INTERNATIONAL MONETARY FUND

GUINEA-BISSAU

STAFF REPORT FOR THE 2013 ARTICLE IV CONSULTATION—DEBT SUSTAINABILITYANALYSIS

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Prepared by the Staff of the International Monetary Fund (IMF) and the International Development Association (IDA).[1]

This debt sustainability analysis for low-income countries (DSA) confirms[2] a moderate risk of debt distress for Guinea-Bissau. Despite a more challenging (especially domestic) environment, and worsening debt outlook, the projected external debt indicators show a moderate vulnerability to shocks. The inclusion of domestic public debt into the analysis confirms the conclusions of the external DSA. Overall, however, risks have increased substantially. Therefore, the current assessment critically depends on the post-crisis recovery and on the assumption that the authorities will reestablish prudent fiscal and debt management policies, implement structural reforms, and have access to concessional borrowing.

[1] The DSA was prepared jointly by Bank and Fund staff, in consultation with the Debt Management Unit of the Bissau-Guinean Ministry of Finance. The fiscal year for Guinea-Bissau is January 1- December 31.

[2] The previous DSA was prepared in December 2011 (IMF Country Report No. 11/355).

BACKGROUND

1. **Overall, Guinea-Bissau's debt outlook improved considerably since the country benefited from a substantial debt relief, but it has worsened recently due to a more challenging environment.** Following the implementation of the Enhanced Heavily Indebted Poor Countries (HIPC) Initiative in December 2010 and the Multilateral Debt Relief Initiative (MDRI) in May 2011, the ratio of public and publicly guaranteed (PPG) external debt to GDP decreased from 122 percent (US$1,066.7 million) at end 2009 to 27.5 percent (US$232.4 million) at end-2012 (Text Table 1). Most of the debt owed to multilaterals and official bilateral creditors was canceled, while 53 percent of the remaining debt owed to non-Paris Club creditors is subject to rescheduling.[3] Since then, domestic political instability has led to some deterioration of Guinea-Bissau's debt outlook. The economy experienced a recession in 2012 while development partners, except regional ones, have reduced their support to the country.

Text Table 1. Guinea-Bissau: Nominal external debt stock, 2009-12

	2009	2010	2011	2012	2012
	USD million				*Percent of total debt*
Total	1,066.7	189.3	210.9	232.4	100.0
Multilateral creditors	529.9	95.7	117.3	138.8	59.7
of which					
IMF	9.9	2.1	9.6	13.3	5.7
IDA	303.8	34.5	34.1	33.5	14.4
AfDB	153.5	11.1	11.1	11.2	4.8
BOAD	1.6	15.4	30.0	48.5	20.9
Bilateral creditors	536.5	93.6	93.6	93.6	40.3
Paris Club	241.5	2.7	2.7	2.7	1.1
Non-Paris Club	295.1	90.9	90.9	90.9	39.1
Commercial	0.3	0.0	0.0	0.0	0.0

Source: Guinea-Bissau authorities and staff estimates

2. **Limited access to official external financing has forced the authorities to rely on less concessional regional borrowing.** Since 2010, the authorities have resorted, mainly if not only, to borrowing at less favorable terms from the regional development bank (the BOAD) to finance their public investment projects in road construction and rehabilitation, rice production and food security support. Therefore, the share of the BOAD debt in total debt has increased from 0.1 to about 21 percent within the last 3 years and may increase even more as the authorities continue their investment effort and official external financing remains limited in the near future. For the debt sustainability analysis, BOAD debt is treated as external based on residency basis.[4]

[3] The government recently signed bilateral agreement with France and Belgium and concluded rescheduling agreements with the Arab Bank for Economic Development in Africa, the Islamic Development Bank, Kuwait and Saudi Arabia. The authorities continue to work on finalizing bilateral agreement with remaining creditors.

[4] According to the Technical Memorandum of Understanding of the program supported by a recent arrangement under the Extended Credit Facility (ECF), the CFAF-denominated debt is considered domestic for debt limits policy purposes (IMF Country Report No. 11/335).

3. **Public domestic debt decreased in recent years, but may increase quickly again given limited access to external financing.** The ratio of domestic debt to GDP decreased from 36 percent at end–2009 to 26.3 percent at end–2011 thanks to the authorities' domestic arrears clearance strategy. However, funding constraints have resulted in a recent increase in domestic arrears and the suspension of the domestic arrears' clearance strategy. In addition, preliminary information of contingent liabilities suggests that there is a recent explicit government guarantee of an electricity company loan from regional commercial banks and that the authorities have started to rely on financing from regional commercial banks to finance their investment projects. Therefore, the ratio of public domestic debt to GDP has increased to above 30 percent at end-2012 and may increase further in the future.

UNDERLYING ASSUMPTIONS

4. **The macroeconomic outlook has been revised to reflect the impact of a double political and economic shock that occurred in 2012.** Going forward, the baseline scenario assumes that near-term economic recovery will be affected by uncertain political environment and delays in restoring traditional development partners' support; in the medium term, however, a more stable political situation should bring positive returns in terms of macroeconomic stabilization and economic growth (Text Table 2; Box 1). In particular, compared to the previous DSA assumptions:

Text Table 2. Guinea-Bissau: Evolution of selected macroeconomic indicators

	2011	2012	2013	Long-term1/
Real GDP growth (percent)				
Previous DSA	5.3	4.5	4.7	4.5
Current DSA	5.3	-1.5	3.5	4.0
Primary fiscal balance (percent of GDP)				
Previous DSA	-2.6	-1.1	-1.0	-1.8
Current DSA	-1.9	-2.8	0.8	-0.2
Non-interest current account deficit (percent of GDP)				
Previous DSA	6.2	7.0	6.4	4.0
Current DSA	1.1	6.5	5.5	2.4
Growth of exports (percent)				
Previous DSA	98.9	-23.6	2.4	6.3
Current DSA	85.6	-44.4	23.7	6.3

Sources: Guinea-Bissau authorties; IMF staff estimates.

1/ Long-term value of the indicator is defined as an average over the last 15 years of the projections.

- The near-term growth is expected to be lower and long-term growth is projected to increase only to 4 percent. This assumes the implementation of sound macroeconomic policies and structural reforms and the authorities' continued investment effort, although constrained by limited resources.
- The primary fiscal balance is projected to improve, turning into a surplus in 2013 and remaining in deficit at around 0.2 percent of GDP in the long term, reflecting the authorities' efforts to build fiscal space in the context of limited access to borrowing.

- The non-interest external current account deficit is expected to improve in the long term reflecting an upward revision in the fiscal balance and a slightly lower growth in imports.

Box 1. Macroeconomic Assumptions

In the medium term (2013-18), projections are consistent with the macroeconomic framework of the 2013 Article IV Consultation. **Long-term (2019-33)** projections assume a more stable political environment, continued growth in cashew exports, and positive returns in terms of macroeconomic stabilization and economic growth from increased public investments and policies implemented in previous years.

Real GDP growth is projected to recover from -1.5 percent in 2012 to 3.5 percent in 2013, fall to about 3 percent in the medium term, and stabilize at about 4 percent over the long run. Medium-term economic activity would be affected by the fragile political situation, but, over the long term, benefit from the implementation of investment projects in agriculture and infrastructure and structural reforms aimed at increasing efficiency and competitiveness and improving the business climate.

Inflation (measured by the GDP deflator) is projected to stabilize over the medium term at around 1.3 percent. Over the long term, inflation is projected to increase to about 2.3 percent.

The primary fiscal deficit is assumed to slightly improve over the medium term from 2.8 percent of GDP in 2012 to 0.3 percent in the medium term, owing to improvements in public fiscal management and efforts to contain recurrent expenditures. Over the long run, the primary fiscal balance is projected to remain at about 0.2 percent of GDP. Over the near-term, **government's domestic debt** is projected to slightly increase from 30.9 percent in 2012 to 32.2 percent in 2013. In the long term, domestic debt is expected to decrease to about 5 percent reflecting the authorities' commitment to a prudent borrowing strategy and a regular repayment of outstanding arrears.

The non-interest external current account deficit is projected to narrow from 5.5 percent of GDP in 2013 to 2.4 percent of GDP in 2018. In the long term, the current account deficit would stabilize at about 2.4 percent, reflecting improved export and fiscal performance.

Net foreign direct investment is projected to decrease in the medium term to about 0.6 percent per year and increase to about 1.3 percent of GDP per year, owing to the stabilization of the political situation, a more favorable business climate, and improved infrastructure.

Net aid flows (official grants and concessional loans) are expected to decrease to about 6 percent of GDP in the medium- and long-runs reflecting some limited development partners' support[1] to Guinea-Bissau infrastructure development and reform efforts. Concessional loans are assumed to be at standard terms, i.e. on 0.25 percent interest rate with 40 (IDA) and 50 (AFDB) years maturity and ten-year grace period. Over the medium term, some new external borrowing is assumed to be on less-concessional terms, and this borrowing is expected to increase moderately as access to concessional financing remains limited. Over the medium- and long-terms, however, the DSA assumes that the authorities will benefit from some concessional borrowing mainly from multilaterals and will have only temporary access to commercial debt. In this context, the average grant element of new disbursements is expected to increase from 21 percent in 2013 to about 30 percent in the long run. The baseline debt scenario assumes that all creditors will provide HIPC debt relief and topping-up assistance, and remaining debt will be rescheduled (Text Table 1).

[1] Some development partners are expected to channel their aid through non-governmental organizations. Therefore, private aid flows are projected to increase from about 1 percent of GDP in 2012 to 3 percent of GDP over the medium term.

5. **The present value of external debt has increased following the revision of the discount rate used in the DSA template.** The discount rate was adjusted from 4 percent to 3 percent in 2012 to reflect the evolution of its reference rate, i.e., the long-term U.S dollar commercial interest rate (CIRR). Therefore, Guinea-Bissau's debt indicators in PV terms have been revised upward and the debt outlook worsened. For instance, *ceteris paribus*, a one percentage point decrease in the

discount rate increases the PV of the Guinea-Bissau's debt-to-GDP ratio by about 2 percentage points.

6. **New risks to the baseline scenario have emerged.** Domestically, a prolonged period of political instability could undermine the population's, development and trading partners' confidence and lead to a slowdown in economic recovery and lower-than-expected exports. In contrast, a successful transition period and political stabilization would speed up the economic recovery. Overall, however, much will also depend on the availability of concessional external financing as well as on the authorities' debt management capacity and ability to implement investment projects and structural reforms. Externally, a weakening external environment could result in lower-than-expected exports and remittances.[5]

EXTERNAL AND PUBLIC DEBT SUSTAINABILITY

A. External Debt Sustainability Analysis

7. **All but one debt indicators are expected to remain below their thresholds[6] in the baseline scenario, but the most extreme shock[7] leads to a significant breach of three of them** (Figure 1, Tables 1 and 2). In the baseline scenario, one debt burden indicator – the PV of debt-to-export – breaches by a limited margin its respective threshold at the beginning of the projection period. On this basis, Guinea-Bissau could be classified as a high risk country, but the breach is projected to be temporary as exports are expected to healthily increase over the medium-term due to improved road infrastructure and some product diversification. In addition, the recent increase in debt-financed investments took place in the context of a restriction in project grants that is expected to be lifted over the medium-term. Stress tests indicate, however, that the economy remains vulnerable to a fall in exports and a one-time currency depreciation shock. The PV of debt-to-export ratio would increase significantly from about 122 percent in 2013 to 306 percent in 2015 and remain well above the relative threshold for the whole projection period. The PV of debt-to GDP and revenue ratios would breach the relative thresholds in the first half of the projection period. Other indicators are also sensitive to the most extreme shock scenario, but do not breach their corresponding thresholds.

8. **The current assessment presents a considerably worse debt outlook than the previous DSA.** Compared to the previous DSA, the three debt burden indicators have deteriorated significantly on account of a less favorable macroeconomic framework. At the same time, the two debt service-related indicators show less favorable debt service trends than the last DSA for the period beyond 2020, reflecting

[5] The inclusion of remittances in the analysis, accounting on average for 2.5 percent of GDP, results in only minor changes of debt burden indicators.

[6] Debt sustainability thresholds are determined by the three-year (2009–11) average of the Country Policy and Institutional Assessment (CPIA) rating (2.7), which classifies Guinea-Bissau as having low-quality policies and institutional frameworks.

[7] The most extreme shock is calibrated as an export shock in 2014–2015 equal to the historical average (2003–2012) of export growth minus one standard deviation (in the same period), or a one-time, 30-percent nominal currency depreciation.

the conclusion of less beneficial than originally expected debt rescheduling agreements with the non-Paris club creditors.

B. Public Debt Sustainability Analysis

9. **Total (external and domestic) public debt indicators are projected to decline gradually** (Figure 2, Tables 3 and 4). In the baseline scenario, the PV of debt-to-GDP ratio is expected to decrease from about 56 percent in 2013 to 16 percent in 2033, the PV of debt-to-revenue ratio is projected to decline from 334 percent to 90 percent, and the debt service-to-revenue ratio would fall from 11 percent in 2013 to 5 percent at the end of the projection period. These indicators are projected to increase initially when compared to the previous DSA, reflecting a deterioration of economic environment and the signing of less favorable than expected debt rescheduling agreements, but the authorities' prudent borrowing strategy and a limited access to external financing would result in their more gradual decrease afterwards.

10. **Moderate risks to the baseline may occur if key macroeconomic variables remain unchanged at historical levels.**[8] Under the historical scenario, the PV of debt-to-GDP and revenue ratios would decline slightly and remain at around 53 and 275 percent in 2033, respectively. The debt service-to-revenue ratio is expected to grow and remain at around 11 percent after 2026. Other stress tests do not point to significant vulnerability. The risks posed by contingent liabilities, which can be approximated by a 20 percent of GDP increase in other debt creating flows, appear contained as well.

CONCLUSION

11. **In the staff's view, Guinea-Bissau continues to face a moderate risk of debt distress under the assumptions of medium-term gradual economic recovery, sound policies, and continued structural reforms**. Although, the external debt outlook worsened compared to the previous assessment, the baseline scenario indicates a limited small and temporary breach of one indicative threshold at the beginning of the projection period, while the stress tests result in the breach of three of them. The breach in the debt-to-export threshold in the baseline scenario is due to ongoing investment efforts to improve the country's infrastructure and its export base. This justifies maintaining a moderate risk of debt distress for the moment. The inclusion of domestic public debt in the analysis confirms that the country's debt position presents a moderate vulnerability to shocks for now. Nevertheless, risks have increased substantially and the debt sustainability critically depends on the normalization of the political situation and sound macroeconomic and debt management policies in the context of limited access to borrowing.

12. **The authorities broadly agree with the staff conclusions and policy recommendations.** The authorities concur that debt sustainability depends critically on the ability to access concessional financing, improvements in potential economic growth, and sound macroeconomic and prudent debt management policies. However, the authorities noted that if concessional financing is difficult to access, the country may need to borrow at less concessional terms to finance structural reforms and investment projects.

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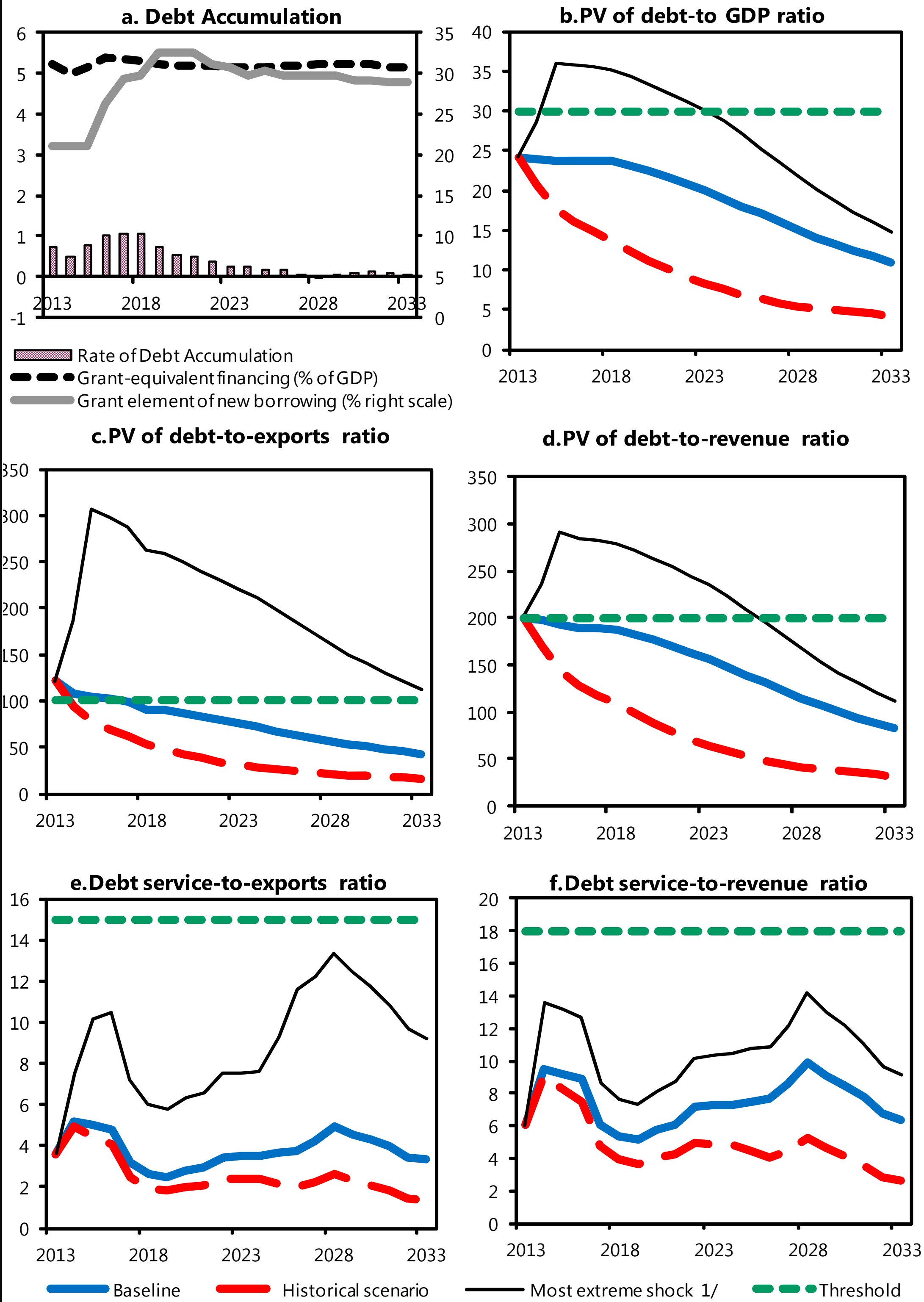
[8] Real GDP growth and the primary fiscal balance (in percent of GDP) would remain at their 10-year averages, i.e. at 2.6 percent and -3.5 percent, respectively.

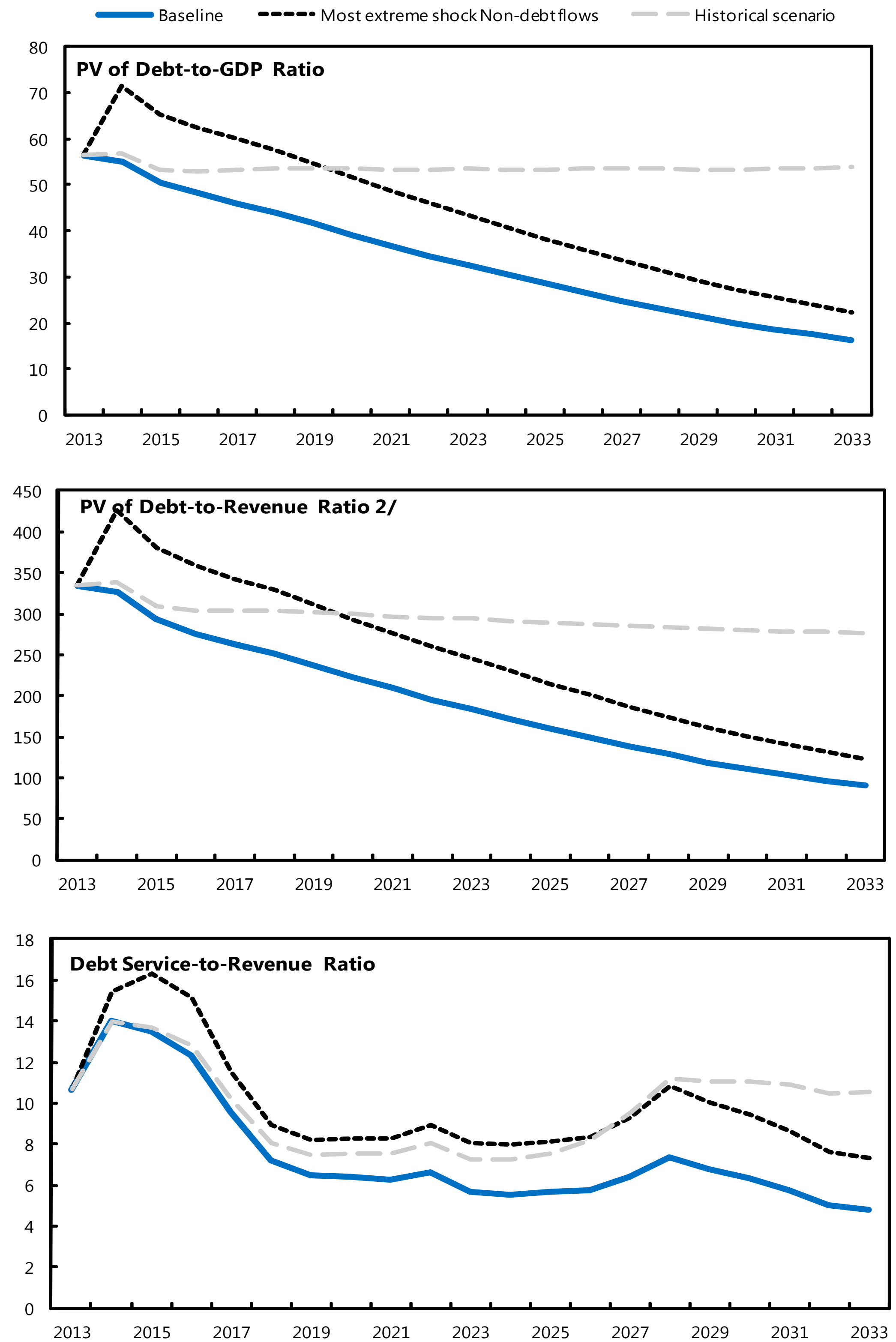
Figure 1. Guinea-Bissau: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2013-2033 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2023. In figure b. it corresponds to a Exports shock; in c. to a Exports shock; in d. to a Exports shock; in e. to a Exports shock and in figure f. to a One-time depreciation shock

Figure 2.Guinea-Bissau: Indicators of Public Debt Under Alternative Scenarios, 2013-2033 1/



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.: External Debt Sustainability Framework, Baseline Scenario, 2010-2033 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average	Standard 6/ Deviation	Projections									
	2010	2011	2012			2013	2014	2015	2016	2017	2018	2013-2018 Average	2023	2033	2019-2033 Average
External debt (nominal) 1/	22.7	23.0	27.5			27.0	26.7	26.5	26.5	26.5	26.3		21.4	13.0	
of which: public and publicly guaranteed (PPG)	22.7	23.0	27.5			27.0	26.7	26.5	26.5	26.5	26.3		21.4	13.0	
Change in external debt	-99.2	0.3	4.5			-0.6	-0.3	-0.2	0.1	0.0	-0.3		-1.0	-0.7	
Identified net debt-creating flows	4.9	-4.6	9.9			4.4	3.8	3.5	2.2	1.7	1.2		0.5	0.8	
Non-interest current account deficit	8.5	1.1	6.5	2.7	3.8	5.5	4.5	4.3	3.0	2.8	2.6	3.8	2.5	2.5	2.4
Deficit in balance of goods and services	15.4	8.2	14.3			14.2	12.6	12.0	11.1	11.7	10.8		8.1	7.9	
Exports	16.5	26.5	17.3			19.9	22.2	22.9	23.3	24.2	26.1		26.6	25.6	
Imports	31.9	34.7	31.6			34.1	34.8	34.8	34.4	35.8	36.9		34.7	33.6	
Net current transfers (negative = inflow)	-6.9	-7.1	-7.9	-9.5	1.8	-8.3	-8.1	-7.6	-8.1	-8.9	-8.3		-8.3	-7.9	-8.2
of which: official	-3.5	-3.5	-3.8			-4.3	-3.4	-1.9	-1.9	-1.9	-1.9		-1.9	-1.6	
Other current account flows (negative = net inflow)	0.0	0.0	0.1			-0.4	0.0	0.0	-0.1	0.0	0.1		2.6	2.5	
Net FDI (negative = inflow)	-3.3	-2.6	-0.7	-1.9	1.0	-0.7	-0.5	-0.5	-0.5	-0.5	-0.6		-1.4	-1.5	-1.3
Endogenous debt dynamics 2/	-0.2	-3.0	4.1			-0.4	-0.2	-0.3	-0.3	-0.5	-0.7		-0.6	-0.2	
Contribution from nominal interest rate	0.1	0.1	0.0			0.5	0.5	0.4	0.4	0.3	0.2		0.3	0.3	
Contribution from real GDP growth	-4.2	-1.0	0.4			-0.9	-0.7	-0.7	-0.8	-0.8	-0.9		-0.8	-0.5	
Contribution from price and exchange rate changes	3.9	-2.0	3.7			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	-104.1	4.9	-5.3			-4.9	-4.1	-3.7	-2.1	-1.8	-1.5		-1.5	-1.5	
of which: exceptional financing	-106.6	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/	...	35.9	24.6			24.2	24.0	23.8	23.7	23.8	23.7		20.1	11.0	
In percent of exports	...	135.6	141.9			121.6	108.1	104.0	101.9	98.4	90.8		75.4	42.7	
PV of PPG external debt	...	35.9	24.6			24.2	24.0	23.8	23.7	23.8	23.7		20.1	11.0	
In percent of exports	...	135.6	141.9			121.6	108.1	104.0	101.9	98.4	90.8		75.4	42.7	
In percent of government revenues	...	...	224.2			200.4	198.2	192.2	189.3	188.9	187.8		156.6	82.5	
Debt service-to-exports ratio (in percent)	8.0	0.6	1.2			3.6	5.2	5.0	4.8	3.2	2.6		3.5	3.3	
PPG debt service-to-exports ratio (in percent)	8.0	0.6	1.2			3.6	5.2	5.0	4.8	3.2	2.6		3.5	3.3	
PPG debt service-to-revenue ratio (in percent)	12.3	1.3	1.9			6.0	9.5	9.2	8.9	6.1	5.4		7.2	6.4	
Total gross financing need (Millions of U.S. dollars)	54.1	-13.6	49.4			48.9	47.1	46.6	35.8	31.2	28.4		27.8	51.3	
Non-interest current account deficit that stabilizes debt ratio	107.7	0.8	2.0			6.1	4.8	4.5	3.0	2.8	2.8		3.4	3.2	
Key macroeconomic assumptions															
Real GDP growth (in percent)	3.5	5.3	-1.5	2.6	1.9	3.5	2.7	2.8	3.1	3.3	3.7	3.2	4.0	4.0	4.0
GDP deflator in US dollar terms (change in percent)	-3.1	9.9	-13.8	5.0	10.3	4.0	0.3	0.2	1.5	1.0	1.0	1.3	1.5	3.0	2.3
Effective interest rate (percent) 5/	0.1	0.3	0.1	0.7	0.5	1.9	1.7	1.7	1.7	1.2	0.8	1.5	1.4	2.0	1.7
Growth of exports of G&S (US dollar terms, in percent)	6.7	85.6	-44.4	13.1	34.0	23.7	14.7	6.5	6.5	8.1	13.2	12.1	6.3	6.6	6.3
Growth of imports of G&S (US dollar terms, in percent)	-0.4	25.7	-22.5	12.4	14.6	16.1	5.1	3.3	3.4	8.5	7.8	7.4	6.1	6.6	5.8
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	21.2	21.2	21.2	26.4	29.4	29.7	24.8	30.8	29.0	30.4
Government revenues (excluding grants, in percent of GDP)	10.8	11.5	11.0			11.8	12.1	12.4	12.5	12.6	12.6		12.8	13.3	13.0
Aid flows (in Millions of US dollars) 7/	90.3	93.0	49.3			44.9	43.2	45.3	51.7	54.9	57.2		73.1	140.2	
of which: Grants	80.9	73.0	49.0			44.9	43.2	45.3	48.3	50.4	52.7		69.1	134.2	
of which: Concessional loans	9.4	20.0	0.2			0.0	0.0	0.0	3.4	4.6	4.5		4.0	6.0	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			5.2	5.0	5.1	5.4	5.4	5.3		5.2	5.1	5.2
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			88.4	84.2	81.3	79.3	83.1	84.4		89.8	90.0	88.7
Memorandum items:															
Nominal GDP (Millions of US dollars)	836.9	968.6	823.2			886.5	912.6	940.8	984.3	1026.9	1074.7	971.0	1408.5	2734.7	1791.8
Nominal dollar GDP growth	0.3	15.7	-15.0			7.7	2.9	3.1	4.6	4.3	4.7	4.6	5.6	7.1	6.4
PV of PPG external debt (in Millions of US dollars)			207.5			213.6	218.0	224.9	234.6	245.0	255.7		283.7	300.8	
(PVt-PVt-1)/GDPt-1 (in percent)						0.7	0.5	0.8	1.0	1.1	1.0	0.9	0.3	0.1	0.2
Gross workers' remittances (Millions of US dollars)	21.7	23.8	23.2			24.6	25.2	26.0	26.8	27.9	29.2		38.3	74.4	
PV of PPG external debt (in percent of GDP + remittances)	...	35.9	23.9			23.5	23.3	23.2	23.1	23.1	23.1		19.5	10.7	
PV of PPG external debt (in percent of exports + remittances)	...	135.6	122.0			106.7	96.1	92.8	91.2	88.4	82.2		68.4	38.6	
Debt service of PPG external debt (in percent of exports + remittances)	...	35.9	1.0			3.2	4.6	4.5	4.3	2.8	2.3		3.2	3.0	

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; capital grants; 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.Guinea-Bissau: 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	24	24	24	24	24	24	20	11
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013-2033 1/	24	21	18	16	15	14	8	4
A2. New public sector loans on less favorable terms in 2013-2033 2	24	24	25	25	26	26	23	15
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	24	24	25	25	25	25	21	11
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	24	29	36	36	36	35	30	15
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	24	25	27	27	27	27	23	12
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	24	24	24	24	24	23	20	11
B5. Combination of B1-B4 using one-half standard deviation shocks	24	26	29	29	29	29	24	13
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	24	34	34	34	34	34	29	16
PV of debt-to-exports ratio								
Baseline	122	108	104	102	98	91	75	43
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013-2033 1/	122	93	77	69	61	52	31	16
A2. New public sector loans on less favorable terms in 2013-2033 2	122	109	108	108	106	100	87	58
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	122	108	104	102	99	91	76	43
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	122	186	306	299	287	263	220	112
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	122	108	104	102	99	91	76	43
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	122	108	103	101	98	90	75	43
B5. Combination of B1-B4 using one-half standard deviation shocks	122	137	162	159	153	141	117	64
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	122	108	104	102	99	91	76	43
PV of debt-to-revenue ratio								
Baseline	200	198	192	189	189	188	157	82
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013-2033 1/	200	171	143	128	117	108	64	31
A2. New public sector loans on less favorable terms in 2013-2033 2	200	200	199	201	204	206	182	113
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	200	201	201	198	197	196	164	86
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	200	236	291	285	282	279	235	111
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	200	209	216	213	213	211	176	93
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	200	198	190	188	187	186	155	82
B5. Combination of B1-B4 using one-half standard deviation shocks	200	214	234	230	229	227	190	96
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	200	282	275	271	271	269	224	118

Table 2.Guinea-Bissau: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2013-2033 (continued)
(In percent)

	Projections							
	2013	2014	2015	2016	2017	2018	2023	2033
Debt service-to-exports ratio								
Baseline	4	5	5	5	3	3	3	3
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013-2033 1/	4	5	4	4	2	2	2	1
A2. New public sector loans on less favorable terms in 2013-2033 2	4	5	5	5	3	3	4	4
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	4	5	5	5	3	3	3	3
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	4	8	10	10	7	6	8	9
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	4	5	5	5	3	3	3	3
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	4	5	5	5	3	3	3	3
B5. Combination of B1-B4 using one-half standard deviation shocks	4	6	7	7	4	4	5	5
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	4	5	5	5	3	3	3	3
Debt service-to-revenue ratio								
Baseline	6	10	9	9	6	5	7	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2013-2033 1/	6	9	8	8	5	4	5	3
A2. New public sector loans on less favorable terms in 2013-2033 2	6	10	9	9	7	6	9	8
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2014-2015	6	10	10	9	6	6	8	7
B2. Export value growth at historical average minus one standard deviation in 2014-2015 3/	6	10	10	10	7	6	8	9
B3. US dollar GDP deflator at historical average minus one standard deviation in 2014-2015	6	10	10	10	7	6	8	7
B4. Net non-debt creating flows at historical average minus one standard deviation in 2014-2015 4/	6	10	9	9	6	5	7	6
B5. Combination of B1-B4 using one-half standard deviation shocks	6	10	10	10	7	6	8	8
B6. One-time 30 percent nominal depreciation relative to the baseline in 2014 5/	6	14	13	13	9	8	10	9
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	33	33	33	33	33	33	33	33

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.Guinea-Bissau: Public Sector Debt Sustainability Framework, Baseline Scenario, 2010-33
(In percent of GDP, unless otherwise indicated)

	Actual						Standard	Estimate	Projections								2019-33
	2008	2009	2010	2011	2012	Average 5/	Deviation6/	2013	2014	2015	2016	2017	2018	Average	2023	2033	Average
Public sector debt 1/	167.5	157.9	52.6	49.3	58.4			59.2	57.6	53.1	50.8	48.7	46.6		34.0	18.3	
of which: foreign-currency denominated	132.7	121.9	22.7	23.0	27.5			27.0	26.7	26.5	26.5	26.5	26.3		21.4	13.0	
Change in public sector debt	-11.0	-9.6	-105.3	-3.3	9.1			0.8	-1.5	-4.5	-2.3	-2.1	-2.1		-2.1	-1.1	
Identified debt-creating flows	-12.1	-18.3	-100.3	-2.7	7.4			-2.4	-0.3	0.5	-1.1	-1.0	-1.2		-1.3	-1.1	
Primary deficit	0.8	-3.0	1.8	1.9	2.8	3.5	3.5	-0.8	0.7	0.5	0.5	0.5	0.6	0.3	0.3	0.0	0.18
Revenue and grants	23.7	24.8	20.4	19.1	16.9			16.9	16.8	17.2	17.4	17.5	17.5		17.7	18.2	
of which: grants	14.5	15.8	9.7	7.5	6.0			5.1	4.7	4.8	4.9	4.9	4.9		4.9	4.9	
Primary (noninterest) expenditure	24.5	21.8	22.3	21.0	19.7			16.1	17.6	17.7	17.9	18.0	18.1		18.0	18.1	
Automatic debt dynamics	-11.7	-13.9	4.5	-4.7	4.6			-1.6	-1.1	...	-1.6	-1.5	-1.7		-1.6	-1.0	
Contribution from interest rate/growth differential	-20.4	-5.3	-7.6	-4.7	4.6			-1.5	-1.2	-1.2	-1.6	-1.5	-1.7		-1.6	-1.0	
of which: contribution from average real interest rate	-14.8	-0.4	-2.3	-2.1	3.9			0.5	0.3	0.4	0.0	0.1	0.0		-0.2	-0.3	
of which: contribution from real GDP growth	-5.6	-4.9	-5.3	-2.7	0.7			-2.0	-1.5	-1.6	-1.6	-1.6	-1.7		-1.4	-0.7	
Contribution from real exchange rate depreciation	8.7	-8.6	12.1	0.1	0.0			-0.1	0.2	0.0	0.0	0.0	0.0	...	...		
Other identified debt-creating flows	-1.3	-1.4	-106.6	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		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		0.0	0.0	
Debt relief (HIPC and other)	-1.3	-1.4	-106.6	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		0.0	0.0	
Residual, including asset changes	1.1	8.7	-5.0	-0.6	1.7			3.2	-1.2	-5.0	-1.2	-1.1	-0.9		-0.9	0.0	
Other Sustainability Indicators																	
PV of public sector debt	...	...	...	...	55.4			56.4	55.0	50.5	48.0	45.9	44.1		32.6	16.3	
of which: foreign-currency denominated	...	...	...	...	24.6			24.2	24.0	23.8	23.7	23.8	23.7		20.1	11.0	
of which: external	...	...	...	...	24.6			24.2	24.0	23.8	23.7	23.8	23.7		20.1	11.0	
PV of contingent liabilities (not included in public sector debt)	...	...	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	19.5	15.3	16.2	9.8	10.8			7.7	9.2	8.4	7.6	6.7	5.9		3.3	0.8	
PV of public sector debt-to-revenue ratio (in percent)	...	...	...	...	505.8			477.5	454.6	407.3	383.0	365.2	349.1		254.3	122.9	
of which: external 3/	...	...	...	...	224.2			200.4	198.2	192.2	189.3	188.9	187.8		156.6	82.5	
Debt service-to-revenue and grants ratio (in percent) 4/	22.4	17.3	7.8	2.0	4.2			10.7	14.0	13.5	12.4	9.5	7.2		5.7	4.8	
Debt service-to-revenue ratio (in percent) 4/	57.8	47.6	14.8	3.3	6.5			15.2	19.5	18.7	17.2	13.2	10.0		7.8	6.5	
Primary deficit that stabilizes the debt-to-GDP ratio			107.1	5.2	-6.3			-1.6	2.2	5.0	2.8	2.7	2.6		2.4	1.0	
Key macroeconomic and fiscal assumptions																	
Real GDP growth (in percent)	3.2	3.0	3.5	5.3	-1.5	2.6	1.9	3.5	2.7	2.8	3.1	3.3	3.7	3.2	4.0	4.0	4.0
Average nominal interest rate on forex debt (in percent)	1.2	1.0	0.1	0.3	0.1	0.7	0.5	1.9	1.7	1.7	1.7	1.2	0.8	1.5	1.4	2.0	1.6
Average real interest rate on domestic debt (in percent)	-9.3	-0.9	-1.2	-4.1	8.2	-0.7	5.4	0.7	0.4	0.5	-0.1	0.3	0.2	0.3	-1.2	-2.8	-2.0
Real exchange rate depreciation (in percent, + indicates depreciation)	7.0	-6.7	10.4	0.3	-0.1	-2.1	9.9	-0.3	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	10.5	1.1	1.7	4.8	-6.7	1.5	5.3	0.7	1.1	0.9	1.5	1.0	1.0	1.0	1.5	3.0	2.3
Growth of real primary spending (deflated by GDP deflator, in percent)	0.0	-0.1	0.1	0.0	-0.1	0.1	0.2	-0.2	0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grant element of new external borrowing (in percent)	...	...	...	...	...	...	...	21.2	21.2	21.2	26.4	29.4	29.7	24.8	30.8	29.0	...

Sources: Country authorities; and staff estimates and projections.

1/ [Indicate coverage of public sector, e.g., general government or nonfinancial public sector. Also whether net or gross debt is used.]

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.Guinea-Bissau: 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	56	55	50	48	46	44	33	16
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	56	57	53	53	53	54	53	54
A2. Primary balance is unchanged from 2013	56	54	47	44	41	39	24	6
A3. Permanently lower GDP growth 1/	56	55	50	48	46	44	35	23
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2014-2015	56	56	52	50	48	46	36	21
B2. Primary balance is at historical average minus one standard deviations in 2014-2015	56	59	58	55	53	51	39	20
B3. Combination of B1-B2 using one half standard deviation shocks	56	59	56	54	52	50	39	22
B4. One-time 30 percent real depreciation in 2014	56	65	59	56	54	52	39	19
B5. 20 percent of GDP increase in other debt-creating flows in 2014	56	72	65	62	60	58	44	22
PV of Debt-to-Revenue Ratio 2/								
Baseline	334	327	293	275	263	251	184	90
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	334	338	309	303	303	304	294	277
A2. Primary balance is unchanged from 2013	334	321	275	253	236	220	135	35
A3. Permanently lower GDP growth 1/	334	328	288	272	261	252	195	126
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2014-2015	334	332	297	281	270	261	201	116
B2. Primary balance is at historical average minus one standard deviations in 2014-2015	334	352	336	316	303	291	219	110
B3. Combination of B1-B2 using one half standard deviation shocks	334	347	326	308	296	285	218	118
B4. One-time 30 percent real depreciation in 2014	334	389	344	323	308	295	219	106
B5. 20 percent of GDP increase in other debt-creating flows in 2014	334	426	380	358	343	329	246	123
Debt Service-to-Revenue Ratio 2/								
Baseline	11	14	13	12	10	7	6	5
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	11	14	14	13	10	8	7	11
A2. Primary balance is unchanged from 2013	11	14	13	12	9	7	5	3
A3. Permanently lower GDP growth 1/	11	14	14	12	10	7	6	6
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2014-2015	11	14	14	13	10	8	6	6
B2. Primary balance is at historical average minus one standard deviations in 2014-2015	11	14	14	13	10	8	6	6
B3. Combination of B1-B2 using one half standard deviation shocks	11	14	14	13	10	8	6	6
B4. One-time 30 percent real depreciation in 2014	11	15	16	15	11	9	8	7
B5. 20 percent of GDP increase in other debt-creating flows in 2014	11	14	14	13	10	8	6	6

Sources: Country authorities; and staff estimates and projections.

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

2/ Revenues are defined inclusive of grants.