

---

**THE UNITED REPUBLIC OF TANZANIA**  
**MINISTRY OF FINANCE AND PLANNING**



**MEDIUM TERM DEBT MANAGEMENT STRATEGY**

---

DECEMBER, 2015

## Contents

FIGURES .....	2
TABLES .....	2
EXECUTIVE SUMMARY .....	3
1.0 INTRODUCTION .....	5
1.1 OBJECTIVES AND SCOPE OF THE MTDS.....	5
2.0 REVIEW OF EXISTING PUBLIC DEBT PORTFOLIO.....	6
2.1 STRUCTURE OF EXISTING DEBT PORTFOLIO .....	6
2.2 EXTERNAL DEBT BY CREDITOR CATEGORY.....	6
2.3.1 DOMESTIC DEBT BY HOLDER CATEGORY.....	8
2.4 COST AND RISK CHARACTERISTIC OF THE EXISTING DEBT PORTFOLIO .....	8
2.4.1 CURRENCY COMPOSITION OF EXTERNAL DEBT.....	11
3.0: MEDIUM TERM FINANCING OUTLOOK .....	12
3.1 EXTERNAL FINANCING .....	12
3.2 DOMESTIC FINANCING .....	12
3.3 MACROECONOMIC PROJECTIONS AND ASSUMPTIONS.....	13
3.3.1 RISKS EXPOSED TO THE ECONOMY.....	15
4.0: DESCRIPTION OF ALTERNATIVE STRATEGIES AND ANALYSIS OF THE RESULTS.....	16
4.1 FINANCING AND PRICING ASSUMPTIONS.....	17
4.1.1 PRICING ASSUMPTIONS.....	18
4.1.2 EXTERNAL FINANCING .....	19
4.1.2 DOMESTIC FINANCING .....	19
4.2 DESCRIPTION OF SHOCK SCENARIOS.....	20
4.3 COST-RISK ANALYSIS OF ALTERNATIVE DEBT MANAGEMENT STRATEGIES.....	21
4.4 SELECTION OF THE STRATEGY .....	24
5.0: IMPLEMENTATION OF THE MTDS AND DEVELOPING ANNUAL BORROWING PLAN..	25
6.0: CONCLUSION AND THE WAY FORWARD.....	25

## Figures

CHART 1: STRUCTURE OF PUBLIC DEBT PORTFOLIO BY SOURCE.....	6
CHART 2 EXTERNAL DEBT BY CREDITOR CATEGORY .....	7
CHART 3: DOMESTIC DEBT BY HOLDER CATEGORY AS AT JUNE, 2015 .....	8
CHART 4: REPAYMENT PROFILE OF EXTERNAL AND DOMESTIC DEBT (TZS MILLION) .....	11
CHART 5: EXTERNAL DEBT BY CURRENCY COMPOSITION AS AT END JUNE, 2015.....	11
CHART 6: YIELD TREND FOR MARKETABLE SECURITIES .....	13
CHART 7: DESCRIPTION OF SHOCK SCENARIOS.....	20
CHART 8: PV OF DEBT TO GDP AS AT END 2019 .....	22
CHART 9: PV OF DEBT TO GDP AS AT END 2019 .....	23
CHART 10: AMORTIZATION PROFILE UNDER DIFFERENT STRATEGIES (AS OF END FY 2019/20) .....	24

## Tables

TABLE 1: COST AND RISK INDICATORS FOR EXISTING DEBT AS AT END 2014/15 .....	10
TABLE 2: FINANCING TERMS OF THE MAJOR CREDITORS .....	12
TABLE 3: SUMMARY OF ALTERNATIVE STRATEGIES IN PERCENT .....	17

## EXECUTIVE SUMMARY

This report presents the 2015 Medium Term Debt Strategy (MTDS) prepared by the Ministry of Finance and Planning with technical assistance from the Macroeconomic and Financial Management Institute of Eastern and Southern Africa (MEFMI), using the IMF/World MTDS analytical tool. The objective of strategy preparation was to attain an optimal mix of external and domestic borrowing at the lowest possible cost consistent with acceptable degree of risks.

The MTDS 2015 covered five years starting 2015/16 to 2019/20. It was developed in line with the underlying set of macroeconomic and new debt assumptions;

Based on macroeconomic framework, Real GDP growth is projected at 7.0 percent in 2015 and maintain upward trend to an average rate of 8.0 percent in the medium term. Nominal GDP growth is projected at 13.0 percent annually consistence with inflation trend which is maintained in the range of 5 percent and 8 percent. These will be underpinned by the envisaged production of natural gas, soda ash, iron ore, investment in infrastructure projects (particularly the construction of a new standard gauge railway line) as well as construction and rehabilitation of major ports in Bagamoyo and Mtwara.

Financing terms were assumed to be less favorable to reflect the changing financing development of the country, implying a gradual shift to the non-concessional financing window over the medium term. Over the medium term, the overall fiscal deficit is projected to remain around 3 percent of GDP, in line with the East African Monetary Union convergence criterion.

The analysis considered four alternative strategies as detailed below:

**Strategy 1: Baseline.** Assumed a net domestic financing (NDF) target of 1.5 percent of GDP as estimated in the budget for 2015/16 and 1 percent for the remaining four years. It also assumed that current levels of concessional borrowing will be maintained over the medium-term and the remaining external borrowing will be met by semi-concessional and commercial loans. For domestic, the issuance plan of the past fiscal year will be retained while T-bills covered over 50 percent of the issuance.

**Strategy 2: Lengthening of Maturity of Domestic Debt.** A NDF target at 1.1 percent and the proportion of short-term domestic debt was reduced from an average of over 50 percent to around 27

percent replaced by medium term and long-term bonds. It also assumed that the composition of external financing for the first strategy will be retained.

**Strategy 3: Borrowing from Semi-concessional Sources and Lengthening of Domestic Maturity.** It envisages a gradual reduction in the concessional borrowing over the medium-term, replaced by semi-concessional borrowing mainly from ADB and ECA. The current commercial borrowing was reduced to average of 15 percent. The strategy maintained composition of domestic instruments as in strategy 2 with NDF target of 1.0 percent of GDP.

**Strategy 4: Issuance of Eurobond.** It sought to assess the impact of issuance of Eurobond to the tune of USD 700 million, which is equivalent to 55.4 percent of the external financing and 24.2 percent of total financing. This issuance replaces borrowing from concessional sources (IDA, ADB) in 2015/16. The strategy assumes that the existing terms and composition of domestic borrowing will be retained as in strategy one and that the country will recourse to the proportion of external borrowing pursued in 2015/16 after issuance of international bond.

The choice of most preferred strategy among the four alternative strategies was guided by the main objective of debt management in terms of the cost-risk tradeoff. The analysis considered strategy 3 to be the most preferred and feasible strategy. It assumes a gradual reduction in the concessional borrowing over the medium-term, replaced by semi-concessional borrowing, mainly from commercial window of African Development Bank and ECA and lengthening of domestic debt maturity. The strategy not only has relatively low risk and cost but also more feasible in implementation given the recent commitment by the African Development Bank to disburse more than USD 2.0 million to the Government through its market window.

Strategy 3 will provide guidance for Government annual borrowing plan financial year 2016/17 by considering the least cost-risk tradeoff combination of borrowing instruments while taking into account macroeconomic indicators and the domestic debt market development.

## **1.0 Introduction**

1. The Government Loans Guarantees and Grant Act CAP 134, and its regulations, requires the Government of the United Republic of Tanzania to prepare a debt management strategy and an annual borrowing plan. In this regard, the Ministry of Finance and Planning and Bank of Tanzania prepared Medium Term Debt Strategy (MTDS) in December 2015 to guide over the period 2016-2020. The MTDS was prepared with technical assistance from the Macroeconomic and Financial Management Institute of Eastern and Southern Africa (MEFMI), using the IMF/World MTDS analytical tool.

### **1.1 Objectives and Scope of the MTDS**

2. The objectives of debt management in Tanzania are to meet the Government's financing needs at the lowest cost consistent with acceptable degree of risk, to develop domestic financial markets, and to ensure debt burden is sustainable throughout the medium and long term. In order to achieve these objectives, MTDS analytical tool is employed to evaluate the cost and risk trade-offs associated with alternative debt management strategies.

3. The scope of the 2015 MTDS covers public external and domestic debt<sup>1</sup> excluding contingent liabilities and loan provided by the IMF for balance of payments (BOP) support. The time horizon of the analysis is five years starting from financial year 2015/16 to 2019/20

---

<sup>1</sup> Includes Pension fund liabilities

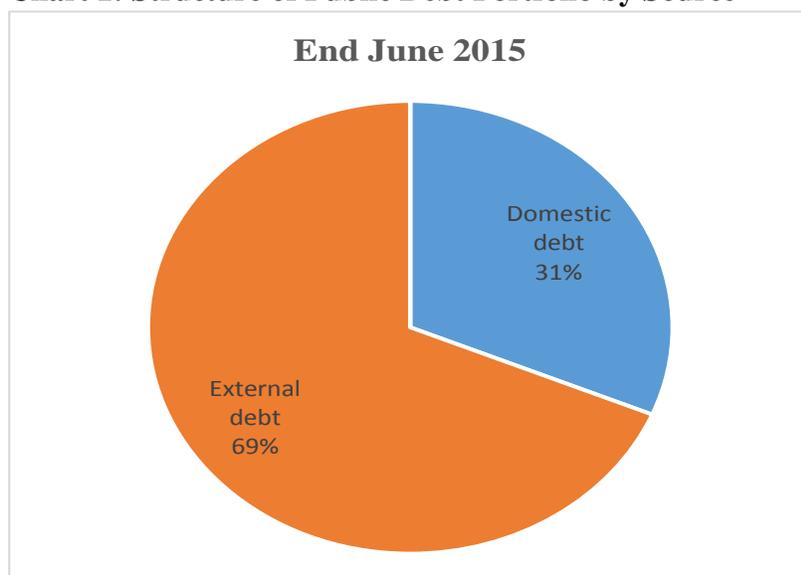
## 2.0 Review of Existing public debt portfolio

### 2.1 Structure of Existing Debt Portfolio

4. As at end of June 2015, total public debt was USD 17,580.7 million, equivalent to 42.4 percent of GDP compared with USD 16,677.0 million as at end of June 2013<sup>2</sup> (equivalent to 55.6<sup>3</sup> percent of GDP). Out of total public debt, external debt was USD 12,083.7 million and domestic debt was USD 5,496.9 million. The increase in public debt is mainly due to new borrowing for financing development projects.

External debt had explained the largest share of public debt which is consistent with Government debt policy to maximize concessional sources on relatively low cost of debt (**Chart 1**)

**Chart 1: Structure of Public Debt Portfolio by Source**



**Data source:** *Ministry of Finance and Planning*

### 2.2 External Debt by Creditor Category

5. As at the end of June 2015, the analysis shows that external debt from multilateral creditors has declined from 67.3 percent as at June 2013 to 60 percent. The decrease in multilateral debt reflects the change in the development finance landscape for the country where concessional sources of financing

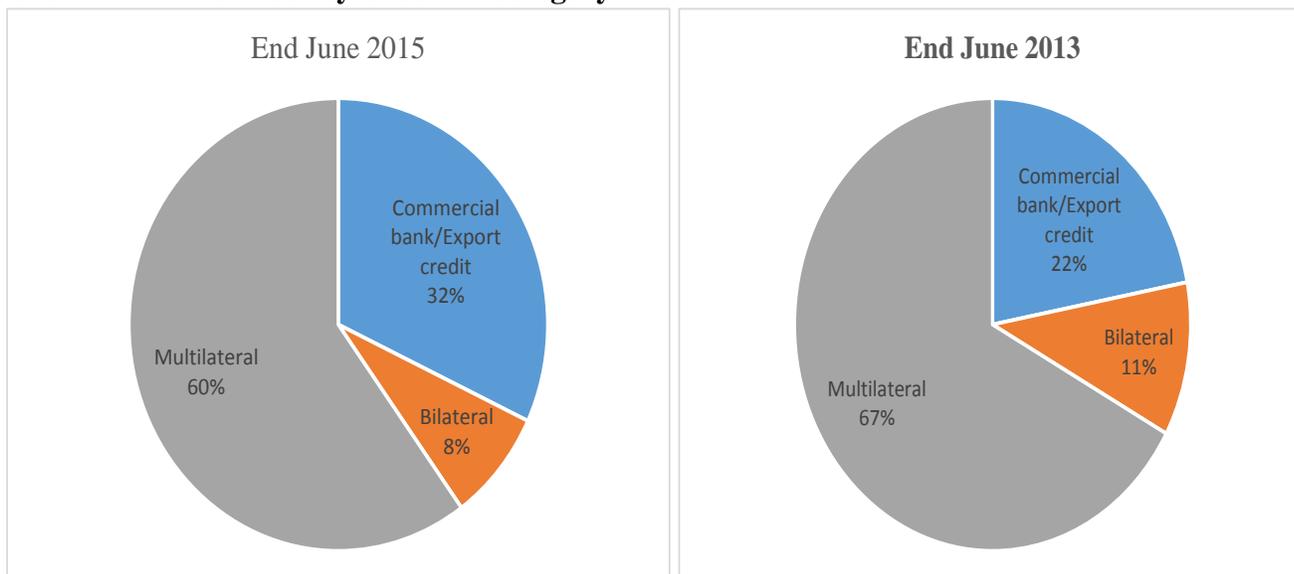
---

<sup>2</sup> Previous MTDS analysis was done in 2013

<sup>3</sup> Outstanding debt was higher as a proportion of GDP in June 2013 compared to June 2015 due to rebasing of GDP

are increasingly replaced by non-concessional loans. In this case, the loan from non-concessional creditors increased from 22 percent in June 2013 to 32.4 percent in June 2015 (Chart 2).

**Chart 2 External Debt by Creditor Category**



### 2.3 Domestic Debt

6. As at end June, 2015 domestic debt<sup>4</sup> stood at TZS 11,161.0 billion equivalent to 11.7 percent of GDP as compared to TZS 5,702.3 billion equivalent to 13.9 percent of GDP recorded in June 2013. The substantial increase in nominal terms is mainly caused by Government borrowing to finance development projects, rolling over the matured securities and inclusion of pension funds debt amounting to TZS 3,758.73 billion. However, domestic debt has declined as a proportion of GDP during this period because of due to rebasing of GDP in 2015.

7. Domestic government securities market comprises both marketable securities and non-marketable securities. Marketable securities consist of Treasury bills (35, 91, 182, 364-days)<sup>5</sup> and Treasury bonds (2, 5, 7, 10-years and 15 years which was launched on November 2013), whereas non-

<sup>4</sup> Domestic Debt comprises of marketable and Non Marketable securities and Pension Fund liabilities emanated from Pre 1999 PSPF contribution and investments by pension funds to Government projects.

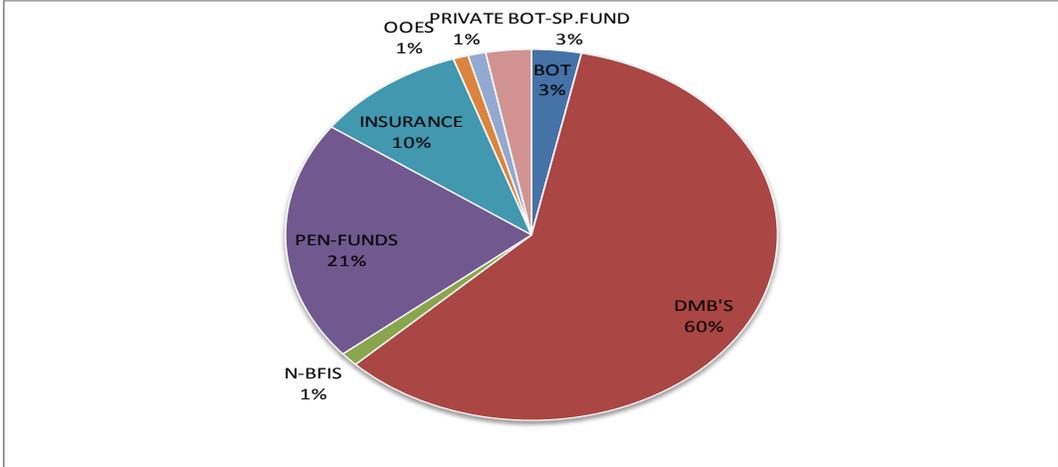
<sup>5</sup> 35 and 91 treasury bills are issued for liquidity management purpose only while 182 and 364 treasury bills are issued for both liquidity management and financing purposes.

marketable securities comprise special bonds and stocks. Special bonds comprise bonds issued for recapitalization of the CRDB and NMB banks as well as accumulation of BOT advance to government which was converted into special bonds. Over the past five years, on average treasury bonds accounted for 45 percent of government securities where as treasury bills and special bonds accounted for 32.6 percent and 22.4 percent respectively of the total domestic debt portfolio.

**2.3.1 Domestic Debt by holder category.**

8. Domestic Debt by holder category reveals that Pension Funds hold 43.8 percent of the total debt followed by Commercial Banks 32.9 percent, Bank of Tanzania 14.3 percent, Insurance Funds 5.4 percent and others 3.4 percent. On other hand, if Non marketable securities are excluded amounting to TZS 5,199.6 billion then commercial banks held 60 percent of domestic debt, followed by Pension Funds 21 percent, Insurance Fund 10 percent, BOT 3 percent while Non-Bank Financial Institutions, Private and Other Official Entities hold 1 percent each (**Chart 3**).

**Chart 3: Domestic debt by holder category as at June, 2015**



**2.4 Cost and Risk Characteristic of the existing Debt Portfolio**

9. Currently, external debt account for 68.7 percent of the total public debt portfolio while domestic debt account for 31.3 percent of the total debt. The External debt consists of highly concessional loans characterized by longer maturity, longer grace period and lower fixed interest rate. A significant share of

external debt has fixed interest rates (80.1 percent) while 19.9 percent of the debt is a floating rate. Given a larger proportion of the fixed interest rate in external debt portfolio, the exposures to interest rate risk is significantly minimized. However the recent decline in concessional financing and donor flows has necessitated the Government to access non concessional loans which may gradually increase the share of floating debt in the debt portfolio and a degree of sensitivity to the risk factors i.e interest rate and exchange rate volatility.

10. The Average Time to Maturity (ATM) of the overall debt portfolio for existing debt is 12.9 years. The ATM for external debt is 15.4 years while for domestic debt the ATM is 7.4 years. The longer ATM for external debt is mainly due to concessional loans whose maturities are 40 years with a longer grace period of 10 years. The ATM for domestic debt of 7.4 years is short compared to external debt due to short term maturities of domestic instruments. The total domestic debt maturing within one year is 21.6 percent which implies high refinancing risk arising from rolling-over domestic debt at higher interest rates or in extreme cases cannot be rolled over at all, which in turn may result to a very large debt burden. The increase in rollover risk is widely contributed by the recent conversion of liquidity papers into financing papers and shifting of the appetite of domestic market investors from long term instruments to short term instruments.

11. The cost of domestic debt portfolio in terms of interest payment as a percentage of GDP is 1 percent compared to 0.6 percent for external debt. This reflects higher interest rates on domestic debt of which the weighted average interest rate for domestic debt is 7.7 percent compared to 1.9 percent for external debt.

12. The Average Time to Re-fixing (ATR) of the overall debt portfolio is 12.4 years which implies that it takes 12.4 years for the entire debt portfolio to change in market interest rates. The ATR of 12.4 years is favored by significant share of concessional loans from multilaterals and bilateral creditors with higher maturities of 40 years and a grace period of 10 years. The ATR for external debt is 14.7 years while for domestic debt is 7.4 years. However, the debt re-fixing in one year as a percentage of total debt is 22.5 percent which implies that there is high exposure to interest rate risk due to a proportional increase in a floating debt of non-concessional loans in external debt portfolio as well as the short term domestic debt. As indicated above, the proportion of non-concessional borrowing is likely to increase going forward, thus leading to increased exposure of the debt portfolio to interest rate risks.

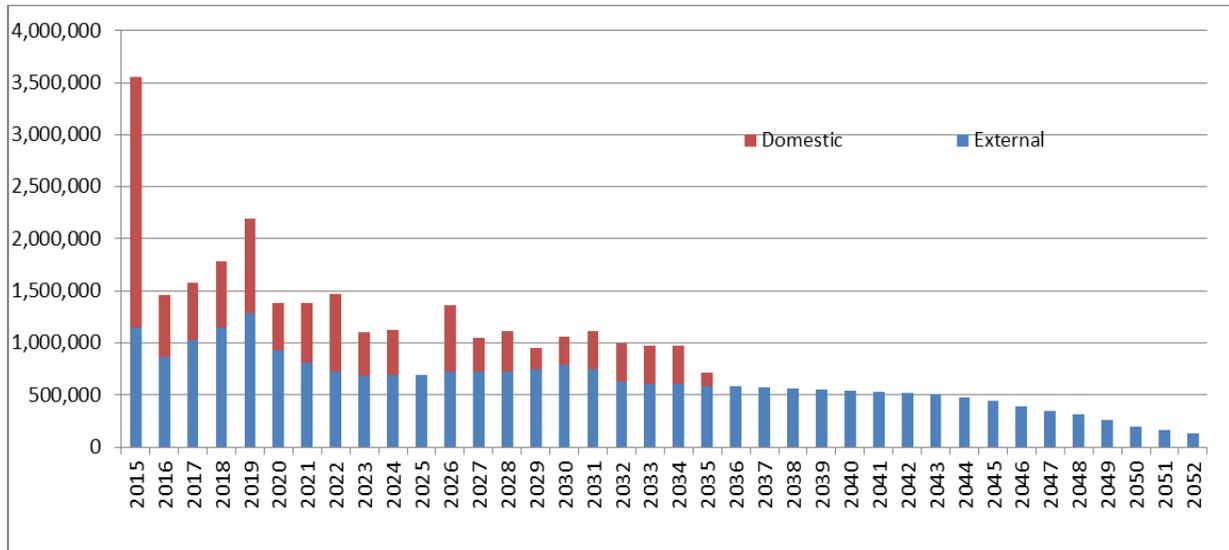
13. Given the current structure of existing debt portfolio, the exposure to market risk i.e interest rate volatility is very low due to the fact that a significant proportion of external debt accounting for 80.1 percent is fixed interest rate while for domestic debt is 100 percent fixed interest rate. However, due to a large proportion of external debt in the existing debt portfolio, the depreciation of the local currency poses high exchange rate risk and therefore may result into higher debt charges. The cost and risk indicators are indicated in table below:

**Table 1: Cost and risk indicators for existing debt as at end 2014/15**

2. COST AND RISK INDICATORS FOR EXISTING DEBT AS AT END 2014			
Risk Indicators	External debt	Domestic debt	Total debt
Amount (in millions of TZS)	24,534,838.5	11,160,969.6	35,695,808.0
Amount (in millions of USD)	12,083.7	5,496.9	17,580.7
Nominal debt as % GDP	29.1	13.2	42.4
PV as % of GDP	18.7	18.2	36.9
Cost of debt	Interest payment as % GDP	0.6	1.0
	Weighted Av. IR (%)	1.9	7.7
Refinancing risk	ATM (years)	15.4	7.4
	Debt maturing in 1yr (% of total)	4.7	21.6
	Debt maturing in 1yr (% of GDP)	1.4	2.9
Interest rate risk	ATR (years)	14.7	7.4
	Debt refixing in 1yr (% of total)	22.9	21.6
	Fixed rate debt (% of total)	80.1	100.0
FX risk	FX debt (% of total debt)		68.7
	ST FX debt (% of reserves)		14.4

14. It is therefore, necessary to address the refinancing risk on the domestic debt portfolio due to the increase in short term instruments which may shorten the ATM and increase a proportional of debt maturing in one year. A proportional increase in debt maturing in one year may adversely cause higher refinancing risk. Measures to be taken may include lengthening maturities of short term instruments to long term instruments and developing a deep and liquid domestic market. The refinancing risk is shown in a redemption profile below.

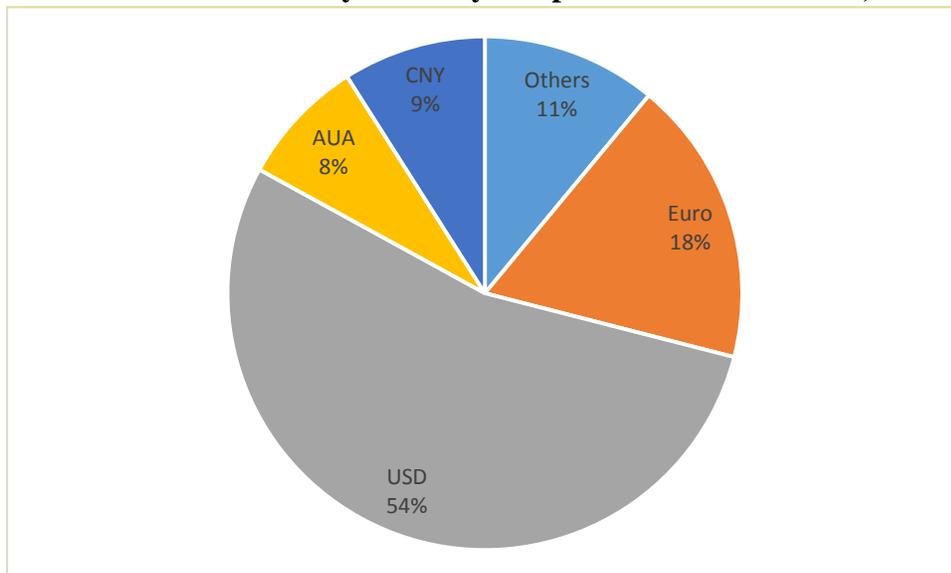
**Chart 4: Repayment Profile of External and Domestic Debt (TZS million)**



**2.4.1 Currency Composition of External Debt**

15. The existing portfolio entails significant exposure to exchange rate fluctuations as 69 per cent is denominated in foreign currency. This represents potential risk given the historical trend of TZS depreciation against major foreign currencies. Further analysis of external debt portfolio by currency shows that USD continued to dominate the by carrying 54 percent followed by Euro 18 percent (Chart 5). Therefore, external debt portfolio risks are exposed to USD movement.

**Chart 5: External debt by currency composition as at end June, 2015**



### 3.0: Medium Term Macroeconomic and Financing outlook

#### 3.1 External Financing

16. The borrowing operations of the Government of Tanzania are guided by the Government, Loans, Guarantees and Grants Act Cap.134, which requires all external borrowing to have a grant element of at least 35 percent (Concessional Loans). However, Tanzania has recently experiencing reduction in concessional loans financing due to changes of external financing landscape. Even though external concessional creditors remain the main sources of external finance, access to non-concessional sources has been increasing.

17. Apart from traditional concessional sources, the Government has been borrowing from other windows including semi-concessional funds (France, Austria) and the Export Credit Agencies (ECA's) (China, India Exim Banks). In addition, the Government may tap on the international capital markets to finance infrastructure projects. Financing terms of the major creditors are summarized in Table 2.

**Table 2: Financing Terms of the Major Creditors**

Instrument	Creditors	Maturity	Grace Period	Interest rates
Existing and New ADF/Existing IDA	ADF, IDA	40	10	0.75%
IFAD/EXKOR/NORDIC fixed	IFAD, NORDIC, JICA, Korea	40	10	0.10%
Concessional Fixed	BADEA, AUSTRIA and EIB	25	5	1.75%
Semi Concessional fixed	OPEC, KUWAIT	20	5	2%
Semi Concessional Floating	ADB, AFD	20	5	2%
ECA Fixed	Exim China, Exim India, HSBC	15	3	2%
ECA floating	Exim China, HSBC	15	3	Libor +4.3%
Commercial fixed/Sovereign Bond	International capital market	10	9	8.50%
Commercial floating	Hongkong & Shanghai Bank and ING( under DRIVE arrangement)	7	2	Libor +7%

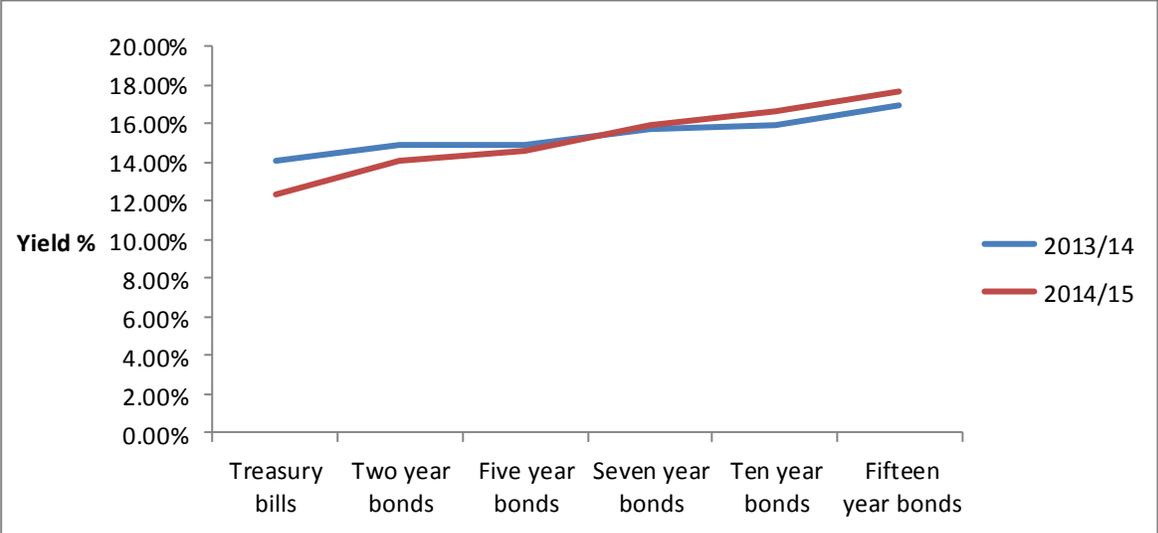
#### 3.2 Domestic Financing

18. Government policy on domestic debt management is to borrow consistently at the lowest possible cost and a prudent degree of risk from domestic financial markets without causing undue effects on monetary policy and financial sector development. According to the National Debt Strategy,

implementation of the domestic debt management policies includes among others: rolling over maturing principal while paying interest through domestic revenue; financing of the budget deficit through marketable instruments; and smoothening redemption profile.

19. The financing from domestic sources assumed the following: (a) Investors in Tanzania will continue showing preference to invest in government securities. (b) Despite of the non-participation of investors from EAC countries during 2014/15, the situation is expected to improve during 2015/16 following implementation of measures to attract foreign investors; (c) the Government will limit its net domestic borrowing less than 1.5% of GDP in medium term to ensure adequate resources to private sector; (d) yields on Government securities are expected to remain at 2014/15 levels (e) and financing will be through marketable instruments; (f) stocks and special bonds will be rolled over using 7, 10 and 15-year bonds while the proportion of Treasury bills will be reduced gradually in favour of long term instruments. As indicated below in Chart 6, Treasury bills and domestic government bonds will be issued across the curve.

**Chart 6: Yield trend for marketable securities**



**3.3 Macroeconomic Projections and Assumptions**

20. Real GDP growth is projected at 7.0 percent in 2015 and maintain upward trend to an average rate of 8.0 percent in the medium term. Nominal GDP growth is projected at 13.0 percent annually,

consistent with inflation trend. Inflation to be maintained at a range of 5 percent and 8 percent, consistent with EA convergence criteria. In line with the assumed real growth, domestic revenue will be maintained at annual growth of 13 percent in the long run consistent with nominal GDP growth. Fiscal deficit is projected at 4.2 percent in 2015/16 and narrow down to 3 percent of GDP in the medium to long term consistent with EA convergence criteria. In the medium term, the ratio of current account balance deficit to GDP is projected to narrow and stabilize at an annual average of 7.4 percent as growth in imports particularly oil are projected to maintain lower rates relative to exports.

The projections are supported by the following assumption:

- i. Improved and stabilized power supply mainly from natural gas which is expected to boost performance of other sectors including manufacturing;
- ii. Continued public investment in infrastructure particularly revival of the central railway line and planned upgrade to standard gauge, as well as increase in the capacity and efficiency of the ports. This will boost economic activities in trade and transportation to and from the neighboring landlocked countries;
- iii. Successfully implementation of economic policies under the FYDP II which focus on nurturing industrial transformation and human development. The Plan focuses specifically on natural resources based industries, geographical location based industries, labour intensive industries and those that can produce enough for the local market and surplus for export. The Government will facilitate availability of conducive business environment to strategically support industrial transformation;
- iv. Strengthened control and management of public expenditure under the Budget Act 2015;
- v. Increase in private investment in the areas of cement production (new plants - Dangote and capacity enhancement) consistent with increased demand for construction activities including construction of LNG plants. LNG plants construction and backward linkages industries are expected to attract potentially enormous size of FDI flow.
- vi. Favorable weather condition: Increase production of traditional crops such as cashew nuts and cotton, which will also boost export performance

- vii. Multiplier effect of the natural gas discoveries currently at 55.08 TCF includes reduction of oil imports for electricity generation; increased revenue to the Government; increased export earnings and foreign reserves; stimulate industrial development and employment.
- viii. Increase in financial deepening to the extent of stimulating economic activities.

### **3.3.1 Risks exposed to the economy**

#### **Inflation risk**

21. Domestic inflation is largely exposed to exogenous forces such as weather which influences food availability and global prices of oil. Higher inflation can affect real growth by posing challenges to fiscal and monetary policy operations. This could may lead to increases in interest rates, widening fiscal deficits and thus create the need for additional borrowing.

#### **Exchange rate risk**

22. As it has been observed in the recent past, Tanzanian shilling was deteriorating against United States dollar. The deterioration of the shilling affects negatively the debt repayment in local currency, although the situation can be beneficial on the sides of competitiveness and domestic government revenue.

#### **GDP Risk**

23. The agricultural sector contributes more than 25 percent to GDP, but leads in providing employment to more than 70 percent of the population. The sector is marginally taxed and is exposed to exogenous shocks that can cause lower GDP than initially projected, thus lowering tax collection and the ability to service the debt.

#### **BOP Risks**

24. Widening of external current account balance can be a result fluctuation of world market commodity prices, unpredictable official transfers and low level of foreign direct investment inflows. Further, uncertainty of Overseas Development Assistances (ODA) flows has been observed tin recent years, thus posing tremendous constraint to the implementation of fiscal policy. The persistent widening

of current account balance can lead to financing challenges to government, leading to loss of official gross reserves.

#### **4.0: Description of Alternative Strategies and analysis of the results**

25. Four alternative debt management strategies were designed and analyzed to determine the strategic path that the Government should take with respect to public debt operations over the medium-term. The alternative debt strategies were subjected to interest rate and exchange rate shocks in order to select the most appropriate strategy. The strategies differed in the combination of external and domestic sources; within external sources, concessional multilateral and bilateral credit, semi-concessional windows of multilateral institutions and bilateral creditors, non-concessional sources including export credit agencies (ECAs) and international bond issuances; and within domestic sources, the strategies differed in composition of various maturities. The four strategies are discussed hereunder.

##### **Strategy 1: Baseline (Existing) Strategy**

26. The baseline debt management strategy (Strategy 1) assumes a policy constraint that limits the net domestic financing (NDF) at 1.5 percent of GDP in the current year, consistent with current Government budget (2015/16FY), and one percent for the remaining four year time horizon of the analysis (2016/17 – 2019/20FY). It also assumed that current levels of concessional borrowing will be maintained over the medium-term and the residual external borrowing requirement will be met by semi-concessional financing and commercial loans. Domestically, the issuance pattern of the past fiscal year will be maintained, with over 50 percent of domestic borrowing requirements covered by the issuance of T-bills and the rest distributed in various bond maturities ranging from two to fifteen years.

##### **Strategy 2: Lengthening of Maturity of Domestic Debt**

27. The cost and risk analysis of the existing debt portfolio suggest that reducing the level of external exposure and refinancing risk in the domestic portfolio would be desirable. In this regard, the strategy was designed to assess the impact of lengthening domestic debt maturity on cost and risk of debt. The NDF was scaled up by 10 basis points to 1.1 percent in the medium term while the proportion of short-term domestic debt was reduced from an average of over 50 percent to around 27 percent in favour of long-term bonds. The strategy assumed that the composition of external financing for the first strategy will be maintained.

### Strategy 3: Borrowing from Semi-concessional Sources and Lengthening of Domestic Maturity

28. The strategy assumed a gradual reduction in the external concessional envelope over the medium-term, while increasing semi-concessional borrowing mainly from ADB and ECA such as Exim China and Exim India. The strategy maintained the composition of domestic instruments as in strategy two of lengthening domestic debt maturity while the NDF set at 1.5% in 2015/16 and maintained 1.0 percent of GDP in the medium term.

### Strategy 4: Issuance of Eurobond

29. Strategy four sought to assess the impact of issuance of Eurobond to the tune of USD 700 million, which is equivalent to 55.4 percent of the external financing and 24.2 percent of total financing. This issuance replaces borrowing from concessional sources (IDA, ADB) in 2015/16. The strategy assumes that the existing terms and composition of domestic borrowing will be maintained as in strategy one and that the country will recourse to the proportion of external borrowing pursued in 2015/16 after issuance of international bond.

Table 3: Summary of Alternative strategies in percent

External Instruments	Baseline					Lengthening Domestic Maturity					Semi-concessional					Issuance of Sovereign Bond				
	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019	2015	2016	2017	2018	2019
IDA & ADF	45.0	42.0	42.0	42.0	42.0	45.0	42.0	42.0	42.0	42.0	45.0	30.0	30.0	30.0	30.0	45.0	30.0	44.0	44.0	44.0
IFAD, Exim Korea, JICA & NORDIC	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.0	4.1	5.5	5.5	5.5
conce fixed	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Semi-concessional-fixed	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Semi-concessional-variable	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	11.0	33.0	33.0	33.0	33.0	11.0	2.0	6.9	6.9	6.9
ECA FIX	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	21.1	21.1	21.1	21.1	15.0	5.6	21.1	21.1	21.1
ECA FLOAT	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	3.0	5.0	5.0	5.0	5.0	3.0	1.0	1.0	1.0	1.0
Eurobond/commercial fixed	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	55.4	0.0	0.0	0.0
Eurobond/commercial variable	20.1	23.1	23.1	23.1	23.1	20.1	23.1	23.1	23.1	23.1	20.1	5.0	5.0	5.0	5.0	20.1	0.0	19.6	19.6	19.6
<b>Domestic Instruments</b>																				
T-bills	50.7	35.0	30.0	25.0	20.0	50.7	35.0	30.0	25.0	20.0	50.7	35.0	30.0	25.0	20.0	50.7	50.7	50.7	50.7	50.7
2&5-Year Bond	19.2	23.2	26.0	27.0	28.0	19.2	23.2	26.0	27.0	28.0	19.2	23.2	26.0	27.0	28.0	19.2	19.2	19.2	19.2	19.2
7&10-Year Bond	21.6	28.3	29.4	30.4	33.4	21.6	28.3	29.4	30.4	33.4	21.6	28.3	29.4	30.4	33.4	21.6	21.6	21.6	21.6	21.6
15-Year Bond	8.5	13.5	14.6	17.6	18.6	8.5	13.5	14.6	17.6	18.6	8.5	13.5	14.6	17.6	18.6	8.5	8.5	8.5	8.5	8.5
Non Marketable 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	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0

### 4.1 Financing and Pricing Assumptions

30. Based on the analysis of the external and domestic sources of financing, thirteen representatives debt instruments have been identified that will be considered in different combinations to represent different debt management strategies. These instruments include:

**Instrument 1:** concessional fixed rate debt (IDA and ADF), with maturity of 38 years, grace period of 6 years and interest rate of 0.75 percent.

**Instrument 2:** Concessional fixed rate debt (IFAD/EXKOR/JICA/NORDIC) with maturity of 40 years, grace period of 8 years and interest rate of 0.1 percent.

**Instrument 3:** Concessional fixed rate debt (Austria, Unicredit) with maturity of 24 years, grace period of 7 years and interest rate of 1 percent.

**Instrument 4:** Semi-concessional fixed rate debt (The OPEC fund, Kuwait fund, United Arab Emirates) with maturity of 20 years and grace period of 5 years and interest rate of 2 percent.

**Instrument 5:** Semi-concessional variable rate debt (ADB and AFD) with maturity of 25 years and grace period of 5 years, but LIBOR plus 200 basis points

**Instruments 6:** ECA fixed (Exim-China and Exim-India) with 15-year maturity, 5-year grace period and interest of 2 percent.

**Instruments 7:** ECA variable (HSBC and Exim-China) with 15-year, 3-year grace period, with a variable interest rate LIBOR plus 430 basis points.

**Instrument 8:** Commercial fixed/Eurobond with maturity of 10-year, interest rate 8.5 percent and grace period of 9 years

**Instrument 9:** Commercial floating (Credit Suisse AG, Standard Bank, China Development Bank) with maturity of 7-year, interest rate LIBOR plus 700 basis points and grace period of 2 years

**Instruments 10 to 13:** Domestic T-bills, 4-years instrument representing 2 and 5-year tenors, a 9-year instrument representing 7- and 10-year tenors, and a 15-year fixed-rate T-bonds

#### **4.1.1 Pricing Assumptions**

31. In order to evaluate the cost and risk trade-off of various debt management strategies, pricing assumptions need to be made concerning the debt instruments used to meet the overall financing requirement. For the purposes of this analysis, the following pricing assumptions were considered:

#### **4.1.2 External Financing**

- i. Concessional external loans (IDA and ADF) are priced at a fixed rate of 0.75 percent, with a 38-year tenor and 6-year grace period. These loans are assumed to be denominated in SDR. Other concessional external loans expected to be sourced from IFAD, Exim-Korea, JICA and NORDIC are projected to be priced at a fixed rate of 0.7 percent with maturity of 40 years and grace period of 10 years.
- ii. Semi-concessional fixed loans are assumed to be sourced from OPEC, Kuwait Fund, UAE and Saudi Fund whereas, Semi Concessional variable are assumed to be sourced from ADB and AFD. It is assumed that fixed rate loans will be available at an interest rate of 2 percent, and variable rate loans at LIBOR plus margin ranges between 0.95 percent and 2.7 percent. Both fixed and variable rate loans carry a tenor of 20-years with a 5-year grace period.
- iii. Access to the international capital market is assumed to be in USD and priced on the underlying forward US Treasury-curves plus a credit spread. The margin is assumed to range between 7.35 percent to 9.0 percent and fixed rate loans the projected interest rate is 8.50 percent for a 10-year bond this reflects current market conditions for a B-rated credit.
- iv. ECA fixed loans ( Exim Bank of China and Exim India) are assumed to be priced at interest rate ranging between 4.65 percent and 6.40 percent while ECA Variable loans are assumed to be sourced from HSBC with projected margin of 200 basis points over LIBOR.

#### **4.1.2 Domestic Financing**

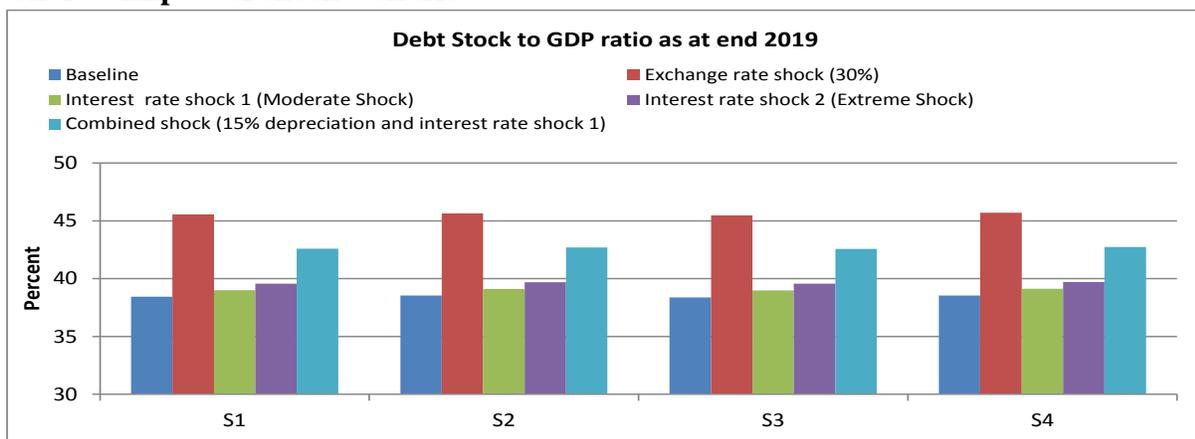
32. The absence of an active secondary domestic market for bonds does not provide a robust basis for determining domestic forward interest rates. Thus we assume that the current rates are the best indicative of future interest rates. For the purposes of this analysis, the pricing of Treasury Bills and bonds is maintained at the same average yield to maturity for the year 2014/15. Treasury Bills assumed to be issued at a yield of 14.20 percent in 2015/16 and decrease to 12.40 percent in outer years. The 2 and 5-year Treasury Bonds are combined into a 4-year bucket and assumed to be issued at a yield of 15.70 percent in 2015/16 and then maintained at 14.0. The 7 and 10-year Treasury Bonds are combined into a 9-year bucket issued at a yield of 17.25 percent in 2015/16 and maintained at 16.30 percent in

outer years. The 15-year Treasury bond is assumed to be issued at a yield of 17.8 percent in first year and maintained at 17.70 percent in the outer years.

#### 4.2 Impact of Shock Scenarios

33. Alternative debt management strategies were subjected to stress test on interest and exchange rates. The choice of the magnitude of the shocks is based on historical interest and exchange rates performance over the last ten years and outlook of the risks facing the economy. The impact of the exchange rate and interest rate shocks are illustrated in Chart 7 and Table 4

**Chart 7: Impact of shock scenarios**



Subject the cost indicators to different shocks, depicts that the maximum risk shock for all strategies comes from the scenario with a 30 percent depreciation of TZS against the US\$.

**37. Scenario 1:** A one off, 30 percent depreciation of the domestic currency against the USD in FY 2018/19. This assumption is based on recent depreciation experienced by TZS against USD on account of recovery of US economy. Also fall in commodity prices in the world pose a risk in foreign exchange earnings which might be manifested in the depreciation of TZS against USD.

**38. Scenario 2:** Assumes a 200 basis points rise in interest rate for domestic instruments and external non-concessional floating loans. For external loans with fixed rates, a 100 basis points increase is assumed. This assumption takes into account the current US Treasury yield curve development.

**37. Scenario 3:** Assumes a combination of a one off, 15 percent depreciation of the domestic currency against the USD in FY 2017/18 and 200 basis points rise in all domestic instruments as well as external non-concessional floating loans. For external loans with fixed rates, a 100 basis points increase is assumed. This assumption takes into account the current developments in the US Treasury yield curve.

**38. Scenario 4:** Assumes a 400 basis points rise in interest rates for domestic debt instruments and external non-concessional floating loans whereas external loans with fixed rates, a 200 basis points increase is assumed.

34. Overall, the exchange rate depreciation poses major risk in the debt management as in all alternative strategies a 30 percent exchange rate shock elevated the debt to above 45 percent of GDP. Interest rate shock has minimal effect as most of external loans are concessional.

#### **4.3 Cost-risk Analysis of Alternative Debt Management Strategies**

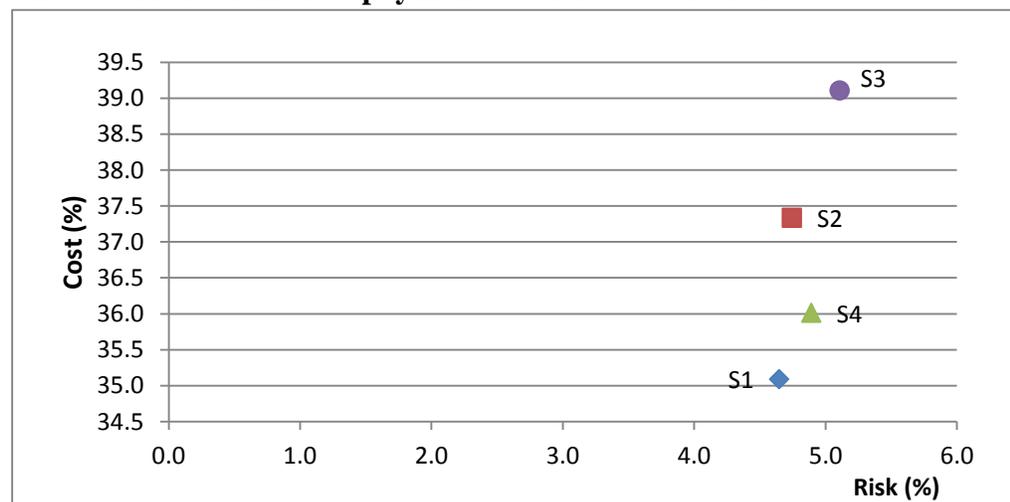
35. The performance of the alternative strategies was analyzed using a deterministic model employed in the MTDS analytical tool. The comparisons of cost and risk were based on simulations of combinations cash flows of existing debt, macro and market projections, and alternative borrowing strategies under different scenarios. The IMF/WB Medium Debt Strategy analytical tool was used to evaluate different strategies and their cost and risk implications on the debt portfolio. While the model typically does not identify the best strategy, it provides a solid basis for comparing different cost and risk measures, and a firm ground on which a specific strategy can be chosen. A number of cost and risk indicators were considered including the performance of each strategy in terms of debt-to-GDP, interest-to-GDP and PV of debt-to-GDP as shown in Table 4 hereunder.

**Table 4: Cost and Risk indicators of Alternative Debt Strategies**

Risk Indicators		2014	As at end 2019/20			
		Current	S1	S2	S3	S4
Nominal debt as % of GDP		42.4	38.4	38.5	38.4	38.5
Present value debt as % of GDP		36.9	35.1	37.3	39.1	36.0
Interest payment as % of GDP		1.6	1.8	1.9	1.8	1.8
Implied interest rate (%)		3.7	5.1	5.3	5.0	5.2
Refinancing risk	Debt maturing in 1yr (% of total)	10.0	9.1	6.4	6.0	8.8
	Debt maturing in 1yr (% of GDP)	4.2	3.5	2.5	2.3	3.4
	ATM External Portfolio (years)	15.4	14.7	14.7	14.4	14.7
	ATM Domestic Portfolio (years)	7.4	5.6	6.5	6.5	5.6
	ATM Total Portfolio (years)	12.9	12.0	12.1	12.0	12.0
Interest rate risk	ATR (years)	12.4	11.4	11.5	10.9	11.6
	Debt refixing in 1yr (% of total)	22.5	21.4	18.4	20.2	17.8
	Fixed rate debt (% of total)	86.3	86.1	86.3	84.5	89.7
	FX debt as % of total	68.7	69.9	69.2	69.8	69.9
FX risk	ST FX debt as % of reserves	14.4	12.3	12.2	10.6	10.8

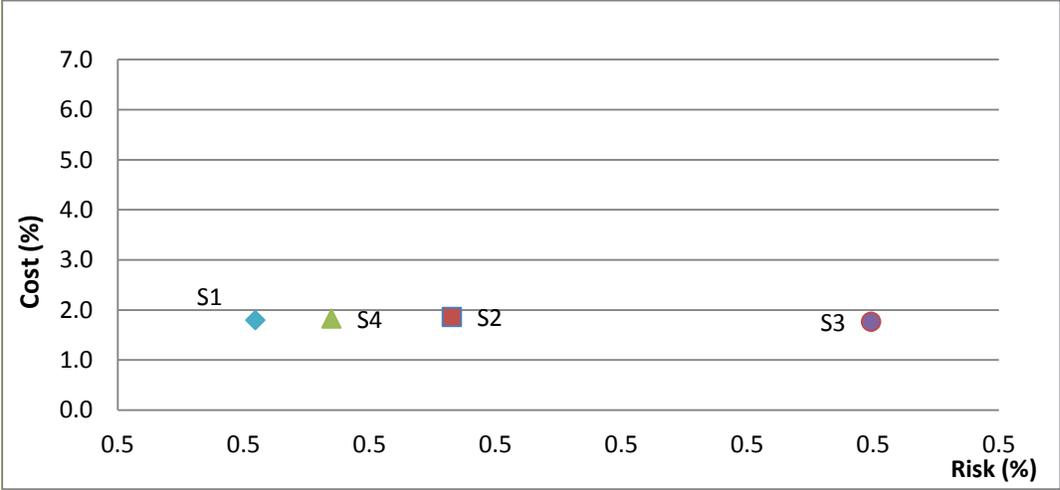
36. Assessed in terms of nominal debt as the percentage of GDP at the end of horizon (2019), all strategies have almost the same outcomes, with lower debt ratios compared to the existing portfolio as of June 2015. The declining debt ratios could nonetheless be explained by projected high GDP growth rather than slowdown in growth of debt. In terms of PV of debt to GDP ratio, strategy one (S1) outperformed other strategies followed by strategy four (S4). This is due to the long-term nature of concessional debt, which accounts for the largest proportional of external financing in S1 and S4. Strategy S2 and S3 seems to be expensive due to the shift towards more domestic borrowing and contraction of semi-concessional and non-concessional debt (Chart 8). However, the risks to the alternative strategies are not significantly different.

**Chart 8: Ratio of interest payment to GDP as at end 2019**



Based on the interest payment as percent of GDP indicator, S3 represents the lowest cost and lowest risk option, followed by S1 ( Chart 10). S2 leads to higher costs than S4 due to the shift from relatively cheaper external sources to more expensive external financing funding sources. In addition, in Strategy S4 the Euro Bond were issued only in year 2016 and other years we maintained the concessional financing.

**Chart 9: PV of Debt to GDP as at end 2019**

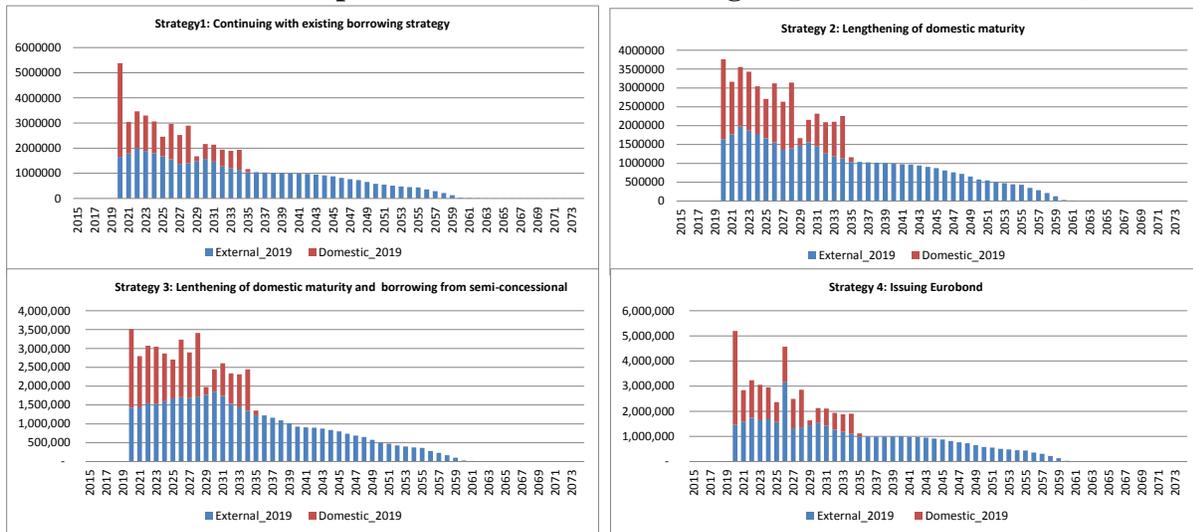


37. Overall the difference in costs between strategies S1, S2 and S3 is not large<sup>1</sup>. Therefore other risk exposure indicators e.g., interest rate, refinancing and foreign currency risks should also be taken into consideration.

With respect to refinancing risk, interest rate risk, and FX risk, all four chosen strategies show an improvement compared to the existing portfolio (see Table 4). Strategy 2 (S2) and Strategy 3 yield the greatest reduction in refinancing risk, with ATM of 6.5 years for domestic debt compare to 5.6 years in the other strategies. The ATM of the total debt portfolio for Strategy (S3) is slightly less than other strategies due to the greater reliance on shorter tenor commercial sources as opposed to concessional financing. The increase in ATM on the domestic portfolio in Strategy S3 and S2 is driven by the augmented issuance of longer term bonds compared to the current status. The ATR for Strategy (S3) is less than other strategies due to due to the increased share of non-concessional loans, most of which are assumed to be floating rate instruments.

In terms of refinancing risk S3, which assumes borrowing from semi concessional and ECA floating while lengthening maturity of domestic debt, performed marginally better than other strategies. The proportional of debt refinancing within one year was marginally lower and the redemption profile was relatively evenly distributed than in other strategies.

**Chart 10: Amortization profile under different strategies (as of end FY 2019/20)**



Source: Ministry of Finance/MTDS Toolkit

#### 4.4 Selection of the strategy

38. The choice of debt strategy is guided by the Government’s debt management objectives such as maintaining debt sustainability, minimizing costs and risk exposure and viability of the strategies. Strategy three was selected to be the preferred strategy among the four alternative strategies. The strategy assumes a gradual reduction in the concessional envelope over the medium-term, replaced by semi-concessional borrowing, mainly from commercial window of African Development Bank and ECA and lengthening of domestic debt maturity. The strategy not only has relatively low risk and cost but also more feasible in implementation given the recent trends of reduced concessional borrowing while increasing reliance on semi-concessional borrowing.

44. The strategy entails the Government issuing external and domestic debt in average of 49:51, with greater portion of external debt being allotted to semi-concessional and ECA debt while large proportion of domestic debt envisaged to be apportioned to long dated instruments with a view to reduce refinancing risk. This aligns with the Government objective of developing domestic market which includes gradually moving towards long-term maturity.

### **5.0: Implementation of the MTDS and developing annual borrowing plan**

39. To operationalize the strategy, the Government will develop a detailed borrowing plan that takes into account the likely timing of government cash flows throughout the fiscal year to accommodate potential funding pressures without compromising debt management objectives. The borrowing plan therefore takes account of the known market demand (or, for external borrowing, creditor availability), conditions, and should be adjusted when necessary. Overall, the government seeks to find an appropriate balance between meeting debt management objectives, increasing pro-poor expenditure and developing the domestic financial markets.

40. The implementation of the MTDS will be in line with a selected strategy and the annual borrowing plan. For effective implementation of the MTDS, a close monitoring of the annual borrowing plan which conforms to a selected strategy is vital. The issuance plan for domestic debt instruments will be consistently prepared annually prior to the new financial year and the issuance calendar be submitted to the Bank of Tanzania.

41. In order to align the strategy and the annual borrowing plan, there is a need to an effective Cash Management Unit to project monthly funding needs in line with annual borrowing plan.

### **6.0: Conclusion and the way forward**

42. The key objective for the 2015 Medium Term Debt Strategy was to assess cost and risks of domestic and external borrowing while taking into consideration the debt sustainability. This analysis will guide the Government to develop financing plan by setting out, inter alia the least cost combination of borrowing instruments with the prudent degree of risk taking into account macroeconomic indicators and the domestic debt market development.

43. The current cost and risk analysis of debt portfolio reveals that there is higher foreign exchange risks due to large foreign currency debt exposure, high costs associated with non concessional financing and the current underdeveloped domestic borrowing market provide an opportunity to diversify sources of financing and further develop the domestic borrowing market.

44. The choice of debt strategy is guided by such objectives as maintaining debt sustainability, minimizing costs and risk exposure and viability of the strategies. In this regard, four alternative strategies were assessed using the MTDS Analytical Tool, based on debt management objectives of the government. The analysis indicates that strategy (S3), which assumes borrowing from semi-concessional sources and ECA while elongating domestic debt maturity, seems more practical to implement than other strategies.

45. The approved MTDS will be communicated to the public through the publication of the MTDS report in MOFP website. Publication of the strategy is an important mechanism for enhancing accountability of debt management, as well as transparency of debt management operations, especially in the domestic market. The MTDS report will provide sufficient guidance to investors on the likely issuance of debt across different segments of the market so that they can plan their participation in the market accordingly.

### **Policy recommendations**

For sound implementation of MTDS the following is recommended;

- i. The MOFP and BOT are urged to revive Market Leaders Forum and establish auction committee order to get feedback from the market.
- ii. The Government is urged to redeem 5 to 10 percent of matured domestic debt obligation in cash instead of current practice of rolling over all matured domestic debt.
- iii. Rollover matured non marketable instruments held by Bank of Tanzania into marketable instruments as required under the East Africa Monetary Union (EAMU) Protocol.
- iv. There is a need to put in place mechanism for regular monitoring the implementation of the strategy.

- v. Building capacity to calculate and assess portfolio risk indicators by complementing the existing quarterly debt report with a new quarterly risk monitoring report. This also includes undertaking further training on the MTDS cost-risk analytical tool.