

## **Malawi: Joint Bank-Fund Debt Sustainability Analysis Based on Low-Income County Framework<sup>1</sup>**

1. **Malawi's risk of debt distress after debt relief under the HIPC Initiative and the Multilateral Debt Relief Initiative (MDRI) is moderate.**<sup>2</sup> On reaching the HIPC Completion Point, Malawi's NPV of debt-to-exports ratio will drop from 191 percent in 2005 to 39 percent in 2006. Debt service as a share of exports will decline from 22 to 16.2 percent between 2005 and 2006. Despite this drop in its debt burden indicators, Malawi will nevertheless remain vulnerable to exogenous shocks. If the government was not to implement its reform strategy to enhance growth, diversify exports and to improve governance, Malawi's debt burden indicators would increase steeply and the external debt stock indicators would breach their thresholds within a decade. Even when assuming good policy performance accompanied by strong GDP and export growth and substantial inflows of external financing in the form of grants, all debt burden indicators are expected to deteriorate through the projection period. Under the most extreme stress test, Malawi's NPV of debt-to-GDP ratio breaches its threshold for a prolonged period of time and the NPV of debt-to-exports ratio also approaches it. Moreover, Malawi's high domestic debt is also vulnerable to exogenous shocks.<sup>3</sup>

### **I. EXTERNAL DEBT SUSTAINABILITY**

2. **The implementation of structural reforms to support private sector development, export diversification and growth, while maintaining macroeconomic stability characterize the underlying macro-framework.**<sup>4</sup> Over the medium term, the

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<sup>1</sup> This document updates the debt sustainability analysis (DSA) prepared in August 2005. It was prepared jointly by the IMF and the World Bank, based on the common standard framework for low-income countries (LIC) approved by the Executive Boards of the IMF and IDA.<sup>1</sup> This LIC DSA makes use of the updated debt data base which was reconciled for the HIPC completion point and also incorporates revised macro-economic projections. It has been published in the following document: "Republic of Malawi: Debt Relief at the Heavily Indebted Poor Countries (HIPC) Initiative Completion Point and under the Multilateral Debt Relief Initiative (MDRI)", August 2006.

<sup>2</sup> The World Bank's Country Policy and Institutional Assessment (CPIA) rates Malawi as a medium performer. Under the joint World Bank/ IMF debt sustainability framework the corresponding thresholds are 40 percent for the NPV of external PPG debt to GDP ratio, 150 percent for the NPV of external PPG debt to exports ratio, 250 percent for the NPV of external PPG debt to revenue ratio, 20 percent for the external PPG debt service to exports ratio, and 30 percent for the external PPG debt service to revenue ratio. (*Operational Framework for Debt Sustainability Assessments in Low-Income Countries – Further Considerations*, SM/05/109, 3/29/05).

<sup>3</sup> Malawi's domestic debt burden increases its vulnerability to exogenous shocks, but does not affect Malawi's risk rating.

<sup>4</sup> The macroeconomic framework underlying this DSA is identical to the baseline underlying the HIPC DSA. Differences in debt burden indicators are the result of the methodological differences between the joint Bank-Fund Low-Income (LIC) DSA framework and the HIPC methodology. The LIC methodology uses a) a fixed 5 percent discount rate instead of currency-specific discount rates under HIPC, b) WEO exchange rate projections instead of fixed exchange rates as of end-of the base date; and (c) annual exports instead of a three-year average of exports in the NPV of debt to exports ratio.

macroeconomic framework is in line with the government's economic program supported by the PRGF arrangement with the IMF. Long-term assumptions are based on information provided by the authorities regarding sectoral strategies, including in the MGDS—the new poverty-reduction strategy—as well as latest WEO prices and recent trends in macroeconomic variables.

3. **Annual output growth is projected to be about 6 percent over the near term, recovering from a prolonged period of poor performance.** It is assumed to drop to 4.5 percent over the longer term converging to the regional average. Private sector investment and FDI inflows are projected to boost export growth in the long term, leading to an increase in the export share of the economy from 27 percent in 2005 to 30 percent by the end of the projection period. Donor support, as measured by net official assistance is assumed to increase gradually and modestly by about 2 percent of GDP to about 23 percent of GDP in 2015. It is assumed that even after HIPC completion point and implementation of MDRI about 84 percent of total aid, excluding HIPC debt relief grants, is provided in the form of grants. The share of loans remains relatively low amounting to around 3.8 percent. Although the volume of new loans increases relative to the past five years, the grant element underlying the new borrowing assumptions is in line with past experience. The main elements of the long term macroeconomic framework underpinning the debt sustainability analysis are outlined in Box 1.

3. **All external debt burden indicators are projected to remain below their thresholds under the baseline** (Figure 1). Malawi's NPV of debt ratio to GDP is projected to fall from 52 percent in 2005 to 11 percent in 2006, before increasing toward 24 percent by the end of the projection period (Table 1). Similarly, the NPV of debt to exports ratio drops from 191 percent in 2005 to 39 percent in 2006, before starting to climb to 81 percent by 2026. Malawi's debt service to exports ratio would decline from 22 in 2005 to 16 percent in 2006, remaining on average at 4.1 percent throughout the projection period. Possible "topping-up" of HIPC assistance would further reduce debt burden indicators in 2004.<sup>5</sup> However, since "topping-up" would reduce MDRI relief provided by IDA, IDA's allocation to Malawi would be higher after possible topping-up. Assuming that growth assumptions remained unchanged, the additional IDA allocation would lead to a slight increase in Malawi's debt burden indicators relative to the baseline projections in the medium term.<sup>6</sup>

4. **Failure to implement reforms, lack of donor financing in the form of grants and exogenous shocks would lead to a substantial deterioration of Malawi's debt burden indicators.** If key macroeconomic variables, such as GDP growth, the current

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<sup>5</sup> Annual IDA allocations are reduced by the amount of MDRI relief provided in a given year. See, IDA, "The Multilateral Debt Relief Initiative: Implementation Modalities for IDA," November 2005.

<sup>6</sup> Similar to IDA, the AfDF "nets out" MDRI debt relief from its annual allocation. See AfDF, "The Multilateral Debt Relief Initiative: ADF Implementation Modalities Paper," November 2005.

account deficit and FDI inflows, would assume their historical average, Malawi's debt stock indicators would breach their thresholds within a decade (Figure 1). Debt stock indicators would also approach their thresholds toward the end of the projection period if scaling up of aid would be financed through concessional debt instead of grants. Finally, under the most extreme stress test, Malawi's NPV of debt to GDP ratio would be lifted above its indicative threshold by 2011 for a sustained period of time.

**Box 1: Macroeconomic Assumptions underlying the Debt Sustainability Analysis over 2006-25**

- **Growth.** Annual output growth is projected to amount to approximately 6 percent over the near term, and to drop to 4.5 percent in line with the regional long term average and consistent with annual per capita growth of 2.5 percent. This compares to a historical ten-year average of real GDP growth of 2.8 percent.
- **Inflation and exchange rates:** Inflation is expected to fall and remain in single digits within the near term. The real exchange rate is assumed to remain steady through the longer term.
- **Net official assistance** to Malawi is assumed to increase gradually and modestly by about 2 percent of GDP to about 23 percent of GDP by 2015, mainly as a result of debt relief. The share of grants in gross aid inflows is expected to increase from 78 percent in the first half of the decade to about 84 percent. The higher aid flows are assumed to have a high import content which will mitigate the threat of an aid-driven appreciation of the real exchange rate.
- **External official debt:** The outlook assumes the full delivery of HIPC assistance and debt relief under the MDRI. New debt is assumed to be issued on concessional terms consistent with the experience since the decision point. New borrowing is assumed to decline from 5.8 percent of GDP in the first half of this decade to 3.8 percent of GDP over the projection period.
- **FDI and exports:** Increasing and diversifying Malawi's export base is a high priority in the MGDS. Possible areas of export growth include tobacco and tea, other agricultural products, tourism, hydro electricity and mineral resources. If implemented, the export share of the economy will be increased, supported by stronger FDI inflows and growth in private sector investment.
- **Fiscal policy** is expected to target continued reduction of domestic debt to around 2 percent of GDP. The government is assumed to maintain a stable domestic revenue effort relative to GDP. A lower domestic interest bill and higher net aid inflows are assumed to support an increase in the development budget by 4 percent of GDP. In addition, poverty reducing current spending will be increased, including a rise in the wage bill to 8.5 percent of GDP to cover increased employment in social sectors. The ability of government to absorb additional aid will be a key constraint on the scaling up of aid.
- **Current account:** The current account balance is expected to deteriorate modestly. Higher exports will be offset by higher aid-driven imports and the tilt in the composition of gross aid toward loans.
- **Gross official reserves** are assumed to increase steadily to 5 months of imports over the longer term. Improving reserve coverage is a key priority because of Malawi's vulnerability to food crises and external shocks.

## II. PUBLIC DEBT SUSTAINABILITY ANALYSIS

6. **Reducing the large domestic debt burden is expected to remain the cornerstone of the government's fiscal strategy through the medium term.** Domestic debt reached almost 25 percent of GDP in 2003/04 with interest costs of 9 percent of GDP (or one fifth of the budget). When a new government was elected in early 2004, it made reversing the domestic debt spiral its fiscal priority. By the end of FY05/06 the government is expected to have succeeded in reducing domestic debt below 20 percent of GDP and domestic interest costs to about 5.5 percent. This was achieved, despite the severe food crisis, through fiscal restraint, lower interest rates, as well as higher program support. Continued fiscal restraint, further reductions in interest rates in tandem with a sustained reduction in inflation, and debt relief under the MDRI are assumed to enable the government to reduce the domestic debt below 10 percent and interest payments to about 2 percent of GDP. Over the longer term, the baseline scenario assumes that the government will target a stable domestic debt burden of about 2 percent of GDP at a cost of less than 0.5 percent of GDP in interest payments.

7. **External debt relief combined with the government's commitment to reduce domestic debt would lead to a substantial decline in Malawi's public debt stock.** Malawi's public debt stock is expected to drop from 159 percent of GDP in 2005 to 37 percent of GDP in 2006 as a result of HIPC debt relief and the implementation of MDRI. It is projected to decline and bottom out around 32 percent at the turn of the decade. Similarly, the NPV of public debt would decline from 74 percent of GDP in 2005 to around 18 percent of GDP at the end of the decade.

8. **The projected improvement in the public debt burden is vulnerable to a deterioration in either the external or domestic debt indicators.** Many of the factors that could cause deterioration in the external debt burden would also threaten domestic debt sustainability. A failure to implement reforms or insufficient donor financing in the form of grants could also lead to pressures to accumulate domestic debt. A reversion to the historical record of poor macroeconomic policy implementation during 1999-2003 would retard the reduction in domestic debt and cause deterioration in the public debt burden indicators, even with the level of external support assumed in the baseline (Figure 2).<sup>7</sup> Under the most extreme stress test, Malawi's NPV of public debt to GDP would continue to rise indefinitely.

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<sup>7</sup> Over this period, real GDP growth averaged below 2 percent and the primary deficit (including grants) averaged about 2 percent of GDP. 2004 and 2005 are excluded from this historical comparison as the primary balance was in surplus during these years.

### III. CONCLUSION

9. **Even after full delivery of HIPC debt relief and implementation of the MDRI, Malawi would remain at a moderate risk of debt distress.** On reaching the HIPC Completion Point, Malawi's NPV of debt-to-exports ratio will drop from 191 percent in 2005 to 41 percent in 2006. Debt service as a share of exports will decline from 22 to 16 percent between 2005 and 2006. Topping-up of HIPC assistance would decrease the NPV of debt to exports ratio further to 31 percent and the debt service to exports to 5.1 percent in 2006, but would not change Malawi's risk of debt distress classification. Notwithstanding good policy performance, the debt stock indicators are projected to increase during the projection period and to breach their policy-dependant thresholds if key macroeconomic variables would assume their historical average. Moreover, the NPV of debt to GDP ratio would breach its threshold under stress tests. Although projected to decline, Malawi's domestic debt is currently high, increasing Malawi's probability of debt distress. For Malawi's debt to remain sustainable in the future it is important that authorities make prudent use of the resources freed-up through debt relief and strengthen their public expenditure management. Moreover, contracting of new loans on less concessional terms or shifting from grants to loans would significantly deteriorate Malawi's debt sustainability outlook.

Table 1. Malawi: External Debt Sustainability Framework, Baseline Scenario, 2006-2026 1/  
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average 6/	Standard Deviation 6/	Projections									
	2003	2004	2005			2006	2007	2008	2009	2010	2011	2006-11 Average	2016	2021	2026
<b>External debt (nominal) 1/</b>	<b>158.9</b>	<b>148.1</b>	<b>136.8</b>			<b>20.1</b>	<b>23.6</b>	<b>25.3</b>	<b>26.8</b>	<b>28.4</b>	<b>29.7</b>		<b>35.3</b>	<b>39.8</b>	<b>42.3</b>
o/w public and publicly guaranteed (PPG)	158.9	148.1	136.8			20.1	23.6	25.3	26.8	28.4	29.7		35.3	39.8	42.3
Change in external debt	15.6	-10.8	-11.3			-116.7	3.5	1.7	1.5	1.5	1.3		1.1	0.7	0.4
Identified net debt-creating flows	18.9	-4.5	-7.7			-4.6	-0.7	-1.6	-0.3	2.1	1.5		1.1	0.9	0.6
<b>Non-interest current account deficit</b>	<b>6.1</b>	<b>7.8</b>	<b>4.6</b>	<b>5.5</b>	<b>3.9</b>	<b>6.7</b>	<b>1.4</b>	<b>0.7</b>	<b>2.3</b>	<b>4.6</b>	<b>4.0</b>	<b>3.3</b>	<b>4.1</b>	<b>4.4</b>	<b>4.8</b>
Deficit in balance of goods and services	22.5	24.4	24.8			24.8	22.0	19.8	21.2	23.0	22.4		22.2	22.1	22.1
Exports	27.2	26.8	27.3			28.0	27.7	26.4	25.2	25.5	25.7		26.9	28.2	29.5
Imports	49.7	51.2	52.0			52.8	49.7	46.2	46.4	48.5	48.1		49.1	50.3	51.6
Net current transfers (negative = inflow)	-17.3	-17.4	-21.0	-10.6	6.3	-18.8	-21.2	-19.6	-19.2	-19.2	-19.1	-19.5	-18.9	-18.9	-18.9
Other current account flows (negative = net inflow)	0.8	0.9	0.8			0.7	0.6	0.5	0.3	0.7	0.7		0.8	1.2	1.7
<b>Net FDI (negative = inflow)</b>	<b>-2.4</b>	<b>-2.3</b>	<b>-1.3</b>	<b>-1.8</b>	<b>0.5</b>	<b>-1.4</b>	<b>-1.4</b>	<b>-1.4</b>	<b>-1.3</b>	<b>-1.4</b>	<b>-1.5</b>	<b>-1.4</b>	<b>-1.8</b>	<b>-2.3</b>	<b>-2.9</b>
<b>Endogenous debt dynamics 2/</b>	<b>15.3</b>	<b>-10.0</b>	<b>-11.1</b>			<b>-9.9</b>	<b>-0.7</b>	<b>-0.9</b>	<b>-1.2</b>	<b>-1.1</b>	<b>-1.1</b>		<b>-1.2</b>	<b>-1.3</b>	<b>-1.4</b>
Contribution from nominal interest rate	1.5	1.5	1.3			1.0	0.4	0.4	0.2	0.2	0.2		0.3	0.4	0.4
Contribution from real GDP growth	-9.5	-10.5	-3.7			-10.9	-1.1	-1.3	-1.4	-1.4	-1.3		-1.4	-1.6	-1.8
Contribution from price and exchange rate changes	23.3	-1.0	-8.6			...	...	...	...	...	...		...	...	...
<b>Residual (3-4) 3/</b>	<b>-3.3</b>	<b>-6.3</b>	<b>-3.6</b>			<b>-112.1</b>	<b>4.2</b>	<b>3.3</b>	<b>1.8</b>	<b>-0.5</b>	<b>-0.2</b>		<b>-0.1</b>	<b>-0.1</b>	<b>-0.2</b>
o/w exceptional financing	0.0	0.0	0.0			-0.7	-0.1	0.0	0.0	-0.8	-0.7		-0.4	-0.1	0.0
NPV of external debt 4/	...	...	52.0			10.9	12.9	13.8	14.6	15.5	16.1		18.9	22.0	24.0
In percent of exports	...	...	190.9			39.0	46.7	52.3	58.1	60.8	62.5		70.2	77.9	81.4
<b>NPV of PPG external debt</b>	<b>...</b>	<b>...</b>	<b>52.0</b>			<b>10.9</b>	<b>12.9</b>	<b>13.8</b>	<b>14.6</b>	<b>15.5</b>	<b>16.1</b>		<b>18.9</b>	<b>22.0</b>	<b>24.0</b>
In percent of exports	...	...	190.9			39.0	46.7	52.3	58.1	60.8	62.5		70.2	77.9	81.4
<b>In percent of revenue</b>	<b>...</b>	<b>...</b>	<b>225.0</b>			<b>48.5</b>	<b>57.0</b>	<b>60.8</b>	<b>65.8</b>	<b>69.3</b>	<b>71.8</b>		<b>84.4</b>	<b>98.1</b>	<b>107.3</b>
Debt service-to-exports ratio (in percent)	21.8	22.9	21.5			16.2	6.4	6.0	5.1	4.5	4.4		3.4	2.3	2.5
<b>PPG debt service-to-exports ratio (in percent)</b>	<b>21.8</b>	<b>22.9</b>	<b>21.5</b>			<b>16.2</b>	<b>6.4</b>	<b>6.0</b>	<b>5.1</b>	<b>4.5</b>	<b>4.4</b>		<b>3.4</b>	<b>2.3</b>	<b>2.5</b>
Total gross financing need (billions of U.S. dollars)	168.9	221.9	190.8			217.2	41.6	22.1	59.2	126.3	114.6		138.1	167.8	223.8
Non-interest current account deficit that stabilizes debt ratio	-9.5	18.6	15.9			123.4	-2.1	-1.0	0.7	3.1	2.7		3.0	3.7	4.5
<b>Key macroeconomic assumptions</b>															
Real GDP growth (in percent)	6.1	7.1	2.8	2.6	3.9	8.4	5.6	6.0	6.0	5.5	5.0	6.1	4.5	4.5	4.5
GDP deflator in US dollar terms (change in percent)	-14.0	0.6	6.2	0.2	7.7	-2.5	-0.8	2.0	2.0	2.2	2.2	0.8	2.2	2.2	2.2
Effective interest rate (percent) 5/	1.0	1.0	0.9	1.0	0.1	0.8	2.0	1.8	1.0	0.9	0.9	1.2	0.9	1.0	0.9
Growth of exports of G&S (US dollar terms, in percent)	2.1	6.2	10.8	0.2	9.2	8.6	3.5	3.3	3.2	8.8	8.3	6.0	7.8	7.8	7.8
Growth of imports of G&S (US dollar terms, in percent)	9.3	11.0	10.8	7.9	12.8	7.3	-1.4	0.5	8.5	12.7	6.4	5.7	7.2	7.3	7.5
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	37.2	34.1	36.6	39.2	40.3	41.1	38.1	39.9	38.9	37.3
<i>Memorandum item:</i>															
Nominal GDP (billions of US dollars)	1765.5	1902.8	2075.6			2194.5	2300.0	2487.0	2688.6	2898.9	3110.8		4322.3	6005.5	8344.2

Source: Bank-Fund Staff simulations.

1/ Includes both public and private sector external debt. Baseline does not include possible "topping-up" assistance.

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  $\rho$  = 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. Malawi: Public Sector Debt Sustainability Framework, Baseline Scenario, 2006-2026  
(In percent of GDP, unless otherwise indicated)

	Actual			Historical Average 5/	Standard Deviation 5/	Estimate					Projections				
	2003	2004	2005			2006	2007	2008	2009	2010	2011	2006-11 Average	2016	2021	2026
<b>Public sector debt 1/</b>	169.9	172.5	158.6			37.4	37.4	34.6	31.9	31.0	31.7		37.3	41.8	44.3
o/w foreign-currency denominated	146.7	148.1	136.8			20.1	23.6	25.3	26.8	28.4	29.7		35.3	39.8	42.3
	23.2	24.4	21.8			17.4	13.8	9.3	5.1	2.6	2.0				
Change in public sector debt	11.2	2.6	-13.9			-121.2	0.0	-2.8	-2.7	-1.0	0.7		1.1	0.7	0.4
Identified debt-creating flows	16.0	-24.4	-9.9			-11.2	-4.0	-4.3	-3.9	-3.0	-1.2		0.6	0.8	0.9
Primary deficit	0.6	-3.0	-4.1	0.2	2.3	-4.0	-3.2	-2.8	-1.9	-1.0	1.0	-2.0	2.7	3.0	3.4
Revenue and grants	31.6	36.4	42.0			42.3	40.5	39.0	38.5	38.2	38.3		37.9	37.7	37.4
of which: grants	9.8	12.4	16.5			18.1	16.2	15.0	14.7	14.5	14.6		14.2	13.9	13.8
Primary (noninterest) expenditure	32.2	33.4	37.9			38.3	37.2	36.2	36.5	37.3	39.3		40.7	40.7	40.8
Automatic debt dynamics	18.0	-18.9	-2.1			-4.4	0.6	-0.5	-1.0	-1.3	-1.4		-1.8	-2.0	-2.5
Contribution from interest rate/growth differential	-3.8	-7.5	-3.8			-12.1	0.6	-0.5	-1.0	-1.2	-1.4		-1.7	-1.9	-2.4
of which: contribution from average real interest rate	5.2	3.8	0.8			0.3	2.6	1.7	1.0	0.4	0.1		-0.2	-0.2	-0.5
of which: contribution from real GDP growth	-9.1	-11.3	-4.6			-12.4	-2.0	-2.1	-2.0	-1.7	-1.5		-1.6	-1.8	-1.9
Contribution from real exchange rate depreciation	21.9	-11.4	1.6			7.7	0.0	0.0	0.0	0.0	-0.1		...	...	...
Other identified debt-creating flows	-2.7	-2.5	-3.7			-2.8	-1.3	-1.0	-1.0	-0.8	-0.7		-0.4	-0.1	0.0
Privatization receipts (negative)	0.0	0.0	-0.8			-0.7	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
Debt relief (HIPC and other)	-2.7	-2.5	-2.9			-2.1	-1.3	-1.0	-1.0	-0.8	-0.7		-0.4	-0.1	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
Residual, including asset changes	-4.8	27.0	-4.0			-110.0	4.0	1.5	1.2	2.1	1.9		0.5	-0.1	-0.6
<b>NPV of public sector debt</b>	90.6	91.0	73.9			28.3	26.7	23.2	19.7	18.1	18.1		20.9	24.0	26.0
o/w foreign-currency denominated	67.4	66.6	52.0			10.9	12.9	13.8	14.6	15.5	16.1		18.9	22.0	24.0
o/w external	67.4	66.6	52.0			10.9	12.9	13.8	14.6	15.5	16.1		18.9	22.0	24.0
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	0.0		0.0	0.0	0.0
Gross financing need 2/	27.3	30.1	29.2			23.3	17.7	13.6	9.4	5.7	4.9		5.7	5.7	5.7
NPV of public sector debt-to-revenue ratio (in percent) 3/	287.0	249.9	176.0			66.9	66.1	59.4	51.3	47.2	47.2		55.0	63.6	69.7
o/w external	213.5	183.0	124.0			25.9	31.9	35.5	38.1	40.4	41.9		49.8	58.3	64.3
Debt service-to-revenue ratio (in percent) 3/ 4/	41.9	38.2	28.9			21.5	14.1	10.8	8.0	5.8	4.3		3.1	2.6	1.3
Primary deficit that stabilizes the debt-to-GDP ratio	-10.5	-5.6	9.8			117.2	-3.2	0.0	0.8	0.0	0.3		1.7	2.3	3.1
<b>Key macroeconomic and fiscal assumptions</b>															
Nominal GDP (local currency)	172	207	246			304	345	393	447	506	570		1011	1791	3175
Real GDP growth (in percent)	6.1	7.1	2.8	2.8	3.7	8.4	5.6	6.0	6.0	5.5	5.0	6.1	4.5	4.5	4.5
Average nominal interest rate on forex debt (in percent)	1.1	1.1	1.0	1.1	0.2	0.8	2.6	1.7	1.3	1.0	0.9	1.4	0.9	1.0	0.3
Average real interest rate on domestic currency debt (in percent)	43.7	26.9	13.9	29.8	10.7	11.4	15.0	13.1	12.8	14.7	14.7	13.6	9.9	9.6	9.3
Real exchange rate depreciation (in percent, + indicates depreciation)	16.4	-8.5	1.2	5.9	32.0	6.2	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	9.2	12.5	15.4	24.2	13.4	13.9	7.7	7.4	7.3	7.3	7.3	8.5	7.3	7.3	7.3
Growth of real primary spending (deflated by GDP deflator, in percent)	17.9	11.1	16.6	9.3	7.9	9.6	2.7	3.1	6.9	7.6	10.8	6.8	4.4	4.3	4.6
Grant element of new external borrowing (in percent)	57.0	57.0	57.0	57.0	0.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0	57.0

Sources: Malawian authorities; and Bank-Fund staff estimates and projections.

1/ Public sector refers to the general government. Gross debt is used. External debt after HIPC assistance and MDRI debt relief and without possible "topping-up" of HIPC assistance.

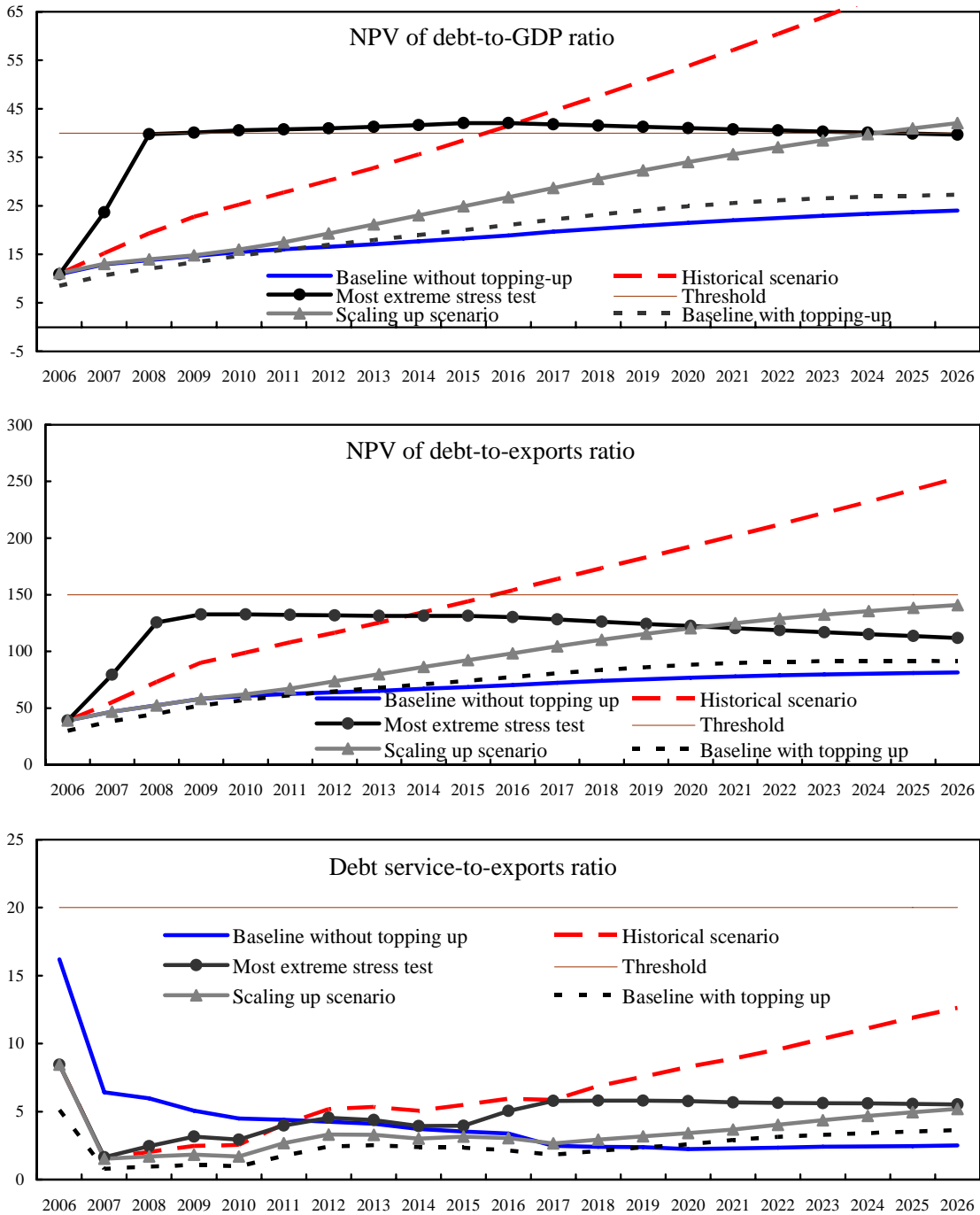
2/ Gross financing need is defined as the primary deficit plus debt service plus the stock of short-term debt at the end of the last period.

3/ Revenues including grants.

4/ Debt service is defined as the sum of interest and amortization of medium and long-term debt.

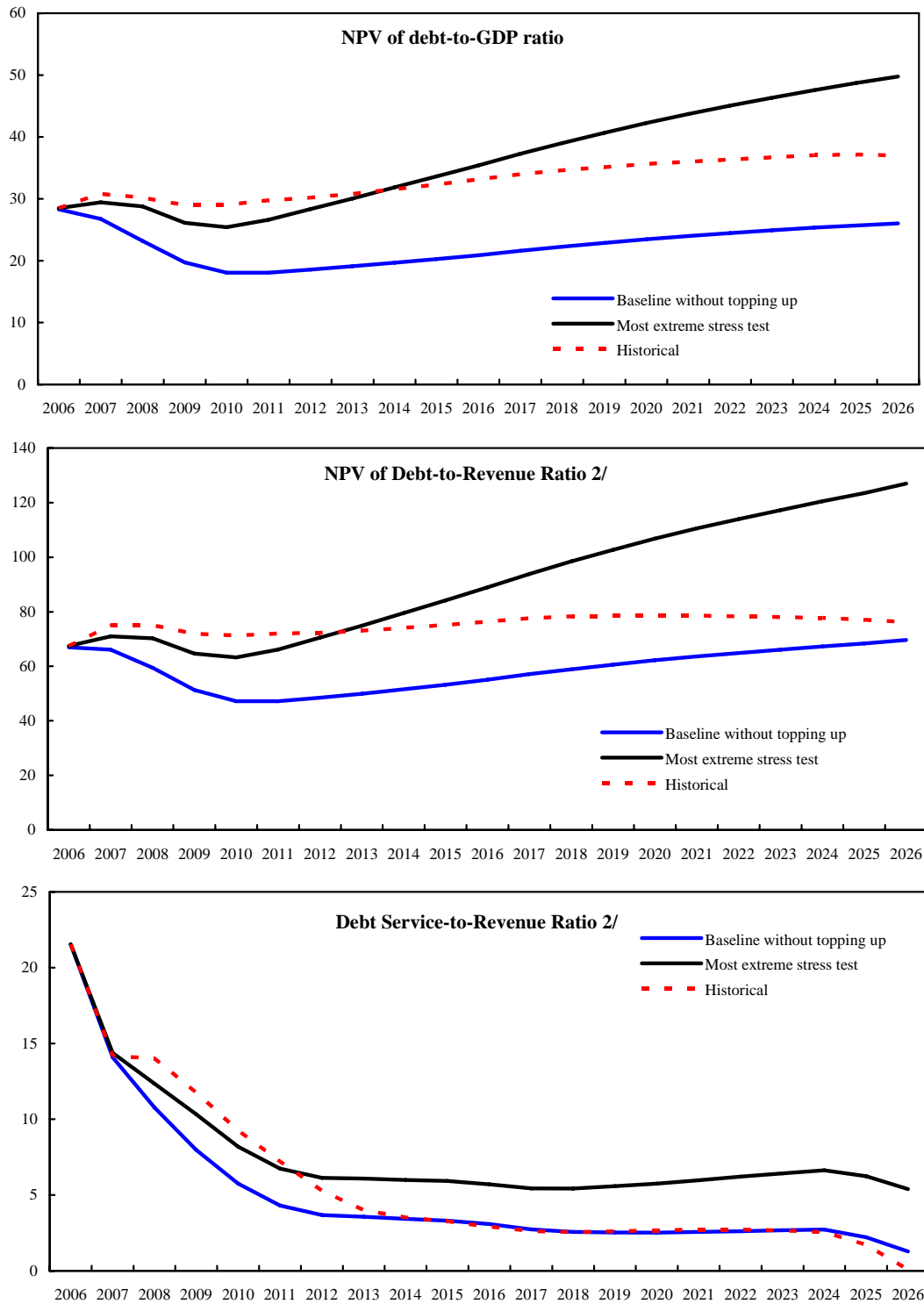
5/ Historical averages and standard deviations are generally derived over the past 6 years due to lack of data availability.

Figure 1. Malawi: Indicators of Public and Publicly Guaranteed External Debt Under Alternative Scenarios after MDRI and without topping up, 2006-2026 (In percent)



Source: Bank-Fund staff projections and simulations.

**Figure 2. Malawi: Indicators of Public Debt Under Alternative Scenarios, 2006-2026 1/**



Source: Staff projections and simulations.

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

2/ Revenue including grants.