INTERNATIONAL MONETARY FUND

THE GAMBIA

Update on Joint IMF/IDA Debt Sustainability Analysis[1]

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The updated Debt Sustainability Analysis (DSA) confirms that The Gambia remains at high risk of debt distress after receiving HIPC and MDRI debt relief. In particular, the NPV of external debt-to-exports ratio remains above its threshold of 100 percent and standard stress tests show that The Gambia remains vulnerable to shocks to GDP and the exchange rate. The fiscal DSA shows public debt declining due to recent fiscal consolidation.

I. BACKGROUND

1. This debt sustainability analysis (DSA) updates the last DSA presented to the Fund Board in December 2007 at The Gambia's completion point. This update was prepared by IMF staff and reviewed by staff of the World Bank. The DSA is based on debt and debt service data reconciled for the completion point under the HIPC/MDRI initiative. These data were updated to reflect newly available debt data and a revised macroeconomic framework resulting from the 2008 Article IV consultation.

2. **The Gambia reached the completion point under the enhanced HIPC Initiative and qualified for debt relief under the MDRI on December 19, 2007**. At the end of 2006, prior to completion point, the stock of nominal external public debt was US$676.7 million (133.6 percent of GDP). Multilateral creditors accounted for 84 percent of this debt, with IDA as the largest creditor (39 percent of total outstanding debt). At end-2007, post-completion point, the stock of external public debt fell to US$299.4 million (46.5 percent of GDP). In January 2008, Paris Club creditors agreed to cancel outstanding claims (US$13 million in NPV terms at end-2006) on The Gambia. Bilateral agreements have been signed with Paris Club creditors France and Norway and agreement has been reached with non-Paris Club creditor Kuwait. Agreements on the delivery of debt relief are still pending with Paris Club creditors Austria, the Netherlands, and the EU-IDA and with non-Paris Club creditors the Saudi Fund for Development, Taiwan Province of China, Libya, China, and

[1] The last DSA was presented to the Fund Executive Board on December 19, 2007 (IMF Country Report No. 08/109, Appendix I) and to the World Bank Executive Board on December 20, 2007 (Enhanced HIPC Completion Point Document and MDRI, Report No. 41413-GM).

India. HIPC debt relief has been or is in the process of being delivered by all multilateral creditors with the exception of ECOWAS, which to date has not participated in the HIPC Initiative.[2]

Box 1: Baseline Macroeconomic Assumptions Underlying the DSA

The medium-term assumptions in the baseline scenario are consistent with the IMF PRGF supported program. Key macroeconomic assumptions include continued robust growth, prudent fiscal and monetary policies, investment in infrastructure and tourism, and a scaling up of donor assistance.

Real GDP growth averaged 6½ percent over the past five years and is projected to remain at 5½ to 6 percent out to 2013. The main drivers of growth are expected to be tourism, construction, telecommunications, and banking. Inflation is projected to decline gradually from 6 percent in 2008 to 4 percent over the medium-term. This assumes the authorities maintain tight monetary policy to adjust to high food and energy costs over the medium to long-term.

Growth of exports of goods and services is expected to be driven by tourism and agricultural exports. Re-exports are expected to decline as a share of GDP as tariff harmonization and improvements in neighboring countries erode The Gambia's competitive advantage. Export growth is expected to average 6¼ percent from 2008–2013 while import growth is expected to average 9¼ percent over the same period. Official transfers are expected to gradually recover to 3–4 percent of GDP over the medium-term. FDI is expected to remain strong while official loans fall from a peak of 4½ percent of GDP in 2009 to about 1–2 percent of GDP over the medium- to long-term. The non-interest current account deficit is projected to gradually declines from a peak of 14 percent of GDP in 2008 to 11 percent of GDP in 2012 and 6¼ percent of GDP in 2027.

The primary fiscal balance is projected to decline from a surplus of 5½ percent of GDP in 2007 to close to zero in 2027. The surplus is expected to drop in the near term due to a recovery in capital expenditures. Over the long-term, tax revenues are projected to remain close to 20 percent of GDP while poverty reducing expenditures are boosted in line with the fall in debt service payments. Donor support, including program and project assistance is expected to remain robust over the medium-term. Grant financing is expected to remain in the region of 3–4 percent of GDP over the medium-term before falling to an average of 2 percent over 2013–27. The grant element of new external borrowing is projected to remain at 45 percent.

[2] The debt relief agreement with the Islamic Development Bank has been negotiated and is in the process of being signed.

II. External Debt Sustainability

A. Baseline

3. **Under the baseline scenario, all but one of the NPV of debt indicators will remain below their corresponding thresholds for 2008–27 as a result of the HIPC/MDRI relief (Table 1 and Figure 1).**[3] The NPV of debt-to-GDP ratio falls to 22 percent in 2008—declining 3 percentage points from the predicted level at completion point as a result of delayed loan disbursements. New borrowing associated with increased investment raises the NPV of debt-to-GDP through 2012 before it declines as investment levels off and growth is sustained. The NPV of debt-to-revenue and the debt service ratios fall considerably beneath their respective thresholds. While they too increase through 2012, they remain at comfortable levels throughout the projection period.

4. **The NPV of debt-to-exports ratio breaches the debt-burden threshold for a protracted period.** The NPV of debt-to-export ratio declined significantly to 114 percent in 2007 following full impact of HIPC and MDRI, but this is still above the indicative policy-dependent threshold of 100 percent. Furthermore, this ratio increases through 2012 due to new borrowing, and it stays above the threshold for a protracted period. It gradually gravitates towards the threshold over the medium term, due to sustained growth in receipts from tourism, re-export services, and agricultural exports.

Policy Dependent Debt Burden Thresholds under the Debt Sustainability Framework
(Applying to external public debt)

	Indicative thresholds 1/	2007
NPV of external debt		
In percent of GDP	30	24
In percent of exports	100	114
In percent of revenues	200	111
Debt service		
In percent of exports	15	20
In percent of revenues	25	19

1/ The latest World Bank Country Policy and Institutional Assessment (CPIA) rates The Gambia a "poor performer".

[3] As outlined in the HIPC completion point DSA, outstanding debt at end-2007 before completion point is estimated at NPV US$439 million. Following completion point, HIPC assistance reduces the NPV of existing debt by US$92 million while MDRI results in an additional US$182.1 million reduction.

B. Alternative Scenarios and Stress Tests

5. **Alternative scenarios reveal that external debt indicators are vulnerable to substantial deterioration under a range of scenarios (Table 2, Figure 1)**.

- Under the "less favorable terms" scenario, the NPV of debt-to-GDP deteriorates above its threshold emphasizing the need for the authorities to refrain from non-concessional borrowing. With the exception of the debt service indicators, which remain beneath their thresholds, the debt stock indicators all deteriorate significantly under this scenario.
- If the US dollar GDP deflator is below its historical average, the debt-to-GDP, debt-to-exports, and debt-to-revenues ratios all deteriorate significantly.
- A combination of adverse economic shocks (i.e. lower growth and exports) would also result in a significant rise in debt ratios.
- Table 2 (line B6) demonstrates the deterioration in the debt-to-GDP ratio as a result of an exchange rate depreciation. In particular, a one-time 30 percent depreciation results in the debt-to-GDP ratio breaching the 30 percent threshold for much of the projection period. This scenario serves to illustrate the importance of recent exchange rate appreciation on the baseline debt-to-GDP ratio. If this appreciation is not permanent, debt-to-GDP will rise above the indicative threshold in the near term despite HIPC and MDRI relief.

III. Public Debt Sustainability

C. Baseline

6. **Domestic debt is expected to fall from 30.7 percent of GDP at the end of 2007 to 13.8 percent of GDP in 2012 and to 9.5 percent of GDP in 2027, reflecting sustained good fiscal performance.** Recently fiscal performance has been aided by reforms to tax administration that are expected to maintain revenues close to 21 percent of GDP. Relatively restrained fiscal policy, as programmed for the medium term, should help lower domestic interest rates. Over the long term, the delivery of external debt relief and lower domestic interest rates should provide fiscal space to increase basic primary expenditures[4] and offset a decline in externally-financed projects as a percent of GDP.

7. **The NPV of public debt is projected to decline from about 56.0 percent of GDP in 2007 to 42.3 percent in 2012 and to 29.9 percent in 2027 (Table 3 and Figure 2).** The biggest factor in the near term is a fall in the domestic debt. As a ratio of domestic revenues,

[4] Defined as expenditures excluding interest payments and externally-financed projects.

the NPV of public debt is projected to fall from about 257 percent in 2007 to 141 percent at the end of the projection period.

D. Alternative Scenarios and Stress Tests

8. **Stress tests indicate that public debt ratios are sensitive to a depreciation in the near term and a shock to GDP growth in the long term, but not to most other adverse shocks (Table 4 and Figure 2).**

- Under a permanently lower output growth rate (4.3 percent instead of 5 percent), the NPV of total debt-to-GDP ratio would decline from 56 percent in 2007 to 48 percent in 2027, as opposed to declining to 30 percent under the baseline scenario. Similarly, the NPV of debt-to-revenues would be 219 percent in 2027 compared to 136 under the baseline and the debt service-to-revenue ratio would increase from 11 to 19 percent of GDP.

- With a one-time 30 percent depreciation in 2008, the debt-to-GDP ratio would rise from 50 percent to 63 percent and the debt-to-revenue ratio would rise from 217 percent to 271 percent in 2008 compared with the baseline. However, the effects would be mitigated over time and these ratios would not be significantly worse than under the baseline in 2027.

- In contrast, the outlook for public debt is not sensitive to shocks to the primary balance, a combination of shocks to growth and the primary balance, or a ten percent increase in other debt-creating flows. Under none of these scenarios does the debt-to-GDP or debt-to-revenue ratio rise much above the baseline in 2008–2009 or out to 2027.

- Because the primary balance was close to balance in 2007, the alternative scenario based on the primary balance being unchanged would result in a rapid decline in The Gambia's public debt ratios with all debt eliminated by 2020.

IV. Conclusion

9. **The Gambia is at high risk of debt distress based on external debt burden indicators.** The Gambia's debt situation has improved since the last DSA due to an improvement in the overall fiscal balance in 2007 and a decline in new borrowing. But given continuing risks, it will be important for the authorities' to finalize and implement the planned national debt strategy as soon as possible. Staff recommend that new borrowing be on highly concessional terms and that the authorities exercise restraint in contracting new loans. The major risks to debt sustainability include lower than expected economic and/or export growth, higher than expected new borrowing, or a deterioration in fiscal performance.

Table 1. The Gambia: External Debt Sustainability Framework, HIPC and MDRI Scenario, 2007-2027 1/
(In percent of GDP, unless otherwise indicated)

	Actual											Historical Average 6/	Standard Deviation 6/	Actual	Projections								
	1996	1997	1998	1999	2000	2001	2002	2003	2004	2005	2006			2007	2008	2009	2010	2011	2012	2007-12 Average	2017	2027	2013-27 Average
External debt (nominal) 1/	...	101.8	102.5	103.0	110.6	117.3	143.0	157.3	146.5	134.7	133.6			46.5	41.8	43.1	44.3	44.3	43.8		39.2	30.4	
o/w public and publicly guaranteed (PPG)	...	101.8	102.5	103.0	110.6	117.3	143.0	157.3	146.5	134.7	133.6			46.5	41.8	43.1	44.3	44.3	43.8		39.2	30.4	
Change in external debt	...	...	0.7	0.5	7.6	6.7	25.7	14.3	-10.8	-11.8	-1.1			-87.0	-4.7	1.3	1.2	0.0	-0.5		-0.8	-0.9	
Identified net debt-creating flows	...	...	-4.0	0.1	2.1	0.9	15.7	8.3	-26.8	-17.3	-15.2			-6.8	3.2	2.8	2.0	1.8	1.6		1.4	1.1	
Non-interest current account deficit	...	-0.3	1.0	1.5	2.0	1.4	1.6	3.4	4.1	13.2	9.8	3.8	4.3	11.0	13.9	12.7	11.8	11.4	10.8		9.1	6.3	8.7
Deficit in balance of goods and services	...	5.7	7.4	5.8	8.2	5.2	8.4	7.5	21.0	22.7	17.3			16.4	19.0	19.3	19.3	18.8	18.4		15.6	10.4	
Exports	...	27.0	30.1	28.0	26.8	25.8	30.4	31.8	31.7	28.4	30.6			21.1	18.9	18.6	18.5	18.4	18.3		18.2	18.8	
Imports	...	32.7	37.5	33.8	35.0	31.0	38.8	39.3	52.7	51.1	47.9			37.5	37.9	37.9	37.9	37.2	36.7		33.8	29.2	
Net current transfers (negative = inflow)	...	-7.7	-9.3	-7.8	-9.9	-8.3	-11.6	-9.6	-23.6	-17.1	-15.2	-12.0	5.1	-11.2	-10.5	-11.3	-11.7	-11.1	-10.7		-9.0	-5.9	-8.1
o/w official	...	...	...	...	-7.4	-7.5	-10.6	-8.5	-8.5	-5.1	-3.2			-1.2	-2.0	-3.1	-3.7	-3.5	-3.3		-2.6	-0.9	
Other current account flows (negative = net inflow)	...	1.6	2.9	3.5	3.7	4.6	4.7	5.4	6.7	7.5	7.8			5.8	5.5	4.7	4.1	3.7	3.2		2.5	1.9	
Net FDI (negative = inflow)	...	-3.8	-3.7	-0.1	-3.8	-2.4	-2.5	-3.6	-14.1	-13.3	-14.6	-7.8	5.5	-12.5	-9.0	-8.0	-7.8	-7.6	-7.4		-6.2	-4.2	-5.6
Endogenous debt dynamics 2/	...	...	-1.3	-1.3	3.9	2.0	16.5	8.5	-16.8	-17.2	-10.4			-5.3	-1.7	-1.9	-2.0	-2.0	-1.8		-1.5	-1.0	
Contribution from nominal interest rate	...	...	1.4	1.4	1.2	1.2	1.2	1.7	2.0	1.9	1.7			1.4	0.4	0.4	0.4	0.4	0.4		0.4	0.4	
Contribution from real GDP growth	...	...	-6.4	-6.4	-5.8	-6.4	4.3	-10.3	-9.7	-6.4	-8.0			-6.8	-2.1	-2.3	-2.4	-2.5	-2.3		-1.9	-1.5	
Contribution from price and exchange rate changes	...	...	3.8	3.8	8.5	7.2	11.0	17.1	-9.1	-12.7	-4.1			…	…	…	…	…	…		…	…	
Residual (3-4) 3/	0.0	...	4.7	0.4	5.5	5.8	10.0	6.0	16.0	5.5	14.0			-80.2	-7.9	-1.5	-0.8	-1.8	-2.1		-2.2	-2.0	
o/w exceptional financing	...	...	0.0	0.0	0.0	0.0	-0.1	0.0	-0.4	-0.3	-0.3			-0.3	-0.8	-0.7	-0.6	-0.4	-0.4		-0.3	-0.1	
NPV of external debt 4/	...	...	...	...	...	...	...	...	...	...	31.2			24.1	22.2	23.5	24.7	25.1	25.2		24.0	20.0	
In percent of exports	...	...	...	...	...	...	...	...	...	...	101.9			113.9	117.6	126.4	133.3	136.8	138.0		131.3	106.4	
NPV of PPG external debt	...	...	...	...	...	...	...	...	...	...	31.2			24.1	22.2	23.5	24.7	25.1	25.2		24.0	20.0	
In percent of exports	...	...	...	...	...	...	...	...	...	...	101.9			113.9	117.6	126.4	133.3	136.8	138.0		131.3	106.4	
In percent of government revenues	...	...	...	...	...	...	...	...	...	...	147.1			111.0	104.6	111.1	116.9	119.2	119.9		116.5	96.3	
Debt service-to-exports ratio (in percent)	...	18.0	16.0	...	19.6	16.8	23.9	11.1	17.7	17.7	16.5			19.5	8.0	7.8	7.2	8.2	8.5		9.2	8.4	
PPG debt service-to-exports ratio (in percent)	...	18.0	16.0	...	19.6	16.8	23.9	11.1	17.7	17.7	16.5			19.5	8.0	7.8	7.2	8.2	8.5		9.2	8.4	
PPG debt service-to-revenue ratio (in percent)	...	25.4	25.9	...	28.4	28.8	44.5	22.4	26.9	25.5	23.8			19.0	7.1	6.9	6.3	7.2	7.4		8.2	7.6	
Total gross financing need (millions of U.S. dollars)	...	...	...	...	14.5	13.9	23.6	11.7	-17.6	22.8	1.2			16.6	50.1	51.8	48.8	53.0	53.7		69.0	111.5	
Non-interest current account deficit that stabilizes debt ratio	...	...	0.3	0.9	-5.7	-5.3	-24.1	-10.9	14.9	25.0	11.0			98.1	18.6	11.4	10.6	11.4	11.3		9.8	7.3	
Key macroeconomic assumptions																							
Real GDP growth (in percent)	...	...	6.5	6.4	5.5	5.8	-3.2	6.9	7.0	5.1	6.5	5.2	3.2	6.4	5.5	6.0	6.0	6.0	5.5	5.9	5.0	5.0	5.0
GDP deflator in US dollar terms (change in percent)	...	...	-3.6	-3.5	-7.7	-6.1	-8.6	-10.7	6.1	9.5	3.1	-2.4	7.0	19.3	14.8	2.0	2.2	2.3	2.2	7.2	2.0	2.0	2.0
Effective interest rate (percent) 5/	...	...	1.4	1.4	1.1	1.1	0.9	1.1	1.5	1.5	1.4	1.3	0.2	1.4	1.1	1.1	1.0	1.0	1.0	1.1	1.0	1.5	1.2
Growth of exports of G&S (US dollar terms, in percent)	...	...	14.5	-4.2	-7.0	-4.3	4.3	-0.3	13.3	2.9	18.4	4.2	9.2	-12.3	8.1	6.9	7.9	7.5	7.3	4.2	7.3	7.4	7.3
Growth of imports of G&S (US dollar terms, in percent)	...	...	17.6	-7.4	0.9	-12.0	10.8	-3.3	52.3	11.6	2.9	8.1	19.1	-0.6	22.3	8.4	8.2	6.5	6.3	8.5	5.0	5.5	5.5
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	...	...	...	...	...	...	...	...	42.4	45.1	42.6	44.5	45.7	45.6	44.3	45.0	45.0	45.0
Aid flows (in millions of US dollars) 7/	0.0	19.7	22.4	18.5	25.5	33.3	51.4	35.1	50.6	41.5	44.2			31.4	51.7	73.0	86.0	79.7	77.4		85.3	92.6	
o/w Grants	...	8.6	5.2	5.4	10.5	16.5	12.4	19.3	18.2	7.7	0.3			7.8	15.8	26.1	34.2	34.4	35.6		39.1	26.1	
o/w Concessional loans	0.0	14.2	...	...	...	...	...	...	32.3	33.8	43.9			23.6	35.9	46.8	51.8	45.3	41.8		46.2	66.5	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...	...	...	...	...	...	...	...	...			2.8	4.1	5.5	6.3	5.6	5.1		4.0	1.9	3.4
Grant-equivalent financing (in percent of external financing) 8/	...	...	...	...	...	...	...	...	...	...	...			56.7	61.9	63.2	66.6	69.1	70.6		70.2	60.5	67.9
Memorandum items:																							
Nominal GDP (millions of US dollars)	...	409.8	420.8	431.9	420.9	417.9	369.7	353.0	401.0	461.3	506.7			643.5	779.3	843.0	913.2	990.7	1068.5		1513.3	2993.3	
(NPVt-NPVt-1)/GDPt-1 (in percent)														-0.6	2.8	3.3	3.2	2.6	2.1	2.2	1.5	0.9	1.3

Source: Staff simulations.

1/ Includes both public and private sector external debt.
2/ Derived as $[r - g - \rho(1+g)]/(1+g+\rho+g\rho)$ 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 NPV 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 NPV of new debt).

Table 2. The Gambia: Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2007-27
including HIPC and MDRI (In percent)

	Actual	Projections					
	2007	2008	2009	2010	2011	2012	**2017**	2027
NPV of debt-to-GDP ratio								
Baseline	24	22	24	25	25	25	**24**	20
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2008-27 1/	24	22	21	20	18	16	**6**	-5
A2. New public sector loans on less favorable terms in 2008-27 2/	24	23	26	28	29	30	**32**	30
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2008-09	24	23	25	27	27	27	**26**	22
B2. Export value growth at historical average minus one standard deviation in 2008-09 3/	24	23	27	28	28	28	**26**	21
B3. US dollar GDP deflator at historical average minus one standard deviation in 2008-09	24	28	34	35	36	36	**34**	29
B4. Net non-debt creating flows at historical average minus one standard deviation in 2008-09 4/	24	29	36	37	37	36	**32**	23
B5. Combination of B1-B4 using one-half standard deviation shocks	24	30	41	42	42	42	**38**	29
B6. One-time 30 percent nominal depreciation relative to the baseline in 2008 5/	24	30	32	33	34	34	**32**	27
NPV of debt-to-exports ratio								
Baseline	114	118	126	133	137	138	**131**	106
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007-26 1/	114	117	112	108	100	90	**34**	-25
A2. New public sector loans on less favorable terms in 2007-26 2/	114	123	137	151	159	164	**173**	160
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2008-09	114	118	126	133	137	138	**131**	106
B2. Export value growth at historical average minus one standard deviation in 2008-09 3/	114	141	186	194	197	198	**184**	142
B3. US dollar GDP deflator at historical average minus one standard deviation in 2008-09	114	118	126	133	137	138	**131**	106
B4. Net non-debt creating flows at historical average minus one standard deviation in 2008-09 4/	114	152	193	198	199	199	**174**	121
B5. Combination of B1-B4 using one-half standard deviation shocks	114	141	184	191	194	194	**177**	132
B6. One-time 30 percent nominal depreciation relative to the baseline in 2008 5/	114	118	126	133	137	138	**131**	106
NPV of debt-to-revenue ratio								
Baseline	111	105	111	117	119	120	**117**	96
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007-26 1/	111	104	99	94	87	78	**30**	-23
A2. New public sector loans on less favorable terms in 2007-26 2/	111	109	121	132	139	143	**154**	145
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2008-09	111	108	120	126	128	129	**125**	104
B2. Export value growth at historical average minus one standard deviation in 2008-09 3/	111	111	127	133	134	135	**127**	100
B3. US dollar GDP deflator at historical average minus one standard deviation in 2008-09	111	133	159	167	170	171	**166**	137
B4. Net non-debt creating flows at historical average minus one standard deviation in 2008-09 4/	111	135	170	173	174	173	**155**	110
B5. Combination of B1-B4 using one-half standard deviation shocks	111	143	192	198	200	200	**186**	142
B6. One-time 30 percent nominal depreciation relative to the baseline in 2008 5/	111	142	150	158	161	162	**158**	130

Table 2. The Gambia: Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2007-27 (continued)
with HIPC and MDRI (In percent)

				Debt service-to-exports ratio				
Baseline	19	8	8	7	8	9	**9**	8
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2008-27 1/	20	10	9	10	10	11	**7**	0
A2. New public sector loans on less favorable terms in 2008-27 2/	20	8	8	9	10	10	**11**	11
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2008-09	20	8	8	8	8	9	**8**	7
B2. Export value growth at historical average minus one standard deviation in 2008-09 3/	20	9	10	11	11	11	**12**	10
B3. US dollar GDP deflator at historical average minus one standard deviation in 2008-09	20	8	8	8	8	9	**8**	7
B4. Net non-debt creating flows at historical average minus one standard deviation in 2008-09 4/	20	8	8	9	9	10	**12**	9
B5. Combination of B1-B4 using one-half standard deviation shocks	20	9	9	10	10	11	**12**	9
B6. One-time 30 percent nominal depreciation relative to the baseline in 2008 5/	20	8	8	8	8	9	**8**	7
				Debt service-to-revenue ratio				
Baseline	19	7	7	6	7	7	**8**	8
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2008-27 1/	20	9	8	9	9	10	**6**	0
A2. New public sector loans on less favorable terms in 2008-27 2/	20	7	7	8	8	9	**10**	10
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2008-09	20	7	7	8	8	8	**8**	7
B2. Export value growth at historical average minus one standard deviation in 2008-09 3/	20	7	7	7	7	8	**8**	7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2008-09	20	9	10	10	10	11	**11**	9
B4. Net non-debt creating flows at historical average minus one standard deviation in 2008-09 4/	20	7	7	8	8	8	**11**	8
B5. Combination of B1-B4 using one-half standard deviation shocks	20	9	10	10	10	11	**12**	10
B6. One-time 30 percent nominal depreciation relative to the baseline in 2008 5/	20	10	9	10	10	10	**10**	9
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	45	45	45	45	45	45	**45**	45

Source: Staff projections and simulations.

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.The Gambia: Public Sector Debt Sustainability Framework, Baseline Scenario, 2001-2027

(In percent of GDP, unless otherwise indicated)

	Actual								Actual	Projections								
	2001	2002	2003	2004	2005	2006	Historical Average 5/	Standard Deviation 5/	2007	2008	2009	2010	2011	2012	2007-12 Average	2017	2027	2013-27 Average
Public sector debt 1/	155.4	179.6	185.2	179.4	170.2	167.8			77.2	67.5	65.5	63.4	60.3	57.6		50.3	39.9	
o/w foreign-currency denominated	117.3	143.0	157.3	146.5	134.7	133.3			46.5	41.8	43.1	44.3	44.3	43.8		39.2	30.4	
Change in public sector debt	13.3	24.2	5.6	-5.8	-9.2	-2.3			-90.6	-9.7	-2.0	-2.1	-3.1	-2.7		-0.8	-1.2	
Identified debt-creating flows	-14.0	27.4	-8.5	-32.1	-14.4	-5.0			-43.5	-6.9	-5.2	-5.0	-5.1	-4.6		-1.5	-2.4	
Primary deficit	9.4	1.5	0.0	-1.3	0.3	0.2	0.6	3.4	-5.7	-1.2	0.5	0.6	-0.2	0.0	-1.0	1.7	-0.2	0.8
Revenue and grants	16.1	19.1	17.0	25.5	21.4	22.5			22.9	23.1	24.2	24.8	24.5	24.3		23.7	22.0	
of which : grants	1.0	2.8	1.3	3.3	1.5	1.3			1.1	1.8	3.0	3.7	3.4	3.3		2.6	0.9	
Primary (noninterest) expenditure	25.6	20.6	17.0	24.1	21.7	22.6			17.1	22.0	24.7	25.4	24.3	24.3		25.4	21.8	
Automatic debt dynamics	-23.4	28.3	-7.1	-29.3	-14.0	-6.7			-36.9	-3.0	-3.2	-3.4	-3.2	-3.0		-2.2	-1.7	
Contribution from interest rate/growth differential	-24.1	3.5	-14.3	-10.6	-4.6	-5.9			-8.4	-2.6	-2.9	-3.1	-3.1	-2.8		-2.2	-1.7	
of which : contribution from average real interest rate	-1.3	-1.7	-2.8	1.5	4.2	4.6			1.6	1.4	0.9	0.6	0.4	0.3		0.2	0.3	
of which : contribution from real GDP growth	-7.7	5.2	-11.5	-12.2	-8.7	-10.5			-10.0	-4.0	-3.8	-3.7	-3.6	-3.1		-2.4	-2.0	
Contribution from real exchange rate depreciation	0.7	24.9	7.2	-18.7	-9.4	-0.8			-28.6	-0.4	-0.3	-0.2	-0.1	-0.1		...	...	
Other identified debt-creating flows	0.0	-2.5	-1.4	-1.5	-0.7	1.5			-0.8	-2.7	-2.4	-2.3	-1.8	-1.6		-1.0	-0.4	
Privatization receipts (negative)	0.0	0.0	0.0	0.0	-0.4	0.0			-0.1	-0.1	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	1.5			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	-1.0	-2.0	-1.1	-1.3	-0.1	0.0			-0.6	-2.6	-2.4	-2.3	-1.8	-1.6		-1.0	-0.4	
Other (specify, e.g. bank recapitalization)	1.0	-0.4	-0.2	-0.2	-0.2	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	27.3	-3.2	14.1	26.3	5.2	2.7			-47.2	-2.8	3.2	2.9	2.0	1.9		0.7	1.1	
NPV of public sector debt	38.1	36.6	27.9	32.9	35.5	65.7			56.0	50.3	49.2	47.3	44.6	42.3		37.0	29.9	
o/w foreign-currency denominated	0.0	0.0	0.0	0.0	0.0	31.2			25.3	24.6	26.7	28.2	28.6	28.5		25.9	20.3	
o/w external	...	...	...	...	...	31.2			25.3	24.6	26.7	28.2	28.6	28.5		25.9	20.3	
NPV of contingent liabilities (not included in public sector debt)	...	...	...	...	...	...			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Gross financing need 2/	17.1	10.4	6.5	9.8	12.3	10.4			2.5	4.1	5.0	4.6	3.3	3.2		4.4	2.1	
NPV of public sector debt-to-revenue and grants ratio (in percent)	236.0	191.5	164.0	129.1	165.6	292.2			244.7	217.3	203.1	190.7	182.2	174.0		156.1	135.7	
NPV of public sector debt-to-revenue ratio (in percent)	252.2	224.2	177.8	148.2	178.4	309.6			256.9	236.0	231.5	223.8	211.7	201.1		175.1	141.3	
o/w external 3/						146.9			116.1	115.4	125.9	133.5	135.8	135.4		122.5	96.3	
Debt service-to-revenue and grants ratio (in percent) 4/	47.5	57.9	46.4	42.4	54.6	43.6			33.9	20.2	16.0	13.2	12.9	12.0		11.4	10.6	
Debt service-to-revenue ratio (in percent) 4/	50.7	67.8	50.2	48.7	58.8	46.2			35.6	22.0	18.3	15.5	15.0	13.9		12.8	11.0	
Primary deficit that stabilizes the debt-to-GDP ratio				4.5	9.5	2.5			84.9	8.5	2.5	2.7	2.9	2.7		2.5	1.0	
Key macroeconomic and fiscal assumptions																		
Real GDP growth (in percent)	5.8	-3.2	6.9	7.0	5.1	6.5	5.0	3.1	6.3	5.5	6.0	6.0	6.0	5.5	5.9	5.0	5.0	5.0
Average nominal interest rate on forex debt (in percent)	1.3	1.2	1.6	1.6	1.4	1.4	1.4	0.1	1.2	1.0	1.1	1.0	1.1	1.1	1.1	1.0	1.5	1.2
Average real interest rate on domestic currency debt (in percent)	-2.1	-4.2	-8.7	8.9	17.3	12.9	7.4	9.2	5.9	5.3	4.8	4.7	4.8	4.9	5.1	5.8	4.1	5.6
Real exchange rate depreciation (in percent, + indicates depreciation)	0.7	20.5	5.4	-12.8	-6.8	-0.6	4.9	11.7	-22.8	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	15.2	16.1	27.4	12.2	4.1	1.4	8.9	8.6	5.7	6.0	5.5	4.8	4.5	4.2	5.1	4.0	4.0	4.0
Growth of real primary spending (deflated by GDP deflator, in percent)	47.8	-22.1	-11.6	51.6	-5.5	11.2	5.5	25.6	-19.5	35.3	19.0	9.1	1.5	5.6	8.5	3.0	3.5	4.3
Grant element of new external borrowing (in percent)	...	...	...	...	...	...			42.6	43.2	43.3	44.1	45.0	45.0	43.9	45.0	45.0	...

Sources: Country authorities; and Fund 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.

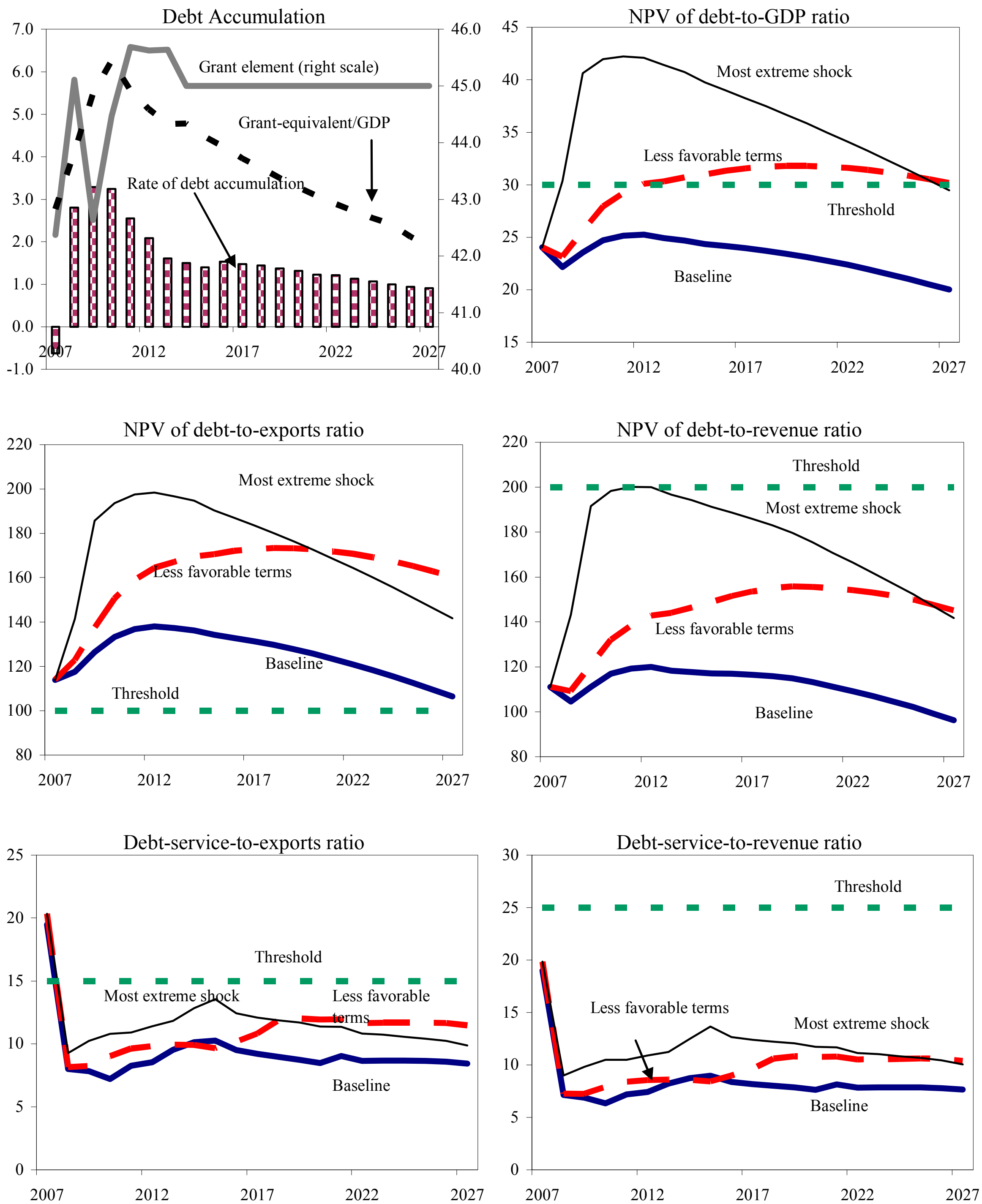
5/ Historical averages and standard deviations are generally derived over the past 10 years, subject to data availability.

Table 4.The Gambia: Sensitivity Analysis for Key Indicators of Public Debt 2007-2027

	Actual	Projections						
	2007	2008	2009	2010	2011	2012	2017	2027
NPV of Debt-to-GDP Ratio								
Baseline	56	50	49	47	45	42	37	30
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	56	52	52	50	49	47	38	32
A2. Primary balance is unchanged from 2007	56	48	43	38	33	28	6	-21
A3. Permanently lower GDP growth 1/	56	51	51	50	47	46	44	48
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2008-2009	56	53	55	54	52	50	48	45
B2. Primary balance is at historical average minus one standard deviations in 2008-2009	56	54	55	53	50	47	41	32
B3. Combination of B1-B2 using one half standard deviation shocks	56	54	55	53	50	47	40	31
B4. One-time 30 percent real depreciation in 2008	56	63	61	58	54	51	43	33
B5. 10 percent of GDP increase in other debt-creating flows in 2008	56	57	55	53	50	48	41	32
NPV of Debt-to-Revenue Ratio 2/								
Baseline	245	217	203	191	182	174	156	136
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	245	225	213	202	197	191	159	143
A2. Primary balance is unchanged from 2007	245	206	178	154	135	116	25	-93
A3. Permanently lower GDP growth 1/	245	221	209	199	193	187	184	219
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2008-2009	245	228	226	216	211	205	199	203
B2. Primary balance is at historical average minus one standard deviations in 2008-2009	245	234	227	212	203	194	172	144
B3. Combination of B1-B2 using one half standard deviation shocks	245	233	227	212	203	193	169	142
B4. One-time 30 percent real depreciation in 2008	245	271	251	233	221	210	180	150
B5. 10 percent of GDP increase in other debt-creating flows in 2008	245	247	228	214	205	196	174	145
Debt Service-to-Revenue Ratio 2/								
Baseline	34	20	16	13	13	12	11	11
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	34	20	18	13	12	13	9	12
A2. Primary balance is unchanged from 2007	34	20	9	2	0	0	-5	-13
A3. Permanently lower GDP growth 1/	34	20	15	13	13	12	14	19
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2008-2009	34	20	17	15	15	15	16	17
B2. Primary balance is at historical average minus one standard deviations in 2008-2009	34	20	22	19	14	12	12	11
B3. Combination of B1-B2 using one half standard deviation shocks	34	20	20	16	13	12	11	11
B4. One-time 30 percent real depreciation in 2008	34	20	16	13	13	12	12	12
B5. 10 percent of GDP increase in other debt-creating flows in 2008	34	20	28	16	13	12	12	11

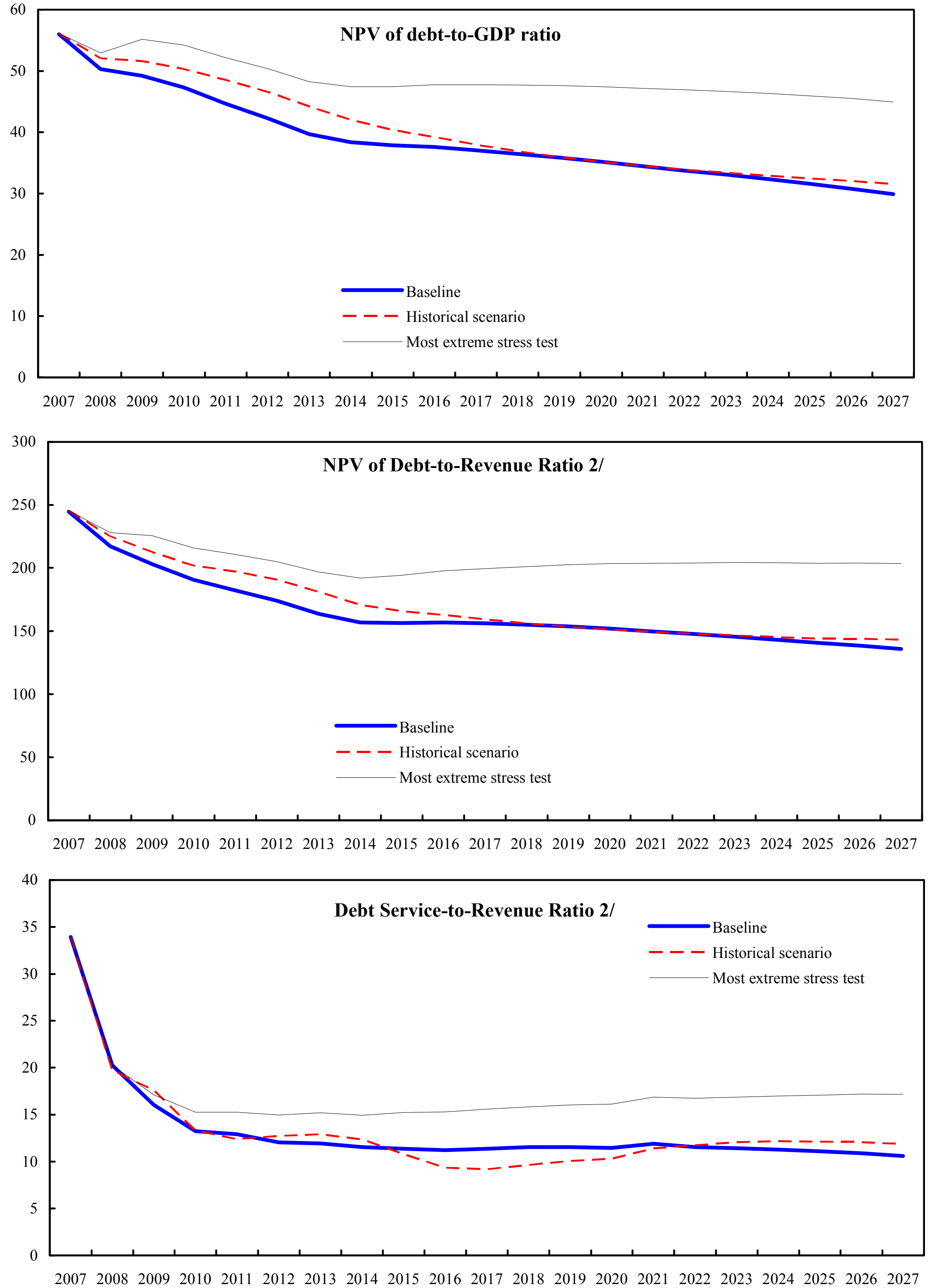
Sources: Country authorities; and Fund staff estimates and projections.
1/ Assumes that real GDP growth is at baseline minus one standard deviation divided by the square root of 20 (i.e., the length of the projection period).
2/ Revenues are defined inclusive of grants.

Figure 1. The Gambia: Indicators of Public and Publicly Guaranteed External Debt
Under Alternative Scenarios, 2007-2027



Source: Staff projections and simulations.

Figure 2.The Gambia: Indicators of Public Debt Under Alternative Scenarios, 2007-2027 1/



Source: Staff projections and simulations.
1/ Most extreme stress test is test that yields highest ratio in 2017.
2/ Revenue including grants.