

Burundi: Joint Bank-Fund Debt Sustainability Analysis

1. This LIC DSA assesses the external and public debt dynamics of Burundi using the forward-looking framework for debt sustainability for low-income countries.¹

Burundi remains at high risk of debt distress, even after the full delivery of debt relief under the HIPC Initiative. Assuming additional debt relief under MDRI, the risk of debt distress would ease, but still remain elevated. The LIC DSA updates the analysis presented in the HIPC decision point document for Burundi of July 2005.² Three key differences underpin the results of this analysis from the previous: (i) the baseline scenario assumes a substantial scaling up of aid inflows, and larger current account deficits and primary fiscal deficits, to be financed mainly with additional grants and concessional loans in the medium term; (ii) real growth would average 6.5 percent in the medium term and 6 percent in the long term, about 1 percent higher than in the decision point baseline, reflecting the combination of higher external financial assistance and investment, and a strong sustained reform effort; (iii) the HIPC completion point is expected to be reached in mid-2007, one year later than the assumption at the decision point.

Baseline scenario

2. The baseline scenario reflects continued growth of real GDP sustained by an increase in export volumes, and financing in the form of grants or highly concessional borrowing (Box 1). The medium-term outlook envisages strong economic growth at 6.5 percent per annum. Growth would be sustained by the consolidation of the peace process, macroeconomic stability, a deepening of structural reforms in the banking sector, public investment in infrastructure, reforms in agricultural export sectors, and strong growth of nontraditional exports. Public investment would average 10.7 percent of GDP in 2006-16, financed through the fiscal space created by aid (grants and concessional loans) inflows, HIPC debt relief and continued strong tax revenue performance. Exports, underpinned by new investment and sustained reforms, are projected to drive growth over the long term assuming significant development of nontraditional sectors. The baseline assumes that prices of the main exports would remain in line with recent market developments and coffee prices

¹ See *Review of Low-Income Country Debt Sustainability Framework and Implications for the Multilateral Debt Relief Initiative (MDRI)*, (IDA/R2006-0046) and (SM/06/123, 3/27/06). For additional information on the LIC DSA framework, see *The Acting Chairs Summing Up, Operational Framework for Debt Sustainability Assessments in Low-Income Countries—Further Considerations* (IMF, BUFF/05/69, 4/13/05). The Bank's Executive Board endorsed the framework on April 12, 2005. The following joint Fund-World Bank staff papers describe the characteristics of the framework: *Debt Sustainability in Low-Income Countries—Proposal for an Operational Framework and Policy Implications*, (SM/04/27, 2/3/04), *Debt Sustainability in Low-Income Countries—Further Considerations on an Operational Framework and Policy Implications*, (SM/04/118, 9/10/04), and *Operational Framework for Debt Sustainability Assessments in Low-Income Countries—Further Considerations*, (SM/05/109, 3/29/05). This DSA was prepared jointly by the staffs of the Fund and the Bank.

² See *Burundi: Decision Point Document for the Enhanced Initiative for Heavily Indebted Poor Countries*, July 11, 2005 (IDA Report No32835-BU; IMF report EBS/05/104).

would fetch a premium beginning in 2008. Privatization would further enhance productivity and increase production and quality in the coffee and tea sectors. Reforms in the banking sector and limited domestic public borrowing would increase the availability of credit to the private sector, sustaining private investment.

Box 1. Main Assumptions in the Debt Sustainability Analysis

Real GDP growth averages 6.0 percent over 2006–26, underpinned by a peacetime broad-based recovery in agricultural production and other private sector activities.

CPI inflation (end-period) is projected to rise from 1.1 percent in 2005 to 8.7 percent in 2006, and subsequently to stabilize at 4 percent from 2007 and remain at that level through 2026.

Fiscal policy aims at restructuring the government’s spending priorities while maintaining macroeconomic stability. Revenues, excluding grants, are assumed to rise gradually from 20 percent of GDP in 2005 to 21.6 percent of GDP by 2026.

Gross official external financing (grants plus loan disbursements) is expected to decline from 25.2 percent of GDP in 2006 to 16.8 percent in 2007 and then gradually decline over the period 2008–26 to 1.0 percent of GDP in 2026.

Official financing: program financing would be only grants in 2007–15 (excluding the IMF), 50 percent grants and 50 percent loans on IDA or comparable terms during 2016–26. Project loans are assumed to be entirely at concessional rates on IDA or comparable terms. The financing gap would be only partially covered by MDRI assistance.

Export receipts are expected to increase sharply in 2006–07 and then to rise more gradually at 10–12 percent per annum in 2008–26, with coffee quality gradually improving, reflecting the impact of the sector’s reform, and the re-emergence of a premium over world prices after 2008. The composition of exports would gradually shift from coffee and tea to other agricultural products, processed foods, and light manufactures. In volume terms, export growth would average 11.5 percent a year over the projection period. Exports of goods and services would rise from 11.9 percent of GDP in 2006 to 20.8 percent in 2026.

Imports of goods and services are projected to average 50 percent of GDP in 2006–07 and with emergency assistance and reconstruction-related imports winding down to decline to 34 percent of GDP in 2026. In volume terms, imports would rise on average by 5.5 percent a year from 2008 onward, following the 2006–07 period of consolidation.

3. **External concessional inflows would finance increased public investment and sustain current account and primary fiscal deficits.** Gross external financing would average 12 percent of GDP per annum (about US\$175 million) over 2006–16, compared with 13 percent (US\$175 million) assumed in the 2005 LIC DSA, with grant financing making up about 90 percent of total external financing. In 2016–26, total external financing would decrease to 3 percent of GDP per annum on average, with the grant share at about 80 percent of the total. Gross investment and national savings would gradually rise to about 22 and 10 percent of GDP, respectively, by 2026. The current account deficit is projected to widen initially and average 15 percent of GDP in 2006–16, and then decline to 12 percent in 2026. The overall fiscal balance is projected to remain close to zero throughout the period.

4. Unless otherwise indicated, all debt ratios in this DSA assume that Burundi will reach the enhanced HIPC completion point in mid-2007, and would then be eligible for relief under the MDRI.

External debt sustainability assessment

5. **The results under the baseline scenario indicate that, even after full delivery of HIPC assistance, Burundi faces a considerable risk of debt distress.** The NPV of debt-to-exports ratio remains above the indicative threshold for countries with comparable policies and institutions for a considerable period of time, before falling below it in 2013 (Box 2) and decreasing further to 76 percent by 2026. Even though all other external debt burden indicators are below their respective thresholds during the projection period, the NPV of debt-to-exports ratio indicates that even after HIPC relief, and assuming future financing on highly concessional terms, debt distress would remain a concern in the long term.

Box 2: Summary of Baseline Debt Sustainability Indicators 1/

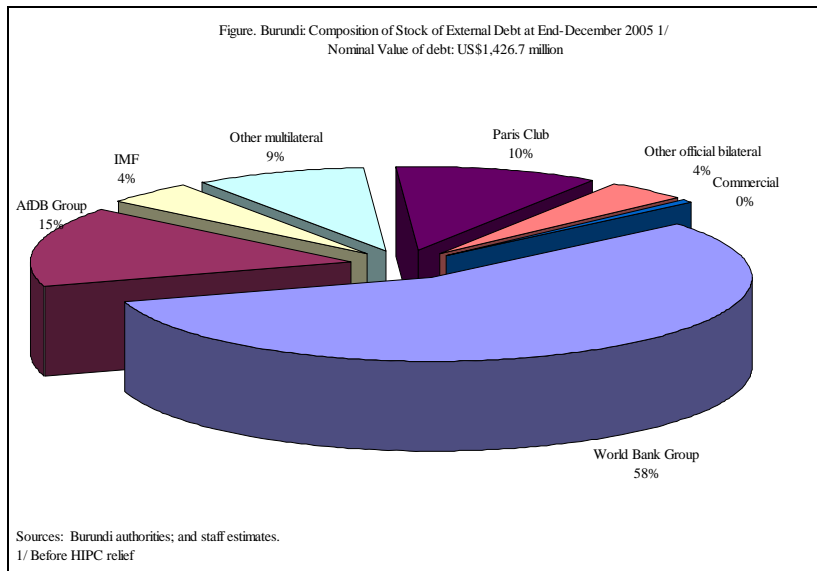
	Indicative Threshold 2/	2006	2016	2026	Average 2006-26
NPV of debt to GDP	30	16.6	15.3	19.5	17.7
NPV of debt to exports	100	139.3	93.7	93.7	109.3
NPV of debt to revenue	200	90.2	72.0	72.2	82.4
Debt service to exports	15	8.3	4.0	4.2	5.1
Debt service to revenue	25	8.2	6.9	6.0	7.4

1/ All debt indicators assume the full delivery of HIPC relief and refer to the NPV of public and publicly guaranteed external debt.

2/ Threshold over which countries with similar evaluations of policies and institutions would have at least a 25 percent chance of having a prolonged incident of debt distress in the coming year. Burundi lies within the bottom quintile of countries ranked by the World Bank's Country Policy and Institutional Assessment Index (CPIA).

6. **At end-2005, Burundi's stock of public and publicly guaranteed (PPG) external debt was US\$1,427 million, US\$43 million higher than at end-2004.** New borrowing includes disbursements under the PRGF arrangement and on already approved credits from IDA and the African Development Fund. Simulating the full delivery of HIPC assistance immediately, the debt would amount to US\$101 million at end-2005 in NPV terms, corresponding to 12.6 percent of GDP and 110.9 percent of exports. Reflecting debt relief and strong export performance in 2005, debt burden indicators for 2005 have substantially improved with respect to projected ratios in the 2005 LIC DSA. The ratio of debt service to exports in 2005 was 47.1 percent (Table 1 and Figure 1), reflecting interim relief provided by creditors in 2005. Debt sustainability indicators are projected to worsen considerably in 2006 because of expected new borrowing of US\$72 million (US\$43 million in NPV terms),³ but to trend down steadily after 2006 until 2010, after which they remain broadly stable. The profiles of the debt and debt-service ratios over the long term are as follows:

³ The new borrowing includes disbursements under the PRGF arrangement and World Bank credits that were initially expected to be disbursed in 2005, but were delayed on account of the political transition.



- ***The NPV of debt-to-exports indicator remains above the indicative threshold until 2013, and then hovers around the indicative threshold.*** The NPV of debt-to-exports declines from 139.3 percent at end-2006 to 93.7 percent in 2026.
- ***The external debt service indicator suggests a more modest and manageable debt burden both in the short and medium term.*** Public external debt service is projected to average about 5.1 percent of exports during 2006-26; the projected trajectory shows an initial decline and then an increase during the years of the repayment of disbursements under the PRGF arrangement. Generally, the relatively low debt-service-to-exports indicator reflects: (i) a stable and relatively high grant element in the debt stock resulting in a relatively low debt service requirement, and (ii) the cumulative effect of high export growth during the period when debt service requirements increase as a result of the end of grace periods. The external debt-service-to-fiscal-revenues ratio (including grants) follows a broadly similar trajectory and is well below the indicative threshold.
- ***The ratio of the NPV of debt to GDP is projected to decline to 13.4 percent in 2014, before rising to about 20 percent in 2026.*** The indicators remain consistently below the country specific threshold.

7. **Alternative scenarios indicate that less concessional borrowing substantially increases the risk of debt distress.**⁴ An alternative scenario shows the effect on debt

⁴ The historical scenario, which assumes key variables at their historical average from 2000 (signing of the Arusha Peace Accord) to 2005, shows debt dynamics that would substantially improve Burundi's net external position. This is a somewhat mechanical result stemming from the scenario's standard assumption of a reduced current account deficit with respect to the baseline, while maintaining the same level of grant financing as in the baseline.

indicators of borrowing at 2 percent higher interest rates during the projection period. Borrowing at less concessional terms would considerably increase the risk of debt distress for Burundi, with the NPV of debt-to-GDP ratios reaching 30 percent by 2026, compared to 19 percent in the baseline, and the NPV of debt-to-exports ratio remaining above the policy-dependent threshold (Table 2 and Figure 1). This scenario highlights the risk of borrowing at less concessional terms after the reduction of the external debt burden as a result of debt relief and the availability of grant financing by IDA and other donors. This would suggest that Burundi should avoid nonconcessional borrowing after HIPC relief. It also points to the need for creditors to align their lending with the borrower's debt sustainability situation.⁵

8. Stress tests signal the vulnerability of Burundi to adverse developments.

Burundi's debt sustainability indicators experience a considerable deterioration under stress tests assuming lower GDP and export growth (Table 2). For the NPV of debt-to-GDP ratio, there is a sizeable increase relative to the baseline when all the main parameters determining the debt dynamics are assumed to be one-half standard deviation below their respective historical averages during the period 2006-07 (the most extreme test in Figure 1, Panel 1). Significant increases in the NPV of external debt-to-exports and debt service-to-exports ratios are observed when exports are assumed to grow at the historical average minus one standard deviation. In particular, under this stress test (the most extreme test in Figure 1, Panels 2 and 3), the debt-service-to-exports ratio rises above the threshold during 2011–15, before declining slightly below the threshold, signifying a considerable risk to external liquidity in the event of sustained overall macroeconomic underperformance.

Fiscal sustainability analysis

9. The baseline macroeconomic scenario (Table 3 and Figure 2) assumes a strong revenue performance and financing of the reconstruction effort and poverty reduction in the medium to long term primarily with grants. This would allow the public sector borrowing requirement to fall over time, while keeping expenditures consistent both with the government's poverty reduction strategy and with macroeconomic stability. In particular, it is assumed that revenues as a percentage of GDP rise from 20 percent in 2005 to 22 percent in 2026 and that borrowing decreases from 7.5 percent of GDP in 2006 to 3.4 percent of GDP on average between 2007 and 2026.

10. Given the relatively strong revenue effort, public debt (external and domestic) burden indicators are projected to remain below their respective indicative thresholds.⁶ The NPV of debt-to-revenue ratio is projected to drop from 90 percent in 2006 to 72 percent

⁵ See *IDA Countries and Non Concessional Debt: Dealing with the Free Rider Problem in the Context of IDA 14 Grants*, Feb. 2006 and *Review of Low-Income Country Debt Sustainability Framework and Implications for the Multilateral Debt Relief Initiative (MDRI)* (IDA/R2006-0046).

⁶ In the LIC DSA methodology, the ratio of debt service to revenue is calculated with revenue including budgetary grants. Under the HIPC DSA framework, grants are excluded.

in 2026, and the debt service-to-revenue ratio is projected to decline from 8 percent in 2006 to 6 percent in 2026.

11. **As in the external debt sustainability analysis, alternative scenarios and bound tests signal a significant increase in Burundi's risk of debt distress over the medium term.** A lower growth scenario that assumes long-term growth at 5.5 percent, one-half percentage point less than the baseline, indicates that the NPV of debt-to-GDP ratio would exceed the policy-dependent threshold. The scenario highlights the risk of failing to achieve sustained long-term growth. In effect, unless the ambitious scaling-up of investment expenditure translates into the projected rate of GDP growth, the investment would not be affordable or possibly even sustainable given the high level of grant financing assumed in the baseline.

12. **Other stress tests highlight the negative impact of temporary shocks on debt burden indicators.** In particular, a 30 percent real depreciation represents the most extreme stress test. A one-off increase of debt-creating flows by 10 percent of GDP, and a recession with GDP growth equal to the historical average minus one standard deviation in 2007-08 also signal increased risk of debt distress over the medium term.

Impact of the full delivery of debt relief under the MDRI

13. **Burundi would be eligible for debt relief under MDRI from the IMF, IDA and the AfDF after reaching the completion point.**⁷ With the HIPC completion point expected in June 2007, debt relief under HIPC and MDRI would amount to a stock of debt reduction of US\$921 million, with debt relief under the HIPC Initiative amounting to US\$848 million and debt relief under MDRI estimated at US\$73 million.⁸ Under the HIPC Initiative, Burundi was assessed to be eligible for debt relief equivalent to 91.5 percent of the NPV of debt outstanding at end-2004. The additional effect of MDRI is therefore estimated to be modest, and would represent an average debt service saving of US\$2.5 million dollars in 2007-23 or about one percent of exports.⁹ A one-year delay in reaching the completion point would imply losing US\$2.7 million in additional multilateral debt service relief, beyond HIPC.

⁷ The implementation of the MDRI in the Fund is described in SM/05/353 (and Supplement 2), EBS/05/158, and EBS/05/174. The implementation of the MDRI in IDA is described in *IDA's Implementation of the Multilateral Debt Relief Initiative*, March 14, 2006. The implementation of the MDRI in AfDF is described in *ADF-X Addition to the ADF Resources Financing the Multilateral Debt Relief Initiative*, March 10, 2006.

⁸ This alternative baseline assumes that MDRI debt relief from the IMF would be provided at the completion point date in June 2007; debt relief from IDA is implemented starting in July 2007 through the forgiveness of the debt service payments on the debt outstanding and disbursed (DOD) as of end-December 2003. As for the African Development Fund, it is assumed that debt service payments on the DOD as of end-December 2004 would be cancelled from January 1, 2008.

⁹ This estimate of debt relief is the amount related to the elimination of the stock of debt owed to the IMF at end-2004. However, this underestimates the combined debt relief of MDRI and HIPC and the reduction of debt distress. Under the provisions of the Instrument to Establish the MDRI Trust (Decision No. 13588-(05/99),

Text Table 1. Burundi: Multilateral Debt Relief under MDRI and HIPC at the Completion Point 1/

(In millions of US dollars)

	Additional Impact of MDRI	HIPC	Total
IMF	11	28	39
IDA 2/	42	636	678
AfDF 3/	11	186	197
Total	64	850	914

Source: Staff estimates

1/ Completion point expected in June 2007.

2/ Expected MDRI implementation date in July 2007.

3/ Expected MDRI implementation date in Jan. 2008

14. **The additional debt relief under MDRI would moderately reduce the risk of debt distress for Burundi.** Under MDRI, IDA and the AfDF would reduce their gross annual allocation by the amount of debt service relief provided.¹⁰ If additional finance by other donors maintained total future borrowing as in the baseline, MDRI would lower the debt burden indicators modestly (Text Table 2). The ratio of the NPV of external debt to exports would be 30 percentage points lower than in the baseline, and would fall below the policy-dependent threshold in 2010, only three years earlier than in the baseline, as well as remain below thereafter. If lower financing from IDA and the AfDF were not compensated by additional resources from other donors, the debt burden indicators would decrease further.

EBS/05/158) for a member that has both pre- and post-MDRI cutoff date debt that is to be covered by HIPC assistance, HIPC debt relief disbursed at the completion point would be allocated in proportion to the ratio between pre- and post-cutoff date debt. As a result, relief on end-2004 debt would be disbursed in about equal amounts from MDRI and HIPC assistance (US\$40 million in total). The remaining amount of HIPC assistance to be disbursed would be about US\$11 million.

¹⁰ See IDA's *Implementation of the Multilateral Debt Relief Initiative*, March 14, 2006; and ADF-X *Addition to the ADF Resources Financing the Multilateral Debt Relief Initiative*, March 10, 2006.

Text Table 2. Burundi: Impact of the full provision of MDRI on the baseline scenario 1/
(In percent)

	2006	2007	2008	2009	2010	2011	2016	2021	2026	Average 2006-26
NPV of debt-to-GDP ratio										
Before MDRI	16.6	17.8	17.9	17.8	17.4	16.5	15.3	20.3	19.5	17.7
After MDRI	16.6	13.1	13.6	13.8	13.8	13.4	12.9	15.1	15.0	14.1
NPV of debt-to-Exports ratio										
Before MDRI	139.3	136.9	133.9	128.5	121.3	111.4	93.7	111.3	93.7	109.3
After MDRI	139.3	100.9	101.9	100.1	96.3	90.2	78.6	82.5	74.5	87.3
Debt service-to-Exports Ratio										
Before MDRI	8.3	3.9	3.8	3.6	4.3	7.7	4.0	4.5	4.2	5.1
After MDRI	8.3	2.9	2.2	2.1	3.0	5.6	3.1	3.8	3.6	3.9

Source: staff estimates and projections

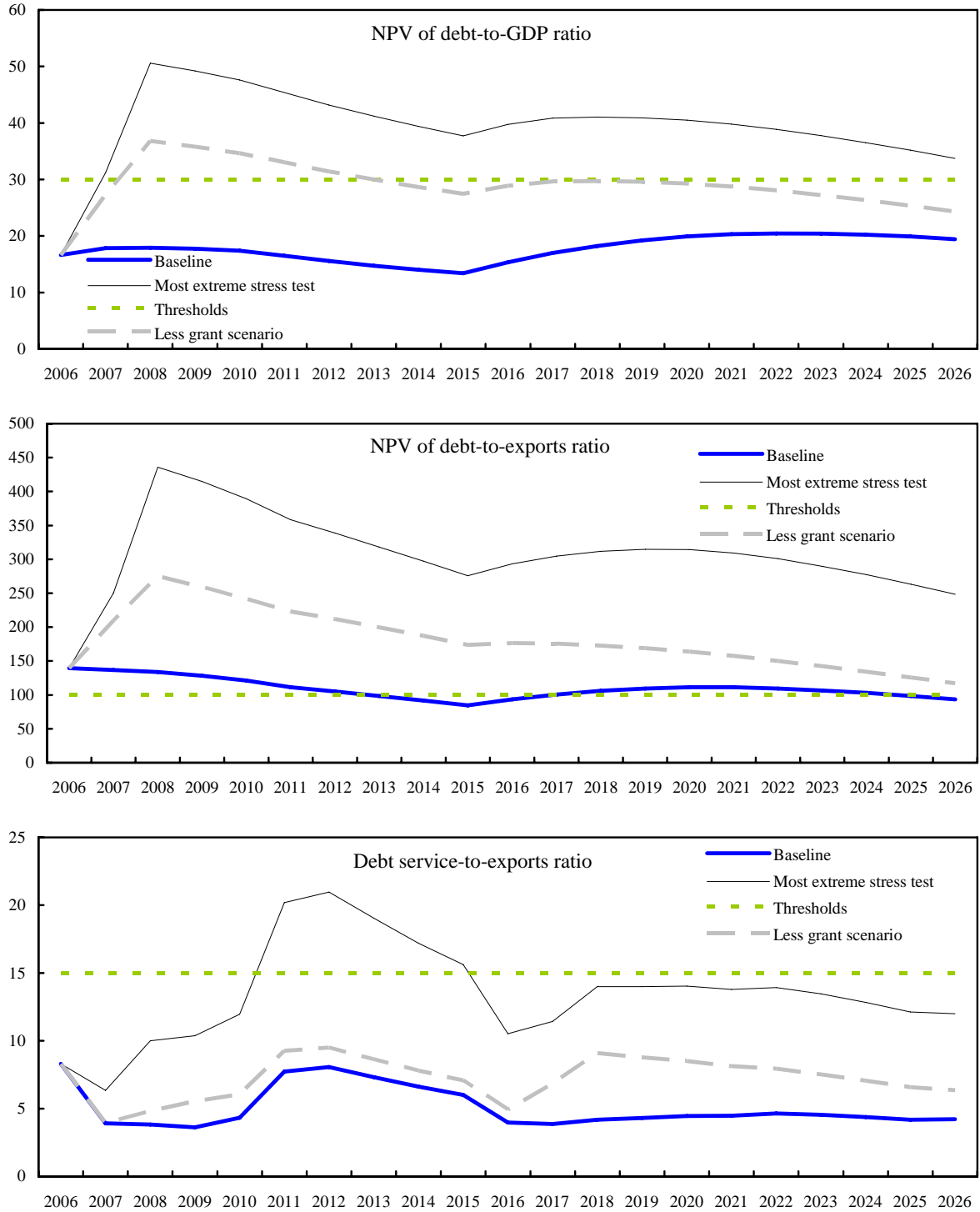
1/ MDRI estimates assume completion point in June 2007.

Conclusion

15. **Burundi's NPV of external debt-to-exports ratio after enhanced HIPC assistance is projected to remain above its indicative threshold over the period 2005-13. In addition, the DSA indicates that adverse shocks would significantly affect the debt sustainability indicators. For these reasons Burundi is viewed as at high risk of debt distress.** The fiscal sustainability indicators for total (domestic and external) debt suggest a more robust position, reflecting a strong domestic revenue effort. However, as reflected in the external debt indicators, the foreign exchange constraint could be binding. Indeed, the external debt sustainability indicators suggest that particular attention be given to exports as the driver of overall growth.

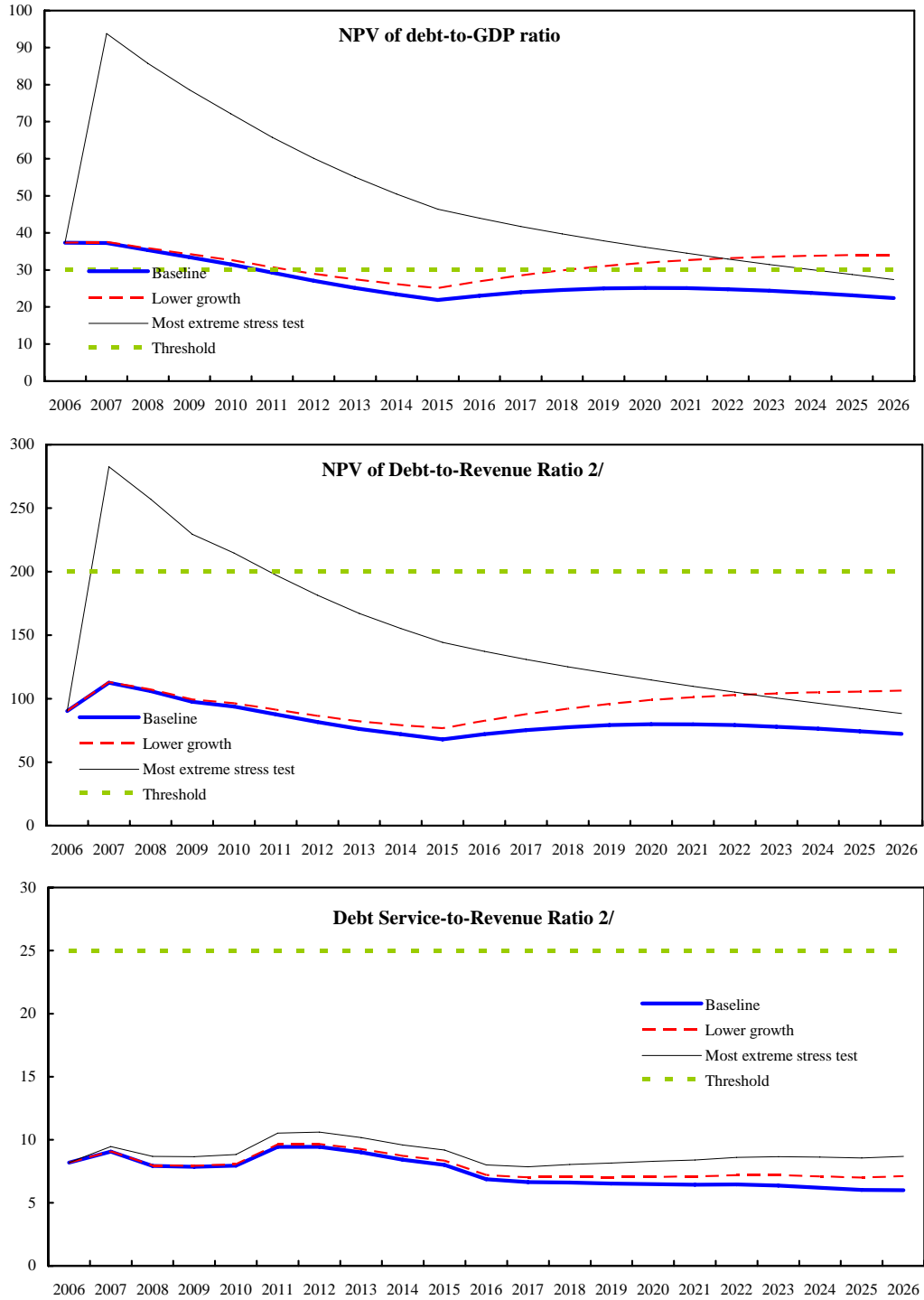
16. The DSA indicates that in order for Burundi to lower its high debt stock ratios with respect to exports and to maintain the other debt indicators below their respective thresholds, particular emphasis needs to be placed on four aspects of future economic performance. First, the authorities will need to implement a strong and sustained reform effort, especially to develop a diversified export base, to support robust growth in exports and GDP. Second, the authorities need to implement prudent fiscal and monetary policies to ensure fiscal discipline and macroeconomic stability. Third, together with prudent debt management, future financing needs to be in the form of grants and highly concessional loans, except in limited justifiable cases in outer years. Fourth, attention should be given to strengthening policies and institutions, which would raise the indicative debt thresholds for the risk of debt distress.

Figure 1. Burundi: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios, 2006-26
(In percent)



Source: Staff projections and simulations.

Figure 2. Burundi: Fiscal Indicators of Public Debt Under Alternative Scenarios, 2006–26 1/



Source: Staff projections and simulations.

1/ Most extreme stress test is test that yields highest ratio in 2016.

2/ Revenue including grants.

Table 1. Burundi: External Debt Sustainability Framework, Baseline Scenario, 2004–26 1/
(In percent of GDP, unless otherwise indicated)

	Actual		Historical Average 6/	Standard Deviation 6/	Projections																	2012-26 Average					
	2004	2005			2006	2007	2008	2009	2010	2011	2006-11 Average	2012	2013	2014	2016	2017	2018	2019	2020	2021	2022		2023	2024	2025	2026	
External debt (nominal) 1/	208.3	178.5			156.5	34.7	34.2	33.2	32.1	30.5		28.7	27.1	25.7	28.7	32.2	34.9	36.8	38.1	38.6	38.8	38.4	37.7	36.7	35.5		
o/w public and publicly guaranteed (PPG)	208.3	178.5			156.5	34.7	34.2	33.2	32.1	30.5		28.7	27.1	25.7	28.7	32.2	34.9	36.8	38.1	38.6	38.8	38.4	37.7	36.7	35.5		
Change in external debt	-18.8	-29.8			-22.0	-121.8	-0.5	-1.0	-1.1	-1.6		-1.8	-1.6	-1.4	4.4	3.5	2.6	1.9	1.3	0.6	0.1	-0.3	-0.7	-1.0	-1.2		
Identified net debt-creating flows	-17.1	-26.5			7.6	4.9	9.8	10.4	11.1	10.7		10.7	10.8	10.2	15.2	14.4	13.2	12.4	11.6	11.2	10.6	10.1	9.7	9.2	8.8		
Non-interest current account deficit	6.6	9.1	4.2	3.1	17.0	16.0	13.8	14.4	15.2	14.8		14.5	14.6	14.0	19.0	18.0	16.8	16.0	15.3	14.9	14.3	13.7	13.2	12.6	12.1	14.8	
Deficit in balance of goods and services	24.3	33.9			37.2	37.3	36.1	35.1	33.4	30.9		29.0	27.5	25.7	22.8	21.5	20.1	19.1	18.2	17.5	16.7	15.8	15.0	14.1	13.2		
Exports	9.6	11.4			11.9	13.0	13.4	13.8	14.3	14.8		14.8	15.0	15.3	16.4	16.9	17.2	17.5	17.9	18.3	18.7	19.2	19.7	20.2	20.8		
Imports	33.9	45.3			49.1	50.3	49.5	48.9	47.7	45.7		43.9	42.6	41.1	39.1	38.4	37.3	36.6	36.1	35.7	35.4	35.0	34.6	34.3	34.0		
Net current transfers (negative = inflow)	-17.4	-23.8	-10.2	7.3	-20.4	-21.6	-22.5	-20.9	-18.5	-16.4		-14.7	-13.1	-11.7	-3.7	-3.4	-3.1	-2.8	-2.7	-2.3	-2.1	-1.9	-1.5	-1.1	-0.7	-5.0	
Other current account flows (negative = net inflow)	-0.3	-1.0			0.2	0.3	0.2	0.2	0.3	0.2		0.2	0.1	0.0	-0.1	-0.1	-0.2	-0.2	-0.3	-0.3	-0.3	-0.3	-0.3	-0.3	-0.4	-5.0	
Net FDI (negative = inflow)	-1.5	-1.9	-0.5	0.8	-0.8	-1.9	-2.0	-2.1	-2.2	-2.4		-2.3	-2.3	-2.5	-2.6	-2.2	-2.0	-1.9	-1.8	-1.7	-1.7	-1.6	-1.6	-1.6	-1.5	-2.0	
Endogenous debt dynamics 2/	-22.3	-33.7			-8.6	-9.2	-2.0	-1.9	-1.8	-1.7		-1.6	-1.5	-1.4	-1.2	-1.4	-1.6	-1.7	-1.8	-1.9	-1.9	-1.9	-1.9	-1.9	-1.8	-1.8	
Contribution from nominal interest rate	1.5	1.4			0.5	0.2	0.2	0.2	0.2	0.2		0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	
Contribution from real GDP growth	-9.8	-1.6			-9.1	-9.5	-2.2	-2.1	-2.0	-1.9		-1.7	-1.6	-1.5	-1.4	-1.6	-1.8	-1.9	-2.0	-2.1	-2.2	-2.2	-2.1	-2.1	-2.0	-2.0	
Contribution from price and exchange rate changes	-13.9	-33.6			...	...	...	...	...	...		...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Residual (3-4) 3/	-1.7	-3.3			-29.6	-126.6	-10.4	-11.4	-12.2	-12.3		-12.4	-12.4	-11.6	-10.8	-10.8	-10.5	-10.4	-10.4	-10.6	-10.5	-10.4	-10.4	-10.3	-10.0	-10.0	
o/w exceptional financing	-16.0	-19.8			-3.3	-115.7	-3.3	-3.1	-3.3	-3.4		-3.3	-3.2	-3.0	-2.2	-1.8	-1.7	-1.5	-1.4	-1.3	-1.2	-1.1	-1.1	-1.0	-0.9	-0.9	
o/w capital grants	-7.4	-3.3			-8.5	-10.7	-11.9	-12.8	-12.8	-12.1		-11.7	-11.0	-10.4	-9.6	-9.2	-8.9	-8.6	-8.4	-8.0	-7.6	-7.2	-6.8	-5.5	-5.2	-5.2	
NPV of external debt 4/	...	10.7			16.6	17.8	17.9	17.8	17.4	16.5		15.6	14.8	14.0	15.3	17.0	18.2	19.2	19.9	20.3	20.5	20.4	20.3	19.9	19.5	19.5	
In percent of exports	...	93.6			139.3	136.9	133.9	128.5	121.3	111.4		104.9	98.2	91.6	93.7	100.6	106.0	109.6	111.4	111.3	109.6	106.6	103.0	98.5	93.7	93.7	
NPV of PPG external debt	...	10.7			16.6	17.8	17.9	17.8	17.4	16.5		15.6	14.8	14.0	15.3	17.0	18.2	19.2	19.9	20.3	20.5	20.4	20.3	19.9	19.5	19.5	
In percent of exports	...	93.6			139.3	136.9	133.9	128.5	121.3	111.4		104.9	98.2	91.6	93.7	100.6	106.0	109.6	111.4	111.3	109.6	106.6	103.0	98.5	93.7	93.7	
Debt service-to-exports ratio (in percent)	109.2	47.1			8.3	3.9	3.8	3.6	4.3	7.7		8.1	7.3	6.6	4.0	3.9	4.2	4.3	4.5	4.5	4.6	4.6	4.4	4.2	4.2	4.2	
PPG debt service-to-exports ratio (in percent)	109.2	47.1			8.3	3.9	3.8	3.6	4.3	7.7		8.1	7.3	6.6	4.0	3.9	4.2	4.3	4.5	4.5	4.6	4.6	4.4	4.2	4.2	4.2	
Total gross financing need (billions of U.S. dollars)	103.5	100.6			163.7	152.6	140.9	159.5	184.4	200.3		216.0	232.4	238.0	378.9	396.6	405.3	421.9	438.4	463.4	485.8	505.0	529.9	550.3	575.6	575.6	
Non-interest current account deficit that stabilizes debt ratio	25.4	38.9			39.0	137.8	14.4	15.4	16.3	16.4		16.3	16.1	15.5	14.6	14.5	14.1	14.1	14.0	14.3	14.2	14.0	13.9	13.7	13.3	13.3	
Key macroeconomic assumptions																											
Real GDP growth (in percent)	4.8	0.9	1.6	2.5	6.1	6.6	7.1	6.7	6.6	6.4		6.6	6.2	6.1	6.1	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.0	6.1	6.1
GDP deflator in US dollar terms (change in percent)	6.5	19.2	-1.9	11.4	12.6	2.7	2.1	2.2	2.2	2.3		4.0	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3	2.3
Effective interest rate (percent) 5/	0.7	0.8	1.0	0.2	0.3	0.2	0.8	0.6	0.6	0.6		0.5	0.6	0.6	0.7	0.6	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7
Growth of exports of G&S (US dollar terms, in percent)	27.1	43.4	11.8	38.0	24.9	19.5	12.3	12.6	13.2	12.3		15.8	8.9	9.9	10.7	12.4	11.9	10.6	10.5	10.5	10.7	11.0	11.3	11.2	11.4	11.5	11.0
Growth of imports of G&S (US dollar terms, in percent)	36.8	60.7	14.7	25.1	29.6	12.1	7.6	7.8	6.4	4.2		11.3	4.3	5.3	4.7	7.2	6.4	5.4	6.5	7.0	7.2	7.4	7.3	7.4	7.4	7.4	6.4
Grant element of new public sector borrowing (in percent)	40.0	45.3	51.1	51.1	51.1	51.1		48.3	51.1	51.1	51.1	55.7	55.6	55.5	55.4	55.3	55.1	55.0	54.8	54.7	54.5	54.5	54.0
<i>Memorandum item:</i>																											
Nominal GDP (billions of US dollars)	664.5	799.4			954.6	1045.4	1143.2	1246.5	1358.7	1478.0		1606.0	1743.4	1891.6	2224.9	2412.9	2616.8	2838.0	3077.9	3338.0	3620.2	3926.1	4258.0	4618.0	5008.3	5008.3	

Source: Staff simulations.

1/ Includes both public and private sector external debt.

2/ Derived as $[r - g - \rho(1+g)] / (1+g+\rho+g)$ 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.

Table 2. Burundi: Sensitivity Analyses for Key Indicators of Public and Publicly Guaranteed External Debt, 2006–26
(In percent)

	Projections							
	2006	2007	2008	2009	2010	2011	2016	2026
NPV of debt-to-GDP ratio								
Baseline	17	18	18	18	17	17	15	19
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007-26 1/	17	20	18	15	12	8	-13	-50
A2. New public sector loans on less favorable terms in 2007-26 2/	17	19	19	20	20	19	21	30
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007-08	17	19	21	21	20	19	18	23
B2. Export value growth at historical average minus one standard deviation in 2007-08 3/	17	20	24	23	23	22	19	21
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007-08	17	21	25	25	24	23	21	27
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007-08 4/	17	27	37	36	35	33	29	24
B5. Combination of B1-B4 using one-half standard deviation shocks	17	31	51	49	48	45	40	34
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 5/	17	25	25	25	25	23	22	27
NPV of debt-to-exports ratio								
Baseline	139	137	134	128	121	111	94	94
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007-26 1/	139	151	133	110	83	54	-79	-242
A2. New public sector loans on less favorable terms in 2007-26 2/	139	144	145	142	136	129	127	145
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007-08	139	137	134	128	121	111	94	94
B2. Export value growth at historical average minus one standard deviation in 2007-08 3/	139	250	436	415	389	358	293	249
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007-08	139	137	134	128	121	111	94	94
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007-08 4/	139	209	275	259	242	223	177	117
B5. Combination of B1-B4 using one-half standard deviation shocks	139	261	423	398	371	343	271	182
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 5/	139	137	134	128	121	111	94	94
Debt service ratio								
Baseline	8	4	4	4	4	8	4	4
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2007-26 1/	8	4	5	4	5	11	6	-5
A2. New public sector loans on less favorable terms in 2007-26 2/	8	4	4	4	5	6	5	7
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2007-08	8	4	4	4	4	8	4	4
B2. Export value growth at historical average minus one standard deviation in 2007-08 3/	8	6	10	10	12	20	11	12
B3. US dollar GDP deflator at historical average minus one standard deviation in 2007-08	8	4	4	4	4	8	4	4
B4. Net non-debt creating flows at historical average minus one standard deviation in 2007-08 4/	8	4	5	6	6	9	5	6
B5. Combination of B1-B4 using one-half standard deviation shocks	8	5	7	9	9	14	8	10
B6. One-time 30 percent nominal depreciation relative to the baseline in 2007 5/	8	4	4	4	4	8	4	4
<i>Memorandum item:</i>								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	55	55	55	55	55	55	55	55

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. Burundi: Public Sector Debt Sustainability Framework, Baseline Scenario, 2004–26
(In percent of GDP, unless otherwise indicated)

	Actual		Estimate		Projections									
	2004	2005	Historical Average 5/	Standard Deviation 5/	2006	2007	2008	2009	2010	2011	2006-11 Average	2016	2026	2012-26 Average
Public sector debt 1/	232.2	185.6			176.9	54.4	51.8	49.1	46.3	43.3		36.5	38.6	
o/w foreign-currency denominated	209.9	165.4			156.2	35.1	34.6	33.5	32.4	30.8		29.0	35.9	
Change in public sector debt	-15.3	-46.6			-8.6	-122.6	-2.6	-2.8	-2.7	-3.0		3.6	-1.5	
Identified debt-creating flows	-37.7	-66.3			-21.2	-122.1	-0.7	-1.2	-1.1	-1.1		0.3	-3.3	
Primary deficit	1.6	1.3	2.2	2.7	-2.5	5.8	5.3	4.2	4.4	4.1	3.6	3.6	-0.4	2.2
Revenue and grants	34.9	31.7			41.4	33.2	33.3	34.3	33.6	33.4		32.0	31.0	
of which : grants	14.8	11.7			22.4	13.3	13.0	13.4	12.7	12.4		10.9	9.4	
Primary (noninterest) expenditure	36.5	33.1			38.9	39.0	38.7	38.5	38.0	37.5		35.6	30.6	
Automatic debt dynamics	-23.1	-49.3			-15.4	-11.0	-2.6	-2.2	-2.1	-1.8		-1.0	-2.0	
Contribution from interest rate/growth differential	-14.9	-6.9			-12.3	-11.8	-2.6	-2.2	-2.0	-1.7		-1.0	-1.9	
of which : contribution from average real interest rate	-3.5	-4.9			-1.7	-0.8	1.0	1.1	1.0	1.1		0.9	0.4	
of which : contribution from real GDP growth	-11.4	-2.1			-10.6	-11.0	-3.6	-3.3	-3.0	-2.8		-1.9	-2.3	
Contribution from real exchange rate depreciation	-8.2	-42.3			-3.1	0.8	-0.1	-0.1	-0.1	-0.1		...	...
Other identified debt-creating flows	-16.1	-18.4			-3.3	-117.0	-3.3	-3.2	-3.3	-3.5		-2.2	-0.9	
Privatization receipts (negative)	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	
Debt relief (HIPC and other)	-16.1	-18.4			-3.3	-117.0	-3.3	-3.2	-3.3	-3.5		-2.2	-0.9	
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	
Residual, including asset changes	22.4	19.7			12.6	-0.5	-1.9	-1.6	-1.6	-1.9		3.3	1.8	
NPV of public sector debt	36.1	30.1			37.4	37.3	35.4	33.4	31.5	29.2		23.1	22.4	
o/w foreign-currency denominated	13.8	9.9			16.6	18.0	18.1	17.9	17.6	16.7		15.5	19.6	
o/w external	13.8	9.9			16.6	18.0	18.1	17.9	17.6	16.7		15.5	19.6	
NPV of contingent liabilities (not included in public sector debt)	...	...			...	...	...	...	...	...		...	...
Gross financing need 2/	13.9	9.0			0.9	8.8	8.0	6.9	7.0	7.3		5.8	1.5	
NPV of public sector debt-to-revenue ratio (in percent) 3/	103.4	94.9			90.2	112.5	106.1	97.5	93.8	87.7		72.0	72.2	
o/w external	39.5	31.2			40.1	54.4	54.3	52.3	52.3	50.0		48.4	63.4	
Debt service-to-revenue ratio (in percent) 3/ 4/	35.3	24.2			8.2	9.1	7.9	7.9	7.9	9.4		6.9	6.0	
Primary deficit that stabilizes the debt-to-GDP ratio	16.8	48.0			6.1	128.4	7.9	7.0	7.1	7.2		0.0	1.1	
Key macroeconomic and fiscal assumptions														
Real GDP growth (in percent)	4.8	0.9	1.7	2.6	6.1	6.6	7.1	6.7	6.6	6.4	6.6	6.0	6.0	6.1
Average nominal interest rate on forex debt (in percent)	0.7	0.8	0.9	0.2	0.3	0.2	0.8	0.6	0.6	0.6	0.5	0.6	0.7	0.7
Average real interest rate on domestic currency debt (in percent)	3.0	-3.9	2.3	5.7	8.0	9.3	7.7	9.4	9.9	11.1	9.2	15.5	30.2	19.6
Real exchange rate depreciation (in percent, + indicates depreciation)	-3.8	-20.7	2.0	15.7	-2.0	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	8.3	16.6	9.5	5.4	4.8	3.6	4.3	4.3	4.3	4.3	4.3	4.3	4.3	4.3
Growth of real primary spending (deflated by GDP deflator, in percent)	23.2	-8.5	9.6	17.4	24.8	6.9	6.1	6.4	5.0	5.0	9.0	5.1	4.2	4.6
Grant element of new external borrowing (in percent)	...	42.9	42.9	...	40.0	45.3	51.1	51.1	51.1	51.1	48.3	55.7	54.5	...

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 including 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. Burundi: Sensitivity Analysis for Key Fiscal Indicators of Public Debt, 2006–26

	Projections							
	2006	2007	2008	2009	2010	2011	2016	2026
NPV of Debt-to-GDP Ratio								
Baseline	37	37	35	33	32	29	23	22
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	37	37	36	34	32	30	21	38
A2. Primary balance is unchanged from 2006	37	34	28	24	19	14	-2	-7
A3. Permanently lower GDP growth 1/	37	38	36	34	33	31	27	34
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2008	37	41	43	42	42	40	39	46
B2. Primary balance is at historical average minus one standard deviations in 2007-2008	37	37	35	33	31	29	23	22
B3. Combination of B1-B2 using one half standard deviation shocks	37	38	38	35	32	28	18	15
B4. One-time 30 percent real depreciation in 2007	37	94	86	79	72	66	44	27
B5. 10 percent of GDP increase in other debt-creating flows in 2007	37	42	40	38	35	33	26	24
NPV of Debt-to-Revenue Ratio 2/								
Baseline	90	113	106	98	94	88	72	72
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	90	111	103	94	89	81	56	87
A2. Primary balance is unchanged from 2006	90	101	85	69	57	43	-7	-22
A3. Permanently lower GDP growth 1/	90	113	107	99	97	91	83	106
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2008	90	119	122	116	117	114	116	143
B2. Primary balance is at historical average minus one standard deviations in 2007-2008	90	111	104	96	92	86	71	72
B3. Combination of B1-B2 using one half standard deviation shocks	90	113	108	96	90	81	53	46
B4. One-time 30 percent real depreciation in 2007	90	283	257	229	215	197	137	88
B5. 10 percent of GDP increase in other debt-creating flows in 2007	90	126	119	109	105	99	82	77
Debt Service-to-Revenue Ratio 2/								
Baseline	8	9	8	8	8	9	7	6
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	8	9	8	8	9	11	9	8
A2. Primary balance is unchanged from 2006	8	9	8	8	8	9	6	2
A3. Permanently lower GDP growth 1/	8	9	8	8	8	10	7	7
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2007-2008	8	9	9	9	9	11	8	9
B2. Primary balance is at historical average minus one standard deviations in 2007-2008	8	9	8	8	8	9	7	6
B3. Combination of B1-B2 using one half standard deviation shocks	8	9	8	8	8	10	7	5
B4. One-time 30 percent real depreciation in 2007	8	9	8	8	8	10	7	6
B5. 10 percent of GDP increase in other debt-creating flows in 2007	8	9	8	8	8	10	7	6

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.