DEBT MANAGEMENT OFFICE
NIGERIA

2022

REPORT OF THE ANNUAL NATIONAL MARKET ACCESS COUNTRY (MAC) DEBT SUSTAINABILITY ANALYSIS(DSA)

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GLOSSARY

AfCFTA	African Continental Free Trade Area
BOF	Budget Office of the Federation
CBN	Central Bank of Nigeria
DSA	Debt Sustainability Analysis
DMO	Debt Management Office
FCT	Federal Capital Territory
FDI	Foreign Direct Investment
FGN	Federal Government of Nigeria
FMBNP	Federal Ministry of Finance, Budget and National Planning
FRA	Fiscal Responsibility Act
FSP	Fiscal Strategy Paper
GDP	Gross Domestic Product
I&E	Investors and Exporters
ICM	International Capital Market
IMF	International Monetary Fund
MAC	Market Access Countries
MTDS	Medium-Term Debt Management Strategy
MTEF	Medium-Term Expenditure Framework
NDP	National Development Plan
NBS	National Bureau of Statistics
OAGF	Office of Accountant-General of the Federation
PIA	Petroleum Industry Act

EXECUTIVE SUMMARY

1.1 Background

1.1.1 The Market Access Country-Debt Sustainability Analysis (MAC-DSA) Framework was used for 2022 DSA as in 2021. The MAC-DSA Template was used due to the fairly large amount of market-sourced funds in the Total Public Debt Stock, accounting for USD65.464bn (63 percent) of the Total Public Debt Stock of USD103.110bn as at September 30, 2022. The share of market-based securities in the External Debt Stock was 39.38 percent while that of Domestic Debt Stock is about 100 percent. Nigeria started using the Framework in 2021 following its classification as a Lower-Middle Income country and the rising share of market-based securities in its debt stock.

1.1.2 The objective of the 2022MAC-DSA exercise is to assess the country's capacity to serviceits current and future debt obligations under both Baseline and Alternative (Shock) Scenarios. The outcomes serve as key inputs into Nigeria's Medium-Term Expenditure Framework (MTEF), the Fiscal Strategy Paper (FSP), and the Federal Government of Nigeria (FGN) Annual Budget.

1.1.3 The 2022 MAC DSA Exercise was conducted by the Debt Management Office (DMO) from December 6-10, 2022 in conjunction with other stakeholders, namely: the Federal Ministry of Finance, Budget and National Planning (FMFBNP), Central Bank of Nigeria (CBN), Budget Office of the Federation (BOF), National Bureau of Statistics (NBS), and the Office of the Accountant-General of the Federation (OAGF). The World Bankalso participated in the exercise.

1.2 Methodology

1.2.1 **Country Classification and Benchmarks:** The International Monetary Fund (IMF) classified Nigeria under the Emerging Market and Developing Country in its October 2022 World Economic Outlook (WEO) and in the Lower Scrutiny category of Emerging Market under the MAC-DSA Framework. This means that Nigeria is required to prepare only the basic MAC-DSA covering Baseline and Alternative Scenarios. Accordingly, Nigeria's 2022 MAC-DSA was prepared under the Lower Scrutiny category, but with additional country specific risks analyses for more in-depth sustainability assessment of the Total Public Debt stock.

1.2.2 The Total Public Debt-to-GDP ratio and Gross Financing Needs-to-GDP ratio benchmarks or peer-group threshold for emerging markets and developing countries like Nigeria under MAC-DSA is 70 percent and 15 percent, respectively.The Nigeria's self-imposed limit of Total

Public Debt-to-GDP ratio was set at 40 percent in the Medium-Term Debt Management Strategy (MTDS), 2020-2023. For prudency, 2022 MAC-DSA exercise also incorporated an upper limit Benchmark of FGN Debt Service-to-Revenue ratio of 50 percent, in view of the threat to debt sustainability, due to high Debt Service-to-Revenue ratio.

1.2.3 The MAC-DSA Analytical Tool has an in-built 10-year data requirements (2012-2021) with 2022 as the base year, and a 5-year data projection (2023-2027) under various macroeconomic assumptions. The analyses cover Baseline, and Alternative scenarios, as well as other analyses, both of which include Realism of the Baseline Scenario, Vulnerability of the Debt Profile, Sensitivity to Macro-Fiscal Risk and Contingent Liabilities.

1.2.4 **Scope of Debt Coverage**: The 2022 MAC-DSA exercise used the Gross Public Debt, that is, the General Government Debt, comprising the External and Domestic Debts of the FGN, thirty-six (36) States and the Federal Capital Territory (FCT). Under the Baseline, the FGN Domestic Debt stock includes the FGN Ways and Means Advances at the CBN in the sum of ₦22.72 trillion (which has now been approved by the National Assembly) and the additional N1.0 trillion in 2022 Supplementary Budget, totaling N23.72 trillion. Also, included in the FGN Domestic Debt under the Baseline are contractual arrears and judgement debts of about ₦2.87 trillion that are being considered for possible clearance through issuance of Promissory Notes in 2023. The FGN's contingent liabilities, including Guarantees in the sum of ₦4.58 trillion as of December 2021 was considered in the Alternative Scenario.

2.1 Macroeconomic Assumptions (Baseline Scenario)

2.1.1 The Baseline macroeconomic assumptions were those in the 2023-2025 MTEF and FSP based on which the 2023 Appropriation Act (2023 Repeal and Re-enactment Act) was formulated. The assumptions incorporate the relevant pillars and priorities of the National Development Plan (NDP), 2021-2025 taking into cognizance the current realities and changes in the economy in terms of output (GDP) and inflation.

2.1.2 Data from the National Bureau of Statistics (NBS) showed that the real Gross Domestic Product (GDP) grew by 3.55 percent in the third quarter of 2022. The real GDP is projected to grow at the rates of 3.75, 3.30, 3.46 percent in 2023, 2024 and 2025, respectively. This will be driven by improvements in agricultural activities and in the operating environments for e-business and investments, as securities related challenges continue to decline. Inflation, much of which is imported, occasion by Russian war in Ukraine is projected to remain high at 17.16 percent in 2023. It is expected to gradually decline to 16.21 percentin 2024,as authorities implement policies aimed at stabilizing the local operating

macroeconomic environment. Note that the projected inflation rate of 17.16 percent in 2023 is higher than 14.93 percent projected in the NDP for 2023 to reflect current realities.

2.1.3 The projection of the New Financingin the MTEF was projected to be in line with the Nigeria's MTDS, 2020-2023, which recommends more borrowing from domestic sources using long-term instruments relative to external sources. The MTDS targets 70:30 domestic and external debt composition, and 75:25 ratio for long and short-term debts with respective to domestic debt instruments. The MTDS also prioritize concessional and semi-concessional funding from multilateral and bilateral sources over market financing in the case of external borrowing. It is important to note that debt financing of Government deficit has been mainly from domestic sources in 2022 due to restricted market access for countries like Nigeria with below investment grade credits. This arose from global inflation and contractionary monetary policy actions of central banks of advanced economies that triggered reversal of capital flows from emerging markets. We expect the restriction in access to the International Capital Market (ICM) to continue in the near term, given the downgrade of Nigeria's credit rating by Moody's Investor Services to Caa1 from B3 in January, 2023. Meanwhile, it is assumed that external financing may be available from other non-concessional sources such as Development Finance Institutions (DFIs), Export Credit Agencies (ECAs) and International banks loan syndication to bridge the financing gaps.

2.2 Alternative Scenario (Shock Scenario)

2.2.1 The Alternative or Shock Scenario assumes that the fiscal and monetary conditions and the general operating macroeconomic environment will deteriorate should Government fail to address the current economic challenges such as low revenues, subsidy on premium motor spirit and foreign exchange scarcity. The current inflation rate is projected to maintain an upward trend through 2023 and 2024, leading to higher interest rates and monetary policy tightening. This will lead to reduction in GDP and widening of the fiscal deficit. Consequently, real GDP growth is projected to decline sharply to 0.5 and 0.1 percent in 2023 and 2024, respectively, relative to 3.75 and 3.30 percent in the Baseline Scenario, while the Primary Balance (the difference between Federal Government Revenue and Non-Interest Expenditure) is projected to widen to -3.7 and -1.7 percent in 2023 and 2024, respectively, against the -2.2 and -0.7 in the Baseline Scenario.

2.2.2 In addition, Nominal Exchange rate is projected to depreciate to USD1/N646.7 from USD1/N435.57 in the MTEF, 2023-2025, while Interest Rate is increased by 200 basis

points on an annual basis from 2023 to 2027, Contingent Liabilities in the range of ₦4.58 trillion as at December 2021 are expected to crystalize and add to the Public Debt stock. These have been included in the Total Public Debt stock

3.1 Key Outcomes

3.1.1 Tables 1 and 2 present the results under the Baseline and Alternative Scenarios, with respect to Total Public Debt, Gross Financing Needs, FGN Debt Service-to-Revenue and their respective risk assessment from 2023-2027.

Table 1: Summary of Total Public Debt Sustainability Assessment

Details	Threshold	2022	2023	2024	2025	2026	2027
Total Public Debt-to-GDP (%)	**40***						
Baseline		23.4	37.1	37.2	37.0	36.6	35.3
Alternative (Shocks)		25.7	45.4	47.5	49.0	50.6	51.6
Gross Financing Needs-to-GDP (%)	**15****						
Baseline		5.3	7.2	6.0	6.1	5.6	5.0
Alternative (Shocks)		5.3	8.8	8.0	8.7	9.0	9.1
FGN Debt Service-to-Revenues (%)	**50*****						
Baseline		36.5	73.5	95.6	105.4	83.5	86.3
Alternative (Shocks)		36.5	142.3	162.9	166.0	152.04	148.61

Note:

i. * Nigeria's Self-Imposed Limit
  ** MAC-DSA Threshold
  *** Nigeria's Recommended Threshold

ii. Gross Financing Needs is Primary Deficit plus Debt Service (interest payment, principal repayment and other charges)

Table 2: Summary of Total Public Debt Risks Assessment

Details	Threshold	Outcome	Assessment
Bond Spread (in Basis Points)	600	947	High
Annual Change in Short-term Debt (in percent of Total Debt)	1.0	1.3	High
Public Debt Held by Non-Resident (in percent of Total Debt)	45	40	Moderate
Public Debt in Foreign Currency (in percent of Total Debt)	60	40	Moderate

a. Baseline Scenario

i. Table 1 shows that inspite of the increase in the debt stock, the Total Public Debt-to-GDP ratio at 37.1 percent in 2023 and thereafter to 2027 remained below the Nigeria's self-imposed limit of 40 percent, but this was due to the growth in GDP.

ii. The Gross Financing Needs-to-GDP ratio remained below its threshold of 15 percent throughout the projection period.

iii. The FGN Debt Service-to-Revenue ratio beginning at 73.5 percent in 2023 to 2027 exceeded the Nigeria's recommended limit of 50 percent, due to low revenue performance of the Government.

b. Alternative Scenario

i. Although the outcomes of the MAC-DSA exercise under the Baseline Scenario indicate that the Total Public Debt-to-GDP and Gross Financing Needs-to-GDP ratios would remain within their respective thresholds of 40 percent and 15 percent, respectively, the outcomes under the Alternative Scenario are different. In Table 1, the Total Public Debt-to-GDP ratio exceeded the Nigeria's self-imposed limit of 40 percent at 45.4 percent in 2023, and thereafter to 2027. The Gross Financing Needs-to-GDP ratio increased to 9.1 percent in 2027, while the FGN Debt Service-to-Revenue ratio is relatively much higher than the threshold and Baseline Scenario, because of high mismatch between the country's revenue outlay and its expenditure profile and total GDP.

3.1.2 Table 2 presents the result in respect to Market Financing shocks, which is risk arising from increase in interest rates leading to high cost of borrowing, due to financial market uncertainties occasioned by Russian war in Ukraine. The Nigeria's 10-year Bond relative to United States 10 years Government Bond Spread exceeded the threshold of 600 basis points at 947 basis points (average between July to October, 2022). The share of Short-Term Debt to Total Public Debt exceeded the threshold of 1.0 percent, showing an increase in short-term debt in the Total Public Debt stock. The proportions of Total Public Debt held by Non-Resident and Public Debt in Foreign Currency are within their respective thresholds.

3.2 Summary of Findings

3.2.1 The 2022 MAC-DSA exercise discloses the following:

i. The projected Total Public Debt-to-GDP ratio increased to 37.1 percent in 2023, under the Baseline Scenario from 23.4 percent in 2022, due mainly to the inclusion of Ways and Means Advances at the CBN, Promissory Notes and New Borrowing for the year 2023 in the Debt Stock. There is very little borrowing space when compared to the Nigeria's self-imposed limit of Total Public Debt-to-GDP ratio of 40 percent set in the 2020-2023 MTDS under the Baseline Scenario. Under the Alternative Scenario, the self-imposed limit was exceeded at 45.4 percent.

ii.   The projected FGN Debt Service-to-Revenue ratio under the Baseline Scenario exceeded the Nigeria's recommended threshold of 50 percent in 2023 at 73.5 percent. This highlights the need to grow revenues in the short to long-term in order to moderate this ratio.

iii.   The projected Eurobond Yield Spread widened from the 316 basis points obtained in 2022 to 947 basis points in the current exercise suggesting an increase in cost of new borrowings.

iv.   The proportion of Short-Term Debt in the Total Public Debt increased to 1.3 percent in 2023 from 1.1 percent in 2022. This is slightly higher than the threshold of 1.0 percent, which indicates some elements of refinancing risk.

v.   The Shares of Debt held by Non-Residents and denominated in Foreign Currency are within their respective thresholds.

3.3   Conclusion

The analysis of the results of 2022 MAC-DSA shows that the Total Public Debt-to-GDP ratio is projected to increase to 37.1 percent in 2023 relative to 23.4 percent as at September 2022, due to the inclusion of the N8.80 trillion (New Borrowings) for the year 2023, the FGN Ways and Means at the CBN of over N23 trillion and estimated Promissory Notes issuance of N2.87 trillion in the Debt stock under the Baseline Scenario. The Country's Debt stock remains sustainable under these criteria, but the borrowing space has been reduced when compared to the Nigeria's self-imposed debt limit of 40 percent set in the MTDS, 2020-2023. On the other hand, FGN Debt Service-to-Revenue ratio at 73.5 percent in 2023 exceeds the recommended threshold of 50 percent due to low revenue, which means that there is need to significantly increase Government revenue. Under the Alternative Scenario, the Total Public Debt-to-GDP ratio at 45.4 percent in 2023 exceeds the Nigeria's self-imposed debt limit of 40 percent, while the FGN Debt Service-to-Revenue also exceeds the recommended threshold of 50 percent.

3.4   Recommendations

3.4.1   Based on the analysis of the results of the 2022 MAC-DSA, the DMO recommends the following:

i.   Although the Baseline analysis projects Total Public Debt-to-GDP ratio at 37.1 percent for 2023 indicating a borrowing space of 2.9 percent (equivalent of about N14.66 trillion) when

compared to the self-imposed limit of 40 percent, it is recommended that this should not be used as a basis for higher level of borrowing as was the case in the 2023 Budget. This is because the outcome of the Shock Scenario, which is more realistic in the circumstances, exceeded the self-imposed limit.

ii. The projected FGN Debt Service-to-Revenue ratio at 73.5 percent for 2023 is high and a threat to debt sustainability. It means that the revenue profile cannot support higher levels of borrowing. Attaining a sustainable FGN Debt Service-to-Revenue ratio would require an increase of FGN Revenue from N10.49 trillion projected in 2023 Budget to about N15.5 trillion.

iii. With respect to expansion in fiscal deficit, there is need to strictly adhere to the provision of extant legislations on Government borrowing, especially the Fiscal Responsibility Act 2007 and Central Bank of Nigeria Act, 2007 as it relates to Ways and Means Advances, in order to moderate the growth rate of public debt.

iv. There is urgent need to pay more attention to revenue generation by implementing far reaching revenue mobilization initiatives and reforms including the Strategic Revenue Growth Initiatives and all its pillars with a view to raising the country's tax revenue to GDP ratio from about 7 percent (one of the lowest in the world) to that of its peer.

v. Government should encourage the private sector fund infrastructure projects through the Public-Private Partnership schemes and take out capital projects in the Budget that are being funded from borrowing, thereby reduce budget deficit and borrowing.

vi. Government can reduce borrowing through privatization and/or sale of Government assets.

CHAPTER ONE
BACKGROUND AND OBJECTIVE

1.1 Background

1.1.1 The Market Access Country-Debt Sustainability Analysis (MAC-DSA) Framework was used for 2022 DSA as in 2021. The MAC-DSA Template was used due to the fairly large amount of market-sourced funds in the Total Public Debt Stock, accounting for USD65.464bn (63 percent) of the Total Public Debt Stock of USD103.110bn as at September 30, 2022. The share of market-based securities in the External Debt Stock was 39.38 percent, while that of Domestic Debt Stock is about 100 percent. Nigeria started using the Framework in 2021 following its classification as a Lower-Middle Income country and the rising share of market-based securities in its Debt stock.

1.2 Objective of 2022 DSA

1.2.1 The main objective of the 2022MAC-DSA exercise is to assess the country's capacity to service its current and future debt obligations under both Baseline and Alternative (Shock) Scenarios. The outcomes serve as key inputs into Nigeria's Medium-Term Expenditure Framework (MTEF), the Fiscal Strategy Paper (FSP), and the FGN Annual Budget

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1.2.3 The 2021MAC-DSA Report is divided into six (6) Chapters, as outlined below:

Chapter 1 - Background and Objective

Chapter 2 - Methodology, Scope of Debt Coverage and Benchmarks

Chapter 3 - Debt Portfolio Review

Chapter 4 - Macroeconomic Assumptions

Chapter 5 – Realm of Baseline and fore cast Heat Map

Chapter 6 –Key outcomes, Conclusion and Recommendations

CHAPTER TWO

METHODOLOGY, SCOPE OF DEBT COVERAGE AND BENCHMARKS

2.1   Methodology

2.1.1   The International Monetary Fund (IMF) classified Nigeria under the Emerging Market and Developing Country in its October 2022 World Economic Outlook (WEO) and in the Lower Scrutiny category of Emerging Market under the MAC-DSA Framework. This means that Nigeria is required to prepare only the basic MAC-DSA covering Baseline and Alternative Scenarios. Accordingly, Nigeria's 2022 MAC-DSA was prepared under the Lower Scrutiny category, but with additional country specific risks analyses for more in-depth sustainability assessment of the Total Public Debt stock.

2.1.2 The MAC-DSA Analytical Tool has an in-built 10-year data requirements (2012-2021) with 2022 as the base year, and a 5-year data projection (2023-2027) under various macroeconomic assumptions. The analyses cover Baseline, and Alternative scenarios, as well as other analyses, both of which include Realism of the Baseline Scenario, Vulnerability of the Debt Profile, Sensitivity to Macro-Fiscal Risk and Contingent Liabilities.

2.2   Scope of Debt Coverage

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2.3   Debt Burden Benchmarks

2.3.1 The Total Public Debt-to-GDP ratio and Gross Financing Needs-to-GDP ratio benchmarks or peer-group threshold for emerging markets and developing countries like Nigeria under MAC-DSA is 70 percent and 15 percent, respectively. The Nigeria's self-imposed limit of Total Public Debt-to-GDP ratio was set at 40 percent in the Medium-Term Debt Management

Strategy (MTDS), 2020-2023. For prudency, 2022 MAC-DSA exercise also incorporated an upper limit Benchmark of FGN Debt Service-to-Revenue ratio of 50 percent, in view of the threat to debt sustainability, due to high Debt Service-to-Revenue ratio.

Table 2.1 shows the Debt Burden Benchmarks.

Table 2.1: Debt Burden Benchmarks

S/N	Indicators	MAC-DSA	DMO's Self-imposed
I	Total Public Debt-to-GDP ratio (in Percent)	70	40
Ii	Gross Financing Needs-to-GDP (in Percent)	15	-
iii	FGN Debt Service-to-Revenue	-	50

Note:
i. Gross Financing Needs is defined as Primary Deficit plus Debt Service
ii.Debt Service comprises of Interest payment, Principal Repayment and other Charges

Table 2.2 shows the Risk Indicators for the Emerging Market Debt Profile, and their respective Benchmarks.

Table 2.2: Risk Indicators and Benchmarks for Emerging Market Debt Profile

S/N	Indicators	Risk Measure	Low Risk	Moderate Risk	High Risk
	Debt Profile Indicators				
1	Bond Spread (basis points)	Liquidity/Refinancing	Below 200	Between 200 and 600	Above 600
2	External Financing Requirements (% of GDP)	Liquidity/Refinancing	Below 5	Between 5 and 15	Above 15
3	Share of Public Debt in Foreign Currency (in Percent of Total Public Debt)	Exchange rate	Below 20	Between 20 and 60	Above 60
4	Share of Debt held by Non-residents (in Percent of Total Public Debt)	Exchange Rate	Below 15	Between 15 and 45	Above 45
5	Share of Short-term in Total Public Debt (in Percent of Total Public Debt)	Refinancing	Below 0.5	Between 0.5 and 1.0	Above 1.0

2.4 Macro-Fiscal Shocks

2.4.1 The MAC-DSA Framework assesses risks associated with the Baseline Scenario mainly through Sensitivity Analysis. The Baseline Scenario is the basic projections of macroeconomic variables used as a reference for analysis, in which the outcomes assume that the current economic condition will be continued in the future. Shocks are applied to the Baseline Scenario to

present the impact of the shocks on the debt burden indicators. The shocks and their details are presented in Table 2.3 below.

Table 2.3: Macro-Fiscal Shocks

S/N	Shocks	Details
i.	Primary Balance	Widening of the Primary Balance (The difference between Federal Government Revenue and Non-Interest Expenditure) to -2.3 and -2.2 percent in 2023 and 2024, respectively, against the -2.2 and -0.7 in the Baseline Scenario.
ii	Real GDP Growth	Lowering of the real GDP growth by 1 standard deviation and increasing inflation by 25 basis points giving rise to a decline in real GDP growth to 1.0 and 0.6 percent in 2023 and 2024, respectively, relative to 3.7 and 3.3 percent in the Baseline Scenario.
iii.	Interest Rate	Interest rate is assumed to increase by 200 basis points
iv	Exchange Rate	The Exchange rate set forth in the MTEF is projected to increase by 38 percent.
v.	Combined Macro-Fiscal	The Macro-Fiscal Shock combines the real GDP growth, real interest rate, real exchange rate and the primary balance shocks to determine the impact of Macro-Fiscal shock on the Total Public Debt-to-GDP ratio.

2.5 Realism of Forecast

2.5.1 The Realism Tools are used to assess the credibility of the Baseline projections. The Tools and their details are shown in Table 2.4.

Table 2.4: Realism Tools

S/N	Tools	Details
i.	Past Forecast Error	It assesses whether the Baseline projections are consistent with the macroeconomic variables (growth, primary balance, and inflation) with the historical data and cross-country experience. A large forecast error is an indication of persistent optimism in the past projections.
ii	Projected Fiscal Adjustment	It assesses the realism of projected Fiscal Adjustment compared with the historical experience of the country and other countries' experiences. This is to guide against over-optimistic projection. The 3-year Cumulative Primary Balance Adjustment has a threshold of 3% of GDP for both the Advanced Economies and Emerging Market Countries.
iii.	Boom-Bust Analysis	The Boom-Bust tool compares growth assumptions for a country to the historical experience of boom-bust cases to serve as a reality check for growth countries. It applies to a country that may be in a boom with the likelihood of entering a bust that would increase the stock of Contingent Liabilities. It is triggered when Output has been greater than potential or projected 0utput for three years.

2.6 Fan Chart

2.6.1 Fan Chart presents the future pathways of debt ratios considering uncertainties of macroeconomic variables such as GDP growth rates, interest and exchange rates and inflation. In the Symmetric Fan Chart the upside risks match downside risks, whereas the AsymmetricFan Chart presents thebest assessment of the likelihood of risks.

2.7 Heat Map

2.7.1The Heat Map summarizes in one place the results of the Template, but does not present the overall risk of debt distress rating. The result of the Heat Map combines with the Fan Chart and the Country-specific factors to determine the country's Overall Rating of risk of debt distress.The first and second rows assess the debt burden indicators, and the third row summarizes the Level of debt risks, which are classified low (green), moderate (yellow) and high (red), and as shown in Table 2.6

Table 2.6: Heat Map (Risk Level)

Risk Level	Baseline Above Benchmark	Stress Test Above Benchmark	Details
Low	No	No	Where the debt burden indicator is below the benchmark under both the baseline and the stress test in any year of projection
Moderate	No	Yes	Where the debt burden indicator is below the benchmark in the baseline, but above it in the stress test in any year of projection
High	Yes	Yes	Where the debt burden indicator is above the upper benchmark for that indicator for both the baseline and stress test

CHAPTER THREE

DEBT PORTFOLIO REVIEW ANDREALISM OF BASELINE FORECAST

3.1 Debt Portfolio Review

3.1.1 The Total Public Debt-to-GDP ratio continued to increase to 22.97 percent as at September 30, 2022 from 20.23 percent in 2021, driven by new Borrowing, given the contraction in the real GDP growth rate of -1.9 percent and a larger fiscal deficit arising from the decline in revenue. This ratio remained below the Self-Imposed Limit of 40 percent of the GDP set in the MTDS, 2020-2023, and 70 percent in MAC-DSA benchmark and Economic Community of West African States' convergence threshold of 70 percent.

3.1.2 Total Public Debt has continued to be dominated by Tradeable (Market-Based) Debt with share of market-based accounting for 64 percent of the Total FGN Debt, (15 percent of External and 49 percent of Domestic) as at September 30, 2022. The currency composition of Total FGN Debt showed that Local Currency Debt (Domestic Debt)has a higher share of the Total Public Debt at 55.69 percent, while the Debt denominated in Foreign Currency (External Debt) was 44.31 percent as at September 30, 2022, against the target of 70:30in the MTDS, 2020-2023. The share of Short-term debt has remained insignificant over the years.See Figures 3.1 to 3.4.

Figure 3.1: Total FGN Debt - Tradable and Non-Tradable Debts, 2017 – Q3,2022Figure 3.2: Total FGN Debt and Total Public Debt to GDP Ratio (%), 2017 – Q3,2022
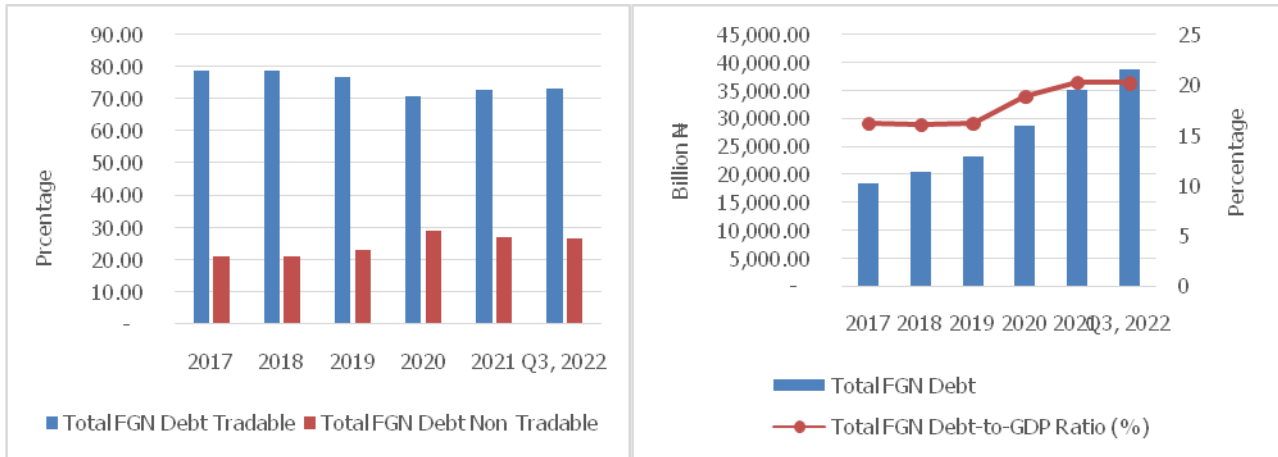
Source: Debt Management Office   Source: Debt Management Office

Figure 3.3: Total FGN Debt – Short-Term and Medium-Long-Term Debts, 2017-Q3,2022   **Figure 3.4: Total FGN Debt by Currency Composition, 2017-Q3,2022**
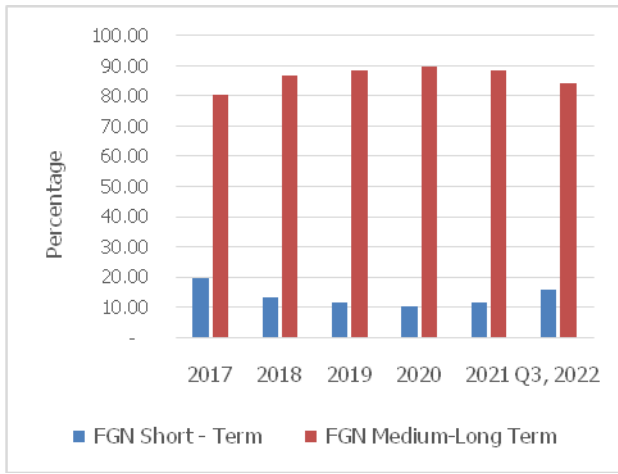
Source: Debt Management Office
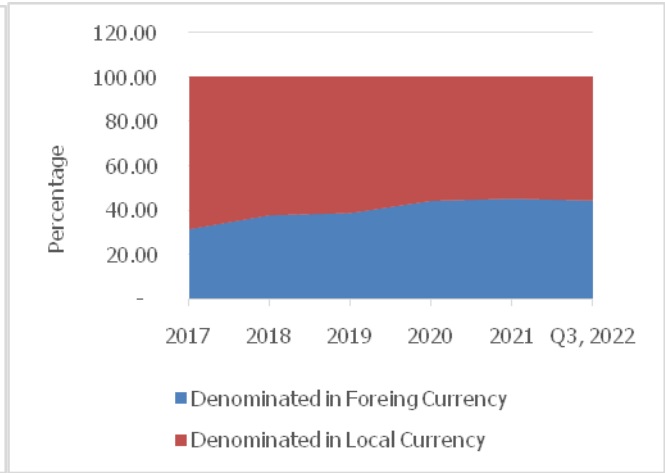
Source: Debt Management Office

CHAPTER FOUR
MACROECONOMIC ASSUMPTIONS

4.1. Baseline Assumptions

4.1.1 The Baseline macroeconomic assumptions were those in the 2023-2025 MTEF and FSP based on which the 2023 Appropriation Act (2023 Repeal and Re-enactment Act) was formulated. The assumptions incorporate the relevant pillars and priorities of the National Development Plan (NDP), 2021-2025 taking into cognizance the current realities and changes in the economy in terms of output (GDP) and inflation. The key macroeconomic assumptions are summarized in Table 4.1 and the details in Box 4.1

Table 4.1: Selected Macroeconomic indicators, 2022-2027

Indicators	2022	2023	2024	2025	2026	2027
Real GDP Growth (%)	3.55	3.75	3.30	3.46	3.45	3.66
Real GDP Growth (N'TRN)	74.96	77.77	80.34	83.11	85.98	89.13
Nominal GDP (N'TRN)	198.93	225.51	252.18	280.80	314.32	353.94
Inflation (%)	13.00	17.16	16.21	17.21	14.36	14.19
Revenue (N'TRN)	9.97	10.49	10.87	12.11	16.40	19.70
Deficit/GDP (%)	3.81	4.24	3.55	4.13	2.54	2.22
Exchange Rate (USD1/N)	410.15	435.57	435.92	437.57	445	445
New Borrowing (N'TRN)	6.92	8.80	8.84	10.62	7.98	7.68
Domestic Borrowing (N'BN)	*4.35*	*7.04*	*7.07*	*8.50*	6.38	6.14
External Borrowing (N'BN)	*2.57*	*1.76*	*1.77*	*2.12*	1.60	1.54

Source: Federal Ministry of Finance, Budget and National Planning (Budget 2022 and MTEF, 2023-2025), and DSA Team projections (2026-2027)

Box 4.1: Baseline Scenario Assumptions

Real and Nominal GDP Growth: Despite the lingering effect of the Covid-19 pandemic and the on-going war in Ukraine andsecurity challenges, the country's growth projections in the NDP were reviewed downwards. Real GDP growth is projected at 3.55 percent and 3.75 percent in 2022 and 2023, respectively. On average, real GDP is expected to grow by 3.53 percent per annum from 2022-2027, which is above the potential real GDP growth of 2.35 percent per annum during the corresponding period. In nominal terms, GDP is anticipated to grow by 14.64 percent in 2022, 13.35 percent in 2023, and an average of 12.62 percent from 2022-2027. This is above the potential nominal growth of 11.89 percent from 2022-2027. Dangote refinery is expected to come on stream during the period thereby moderating the contraction in the oil refining sub-sector and supporting the manufacturing sector.

The value of nominal GDP is projected at ₦198,930.02 billion in 2022, ₦225,482.49 billion in 2023, and ₦353,941.37 billion in 2027. Similarly, the consumption expenditure at current purchasers' value is expected to expand from ₦120,172.58 billion in 2022 to ₦121,933.05 billion in 2023 and ₦129,291.02 billion in 2027.

Inflation Rate. The Nigerian economy, just like the global economy, is experiencing rising inflation, due to the heightened economic and geopolitical uncertainties and disruptions in energy and commodity markets resulting from the lingering effect of the COVID-19 pandemic and ongoing war in Ukraine. The headline inflation on a year-on-year basis increased to 16.98 percent in 2021 from 13.20 percent in 2020. It was expected that addressing security challenges in the country affecting agriculture and food production, as well as and oil theft affecting crude production, as well as the war in Ukraine is resolved, the war-induced global commodity price increases will decline, these would result in lowering inflation to 13.00 percent in 2022. However, the headline inflation on a year-on-year basis is projected at17.16,16.21 and 17.21 percent in 2023, 2024 and 2025, respectively, on account of sustained upward pressure on prices expected to be driven by the current and lag effect of global price surge, due to the war in Ukraine, domestic insecurity, rising costs of imports, exchange rate depreciation, as well as supply bottlenecks.

Export: Export is expected to grow in the medium to long-term projected period, driven largely by anticipated improvement in the non-oil sector, as the government's efforts to diversify the economy yield positive results. Specifically, the policy measures in the critical sectors of the economy, particularly the interventions by the CBN are expected to drive this improvement. In addition, high commodity prices as a result of the lingering effect of COVID-19 and the Russia-Ukraine unrest are expected to improve non-oil export. Furthermore, the commencement of trading under the African Continental Free Trade Area (AfCFTA) Agreement is also expected to improve non-oil export. Similarly, crude oil and gas export is expected to grow, in the short to medium term. The growth would be supported by the sustained high prices at the international market and the expected gradual global economic recovery, which is likely to boost demand.

Current Account Position: The current account balance is expected to swing to the traditional surplus position in the short-term, driven largely by the steady rise in crude oil and gas prices at the international market and sustained inflow of remittances, as well as the improvement in non-oil export receipts. The surplus in the current account would be sustained in the medium to long-term horizon.

Foreign Direct Investments: The negative effect of the COVID-19 pandemic on global capital flows which has affected the inflow of Foreign Direct Investment (FDI) into the country is expected to further dampen the growth of FDI in the short-term. However, improved macroeconomic conditions, economic reforms, particularly structural reforms in critical areas such as infrastructural development, and the implementation of the Petroleum Industry Act are the major factors expected to drive growth in FDI inflow in the medium to long term.

External Reserves: External reserves at end-December 2022 was US$37.39 billion, lower than the US$42.60 billion in 2021. The level of External Reserves could finance 5.4 months of goods and services or 7.1 months for goods only, compared to7.3 months or 9.6 months, respectively, in 2021. The external reserves is expected to remain comfortably above the international benchmark of 3.0 months of import cover in the medium to long-term horizon, hinged on the sustained improvement in crude oil production as government intensifies efforts to address the existing production challenges. In addition, the current account surplus in the medium to long-term horizon is assumed to support the maintenance of buoyant external reserves.

Nominal Exchange Rate: The effort of the CBN to unify the exchange rate in all the segments of the market led to further adjustment of the nominal exchange rate by adopting the Investors' and Exporters' window rate as the official exchange rate. Once the unification of the exchange rate is achieved within the shortest term, the nominal exchange rate is expected to remain stable in the medium and long-term, driven by the sustained and robust foreign exchange policy of the CBN aimed at enhancing the inflow of foreign exchange into the economy. The recent exchange rate reforms undertaken by the CBN to block leakages and ensure the enhanced inflow of remittances by Nigerians in the Diaspora is expected to further boost liquidity in the foreign exchange market, thereby curbing demand pressure in the short-term horizon.

Fiscal Deficit: Fiscal deficit in the 2022 appropriation act (amended) was ₦6.21 trillion or 3.37 percent of

GDP, compared to ₦5.74 trillion or 4.02 percent of GDP in 2021 (2021 Budget and Supplementary). The fiscal deficit is projected to stand at ₦9.04 trillion or 4.00 percent in 2023, ₦8.94 trillion or 3.55 percent in 2024 and ₦11.62 trillion or 4.13 percent in 2025. The deficits are above the threshold of 3 percent of GDP set by the Fiscal Responsibility Act, 2007, due to the economic challenge attributed to the Covid-19 pandemic. The deficit as a percentage of GDP is expected to start declining below the threshold from 2025 to the end of the projection period consistent with the projected faster growth of the GDP.

New Financing: New Financing in the MTEF was projected to be in line with the Nigeria's MTDS, 2020-2023, which recommends more borrowing from domestic sources using long-term instruments relative to external sources. The MTDS targets 70:30 domestic and external debt composition, and 75:25 ratio for long and short-term debts with respective to domestic debt instruments. The MTDS also prioritize concessional and semi-concessional funding from multilateral and bilateral sources over market financing in the case of external borrowing. It is important to note that debt financing of Government deficit has been mainly from domestic sources in 2022 due to restricted market access for countries like Nigeria with below investment grade credits. This arose from global inflation and contractionary monetary policy actions of central banks of advanced economies that triggered reversal of capital flows from emerging markets. We expect the restriction in access to the International Capital Market (ICM) to continue in the near term, given the downgrade of Nigeria's credit rating by Moody's Investor Services to Caa1 from B3 in January, 2023. Meanwhile, it is assumed that external financing may be available from other non-concessional sources such as Development Finance Institutions (DFIs), Export Credit Agencies (ECAs) and International banks loan syndication to bridge the financing gaps.

4.2 Alternative Scenario (Shock Scenario)

4.2.1 The Alternative or Shock Scenario assumes that the fiscal and monetary conditions and the general operating macroeconomic environment will deteriorate should Government fail to address the current economic challenges such as low revenues, subsidy on premium motor spirit and foreign exchange scarcity. The current inflationary trend is projected to maintain an upward trend through 2023 and 2024, leading to higher interest rates and tightening. These will further have negative impact on the real sector, and therefore employment and output (GDP). Consequently, real GDP growth is projected to decline to 0.5 percent in 2023 and 0.1 percent in 2024 relative to 3.75 and 3.30 percent in the Baseline Scenario, respectively. The Primary Balance (the difference between Federal Government Revenue and Non-Interest Expenditure) is projected to widen to -3.7 and -1.7 percent in 2023 and 2024 as against -2.2 and -0.7 in the Baseline Scenario, respectively.

4.2.2 In addition, Nominal Exchange rate is projected to depreciate to USD1/N646.7 from USD1/N435.57 in the MTEF, 2023-2025, while Interest Rate is increased by 200 basis points on an annual basis from 2023 to 2027, Contingent Liabilities in the range of N4.58 trillion as at December 2021 are expected to crystalize and add to the Public Debt stock. These have been included in the Total Public Debt stock.

CHAPTER FIVE

REALISM OF BASLINE FORECAST, FAN CHART AND HEAT MAP

5.1   Realism of Baseline Forecast

5.1.1 Forecast Error

Nigerian Median Forecast Errors are -1.18, -2.46 and -1.37 percent for real GDP growth, Primary Balance and Inflation, respectively, with Percentile Ranks of 21, 14 and 17 percent. These negative forecast errors show some optimism, meaning that the projected values are relatively higher than the actual values. The forecast errors were mainly from the Primary Balance forecast in the past years caused by oil price volatilities (Figures5.1 and 5.2).

5.1.2 Primary Balance

The 3-year Average Level of Cyclically-Adjusted Primary Balance at 2.51 percent of the GDP is less than the 3.5 percent of the GDP benchmark, indicating that the Primary Balance forecast was reasonable, when compared to other countries in Emerging Markets (Figure 5.2).

5.1.3   Boom-Bust Analysis

The Boom-Bust Analysis does not apply to Nigeria due to the very low Private Sector Credit-to-GDP ratio. Data from the CBN shows that Private Sector Credit, which is the Banking System's Credit to the private sector as a percentage of GDP was on the average at about 3.7 percent in the past three years, 2019 to 2021, compared to the Benchmark of 15 percent (Figure 5.2).

5.2 Fan Chart

5.2.1 The Fan Chart presents the possible evolution of Total Public Debt over the medium-term and are based on Symmetric and Asymmetric distribution of risks. Under the Symmetric distribution, there is a probability that the Debt level would remain below 45 percent of the GDP over the medium-term. In the Asymmetric distribution with no positive shock to Primary Balance and zero as the maximum positive Primary Balance shock as percent of GDP, there is the probability that the Debt level would also remain below the 45 percent of the GDP over the medium-term (Figure 5.3).

5.3   Heat Map

5.3.1 The Heat Map identifies Market Perception, change in Share of Short-term-to- Total Public Debt and Share of Public Debt held by Non-Residents as the principal risks to Total Public Debt portfolio (Figure 5.3).

Nigeria Public Sector Debt Sustainability Analysis (DSA) - Baseline Scenario

(in percent of GDP unless otherwise indicated)

Debt, Economic and Market Indicators [1]

	Actual			Projections						As of October 28, 2022		
	2011-2019 [2]	2020	2021	2022	2023	2024	2025	2026	2027	Sovereign Spreads		
Nominal gross public debt	14.8	20.4	22.8	25.6	38.1	38.6	39.0	38.7	37.4	Bond Spread (bp) 3/		1012
Public gross financing needs	3.8	5.9	5.7	5.4	7.6	6.7	7.2	6.6	6.0	5Y CDS (bp)		990
Public debt (in percent of potential GDP)	17.1	23.1	24.8	25.5	38.5	39.0	39.2	38.9	37.8			
Real GDP growth (in percent)	3.0	-1.9	3.4	3.5	3.7	3.3	3.5	3.4	3.7	Ratings	Foreign	Local
Inflation (GDP deflator, in percent)	8.0	7.9	10.1	10.6	9.3	8.3	7.6	8.2	8.6	Moody's	B2	B3
Nominal GDP growth (in percent)	11.6	11.8	7.7	14.5	13.3	11.8	11.3	12.0	12.6	S&Ps	B-	B-
Effective interest rate (in percent) [4]	11.8	8.9	6.9	8.9	11.4	10.3	11.2	12.1	12.8	Fitch	B-	B-

Contribution to Changes in Public Debt

	Actual			Projections							
	2011-2019	2020	2021	2022	2023	2024	2025	2026	2027	cumulative	debt-stabilizing
Change in gross public sector debt	1.1	1.4	2.4	2.8	12.5	0.5	0.4	-0.3	-1.3	14.6	primary
Identified debt-creating flows	0.5	5.5	3.2	2.1	12.5	0.5	0.4	-0.3	-1.3	14.0	balance 9/
Primary deficit	0.3	3.4	4.0	3.3	2.7	1.0	0.4	-0.4	-1.3	5.8	0.0
Primary (noninterest) revenue and gra	7.4	4.6	2.8	8.4	7.9	7.4	7.3	8.0	8.2	47.2	
Primary (noninterest) expenditure	7.7	8.0	6.7	11.7	10.6	8.4	7.7	7.6	6.9	53.0	
Automatic debt dynamics [5]	0.2	2.0	-0.8	-1.1	-0.4	-0.5	0.0	0.0	0.1	-2.0	
Interest rate/growth differential [6]	0.0	0.5	-1.2	-1.1	-0.4	-0.5	0.0	0.0	0.1	-2.0	
Of which: real interest rate	0.4	0.2	-0.6	-0.4	0.4	0.6	1.2	1.2	1.3	4.3	
Of which: real GDP growth	-0.3	0.3	-0.6	-0.7	-0.8	-1.1	-1.2	-1.2	-1.3	-6.3	
Exchange rate depreciation [7]	0.2	1.5	0.5	...	...	...	...	...	...	...	
Other identified debt-creating flows	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	-0.1	10.2	
Please specify (1) (e.g., privatization r	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	-0.1	-0.3	
Contingent liabilities	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	
Please specify (2) (e.g., other debt flo	0.0	0.0	0.0	0.0	10.5	0.0	0.0	0.0	0.0	10.5	
Residual, including asset changes [8]	0.5	-4.1	-0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.7	
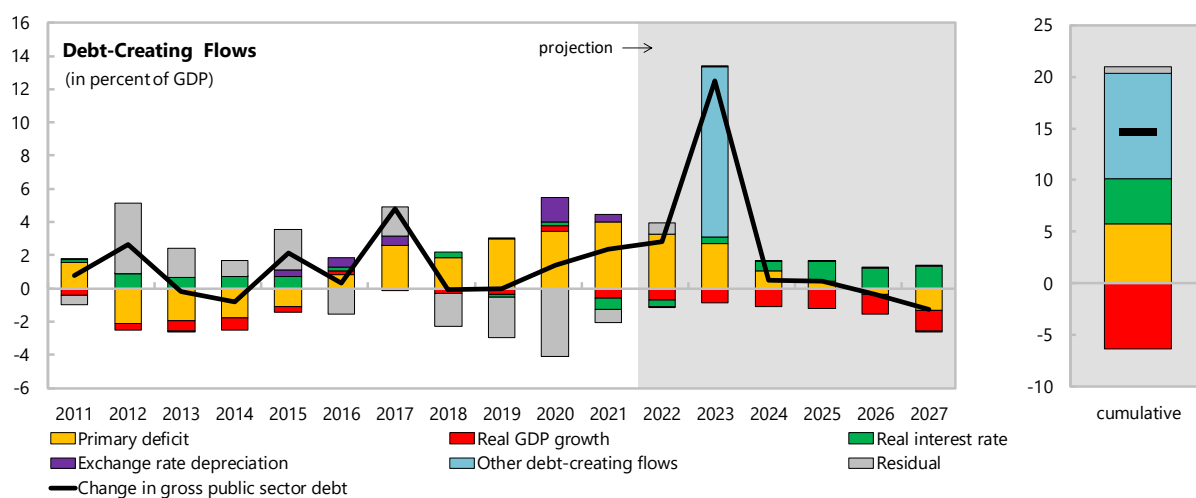
Source: Debt Management Office

1/ Public sector is defined as general government.

2/ Based on available data.

3/ EMBIG (bp).

4/ Defined as interest payments divided by debt stock (excluding guarantees) at the end of previous year.

5/ Derived as $[r - \pi(1+g) - g + ae(1+r)]/(1+g+\pi+g\pi)$ times previous period debt ratio, with r = effective nominal interest rate; π = growth rate of GDP deflator; g = real GDP growth rate;
a = share of foreign-currency denominated debt; and e = nominal exchange rate depreciation (measured by increase in local currency value of U.S. dollar).

6/ The real interest rate contribution is derived from the numerator in footnote 5 as $r - \pi(1+g)$ and the real growth contribution as -g.

7/ The exchange rate contribution is derived from the numerator in footnote 5 as $ae(1+r)$.

8/ Includes asset changes and interest revenues (if any). For projections, includes exchange rate changes during the projection period.

9/ Assumes that key variables (real GDP growth, real interest rate, and other identified debt-creating flows) remain at the level of the last projection year.

Figure 5.2: Nigeria Public DSA - Realism of Baseline Assumptions

Forecast Track Record, versus all countries

Real GDP Growth
(in percent, actual-projection)
Nigeria median forecast error, 2013-2021: **-1.18**
Has a percentile rank of: **21%**

Primary Balance
(in percent of GDP, actual-projection)
Nigeria median forecast error, 2013-2021: **-2.46**
Has a percentile rank of: **14%**

Inflation (Deflator)
(in percent, actual-projection)
Nigeria median forecast error, 2013-2021: **-1.37**
Has a percentile rank of: **17%**

Distribution of forecast errors: [1]
Distribution of forecast errors:
— Median
♦ **Nigeria forecast error**

Distribution of forecast errors: [1]

Distribution of forecast errors: [1]
Distribution of forecast errors:
— Median
♦ **Nigeria forecast error**

Assessing the Realism of Projected Fiscal Adjustment

3-Year Adjustment in Cyclically-Adjusted Primary Balance (CAPB)
(Percent of GDP)

☐ Distribution [4]
♦ Nigeria has a percentile rank of 21%

3-year CAPB adjustment greater than 3 percent of GDP in approx. top quartile

3-Year Average Level of Cyclically-Adjusted Primary Balance (CAPB)
(Percent of GDP)

☐ Distribution [4]
♦ Nigeria has a percentile rank of 67%

3-year average CAPB level greater than 3.5 percent of GDP in approx. top quartile

Boom-Bust Analysis [3]

Real GDP growth
(in percent)
— Nigeria

Boom-bust inter-quartile range around crisis events (t)

Source : Debt Management Office

1/ Plotted distribution includes all countries, percentile rank refers to all countries.

2/ Projections made in the spring WEO vintage of the preceding year.

3/ Nigeria has had a positive output gap for 3 consecutive years, 2019-2021. For Nigeria, t corresponds to 2022; for the distribution, t corresponds to the first year of the crisis.

4/ Data cover annual obervations from 1990 to 2011 for advanced and emerging economies with debt greater than 60 percent of GDP. Percent of sample on vertical axis.

Source: Debt Management Office

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Figure 5.3: Nigeria Public DSA Risk Assessment

Heat Map

Debt level [1/]	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability shock
Gross financing needs [2/]	Real GDP Growth Shock	Primary Balance Shock	Real Interest Rate Shock	Exchange Rate Shock	Contingent Liability Shock
Debt profile [3/]	Market Perception	External Financing Requirements	Change in the Share of Short-Term Debt	Public Debt Held by Non-Residents	Foreign Currency Debt

Evolution of Predictive Densities of Gross Nominal Public Debt

(in percent of GDP)

— Baseline   Percentiles: ■ 10th-25th   ■ 25th-75th   ■ 75th-90th

Symmetric Distribution

Restricted (Asymmetric) Distribution

Restrictions on upside shocks:
no restriction on the growth rate shock
no restriction on the interest rate shock
0 is the max positive pb shock (percent GDP)
no restriction on the exchange rate shock
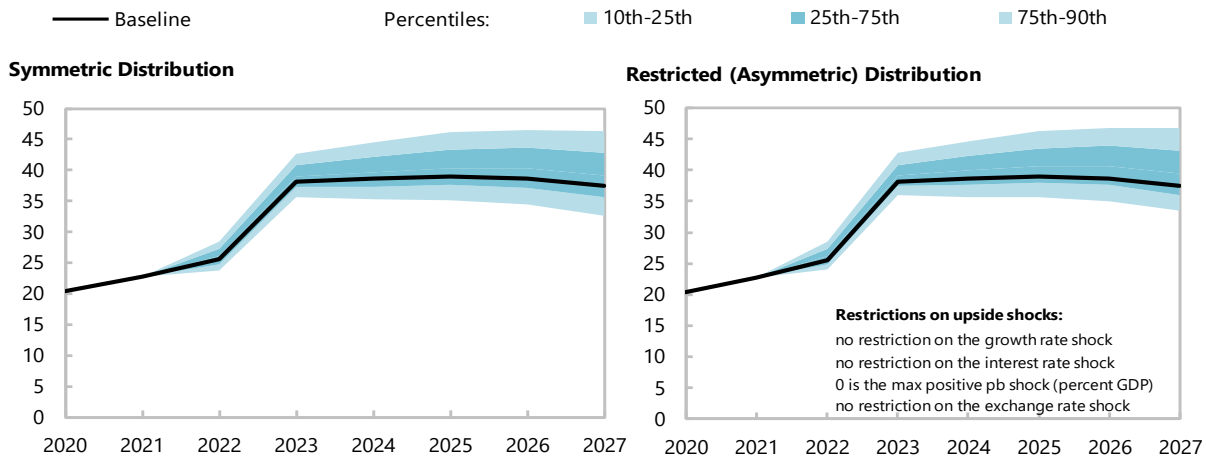
Debt Profile Vulnerabilities

(Indicators vis-à-vis risk assessment benchmarks, in 2021)

■ Nigeria   – – Lower early warning   · – · Upper early warning

Bond spread	**External Financing Requirement**	**Annual Change in Short-Term Public Debt**	**Public Debt Held by Non-Residents**	**Public Debt in Foreign Currency**
(in basis points) 4/	(in percent of GDP) 5/	(in percent of total)	(in percent of total)	(in percent of total)
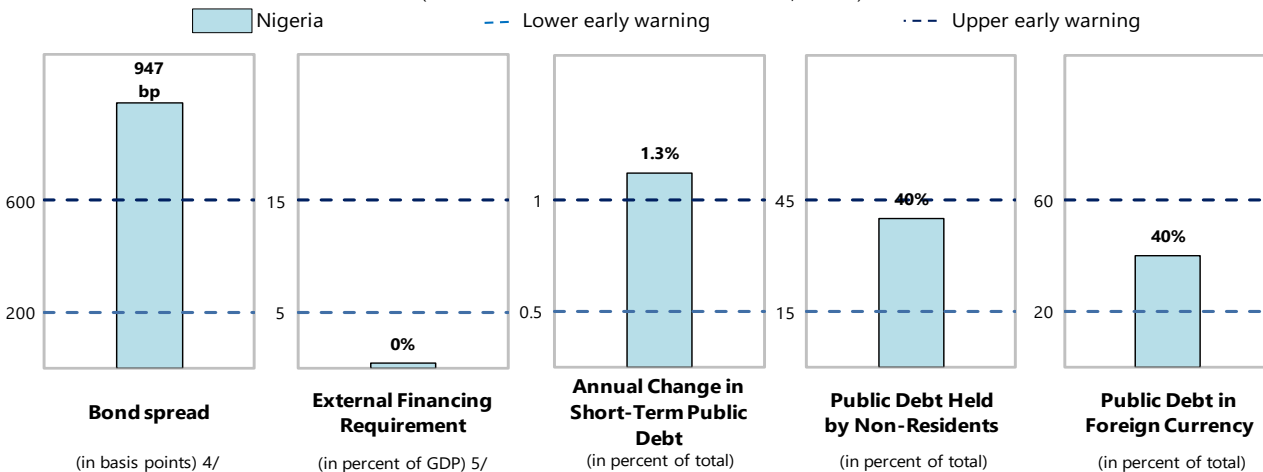
Source: Debt Management Office

1/ The cell is highlighted in green if debt burden benchmark of 70% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

2/ The cell is highlighted in green if gross financing needs benchmark of 15% is not exceeded under the specific shock or baseline, yellow if exceeded under specific shock but not baseline, red if benchmark is exceeded under baseline, white if stress test is not relevant.

3/ The cell is highlighted in green if country value is less than the lower risk-assessment benchmark, red if country value exceeds the upper risk-assessment benchmark, yellow if country value is between the lower and upper risk-assessment benchmarks. If data are unavailable or indicator is not relevant, cell is white.
Lower and upper risk-assessment benchmarks are:

200 and 600 basis points for bond spreads; 5 and 15 percent of GDP for external financing requirement; 0.5 and 1 percent for change in the share of short-term debt; 15 and 45 percent for the public debt held by non-residents; and 20 and 60 percent for the share of foreign-currency denominated debt.

4/ EMBIG (bp), an average over the last 3 months, 28-Jul-22 to 28-Oct-22.

5/ External financing requirement is defined as the sum of current account deficit, amortization of medium and long-term total external debt, and short-term total external debt at the end of previous period.

Source: Debt Management Office

Figure 5.4: Nigeria Public DSA – Stress Tests

Macro-Fiscal Stress Tests

Legend: Baseline | Primary Balance Shock | Real Interest Rate Shock | Real GDP Growth Shock | Real Exchange Rate Shock

Gross Nominal Public Debt
(in percent of GDP)

Gross Nominal Public Debt
(in percent of Revenue)

Public Gross Financing Needs
(in percent of GDP)
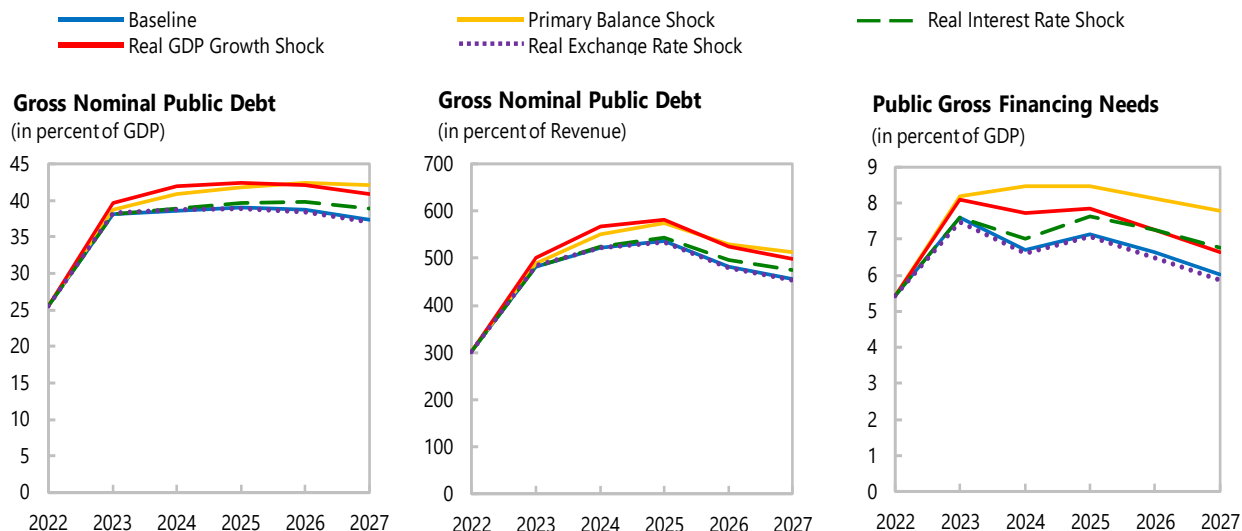
Additional Stress Tests
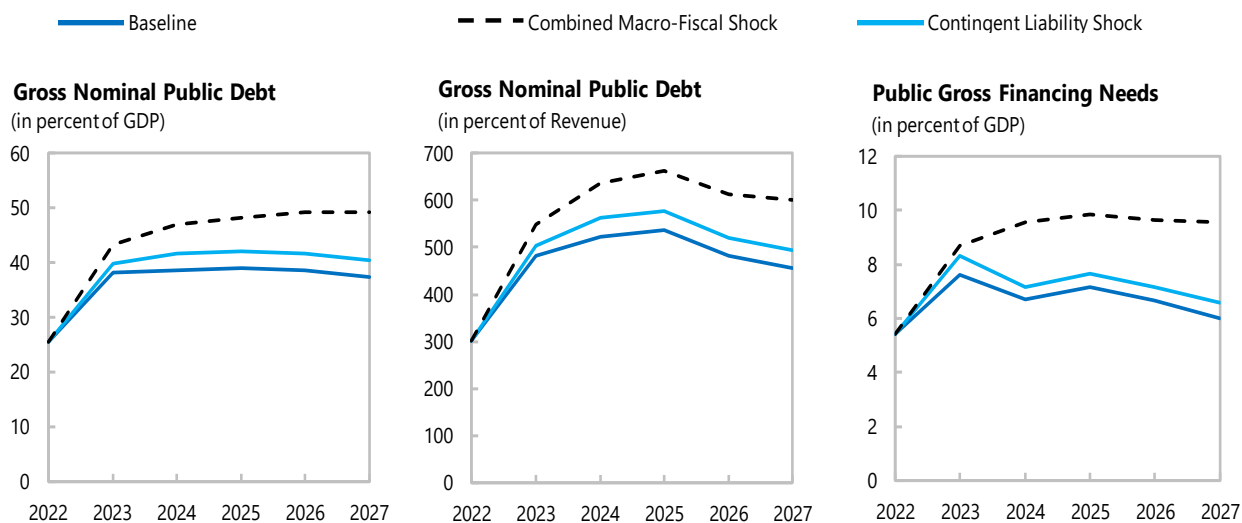
Legend: Baseline | Combined Macro-Fiscal Shock | Contingent Liability Shock

Gross Nominal Public Debt
(in percent of GDP)

Gross Nominal Public Debt
(in percent of Revenue)

Public Gross Financing Needs
(in percent of GDP)

Underlying Assumptions
(in percent)

Primary Balance Shock	2022	2023	2024	2025	2026	2027		Real GDP Growth Shock	2022	2023	2024	2025	2026	2027
Real GDP growth	3.5	3.7	3.3	3.5	3.4	3.7		Real GDP growth	3.5	1.0	0.6	3.5	3.4	3.7
Inflation	10.6	9.3	8.3	7.6	8.2	8.6		Inflation	10.6	8.6	7.6	7.6	8.2	8.6
Primary balance	-3.3	-3.3	-2.7	-1.0	-0.4	0.4		Primary balance	-3.3	-3.0	-1.6	-0.4	0.4	1.3
Effective interest rate	8.9	11.4	10.4	11.3	12.2	12.9		Effective interest rate	8.9	11.4	10.3	11.3	12.1	12.8
Real Interest Rate Shock								**Real Exchange Rate Shock**						
Real GDP growth	3.5	3.7	3.3	3.5	3.4	3.7		Real GDP growth	3.5	3.7	3.3	3.5	3.4	3.7
Inflation	10.6	9.3	8.3	7.6	8.2	8.6		Inflation	10.6	18.9	8.3	7.6	8.2	8.6
Primary balance	-3.3	-2.7	-1.0	-0.4	0.4	1.3		Primary balance	-3.3	-2.7	-1.0	-0.4	0.4	1.3
Effective interest rate	8.9	11.4	11.2	12.3	13.3	14.1		Effective interest rate	8.9	12.1	9.9	10.8	11.7	12.5
Combined Shock								**Contingent Liability Shock**						
Real GDP growth	3.5	1.0	0.6	3.5	3.4	3.7		Real GDP growth	3.5	1.0	0.6	3.5	3.4	3.7
Inflation	10.6	8.6	7.6	7.6	8.2	8.6		Inflation	10.6	8.6	7.6	7.6	8.2	8.6
Primary balance	-3.3	-3.3	-2.7	-1.0	-0.4	0.4		Primary balance	-3.3	-2.7	-1.0	-0.4	0.4	1.3
Effective interest rate	8.9	12.1	10.7	11.8	13.0	13.8		Effective interest rate	8.9	13.9	10.3	11.2	12.1	12.8

Source: Debt Management Office

Figure 5.5: Nigeria Public DSA – Composition of Public Debt and Alternative Scenarios

Composition of Public Debt

By Maturity
(in percent of GDP)
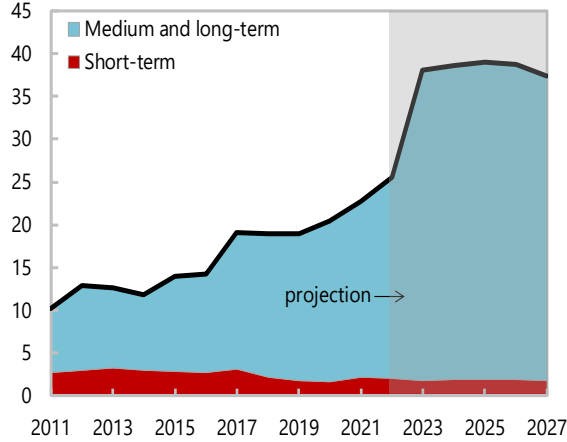
By Currency
(in percent of GDP)
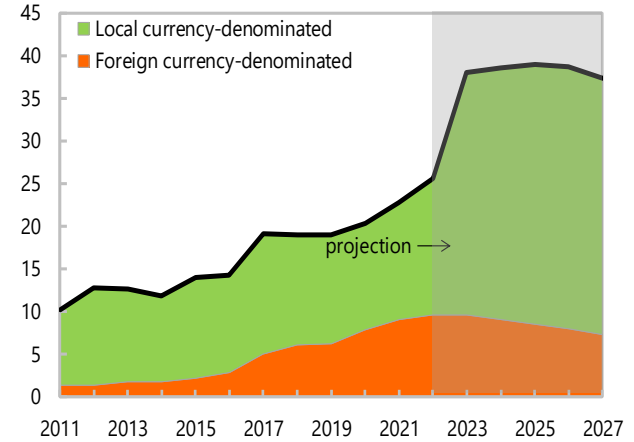
Alternative Scenarios

— Baseline .... Historical – – – Constant Primary Balance

Gross Nominal Public Debt [1]
(in percent of GDP)
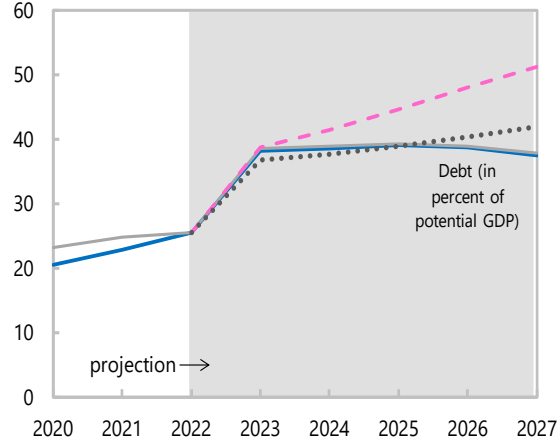
Public Gross Financing Needs
(in percent of GDP)
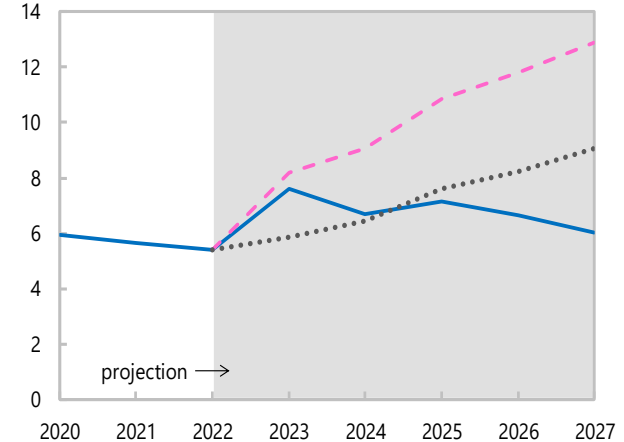
Underlying Assumptions
(in percent)

Baseline Scenario	2022	2023	2024	2025	2026	2027
Real GDP growth	3.5	3.7	3.3	3.5	3.4	3.7
Inflation	10.6	9.3	8.3	7.6	8.2	8.6
Primary Balance	-3.3	-2.7	-1.0	-0.4	0.4	1.3
Effective interest rate	8.9	11.4	10.3	11.2	12.1	12.8
Constant Primary Balance Scenario						
Real GDP growth	3.5	3.7	3.3	3.5	3.4	3.7
Inflation	10.6	9.3	8.3	7.6	8.2	8.6
Primary Balance	-3.3	-3.3	-3.3	-3.3	-3.3	-3.3
Effective interest rate	8.9	11.4	10.3	11.2	12.0	12.7

Historical Scenario	2022	2023	2024	2025	2026	2027
Real GDP growth	3.5	2.4	2.4	2.4	2.4	2.4
Inflation	10.6	9.3	8.3	7.6	8.2	8.6
Primary Balance	-3.3	-0.9	-0.9	-0.9	-0.9	-0.9
Effective interest rate	8.9	11.4	10.6	11.6	12.5	13.2

Source: Debt Management Office

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CHAPTER SIX

KEY OUTCOMES, CONCLUSION AND RECOMMENDATIONS

6.1   Key Outcomes

6.1.1   Tables 1 and 2 present the results under the Baseline and Alternative Scenarios, with respect to Total Public Debt, Gross Financing Needs, FGN Debt Service-to-Revenue and their respective risk assessment from 2023-2027.

Table 1: Summary of Total Public Debt Sustainability Assessment

Details	Threshold	2022	2023	2024	2025	2026	2027
Total Public Debt-to-GDP (%)	40*						
Baseline		23.4	37.1	37.2	37.0	36.6	35.3
Alternative (Shocks)		25.7	45.4	47.5	49.0	50.6	51.6
Gross Financing Needs-to-GDP (%)	15**						
Baseline		5.3	7.2	6.0	6.1	5.6	5.0
Alternative (Shocks)		5.3	8.8	8.0	8.7	9.0	9.1
FGN Debt Service-to-Revenues (%)	50***						
Baseline		36.5	73.5	95.6	105.4	83.5	86.3
Alternative (Shocks)		36.5	142.3	162.9	166.0	152.04	148.61

Note:

i. * Nigeria's Self-Imposed Limit

   ** MAC-DSA Threshold

   *** Nigeria's Recommended Threshold

ii. **Gross Financing Needs is Primary Deficit plus Debt Service (interest payment, principal repayment and other charges)**

Table 2: Summary of Total Public Debt Risks Assessment

Details	Threshold	Outcome	Assessment
Bond Spread (in Basis Points)	600	947	High
Annual Change in Short-term Debt (in percent of Total Debt)	1.0	1.3	High
Public Debt Held by Non-Resident (in percent of Total Debt)	45	40	Moderate
Public Debt in Foreign Currency (in percent of Total Debt)	60	40	Moderate

a. Baseline Scenario

The analysis of the results obtained under Baseline Scenario are presented hereunder.

i. Table 1 shows a moderate increase in Total Public Debt-to-GDP ratio to a maximum of 37.1 percent in 2024, which is below the Nigeria's self-imposed limit of 40 percent throughout the projection period. These are also below the peer-group threshold of 70 percent recommended in the MAC-DSA.

ii. The Gross Financing Needs-to-GDP ratio remained well below the MAC-DSA threshold of 15 percent throughout the projection period at a maximum of 5.6 percent in 2027.

iii. The FGN Debt Service-to-Revenue ratio exceeded the recommended limit of 50 percent in 2023 throughout the projection period, with a minimum of 73.5 percent in 2023 due to the low revenue profile of the Government.

In summary, the debt sustainability parameters and outlook remained low and stable under the Baseline Scenario, except for the revenue challenge.

b. Alternative Scenario

The results under the Alternative Scenario are as follows:

i. In Table 1, the Total Public Debt-to-GDP ratio exceeded Nigeria's self-imposed limit of 40 percent at 45.4 percent in 2023 and rose slowly to 51.6 percent in 2027. The ratios are below the MAC-DSA peer-group threshold of 70 percent.

ii. The Gross Financing Needs-to-GDP ratio at a maximum of 9.1 percent in 2027 is relatively higher than the results obtained under the Baseline, but well below the MAC-DSA threshold of 15 percent throughout the projection period.

iii. The FGN Debt Service-to-Revenue ratios obtained are much higher than those under the Baseline and the country's recommended threshold of 50 percent due to the shocks. These highlight the urgent need to increase Government revenue.

6.1.2 Table 2 presents the results with respect to Market Financing shocks. The Eurobond Yield Spread relative to US Treasury (UST) Yields and Annual changes in short-term debt helps to explain the movement in cost of borrowing and refinancing risks in the Total Public Debt portfolio, respectively in periods of market volatilities. The Nigeria's 10-year Eurobond Yield Spread relative to 10-yr UST exceeded the threshold of 600 basis points at 947 basis

points (average between July to October, 2022). This means that there will be increase in the cost of borrowing in the ICM by about 347 basis points due to market shocks. The share of Short-Term Debt to Total Public Debt increased to 1.3 percent as against the threshold of 1.0 percent indicating an increase in the refinancing risk. The proportions of Total Public Debt held by Non-Resident and Public Debt in Foreign Currency are within their respective thresholds.

7.0   Summary of Findings

7.1   The 2022 MAC-DSA exercise discloses the following:

i. The projected Total Public Debt-to-GDP ratio increased to 37.1 percent in 2023, under the Baseline Scenario from 23.4 percent in 2022, due mainly to the inclusion of Ways and Means Advances at the CBN, Promissory Notes and New Borrowing for the year 2023 in the Debt Stock. There is very little borrowing space when compared to the Nigeria's self-imposed limit of Total Public Debt-to-GDP ratio of 40 percent set in the 2020-2023 MTDS under the Baseline Scenario. Under the Alternative Scenario, the self-imposed limit was exceeded at 45.4 percent.

ii. The projected FGN Debt Service-to-Revenue ratio under the Baseline Scenario exceeded the Nigeria's recommended threshold of 50 percent in 2023 at 73.5 percent. This highlights the need to grow revenues in the short to long-term in order to moderate this ratio.

iii. The projected Eurobond Yield Spread widened from the 316 basis points obtained in 2022 to 947 basis points in the current exercise suggesting an increase in cost of new borrowings.

iv. The proportion of Short-Term Debt in the Total Public Debt increased to 1.3 percent in 2023 from 1.1 percent in 2022. This is slightly higher than the threshold of 1.0 percent, which indicates some elements of refinancing risk.

v. The Shares of Debt held by Non-Residents and denominated in Foreign Currency are within their respective thresholds.

7.2   Conclusion

The analysis of the results of 2022 MAC-DSA shows that the Total Public Debt-to-GDP ratio is projected to increase to 37.1 percent in 2023 relative to 23.4 percent as at September 2022, due to the inclusion of the N8.80 trillion (New Borrowings) for the year 2023, the FGN Ways and Means at the CBN of over N23 trillion and estimated Promissory Notes issuance of N2.87 trillion in the Debt

stock under the Baseline Scenario. The Country's Debt stock remains sustainable under these criteria, but the borrowing space has been reduced when compared to the Nigeria's self-imposed debt limit of 40 percent set in the MTDS, 2020-2023. On the other hand, FGN Debt Service-to-Revenue ratio at 73.5 percent in 2023 exceeds the recommended threshold of 50 percent due to low revenue, which means that there is need to significantly increase Government revenue. Under the Alternative Scenario, the Total Public Debt-to-GDP ratio at 45.4 percent in 2023 exceeds the Nigeria's self-imposed debt limit of 40 percent, while the FGN Debt Service-to-Revenue also exceeds the recommended threshold of 50 percent.

7.3   Recommendations

7.3.1   Based on the analysis of the results of the 2022 MAC-DSA, the DMO recommends the following:

   i.   Although the Baseline analysis projects Total Public Debt-to-GDP ratio at 37.1 percent for 2023 indicating a borrowing space of 2.9 percent (equivalent of about N14.66 trillion) when compared to the self-imposed limit of 40 percent, it is recommended that this should not be used as a basis for higher level of borrowing as was the case in the 2023 Budget. This is because the outcome of the Shock Scenario, which is more realistic in the circumstances, exceeded the self-imposed limit.

   ii.   The projected FGN Debt Service-to-Revenue ratio at 73.5 percent for 2023 is high and a threat to debt sustainability. It means that the revenue profile cannot support higher levels of borrowing. Attaining a sustainable FGN Debt Service-to-Revenue ratio would require an increase of FGN Revenue from N10.49 trillion projected in 2023 Budget to about N15.5 trillion.

   iii.   With respect to expansion in fiscal deficit, there is need to strictly adhere to the provision of extant legislations on Government borrowing, especially the Fiscal Responsibility Act 2007 and Central Bank of Nigeria Act, 2007 as it relates to Ways and Means Advances, in order to moderate the growth rate of public debt.

   iv.   There is urgent need to pay more attention to revenue generation by implementing far reaching revenue mobilization initiatives and reforms including the Strategic Revenue Growth Initiatives and all its pillars with a view to raising the country's tax revenue to GDP ratio from about 7 percent (one of the lowest in the world) to that of its peer.

v.   Government should encourage the private sector fund infrastructure projects through the Public-Private Partnership schemes and take out capital projects in the Budget that are being funded from borrowing, thereby reduce budget deficit and borrowing.

vi.   Government can reduce borrowing through privatization and/or sale of Government assets.

Annexure 1: Nigeria's Baseline Scenario, 2012-2027

BASELINE DEBT	Unit and Scale	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022 First Year of projection	2023	2024	2025	2026	2027
NOMINAL PUBLIC DEBT								-5.8%					-24.7%						
Total Gross Public Debt	Billions LCU	5224.1	6510.8	9105.9	10030.0	11190.7	13451.8	17495.6	21725.8	24357.1	27401.4	32915.5	39556.0	50859.8	85893.4	97344.1	109548.5	121622.9	132409.6
of which: guarantees	Billions LCU																		
Old Debt	Billions LCU	5224.1	6510.8	9105.9	10030.0	11190.7	13451.8	17495.6	21725.8	24357.1	27401.4	32915.5	39556.0	40160.8	38947.8	37583.1	34626.6	31543.1	27821.1
o/w local-currency debt	Billions LCU	4551.8	5622.8	8089.2	8656.4	9559.2	11340.3	14016.7	15938.3	16597.8	18379.0	20209.9	23700.8	23383.1	23132.2	22862.3	21220.9	18755.1	16320.9
o/w public guarantees	Billions LCU																		
o/w foreign-currency debt	Billions LCU	672.3	888.0	1016.7	1373.6	1631.5	2111.5	3478.9	5787.5	7759.2	9022.4	12705.6	15855.2	16777.7	15815.5	14720.8	13405.7	12788.0	11500.2
o/w public guarantees	Billions LCU																		
o/w short-term debt at original maturity	Billions LCU	1301.3	1761.0	2122.9	2581.6	2815.5	2772.9	3277.3	3579.8	2736.0	2651.5	2720.4	3786.1	0.0	0.0	0.0	0.0	0.0	0.0
o/w MLT debt	Billions LCU	3947.0	4782.9	6983.0	7448.5	8375.2	10678.9	14218.4	18146.0	21621.1	24749.9	30195.1	35769.9	40160.8	38947.8	37583.1	34626.6	31543.1	27821.1
New Debt	Billions LCU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10699.0	46945.6	59761.0	74921.9	90079.8	104588.5
o/w local-currency debt	Billions LCU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	8416.0	41122.4	51676.0	64388.2	77622.5	90267.6
o/w foreign-currency debt	Billions LCU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2283.0	5823.2	8085.1	10533.7	12457.2	14320.9
o/w short-term debt at original maturity	Billions LCU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	4062.4	4102.3	4932.0	5421.4	5921.9	6389.3
o/w MLT debt	Billions LCU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	6636.6	42843.3	54829.1	69500.6	84157.8	98199.2
Total Net Public Debt	Billions LCU	5224.1	6510.8	9105.9	10030.0	11190.7	13451.8	17495.6	21725.8	24357.1	27401.4	32915.5	39556.0	50859.8	85893.4	97344.1	109548.5	121622.9	132409.6
														410.0	430.0	440.0	450.0	455.0	460.0
NOMINAL GROSS FINANCING NEEDS																			
Gross Financing Needs	Billions LCU	2820.326	3840.088	1740.768	1778.1	1802.9	2543.1	3590.6	6193.8	6236.7	8251.4	9560.1	9835.6	10784.6	17134.9	16912.7	20087.4	20895.4	21263.2
Primary deficit	Billions LCU	1508.8	1003.2	-1511.6	-1545.5	-1684.3	-1058.5	1028.5	2946.2	2368.3	4267.1	5537.9	6910.2	6518.1	6053.0	2601.7	1259.9	-1158.5	-4593.9
Interest Receipts	Billions LCU													0.0	0.0	0.0	0.0	0.0	0.0
Interest Payments	Billions LCU	482.2	597.8	990.1	1081.1	1227.4	1337.7	1563.9	1882.9	2392.1	2395.0	2432.9	2272.2	3533.3	5808.6	8846.4	10942.0	13229.9	15575.0
o/w domestic-currency debt	Billions LCU													2875.3	4953.8	7776.3	9673.8	11621.1	13773.7
o/w foreign-currency debt	Billions LCU	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	657.9	854.8	1070.1	1268.1	1608.8	1801.3
Amortization Payments	Billions LCU	829.4	2239.1	2262.3	2242.4	2259.9	2263.9	998.2	1364.7	1476.4	1589.3	1589.3	653.3	733.2	5273.3	5464.5	7885.5	8824.0	10282.1
UNDERLYING ASSUMPTIONS																			
Nominal GDP in LCU (current prices)	Billions LCU	55469.4	63713.4	70926.0	79272.0	94349.0	95957.0	122243.0	113790.0	128121.0	144248.0	161319.0	173744.8	198930.0	225482.5	252177.4	280797.9	314420.7	353941.4
Real GDP (constant prices)	Billions LCU	54612.3	57511.0	59930.0	63219.0	67153.0	69024.0	67931.0	68491.0	69800.0	71388.0	70014.0	72393.7	74961.6	77772.6	80337.5	83113.9	85980.0	89129.2
Potential GDP (current prices)	Billions LCU	#REF!	55410.5	64601.1	68530.0	77468.0	86857.0	91152.9	101940.1	114006.1	127505.1	142610.3	159516.6	199636.5	223361.3	249017.4	279638.8	312900.1	350120.0
Potential GDP (constant prices)	Billions LCU	#REF!	50016.4	55214.6	55266.1	59135.9	62939.9	59969.0	60678.6	62298.4	63121.3	65417.6	66465.2	75227.8	77041.0	79617.5	82770.8	85564.2	88166.9
Output gap	Percent	#REF!	14.98%	8.54%	14.39%	13.56%	9.67%	13.28%	12.88%	12.04%	13.10%	7.03%	8.92%	-0.35%	0.95%	0.90%	0.41%	0.49%	1.09%
Public sector revenues and grants	Billions LCU	7124.0	8424.3	6727.5	7266.6	6959.8	6068.6	5415.2	5678.0	7689.5	8346.8	7383.8	4788.4	16802.5	17831.6	18664.5	20451.6	25189.9	29010.8
Debt service	Billions LCU	1311.6	2836.9	3252.4	3323.6	3487.2	3601.6	2562.1	3247.5	3868.4	3984.4	4022.2	2925.5	4266.5	11081.9	14311.0	18827.5	22054.0	25857.1
Public sector non-interest revenue	Billions LCU	7124.0	8424.3	6727.5	7266.6	6959.8	6068.6	5415.2	5678.0	7689.5	8346.8	7383.8	4788.4	16802.5	17831.6	18664.5	20451.6	25189.9	29010.8
Public sector non-interest expenditure	Billions LCU	8632.8	9427.5	5215.9	5721.1	5275.5	5010.1	6443.7	8624.2	10057.8	12613.8	12921.6	11698.6	23320.6	23884.6	21266.2	21711.5	24031.4	24416.9
Primary balance	Billions LCU	-1508.8	-1003.2	1511.6	1545.5	1684.3	1058.5	-1028.5	-2946.2	-2368.3	-4267.1	-5537.9	-6910.2	-6518.1	-6053.0	-2601.7	-1259.9	1158.5	4593.9
Nominal GDP growth	Growth rate (percent)		14.9%	11.3%	11.8%	19.0%	1.7%	27.4%	-6.9%	12.6%	12.6%	11.8%	7.7%	14.5%	13.3%	11.8%	11.3%	12.0%	12.6%
Real GDP growth	Growth rate (percent)		5.3%	4.2%	5.5%	6.2%	2.8%	-1.6%	0.8%	1.9%	2.3%	-1.9%	3.4%	3.5%	3.7%	3.3%	3.5%	3.4%	3.7%
Potential real GDP growth	Growth rate (percent)			10.4%	0.1%	7.0%	6.4%	-4.7%	1.2%	2.7%	1.3%	3.6%	1.6%	13.2%	2.4%	3.3%	4.0%	3.4%	3.0%
Inflation	Growth rate (percent)		9.1%	5.6%	6.0%	5.6%	5.3%	10.1%	10.5%	8.9%	10.4%	7.9%	10.1%	10.6%	9.3%	8.3%	7.6%	8.2%	8.6%
Non-interest revenue-to-GDP ratio	% of GDP	12.8%	13.2%	9.5%	9.2%	7.4%	6.3%	4.4%	5.0%	6.0%	5.8%	4.6%	2.8%	8.4%	7.9%	7.4%	7.3%	8.0%	8.2%
Non-interest expenditure-to-GDP ratio	% of GDP	15.6%	14.8%	7.4%	7.2%	5.6%	5.2%	5.3%	7.6%	7.9%	8.7%	8.0%	6.7%	11.7%	10.6%	8.4%	7.7%	7.6%	6.9%
Primary Balance	% of GDP	-2.7%	-1.6%	2.1%	1.9%	1.8%	1.1%	-0.8%	-2.6%	-1.8%	-3.0%	-3.4%	-4.0%	-3.3%	-2.7%	-1.0%	-0.4%	0.4%	1.3%
Privatization receipts-to-GDP	% of GDP	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%	0.2%	0.0%	0.0%	0.0%	0.1%
Recognition of implicit contingent liabilities-to-GDP	% of GDP	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%
Please specify (2) (e.g., other debt flows) (+ increases financing needs	% of GDP		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	10.5%	0.0%	0.0%	0.0%	0.0%
Effective interest rate	Ratio (percent)		11.4%	15.2%	11.9%	12.2%	12.0%	11.6%	10.8%	11.0%	9.8%	8.9%	6.9%	8.9%	11.4%	10.3%	11.2%	12.1%	12.8%
Denominated in local currency	Ratio (percent)													12.1%	15.6%	12.1%	13.0%	13.6%	14.3%
Denominated in foreign currency	Ratio (percent)		0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	4.1%	4.5%	4.9%	5.6%	6.7%	7.1%
Effective real interest rate	Ratio (percent)		2.2%	9.1%	5.6%	6.2%	6.3%	1.3%	0.2%	1.9%	-0.5%	0.9%	-2.9%	-1.5%	2.0%	1.9%	3.4%	3.5%	3.9%
Denominated in local currency	Ratio (percent)													1.4%	5.8%	3.5%	5.0%	4.9%	5.2%
Denominated in foreign currency	Ratio (percent)		-8.3%	-5.3%	-5.6%	-5.3%	-5.1%	-9.2%	-9.5%	-8.2%	-9.4%	-7.3%	-9.2%	-5.8%	-4.4%	-3.1%	-1.9%	-1.4%	-1.3%
Average nominal interest rate, r	Ratio (percent)		11.4%	15.2%	11.9%	12.2%	12.0%	11.6%	10.8%	11.0%	9.8%	8.9%	6.9%	8.9%	11.4%	10.3%	11.2%	12.1%	12.8%
Nominal Exchange Rate -- average (LCU/USD)	LCU/USD	148.8	152.3	156.1	156.0	169.7	196.5	304.5	305.5	305.3	307.0	390.0	409.0	445.00	445.00	445.00	445.00	445.00	445.00
Nominal Exchange Rate -- end of period (LCU/USD)	LCU/USD	149.2	156.7	157.5	157.3	158.6	196.5	253.2	305.8	305.8	306.9	385.0	411.3	446.00	446.00	446.00	446.00	446.00	446.00
Nominal exchange rate depreciation	Growth rate (percent)		5.0%	0.5%	-0.1%	0.8%	23.9%	28.9%	20.8%	0.0%	0.4%	25.4%	6.8%	8.4%	0.0%	0.0%	0.0%	0.0%	0.0%
Domestic Deflator -- local currency	Index	101.57	110.78	117.00	124.00	131.00	138.00	152.00	168.00	183.00	202.00	218.00	240.00	265.38	289.93	313.90	337.85	365.69	397.11
Change in domestic deflator in LCU	Growth rate (percent)		9.1%	5.6%	6.0%	5.6%	5.3%	10.1%	10.5%	8.9%	10.4%	7.9%	10.1%	10.6%	9.3%	8.3%	7.6%	8.2%	8.6%
Domestic Deflator -- USD	Index	0.68	0.71	0.74	0.79	0.83	0.70	0.60	0.55	0.60	0.66	0.57	0.58	0.60	0.65	0.70	0.76	0.82	0.89
Change in domestic deflator in USD	Growth rate (percent)		3.8%	5.1%	6.1%	4.8%	-15.0%	-14.5%	-8.5%	8.9%	10.0%	-14.0%	3.1%	2.0%	9.3%	8.3%	7.6%	8.2%	8.6%

Source: Debt Management Office

DEBT BURDEN RATIOS

Indicator	Unit	2010	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Total public debt-to-GDP	% of GDP	9%	10%	13%	13%	11.86%	14.0%	14.3%	19.1%	19.0%	19.0%	20.4%	22.8%	25.6%	38.1%	38.6%	39.0%	38.7%	37.4%
Total public debt-to-Revenue	% of revenue	0.7	0.8	1.4	1.4	1.6	2.2	3.2	3.8	3.2	3.3	4.5	8.3	3.03	4.82	5.22	5.36	4.83	4.56
Debt service-to-GDP	% of GDP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	2%	2.1%	0.05	0.06	0.07	0.07	0.07
Debt service-to-Revenue	% of revenue	0.2	0.3	0.5	0.5	0.5	0.6	0.5	0.6	0.5	0.5	54%	61%	25%	62%	77%	92%	88%	89%
Gross financing needs-to-GDP	% of GDP	0.1	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.0	0.1	0.1	0.1	5.4%	7.6%	6.7%	7.2%	6.6%	6.0%
Gross financing needs-to-revenue	% of revenue	0.4	0.5	0.3	0.2	0.3	0.4	0.7	1.1	0.8	1.0	1.3	2.1	0.64	0.96	0.91	0.98	0.83	0.73
Total Net Public Debt-to-GDP	% of GDP	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4
Total Net Public Debt-to-Revenue	% of revenue	0.7	0.8	1.4	1.4	1.6	2.2	3.2	3.8	3.2	3.3	4.5	8.3	3.0	4.8	5.2	5.4	4.8	4.6
Total Gross Public Debt-to-potential GDP	% of potential GDP	#REF!	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.3	0.4	0.4	0.4	0.4	0.4

SHOCK CALIBRATION STATISTICS

	Historical average	St.dev.	Max.	Min.	Coefficient of variation	Projection average	St.dev.	Max.	Min.	Difference in bps (Average)	Difference in bps (Max)
Real interest rate	2.8%		9.1%			2.2%				61.93	689.42
Real GDP growth rate	2.4%	2.7%			1.1						
Revenue-to-GDP ratio	6.1%										
Non-interest expenditure-to-GDP ratio	7.0%										
Primary balance	-0.9%	2.4%									

PUBLIC DEBT (% GDP) PROFILE - CHART DATA

	Unit		2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027
Gross public sector debt	% of GDP	9.4	10.2	12.8	12.7	11.9	14.0	14.3	19.1	19.0	19.0	20.4	22.8	25.6	38.1	38.6	39.0	38.7	37.4
of which: guarantees	% of GDP	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...	...
Foreign currency-denominated	% of GDP	1.2	1.4	1.4	1.7	1.7	2.2	2.8	5.1	6.1	6.3	7.9	9.1	9.6	9.6	9.0	8.5	8.0	7.3
Local currency-denominated	% of GDP	8.2	8.8	11.4	10.9	10.1	11.8	11.5	14.0	13.0	12.7	12.5	13.6	16.0	28.5	29.6	30.5	30.7	30.1
Short-term	% of GDP	2.3	2.8	3.0	3.3	3.0	2.9	2.7	3.1	2.1	1.8	1.7	2.2	2.0	1.8	2.0	1.9	1.9	1.8
Medium and long-term	% of GDP	7.1	7.5	9.8	9.4	8.9	11.1	11.6	15.9	16.9	17.2	18.7	20.6	23.5	36.3	36.6	37.1	36.8	35.6
Short-term debt, in percent of total debt	% of total public debt	24.9	27.0	23.3	25.7	25.2	20.6	18.7	16.5	11.2	9.7	8.3	9.6	8.0	4.8	5.1	4.9	4.9	4.8
Foreign currency-denominated debt, in percent of total debt	% of total public debt	12.9	13.6	11.2	13.7	14.6	15.7	19.9	26.6	31.9	32.9	38.6	40.1	37.5	25.2	23.4	21.9	20.8	19.5
Gross financing needs	% of GDP	5.1	6.0	2.5	2.2	1.9	2.7	2.9	5.4	4.9	5.7	5.9	5.7	5.4	7.6	6.7	7.2	6.6	6.0
Net public sector debt	% of GDP																		
Gross public sector debt	% of potential GDP	#REF!	11.8	14.1	14.6	14.4	15.5	19.2	21.3	21.4	21.5	23.1	24.8	25.5	38.5	39.0	39.2	38.9	37.8

PUBLIC SECTOR DEBT DYNAMICS

	Unit	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	cumulative
Change in gross public sector debt	% of GDP	0.8	2.6	-0.2	-0.8	2.2	0.3	4.8	-0.1	0.0	1.4	2.4	2.8	12.5	0.5	0.4	-0.3	-1.3	14.6
Identified debt-creating flows (4+7+12)	% of GDP	1.3	-1.6	-1.9	-1.8	-0.3	1.8	3.0	1.8	2.5	5.5	3.2	2.8	12.5	0.5	0.4	-0.3	-1.3	14.7
Primary deficit	% of GDP	1.6	-2.1	-1.9	-1.8	-1.1	0.8	2.6	1.8	3.0	3.4	4.0	3.3	2.7	1.0	0.4	-0.4	-1.3	5.8
Primary (noninterest) revenue and grants	% of GDP	13.2	9.5	9.2	7.4	6.3	4.4	5.0	6.0	5.8	4.6	2.8	8.4	7.9	7.4	7.3	8.0	8.2	47.2
Primary (noninterest) expenditure	% of GDP	14.8	7.4	7.2	5.6	5.2	5.3	7.6	7.9	8.7	8.0	6.7	11.7	10.6	8.4	7.7	7.6	6.9	53.0
Automatic debt dynamics 2/ (8+11)	% of GDP	-0.2	0.5	0.0	0.0	0.8	1.0	0.4	0.0	-0.5	2.0	-0.8	-0.4	-0.4	-0.5	0.0	0.0	0.1	-1.3
Contribution from interest rate/growth differential 3/	% of GDP	-0.3	0.5	0.0	0.0	0.4	0.4	-0.1	0.0	-0.5	0.5	-1.2	-1.1	-0.4	-0.5	0.0	0.0	0.1	-2.0
Real interest rate	% of GDP	0.2	0.9	0.6	0.7	0.7	0.2	0.0	0.3	-0.1	0.2	-0.6	-0.4	0.4	0.6	1.2	1.2	1.3	4.3
Real GDP growth	% of GDP	-0.4	-0.4	-0.6	-0.7	-0.3	0.2	-0.1	-0.3	-0.4	0.3	-0.6	-0.7	-0.8	-1.1	-1.2	-1.2	-1.3	-6.3
Contribution from exchange rate depreciation 4/	% of GDP	0.1	0.0	0.0	0.0	0.4	0.6	0.5	0.0	0.0	1.5	0.5	0.7	0.0	0.0	0.0	0.0	0.0	0.7
Other debt-creating flows	% of GDP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	-0.1	10.2
Privatization receipts (negative)	% of GDP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	-0.1	-0.3
Recognition of implicit or contingent liabilities	% of GDP	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
Please specify (2) (e.g., other debt flows) (+ increases financing n	% of GDP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.0	0.0	0.0	10.5
Residual	% of GDP	-0.5	4.3	1.8	1.0	2.5	-1.6	1.7	-1.9	-2.5	-4.1	-0.8	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Denominator = 1+g+p+gp		1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	6.8

PUBLIC SECTOR DEBT DYNAMICS - TABLE/CHART DATA

	Unit	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026	2027	cumulative
Change in gross public sector debt	% of GDP	0.8	2.6	-0.2	-0.8	2.2	0.3	4.8	-0.1	0.0	1.4	2.4	2.8	12.5	0.5	0.4	-0.3	-1.3	14.6
Identified debt-creating flows	% of GDP	1.3	-1.6	-1.9	-1.8	-0.3	1.8	3.0	1.8	2.5	5.5	3.2	2.1	12.5	0.5	0.4	-0.3	-1.3	14.0
Primary deficit	% of GDP	1.6	-2.1	-1.9	-1.8	-1.1	0.8	2.6	1.8	3.0	3.4	4.0	3.3	2.7	1.0	0.4	-0.4	-1.3	5.8
Primary (noninterest) revenue and grants	% of GDP	13.2	9.5	9.2	7.4	6.3	4.4	5.0	6.0	5.8	4.6	2.8	8.4	7.9	7.4	7.3	8.0	8.2	47.2
Primary (noninterest) expenditure	% of GDP	14.8	7.4	7.2	5.6	5.2	5.3	7.6	7.9	8.7	8.0	6.7	11.7	10.6	8.4	7.7	7.6	6.9	53.0
Automatic debt dynamics	% of GDP	-0.2	0.5	0.0	0.0	0.8	1.0	0.4	0.0	-0.5	2.0	-0.8	-1.1	-0.4	-0.5	0.0	0.0	0.1	-2.0
Contribution from interest rate/growth differential	% of GDP	-0.3	0.5	0.0	0.0	0.4	0.4	-0.1	0.0	-0.5	0.5	-1.2	-1.1	-0.4	-0.5	0.0	0.0	0.1	-2.0
Real interest rate	% of GDP	0.2	0.9	0.6	0.7	0.7	0.2	0.0	0.3	-0.1	0.2	-0.6	-0.4	0.4	0.6	1.2	1.2	1.3	4.3
Real GDP growth	% of GDP	-0.4	-0.4	-0.6	-0.7	-0.3	0.2	-0.1	-0.3	-0.4	0.3	-0.6	-0.7	-0.8	-1.1	-1.2	-1.2	-1.3	-6.3
Exchange rate depreciation	% of GDP	0.1	0.0	0.0	0.0	0.4	0.6	0.5	0.0	0.0	1.5	0.5	#N/A	#N/A	#N/A	#N/A	#N/A	#N/A	...
Other debt-creating flows	% of GDP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.3	0.0	0.0	0.0	-0.1	10.2
Privatization receipts (negative)	% of GDP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	-0.2	0.0	0.0	0.0	-0.1	-0.3
Recognition of implicit or contingent liabilities	% of GDP	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
Please specify (2) (e.g., other debt flows) (+ increases financing n	% of GDP	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	10.5	0.0	0.0	0.0	0.0	10.5
Residual 5/	% of GDP	-0.5	4.3	1.8	1.0	2.5	-1.6	1.7	-1.9	-2.5	-4.1	-0.8	0.7	0.0	0.0	0.0	0.0	0.0	0.7

Source: Debt Management Office

Annexure 2: Nigeria's Alternative Scenario, 2022-2027

Alternative Scenario	First Year of projection					
	2022	2023	2024	2025	2026	2027
Total Public Debt	55440.5	101528.6	115939.8	132088.4	151129.7	171219.4
o/w public guarantees	4580.7	4580.7	4580.7	4580.7	4580.7	4580.7
Old Debt	44741.5	50645.5	48788.2	45239.9	41878.4	37576.9
o/w domestic-currency debt	27963.8	27713.0	27443.0	25801.7	23335.8	20901.7
o/w foreign-currency debt	16777.7	22932.5	21345.2	19438.3	18542.6	16675.2
o/w short-term debt at original maturity	0.0	0.0	0.0	0.0	0.0	0.0
o/w MLT debt	44741.5	50645.5	48788.2	45239.9	41878.4	37576.9
New Debt	10699.0	50883.1	67151.6	86848.5	109251.3	133642.4
o/w domestic-currency debt	8416.0	43784.8	57295.4	73863.5	93539.5	114974.4
o/w foreign-currency debt	2283.0	7098.4	9856.2	12985.0	15711.8	18668.0
o/w short-term debt at original maturity	4062.4	4399.4	6027.0	6942.6	8414.1	10157.6
o/w MLT debt	6636.6	46483.8	61124.6	79905.9	100837.2	123484.8
Gross Financing Needs	10784.6	20053.0	20667.9	25723.9	29689.1	33688.4
Primary deficit	6518.1	8148.6	4104.1	3053.5	2639.1	206.1
Interest revenues	0.0	0.0	0.0	0.0	0.0	0.0
Debt service	4266.5	11904.4	16563.8	22670.4	27050.0	33482.2
Interest payments	3533.3	6196.0	10307.1	13095.1	16402.2	20079.1
Amortization payments	733.2	5708.4	6256.7	9575.3	10647.8	13403.1
Effective interest rate	8.9%	12.2%	10.6%	11.8%	12.9%	13.7%
Real GDP growth	3.5%	0.5%	0.1%	1.3%	2.2%	2.5%
Inflation	10.6%	9.3%	8.3%	7.6%	8.2%	8.6%
Non-interest revenue-to-GDP ratio	8.4%	3.2%	3.3%	3.3%	3.7%	4.1%
Non-interest expenditure-to-GDP ratio	11.7%	6.9%	5.0%	4.5%	4.6%	4.1%
Primary balance	-3.3%	-3.7%	-1.7%	-1.2%	-0.9%	-0.1%
Nominal exchange rate -- average (LCU/USD)	445.00	646.70	646.70	646.70	646.70	646.70
Nominal exchange rate -- end of period (LCU/USD)	446.00	646.70	646.70	646.70	646.70	646.70
Interest rate shock, basis points, compared to baseline	0	200	200	200	200	200
Nominal GDP growth	14.5%	9.9%	8.4%	9.0%	10.7%	11.3%
Nominal GDP in LCU	198,930.0	218,527.8	236,828.3	258,099.0	285,651.4	317,833.6
Total public debt-to-GDP	0.28	0.46	0.49	0.51	0.53	0.54
Debt service-to-GDP	0.02	0.05	0.07	0.09	0.09	0.11
Gross financing needs-to-GDP	0.05	0.09	0.09	0.10	0.10	0.11
Total public debt-to-revenue	3.30	14.74	14.78	15.45	14.24	13.24
Debt service-to-revenue	0.25	1.73	2.11	2.65	2.55	2.59
Gross financing needs-to-revenue	0.64	2.91	2.64	3.01	2.80	2.61

Source: Debt Managemnet Office

THE MAC-DSA TECHNICAL TEAM

Executive

1.   Patience Oniha   - Director-General, DMO

Technical Working Team

2.   Maraizu Nwankwo   - DMO

3.   Abubakar S.K.   - DMO

4.   Maryam Omar   - DMO

5.   JummaiSa'id-Ahmed   - DMO

6.   Bartholomew Aja   - DMO

7.   Kingsley Amadi   - DMO

8.   Isiaku Mohammed   - DMO

9.   Adamu M. Bara   - DMO

10.   Adeoye Felix   - DMO

11.   OlufunmiOlasoji   - DMO

12.   Chinenye Onu   - DMO

13.   Halimat Abdulazeez   - DMO

14.   Ahmed U. Bajoga   - OAGF

15.   Philip Obasi   - FMFBNP (Planning)

16.   Samuel Omenka   - BOF

17.   Musa Abdullahi   - CBN

18.   Zainab Sani   - CBN

19.   Simon Oga Ode   - NBS