DEBT SUSTAINABILITY ANALYSIS REPORT 2018/19

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MINISTRY OF FINANCE, PLANNING AND ECONOMIC DEVELOPMENT

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Preface

Section 42 of the Public Finance Management Act (2015) mandates the Minister responsible for Finance with managing public debt. An important facet of debt management is the assessment of current and future debt levels with a view to ascertaining the risks and vulnerabilities associated with the country's debt trajectory. The Debt Sustainability Analysis (DSA) exercise is conducted periodically to discharge this mandate.

Government has prioritised the improvement of the country's infrastructure as a means to unlock Uganda's potential, enhance productive capacity and increase competitiveness. A number of key infrastructure projects have been financed using borrowed resources, leading to build up in public debt in recent years. This has come with some risks to the debt portfolio, particularly related to the ratio of debt service to revenue, which has grown in recent years as debt contracted has become less concessional.

However, public debt accumulation has been carefully managed to ensure that debt remains sustainable. Uganda's debt levels are significantly below those of most of our regional peers. As this report shows, our debt is sustainable in the medium and long term, and is rated as being at low risk of debt distress.

We will continue to manage debt in a prudent manner, giving priority to transformative infrastructure projects and implementing them efficiently. This will help foster economic growth and increase tax revenues, reducing our reliance on debt and keeping debt at low, manageable levels.

This DSA Report was prepared by a team led by the Macroeconomic Policy Department of the Ministry. The team also included officials from the Directorate of Debt and Cash Policy, the Accountant General's Office, the Bank of Uganda and the Parliament Budgetary Office.

Keith Muhakanizi

PERMANENT SECRETARY / SECRETARY TO THE TREASURY

Table of Contents

Preface i

Table of Contents ii

List of Acronyms iii

Executive Summary iv

1.0 INTRODUCTION 1

2.0 METHODOLOGY 2

3.0 RECENT DEVELOPMENTS IN PUBLIC AND PUBLICLY GUARANTEED DEBT 4

3.1 Overview of Uganda's debt 4

3.2 Composition of Public Debt 4

3.2.1 Composition of External Public Debt 5

3.2.2 Composition of Domestic Debt 6

3.3 Drivers of Changes in Debt 7

3.4 Redemption Profile 8

3.5 Cost and Risk Profile of the Existing Debt 8

3.5.1 Cost of Debt 8

3.5.2 Refinancing / Rollover risk 9

3.5.3 Interest Rate Risk 10

3.5.4 Exchange Rate Risk 10

4.0 BASELINE ASSUMPTIONS 11

4.1 Macroeconomic Assumptions 11

4.1.1 Fiscal Assumptions 11

4.1.2 Financing Assumptions 12

4.2 Balance of Payments Assumptions 13

5.0 DSA RESULTS AND ANALYSIS 14

5.1 Sustainability of External Public and Publicly Guaranteed Debt 14

5.1.1 External PPG Debt Burden Indicators 14

5.2 Sustainability of Total Public Debt 17

5.3 Uganda's Overall Risk Rating 19

5.4 Further Analysis of Public Debt outside of the DSF 21

6.0 CONCLUSION 23

GLOSSARY 24

APPENDICES 27

List of Acronyms

ADB/F	African Development Bank/Fund
ATM	Average Time to Maturity
ATR	Average Time to Re-fixing
CPIA	Country Policy and Institutional Assessment
CI	Composite Indicator
DOD	Disbursed and Outstanding Debt
DSA	Debt Sustainability Analysis
DSF	Debt Sustainability Framework
EAC	East African Community
EAMU	East African Community Monetary Union
FDI	Foreign Direct Investment
FY	Financial Year
GDP	Gross Domestic Product
IDA	International Development Association
IMF	International Monetary Fund
LIBOR	London Interbank Offered Rate
LICs	Low Income Countries
MDAs	Ministries, Departments and Agencies
MEPD	Macroeconomic Policy Department.
NDP	National Development Plan
PDMF	Public Debt Management Framework
PPG	Public and Publicly Guaranteed
PV	Present Value
SOEs	State Owned Enterprises
UGX	Uganda Shillings
US$	United States Dollar
WEO	World Economic Outlook

Executive Summary

The stock of total public debt grew from US$ 10.74 billion at end June 2018 to US$ 12.55 billion (UGX 46.36 Trillion) by end June 2019. Of this, external debt was US$ 8.35 billion (UGX 30.85 Trillion), while domestic debt was US$ 4.2 billion (UGX 15.51Trillion). This represents an increase in nominal debt to GDP from 34.8% in June 2018 to 36.1% in June 2019. Measured in present value terms, the total stock of debt amounted to 27.3% of GDP up from 25.8% the previous financial year.

Nominal total public debt is projected to increase to 40.9% of GDP in FY2019/20, before peaking at 49.5% in FY2023/24. In **present value terms,** total public debt will follow a similar trend, increasing to 31.1% of GDP in FY2019/20, and then peaking at 38.8% in FY2024/25.

This Debt Sustainability Analysis (DSA) finds that Uganda continues to be at low risk of debt distress, with public debt found to be sustainable over the medium to long term. Despite this, the analysis identified a number of risks to the debt portfolio, including the slow growth of exports and the increasing debt service burden. Debt service as a percentage of revenue has increased over recent years, as a result of the increase in domestic debt (which is typically costlier) as well as less concessional external debt.

To maintain debt sustainability, Government will ensure that the recent improvement in economic growth is sustained. This will be achieved, in part, by ensuring that borrowed resources are used for projects with a growth dividend, and that projects are implemented in the most efficient manner. To this end, Government has put in place a number of measures aimed at improving the project cycle, including the development of a user manual for project development and appraisal; the maintenance of an integrated bank of projects; strengthening the Development Committee, which is responsible for reviewing the feasibility of projects and approving them for inclusion in the Public Investment Plan; and building capacity in MDAs to equip officers with project management skills in order to enhance efficiency in project implementation.

Government will also fast track the implementation of the Domestic Revenue Mobilization Strategy, which will address major bottlenecks / inefficiencies in tax administration. This will result into more revenue collections and consequently reduce reliance on borrowing.

1.0 INTRODUCTION

The Government of Uganda conducts an annual Debt Sustainability Analysis (DSA) exercise with a view to ascertaining the sustainability of the country's current and future debt, as well as identifying the key risks and vulnerabilities associated with the public debt portfolio. The annual DSA is also a requirement under the Charter for Fiscal Responsibility, and is therefore provided for under the Public Finance Management Act, 2015.

Public investment in physical infrastructure is critical if Uganda is to transform from a peasant to a modern and prosperous country as envisaged in the Vision 2040. The NDP framework identifies a number of flagship projects aimed at achieving the Vision 2040, the majority of which will be financed through external borrowing. Despite these development aspirations, Government remains cognizant of the need to ensure that public debt remains sustainable.

As part of efforts to monitor debt, Government conducts an annual DSA, which uses a consistent macroeconomic framework to assess Uganda's current and future debt levels, as well as the country's ability to meet its debt service obligations when they fall due.

The DSA informs decision making at different levels of Government, and is a key input into Government's Medium Term Debt Strategy, the National Budget Strategy, the Medium Term Fiscal Framework, and the Fiscal Risks Statement. It is also used to track progress on Government's commitments under the Charter for Fiscal Responsibility and the East African Monetary Union (EAMU) Protocol.

The report captures external debt stock as disbursed outstanding debt (DOD). Undisbursed debt feeds into the projections for future years. Domestic debt is captured at cost value.

The rest of this report is structured as follows: Section 2 gives an overview of the methodology used for the analysis while Section 3 sets the context for the report, highlighting the existing levels of debt and its cost and risk profile. Section 4 discusses the assumptions underpinning the baseline projections, while Section 5 presents and discusses the results of the analysis. Section 6 concludes.

2.0 METHODOLOGY

This DSA was conducted using the revised World Bank/IMF Low-Income Countries' Debt Sustainability Framework (LIC-DSF) analytical tool[1]. The DSF uses a benchmark for total public debt and indicative thresholds for external Public and Publicly Guaranteed (PPG) debt burden indicators, which depend on each country's debt carrying capacity. Countries have different abilities to handle debt, depending on their policy and institutional strengths; macroeconomic performance; and buffers to absorb shocks.

The LIC DSF uses the Composite Indicator (CI) to determine each country's debt carrying capacity. The CI is computed using country specific information, specifically: Country Policy and Institutional Assessment (CPIA)[2] score, the country's real GDP growth, remittances, international reserves, and world growth. Based on this approach, Uganda is currently classified as a strong performer with the latest CI score of 3.11 being above the threshold of 3.05. Table 1 below shows the computation for Uganda's CI.

Table1: Calculation of the CI Index for Uganda

Components	Coefficients (A)	10-year average values (B)	CI Score components (A*B) = (C)	Contribution of components
CPIA	0.385	3.658	1.41	45%
Real growth rate (%)	2.719	272	0.14	5%
Import coverage of reserves (%)	4.052	41.271	1.67	54%
Import coverage of reserves^2 (%)	-3.990	17.033	-0.68	-22%
Remittances (%)	2.022	4.196	0.08	3%
World economic growth (%)	13.520	3.579	0.48	16%
CI Score			3.11	100%
CI rating			**Strong**	

Source: IMF/World Bank Low-Income Countries' Debt Sustainability Framework.

The LIC-DSF provides results for the baseline assumptions and stress test scenarios against the applicable thresholds / benchmark. The applicable debt burden thresholds for external PPG

[1] The World Bank and IMF recently revised the LIC DSF, with the revised framework taking effect in mid-2018. This replaced the old framework, which had been in operation since 2012.
[2] The CPIA is an index computed annually by the World Bank for Low Income Countries. It uses 16 indicators, and assigns countries a score ranging from 1 to 6, with higher figures representing better institutional capacity.

debt and benchmark for total public debt for Uganda are those for a strong performer as shown in Table 2 below.

Table 2: Debt Burden Thresholds/ Benchmark by Classification.

	Weak Performer CI < 2.69	**Medium Performer 2.69 ≤ CI ≤ 3.05**	**Strong Performer CI > 3.05**
External PPG Debt Burden Thresholds			
Solvency Ratios			
PV of debt in % of Exports	140	180	240
PV of debt in % of GDP	30	40	55
Liquidity Ratios			
Debt service in % of Exports	10	15	21
Debt service in % of Revenue	14	18	23
Total Public Debt Benchmark			
PV of total public debt in % of GDP	35	55	70

Source: IMF/World Bank Low-Income Countries' Debt Sustainability Framework.

This DSA was also conducted using the **rebased GDP** series. The recent rebasing exercise revealed that the economy was 18.3% bigger than earlier estimated. GDP figures were rebased with FY2016/17 as the new base year resulting into an upward revision of GDP for both FY2017/18 and FY2018/19. The re-estimation of GDP consequently resulted into a downward revision of the debt ratios compared to those in earlier publications.

3.0 RECENT DEVELOPMENTS IN PUBLIC AND PUBLICLY GUARANTEED DEBT

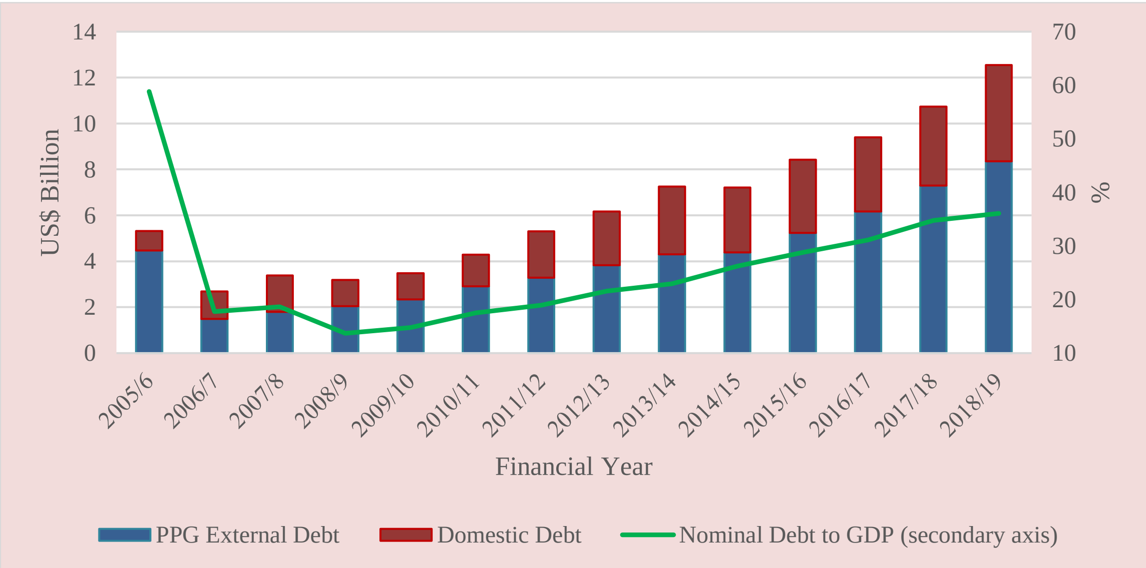
3.1 Overview of Uganda's debt

The stock of public sector debt increased from US$ 10.74 billion in FY 2017/18 to US$ 12.55 billion in FY 2018/19. External debt increased from US$ 7.29 billion in FY 2017/18 to US$ 8.35 billion in FY 2018/19, while domestic debt measured in US Dollars increased from 3.45 billion to 4.2 billion over the same period.

Public sector debt rose from 34.8% of GDP in FY 2017/18 to 36.1% in FY 2018/19. Of this, external debt contributed 24.0% of GDP, while domestic debt contributed 12.1% of GDP. In Present Value (PV) terms, public sector debt amounted to 27.3% at end June 2019.

Figure 1 shows the evolution of public debt in billions of US Dollars between 2005/6 and 2018/19. The figure also plots trends in total nominal debt to GDP.

Figure 1: Evolution of Public Debt



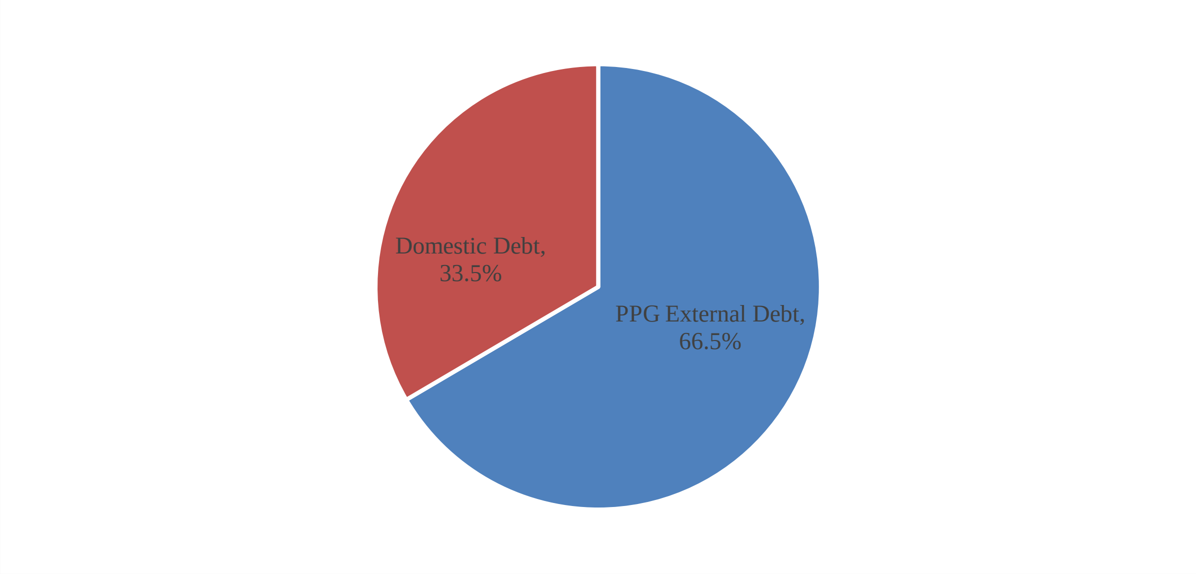
Source: MEPD, Ministry of Finance, Planning and Economic Development

3.2 Composition of Public Debt[3]

In FY2018/19, external debt comprised 66.5% of total public debt, while the remainder was domestic debt, as shown in Figure 2. The share of domestic debt increased from 32.0% in FY2017/18 to 33.5% in FY2018/19.

[3] This DSA Report defines domestic and external debt based on the currency of issuance, rather than the residence of the creditor. This means that all debt issued in Uganda shillings is defined as domestic debt, while all debt issued in foreign currency is defined as external debt.

Figure 2: Public Debt Composition at End June 2019



Source: MEPD, Ministry of Finance, Planning and Economic Development

3.2.1 Composition of External Public Debt

Of the total external disbursed and outstanding debt, 64.5% was owed to multilateral creditors; 33.7% to bilateral creditors and 1.8% to commercial banks. Multilateral lenders are dominated by the International Development Association (IDA) of the World Bank, a concessional lender, while China (non-concessional lender) dominates the bilateral creditors.

As in recent years, there has been a reduction in the stock of debt owed to multilateral lenders (particularly IDA) in favour of bilateral lenders (particularly China). This is occasioned by the insufficiency of concessional resources to finance the country's development aspirations, leading to increased recourse to non-concessional borrowing, which is typically characterised by more expensive terms. Table 3 provides the distribution of external debt by creditor category.

Table 3: Distribution of External Debt Stock by Creditor Category (%)

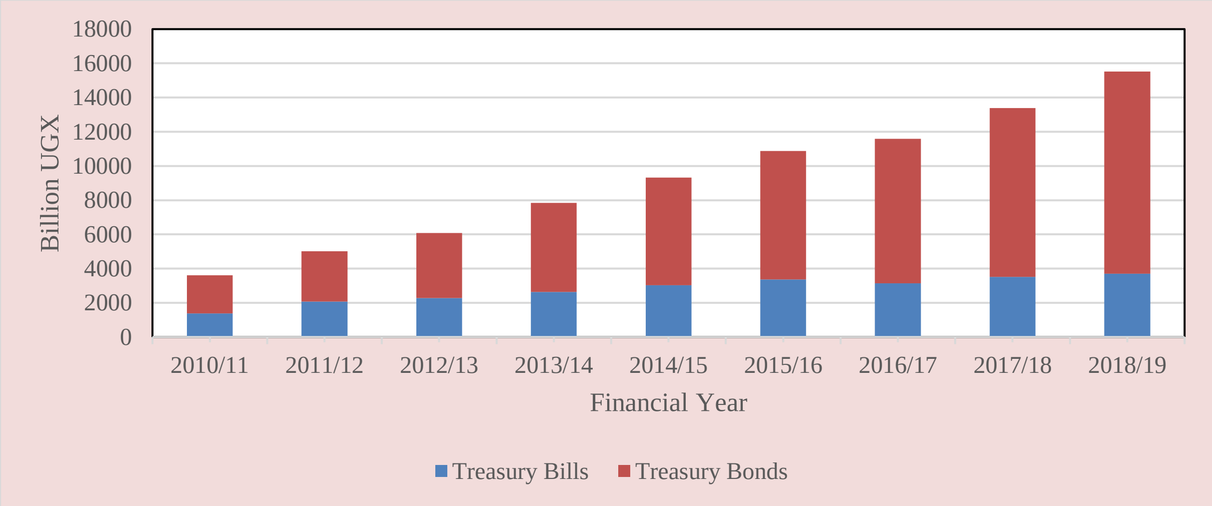
Creditor Category	2010/11	2011/12	2012/13	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Multilateral Creditors	90.1	87.9	86.9	87.4	85.5	76.6	70.8	67.8	64.5
o/w IDA	61.9	59.4	58.6	58.3	55.8	48.9	45.2	42.2	40.1
Bilateral Creditors	9.9	12.1	13.1	12.6	14.5	23.4	26.6	31.5	33.7
Non Paris Club	8.0	10.4	11.3	10.4	12.3	20.4	22.8	25.1	27.5
o/w China	3.3	7.0	8.0	7.7	9.6	17.8	20.3	24.2	26.5
Paris Club	1.9	1.6	1.8	2.2	2.2	3.0	3.8	6.5	6.2
o/w Japan	0.7	0.7	0.9	1.3	1.7	2.4	3.0	4.0	2.5
Commercial Banks	-	-	-	-	-	-	2.6	0.7	1.8

Source: MEPD, Ministry of Finance, Planning and Economic Development

3.2.2 Composition of Domestic Debt

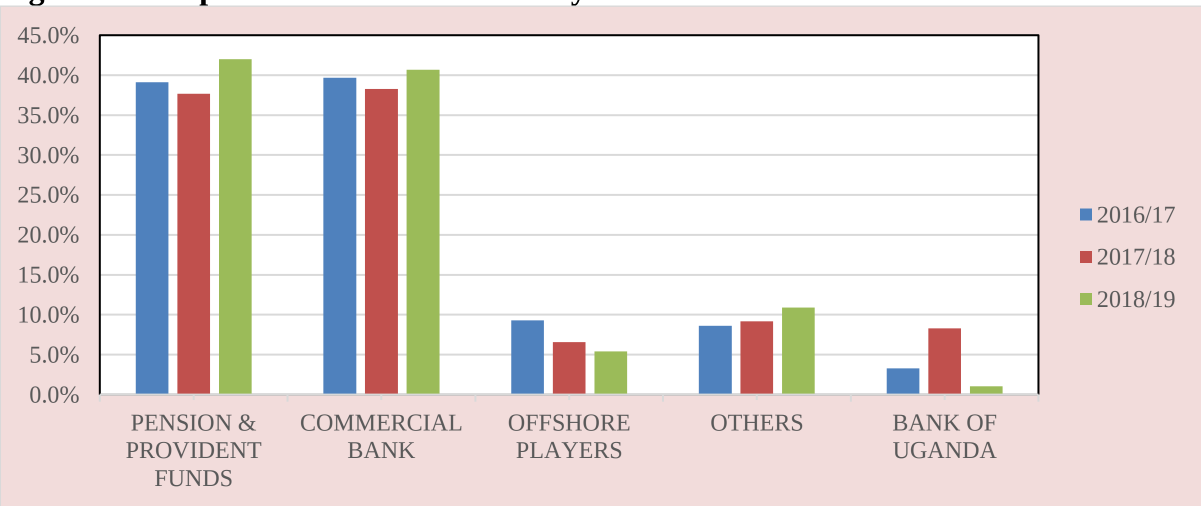
The share of longer term dated treasury instruments (treasury bonds) in public domestic debt has been increasing over the years (Figure 3). This is consistent with Government's decision to issue more long-term debt so as to reduce the refinancing risk associated with the portfolio, and to smoothen the redemption / repayment profile. As at end June 2019, short-term debt (treasury bills) constituted 23.9% of total domestic debt down from 26.3% a year before, while long-term debt (treasury bonds) accounted for the remaining 76.1% up from 73.7% at end June 2018. Figure 3 plots the distribution of domestic debt between treasury bills and treasury bonds.

Figure 3: Composition of Domestic debt by treasury instrument



Source: Bank of Uganda

Figure 4: Composition of Domestic debt by Holder[4]



Source: Bank of Uganda

[4] "Others" includes Retail Investors, Institutional Investors, Insurance Companies, Deposit Protection Funds, and Other Market Intermediaries.

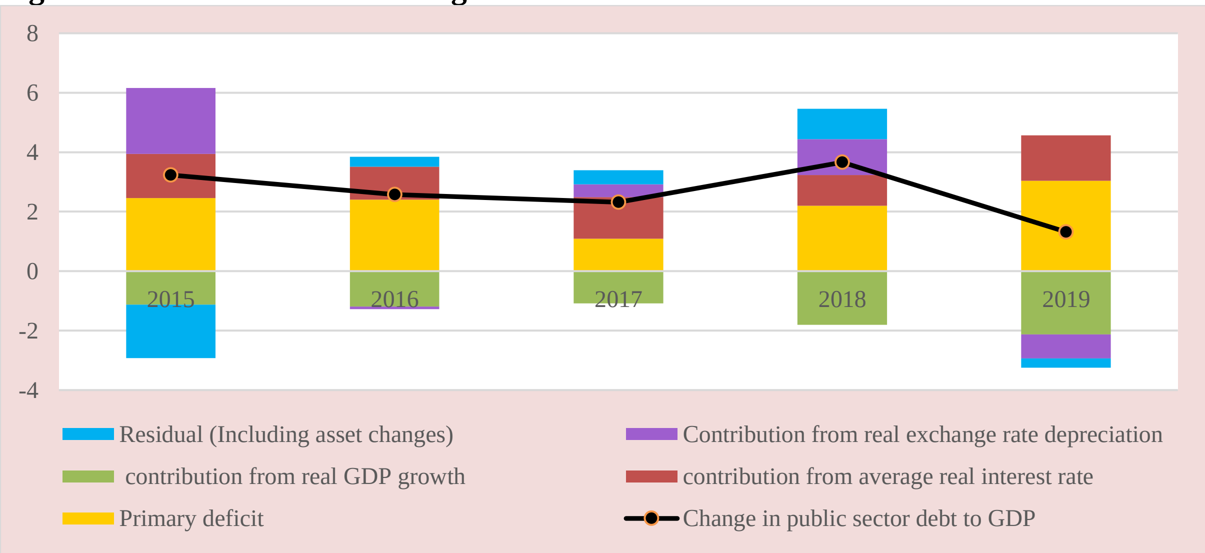
3.3 Drivers of Changes in Debt

Consistent with Government's policy of closing the infrastructure gap in order to enhance the country's productive capacities, the primary deficit has been the major driver of the increase in Uganda's debt over the last five years. The other notable contributor to rising debt levels has been the average real interest rate on public debt. This is consistent with the increasingly less concessional external debt being contracted by Government.

The main factor mitigating the increase in debt has been real GDP growth. For debt to remain sustainable, it is critical that real GDP continues to grow at a rate higher than the average real interest rate on Government debt. A situation where the real interest rate on public debt is consistently higher than the real GDP growth rate would result in unsustainable debt dynamics.

While the real exchange rate depreciation has also been a driver of debt in the recent years, we observe a reversal in FY2018/19 where it's one of the mitigating factors following the appreciation of the shilling against the major foreign currencies during this period. Using the end of period exchange rate, the Uganda shilling appreciated by 4.8% against the US$ in between FY2017/18 and FY 2018/19.

Figure 5: Contributions to Changes in Public Debt



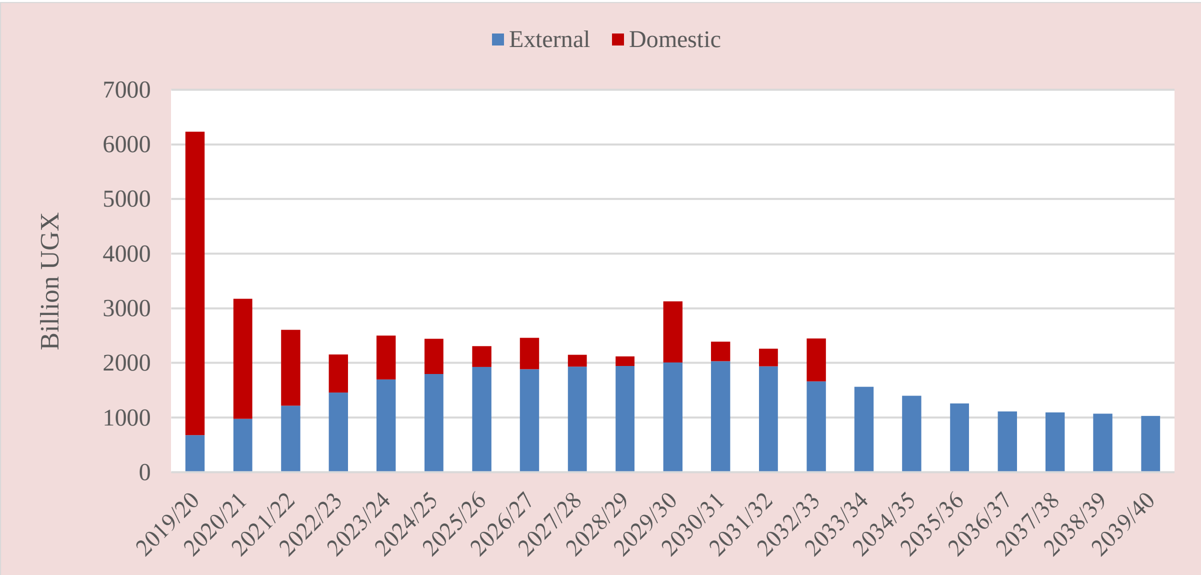
Source: MEPD, Ministry of Finance, Planning and Economic Development

3.4 Redemption Profile

The share of public debt maturing within one year reduced from 13.6% at end June 2018 to 10.8% by end June 2019. This is partly due to efforts to lengthen the maturity profile of domestic debt by issuing longer dated instruments (see Figure.3).

As shown in Figure 6 below, the redemption profile for external debt is smooth over the next twenty years, reflecting the largely concessional nature of Uganda's externally sourced debt. The redemption profile for domestic debt, however, shows that much of the debt is maturing in the first year. This largely reflects the fact that a significant portion of domestic debt is issued in treasury bills with maturities of three, six and twelve months. As the securities market continues to develop, there will be increased demand for longer dated instruments, which will help smoothen the redemption profile for domestic debt.

Figure 6: Redemption Profile as at end June 2019



Source: Ministry of Finance, Planning and Economic Development

3.5 Cost and Risk Profile of the Existing Debt

3.5.1 Cost of Debt

Two indicators are used in assessing the cost of debt. These are the ratio of interest payments to GDP and the Weighted Average Interest Rate (WAIR). Both indicators increased slightly between June 2018 and June 2019, illustrating the higher debt service obligations that Government has to meet. The ratio of interest payments to GDP increased from 1.8% to 2.0%, while the WAIR increased from 5.5% to 5.7%. Table 4 summarizes the cost and risk profile of the existing debt portfolio.

Table 4: Cost and risk profile of the existing debt

Cost and Risk indicators		Jun-18			Jun-19		
		External	**Domestic**	**Total**	**External**	**Domestic**	**Total**
Cost of debt	Interest payment as %GDP	0.3	1.5	1.8	0.4	1.7	2.0
	Weighted Av. IR (%)	1.7	14.0	5.5	1.6	14.0	5.7
Refinancing risk	ATM (years)	15.0	3.8	11.5	14.7	3.9	11.9
	Debt maturing in 1 yr (% of total)	2.9	36.8	13.6	1.6	36.5	10.8
	Debt maturing in 1 yr (% of GDP)	0.7	4.0	4.7	0.5	4.3	4.9
Interest rate risk	ATR (years)	14.6	3.8	11.2	14.2	3.9	11.5
	Debt refixing in 1 yr (% of total)	8.9	36.8	17.7	9.2	36.5	16.4
	T-bills (percent of total)		26.3	8.5	0.0	24.3	6.4
	Fixed rate debt (% of total)	93.9	100.0	95.8	92.3	100.0	94.4
FX risk	FX debt (% of total debt)			68.4			66.5
	ST FX debt (% of reserves)			6.5			5.6

Source: Ministry of Finance, Planning and Economic Development

3.5.2 Refinancing / Rollover risk

Average Time to Maturity

The weighted average time to maturity (ATM) of all the principal payments in the debt portfolio increased from 11.5 years in June 2018 to 11.9 years in June 2019. Ceteris paribus, a longer ATM is good for Government, as it is indicative of a lower refinancing risk. The lengthening of the ATM was driven by domestic debt, whose ATM increased from 3.8 years to 3.9 years. The ATM for external debt declined from 15 years in June 2018 to 14.7 years in June 2019. This decline is a continuation of the trend from previous years, and is occasioned by the increasingly non-concessional nature of external debt.

Debt Maturing in One Year

Debt maturing in one year as a percentage of total debt significantly improved to 10.8% in June 2019, down from 13.6% in June 2018. The improvement was largely driven by lower external debt maturing in one year, from 2.9% in June 2018 to 1.6% in June 2019. This was due to the completion of repayments associated with the PTA loan. Domestic debt maturing in one year also declined, from 36.8% to 36.5%, reflecting the issuance of longer dated securities.

3.5.3 Interest Rate Risk

As at June 2019, 94.4% of Uganda's debt portfolio was held on fixed interest rates, indicating limited exposure to interest rate risk. However, this ratio continued to decline, reducing by 1.4 percentage points from 95.8% in June 2018, on account of the recent contraction of debt on variable interest rates. All variable rate debt is externally sourced as domestic debt is exclusively contracted on fixed interest rates.

Average Time to Re-fixing

The Average Time to Re-fixing (ATR) of the total debt improved slightly to 11.5 years in June 2019 compared to 11.2 years in June 2018. This was on account of the issuance of longer term domestic debt increasing the average time to re-fixing for domestic debt from 3.8 to 3.9 years at end June 2019. The ATR for external debt continued to decline from 14.6 years at June 2018 to 14.2 years at June 2019, consistent with the aforementioned reduction of the external debt ATM. This is further consistent with the decline in the fixed rate external debt as a percentage of total external debt, from 93.9% in June 2018 to 92.3% in June 2019.

3.5.4 Exchange Rate Risk

The exchange rate risk is measured by two indicators: the share of debt denominated in foreign currency and the ratio of short term foreign debt to foreign currency reserves. Both indicators registered improvement between June 2018 and June 2019, with the former declining from 68.4% to 66.5% and the latter from 6.5% to 5.6%. The decline in these indicators means that Uganda's debt portfolio is less vulnerable to exchange rate shocks.

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4.0 BASELINE ASSUMPTIONS[5]

4.1 Macroeconomic Assumptions

Real GDP is projected to grow at 6.3% in FY2019/20, which is below the 6.5% growth registered in FY 2018/19. Growth will be supported by increased production and productivity in manufacturing and agriculture, increased public & private sector investment, and strong aggregate demand. The accommodative monetary policy stance as well as a reduction in non-performing loans are also expected to lead to a further recovery in private sector credit which will subsequently support economic growth. In the medium term, real GDP is projected to grow at an average of 6.4%, before increasing to an annual average of 6.9% in the outer years. Growth over the medium to long term will be driven by the commencement of oil and gas production, as well as increased general productivity in the economy following the completion of major infrastructure projects.

The growth forecast is however faced with risks, including: adverse weather which can affect growth in agriculture and agro-processing; delays in the final investment decision in the oil sector; and slow implementation of Government projects. Global trade tensions coupled with volatility in global prices of primary products could also affect Uganda's growth outlook in the medium term.

Annual headline inflation is projected to decrease to 3.1% in FY 2019/20 from 3.8% in FY 2018/19. Headline inflation will remain below the 8% EAMU convergence criterion in the medium term, largely due to subdued food crop prices and a relatively stable exchange rate.

4.1.1 Fiscal Assumptions

Domestic revenue as a percentage of GDP is projected to increase by 1.1 percentage points from 12.9% in FY2018/19 to 14.0% in FY2019/20, resulting from: the re-classification of Appropriation in Aid (AIA) as part of revenue starting in FY 2019/20; improved efficiency in tax administration; introduction of new tax measures; and reforms in the tax system. In the medium term, revenue to GDP ratio is projected to increase on average by 0.5 percentage points per annum and to peak at 21.3% of GDP in the long run. The increase in revenue will be supported by efficiency gains from implementation of the medium-term Domestic Revenue Mobilization Strategy (DRMS) and oil and gas related revenues.

[5] Please note, the assumptions here are as at December 2019.

Consistent with the Vision 2040, a number of development projects are expected to be implemented to transform the economy from a peasant to a prosperous country. Government expenditure is therefore projected to increase from 18.9% of GDP in FY2018/19 to an average of 21.1 % in the medium term, before recording an average of 22.9% of GDP in the outer years. The fiscal deficit including grants will expand from 5.0% of GDP in FY2018/19 to 6.2% in FY2019/20, before reducing to an average of 5.0% in the medium term. In the long run, the deficit is projected to average at 2.6% due to an increase in domestic revenue from oil receipts, as well as the completion of major infrastructure projects. Table 5 summarizes the fiscal assumptions used for this DSA.

Table 5: Summary of Fiscal Assumptions.

FY	2018/19 (Outturns)	2019/20	2020/21	2021/22	2022/23	2023/24
Fiscal projections (Shs Bn)						
Revenue and Grants	17,839.3	21,736.2	24,093.3	27,298.3	31,256.0	36,382.5
o/w Revenue	16,637.8	19,901.0	22,537.6	26,012.4	30,111.0	35,382.2
Primary Expenditure	21,742.3	27,246.1	31,052.0	34,136.6	37,678.0	40,928.8
Total Interest Expenditure	2,525.3	3,289.3	3,435.2	3,771.0	4,197.1	4,643.8
Total Expenditure	24,267.6	30,535.4	34,487.2	37,907.6	41,875.2	45,572.6
Primary Deficit	3,902.9	5,510.0	6,958.7	6,838.3	6,422.0	4,546.3
Overall Budget Deficit	6,428.2	8,799.2	10,393.9	10,609.3	10,619.1	9,190.1
As a percentage of GDP						
Revenue and Grants	13.9%	15.3%	15.2%	15.3%	15.6%	16.1%
o/w Revenue	12.9%	14.0%	14.2%	14.6%	15.0%	15.7%
Total Expenditure	18.9%	21.5%	21.7%	21.3%	20.9%	20.2%
Primary Deficit	3.0%	3.9%	4.4%	3.8%	3.2%	2.0%
Overall Budget Deficit	5.0%	6.2%	6.5%	5.9%	5.3%	4.1%
Memorandum Items						
Real GDP Growth	6.5%	6.3%	6.2%	6.0%	6.5%	6.9%
Nominal GDP (Shs Bn)	128,499.0	142,284.1	158,775.3	178,350.1	200,667.2	225,883.3

Source: MEPD, Ministry of Finance, Planning and Economic Development, December 2019

4.1.2 Financing Assumptions

In light of the high interest costs associated with domestic borrowing; and with a view to ensuring adequate growth of private sector credit, Government will scale back on domestic borrowing in the medium to long term to no more than 1% of GDP. As such, the deficit will be largely financed using external resources during this period.

Despite the desirability and continued preference for concessional external resources, Government is cognizant of the fact that such resources are insufficient to meet Uganda's development financing needs. As such, Uganda will continue to utilize some non-concessional financing, although this will be done in a manner that does not jeopardize debt sustainability.

4.2 Balance of Payments Assumptions

In the medium term, commodity prices of exports and imports were taken from the IMF's World Economic Outlook (WEO) while volumes were based on real growth rates of the relevant sub-sectors. Exports of services were projected to grow in line with nominal GDP growth of advanced economies, while imports of services were broadly forecast to grow in line with imports of goods.

In the outer years, the values of both exports and imports of goods and services were forecast as a constant share of GDP based on the average of the last four years of the medium term. In addition, oil exports were forecast to start in 2023/24, in line with oil revenue projections from the macroeconomic assumptions. Oil imports were discounted from 2023/24 on the assumption that some oil will be produced for the domestic market. The proportions applied were; 19% in 2023/24 (first year of oil production), 42% between 2023/24 and 2024/25, 50% between 2024/25 and 2025/26, 40% between 2025/26 and 2026/27 (oil revenue peak year). From 2027/28 onwards, the value of oil imports was kept constant, taking into consideration refined oil imported for aircraft fuel.

The income inflows/outflows forecasts in the medium term were based on LIBOR, and computed as the stock of financial assets/liabilities in the previous period, multiplied by the LIBOR for the current period. LIBOR projections were taken from the IMF's WEO.

Inflows of private transfers were forecast to grow in line with nominal GDP growth of advanced economies in the medium term. In the outer years, these flows were assumed to grow at an average growth rate of the medium term estimated at 2.7%.

Foreign Direct Investment (FDI) inflows were projected to grow in line with Ugandan nominal GDP growth in dollar terms, in combination with estimation of expected foreign investment for oil related infrastructural developments in the medium term (period running up to the year of first oil production). FDI inflows were forecast to grow in line with nominal GDP in the outer years.

The stock of gross reserves was fixed at 4.5 months of future import cover throughout the outer years in line with the EAMU convergence criteria.

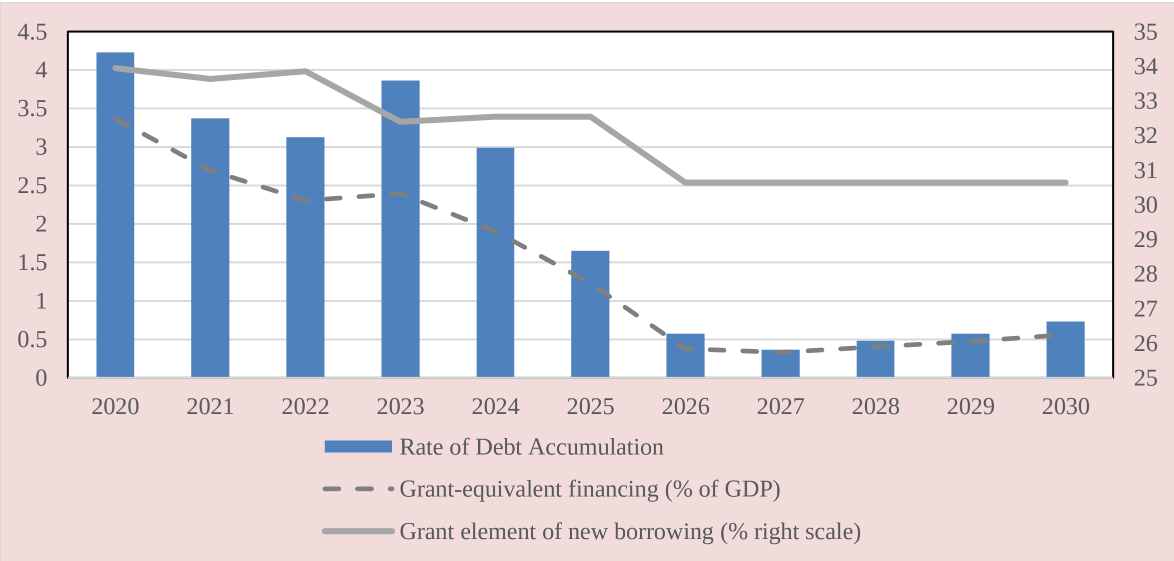
5.0 DSA RESULTS AND ANALYSIS

This section presents the findings of the analysis. The main finding is that Uganda's external public and publicly guaranteed debt remains at low risk of debt distress and the total public debt-to-GDP ratio remains below its benchmark under both the baseline and the most extreme shock, which culminates into low overall risk of debt distress. Total public debt is found to be sustainable over both the medium and long term.

5.1 Sustainability of External Public and Publicly Guaranteed Debt

External debt is projected to increase in the medium term, in line with the infrastructure expansion discussed in the previous section. As shown in Figure 7, the rate of debt accumulation is projected to decline significantly after the medium term as major infrastructure projects are completed and oil revenues become available, leading to a reduction in Government's borrowing requirements. Throughout the projection period, there will be a reduction in both the grant-equivalent financing as a percentage of GDP and the grant element of new borrowing, as the country is expected to graduate to middle income status and have less access to concessional loans.

Figure 7: External Debt Accumulation



Source: MEPD, Ministry of Finance Planning and Economic Development

5.1.1 External PPG Debt Burden Indicators

All PPG external debt burden indicators remain below their indicative thresholds over the projection period under both the baseline and most extreme shock case. Likewise, the debt service indicators are projected to remain below their respective indicative thresholds, reflecting low risk of liquidity challenges despite of the recent increase in the rate of debt accumulation. This is largely due to the biggest portion of Uganda's external debt stock being on concessional terms. Table 6 shows the external DSA results.

Table 6: Summary of External PPG Debt Sustainability Indicators (%)

	LIC DSF Thresholds	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
SOLVENCY RATIOS									
PV of External Debt to GDP	55	13.8	15.4	17.7	19.7	20.5	22.0	23.0	23.0
PV of External Debt to Exports	240	84.6	89.8	119.6	134.2	147.3	158.8	171.1	154.7
LIQUIDITY RATIOS									
External Debt Service to Exports	21	6.7	7.8	6.2	7.3	8.5	9.0	9.7	9.3
External Debt Service to Revenue	23	9.1	10.3	6.6	7.6	8.1	8.3	8.4	8.3

Source: MEPD, Ministry of Finance Planning and Economic Development

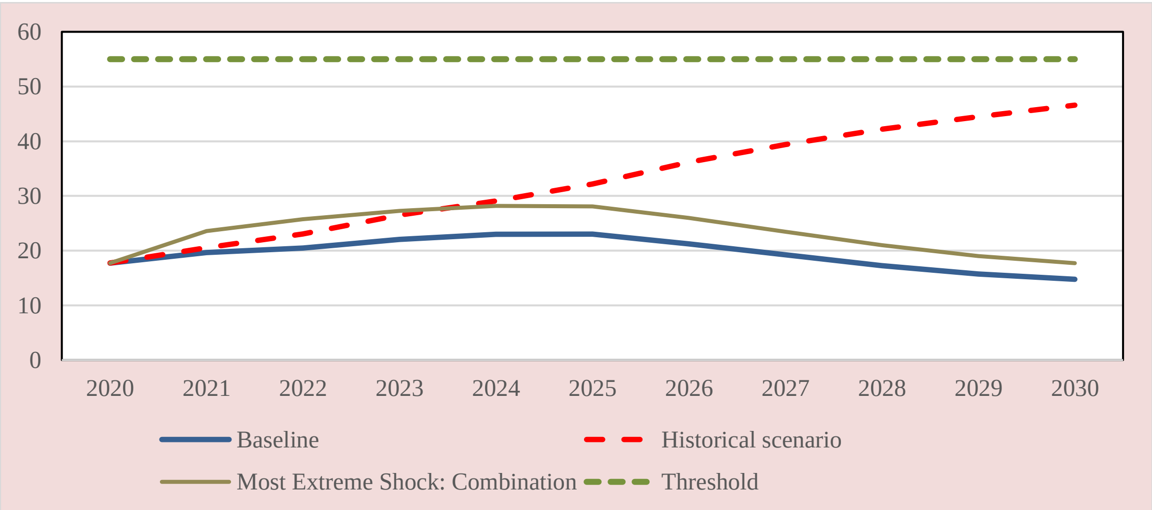
5.1.1.1 Solvency Indicators

PV of External PPG Debt to GDP Ratio.

The PV of External Public and Publicly Guaranteed (PPG) debt to GDP is projected to increase from 15.4% in FY2018/19 to 17.7% in FY2019/20. This ratio will continue to increase throughout the medium term, peaking at 23.0% in FY2023/24 and FY2024/25, before declining to 19.2% in FY 2026/27. Despite the increased rate of external debt accumulation, this ratio is forecast to remain well below its indicative threshold throughout the projection period as shown in Figure 8.

In nominal terms, the external PPG debt to GDP ratio is projected to increase from 24.0% in FY2018/19 to 27.8% the following year and peak at 34.1% in FY2023/24. This ratio will gradually decline thereafter.

Figure 8: PV of External PPG Debt to GDP (%)



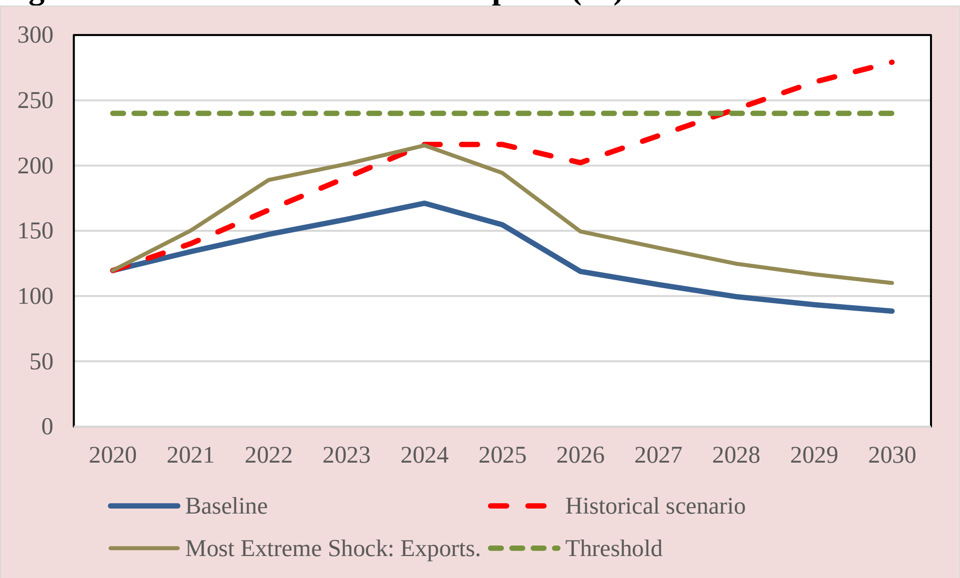
Source: MEPD, Ministry of Finance Planning & Economic Development

PV of External PPG Debt to Exports

The PV of external PPG debt to exports of goods and services is projected to remain below its indicative threshold of 240 under the baseline case. A shock to exports[6] raises the PV of external PPG debt to exports to a peak of 215% in FY2023/24, which still remains below the indicative threshold.

It is however important to note that exports constitute an important variable in the analysis of external debt sustainability since they are a crucial source of foreign currency, which a country needs to service its foreign currency denominated debt. This therefore implies that Uganda needs to continuously improve its export performance especially in the medium term so as to enhance her debt sustainability. Figure 9 shows the evolution of the PV of external debt to exports through the projection period.

Figure 9: PV of External Debt to Exports (%)



Source: MEPD, Ministry of Finance Planning and Economic Development

5.1.1.2 Liquidity Indicators

The LIC-DSF uses two liquidity indicators for external debt service: external debt service to exports of goods and services; and external debt service to domestic revenue.

As shown in Figure 10, the two liquidity ratios remain below their respective thresholds throughout the projection period in both the baseline and most extreme shock scenarios. This means that the country will be in position to meet its debt obligations when they fall due, even in the event of drastic shocks to the economy. Nevertheless, there is a slight increase in both

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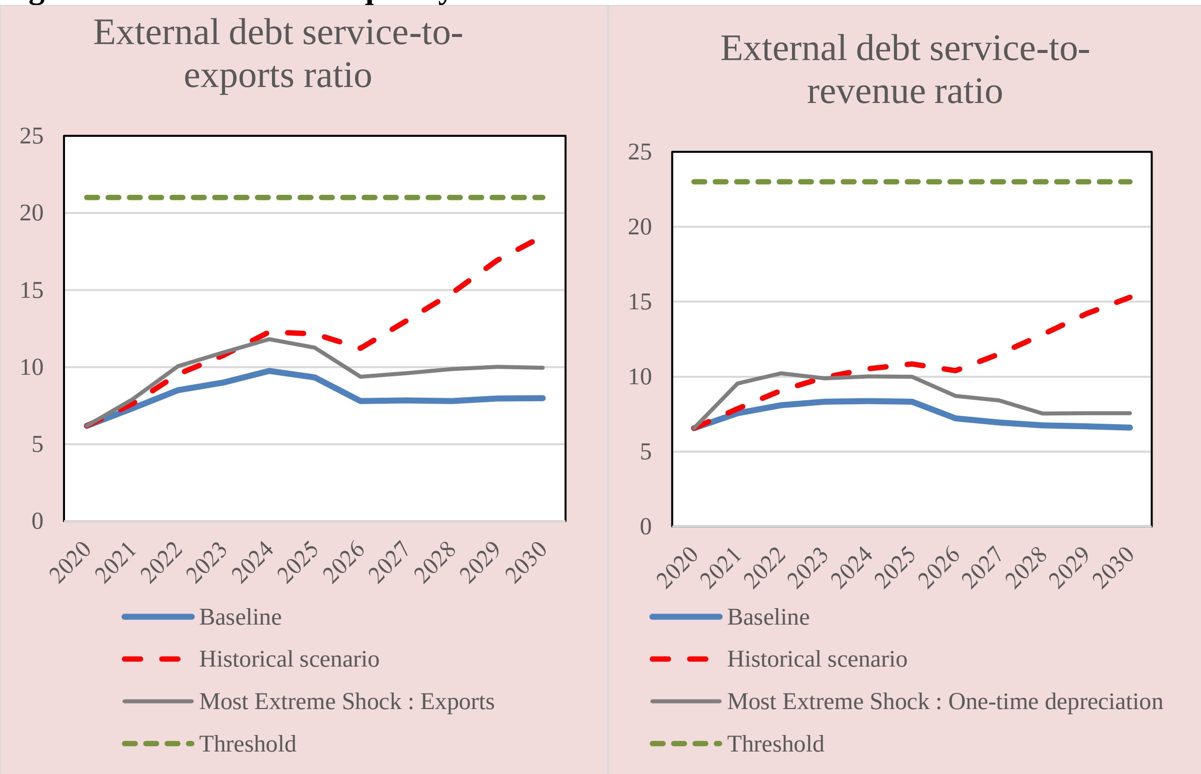
[6] The shock in this case is that exports grow at their historical average minus one standard deviation.

ratios during the medium term, indicating a higher debt service burden brought about by the increased rate of borrowing, particularly on non-concessional terms.

The increase in the ratio of external debt service to revenue in the medium term means that external debt service is growing faster than revenue and that consequently debt service will continuously take up an increasing share of revenue at the expense of allocations to the other sectors in the economy that enhance economic growth and poverty alleviation. This underscores the need to limit borrowing on commercial terms.

Figure 10: Evolution of Liquidity Indicators for External PPG Debt



Source: MEPD, Ministry of Finance, Planning and Economic development

5.2 Sustainability of Total Public Debt

Total Public debt is a more comprehensive measure of the country's indebtedness, as it encompasses both domestic and external PPG debt. The DSF uses a benchmark for PV of total public debt to GDP to help flag risks from broader debt exposures. This benchmark, which is dependent on the country's CI classification, helps to highlight the risks stemming from a combination of domestic and external debt. Public debt ratios (Table 7) show that despite the increased rate of debt accumulation in the medium term, Uganda's public debt will remain sustainable over the medium and long term.

Table 7: Summary of Public Debt Sustainability Indicators (%)

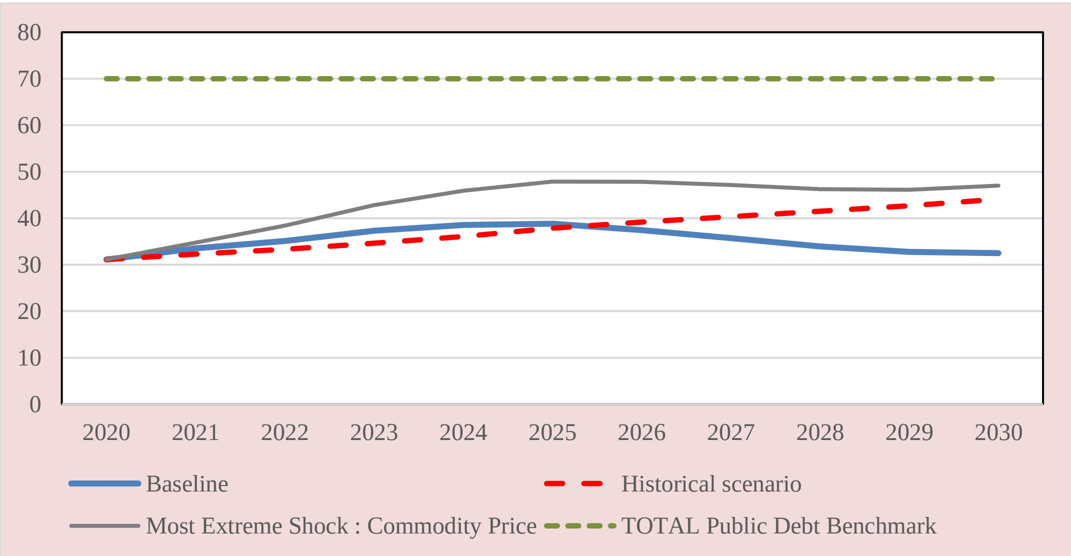
Financial Year	LIC DSF Benchmark	17/18	18/19	19/20	20/21	21/22	22/23	23/24	24/25
Nominal debt to GDP		34.8	36.1	40.9	43.9	45.5	48.1	49.5	49.4
PV of Debt to GDP	70	25.8	27.3	31.1	33.5	35.1	37.3	38.6	38.8

Source: MEPD, Ministry of Finance Planning and Economic Development

Nominal public sector debt is projected to increase from 36.1% of GDP in FY2018/19 to a peak of 49.5% of GDP in FY2023/24. The PV of public sector debt to GDP is projected to increase from 27.3% in FY2018/19 to a peak of 38.8 % in FY2024/25. This still remains below the threshold of 50% contained in the Charter for Fiscal Responsibility, the Public Debt Management Framework (PDMF) and the EAMU Protocol. The ratio is also significantly below the LIC DSF benchmark of 70%, which is shown in Table 7.

Despite this, the high rate of debt accumulation in the medium term compared to previous years highlights the need for Government to exercise caution when taking on new debt. Figure 11 maps the evolution of the PV of total public debt to GDP over the next ten years against the applicable LIC DSF benchmark. The black line depicts the trajectory of this ratio in the event of the most extreme shock to commodity prices (including international oil prices), and this peaks at 48% just slightly below the 50% mark in FY2024/25 & FY2025/26.

Figure 11: PV of Public Debt to GDP

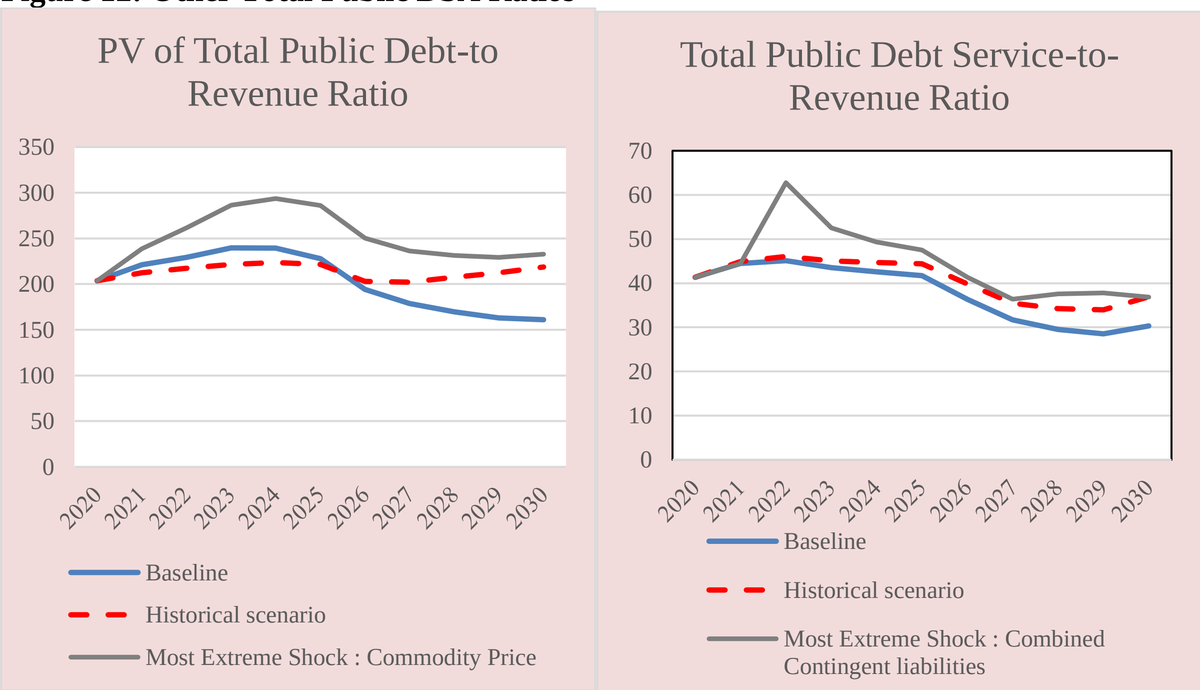


Source: MEPD, Ministry of Finance, Planning and Economic Development

The increase in public debt over the medium term is consistent with Government's commitment to enhance the productive capacity of the economy by closing the large infrastructural gap, with particular focus on the energy and transport sectors. A significant proportion of these infrastructure projects will be financed using loans from external development partners, on both concessional and non-concessional terms. Government will continue to prioritize the use of concessional financing over non-concessional resources.

The Public DSA also provides ratios for total public debt service-to-revenue and PV of public debt-to-revenue as shown in Figure 12 below. These, however, do not have any associated thresholds / benchmarks. Both ratios are projected to increase in the medium term, before declining in the outer years.

Figure 12: Other Total Public DSA Ratios



Source: MEPD, Ministry of Finance, Planning and Economic Development

5.3 Uganda's Overall Risk Rating

The model-based signal for the risk of public external debt distress is derived by comparing the projected PPG external debt indicators with their indicative thresholds for the first 10 years of the projection both under the baseline and stress-test scenarios and this is determined as in Table 8.

Table 8: Mechanical Approach for Risk Rating (Criteria)

	Number of Debt burden indicators breaching threshold under baseline assumptions	**Number of Debt burden Indicators breaching threshold under stress tests**
Low Risk	**0**	**0**
Moderate Risk	**0**	**1 or more**
High Risk	**1 or more**	**1 or more**
In debt Distress	**Country is already having problems servicing its debt (Having debt arrears)**	

Source: IMF/WB LIC-DSF Guidance Note.

With reference to the mechanical approach for external risk rating outlined in Table 8 above, Uganda's **External PPG debt is rated as being at low risk of debt distress**.

The DSF also provides a signal for the overall risk of public debt distress. This signal is derived based on joint information from the five debt burden indicators: the four from the external block, which are compared with their indicative thresholds, plus the PV of total public debt-to-GDP, which is compared with its indicative benchmark. The risk signal is determined as follows:

• **Low overall risk of public debt distress** if the PPG external debt has a low risk signal and the PV of total public debt-to-GDP ratio remains below its benchmark under the baseline and the most extreme shock.

• **Moderate overall risk of public debt distress** if the PPG external debt has a moderate risk signal or if the PPG external debt has low risk signal but the public debt burden indicator breaches its benchmark under the stress test.

• **High overall risk of public debt distress** if any of the four external debt burden indicators or the total public debt burden indicator breach their corresponding thresholds/benchmark under the baseline.

This therefore means that Uganda's debt profile is faced with **Low overall risk of public debt distress**, since its PPG external debt has a low risk signal and the PV of total public debt-to-GDP ratio remains below its indicative benchmark under both the baseline and the most extreme shock (figure 11).

5.4 Further Analysis of Public Debt outside of the DSF

In Uganda, public debt management is guided by the provisions of the PDMF (2018), which provides a number of benchmarks associated with public debt. Some of these benchmarks, along with the performance in recent years, are provided in Table 9.

Table 9: Public Debt Management Framework Benchmarks.

	Benchmark	2013/14	2014/15	2015/16	2016/17	2017/18	2018/19
Domestic interest /Domestic revenue (excluding grants)	<12.5%	10.4%	10.6%	12.8%	15.1%	13.3%	12.1%
Domestic interest /Total Government Expenditure	<10%	7.3%	8.3%	9.7%	11.7%	10.5%	10.7%
Total Debt Service[7]/Domestic Revenue (Excluding grants)		14.7%	14.4%	16.9%	21.1%	21.2%	22.4%
Domestic debt stock/Private Sector credit		82.7%	85.1%	95.0%	95.7%	99.9%	102.8%

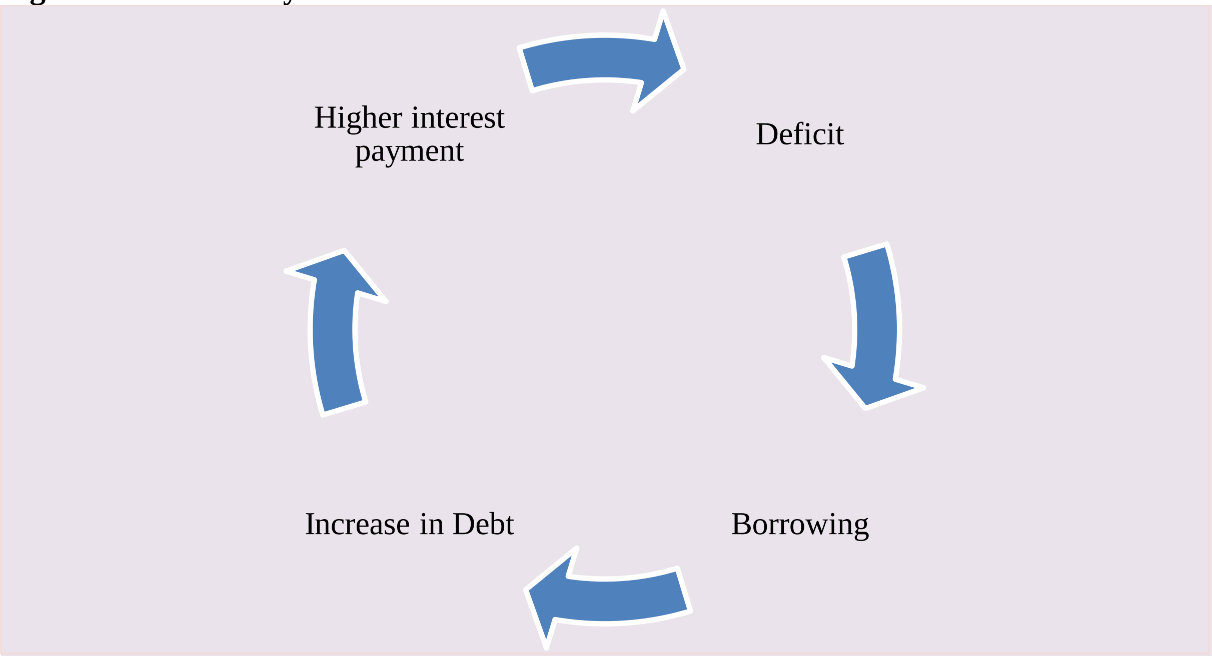
Source: MEPD, Public Debt Management Framework (2018)

Further analysis of domestic debt reveals vulnerabilities relating to domestic interest costs as well as a possibility of crowding out the private sector. The indicator of domestic interest cost to Government expenditure measures the extent to which budgetary resources are allocated to domestic debt service. The results indicate that interest payments for domestic debt are putting an increasing burden on the budget (10.7% of total expenditure in FY 2018/19, above the PDMF benchmark of 10%), and thereby depriving resources from sectors that have a direct impact on welfare.

Moreover, total debt service in FY2018/19 was equivalent to 22.4% of the country's domestic revenue. Debt service has the first call on any available resources. This means that only 77.6% of domestic revenue is available for allocation to other sectors. An increasing debt service burden on the available resources worsens the overall deficit, accentuating the need for more borrowing, which in turn implies more debt service expenses for the future periods, resulting into a vicious debt cycle.

[7] This does not include domestic debt amortization.

Figure 13: Vicious Cycle of Deficit and Debt



One other indicator that needs to be monitored closely is the ratio of the domestic debt stock to private sector credit (PSC). This is a particularly important indicator because it proxies the crowding-out effect of Government borrowing on the private sector. The private sector plays a key role in investment growth, and requires a healthy supply of credit to enhance its contribution to economic growth and development. Government actions that hamper private sector credit growth also hamper private investment growth. As at end June 2019, public domestic debt stock exceeded the stock of private sector credit (Table 9). This highlights the need for Government to continue efforts aimed at moderating domestic borrowing.

To address these vulnerabilities, Government is committed to reducing domestic borrowing to no more than 1% of GDP per year, in the medium to long term. This is because domestic debt comes at relatively higher interest costs and is associated with a more elevated refinancing risk because of its relatively shorter maturities. Government will also continue to pursue concessional credit over non concessional loans to the extent possible, so as to keep its cost of debt at a minimum.

6.0 CONCLUSION

Uganda's public debt has continued to rise in recent years, increasing to 36.1% of GDP in FY2018/19. This trend is expected to continue in the NDP III period, with debt peaking at 49.5% of GDP in FY2023/24. The increase in debt levels is due to higher borrowing to finance Uganda's development aspirations, with particular focus on transport and energy infrastructure.

This DSA finds that Uganda's debt remains sustainable with low risk of debt distress. However, the debt portfolio is faced with a number of vulnerabilities, including a high and increasing debt service burden. As at FY2018/19, debt service amounted to 22.4% of domestic revenue and 15.3% of the total budget, compared to 14.4% and 10.1% in FY2014/15, respectively.

While the recent GDP rebasing has resulted into lower debt to GDP ratios, it has not improved the country's ability to repay its debt. Borrowing decisions should therefore not be based upon just the ratio of debt to GDP, but rather increasingly be guided by the capacity to repay.

The major risks to the debt outlook include: the slow growth and diversification of exports; the increased rate of debt accumulation, particularly on non-concessional terms; low tax revenues; the increase in domestic borrowing; and challenges in the project management cycle, which delay project benefits and often lead to cost overruns.

Government is cognizant of these risks, and is taking measures to mitigate them. A number of initiatives have been put in place to enhance the growth of exports, including the 2020 Coffee Roadmap aimed at increasing coffee production for export and the development of several industrial parks around the country to boost industrial output, some of which will be exported.

In a bid to improve domestic revenue mobilization, Government has come up with the medium-term Domestic Revenue Mobilization Strategy, whose implementation is expected to increase the tax to GDP ratio by 0.5 percentage points every year.

Finally, Government has also instituted a number of public investment management reforms, including the development of a user manual for project development and appraisal, the preparation of an integrated bank of ready projects, as well as strengthening capacity in MDAs in project management in order to enhance efficiency in project implementation.

GLOSSARY

1. **Average Time to Maturity:** ATM gives information on how long it takes on average to rollover or refinance the debt portfolio. Low value of ATM indicates that a high share of debt will be due for payment or roll over in the near future, implying a substantial exposure to refinancing risk if resources are not available to meet or roll over maturing debt. On the other hand, a high value of ATM indicates that a low proportion of debt will be maturing in the near future, implying a low exposure to refinancing risk.

2. **Average Time to Re-fixing:** ATR provides a measure for the average length of time it takes for interest rates to be reset. The longer the period, the lower the interest rate exposure.

3. **Concessionality:** Concessional loans are those whose grant element is not less than 35%. These typically come from multilateral creditors such as the IDA and the ADF/B.

4. **External Debt Service/ Domestic Budget Revenue:** This ratio describes the ratio of domestic revenue inflows to external outflows used for servicing external debt. An indicator used to measure liquidity risk.

5. **External Debt Service/ Exports (goods & services):** This ratio describes the share of foreign exchange earning inflows from exports to external outflows used for servicing external debt. This indicator is used to measure liquidity risk.

6. **External Debt/ Domestic Budget Revenue:** This ratio describes the share of total domestic budget revenues that is directed to pay external debt.

7. **Liquidity Risk:** A situation where available financing and liquid assets are insufficient to meet maturing obligations. The DSF includes indicative thresholds that facilitate the assessment of solvency and liquidity risk (Staff Guidance note on the DSF for LICs, IMF 2013).

8. **Percent maturing in any year after year one**: To avoid refinancing requirements being particularly concentrated in any single year, it is recommended to spread maturities evenly over the maturity curve. This risk control measure helps prevent rollover risk from being simply shifted to a later period, for example from year one to year two.

9. **Percent maturing in one year:** This is the share of debt maturing in the next twelve months. High proportions are indicative of high levels of interest rate or rollover risk. The risk is more pronounced in less liquid markets.

10. **Present Value (PV):** PV captures the degree of concessionality of the debt stock. The more concessional the debt, the lower the PV compared to the nominal value. The benchmarks by which Uganda is assessed, such as those in the LIC-DSF; the PDMF and the EAMU convergence criteria, are all specified in PV terms.

11. **Public and Publicly Guaranteed Debt**: Total Public Debt plus debt guaranteed by Government. However, in regard to guaranteed debt, the DSA only includes guaranteed debt that has become a liability to Government upon default by the responsible debtor.

12. **Public Debt/GDP (Nominal):** A measure of the level of total public/Government debt (external & domestic) relative to the size of the economy.

13. **Refinancing Risk:** Refinancing risk is the possibility of having the debt to be rolled over at a higher interest rate. In this report, two measures are used to assess the exposure of Uganda's public debt to refinancing risk: Redemption profile of debt and Average Time to Maturity (ATM) of debt stock.

14. **Solvency:** An economic agent (or a sector of an economy, or a country as a whole) is solvent if the present value of its income stream is at least as large as the PV of its expenditure plus any initial debt.

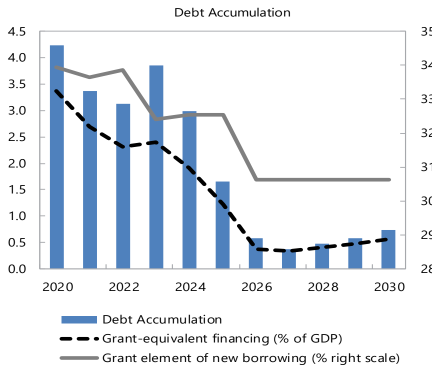
APPENDICES

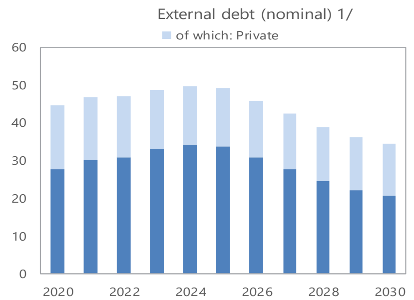
Table 1. Uganda: External Debt Sustainability Framework, Baseline Scenario, 2017-2040

(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 8/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2040	Historical	Projections
External debt (nominal) 1/	36.5	40.3	41.5	44.6	46.8	47.1	48.7	49.6	49.2	34.5	26.3	29.8	44.0
of which: public and publicly guaranteed (PPG)	20.4	23.6	24.0	27.8	30.0	30.9	33.0	34.1	33.8	20.8	13.4	16.2	28.7
Change in external debt	2.5	3.7	1.2	3.2	2.2	0.2	1.7	0.9	-0.4	-1.6	-0.1		
Identified net debt-creating flows	-0.5	0.5	3.5	2.0	1.2	1.1	0.4	0.2	-2.4	-2.0	1.2	2.8	-1.5
Non-interest current account deficit	2.8	4.9	9.0	7.4	7.2	6.9	7.0	7.3	5.8	3.9	6.4	5.6	5.0
Deficit in balance of goods and services	5.7	7.6	10.8	9.1	9.0	8.5	8.3	8.4	7.1	5.8	7.4	8.8	6.9
Exports	16.1	16.4	17.2	14.8	14.7	13.9	13.9	13.4	14.9	16.7	15.3		
Imports	21.9	24.0	27.9	24.0	23.6	22.4	22.2	21.9	22.0	22.5	22.6		
Net current transfers (negative = inflow)	-4.7	-4.8	-4.8	-4.2	-4.0	-3.5	-3.2	-2.9	-2.7	-1.6	-0.7	-4.7	-2.8
of which: official	-0.6	-0.4	-0.4	-0.6	-0.4	-0.3	-0.2	-0.2	-0.2	-0.1	0.0		
Other current account flows (negative = net inflow)	1.8	2.1	3.0	2.5	2.2	2.0	1.9	1.8	1.4	-0.3	-0.2	1.6	0.9
Net FDI (negative = inflow)	-1.8	-2.7	-4.5	-3.9	-4.4	-4.3	-4.8	-5.0	-6.0	-4.3	-4.3	-2.4	-4.6
Endogenous debt dynamics 2/	-1.4	-1.7	-1.1	-1.5	-1.6	-1.6	-1.8	-2.1	-2.2	-1.5	-0.9		
Contribution from nominal interest rate	0.5	0.5	0.8	0.9	1.0	0.9	0.9	1.0	1.0	0.8	0.6		
Contribution from real GDP growth	-1.3	-2.1	-2.5	-2.4	-2.6	-2.5	-2.8	-3.1	-3.2	-2.3	-1.5		
Contribution from price and exchange rate changes	-0.7	-0.1	0.6	...	...	...	...	...	...	...	...		
Residual 3/	3.0	3.2	-2.3	1.1	0.9	-0.8	1.3	0.7	2.0	0.4	-1.3	-0.2	0.9
of which: exceptional financing	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Sustainability indicators													
PV of PPG external debt-to-GDP ratio	...	...	15.4	17.7	19.7	20.5	22.0	23.0	23.0	14.8	9.9		
PV of PPG external debt-to-exports ratio	...	...	89.8	119.6	134.2	147.3	158.8	171.1	154.7	88.5	64.8		
PPG debt service-to-exports ratio	5.4	6.7	7.8	6.2	7.3	8.5	9.0	9.7	9.3	8.0	5.5		
PPG debt service-to-revenue ratio	7.3	9.1	10.3	6.6	7.6	8.1	8.3	8.4	8.3	6.6	4.0		
Gross external financing need (Billion of U.S. dollars)	0.9	1.2	2.3	2.0	1.9	2.0	2.0	2.2	1.0	1.3	9.7		
Key macroeconomic assumptions													
Real GDP growth (in percent)	3.9	6.2	6.5	6.3	6.2	6.0	6.5	6.9	7.0	7.0	6.4	5.4	7.1
GDP deflator in US dollar terms (change in percent)	2.2	0.4	-1.5	4.0	1.1	5.1	3.6	1.8	0.1	4.3	3.8	-1.9	3.3
Effective interest rate (percent) 4/	1.7	1.5	2.1	2.3	2.3	2.2	2.2	2.2	2.2	2.3	2.6	1.3	2.3
Growth of exports of G&S (US dollar terms, in percent)	6.3	8.3	9.7	-4.3	6.1	5.6	10.3	5.4	18.6	10.4	10.1	6.7	10.8
Growth of imports of G&S (US dollar terms, in percent)	-3.0	16.9	22.2	-5.1	5.9	5.5	9.5	7.2	7.6	11.6	10.6	6.4	8.7
Grant element of new public sector borrowing (in percent)	...	...	...	33.9	33.6	33.8	32.4	32.5	32.5	30.6	28.2	...	32.0
Government revenues (excluding grants, in percent of GDP)	11.9	12.1	12.9	14.0	14.2	14.6	15.0	15.7	16.7	20.2	20.8	10.7	17.2
Aid flows (in Billion of US dollars) 5/	0.3	0.2	0.3	1.5	1.3	1.2	1.3	1.1	0.8	0.6	1.4		
Grant-equivalent financing (in percent of GDP) 6/	...	...	...	3.4	2.7	2.3	2.4	1.9	1.2	0.6	0.5	...	1.5
Grant-equivalent financing (in percent of external financing) 6/	...	...	...	45.4	44.3	42.7	38.6	38.6	40.0	30.6	28.2	...	36.6
Nominal GDP (Billion of US dollars)	31	33	34	38	41	45	50	55	58	105	296		
Nominal dollar GDP growth	6.2	6.6	4.9	10.6	7.4	11.4	10.4	8.8	7.1	11.5	10.5	3.4	10.7
Memorandum items:													
PV of external debt 7/	...	...	32.9	34.6	36.4	36.6	37.7	38.5	38.5	28.5	22.8		
In percent of exports	...	...	191.6	233.5	248.7	263.5	271.9	286.5	258.4	171.0	149.2		
Total external debt service-to-exports ratio	13.0	9.1	11.9	12.0	13.1	13.2	12.5	13.3	12.6	10.5	8.0		
PV of PPG external debt (in Billion of US dollars)			5.3	6.7	8.0	9.3	11.1	12.6	13.5	15.6	29.2		
(PVt-PVt-1)/GDPt-1 (in percent)				4.2	3.4	3.1	3.9	3.0	1.7	0.7	1.0		
Non-interest current account deficit that stabilizes debt ratio	0.3	1.2	7.8	4.2	5.1	6.7	5.3	6.4	6.3	5.4	6.5		

Definition of external/domestic debt	**Currency-based**
Is there a material difference between the two criteria?	**No**





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/ Current-year interest payments divided by previous period debt stock.
5/ Defined as grants, concessional loans, and debt relief.
6/ 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).
7/ Assumes that PV of private sector debt is equivalent to its face value.
8/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

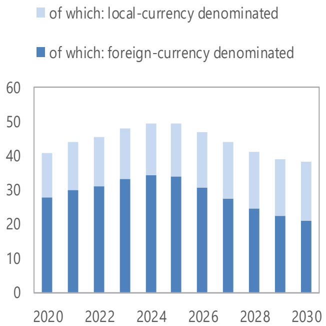
Table 2. Uganda: Public Sector Debt Sustainability Framework, Baseline Scenario, 2017-2040

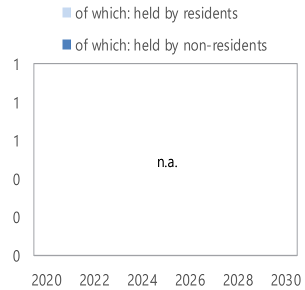
(In percent of GDP, unless otherwise indicated)

	Actual			Projections								Average 6/	
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2030	2040	Historical	Projections
Public sector debt 1/	31.1	34.8	36.1	40.9	43.9	45.5	48.1	49.5	49.4	38.4	38.2	25.3	44.2
of which: external debt	20.4	23.6	24.0	27.8	30.0	30.9	33.0	34.1	33.8	20.8	13.4	16.2	28.7
Change in public sector debt	2.3	3.7	1.3	4.8	2.9	1.6	2.7	1.3	-0.1	-0.7	0.9		
Identified debt-creating flows	1.8	2.6	1.6	4.8	2.9	1.6	2.6	1.3	-0.1	-0.7	0.8	2.1	0.2
Primary deficit	1.1	2.2	3.0	6.0	4.4	3.7	4.5	2.9	1.0	0.5	0.6	2.1	2.0
Revenue and grants	12.8	12.7	13.9	15.3	15.2	15.3	15.6	16.1	17.0	20.2	20.8	11.8	17.6
of which: grants	0.9	0.6	0.9	1.3	1.0	0.7	0.6	0.4	0.3	0.0	0.0		
Primary (noninterest) expenditure	13.9	14.9	16.9	21.3	19.6	19.0	20.1	19.0	18.0	20.6	21.4	14.0	19.6
Automatic debt dynamics	0.8	0.4	-1.4	-1.2	-1.5	-2.1	-1.9	-1.6	-1.1	-1.2	0.2		
Contribution from interest rate/growth differential	0.3	-0.8	-0.6	-1.2	-1.5	-1.3	-1.5	-1.7	-1.7	-0.8	0.4		
of which: contribution from average real interest rate	1.4	1.0	1.5	0.9	0.9	1.2	1.2	1.4	1.5	1.8	2.7		
of which: contribution from real GDP growth	-1.1	-1.8	-2.1	-2.1	-2.4	-2.5	-2.8	-3.1	-3.2	-2.5	-2.3		
Contribution from real exchange rate depreciation	0.4	1.2	-0.8	...	...	...	...	...	...	...	...		
Other identified debt-creating flows	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
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 contingent liabilities (e.g., bank recapitalization)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
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 debt creating or reducing flow (please specify)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		
Residual	0.5	1.0	-0.3	0.1	0.0	-0.8	-0.3	0.1	0.6	-0.4	-0.2	0.1	-0.2
Sustainability indicators													
PV of public debt-to-GDP ratio 2/	...	...	27.3	31.1	33.5	35.1	37.3	38.6	38.8	32.5	34.7		
PV of public debt-to-revenue and grants ratio	...	...	196.6	203.6	221.1	229.3	239.7	239.4	227.9	161.1	166.7		
Debt service-to-revenue and grants ratio 3/	58.3	51.4	51.1	41.4	44.4	45.1	43.5	42.6	41.7	30.4	37.6		
Gross financing need 4/	8.6	8.8	10.1	12.3	11.1	10.6	11.3	9.7	8.1	6.6	8.5		
Key macroeconomic and fiscal assumptions													
Real GDP growth (in percent)	3.9	6.2	6.5	6.3	6.2	6.0	6.5	6.9	7.0	7.0	6.4	5.4	7.1
Average nominal interest rate on external debt (in percent)	2.2	1.4	1.9	1.3	1.5	1.6	1.7	1.7	1.7	1.7	2.0	1.3	1.6
Average real interest rate on domestic debt (in percent)	12.7	12.1	14.3	9.2	8.6	10.1	9.7	10.6	11.2	11.7	12.1	9.8	10.6
Real exchange rate depreciation (in percent, + indicates depreciation)	2.5	6.3	-3.7	...	...	...	...	...	...	...	...	2.7	...
Inflation rate (GDP deflator, in percent)	4.7	4.1	0.6	4.2	5.1	6.0	5.6	5.3	4.7	5.0	4.7	4.7	5.1
Growth of real primary spending (deflated by GDP deflator, in percent)	-4.3	14.2	20.6	33.5	-2.2	3.0	12.4	1.2	1.5	9.4	6.3	11.5	9.4
Primary deficit that stabilizes the debt-to-GDP ratio 5/	-1.2	-1.5	1.7	1.1	1.5	2.1	1.8	1.6	1.1	1.2	-0.2	-0.3	1.8
PV of contingent liabilities (not included in public sector debt)	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0		

Definition of external/domestic debt	**Currency-based**
Is there a material difference between the two criteria?	**No**

Public sector debt 1/





Sources: Country authorities; and staff estimates and projections.

1/ Coverage of debt: The central government, government-guaranteed debt . Definition of external debt is Currency-based.

2/ The underlying PV of external debt-to-GDP ratio under the public DSA differs from the external DSA with the size of differences depending on exchange rates projections.

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

4/ 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 and other debt creating/reducing flows.

5/ Defined as a primary deficit minus a change in the public debt-to-GDP ratio ((-): a primary surplus), which would stabilizes the debt ratio only in the year in question.

6/ Historical averages are generally derived over the past 10 years, subject to data availability, whereas projections averages are over the first year of projection and the next 10 years.

Table 3. Uganda: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2020-2030

(In percent)

	Projections 1/										
	2020	**2021**	**2022**	**2023**	**2024**	**2025**	**2026**	**2027**	**2028**	**2029**	**2030**
PV of debt-to GDP ratio											
Baseline	18	20	20	22	23	23	21	19	17	16	15
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	18	21	23	27	29	32	36	39	42	44	47
B. Bound Tests											
B1. Real GDP growth	18	20	22	24	25	25	23	21	19	17	16
B2. Primary balance	18	20	21	22	23	23	22	20	18	16	15
B3. Exports	18	20	23	24	25	25	23	21	19	17	16
B4. Other flows 3/	18	22	25	27	27	27	25	23	20	18	17
B5. Depreciation	18	25	22	25	26	26	24	22	20	18	17
B6. Combination of B1-B5	18	24	26	27	28	28	26	23	21	19	18
C. Tailored Tests											
C1. Combined contingent liabilities	18	22	23	25	26	26	24	22	20	19	18
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	18	21	22	24	25	25	23	20	18	16	15
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	55	55	55	55	55	55	55	55	55	55	55
PV of debt-to-exports ratio											
Baseline	120	134	147	159	171	155	119	109	100	93	88
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	120	140	166	191	216	216	202	223	**243**	**264**	**279**
B. Bound Tests											
B1. Real GDP growth	120	134	147	159	171	155	119	109	100	93	88
B2. Primary balance	120	135	150	161	174	157	121	111	102	96	91
B3. Exports	120	150	189	201	215	194	150	137	125	117	110
B4. Other flows 3/	120	151	181	191	203	183	141	129	117	109	102
B5. Depreciation	120	134	128	141	153	139	107	97	90	84	81
B6. Combination of B1-B5	120	157	171	195	208	187	144	132	120	112	105
C. Tailored Tests											
C1. Combined contingent liabilities	120	149	166	179	192	175	136	125	117	112	108
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	120	152	171	181	191	169	128	117	106	99	93
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	240	240	240	240	240	240	240	240	240	240	240
Debt service-to-exports ratio											
Baseline	6	7	9	9	10	9	8	8	8	8	8
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	6	8	10	11	12	12	11	13	15	17	18
B. Bound Tests											
B1. Real GDP growth	6	7	9	9	10	9	8	8	8	8	8
B2. Primary balance	6	7	9	9	10	9	8	8	8	8	8
B3. Exports	6	8	10	11	12	11	9	10	10	10	10
B4. Other flows 3/	6	7	9	10	11	10	8	9	9	9	9
B5. Depreciation	6	7	9	8	9	9	7	8	7	7	7
B6. Combination of B1-B5	6	8	10	10	11	11	9	9	10	10	10
C. Tailored Tests											
C1. Combined contingent liabilities	6	7	9	10	10	10	8	8	8	8	8
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	6	8	9	10	11	10	8	8	8	9	9
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	21	21	21	21	21	21	21	21	21	21	21
Debt service-to-revenue ratio											
Baseline	7	8	8	8	8	8	7	7	7	7	7
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	7	8	9	10	11	11	10	12	13	14	15
B. Bound Tests											
B1. Real GDP growth	7	8	9	9	9	9	8	7	7	7	7
B2. Primary balance	7	8	8	8	8	8	7	7	7	7	7
B3. Exports	7	8	8	9	9	9	7	7	7	7	7
B4. Other flows 3/	7	8	9	9	9	9	8	8	8	8	8
B5. Depreciation	7	10	10	10	10	10	9	8	8	8	8
B6. Combination of B1-B5	7	8	9	10	10	10	8	8	8	8	8
C. Tailored Tests											
C1. Combined contingent liabilities	7	8	8	9	9	9	8	7	7	7	7
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	7	8	9	9	9	9	8	7	7	7	7
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Threshold	23	23	23	23	23	23	23	23	23	23	23

Table 4. Uganda: Sensitivity Analysis for Key Indicators of Public Debt , 2020-2030

	Projections 1/										
	2020	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030
PV of Debt-to-GDP Ratio											
Baseline	31	34	35	37	39	39	37	36	34	33	32
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	31	32	33	35	36	38	39	40	41	43	44
B. Bound Tests											
B1. Real GDP growth	31	35	39	43	45	46	46	46	45	45	46
B2. Primary balance	31	34	36	38	40	40	38	37	35	34	33
B3. Exports	31	34	37	39	40	41	39	37	35	34	34
B4. Other flows 3/	31	36	40	42	43	43	41	39	37	35	35
B5. Depreciation	31	36	35	36	36	35	33	31	28	26	25
B6. Combination of B1-B5	31	33	35	37	38	38	37	35	33	32	32
C. Tailored Tests											
C1. Combined contingent liabilities	31	41	42	45	46	46	45	43	41	39	39
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	31	35	38	43	46	48	48	47	46	46	47
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
TOTAL public debt benchmark	70	70	70	70	70	70	70	70	70	70	70
PV of Debt-to-Revenue Ratio											
Baseline	204	221	229	240	239	228	194	179	170	163	161
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	204	212	217	222	224	222	203	202	207	212	219
B. Bound Tests											
B1. Real GDP growth	204	232	256	273	279	272	240	228	224	222	226
B2. Primary balance	204	224	236	246	245	234	199	184	174	167	165
B3. Exports	204	226	243	253	251	239	203	187	176	169	166
B4. Other flows 3/	204	238	260	269	266	252	215	197	185	176	172
B5. Depreciation	204	237	232	232	224	208	172	154	141	131	125
B6. Combination of B1-B5	204	218	229	236	235	224	191	176	166	160	158
C. Tailored Tests											
C1. Combined contingent liabilities	204	271	277	287	285	271	232	214	204	196	192
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	204	239	261	286	294	286	250	236	231	229	233
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
Debt Service-to-Revenue Ratio											
Baseline	41	44	45	44	43	42	36	32	30	29	30
A. Alternative Scenarios											
A1. Key variables at their historical averages in 2020-2030 2/	41	45	46	45	45	44	40	35	34	34	37
B. Bound Tests											
B1. Real GDP growth	41	46	50	50	50	49	44	40	39	39	42
B2. Primary balance	41	44	46	45	44	43	37	32	30	30	31
B3. Exports	41	44	45	44	43	42	37	32	30	29	31
B4. Other flows 3/	41	44	46	44	43	42	37	33	31	30	31
B5. Depreciation	41	42	44	41	41	41	35	31	29	27	29
B6. Combination of B1-B5	41	43	45	43	42	41	36	32	29	28	30
C. Tailored Tests											
C1. Combined contingent liabilities	41	44	63	53	49	48	41	36	38	38	37
C2. Natural disaster	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.
C3. Commodity price	41	47	49	50	52	51	45	41	39	40	44
C4. Market Financing	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.	n.a.