UNITED REPUBLIC OF TANZANIA

SEVENTH REVIEW UNDER THE POLICY SUPPORT INSTRUMENT—DEBT SUSTAINABILITY ANALYSIS

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Approved By
Roger Nord (AFR) and Daria Zakharova (SPR) and Paloma Anós-Casero (IDA)

Prepared by the staffs of the International Monetary Fund (IMF) and the International Development Association (IDA).

Risk of external debt distress:	Low
Augmented by significant risks stemming from domestic public and/or private external debt?	No

This Debt Sustainability Analysis (DSA) update indicates that Tanzania remains at low risk of external debt distress.[1] *The medium- and long-term macroeconomic assumptions remain largely unchanged from the previous DSA with the exception of a substantial decrease in the projected current account deficit. All external debt burden indicators remain below their policy-determined thresholds. The public DSA analysis also shows the present value of public debt-to-GDP ratio remains favorable. With the Tanzanian authorities scaling up public investment to finance infrastructure projects envisaged under the FYDP II, the public debt-to-GDP ratio is projected to increase until the large flagship projects are completed, then to decline gradually over the long run. The results of the DSA update underscore that prudent fiscal policy and continued efforts to secure a strong economic growth momentum will be key to the success of the authorities' strategy. Policy measures to raise public domestic revenue in a business-friendly manner, to improve spending efficiency further by focusing on effective public investment management, and to enhance debt management capacity should be pursued. Exposure to volatility in export markets and tightening of financing terms pose downside risks to debt prospects.*

[1] This Debt Sustainability Analysis (DSA) updates the previous joint IMF/IDA DSA prepared in June 2016 in the context of the 2016 Article IV consultation and Fourth PSI review (IMF Country Report No. 16/253). The three-year average score of the World Bank's Country Policy and Institutional Assessment (CPIA) for 2014–16 is 3.71, thus this DSA applies policy-dependent thresholds corresponding to medium policy performers.

BACKGROUND AND MACROECONOMIC ASSUMPTIONS

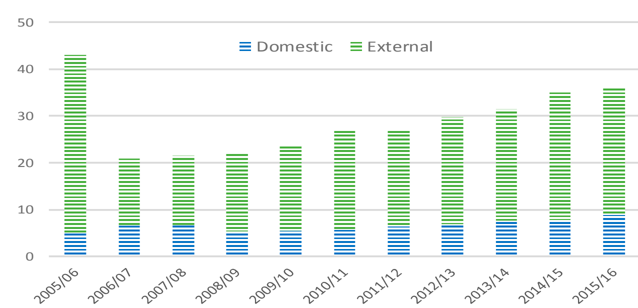
1. **Tanzania's public and publicly guaranteed (PPG) debt to GDP ratio has been increasing in recent years.** Total PPG debt increased by more than 15 percentage points of GDP since 2006/07 to 36.2 percent of the GDP at end-2015/16.[2] Most of the increase (some 13 points) was accounted for by external debt.

2. **While most of Tanzania's PPG external debt is concessional, borrowing on non-concessional terms has increased in recent years.** Official bilateral and multilateral creditors continue to be the major financiers, accounting for more than two thirds of external PPG debt as of end-2015/16. That said, the share of commercial financing has increased to about 30 percent at end-2015/16 from just over 4 percent at end-2010/11. More recently, and to finance high priority infrastructure projects, the authorities raised US$500 million through a commercial loan from Credit Suisse over the period June-August 2017.

3. **Domestic public debt has increased gradually, but remains relatively small.** Domestic debt stood at 9 percent of GDP at end-2015/16, with only about a third stemming from short-term instruments. Commercial banks continue to hold the largest share of government domestic debt. However, adding several outstanding government liabilities and other contingent liabilities currently not accounted for in the domestic debt stock increases it to 14.4 percent of GDP (as reflected in the 2016/17 figures, the first projection year under the current DSA update).[3]

4. **The medium- and long-term macroeconomic projections remain broadly unchanged from the previous DSA** (Box 1) with the exception of a substantial decrease in the projected current account deficit.

Text Figure 1. Tanzania Public Debt, 2005/06 – 2015/16 (in percent of GDP)



Source: Ministry of Finance and Planning, Bank of Tanzania, and IMF staff estimates.

[2] While the DSA tables below have a standardized presentation in calendar year terms, the data for Tanzania are represented in fiscal year terms, i.e., 2016 corresponds to 2015/16 figures.

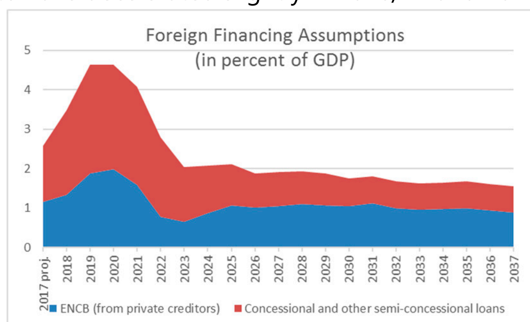
[3] This mainly include arrears to pension funds and loans to government entities, budget expenditure arrears, TANESCO's arrears to its suppliers, and other actual or contingent liabilities.

EXTERNAL DSA

5. **Tanzania's external debt is assessed to be remain "low" in this DSA update.** The present value of the PPG external debt-to-GDP ratio peaks at 19.1 percent in FY20/21, in line with the previous DSA. All debt burden indicators under the baseline scenario and under various bound tests remain below their respective policy-dependent thresholds. However, some ratios breach the respective thresholds under the historical scenario, mainly due to a larger historical current account deficit, which has recently fallen substantially and is projected to remain relatively low throughout the projection period (Figure 1).

Box 1. Baseline Macroeconomic Assumptions

Real GDP growth: Although GDP growth is projected to have decelerated slightly in 2016/17 and 2017/18, it is projected to remain strong in the next few years (around 6½-7 percent), reflecting a scaling up of public investment, mainly in transportation and energy infrastructure. Over the medium term, growth is assumed to revert to its historical average of about 6.5 percent.



Inflation (CPI): CPI inflation is projected at about 5 percent, in line with the authorities' inflation target.

Current account balance: The external current account deficit fell to 2.7 percent of GDP in 2016/17 from 10.7 percent in 2013/14, due to a decline in oil imports partly aided by a shift from imported oil to domestically-produced gas for electricity generation and a contractionary fiscal stance. Considering this, the projected long-term current account deficit has been assumed to narrow by 2½ percentage points of GDP to 5½ percent of the GDP, compared to the previous DSA.

Government balances and domestic borrowing: The fiscal deficit is assumed to widen over the medium-term relative to the 1½ percent of GDP deficit recorded in 2016/17. The initial expansion, reflecting the scale up of public investment to finance infrastructure projects envisaged under the FYDP II, is expected to be followed by a gradual consolidation. The fiscal deficit is projected to fall below 3 percent of GDP by 2022/23, in line with the regional convergence criteria of the East African Monetary Union. Net domestic borrowing is expected to be maintained at around 1 percent of GDP during most of the projection period.

Selected Macroeconomic Indicators, Current vs. Previous DSA

		2015/16	2016/17	2017/18 proj.	2018/19 proj.	2019/20 proj.	2020/21 proj.	Long term (Last 15 years)
Real GDP Growth (percent)	Current DSA	7.0	6.0	6.2	6.5	6.8	6.7	6.5
	Previous DSA	7.1	7.2	7.0	7.0	7.0	7.0	6.5
Inflation (average)	Current DSA	5.5	5.4	5.0	5.0	5.0	5.0	5.0
	Previous DSA	6.4	5.4	5.0	5.0	5.0	5.0	5.0
Fiscal Balance (% of GDP)	Current DSA	-3.5	-1.5	-4.2	-4.6	-4.6	-3.7	-2.2
	Previous DSA	-3.3	-4.6	-4.5	-4.5	-4.5	-3.7	-2.2
Current account (% of GDP)	Current DSA	-6.6	-2.7	-4.8	-5.8	-6.0	-5.4	-5.5
	Previous DSA	-8.6	-9.1	-8.8	-8.6	-8.7	-8.0	-8.0
FDI (% of GDP)	Current DSA	3.2	2.6	2.5	2.7	3.1	3.4	4.0
	Previous DSA	4.5	4.2	4.2	4.2	4.2	4.2	4.0

Sources: Tanzanian authorities and IMF staff estimates and projections.

External financing flows: Reflecting the recent increase in commercial borrowing, the ratio of the ENCB (external non-concessional borrowing) to total annual foreign financing is expected to increase to around 50 percent of in the long term. Although it has dipped recently, owing to worsening investment sentiments, FDI is projected to recover gradually to its historical average of 4 percent of the GDP. As in the previous DSA, access to grants is assumed to taper.

6. **Still, several debt indicators remain sensitive to various shocks.** A one-time depreciation shock is the most extreme scenario among bound tests for most of the ratios, confirming the sensitivity of the Tanzanian economy to shocks stemming from exchange rate volatility. This is especially so for the debt service to revenue indicator; while more costly terms of external finance underscore a degree of vulnerability in the debt to exports measure. While there has been a structural change to a more resilient economy, breaches of the thresholds for the debt-to-exports and debt service-to-revenue ratios under the historical scenario underscore the importance of expanding the export base, boosting public revenue sources and adhering to fiscal consolidation over the medium to longer terms.

PUBLIC DSA

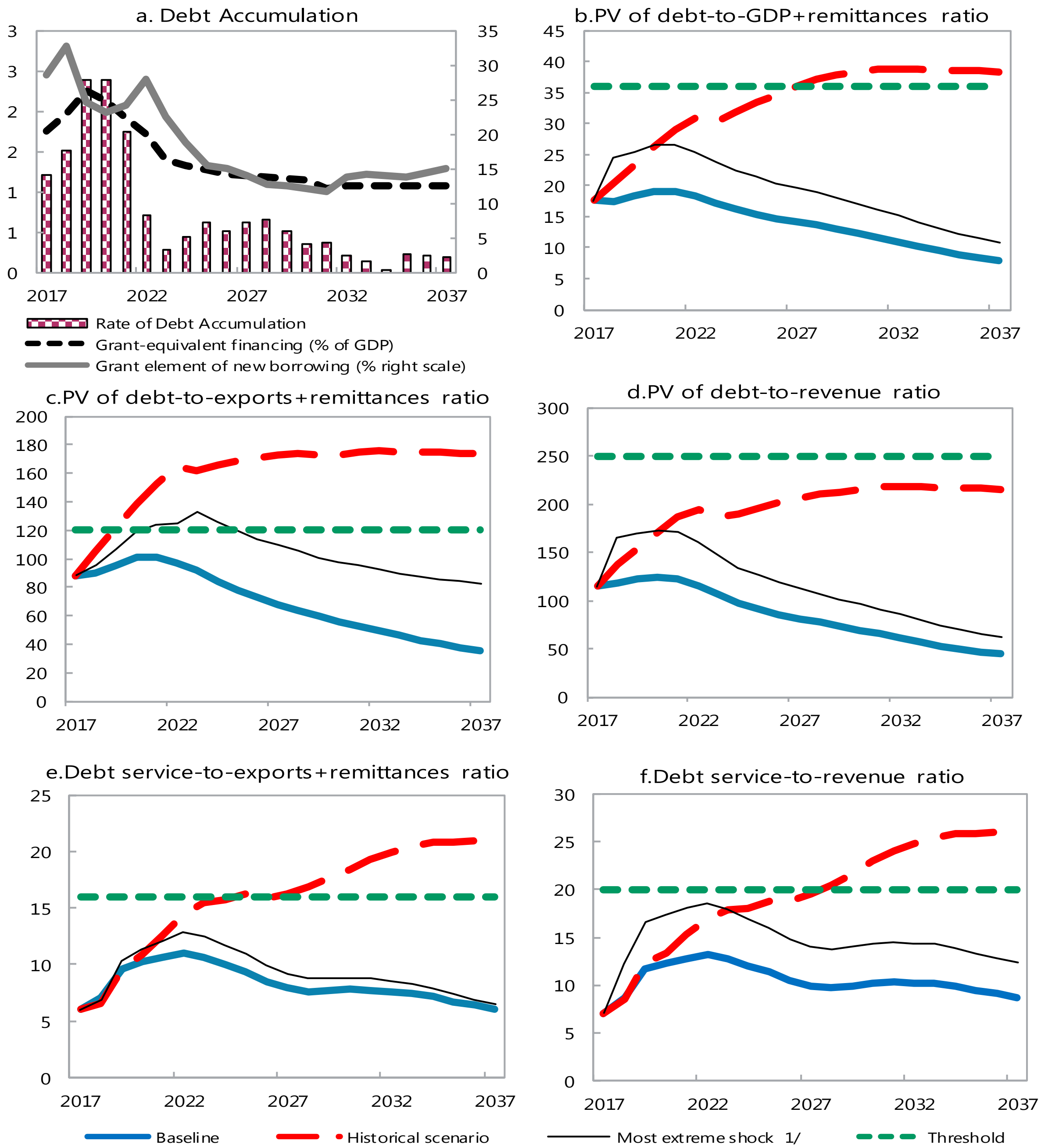
7. **Total public debt and debt service ratios suggest a low level of vulnerability.** Under the baseline scenario, the present value of total public debt as a share of GDP is expected to increase modestly in the next few years (to a peak of 43.6 percent of GDP in 2019/20) and to decline gradually over time, therefore remaining below the benchmark of 56 percent of GDP associated with heightened public debt vulnerabilities for medium performers, and the EAMU convergence criterion of 50 percent (Figure 2).

8. **Bound tests indicate a low level of vulnerability for the projected paths for total public debt indicators.** Under the historical scenario, all three ratios (PV of debt-to-GDP, PV of debt-to-revenue, and debt service-to revenue ratio) would keep growing gradually and reach the highest among alternative scenarios and bound tests at the end of the projection period, highlighting again the importance of implementing the envisaged fiscal consolidation over the medium to long terms.

CONCLUSION

9. **The DSA update indicates that Tanzania continues to face a low risk of external debt distress.** External debt burden indicators remain below the policy-dependent thresholds under the baseline scenario and stress tests. The latter suggests that a potential exchange rate depreciation and a currently narrow export base pose risks to debt vulnerabilities. The results also highlight the importance of maintaining the authorities' strong track record of macroeconomic management—sound fiscal and monetary policies leading to robust growth, relatively low current account, balances, and a strong international reserves' position. To that effect, raising public domestic revenue should be pursued in a business-friendly manner to maintain the economic growth momentum. The scaling-up of development spending to address Tanzania's infrastructure gap needs to be accompanied by improvements in spending efficiency through improved public investment management and enhanced debt management capacity. It is vital to leverage concessional and semi-concessional sources of financing when available and carefully select projects to be financed by commercial loans.

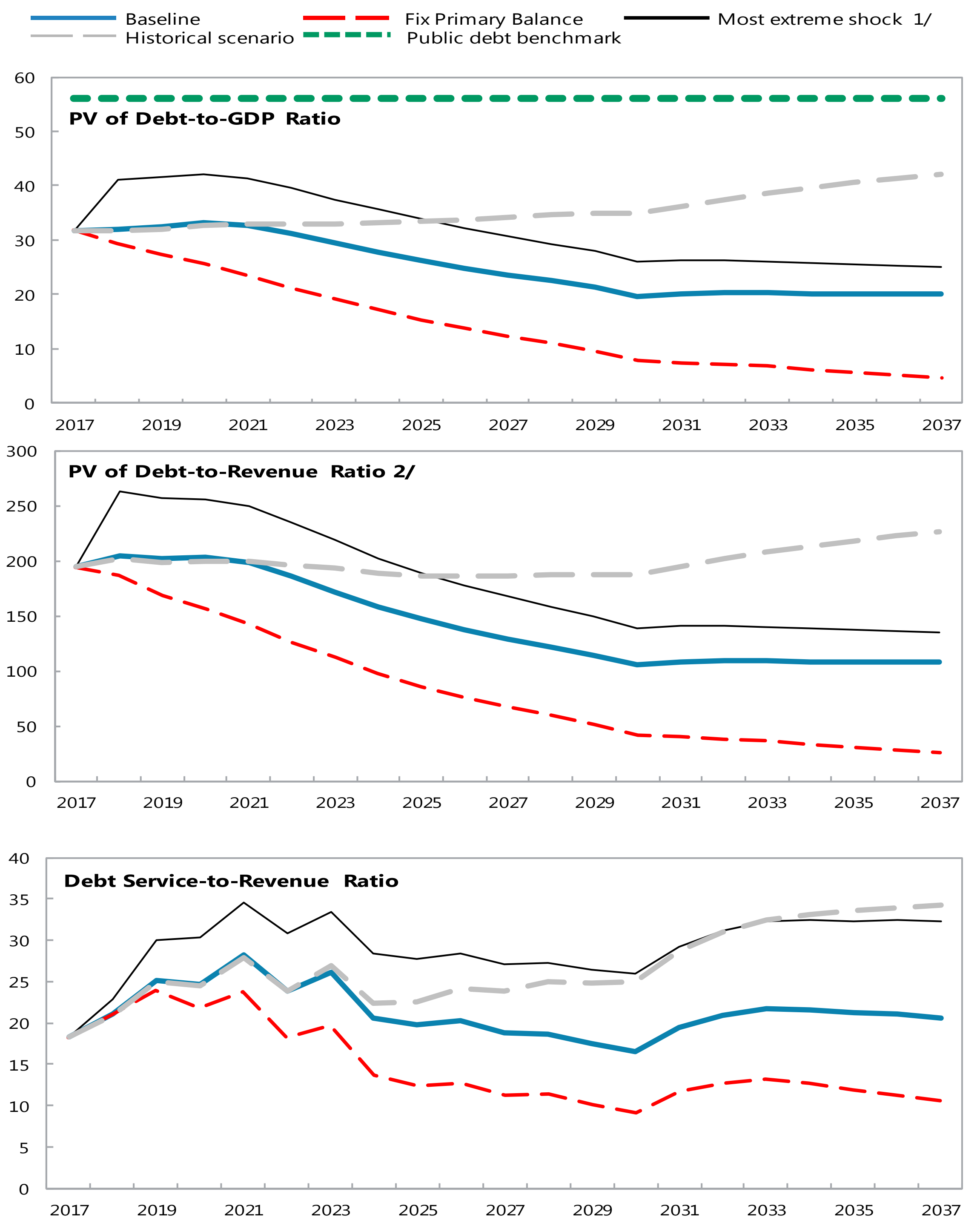
Figure 1. Tanzania: Indicators of Public and Publicly Guaranteed External Debt under Alternative Scenarios, 2017-2037 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2027. In figure b. it corresponds to a One-time depreciation shock; in c. to a Terms shock; in d. to a One-time depreciation shock; in e. to a Exports shock and in figure f. to a One-time depreciation shock

Figure 2. Tanzania: Indicators of Public Debt under Alternative Scenarios, 2017-2037 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio on or before 2027.

2/ Revenues are defined inclusive of grants.

Table 1. Tanzania: External Debt Sustainability Framework, Baseline Scenario, 2014-2037 1/

	Actual			Historical 6/ Average	Standard 6/ Deviation	Projections									
	2014	2015	2016			2017	2018	2019	2020	2021	2022	2017-2022 Average	2027	2037	2023-2037 Average
External debt (nominal) 1/	**27.0**	**30.8**	**33.2**			**33.0**	**33.3**	**34.9**	**36.5**	**36.9**	**35.9**		**29.6**	**22.7**	
of which: public and publicly guaranteed (PPG)	23.7	27.6	27.2			26.9	27.1	28.3	29.3	29.6	28.5		21.3	11.9	
Change in external debt	0.5	3.9	2.4			-0.2	0.3	1.5	1.7	0.3	-1.0		-1.0	-0.3	
Identified net debt-creating flows	3.6	5.5	5.5			-1.7	0.4	1.1	0.8	-0.3	-0.4		-0.4	0.0	
Non-interest current account deficit	**10.4**	**9.4**	**5.9**	**8.7**	**2.0**	**2.3**	**4.3**	**5.2**	**5.4**	**4.7**	**4.8**		**4.9**	**4.9**	5.0
Deficit in balance of goods and services	10.9	9.2	5.4			-0.4	3.9	4.9	5.3	5.0	5.4		5.4	5.3	
Exports	19.1	18.4	19.9			19.8	19.4	19.2	18.8	19.0	18.7		20.8	22.1	
Imports	29.9	27.6	25.3			19.5	23.3	24.1	24.2	24.0	24.1		26.2	27.4	
Net current transfers (negative = inflow)	-1.6	-1.2	-0.7	-2.3	1.0	-0.9	-1.0	-0.9	-0.9	-0.8	-0.8		-0.6	-0.4	-0.5
of which: official	-0.9	-0.6	-0.1			-0.3	-0.3	-0.3	-0.3	-0.3	-0.3		-0.2	-0.1	
Other current account flows (negative = net inflow)	1.1	1.3	1.3			3.6	1.4	1.2	0.9	0.5	0.2		0.1	0.0	
Net FDI (negative = inflow)	**-4.4**	**-3.4**	**-3.2**	**-3.8**	**0.7**	**-2.6**	**-2.5**	**-2.7**	**-3.1**	**-3.4**	**-3.6**		**-4.0**	**-4.0**	-4.0
Endogenous debt dynamics 2/	**-2.4**	**-0.5**	**2.8**			**-1.4**	**-1.4**	**-1.4**	**-1.5**	**-1.6**	**-1.6**		**-1.3**	**-0.8**	
Contribution from nominal interest rate	0.3	0.4	0.6			0.4	0.5	0.6	0.6	0.7	0.7		0.6	0.6	
Contribution from real GDP growth	-1.7	-1.8	-2.3			-1.8	-1.9	-2.0	-2.2	-2.3	-2.2		-1.8	-1.4	
Contribution from price and exchange rate changes	-1.0	0.9	4.5			...	...	...	...	...	...		...	...	
Residual (3-4) 3/	**-3.0**	**-1.6**	**-3.1**			**1.4**	**0.0**	**0.4**	**0.9**	**0.6**	**-0.6**		**-0.6**	**-0.4**	-0.8
of which: exceptional financing	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	-0.4	
PV of external debt 4/	...	...	23.9			23.7	23.6	24.8	26.3	26.4	25.7		22.4	18.7	
In percent of exports	...	...	119.8			119.4	121.9	129.5	139.4	139.4	137.5		107.9	84.8	
PV of PPG external debt	**...**	**...**	**17.9**			**17.6**	**17.5**	**18.3**	**19.0**	**19.1**	**18.3**		**14.1**	**7.9**	
In percent of exports	**...**	**...**	**89.9**			**88.7**	**90.1**	**95.5**	**101.1**	**100.9**	**97.6**		**67.8**	**35.7**	
In percent of government revenues	**...**	**...**	**125.4**			**114.5**	**117.7**	**121.7**	**123.7**	**122.6**	**114.9**		**81.1**	**44.2**	
Debt service-to-exports ratio (in percent)	**3.4**	**4.6**	**7.0**			**8.9**	**10.1**	**12.7**	**13.5**	**14.1**	**14.4**		**11.3**	**9.8**	
PPG debt service-to-exports ratio (in percent)	**2.9**	**3.6**	**5.3**			**6.0**	**7.1**	**9.7**	**10.2**	**10.7**	**11.0**		**7.9**	**6.1**	
PPG debt service-to-revenue ratio (in percent)	**4.1**	**5.2**	**7.4**			**7.1**	**8.6**	**11.7**	**12.3**	**12.8**	**13.2**		**10.0**	**8.7**	
Total gross financing need (Billions of U.S. dollars)	3.1	3.3	1.9			0.7	1.9	2.9	3.0	2.7	3.0		3.8	8.7	
Non-interest current account deficit that stabilizes debt ratio	9.8	5.5	3.6			2.5	3.9	3.7	3.7	4.4	5.8		5.9	5.2	
Key macroeconomic assumptions															
Real GDP growth (in percent)	7.1	7.0	7.0	6.6	0.6	6.0	6.2	6.5	6.8	6.7	6.6	6.5	6.5	6.5	6.5
GDP deflator in US dollar terms (change in percent)	4.0	-3.1	-12.7	3.2	8.2	3.0	2.6	2.5	2.0	2.0	2.0	2.3	2.0	2.0	2.0
Effective interest rate (percent) 5/	1.3	1.7	1.9	1.1	0.5	1.4	1.6	1.8	2.0	2.0	2.0	1.8	2.1	2.6	2.3
Growth of exports of G&S (US dollar terms, in percent)	6.6	-0.1	1.3	11.3	9.6	-1.0	8.4	10.4	10.4	10.2	10.5	8.2	12.0	10.0	10.7
Growth of imports of G&S (US dollar terms, in percent)	8.5	-4.4	-14.4	10.3	15.2	-16.0	19.2	13.6	12.1	7.2	10.3	7.7	11.3	9.8	10.3
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	28.6	32.7	24.5	23.2	24.2	27.9	26.9	13.9	15.1	14.7
Government revenues (excluding grants, in percent of GDP)	13.5	12.8	14.3			15.4	14.8	15.0	15.4	15.6	15.9		17.4	17.8	17.5
Aid flows (in Billions of US dollars) 7/	1.3	0.8	0.2			1.1	1.5	1.7	1.7	1.7	1.5		1.5	3.1	
of which: Grants	1.0	0.6	0.2			0.5	0.4	0.7	0.7	0.6	0.7		1.1	2.2	
of which: Concessional loans	0.3	0.2	0.0			0.6	1.0	1.0	1.1	1.0	0.8		0.4	0.9	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			1.7	2.0	2.3	2.1	1.9	1.7		1.2	1.1	1.2
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			48.6	45.6	39.1	37.4	38.3	45.9		41.8	44.5	42.5
Memorandum items:															
Nominal GDP (Billions of US dollars)	46.6	48.4	45.1			49.3	53.7	58.6	63.8	69.4	75.4		113.8	259.5	
Nominal dollar GDP growth	11.3	3.7	-6.7			9.2	8.9	9.1	8.9	8.8	8.7	8.9	8.6	8.6	8.6
PV of PPG external debt (in Billions of US dollars)			8.0			8.5	9.3	10.6	12.0	13.1	13.6		15.8	20.1	
(PVt-PVt-1)/GDPt-1 (in percent)						1.2	1.5	2.4	2.4	1.7	0.7	1.7	0.6	0.2	0.4
Gross workers' remittances (Billions of US dollars)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.1		0.1	0.1	
PV of PPG external debt (in percent of GDP + remittances)	...	...	17.9			17.6	17.5	18.3	19.0	19.1	18.2		14.1	7.9	
PV of PPG external debt (in percent of exports + remittances)	...	...	89.5			88.3	89.8	95.1	100.7	100.5	97.3		67.7	35.6	
Debt service of PPG external debt (in percent of exports + remittanc	...	...	5.3			6.0	7.1	9.7	10.2	10.6	11.0		7.9	6.1	

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

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

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

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

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

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

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

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

Table 2. Tanzania: Public Sector Debt Sustainability Framework, Baseline Scenario, 2014–2037

(in percent of GDP, unless otherwise indicated)

	Actual					Estimate				Projections					
	2014	2015	2016	Average 5/	Standard Deviation 5/	2017	2018	2019	2020	2021	2022	2017-22 Average	2027	2037	2023-37 Average
Public sector debt 1/	31.4	35.4	36.2			41.1	41.6	42.6	43.6	43.2	41.6		32.6	21.7	
of which: foreign-currency denominated	23.7	27.6	27.2			26.9	27.1	28.3	29.3	29.6	28.5		21.3	11.9	
Change in public sector debt	1.7	4.0	0.7			4.9	0.6	0.9	1.0	-0.4	-1.6		-1.4	-0.7	
Identified debt-creating flows	0.9	4.5	2.6			5.3	0.5	1.0	0.7	-0.1	-0.8		-0.9	-0.6	
Primary deficit	2.0	1.6	2.1	2.7	1.2	0.0	2.9	2.9	2.8	1.9	1.2	1.9	0.7	0.6	0.6
Revenue and grants	15.6	14.0	14.8			16.4	15.7	16.2	16.5	16.5	16.8		18.3	18.6	
of which: grants	2.1	1.2	0.5			1.0	0.8	1.1	1.1	0.9	0.9		0.9	0.8	
Primary (noninterest) expenditure	17.6	15.6	16.9			16.4	18.6	19.0	19.2	18.4	18.0		19.0	19.3	
Automatic debt dynamics	-1.7	1.9	-0.3			-1.7	-2.5	-1.9	-2.0	-2.0	-2.0		-1.6	-1.2	
Contribution from interest rate/growth differential	-1.3	-1.3	-1.7			-1.5	-2.2	-2.0	-2.0	-2.0	-2.0		-1.6	-0.7	
of which: contribution from average real interest rate	0.6	0.7	0.6			0.5	0.2	0.6	0.7	0.7	0.7		0.5	0.7	
of which: contribution from real GDP growth	-2.0	-2.0	-2.3			-2.0	-2.4	-2.5	-2.7	-2.7	-2.7		-2.1	-1.4	
Contribution from real exchange rate depreciation	-0.3	3.2	1.4			-0.1	-0.2	0.1	0.0	0.0	0.0		...	...	
Other identified debt-creating flows	0.5	1.0	0.8			7.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Privatization receipts (negative)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	0.0	0.0			6.7	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)	0.5	1.0	0.8			0.2	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	0.8	-0.5	-1.8			-0.4	0.1	0.0	0.3	-0.2	-0.8		-0.6	-0.2	
Other Sustainability Indicators															
PV of public sector debt	...	...	26.8			31.8	32.0	32.6	33.3	32.7	31.4		25.5	17.6	
of which: foreign-currency denominated	...	...	17.9			17.6	17.5	18.3	19.0	19.1	18.3		14.1	7.9	
of which: external	...	...	17.9			17.6	17.5	18.3	19.0	19.1	18.3		14.1	7.9	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	3.9	4.0	5.3			3.0	6.2	6.9	6.8	6.5	5.2		4.3	3.7	
PV of public sector debt-to-revenue and grants ratio (in percent)	...	...	181.4			194.4	204.0	201.5	202.5	198.1	186.4		138.9	94.6	
PV of public sector debt-to-revenue ratio (in percent)	...	...	187.8			207.1	215.4	216.4	216.3	209.9	197.3		146.3	99.0	
of which: external 3/	...	...	125.4			114.5	117.7	121.7	123.7	122.6	114.9		81.1	44.2	
Debt service-to-revenue and grants ratio (in percent) 4/	12.1	16.8	21.5			18.3	21.0	25.1	24.7	28.2	24.0		19.6	16.2	
Debt service-to-revenue ratio (in percent) 4/	14.0	18.4	22.2			19.5	22.2	27.0	26.4	29.9	25.5		20.6	17.0	
Primary deficit that stabilizes the debt-to-GDP ratio	0.3	-2.4	1.4			-4.9	2.4	1.9	1.8	2.2	2.8		2.1	1.4	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	7.1	7.0	7.0	6.6	0.6	6.0	6.2	6.5	6.8	6.7	6.6	6.5	6.5	6.5	6.5
Average nominal interest rate on forex debt (in percent)	1.5	1.8	1.9	1.1	0.5	1.2	1.5	1.7	1.9	2.0	1.9	1.7	2.0	2.9	2.3
Average real interest rate on domestic debt (in percent)	9.5	9.4	8.0	4.5	3.8	8.5	2.2	5.0	5.2	5.5	5.7	5.4	4.8	0.8	3.5
Real exchange rate depreciation (in percent, + indicates depreciation	-1.4	14.5	5.4	-1.1	8.0	-0.6	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	6.3	5.8	6.7	9.3	2.3	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0	5.0
Growth of real primary spending (deflated by GDP deflator, in percer	-1.4	-5.1	15.5	1.0	5.4	2.6	20.8	9.0	7.8	2.1	4.4	7.8	8.5	6.6	7.0
Grant element of new external borrowing (in percent)	...	...	...	...	...	28.6	32.7	24.5	23.2	24.2	27.9	26.9	13.9	15.1	...

Sources: Country authorities; and staff estimates and projections.

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

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

3/ Revenues excluding grants.

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

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

Table 3. Tanzania: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt 2017-2037 (in percent)

	Projections							
	2017	2018	2019	2020	2021	2022	**2027**	2037
PV of debt-to-GDP+remittances ratio								
Baseline	18	17	18	19	19	18	**14**	8
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	18	20	23	26	29	31	**36**	38
A2. New public sector loans on less favorable terms in 2017-2037 2	18	18	21	22	24	23	**23**	18
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	18	17	18	19	19	18	**14**	8
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	18	18	21	21	21	20	**15**	8
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	18	19	21	22	22	21	**16**	9
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	18	16	16	17	17	17	**13**	8
B5. Combination of B1-B4 using one-half standard deviation shocks	18	16	17	17	18	17	**14**	8
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	18	24	25	26	27	25	**20**	11
PV of debt-to-exports+remittances ratio								
Baseline	88	90	95	101	101	97	**68**	36
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	88	105	121	138	153	164	**172**	173
A2. New public sector loans on less favorable terms in 2017-2037 2	88	95	107	119	124	124	**109**	82
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	88	89	94	99	99	96	**66**	35
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	88	98	119	121	119	111	**72**	32
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	88	89	94	99	99	96	**66**	35
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	88	84	85	90	91	88	**63**	34
B5. Combination of B1-B4 using one-half standard deviation shocks	88	81	81	85	85	80	**56**	29
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	88	89	94	99	99	96	**66**	35
PV of debt-to-revenue ratio								
Baseline	114	118	122	124	123	115	**81**	44
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	114	137	154	170	186	194	**207**	215
A2. New public sector loans on less favorable terms in 2017-2037 2	114	125	136	146	151	147	**131**	102
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	114	117	121	123	121	114	**80**	44
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	114	122	137	138	136	126	**86**	44
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	114	126	140	142	141	132	**93**	50
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	114	110	108	111	111	104	**75**	43
B5. Combination of B1-B4 using one-half standard deviation shocks	114	110	110	113	114	107	**79**	46
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	114	165	169	172	171	160	**113**	61

Table 3. Tanzania: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt 2017-2037 (in percent) (concluded)

	Projections							
	2017	2018	2019	2020	2021	2022	**2027**	2037
PV of debt-to-GDP+remittances ratio								
Baseline	18	17	18	19	19	18	**14**	8
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	18	20	23	26	29	31	**36**	38
A2. New public sector loans on less favorable terms in 2017-2037 2	18	18	21	22	24	23	**23**	18
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	18	17	18	19	19	18	**14**	8
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	18	18	21	21	21	20	**15**	8
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	18	19	21	22	22	21	**16**	9
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	18	16	16	17	17	17	**13**	8
B5. Combination of B1-B4 using one-half standard deviation shocks	18	16	17	17	18	17	**14**	8
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	18	24	25	26	27	25	**20**	11
PV of debt-to-exports+remittances ratio								
Baseline	88	90	95	101	101	97	**68**	36
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	88	105	121	138	153	164	**172**	173
A2. New public sector loans on less favorable terms in 2017-2037 2	88	95	107	119	124	124	**109**	82
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	88	89	94	99	99	96	**66**	35
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	88	98	119	121	119	111	**72**	32
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	88	89	94	99	99	96	**66**	35
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	88	84	85	90	91	88	**63**	34
B5. Combination of B1-B4 using one-half standard deviation shocks	88	81	81	85	85	80	**56**	29
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	88	89	94	99	99	96	**66**	35
PV of debt-to-revenue ratio								
Baseline	114	118	122	124	123	115	**81**	44
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2017-2037 1/	114	137	154	170	186	194	**207**	215
A2. New public sector loans on less favorable terms in 2017-2037 2	114	125	136	146	151	147	**131**	102
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2018-2019	114	117	121	123	121	114	**80**	44
B2. Export value growth at historical average minus one standard deviation in 2018-2019 3/	114	122	137	138	136	126	**86**	44
B3. US dollar GDP deflator at historical average minus one standard deviation in 2018-2019	114	126	140	142	141	132	**93**	50
B4. Net non-debt creating flows at historical average minus one standard deviation in 2018-2019 4/	114	110	108	111	111	104	**75**	43
B5. Combination of B1-B4 using one-half standard deviation shocks	114	110	110	113	114	107	**79**	46
B6. One-time 30 percent nominal depreciation relative to the baseline in 2018 5/	114	165	169	172	171	160	**113**	61

Table 4. Tanzania: Sensitivity Analysis for Key Indicators of Public Debt 2017-2037

	Projections							
	2017	2018	2019	2020	2021	2022	2027	2037
PV of Debt-to-GDP Ratio								
Baseline	32	32	33	33	33	31	25	18
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	32	32	32	33	33	33	36	44
A2. Primary balance is unchanged from 2017	32	29	27	25	23	21	13	4
A3. Permanently lower GDP growth 1/	32	32	33	34	33	32	27	22
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-20	32	32	33	34	33	32	26	19
B2. Primary balance is at historical average minus one standard deviations in 2018-201	32	33	34	35	34	33	27	19
B3. Combination of B1-B2 using one half standard deviation shocks	32	32	33	34	33	32	26	18
B4. One-time 30 percent real depreciation in 2018	32	39	39	39	38	36	31	26
B5. 10 percent of GDP increase in other debt-creating flows in 2018	32	42	42	42	42	40	33	23
PV of Debt-to-Revenue Ratio 2/								
Baseline	194	204	201	202	198	186	139	95
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	194	202	198	199	200	197	198	236
A2. Primary balance is unchanged from 2017	194	186	167	154	140	124	73	19
A3. Permanently lower GDP growth 1/	194	204	202	204	200	189	146	116
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-20	194	205	203	205	201	190	144	104
B2. Primary balance is at historical average minus one standard deviations in 2018-201	194	210	213	213	209	196	147	101
B3. Combination of B1-B2 using one half standard deviation shocks	194	206	206	207	202	191	143	98
B4. One-time 30 percent real depreciation in 2018	194	248	239	235	228	215	170	138
B5. 10 percent of GDP increase in other debt-creating flows in 2018	194	265	260	258	252	238	180	125
Debt Service-to-Revenue Ratio 2/								
Baseline	18	21	25	25	28	24	20	16
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	18	21	25	24	28	24	25	34
A2. Primary balance is unchanged from 2017	18	21	24	22	24	18	11	6
A3. Permanently lower GDP growth 1/	18	21	25	25	28	24	20	19
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2018-20	18	21	25	25	29	24	20	17
B2. Primary balance is at historical average minus one standard deviations in 2018-201	18	21	26	26	29	25	21	17
B3. Combination of B1-B2 using one half standard deviation shocks	18	21	25	25	29	25	20	17
B4. One-time 30 percent real depreciation in 2018	18	23	30	30	35	31	28	28
B5. 10 percent of GDP increase in other debt-creating flows in 2018	18	21	29	31	34	32	25	21

Sources: Country authorities; and staff estimates and projections.

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

2/ Revenues are defined inclusive of grants.