INTERNATIONAL MONETARY FUND

MALAWI

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SEVENTH AND EIGHTH REVIEWS UNDER THE EXTENDED CREDIT FACILITY ARRANGEMENT AND REQUEST FOR WAIVERS FOR NONOBSERVANCE OF PERFORMANCE CRITERIA, EXTENSION OF THE ARRANGEMENT, AUGMENTATION OF ACCESS, MODIFICATION OF PERFORMANCE CRITERION, AND REPHASING OF DISBURSEMENTS—DEBT SUSTAINABILITY ANALYSIS

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The Debt Sustainability Analysis has been prepared jointly by IMF and International Development Association staff using the debt sustainability framework for low-income countries approved by the Boards of both institutions.

Malawi faces a moderate risk of debt distress based on an assessment of public external debt, with heightened vulnerabilities related to domestic debt.[1] Malawi's[2] debt situation is somewhat better than indicated in the last DSA[3] mostly on account of recent rebasing of GDP. Except for the debt service-to-revenue ratio – which displays a marginal and temporary breach in 2016, baseline external debt burden indicators remain below their indicative thresholds, but stress tests show that a weaker debt outcome is possible under the historical scenario. The projected borrowing path and debt policies remain broadly unchanged since the last DSA.

[1] The DSA was prepared by Pranav Gupta (Economist, IMF) and Richard Record (Senior Economist, World Bank).

[2] Malawi has weak capacity of debt monitoring and the average CPIA score for past three years stands at 3.15.

[3] *IMF Country* Report *No. 15/83, March 2015.*

BACKGROUND

1. The last Low Income Country Debt Sustainability Analysis (DSA) conducted in March 2015 concluded that Malawi's external public debt faced moderate risk of debt distress. Malawi's external debt situation has shown a slightly improvement since the last DSA on account of the rebasing of GDP and (to a lesser extent) lower incremental external borrowing in 2015.

2. Malawi's score under the World Bank's Country Policy and Institutional Assessment (CPIA), which measures the quality of a country's present policy and institutional framework, improved slightly in 2015. The CPIA assesses how conducive that framework is to fostering poverty reduction, sustainable growth, and the effective use of development assistance. Malawi's score peaked to 3.4 in 2007 before deteriorating to 3.1 in 2013. Thus, the 2015 score of 3.2 represents a modest recovery. Malawi performs better than the average for SSA in the areas of social inclusion and equity (with a score of 3.5, much higher than 3.2 for SSA), and is broadly in line with regional averages for public sector management and institutions (3.1 vs. 3.0 of SSA). Structural policies are also at par with the average of SSA (3.2), while economic management stands below regional average at 3.0 (compared to 3.3 for SSA). Since 2014, Malawi has been subject to the tighter debt thresholds for DSA analysis reflecting a weak policy and institutional framework. The recent small improvement in the CPIA score does not affect debt thresholds for Malawi.

3. To improve the debt monitoring capacity and strengthen the debt management framework, Malawi has established a debt management committee. Malawi has recently managed to fully operationalize the Debt Management Committee, whose membership is at senior level. The committee will look at each external borrowing and ascertain its concessionality. It will also ensure that external debt remains sustainable and the right balance of cost and risks is achieved.

4. Malawi's National Statistical Office recently rebased the country's GDP series by updating the base year from 2007 to 2010, resulting in nominal GDP revised upwards by 29 percent. The new series is based on an updated set of reference prices and better reflects current economic developments. The rebasing has fundamental implications for a number of key indicators, including a decline in the actual revenue-to-GDP and public debt-to-GDP ratios[4].

Recent Debt Developments

5. Malawi's public and publicly guaranteed (PPG) external debt stood at about US$1.78 billion (37.0 percent of GDP) in 2015, compared to US$1.45 billion (30.8 percent of GDP) in 2013. At the end of 2014, the nominal value of PPG external debt stood at US$1.8 billion, which fell marginally to US$1.78 billion in 2015 on account of lower external borrowing by the central government and the recent

[4] Prior to GDP rebasing in 2014, the public and publicly guaranteed external debt to GDP ratio stood at 44.0 percent in 2013, which now is revised down to 30.8 percent in 2013.

exchange rate depreciation[5], which reduced the face value of PTA debt outstanding. The PTA debt restructuring loan[6] was contracted in 2014 in US dollars with the repayment to be done in Kwacha. This implies that as the exchange rate depreciates, the dollar denominated face value of PTA debt declines. Despite the fall in nominal value of debt in 2015, the debt to GDP ratio has increased because of the sharp decline in the GDP deflator caused by the recent depreciation of the exchange rate.

6. The external debt of Malawi is held mainly by multilateral creditors, with 75 percent of the total in 2015, and the remainder held by bilateral creditors (Text Table 1). The main provider of loans to Malawi is the International Development Association (IDA) (33 percent), followed by the African Development Fund (ADF) (13 percent) and the IMF (9 percent). China and India are the main holders among bilateral creditors, with China accounting for about 14 percent of total debt. Data on private external debt remains unavailable, but the amounts are not believed to be large.

Text Table 1. Malawi: Composition of Public and Publically Guaranteed External Debt

(Million USD)

	2013		2014		2015	
	Actual	Share	Actual	Share	Actual	Share
Multilaterals	1011.00	69.85	1357.40	75.22	1343.10	75.33
IMF	198.20	13.69	176.00	9.75	162.81	9.13
IDA	416.50	28.78	501.40	27.79	589.90	33.09
ADF	190.90	13.19	226.00	12.52	228.77	12.83
IFAD	75.60	5.22	77.40	4.29	71.80	4.03
other multilateral	129.80	8.97	376.60	20.87	289.83	16.26
		0.00		0.00		0.00
Bilateral	413.60	28.58	432.60	23.97	439.48	24.65
France	10.80	0.75	3.30	0.18	0.00	0.00
Belgium	2.20	0.15	1.90	0.11	1.72	0.10
People's Republic of China	252.40	17.44	244.00	13.52	242.74	13.61
India	106.20	7.34	141.80	7.86	151.74	8.51
others	42.00	2.90	41.60	2.31	43.28	2.43
		0.00		0.00		0.00
Commercial	22.78	1.57	14.49	0.80	0.39	0.02
Total	**1447.38**	**100.00**	**1804.49**	**100.00**	**1782.97**	**100.00**

Sources: Malawian authorities; and IMF staff estimates.

7. Gross domestic debt increased from MK206.6 billion (13.8 percent of the new rebased GDP) at the end of 2012 to MK538.2 billion (16.8 percent of GDP) at the end of 2015. As illustrated in Text Table 2, this increase is largely due to:

[5] The Kwacha depreciated by around 36 percent from July 2015 to February 2016.

[6] An equivalent to 4.1 percent of GDP of RBM advances was converted into Treasury notes and sold to a regional non-resident bank (PTA bank) in December 2014–January 2015. The PTA debt restructuring loan was considered as external loan despite repayment to be made in local currency on account of the lender (PTA bank) being a non-resident. At the time of contracting, the government sold to PTA three-year maturity Treasury bills, equivalent to US$250 million. The US dollar value of Treasury notes held by PTA declined following the recent steep depreciation of the Kwacha.

- The rise in government net domestic financing (NDF) during FY13/14 and FY14/15, following the drop in external financing in the wake of the "cashgate" scandal; NDF averaged 3.7 percent of GDP during these two fiscal years and was covered by a mix of issuance of treasury bills and accumulation of ways and means advances from the RBM.

- The issuance of promissory notes in 2013–14 in the amount of MK58 billion (2.3 percent of the 2014 GDP) by the government to recapitalize the central bank following losses that arose from the 2012 devaluation of the exchange rate.

- The securitization of domestic arrears in March 2013 (2.2 percent of GDP) and in 2015 (1 percent of GDP). The 2013 issuance securitized close to MK40 billions of verified old arrears, through promissory notes maturing in 2017, at the T-bill rates plus 200 basis points. The 2015 issuance is related to a stock of domestic arrears uncovered in late 2014 (about MK157 billion). Of that stock, MK31 billion had been verified, audited and paid by zero-coupon promissory notes at end-2015.

- The issuance of a substantial amount of treasury notes (4.8 percent of GDP) with maturity ranging from two to seven years, during the second half of 2015. About one-third of the issued amount was through a conversion of ways and means. The objective of these issuances was to restructure the maturity profile of the local public debt as well as to assist in financing maturing debt and the development budget.

Text Table 2. Composition of Gross Domestic Debt
(Percent of GDP)

	2012	2013	2014	2015
		Actual		
Treasury bills at cost value	9.0	9.1	6.9	6.2
Treasury notes	2.7	1.8	1.3	6.1
Local registered stocks (LRS)	0.2	0.1	0.1	0.0
Ways and means advances from RBM	1.7	5.2	3.0	0.9
Promissory notes for recapitalization of banks	0.1	1.5	2.3	2.0
Promisory notes for clearance of arrears	0.0	2.2	1.4	1.6
Commercial bank advances	0.1	0.0	0.0	0.0
Total	**13.8**	**19.8**	**14.9**	**16.8**

Sources: Malawian authorities and IMF staff estimates.

UNDERLYING DSA ASSUMPTIONS

8. Weather-related shocks, compounded by macroeconomic instability during 2015 resulted in several areas of underperformance relative to the March 2015 DSA. First flooding and then drought severely affected the maize crop and weakened growth (by 2.7 percentage points) and contributed to

higher annual inflation (24.9 percent at end-2015). The Kwacha, like most currencies in the region, has experienced a sharp depreciation since end-June. Despite robust tobacco exports, overall exports dropped because of lower agricultural exports and the closure of the uranium mine. The baseline maintains the assumption of a gradual reduction in the external current account deficit beyond 2016 through export diversification and productivity improvement in the exportable sectors. It also assumes a gradual lowering of the reliance on grants and concessional financing over the long-term. End-of-period inflation is programmed to drop to single digits by end-2017. The key macroeconomic assumptions are summarized in Box 1.

9. It is assumed that the current policy mix aimed at restoring macroeconomic stability will be pursued over the medium-term. These policies will consist of tighter fiscal and monetary policies to keep inflation on a declining trend, PFM reforms to improve the quality of spending and mobilization of revenues, and structural reforms to address supply-side bottlenecks and improve factor productivity.

Box 1. Baseline Macroeconomic Assumptions

Real GDP growth is projected to gradually recover from 2.7 percent in 2016 to 5 percent in 2018 and to remain close to 5.5 percent over the longer term, driven by agriculture, improved productivity across sectors and population growth rate.

Inflation (end-of period) is projected to gradually decline from 24.9 percent at end-2015 to 15.8 percent by December 2016 and to reach single digits by 2017 in the absence of other weather-related shocks. The continuation of tight fiscal and monetary policies should help anchor inflation expectations based on the decline in nonfood inflation for five consecutive months.

The exchange rate is projected to remain constant in real terms in medium-long term.

The tax revenue to GDP ratio is expected to increase in FY15/16 and FY16/17 due to higher tax collection in international trade following, the recent sharp depreciation and improved efficiency of tax administration. In long run, we assume that the tax revenue will gradually increase from 16.8 percent of GDP in FY16/17 to 22 percent of GDP in FY35/36, as a result of reforms in tax administration and policy.

External debt will be mainly contracted over the medium term from multilateral creditors on concessional terms, with the remainder being bilateral on less concessional terms. Budget support from multilateral and bilateral donors is assumed to remain subdued for FY 2015/16 and into the medium term.

The current account deficit is projected to increase in 2016 due to higher imports of food supplies to compensate for domestic food shortage, which would be financed by higher off-budget donor support. Going forward from 2017, the current account is projected to remain at a gradual declining path.

New disbursements on external loans. For 2016 and the first half of 2017, new disbursements on external loans are taken from the authorities' fiscal framework, which projects capital spending covered by external loans to reach 3.8 percent of GDP in FY15/16 and 2.9 percent of GDP in FY16/17. It is assumed that external project loans will remain close to 2.7 percent of GDP in subsequent fiscal years.

Net domestic financing. It is assumed that government net domestic financing will be limited to less than 1 percent of GDP in each fiscal year beyond FY16/17, thus contributing marginally to the change in domestic debt.

Text Table 3. Macroeconomic Forecasts and Assumptions (Previous and Current DSA) [1/]

	Real GDP growth		Primary deficit (percent of GDP)[2/]		Change in public debt (percent of GDP)	
Year	Previous	Current	Previous	Current	Previous	Current
2013	5.2	5.2	1.9	-2.2	14.9	10.4
2014	5.7	5.7	-1.6	-0.3	3.7	-2.6
2015	5.5	3.0	-0.9	-2.0	-15.5	5.8
2016	5.7	2.7	-3.1	-2.5	-3.3	-1.7
2017	6.0	4.5	-2.4	-0.2	-6.2	-5.0
2018	5.9	5.0	-0.9	-0.6	-1.1	-2.4
2019	5.8	5.5	-1.2	-0.3	-1.9	-2.1
2020	5.9	5.5	-0.5	-0.7	-1.9	-1.0
Avg 2021-2034	6.0	5.5	1.0	-1.4	-2.0	-0.2

Sources: Malawian authorities and IMF staff calculations and projections.
1/ Base year for previous DSA was 2013 and is 2015 for the current DSA.
2/On a calendar year basis.

Borrowing Plan

10. Malawi is expected to contract around US$170 million of concessional loans in FY2015/16 and plans to contract about US$379.5 million in FY2016/17. Malawi contracted about US$119.5 million in the first half of FY 2015/16 on concessional terms, with a major portion contracted with multilateral donors for infrastructure projects. The rest of the amount is expected to be contracted in the second half of the fiscal year. In FY2016/17, the government expects to borrow US$379.5 million, 80 percent of which would be on concessional basis, whereas the remaining 20 percent would be on a non-concessional basis. The loans would primarily for the health, education and agricultural sectors. The DSA assumes that about 20 percent of new borrowing in 2016–18 would be non-concessional, an assumption which largely accommodates disbursements on two nonconcessional loans. The major portion of the nonconcessional borrowing would be from the African Development Bank with a grant element slightly less than 35 percent. These borrowing plans (Text Table 4.) are consistent with authorities' objective of social development and poverty reduction and with maintaining overall medium- to long-term debt sustainability.

Text Table 4. Authorities' External Borrowing Plan

PPG external debt contracted of guaranteed	Volume of new debt in USD Million (FY2016/17)	Volume of new debt in USD Million (FY2017/18)
Source of debt financing		
Concessional debt	302	160
Multilateral debt	279	**130**
Bilateral debt	23	30
Non-concessional debt	77.5	20
Total	**379.5**	**180**
Use of debt financing		
Health, Education,Water,Sanitation and Irrigation	187	65
Agriculture, Trade, Industry and Private Sector Development	170	95
ICT (E-government)	22.5	20

Sources: Malawian authorities and IMF staff estimates.

EXTERNAL PUBLIC DEBT SUSTAINABILITY

11. Except for a very modest breach in 2016 in the debt service to revenue ratio, all external debt indicators remain well below their policy-dependent debt-burden thresholds. Debt service is high in 2016 because of large amortization related to debt restructuring operation with PTA, which causes a temporary breach of the threshold, but the ratio falls significantly once the PTA related amortization is completed. Our rating assessment is also supported by the probability approach to the DSA (figure 3), which yields an improved profile for debt dynamics and breaches under the stress tests, providing a clearer case for moderate risk. In 2016 and 2017, the nominal value of PPG external debt is projected to fall further on account of the large amortization repayment related to the PTA loan. Also, recent GDP rebasing lowers the overall debt profile compared to the previous DSA, helping to improve debt dynamics.

Stress Tests

12. Standard tests indicate that a somewhat weaker debt outcome is possible under certain conditions. The strongest impact on the indicators arises under the historical scenario, when the average current account deficit was around 10.1 percent of GDP and low foreign direct investment (around 1.5 percent of GDP), causing the PV of debt to GDP and the PV of debt to exports to breach the thresholds and remain at elevated levels. Since the last DSA, the team has moved to the IMF BPM6 classification. In the past, project and dedicated grants were classified in the current account but are now reclassified in the capital account, leading to significant increase in historical values of the current account deficit[7]. This explains why the breach under the historical scenario is more pronounced compared to the last DSA. However, Malawi is unlikely to run high and protracted current account deficits in medium-long term because (i) prior to 2012, Malawi had a pegged exchange rate regime, with exchange rate highly overvalued, which has now been removed (ii) as the business environment improves, we expect increases in FDI inflows, especially in the energy sector.

PUBLIC DEBT SUSTAINABILITY

13. Gross domestic debt as a percentage of GDP is projected to gradually decline from 18.9 percent of GDP at end-2016 to about 14 percent of GDP at end-2036. These projections assume that (i) the cost value of all maturing T-bills and the face-value of all maturing Treasury notes will be continuously rolled over; (ii) the government net domestic financing will be limited to less than 1 percent of GDP in each fiscal year after 2016[8]; (iii) the issuance of zero coupon promissory notes for the payment of domestic arrears uncovered in late 2014 will be gradually completed by mid-2017, after verification and

[7] Average of current account over last 10 years was around -5.5 percent of GDP, compared to -10.1 percent under the revised classification. For example, under the reclassification, current account for 2011 and 2012 were revised from -5.9 percent and -3.5 percent of GDP to -9.3 and -8.7 percent of GDP respectively.

[8] Domestic financing is expected to increase in 2016 in order to respond to the drought.

audit; and (iv) all maturing promissory and Treasury notes, including those sold to PTA bank, will also be automatically converted into advances from the central Bank and ultimately into marketable securities.

14. The baseline scenario projects a gradual decline in public debt to GDP. The levels and paths for total public debt are in line with the March 2015 DSA, with debt to GDP indicators about 2 percentage points higher than desirable benchmarks, in spite of the substantial decline in this ratio caused by the rebasing of GDP. The breach is caused due to significant increase in domestic debt related to PTA amortization[9]. Standard tests suggest that the debt dynamics would deteriorate relative to the baseline (Figure 2 and Table 3). The strongest impact is under the fixed primary balance scenario, where we assume that the primary deficit would remain constant at the 2016 level (2.5 percent of GDP) for the remainder of projection period. In 2016, the primary deficit is expected to increase on account of additional maize procurement (around 1 percent of GDP) related to drought. However, the deficit is unlikely to remain high beyond 2017.

Policy Implications

15. Malawi continues to face a number of external financing risks that can only be addressed by increased fiscal restraint in order to ensure that growth in the country's debt takes place at a sustainable pace. As such, fiscal tightening is expected to be the policy response to unexpected negative financing shocks (such as delayed or lower donor support, lower tax revenue or growth shocks). Higher than assumed domestic borrowing would bring additional pressures on the exchange rate and on non-food inflation, and crowd out private sector borrowing and investment, while also eroding perceptions of government commitment to policy reforms and maintaining macroeconomic stability.

16. A key challenge will be absorbing the impact of a second year of droughts and food security challenges in fiscal year 2016/17. The authorities are expected to rely primarily on additional grant financing in order to meet household maize consumption needs as a result of the weak harvest. The authorities will explore additional cuts in domestically financed development expenditure, and in other goods and services in order to meet any gaps in food security needs and to avoid additional unplanned domestic borrowing. Hence government will need to carefully balance the maintenance of stability in key macroeconomic variables, with an effective drought response and the maintenance of core public services that reach the poorest segments of the population. In this scenario, there is a strong case to be made for confronting the political challenges of reducing expenditure in political sensitive areas, including subsidy programs (such as on fertilizer), and exercising restraint over the management and growth of public sector compensation.

Authorities' Views

17. The Malawian authorities concurred with the analysis and conclusion of this DSA. They agreed with staff that a prudent external borrowing and a consolidated fiscal position limiting

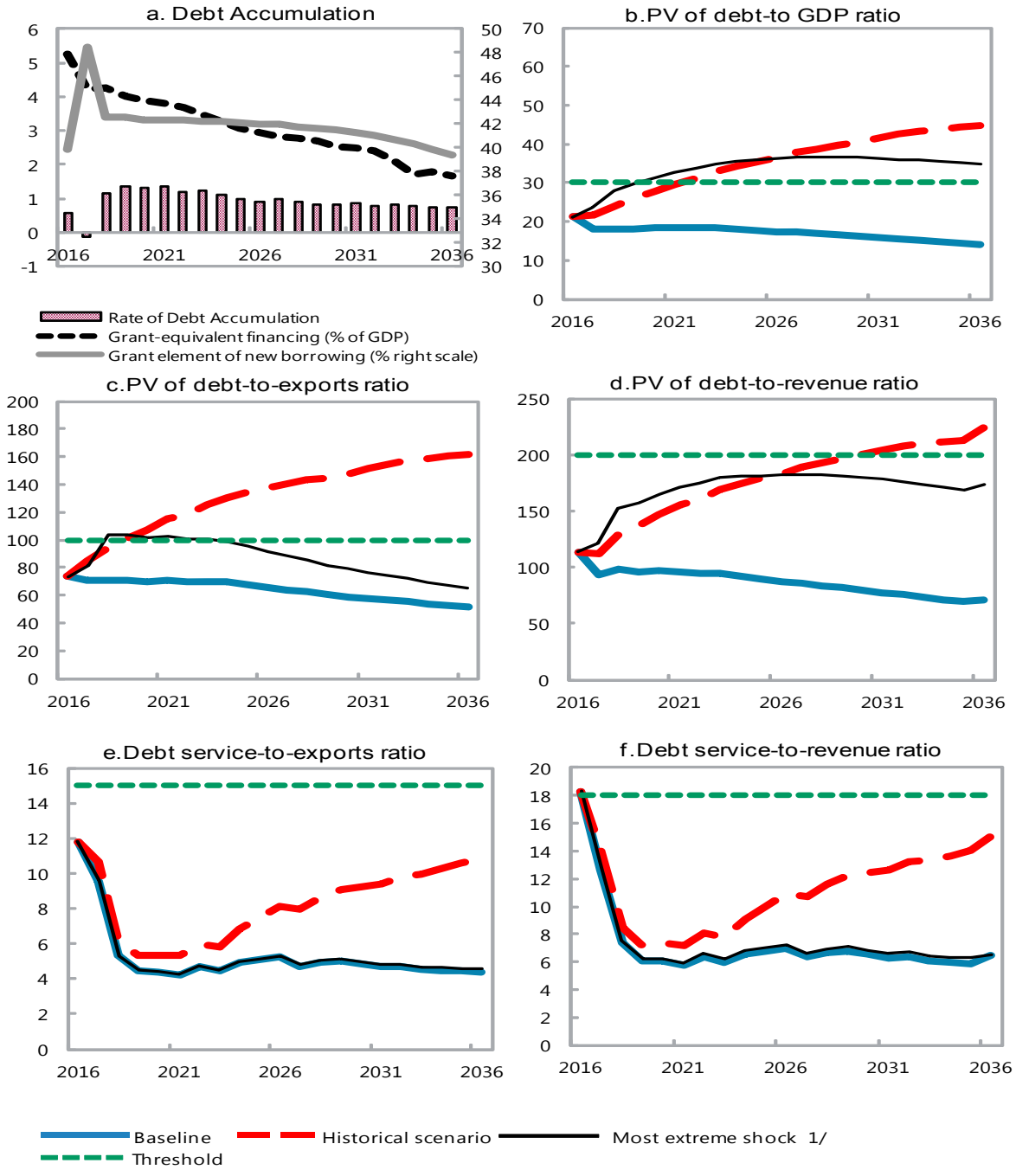
[9] Domestic debt is projected to increase from 16.8 percent in 2015 to 18.9 percent in 2016. We assume that as the PTA debt is amortized, the debt is rolled over from foreign to domestic.

domestic financing needs will be key to maintaining total debt sustainability. Achieving this objective will require strengthening debt management and relying on concessional debt to the extent possible.

CONCLUSIONS

18. Malawi remains at moderate risk of debt distress, based on an assessment of external public debt, but heightened overall risks remain, reflecting vulnerabilities to domestic debt and external conditions. Risks of export-related and weather shocks remain, and have materialized since the last DSA. Malawi suffers from vulnerabilities related to a dependency on a short and predominantly rain-fed agricultural season in order to meet food security needs and an increased frequency of climate-induced weather shocks. These vulnerabilities can be mitigated by long-term investments in infrastructure and diversification of the economy. Absorption of such weather shocks while maintaining macroeconomic stability and debt sustainability will require careful macroeconomic management and difficult policy choices. Similarly, risks of negative financing shocks in the form of delayed donor support, or lower- than -expected revenue also remain, given Malawi's high aid dependency. This calls for further efforts to broaden the tax base and strengthen public financial management.

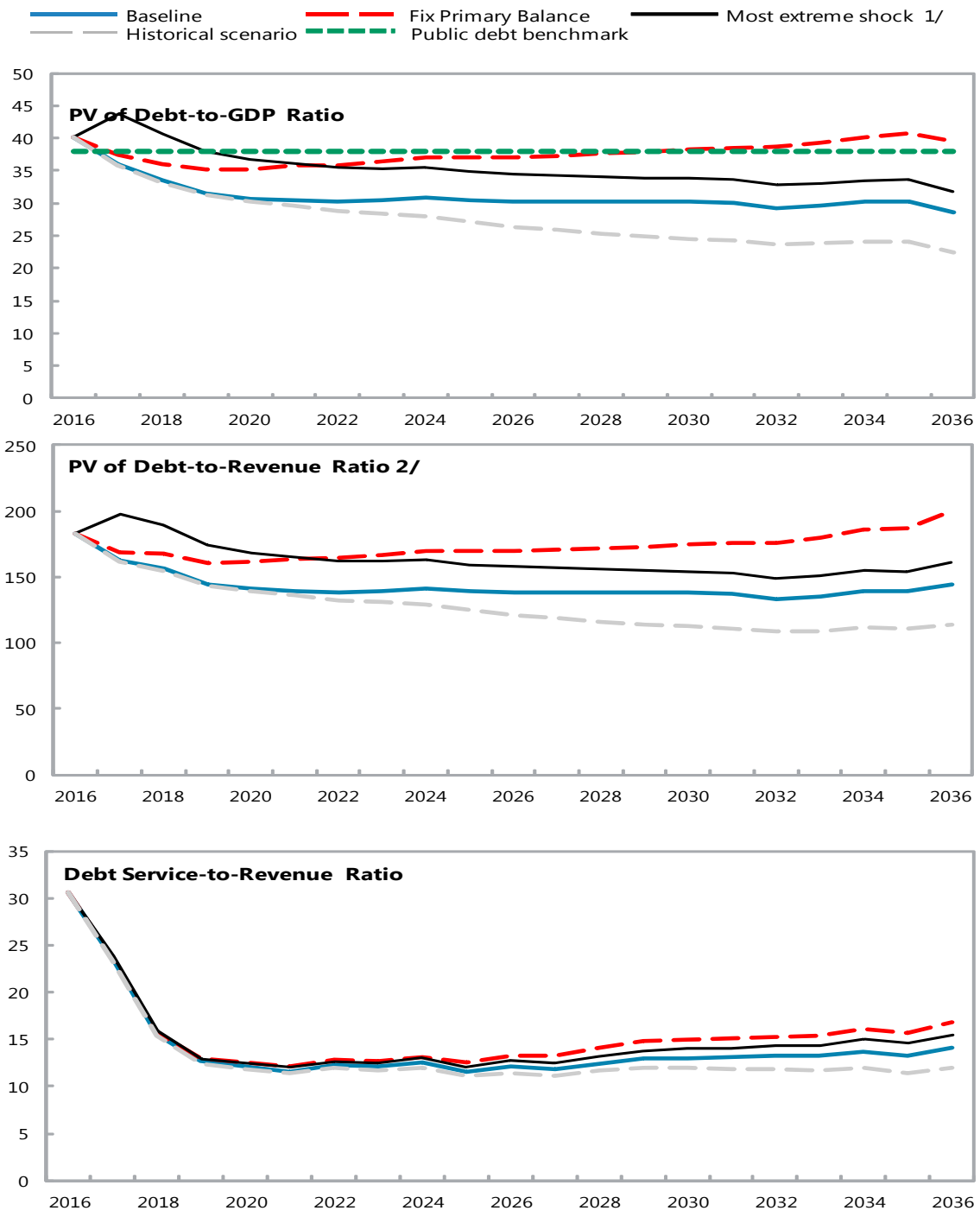
Figure 1. Malawi: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2016–2036 1/



Sources: Malawian authorities and IMF staff estimates and projections.

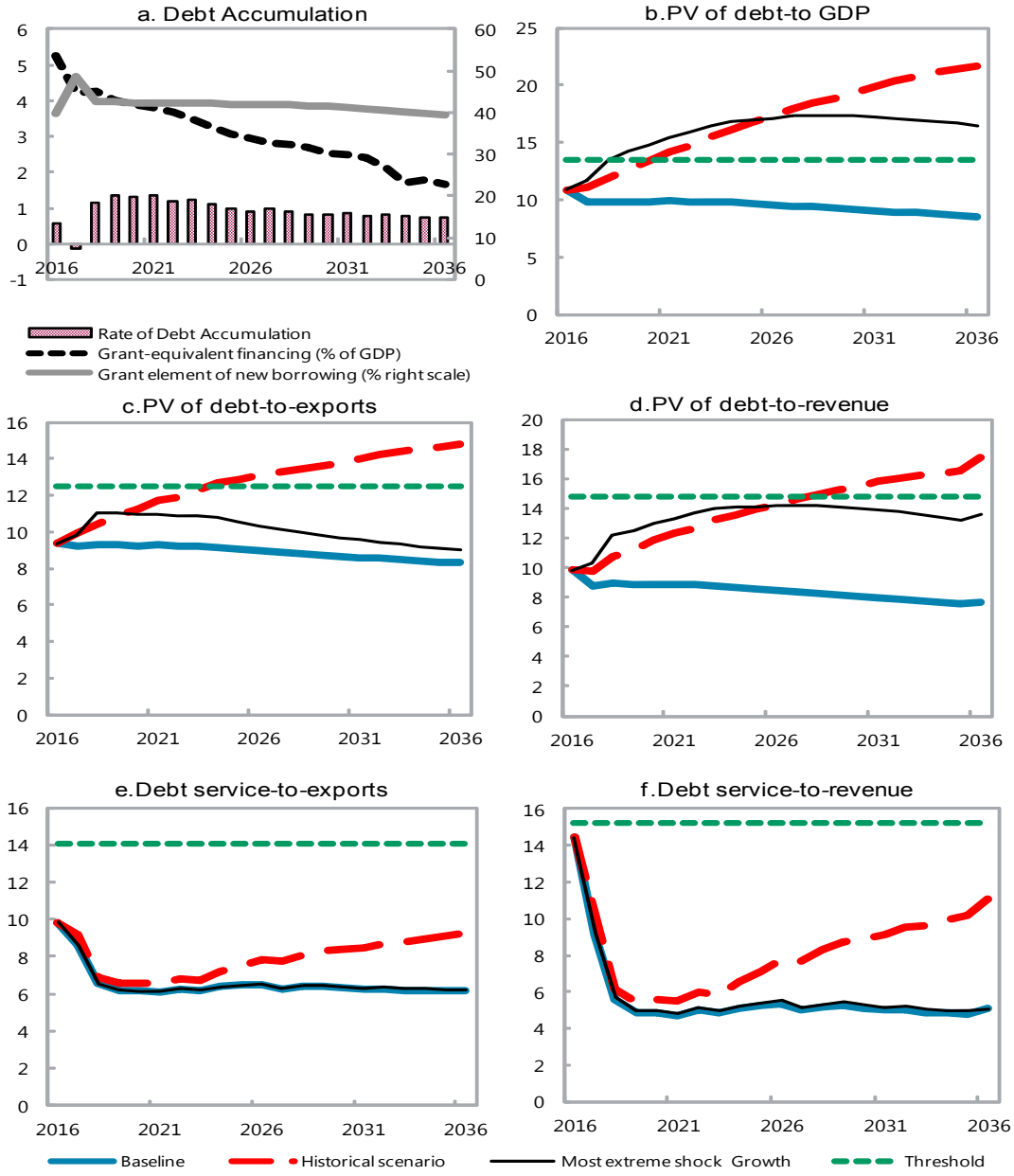
1/ The most extreme stress test is the test that yields the highest ratio on or before 2026. In figure b. it corresponds to a GDP deflator shock; in c. to a Exports shock; in d. to a GDP deflator shock; in e. to a Growth shock and in figure f. to a Growth shock.

Figure 2. Malawi: Indicators of Public Debt under Alternative Scenarios, 2016–2036 1/



Sources: Malawian authorities and IMF staff estimates and projections.
1/ The most extreme stress test is the test that yields the highest ratio on or before 2026.
2/ Revenues are defined inclusive of grants.

Figure 3. Malawi: Probability of Debt Distress of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2016–2036 1/



Sources: Malawian authorities and IMF staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2026. In figure b. it corresponds to a GDP deflator shock; in c. to a Exports shock; in d. to a GDP deflator shock; in e. to a Growth shock and in figure f. to a Growth shock.

Table 1. Malawi: External Debt Sustainability Framework, Baseline Scenario, 2013–2036

(Percent of GDP, unless otherwise indicated)[9]

	Actual			Historical 6/ Average	Standard 6/ Deviation	Projections								
	2013	2014	2015			2016	2017	2018	2019	2020	2021	2016-2021 Average	2026	2036	2022-2036 Average
External debt (nominal) 1/	**34.8**	**36.7**	**40.4**			**37.0**	**32.3**	**32.1**	**32.1**	**31.8**	**31.6**		**29.2**	**23.5**	
of which: public and publicly guaranteed (PPG)	30.8	33.1	37.0			33.2	29.1	29.2	29.3	29.2	29.2		27.5	22.6	
Change in external debt	4.5	1.9	3.7			-3.4	-4.7	-0.2	-0.1	-0.2	-0.2		-0.6	-0.5	
Identified net debt-creating flows	10.1	4.2	4.4			9.9	4.6	4.0	3.6	3.8	4.0		3.8	3.6	
Non-interest current account deficit	**8.5**	**8.4**	**8.0**	**10.1**	**3.2**	**13.3**	**8.4**	**7.7**	**7.4**	**7.5**	**7.6**		**7.3**	**6.4**	7.0
Deficit in balance of goods and services	12.1	10.9	10.4			16.2	10.7	9.8	9.3	9.4	9.6		9.1	8.2	
Exports	30.5	28.7	25.2			29.0	25.6	25.4	25.6	26.1	25.9		26.6	27.7	
Imports	42.6	39.6	35.6			45.1	36.3	35.2	35.0	35.5	35.5		35.7	35.9	
Net current transfers (negative = inflow)	-6.4	-5.1	-4.9	-5.6	1.4	-5.3	-4.5	-4.2	-4.1	-4.0	-4.0		-3.7	-3.2	-3.6
of which: official	-1.3	0.0	-0.4			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other current account flows (negative = net inflow)	2.7	2.5	2.5			2.4	2.2	2.1	2.1	2.1	2.0		1.9	1.4	
Net FDI (negative = inflow)	**-1.7**	**-0.8**	**-1.8**	**-1.6**	**1.0**	**-3.0**	**-2.8**	**-2.4**	**-2.4**	**-2.4**	**-2.4**		**-2.3**	**-1.9**	-2.2
Endogenous debt dynamics 2/	**3.3**	**-3.4**	**-1.8**			**-0.4**	**-1.1**	**-1.2**	**-1.4**	**-1.4**	**-1.3**		**-1.2**	**-1.0**	
Contribution from nominal interest rate	0.2	0.2	0.2			0.8	0.3	0.3	0.3	0.3	0.3		0.3	0.3	
Contribution from real GDP growth	-1.7	-1.8	-1.0			-1.2	-1.4	-1.5	-1.7	-1.7	-1.6		-1.5	-1.2	
Contribution from price and exchange rate changes	4.8	-1.8	-1.0			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**-5.6**	**-2.3**	**-0.7**			**-4.6**	**-4.0**	**0.7**	**1.1**	**0.8**	**0.6**		**-0.1**	**-0.6**	
of which: exceptional financing	-1.8	-3.7	-2.3			-3.2	-2.8	-2.8	-2.8	-2.7	-2.7		-2.5	-1.9	
PV of external debt 4/	...	...	28.0			25.0	21.2	21.1	21.0	20.9	20.8		19.2	15.1	
In percent of exports	...	...	110.9			86.4	83.0	82.7	82.0	80.2	80.5		71.9	54.6	
PV of PPG external debt	**...**	**...**	**24.5**			**21.2**	**18.0**	**18.1**	**18.2**	**18.3**	**18.4**		**17.4**	**14.2**	
In percent of exports	**...**	**...**	**97.3**			**73.2**	**70.5**	**71.0**	**71.1**	**70.1**	**71.0**		**65.4**	**51.4**	
In percent of government revenues	**...**	**...**	**133.4**			**113.8**	**93.2**	**98.3**	**96.3**	**96.5**	**96.1**		**87.5**	**71.3**	
Debt service-to-exports ratio (in percent)	**1.7**	**4.3**	**5.2**			**11.8**	**9.6**	**5.3**	**4.5**	**4.4**	**4.2**		**5.2**	**4.4**	
PPG debt service-to-exports ratio (in percent)	**1.7**	**4.3**	**5.2**			**11.8**	**9.6**	**5.3**	**4.5**	**4.4**	**4.2**		**5.2**	**4.4**	
PPG debt service-to-revenue ratio (in percent)	**2.8**	**6.6**	**7.2**			**18.3**	**12.7**	**7.4**	**6.1**	**6.0**	**5.7**		**7.0**	**6.5**	
Total gross financing need (Billions of U.S. dollars)	0.4	0.6	0.5			0.8	0.6	0.5	0.5	0.5	0.6		0.8	1.5	
Non-interest current account deficit that stabilizes debt ratio	4.0	6.5	4.3			16.7	13.1	7.9	7.5	7.7	7.8		7.9	6.9	
Key macroeconomic assumptions															
Real GDP growth (in percent)	5.2	5.7	2.9	5.8	2.4	2.7	4.5	5.0	5.5	5.5	5.5	4.8	5.5	5.5	5.5
GDP deflator in US dollar terms (change in percent)	-13.7	5.5	2.8	0.7	11.8	-12.4	13.3	2.6	0.8	1.2	1.3	1.1	1.5	1.8	1.6
Effective interest rate (percent) 5/	0.7	0.5	0.5	0.6	0.1	1.8	1.1	0.9	1.0	1.0	1.0	1.1	1.1	1.2	1.1
Growth of exports of G&S (US dollar terms, in percent)	16.6	4.8	-7.0	12.2	16.4	3.4	4.6	7.1	7.2	8.5	6.2	6.2	8.3	7.6	7.7
Growth of imports of G&S (US dollar terms, in percent)	1.5	3.7	-4.8	6.9	15.8	14.0	-4.9	4.7	5.6	8.3	6.8	5.8	7.4	7.2	7.3
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	39.8	48.5	42.5	42.5	42.4	42.3	43.0	42.0	39.3	41.3
Government revenues (excluding grants, in percent of GDP)	18.2	18.6	18.4			18.6	19.3	18.4	18.9	18.9	19.1		19.9	20.0	20.1
Aid flows (in Billions of US dollars) 7/	0.4	0.4	0.3			0.3	0.3	0.3	0.3	0.3	0.4		0.4	0.5	
of which: Grants	0.3	0.2	0.2			0.2	0.2	0.2	0.2	0.2	0.2		0.2	0.2	
of which: Concessional loans	0.1	0.2	0.1			0.1	0.1	0.1	0.1	0.1	0.1		0.2	0.3	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			5.2	4.2	4.3	4.0	3.9	3.8		2.9	1.7	2.6
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			63.6	74.6	72.9	71.9	71.8	71.2		67.3	57.1	65.2
Memorandum items:															
Nominal GDP (Billions of US dollars)	5.4	6.1	6.4			5.8	6.8	7.4	7.8	8.4	8.9		12.6	25.5	
Nominal dollar GDP growth	-9.2	11.5	5.9			-10.0	18.4	7.8	6.4	6.8	6.9	6.0	7.1	7.4	7.2
PV of PPG external debt (in Billions of US dollars)			1.2			1.2	1.2	1.3	1.4	1.5	1.6		2.2	3.6	
(PVt-PVt-1)/GDPt-1 (in percent)						0.6	-0.1	1.1	1.3	1.3	1.4	0.9	0.9	0.7	0.9
Gross workers' remittances (Billions of US dollars)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of PPG external debt (in percent of GDP + remittances)	...	...	24.5			21.2	18.0	18.1	18.2	18.3	18.4		17.4	14.2	
PV of PPG external debt (in percent of exports + remittances)	...	...	97.3			73.2	70.5	71.0	71.1	70.1	71.0		65.4	51.4	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	5.2			11.8	9.6	5.3	4.5	4.4	4.2		5.2	4.4	

Sources: Malawian authorities and IMF staff estimates and projections.

1/ Includes both public and private sector external debt.

2/ Derived as [r - g - ρ(1+g)]/(1+g+ρ+gρ) times previous period debt ratio, with r = nominal interest rate; g = real GDP growth rate, and ρ = growth rate of GDP deflator in U.S. dollar terms.

3/ Includes exceptional financing (i.e., changes in arrears and debt relief); changes in gross foreign assets; and valuation adjustments. For projections also includes contribution from price and exchange rate changes.

4/ Assumes that PV of private sector debt is equivalent to its face value.

5/ Current-year interest payments divided by previous period debt stock.

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

7/ Defined as grants, concessional loans, and debt relief.

8/ Grant-equivalent financing includes grants provided directly to the government and through new borrowing (difference between the face value and the PV of new debt).

9/ Residual for 2016 and 2017 is high on account of projected financing gap resulting from spending for humanitarian relief.

Table 2. Malawi: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2016–2036

(Percent)

	Projections							
	2016	2017	2018	2019	2020	2021	2026	2036
PV of debt-to GDP ratio								
Baseline	21	18	18	18	18	18	17	14
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	21	22	24	26	28	30	37	45
A2. New public sector loans on less favorable terms in 2016-2036 2/	21	19	19	20	21	21	23	24
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	21	18	18	18	19	19	18	15
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	21	19	22	22	22	22	20	15
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	21	23	28	30	31	33	36	35
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	21	19	20	20	20	20	19	15
B5. Combination of B1-B4 using one-half standard deviation shocks	21	24	28	29	30	31	32	28
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	21	25	26	27	28	30	32	30
PV of debt-to-exports ratio								
Baseline	73	70	71	71	70	71	65	51
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	73	85	94	101	107	115	137	162
A2. New public sector loans on less favorable terms in 2016-2036 2/	73	72	75	78	79	83	87	85
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	73	69	69	70	69	71	66	53
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	73	81	104	103	102	103	91	65
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	73	72	75	79	81	86	92	85
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	73	75	79	79	78	79	71	52
B5. Combination of B1-B4 using one-half standard deviation shocks	73	77	89	92	93	96	96	81
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	73	73	75	78	80	84	88	80
PV of debt-to-revenue ratio								
Baseline	114	93	98	96	96	96	88	71
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	114	112	130	137	147	155	183	224
A2. New public sector loans on less favorable terms in 2016-2036 2/	114	96	103	105	109	112	117	118
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	114	93	98	97	98	98	91	76
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	114	99	118	115	115	114	100	74
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	114	121	153	157	165	170	182	174
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	114	100	109	107	107	106	95	73
B5. Combination of B1-B4 using one-half standard deviation shocks	114	122	154	155	160	163	161	140
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	114	131	142	144	150	154	161	150

Table 2. Malawi: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2016–2036 (Concluded)

(Percent)

	Projections							
	2016	2017	2018	2019	2020	2021	2026	2036
Debt service-to-exports ratio								
Baseline	12	10	5	4	4	4	5	4
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	12	11	6	5	5	5	8	11
A2. New public sector loans on less favorable terms in 2016-2036 2/	12	10	5	5	5	5	5	6
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	12	10	5	4	4	4	5	5
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	12	10	7	6	6	6	8	6
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	12	10	5	5	5	4	6	7
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	12	10	5	5	5	4	6	5
B5. Combination of B1-B4 using one-half standard deviation shocks	12	10	6	5	5	5	7	7
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	12	10	5	5	5	4	6	6
Debt service-to-revenue ratio								
Baseline	18	13	7	6	6	6	7	6
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2016-2036 1/	18	14	8	7	7	7	11	15
A2. New public sector loans on less favorable terms in 2016-2036 2/	18	13	7	6	7	6	7	8
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2017-2018	18	13	8	6	6	6	7	6
B2. Export value growth at historical average minus one standard deviation in 2017-2018 3/	18	13	8	7	6	6	8	7
B3. US dollar GDP deflator at historical average minus one standard deviation in 2017-2018	18	16	11	9	9	9	12	13
B4. Net non-debt creating flows at historical average minus one standard deviation in 2017-2018 4/	18	13	8	6	6	6	8	6
B5. Combination of B1-B4 using one-half standard deviation shocks	18	15	10	8	8	8	12	11
B6. One-time 30 percent nominal depreciation relative to the baseline in 2017 5/	18	17	10	8	9	8	11	12
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	39	39	39	39	39	39	39	39

Sources: Malawian authorities and IMF staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

Table 3. Malawi: Public Sector Debt Sustainability Framework, Baseline Scenario, 2013–2036

(Percent of GDP, unless otherwise indicated)

	Actual					Estimate	Projections								
	2013	2014	2015	Average 5/	Standard Deviation 5/	2016	2017	2018	2019	2020	2021	2016-21 Average	2026	2036	2022-36 Average
Public sector debt 1/	50.6	48.0	53.8			52.1	47.1	44.7	42.5	41.6	41.3		40.3	36.9	
of which: foreign-currency denominated	30.8	33.1	37.0			33.2	29.1	29.2	29.3	29.2	29.2		27.5	22.6	
Change in public sector debt	10.4	-2.6	5.8			-1.7	-5.0	-2.4	-2.1	-1.0	-0.3		-0.3	-2.0	
Identified debt-creating flows	4.2	-3.9	6.4			-2.9	-4.3	-0.9	-1.5	-1.0	-0.5		0.0	-0.5	
Primary deficit	2.2	0.3	2.0	0.6	2.2	2.5	0.2	0.6	0.3	0.7	1.1	0.9	1.6	0.8	1.3
Revenue and grants	23.9	21.4	20.9			21.9	22.2	21.5	21.8	21.7	21.8		21.8	19.7	
of which: grants	5.7	2.8	2.5			3.3	2.9	3.1	2.9	2.8	2.7		1.9	0.9	
Primary (noninterest) expenditure	26.1	21.7	22.9			24.4	22.4	22.1	22.1	22.4	22.9		23.5	20.5	
Automatic debt dynamics	-0.9	-4.2	4.4			-5.1	-4.5	-1.6	-1.8	-1.7	-1.6		-1.6	-1.3	
Contribution from interest rate/growth differential	-1.6	-2.1	-1.3			-0.3	-1.6	-1.9	-2.1	-1.8	-1.7		-1.7	-1.3	
of which: contribution from average real interest rate	0.4	0.7	0.1			1.1	0.6	0.4	0.2	0.4	0.4		0.4	0.7	
of which: contribution from real GDP growth	-2.0	-2.7	-1.4			-1.4	-2.2	-2.2	-2.3	-2.2	-2.2		-2.1	-2.0	
Contribution from real exchange rate depreciation	0.7	-2.2	5.7			-4.7	-2.9	0.3	0.3	0.1	0.1		...	...	
Other identified debt-creating flows	2.9	0.0	0.0			-0.3	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0			-0.3	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	2.9	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	6.2	1.3	-0.6			1.2	-0.7	-1.5	-0.6	0.0	0.2		-0.3	-1.5	
Other Sustainability Indicators															
PV of public sector debt	...	...	41.3			40.1	36.0	33.6	31.5	30.7	30.5		30.2	28.5	
of which: foreign-currency denominated	...	...	24.5			21.2	18.0	18.1	18.2	18.3	18.4		17.4	14.2	
of which: external	...	...	24.5			21.2	18.0	18.1	18.2	18.3	18.4		17.4	14.2	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	6.0	5.7	6.2			9.1	5.5	4.0	3.0	3.3	3.6		4.3	3.6	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	198.0			183.2	162.2	156.3	144.5	141.2	139.7		138.6	144.6	
PV of public sector debt-to-revenue ratio (in percent)	...	...	224.7			215.2	186.2	182.6	166.4	161.9	159.4		151.9	151.2	
of which: external 3/	...	...	133.4			113.8	93.2	98.3	96.3	96.5	96.1		87.5	75.6	
Debt service-to-revenue and grants ratio (in percent) 4/	16.1	25.1	19.2			30.6	23.7	15.6	12.6	12.1	11.6		12.1	14.0	
Debt service-to-revenue ratio (in percent) 4/	21.1	28.9	21.7			35.9	27.2	18.2	14.5	13.8	13.2		13.2	14.7	
Primary deficit that stabilizes the debt-to-GDP ratio	-8.2	3.0	-3.8			4.1	5.2	3.1	2.4	1.7	1.4		1.9	2.8	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	5.2	5.7	2.9	5.8	2.4	2.7	4.5	5.0	5.5	5.5	5.5	4.8	5.5	5.5	5.5
Average nominal interest rate on forex debt (in percent)	1.7	1.3	1.2	1.5	0.3	4.0	2.5	2.1	2.1	2.2	2.2	2.5	2.4	2.5	2.4
Average real interest rate on domestic debt (in percent)	2.6	4.1	-0.1	1.5	4.4	0.8	2.0	2.3	2.0	2.7	3.2	2.2	2.4	3.9	4.1
Real exchange rate depreciation (in percent, + indicates depreciation)	2.9	-7.5	17.7	6.3	25.4	-12.8	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	27.3	20.9	21.1	15.7	7.0	18.3	13.1	8.3	7.5	7.2	6.9	10.2	5.7	4.9	5.5
Growth of real primary spending (deflated by GDP deflator, in percent)	9.3	-12.0	8.5	0.6	5.8	9.3	-3.9	3.7	5.3	7.2	7.7	4.9	6.4	-5.0	4.8
Grant element of new external borrowing (in percent)	...	...	...	...	...	39.8	48.5	42.5	42.5	42.4	42.3	43.0	42.0	39.3	...

Sources: Malawian authorities and IMF staff estimates and projections.

1/ Data cover central government and are on a gross debt basis.

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. Malawi: Sensitivity Analysis for Key Indicators of Public Debt 2016–2036

	Projections							
	2016	2017	2018	2019	2020	2021	2026	2036
PV of Debt-to-GDP Ratio								
Baseline	40	36	34	32	31	30	30	28
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	40	36	33	31	30	30	26	22
A2. Primary balance is unchanged from 2016	40	37	36	35	35	36	37	40
A3. Permanently lower GDP growth 1/	40	36	34	32	32	32	35	42
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018	40	37	35	33	32	33	34	34
B2. Primary balance is at historical average minus one standard deviations in 2017-2018	40	38	36	34	33	33	32	30
B3. Combination of B1-B2 using one half standard deviation shocks	40	37	35	33	32	32	32	30
B4. One-time 30 percent real depreciation in 2017	40	44	41	38	37	36	34	32
B5. 10 percent of GDP increase in other debt-creating flows in 2017	40	42	39	37	36	36	35	31
PV of Debt-to-Revenue Ratio 2/								
Baseline	183	162	156	145	141	140	139	145
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	183	162	155	144	140	137	121	114
A2. Primary balance is unchanged from 2016	183	168	167	161	162	164	170	201
A3. Permanently lower GDP growth 1/	183	163	158	148	146	147	159	213
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018	183	164	162	151	149	149	154	171
B2. Primary balance is at historical average minus one standard deviations in 2017-2018	183	169	169	157	153	151	148	151
B3. Combination of B1-B2 using one half standard deviation shocks	183	166	164	152	148	147	146	151
B4. One-time 30 percent real depreciation in 2017	183	197	189	174	169	165	158	161
B5. 10 percent of GDP increase in other debt-creating flows in 2017	183	189	184	171	167	164	159	158
Debt Service-to-Revenue Ratio 2/								
Baseline	31	24	16	13	12	12	12	14
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	31	23	15	12	12	11	11	12
A2. Primary balance is unchanged from 2016	31	24	16	13	12	12	13	17
A3. Permanently lower GDP growth 1/	31	24	16	13	12	12	13	18
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2017-2018	31	24	16	13	12	12	13	16
B2. Primary balance is at historical average minus one standard deviations in 2017-2018	31	24	16	13	12	12	13	15
B3. Combination of B1-B2 using one half standard deviation shocks	31	24	16	13	12	12	13	15
B4. One-time 30 percent real depreciation in 2017	31	27	19	16	15	15	16	19
B5. 10 percent of GDP increase in other debt-creating flows in 2017	31	24	16	14	13	12	14	15

Sources: Malawian authorities and IMF staff estimates and projections.

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

2/ Revenues are defined inclusive of grants.