for three further years (2014–18). This would be more consistent with World Bank projections for international gold prices, which show cumulative price declines of around 17 percent over five years. Under this scenario the debt distress threshold with respect to exports is breached.



13. Finally, an alternative scenario was explored in which long term growth projections are gradually increased as a result of the impact of the government program to scale up investment (Figure 1b). Staff analysis using DSGE models shows that scaling up investment spending in line with the amounts proposed by the authorities (roughly 2 percentage points of GDP) could add as much as 1.5 percentage points to growth after 8 years. In the alternative scenario considered here, it is assumed that growth remains at an average of 7.0 percent through 2015, and then gradually trends upward to 7.5 percent as of 2033 (as opposed to a gradual decline to 6.0 percent under the baseline scenario). This is

a more conservative assumption than the DSGE scaling up result, since the full effect on growth rates takes a decade longer to phase in.³ Under this scenario, there are no breaches of the debt distress thresholds, under either the standardized or customized stress tests.⁴

Figure 1b. Alternative scenario and Stress Test



TOTAL PUBLIC DEBT DSA RESULTS

14. The inclusion of domestic public debt in the analysis does not significantly alter the dynamics of debt burden indicators (Table 2a, Figure 2). Under the baseline scenario, the PV of total public debt-to-GDP and total public debt-to-revenue (including grants) ratios are projected to increase steadily over time to reach 36.3 and 168.8 percent at the end of the projection period. In this DSA it is assumed that current domestic debt levels are maintained in the medium term and are increased gradually in the long term to allow for development of domestic and regional bond markets. However, as the share of domestic debt isn't very large, the total public debt is mostly driven by the dynamics of external debt.

³ While these growth assumptions are more positive than historical rates, they are not unrealistic considering historical trends. Over the past 30 years, average real growth rates have increased (4.3 percent in the period 1986-1997, compared to 6.0 in 1998-2012). Over the same period, the volatility of growth has dropped (the standard deviation of the growth rate went from 3.7 percentage points to 2.1 percentage points over the same periods). The results are more pronounced on a per capita basis.

⁴ In this case, the standardized stress test affecting the terms of new borrowing rendered a worse result than the customized extended export shock.

CONCLUSION

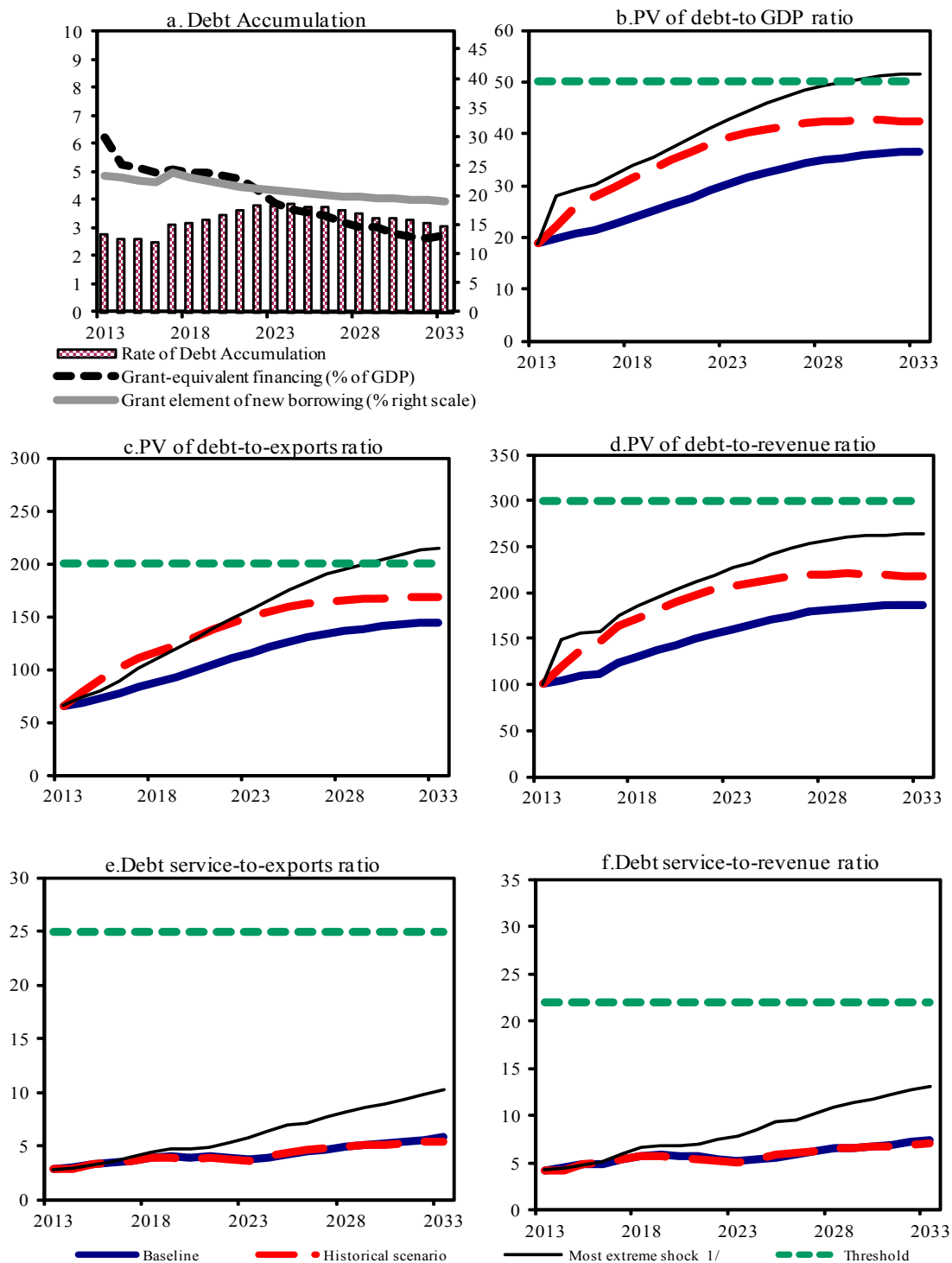
15. The DSA results indicate that Burkina Faso should remain at moderate risk of debt distress.

The baseline scenario shows no breach of debt distress thresholds for any of the indicators. However, the thresholds were breached with two plausible stress tests, the standard DSA stress test on borrowing terms and customized stress test that better reflects the high dependency on underlying assumptions about gold exports.

AUTHORITIES' VIEWS

16. The assumptions and conclusions of the DSA were discussed with the authorities, who broadly concurred with staff's assessment. They questioned the baseline assumption of zero growth impact of scaled up public investment, thus an alternative scenario has been added to show the impact of a gradual increase in growth due to investment scaling up.

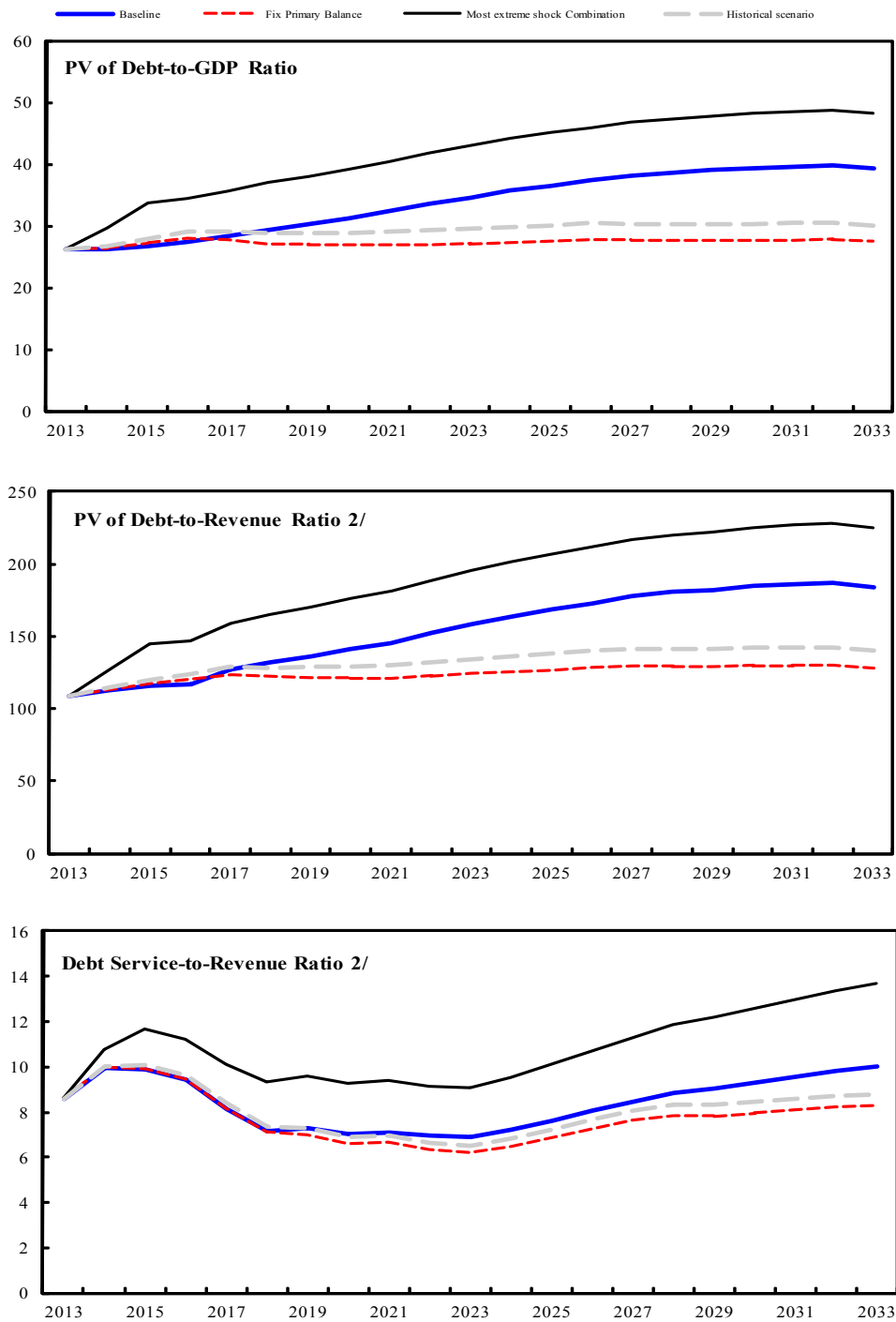
Figure 2. Burkina Faso: Indicators of Public and Publicly Guaranteed External Debt Under Alternatives Scenarios, 2013–2033¹



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2033. In figure b. it corresponds to a One-time depreciation shock; in c. to a Terms shock; in d. to a One-time depreciation shock; in e. to a Terms shock and in figure f. to a Terms shock

Figure 3. Burkina Faso: Indicators of Public Debt Under Alternative Scenarios, 2013–2033¹



Sources: Country authorities; and staff estimates and projections.
 1/ The most extreme stress test is the test that yields the highest ratio in 2023.
 2/ Revenues are defined inclusive of grants.

Table 1. Burkina Faso: External Debt Sustainability Framework, Baseline Scenario, 2010-2033¹
(In percent of GDP, unless otherwise indicated)

	Actual			Historic: ^{6/} Average	Std. ^{6/} Deviation	Projections						2019-2033				
	2010	2011	2012			2013	2014	2015	2016	2017	2018	2013-2018 Average	2023	2033	Average	
External debt (nominal) 1/	26.1	24.6	23.2			24.3	25.4	26.5	27.4	29.0	30.7			38.0	44.0	
o/w public and publicly guaranteed (PPG)	26.1	24.6	23.2			24.3	25.4	26.5	27.4	29.0	30.7			38.0	44.0	
Change in external debt	1.7	-1.5	-1.4			1.1	1.1	1.1	0.9	1.7	1.6			1.4	-0.1	
Identified net debt-creating flows	-0.2	-2.5	0.6			0.3	0.2	-0.1	1.2	1.9	1.9			1.9	1.4	
Non-interest current account deficit	2.0	1.0	2.0	7.0	4.2	1.9	1.9	1.6	3.0	3.7	3.7			4.0	4.0	
Deficit in balance of goods and services	7.4	6.7	7.1			6.8	6.0	5.6	6.9	7.5	7.5			7.2	6.5	
Exports	21.0	26.9	28.5			28.5	28.6	28.5	27.6	27.1	27.2			26.1	25.2	
Imports	28.4	33.6	35.5			35.3	34.6	34.1	34.5	34.6	34.7			33.3	31.6	
Net current transfers (negative = inflow)	-5.3	-5.5	-4.8	-5.0	0.7	-4.7	-3.8	-3.7	-3.6	-3.5	-3.5			-2.8	-2.0	
o/w official	-3.8	-4.2	-3.6			-3.6	-2.8	-2.7	-2.7	-2.7	-2.6			-2.0	-1.2	
Other current account flows (negative = net inflow)	-0.2	-0.2	-0.3			-0.3	-0.3	-0.3	-0.3	-0.3	-0.3			-0.4	-0.4	
Net FDI (negative = inflow)	-0.4	-0.4	-0.4	-1.1	1.4	-0.4	-0.4	-0.4	-0.4	-0.4	-0.5			-0.6	-0.9	
Endogenous debt dynamics 2/	-1.8	-3.1	-1.0			-1.2	-1.3	-1.3	-1.3	-1.3	-1.4			-1.6	-1.7	
Contribution from nominal interest rate	0.2	0.2	0.3			0.3	0.3	0.3	0.4	0.4	0.4			0.6	0.7	
Contribution from real GDP growth	-1.9	-1.1	-2.1			-1.4	-1.6	-1.6	-1.7	-1.7	-1.8			-2.1	-2.5	
Contribution from price and exchange rate changes	-0.2	-2.2	0.8			...	...	...	...	...	...			...	...
Residual (3-4) 3/	1.9	1.0	-2.0			0.8	0.9	1.1	-0.4	-0.3	-0.3			-0.5	-1.5	
o/w 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/	...	...	17.8			18.7	19.7	20.6	21.4	22.7	23.9			30.2	36.4
In percent of exports	...	...	62.4			65.8	68.9	72.3	77.2	83.7	88.1			115.6	144.6
PV of PPG external debt	...	...	17.8			18.7	19.7	20.6	21.4	22.7	23.9			30.2	36.4
In percent of exports	...	...	62.4			65.8	68.9	72.3	77.2	83.7	88.1			115.6	144.6
In percent of government revenues	...	...	100.2			100.2	105.2	109.5	111.6	124.2	131.0			160.2	186.9
Debt service-to-exports ratio (in percent)	2.7	2.2	2.5			2.8	2.9	3.3	3.4	3.6	3.9			3.7	5.8	
PPG debt service-to-exports ratio (in percent)	2.7	2.2	2.5			2.8	2.9	3.3	3.4	3.6	3.9			3.7	5.8	
PPG debt service-to-revenue ratio (in percent)	3.8	3.7	4.0			4.3	4.5	4.9	4.9	5.3	5.8			5.1	7.4	
Total gross financing need (Billions of U.S. dollars)	0.2	0.1	0.2			0.3	0.3	0.3	0.6	0.7	0.8			1.2	2.8	
Non-interest current account deficit that stabilizes debt ratio	0.3	2.5	3.4			0.8	0.8	0.6	2.1	2.0	2.1			2.6	4.1	
Key macroeconomic assumptions																
Real GDP growth (in percent)	8.4	5.0	9.0	6.2	2.1	7.0	7.0	7.0	6.9	6.8	6.7	6.9	6.3	6.0	6.2	
GDP deflator in US dollar terms (change in percent)	0.7	9.2	-3.3	6.8	8.5	5.1	1.4	1.3	1.2	1.3	1.3	1.9	2.0	2.3	2.0	
Effective interest rate (percent) 5/	1.0	1.0	1.2	0.9	0.2	1.4	1.3	1.4	1.5	1.6	1.6	1.5	1.7	1.8	1.7	
Growth of exports of G&S (US dollar terms, in percent)	81.8	46.6	11.7	30.0	26.1	12.3	9.0	8.0	5.0	5.9	8.4	8.1	8.0	8.3	7.8	
Growth of imports of G&S (US dollar terms, in percent)	33.4	35.3	11.6	19.3	15.4	11.7	6.3	6.9	9.4	8.4	8.4	8.5	7.7	7.7	7.7	
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	23.4	23.1	22.5	22.3	23.8	23.1	23.0	20.8	19.0	20.3
Government revenues (excluding grants, in percent of GDP)	15.3	16.1	17.7			18.7	18.7	18.8	19.1	18.2	18.3			18.9	19.5	
Aid flows (in Billions of US dollars) 7/	0.7	0.8	0.8			0.9	0.8	0.9	0.9	0.9	1.0			1.0	1.4	
o/w Grants	0.4	0.5	0.5			0.7	0.6	0.6	0.7	0.7	0.7			0.8	1.2	
o/w Concessional loans	0.3	0.3	0.2			0.2	0.2	0.2	0.2	0.2	0.2			0.2	0.2	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			6.2	5.3	5.2	5.0	5.1	5.0			3.9	2.7
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			69.4	66.0	64.9	64.9	60.9	59.5			51.4	45.5
Memorandum items:																
Nominal GDP (Billions of US dollars)	9.1	10.5	11.0			12.4	13.5	14.6	15.8	17.1	18.4			27.8	61.4	
Nominal dollar GDP growth	9.2	14.6	5.4			12.4	8.5	8.3	8.2	8.1	8.0	8.9		8.5	8.4	
PV of PPG external debt (in Billions of US dollars)	...	...	2.0			2.3	2.6	3.0	3.4	3.9	4.4			8.4	22.3
(PVt-PVt-1)/GDPt-1 (in percent)	...	...	...			2.8	2.6	2.6	2.5	3.1	3.2	2.8		3.8	3.1
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 % of GDP + remittances)	...	...	17.8			18.7	19.7	20.6	21.4	22.6	23.9			30.2	36.3
PV of PPG external debt (in % of exports + remittances)	...	...	62.3			65.7	68.8	72.2	77.2	83.5	87.9			115.0	143.4
Debt service of PPG external debt (in % of exports + remittances)	...	...	2.5			2.8	2.9	3.3	3.4	3.6	3.9			3.7	5.7

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as $[r - g - \rho(1+g)] / (1+g+\rho+gp)$ 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. Burkina Faso: Total Public Sector Debt Sustainability Framework, Baseline Scenario, 2010–2033
(In percent of GDP, unless otherwise indicated)

	Actual			Average	Std. Dev.	Estimate					Projections				
	2010	2011	2012			2013	2014	2015	2016	2017	2018	2013-18 Average		2019-33 Average	
Public sector debt 1/	29.3	29.7	27.3			31.8	31.9	32.7	33.3	34.7	36.1		42.4	47.0	
o/w foreign-currency denominated	26.1	24.6	23.2			24.3	25.4	26.5	27.4	29.0	30.7		38.0	44.0	
Change in public sector debt	0.7	0.4	-2.4			4.5	0.1	0.8	0.6	1.4	1.4		1.2	-0.6	
Identified debt-creating flows	2.8	0.1	-0.5			0.1	-0.1	-0.1	-0.4	1.3	1.3		0.4	-0.8	
Primary deficit	4.0	2.0	2.6	1.6	6.6	1.4	1.1	1.2	0.9	3.0	3.4	1.8	2.9	2.1	2.6
Revenue and grants	19.8	21.2	22.7			24.1	23.2	23.2	23.3	22.3	22.2		21.8	21.4	
of which: grants	4.5	5.1	4.9			5.4	4.5	4.4	4.2	4.1	4.0		2.9	2.0	
Primary (noninterest) expenditure	23.8	23.2	25.3			25.5	24.3	24.3	24.2	25.4	25.6		24.7	23.5	
Automatic debt dynamics	-1.1	-1.9	-3.1			-1.3	-1.2	-1.2	-1.3	-1.7	-2.1		-2.5	-2.9	
Contribution from interest rate/growth differential	-2.9	-2.4	-3.1			-1.2	-1.4	-1.4	-1.5	-1.9	-2.2		-2.5	-2.9	
of which: contribution from average real interest rate	-0.7	-1.0	-0.7			0.5	0.7	0.7	0.6	0.2	-0.1		-0.1	-0.2	
of which: contribution from real GDP growth	-2.2	-1.4	-2.4			-1.8	-2.1	-2.1	-2.1	-2.1	-2.2		-2.4	-2.7	
Contribution from real exchange rate depreciation	1.8	0.5	0.0			0.0	0.2	0.2	0.2	0.2	0.2		...	...
Other identified debt-creating flows	-0.2	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	-0.2	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	-2.1	0.3	-1.8			4.4	0.2	0.9	1.0	0.1	0.1		0.9	0.3	
Other Sustainability Indicators															
PV of public sector debt	...	...	21.9			26.2	26.2	26.8	27.3	28.3	29.4		34.6	39.4
o/w foreign-currency denominated	...	...	17.8			18.7	19.7	20.6	21.4	22.7	23.9		30.2	36.4
o/w external	...	...	17.8			18.7	19.7	20.6	21.4	22.7	23.9		30.2	36.4
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...
Gross financing need 2/	5.3	3.3	4.1			3.5	3.4	3.5	3.1	4.9	5.0		4.4	4.2	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	96.5			108.9	112.9	115.7	117.0	126.9	132.1		158.7	183.7
PV of public sector debt-to-revenue ratio (in percent)	...	...	123.4			140.3	139.7	142.4	142.7	155.3	160.7		183.3	202.2
o/w external 3/	...	...	100.2			100.2	105.2	109.5	111.6	124.2	131.0		160.2	186.9
Debt service-to-revenue and grants ratio (in percent) 4/	6.7	6.1	6.6			8.6	10.0	9.9	9.4	8.1	7.2		6.9	10.0	
Debt service-to-revenue ratio (in percent) 4/	8.7	8.0	8.5			11.1	12.3	12.2	11.5	9.9	8.7		8.0	11.0	
Primary deficit that stabilizes the debt-to-GDP ratio	3.3	1.6	5.0			-3.1	1.0	0.4	0.3	1.6	2.0		1.6	2.6	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	8.4	5.0	9.0	6.2	2.1	7.0	7.0	7.0	6.9	6.8	6.7	6.9	6.3	6.0	6.2
Average nominal interest rate on forex debt (in percent)	1.0	1.0	1.2	0.9	0.2	1.4	1.3	1.4	1.5	1.6	1.6	1.5	1.7	1.8	1.7
Average real interest rate on domestic debt (in percent)	1.4	1.7	1.2	2.7	3.3	17.9	12.4	13.4	12.5	6.0	0.5	10.5	1.0	0.7	0.5
Real exchange rate depreciation (in percent, + indicates depreciation)	8.3	2.3	-0.1	-2.1	9.7	-0.2
Inflation rate (GDP deflator, in percent)	4.2	5.6	4.6	3.3	2.9	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.0	2.3	2.0
Growth of real primary spending (deflated by GDP deflator, in percent)	0.1	0.0	0.2	0.1	0.1	0.1	0.0	0.1	0.1	0.1	0.1	0.1	0.0	0.1	0.1
Grant element of new external borrowing (in percent)	23.4	23.1	22.5	22.3	23.8	23.1	23.0	20.8	19.0	...

Sources: Country authorities; and staff estimates and projections.

1/ Medium term and long term general government gross debt

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 3. Burkina Faso: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2013-2033 (in percent)

	Projections							
	2013	2014	2015	2016	2017	2018	2023	2033
PV of debt-to GDP ratio								
Baseline	19	20	21	21	23	24	30	36
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013-2033 1/	19	22	26	28	30	32	39	42
A2. New public sector loans on less favorable terms in 2013-2033 2	19	21	23	25	27	30	41	54
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	19	20	22	22	24	25	32	38
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	19	21	23	24	25	26	32	37
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	19	20	22	23	24	25	32	39
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	19	20	21	22	23	24	30	36
B5. Combination of B1-B4 using one-half standard deviation shocks	19	17	14	15	17	18	26	35
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	19	28	29	30	32	34	43	51
PV of debt-to-exports ratio								
Baseline	66	69	72	77	84	88	116	145
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013-2033 1/	66	78	91	101	110	116	150	168
A2. New public sector loans on less favorable terms in 2013-2033 2	66	73	80	89	101	109	157	215
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	66	69	72	77	83	88	115	144
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	66	76	90	95	101	106	133	160
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	66	69	72	77	83	88	115	144
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	66	69	73	78	84	89	116	144
B5. Combination of B1-B4 using one-half standard deviation shocks	66	56	42	47	53	58	85	119
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	66	69	72	77	83	88	115	144
PV of debt-to-revenue ratio								
Baseline	100	105	110	112	124	131	160	187
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013-2033 1/	100	120	138	146	164	173	208	217
A2. New public sector loans on less favorable terms in 2013-2033 2	100	111	121	129	150	163	218	278
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	100	108	115	118	131	138	169	197
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	100	111	125	126	138	144	170	190
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	100	108	116	118	132	139	170	198
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	100	106	111	113	125	132	161	187
B5. Combination of B1-B4 using one-half standard deviation shocks	100	93	75	79	92	101	138	180
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	100	149	155	158	176	185	227	265

Table 3 (continued). Burkina Faso: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2013-2033 (in percent)

	Projections							
	2013	2014	2015	2016	2017	2018	2023	2033
Debt service-to-exports ratio								
Baseline	3	3	3	3	4	4	4	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013-2033 1/	3	3	3	3	4	4	4	5
A2. New public sector loans on less favorable terms in 2013-2033 2	3	3	3	4	4	4	6	10
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	3	3	3	3	4	4	4	6
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	3	3	4	4	4	4	4	7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	3	3	3	3	4	4	4	6
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	3	3	3	3	4	4	4	6
B5. Combination of B1-B4 using one-half standard deviation shocks	3	3	3	3	3	3	3	4
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	3	3	3	3	4	4	4	6
Debt service-to-revenue ratio								
Baseline	4	4	5	5	5	6	5	7
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013-2033 1/	4	4	5	5	5	6	5	7
A2. New public sector loans on less favorable terms in 2013-2033 2	4	4	5	5	6	7	8	13
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	4	5	5	5	6	6	5	8
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	4	4	5	5	6	6	5	8
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	4	5	5	5	6	6	5	8
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	4	4	5	5	5	6	5	7
B5. Combination of B1-B4 using one-half standard deviation shocks	4	4	5	4	5	5	5	7
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	4	6	7	7	8	8	7	11
<i>Memorandum item:</i>								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	19	19	19	19	19	19	19	19

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 4. Burkina Faso: Sensitivity Analysis for Key Indicators of Public Debt 2013-2033
(in percent)**

	Projections							
	2013	2014	2015	2016	2017	2018	2023	2033
PV of Debt-to-GDP Ratio								
Baseline	26	26	27	27	28	29	35	39
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	26	27	28	29	29	29	29	30
A2. Primary balance is unchanged from 2013	26	26	27	28	28	27	27	27
A3. Permanently lower GDP growth 1/	26	26	27	28	29	31	39	53
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2014-2015	26	27	30	31	33	35	43	51
B2. Primary balance is at historical average minus one standard deviations in 2014-2015	26	32	38	38	38	39	42	42
B3. Combination of B1-B2 using one half standard deviation shocks	26	30	34	34	36	37	43	48
B4. One-time 30 percent real depreciation in 2014	26	34	33	33	34	34	37	40
B5. 10 percent of GDP increase in other debt-creating flows in 2014	26	34	34	34	35	36	39	41
PV of Debt-to-Revenue Ratio 2/								
Baseline	109	113	116	117	127	132	159	184
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	109	115	120	124	129	128	135	140
A2. Primary balance is unchanged from 2013	109	114	117	120	124	122	125	128
A3. Permanently lower GDP growth 1/	109	114	117	120	132	139	179	246
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2014-2015	109	117	126	131	145	154	195	238
B2. Primary balance is at historical average minus one standard deviations in 2014-2015	109	138	164	162	172	175	191	198
B3. Combination of B1-B2 using one half standard deviation shocks	109	128	145	147	159	165	196	225
B4. One-time 30 percent real depreciation in 2014	109	145	144	143	151	153	170	186
B5. 10 percent of GDP increase in other debt-creating flows in 2014	109	148	149	148	158	161	181	192
Debt Service-to-Revenue Ratio 2/								
Baseline	9	10	10	9	8	7	7	10
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	9	10	10	10	8	7	7	9
A2. Primary balance is unchanged from 2013	9	10	10	9	8	7	6	8
A3. Permanently lower GDP growth 1/	9	10	10	10	8	7	7	12
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2014-2015	9	10	10	10	9	8	8	12
B2. Primary balance is at historical average minus one standard deviations in 2014-2015	9	10	10	11	9	8	8	11
B3. Combination of B1-B2 using one half standard deviation shocks	9	10	11	10	9	8	8	12
B4. One-time 30 percent real depreciation in 2014	9	11	12	11	10	9	9	14
B5. 10 percent of GDP increase in other debt-creating flows in 2014	9	10	11	10	9	8	7	11

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.