



DEBT MANAGEMENT OFFICE
NIGERIA

**REPORT OF THE ANNUAL NATIONAL
DEBT SUSTAINABILITY ANALYSIS
(DSA)**

2008

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GLOSSARY

AfDF	African Development Fund
ASYCUDA	Automated System of Custom Data
BPE	Bureau of Public Enterprises
CBN	Central Bank of Nigeria
CPIA	Country Policy and Institutional Assessment
DFID	Department for International Development
DMDs	Debt Management Departments
DMO	Debt Management Office
DSA	Debt Sustainability Analysis
DSF	Debt Sustainability Framework
DRI	Debt Relief International
EFCC	Economic and Financial Crimes Commission
EIB	European Investment Bank
EU	European Union
FDI	Foreign Direct Investment
FEC	Federal Executive Council
FGN	Federal Government of Nigeria
FRN	Federal Republic of Nigeria
GDP	Gross Domestic Product
HDI	Human Development Index
HIPC	Heavily Indebted Poor Countries
IBRD	International Bank for Reconstruction and Development
IDA	International Development Association
IFAD	International Fund for Agricultural Development
IMF	International Monetary Fund
IsBD	Islamic Development Bank
LEEDS	Local Government Economic Empowerment and Development Strategy
LIC	Low Income Country
LNG	Liquefied Natural Gas
MDGs	Millennium Development Goals
MoF	Ministry of Finance
MPR	Monetary Policy Rate
MTEF	Medium Term Expenditure Framework
NASS	National Assembly
NBS	National Bureau of Statistics
NEEDS	National Economic Empowerment and Development Strategy
NEITI	Nigerian Extractive Industries Transparency Initiative
NPC	National Planning Commission
NPV	Net Present Value
NTBs	Nigerian Treasury Bills
OPEC	Organization of Petroleum Exporting Countries
OTC	Over-The-Counter
PPPs	Public-Private Partnerships
PRSP	Poverty Reduction Strategy Paper

PSI	Policy Support Instrument
SBA	Stand-By-Agreement
SDRs	Special Drawing Rights
SEC	Securities and Exchange Commission
SEEDS	State Economic Empowerment and Development Strategy
SMEs	Small and Medium Enterprises
SSA	Sub-Saharan Africa
TBs	Treasury Bonds
UNDP	United Nations Development Programme
UNICEF	United Nations Children's Fund
USAID	United States Agency for International Development
WAIFEM	West African Institute for Financial and Economic Management
WEO	World Economic Outlook

EXECUTIVE SUMMARY

The National Debt Sustainability Analysis Workshop was conducted on June 4-15, 2008, in order to assess the sustainability of Nigeria's debt position in the medium to long term. This document reports the results and deliberations of the workshop. As such, it does not take into account any of the changes in Government economic policy and macroeconomic variables since then.

During the workshop, different scenarios were constructed, based on a set of assumptions. These scenarios were used to project Nigeria's future debt ratios, which were compared against the indicative thresholds set by the World Bank's annual Country Policy and Institutional Assessment (CPIA). The latter are calculated on the basis of the quality of policies and institutions in a country. Additionally, risk assessment of the debt portfolio was conducted.

Four principal scenarios were constructed:

- Baseline scenario
- Export/Oil Production Shock scenario
- Accelerated GDP Growth (Vision 2020) scenario
- Contingent Liability scenario

All the four scenarios were applied in the Fiscal/ Total Public Debt template. However, in the Fiscal template, only the first three scenarios were applied. This is because contingent liabilities are entirely denominated in domestic currency and they are not captured in the external template.

The main assumptions of the "Baseline" Scenario for the external template include a projected real GDP growth of 6.4 percent; an inflation rate of 10.8% between 2008 – 2012, average oil price of \$120 for 2008 – 2012, an oil-price based fiscal rule that will

average \$120 for the period 2008 – 2011 and would fall to \$80 by 2012 and to \$50 by 2018. An overall deficit not exceeding 3% of GDP is maintained throughout the period 2008 – 2028; and an exchange rate of \$/N118 for the projection period.

The “Export/Oil Production Shock” Scenario according to the template provides for 30 percent drop but due to the country specific, the export oil production shock relies on the main assumption of a 40 percent drop in exports due to the escalation of the Niger Delta crisis, which consequently reduces the GDP growth rate by 40 percent; while the “Contingent Liabilities” Scenario maintains, as the key assumption, the crystallization of contingent liabilities of the Federal and State governments comprising pension arrears, local contractors debts and salary arrears up to 8 percent of GDP which have not been recognized in the debt portfolio, with the consequent deflation in the GDP.

Under the “Accelerated GDP Growth for the Achievement of Vision 2020” Scenario, the GDP growth follows a cyclical trend, rising from 9% in 2008, peaking at 11% in 2011, dropping to 9.25% between 2012 – 2025, before dropping further to 8% in 2021– 2028. This occurs as a result of the higher amounts that are invested in the economy to drive the improvements in infrastructure, especially the power sector.

The results of the “Baseline” Scenario show that debt sustainability, both in the external and in the fiscal/total public debt templates, will be maintained throughout the period 2007-2028, if the current macroeconomic reforms, prudent borrowing and fiscal responsibility are maintained. For example, the NPV of debt-to-GDP ratio is on average 1.18 percent and 7.63 percent in the external and in the fiscal/total public debt templates, respectively. Both values are well below the relevant indicative threshold of 30 percent.

In the “Accelerated GDP Growth for the Achievement of Vision 2020” Scenario, Nigeria’s external debt ratios remain sustainable throughout the projected period both for the solvency and liquidity criteria. However, the solvency ratios in the short to

medium term tended towards unsustainability, reflecting increased borrowing for infrastructural investments. In the long term, as the capacity of the economy improves, allowing for enhanced absorption of more borrowing, the ratios tended to decline (higher sustainability), even better than the baseline ratios.

In the “Oil Production shock” Scenario, Nigeria’s total public debt ratios remain sustainable throughout the projection period. All debt ratios are well below their threshold levels. The NPV of Total Debt-to-GDP ratio hovers around an average of 10.65 percent over the projection period against the indicative threshold of 30 percent. Also, average NPV of Total Debt-to-Revenues and the Debt Service-to-Revenues ratios over the projected periods are 34.28 percent and 2.63 percent, respectively against the relevant indicative thresholds of 200 percent and 25 percent.

The fiscal position is still sustainable with the recognition of contingent liabilities as presented in the “Contingent Liabilities” Scenario. The debt ratios remain at sustainable levels throughout the projection period, although the annual average ratios over the projection period are higher compared to those in the other two scenarios. The annual average ratios of NPV of debt to GDP and revenue, as well as debt service-to-revenue over the projection period are 10.3 percent, 33.1 percent and 6.3 percent, respectively.

Following the analysis conducted under the various scenarios, some recommendations were proposed. These include:

- i. Although there is significant gap between our present sustainability level and the thresholds for all the ratios, this should not be interpreted to mean that the gap should be filled immediately with increased borrowing. Government should be cautious in future borrowing as the present level could change within a short period if prudent borrowing and investment decisions are not taken in the short and medium term.

- ii. Even with the low base of the total public debt stock, there is a big sustainability issue arising from the possible simultaneous occurrences of a number of shocks, including oil production shock and crystallization of contingent liabilities shock. As a matter of deliberate action, therefore, debt management policy must be geared towards effectively managing these shocks.
- iii. Concessional borrowing and continuation of the current reform momentum would guarantee debt sustainability in the next twenty years. The preference should, therefore, be for concessional borrowing. However, the achievement of the Vision 2020 objectives will require accessing non-concessional borrowing, which will still not pose sustainability problems. In particular, such non-concessional borrowing under proper debt management will also not pose any immediate liquidity problems for government expenditure, if the proceeds are utilized for imported capital goods needed to develop the country's infrastructure.
- iv. As the analysis shows, there is the potential for the crystallization of a stock of contingent liabilities of the Federal, State and Local Governments amounting to ₦1.87 trillion. This figure is based partly on CBN study of State Governments obligations which had not been recognized in the book and figures from Federal Government agencies. This has serious implications for debt sustainability and the Federal Government should, as a matter of urgency, recognize these contingent liabilities and work out a way of securitizing the portion that crystallizes in a phased programme. In the case of the states, the federal government may use its on-lending programme by sourcing funds from the domestic bond market on their behalf to reduce the volume of their contingent liabilities. It should be noted that the build-up of contingent liabilities by governments, is a direct consequence of poor public finance management. In order to avoid future build-up of contingent liabilities, there is the need for all tiers of governments to recognize and settle such liabilities as at when due through their relevant Ministries, Departments and Agencies and to only incur liabilities that have been duly provided for in the

- approved government budgets. The compliance by governments with the provisions of the Fiscal Responsibility legislation will facilitate the satisfaction of this condition. The DMO's plan of helping States to establish their Debt Management Departments (DMDs) should be implemented with a sense of urgency. This will increase capacity for collecting and collating debt data from all agencies so that all liabilities are captured on time.
- v. The Oil Production Shock Scenario shows that an oil production shock of about 40 percent has the potential for reducing the capacity for sustainability by half, (even though the resultant condition would still fall within the acceptable limits). It is, therefore, imperative that:
 - (a) In the short and medium terms, necessary measures are taken to ensure sufficiently smooth oil production activities; and,
 - (b) In the medium and long terms, strategic and structural measures are taken to achieve considerable diversification of the economy.
 - vi. In general, as shown by the results of the "Accelerated GDP Growth for the Achievement of Vision 2020" Scenario, there is the need to build the infrastructural base, especially the power sector. This is because the development of the power sector is a sine qua non to sustained economic growth.

Report of Nigeria's Debt Sustainability Analysis 2008 Under the Debt Sustainability Framework for Low Income Countries

1.0 INTRODUCTION

A Debt Sustainability Analysis (DSA) generally provides a basis for the production of a Debt Sustainability Framework (DSF). The DSF is intended to serve as an early warning system of potential risks of debt distress so that preventive action can be taken. The DSF fulfils the expectations of lenders (international multilateral agencies such as the IMF, World Bank etc) and borrowers (Low Income Countries) in the following distinct but related ways:

For Borrowers, a DSA:

- Helps to design appropriate financing strategies that guarantee a debt path that matches financing with the ability to repay;
- Is a key element of broad policy design that, in the near term, involves the determination of the fiscal stance of the Government and appropriate financing terms, as well as informs the preventive action to reduce, in the medium term, the possibility of debt unsustainability;
- Is a tool for discussions with creditors on the volume and terms of financing; and,
- Helps to identify technical assistance needs in the area of debt management.

For Lenders, a DSA:

- Impacts on IDA financing terms, IMF policy advice and programme design;
- Ensures effective surveillance and better monitoring of debt issues in emerging economies;
- Helps to provide support for Low-Income-Countries (LICs) in achieving their developmental objectives, while maintaining sustainable levels of debt; and,

- It sensitizes or encourages creditors to acknowledge the effects of different lending terms and debt sustainability, as debt relief does not eliminate the potential for unsustainability.

In addition to being a low income, IDA-only country, for which the conduct of an annual DSA is mandatory, Nigeria is mindful of the heavy burden of external debt overhang and the associated huge drain on national resources for debt servicing that bedeviled the country prior to its exit from the Paris Club in 2006. Therefore, the need for proactive initiatives towards efficient management of Nigeria's debt portfolio to ensure its continued sustainability, vis-a-vis the country's desire to be among the top 20 world economies in the year 2020, cannot be over-emphasized. In addition, the need for funding government's financing gaps that is further reinforced by the challenges of meeting the Millennium Development Goals (MDGs), as well as Mr. President's Seven-Point Agenda, underlines the importance of conducting a debt sustainability analysis particularly at this time.

The 2008 DSA constitutes the fourth in a series that was started in 2005. As a logical follow-up on the last two DSAs of 2006 and 2007, the over-arching aim of the 2008 DSA is to assess the sustainability of Nigeria's debt portfolio and monitor the effect of the Paris Club debt relief and new borrowings in the future. This year's DSA utilizes the enhanced World Bank/IMF-DSA template released in 2007. The methodology also incorporates risk analysis to underline the impact of various risk vulnerabilities which could adversely affect the debt portfolio. Thus, in addition to assessing whether a country's current and future borrowing strategy may lead to future debt-servicing difficulties using the LIC External Debt Template and LIC Total Public Debt Template, a more rigorous Risk Analysis has now been introduced into the Portfolio Review section of the debt portfolio. The analytical tools allow the construction of a baseline scenario and the traditional Bound Tests A1, A2, B1-B6, (See Appendix 3) as well as the country-specific stress tests, which help to identify the factors that are most likely to undermine debt sustainability.

The technical session of the 2008 DSA was held from June 4 – 15, 2008 in Abuja. Participants were drawn from the DMO and other stakeholder institutions, including the Central Bank of Nigeria (CBN), Budget Office of The Federation (BoF), Federal Ministry of Finance (FMF), National Planning Commission (NPC) and the National Bureau of Statistics (NBS).

Overall, the results of the DSA will be fed into the design of appropriate strategies for new financing options, in order to put in place a framework for closing the country's fiscal gaps without undermining debt sustainability over time. Such results will, indeed, feed into the budgetary process for the purpose of providing a platform for good public expenditure management, as well as planning and monitoring of poverty reduction programmes. In particular, the analysis will feed into the National Debt Management Framework, which sets the policy guidelines for debt management in the country. In addition to complementing the DMO's 2008 – 2012 Strategic Plan document, it will provide an input to DMO's other policy documents such as the External and Domestic Borrowing Guidelines, and the annual FGN Bonds Issuance Programme. In view of the DMO's plan to work towards stronger policy coordination with other key government agencies, it is expected that this DSA Report will guide policy analysis and decisions by other stakeholders such as the FMF, BoF, CBN and NPC.

2.0 RECENT MACROECONOMIC DEVELOPMENTS IN NIGERIA

The general economic outlook has continued to be positive, building on the macroeconomic policy successes recorded in recent years. The aggregate output growth in the economy, measured by the Gross Domestic Product (GDP), was 7.64 percent in 2007 compared to 6.05 percent in 2006. This was driven by the non-oil sector which grew at 10.99 percent. Although oil revenue contributed 80 percent of government revenues, it accounted for less than 40 percent of the GDP. Under the National Economic Empowerment and Development Strategy (NEEDS) framework launched in March 2004, the manufacturing sector was projected to contribute at least 45 percent of GDP. However, the sector only managed to contribute 4.02 percent of GDP. With a real growth rate of 7.42 percent in 2007, and a contribution of over 42 percent to GDP, the Agricultural sector seems to be playing the envisioned key role in employment generation.

The external reserve position, which was US\$51.33 billion as at 31st December 2007 has grown to a more robust size of over US\$59 billion as at 31st March 2008. Exchange rate movements have been favourable as the Naira has continued to appreciate against major currencies, especially the US Dollar. The inflation rate remained at the desired single-digit level, rising marginally from 8.02 at the end of 2007 to 8.13 percent as at 31st March 2008.

These positive developments were driven by favourable external and domestic conditions, such as positive terms of trade arising from higher oil prices, and a more positive country image/rating following the Paris Club and London club debts exit. In addition, macroeconomic stability resulting from the implementation of the present administration's '7-Point Agenda' and the National Economic Empowerment and Development Strategy (NEEDS-2) contributed significantly to the positive developments.

The CBN introduced Monetary Policy Rate (MPR) in December 2006 in order to improve the effectiveness of interest rate management. The 2008 Budget was based on a crude oil benchmark price of US\$59 per barrel, maintaining the price-based fiscal rule that has been in operation since 2004. Adherence to the Medium Term Expenditure Framework (MTEF) has continued to foster prudence in public expenditure management and observance of due process in public procurement. The passage of key legislations such as the Fiscal Responsibility Act (2007) and Public Procurement Act (2007), as well as Mr. President's commitment to the entrenchment of the 'rule of law' as an irreducible minimum for the conduct of public affairs are also expected to strengthen the fiscal regime and engender confidence in the process of governance.

Substantial progress was also recorded in public sector reforms: tax, customs administration and financial system reforms as the banking system continues to show signs of strength following the bank consolidation concluded in 2006. Moreover, a number of other developments are addressing lapses in governance and transparency. These include the anti-corruption drive of the Economic and Financial Crimes Commission (EFCC), Independent Corrupt Practices and other Offences Commission (ICPC), the work of the Nigerian Extractive Industries Transparency Initiative (NEITI) in auditing the oil and gas industry and the closer oversight activities by the National Assembly.

The Government has continued to pursue its policy of deploying savings from the Paris Club debt relief into MDG-related spending. In 2007, an additional annual amount of ₦100 billion was allocated towards meeting specific MDG goals. Furthermore, the government has continued to show prudence in accessing loans from only highly concessional sources to finance gaps in its investment outlay.

3.0 PORTFOLIO REVIEW

3.1 INTRODUCTION

This chapter provides a historical review of Nigeria's public debt portfolio for the last five years (2003-2007). It considers the total public debt stock, its external and domestic composition, creditor and instrument classification, currency composition, disbursements, debt service payments, and holdings of domestic debt. The Federal Government debt portfolio has undergone significant changes over the past few years. With the exit from Paris and London Clubs debts, the external debt stock fell significantly resulting in a dramatically different structure of the country's public debt portfolio.

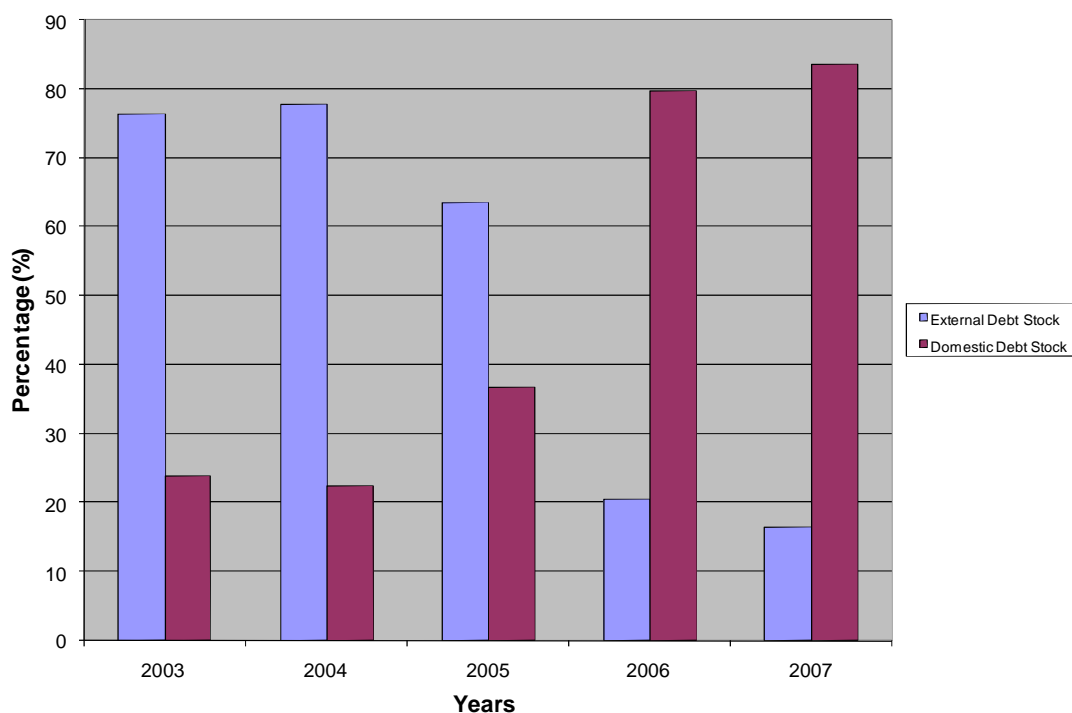
3.2 TOTAL PUBLIC DEBT

Nigeria's total public debt comprises public and publicly guaranteed external and domestic debt. The total public debt stood at US\$22.23 billion as at 31st December 2007. External debt accounted for 16.44 percent of the total public debt stock in 2007, decreasing from 76.19 percent as at end 2003. The sharp decrease was as a result of the Paris and London Clubs debt exits achieved in 2006. Domestic debt accounted for 83.56 percent of the total public debt stock in 2007, increasing from 23.81 percent in 2003. This increase is due to the stock of domestic debt resulting from the funding of the 2007 budget deficit, securitization of local contractors' debt and pension arrears. It is important to note that owing to the sharp drop of the external debt stock, the relative share of the domestic debt in the total public debt has risen significantly but not necessarily because of the increase in the domestic debt stock.

Table 3.1: Nigeria's Total Public Debt Outstanding, 2003-2007 (US\$ million)

<i>Type</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>
External Debt Stock	32,916.81	35,944.66	20,477.97	3,544.49	3,654.21
Domestic Debt Stock	10,283.99	10,314.79	11,828.76	13,805.20	18,575.67
TOTAL	43,200.80	46,259.45	32,306.73	17,349.69	22,229.88
Percentage (%) Share					
<i>Type</i>	<i>2003</i>	<i>2004</i>	<i>2005</i>	<i>2006</i>	<i>2007</i>
External Debt Stock	76.19	77.7	63.39	20.43	16.44
Domestic Debt Stock	23.81	22.3	36.61	79.57	83.56
TOTAL	100.00	100.00	100.00	100.00	100.00

Figure 3.1: Nigeria's Total Public Debt Outstanding, 2003-2007



3.3 EXTERNAL DEBT

3.3.1 EXTERNAL DEBT BY CREDITOR CATEGORY

Nigeria's external debt portfolio for the review period was made up of Official debts, comprising Bilateral and Multilateral debts; and, Private debts, comprising London Club, Promissory Notes and Other Commercial debts.

Bilateral debt comprising Paris club and non Paris club debts as at December 31, 2007 amounted to US\$184.9 million or 5.06 percent of the outstanding external debts. However, the London club and Paris club debts have been exited between 2005 and 2006, thereby having a nil value in 2007. The non-Paris club bilateral debt in 2007 comprises the Exim Bank of Korea and Chinese Nigeria-Communication Satellite (NigComSat) loans. The reduction in the stock of non-Paris club bilateral debt from US\$326 million in 2006 to US\$184.9 million in 2007 (Table 3.2) was as a result of the reclassification of some China Exim bank loans from the bilateral debt category to the category of other commercial debts.

Multilateral debts outstanding as at December 31, 2007 amounted to US\$3,080.91 million (84.34 percent of the total external debt stock). Of this amount, US\$2,358.60 million was owed to concessional multilateral creditors (such as the International Development Association (IDA), International Fund for Agricultural Development (IFAD), African Development Fund (ADF) and European Development Fund (EDF)) and US\$722.31 million to non-concessional creditors such as the International Bank for Reconstruction and Development (IBRD), African Development Bank (ADB) and the European Investment Bank (EIB) which was fully repaid in 2007.

The increase in total multilateral debt by US\$476.61 million (18.12 percent) in 2007 when compared to the value as at December 31, 2006 was mainly due to the depreciation of the US Dollar against other currencies of the portfolio.

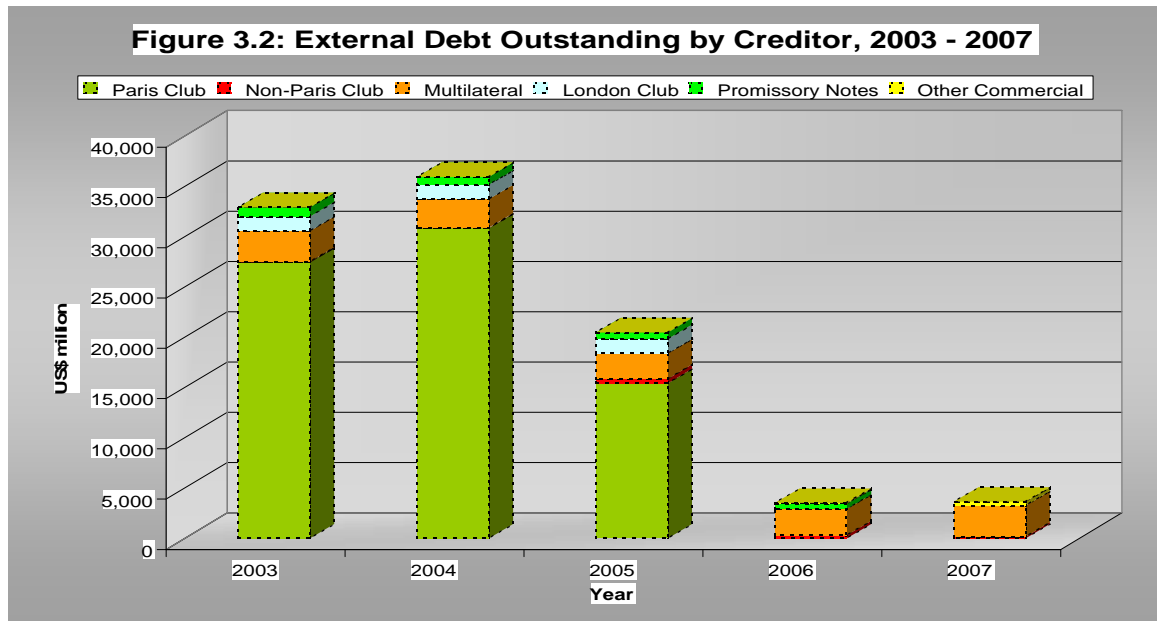
With regard to private debt, the country has no London club debt including Promissory Notes as a result of the country's exit from the London Club in 2006. However, Other Commercial debts comprise non-concessional loans that were obtained from the Commercial window. This amounted to US\$388.4 million (or 10.63 percent) in 2007. The increase in the quantum of the Other Commercial debts portfolio from US\$101.10 million in 2006 to US\$388.4 million as at December 31, 2007 was due to reclassification of some of the China loans.

Table 3.2: External Debt Outstanding by Creditor Category 2003-2007 (US\$ Million)

CREDITOR CATEGORY	2003	2004	2005	2006	2007
A. Official:					
1. Bilateral	27,521.55	30,895.31	15,874.19	326.08	184.90
Paris Club	27,469.92	30,847.81	15,412.40	0.00	0.00
Non-Paris Club	51.63	47.50	461.79	326.08	184.90
2. Multilateral	3,042.08	2,824.32	2,512.17	2,608.31	3,080.91
IBRD	1,200.91	935.57	702.67	417.53	368.51
IDA	786.97	868.14	979.07	1,405.69	1,941.00
IFAD	25.17	26.39	30.11	39.94	48.60
ADB	715.15	720.03	507.07	434.13	353.80
ADF	158.17	127.93	160.78	179.85	222.90
ECOWAS FUND	1.59	1.16	0.40	0.0	0.0
EIB	15.44	11.87	5.34	2.03	0.0
EDF	138.68	133.23	126.73	129.14	146.10
B. Private:	2,353.18	2,225.02	2,091.59	610.11	388.40
1. London Club (Par Bonds/ Oil warrants)	1,441.79	1,441.79	1,441.79	0.00	0.0
2. Promissory Notes (trade arrears)	911.39	783.23	649.80	509.01	0.0
3. Other Commercial	0.00	0.00	0.00	101.10	388.40
Grand Total	32,916.81	35,944.65	20,477.95	3,544.5	3,654.21

**EXTERNAL DEBT OUTSTANDING BY CREDITOR, 2003 – 2007
(PERCENTAGE SHARE)**

A. Official:					
1. Bilateral:					
Paris club	83.45	85.82	76.26	0.00	0.00
Non-Paris Club	0.16	0.13	2.26	9.20	5.06
2. Multilateral	9.24	7.86	12.27	73.59	84.31
<i>Sub-Total</i>	92.85	93.81	89.79	85.64	89.37
B. Private:					
1. London Club	4.38	4.01	7.04	0.00	0.00
2. Promissory Notes	2.77	2.18	3.17	14.36	0.00
3. Other Commercials	0.00	0.00	0.00	2.85	10.63
<i>Sub-Total</i>	7.15	6.19	10.21	14.36	10.63
Grand Total	100.00	100.00	100.00	100.00	100.00



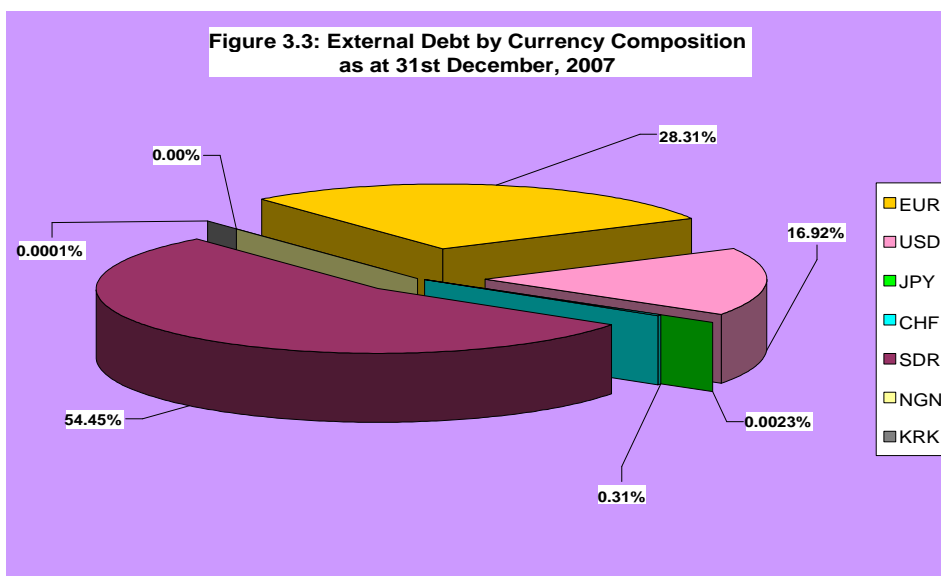
3.3.2 CURRENCY COMPOSITION OF EXTERNAL DEBT

Nigeria's external debt stock is composed of the following currencies: Special Drawing Rights, Euro, the US Dollar, the Japanese Yen, Swiss Franc, Nigerian Naira, and the Korean Won as at end December, 2007. Special Drawing Rights (SDRs) account for the largest share in Nigeria's debt portfolio, constituting 54.45 percent of the external debt stock. The Euro and US Dollar represent 28.31 and 16.92 percent, respectively. Other currencies (Japanese Yen, Swiss Franc, Nigerian Naira and Korean Won) account for the balance of 0.31 percent. Table 3.3 and Figure 3.3 show the currency composition of the external debt stock as at 31st December, 2007.

Table 3.3: External Debt Stock by Currency Composition as at 31st December, 2007

S/No	Currency	Debt Stock in Original Currencies	US\$ Exch. Rate	USD Equivalent (Millions)	Percentage of Total (%)
1	EUR	703,046,627.00	1.47	1,034.65	28.31
2.	USD	618,475,337.00	1.00	618.48	16.93
3.	JPY	9,443,368.00	0.009	0.084	0.0023
4.	CHF	10,125,664.00	0.89	11.40	0.32
5.	SDR	1,357,522,044.00	1.58	1,989.60	54.45
6.	NGN	969,429.41	0.01	0.01	0.0003
7.	KRK	3,174,365.00	0.001	0.003	0.0002
	TOTAL			3,654.21	100.0000

It could be observed that over 80 percent of the debt stock is in currencies other than the US Dollar which is used to service Nigerian debts. This exposes the country to foreign exchange risk due to the depreciation of the US Dollar against major international currencies.



3.3.3 EXTERNAL DEBT DISBURSEMENTS

Table 3.4 displays disbursements of external debt by creditor for the period 2003 to 2007. External disbursements (excluding grants) amounted to US\$424.55 million for 2007, a decrease of US\$76.86 million or 18.10 percent, from the level in 2006. The change was largely due to the decrease in disbursements from Bilateral creditors and the absence of disbursement from Private creditors due to completion of their disbursements. Table 3.4 also depicts that IDA still maintains its position as the largest provider of new credit to Nigeria.

Table 3.4: Disbursements by Creditor, 2003-2007 (US\$ million)

	2003	2004	2005	2006	2007
Official:					
<i>Multilateral:</i>					
IDA	63.18	156.19	244.95	337.36	330.68
IFAD	5.17	2.43	2.46	5.20	6.52
ADB	21.45	26.26	10.42	5.53	2.34
ADF	16.43	0.35	6.98	10.11	47.08
Sub-Total	106.23	185.23	264.81	358.20	386.62
Bilateral	0.00	0.00	0.00	119.77	37.94
Private (Commercial)	0.00	0.00	0.00	23.44	0.00
TOTAL	106.23	185.23	264.81	501.41	424.55

It could be observed from table 3.4 that there were no disbursements from the Bilateral and Private (Commercial) creditors between the periods 2003 to 2005 due to the non-commencement of disbursements from new loans. However, disbursements from such creditors commenced in 2006 in respect of the NIGCOMSAT and China mechanical and equipment loans.

3.3.4 EXTERNAL DEBT SERVICE PAYMENTS

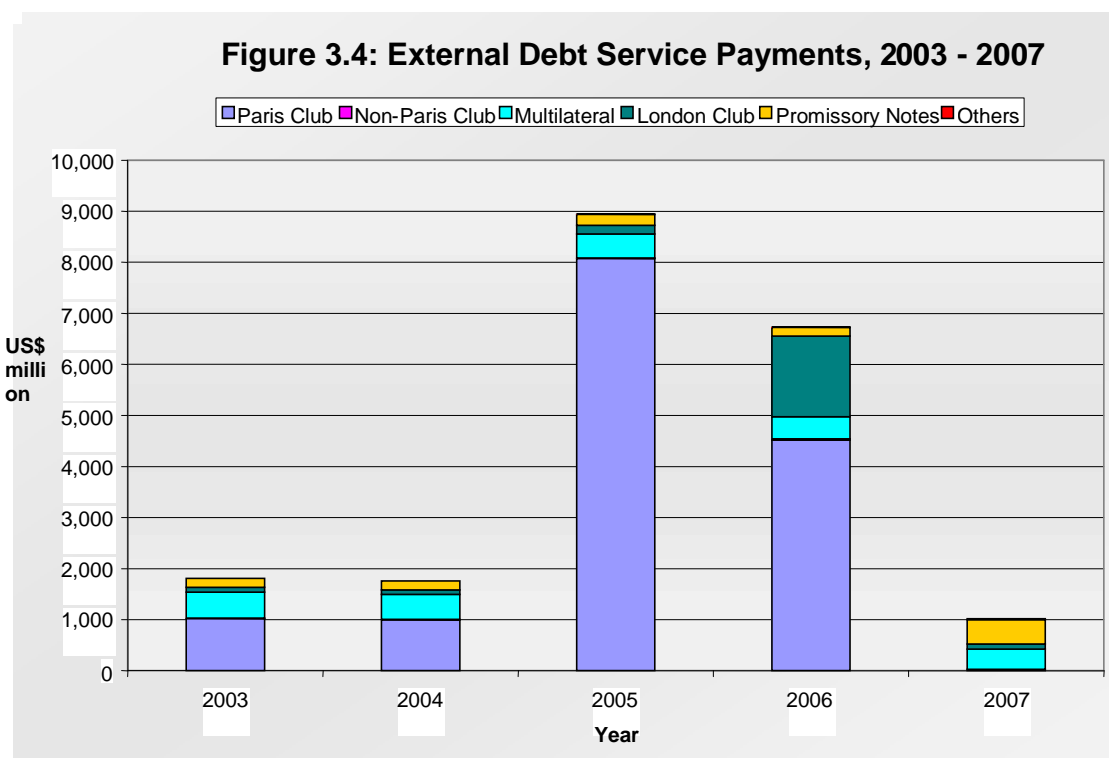
Table 3.5 shows Nigeria's external debt service payments from 2003 to 2007. Although the external debt service payments for 2003 and 2004 are low compared to 2005 and 2006, it should be recalled that Nigeria was not fully servicing her external debts in those earlier years. On the other hand, the higher amount paid in 2005 and 2006 reflects mainly the payments made in respect of the Paris and London clubs exit.

Furthermore, the debt service payment in 2007 was considerably lower than that in 2006 because there were no more debt service obligations to the Paris club and London club but mainly to the multilaterals (38.4 percent) and a residual to other private creditors. It should also be noted that a significant payment was made in respect of the Promissory Notes in 2007 reflecting its final settlement.

Table 3.5 External Debt Service by Creditor Category 2003-2007 (US\$ Million)

CREDITOR CATEGORY	2003	2004	2005	2006	2007
A. Official:					
1. Bilateral	1,033.44	1006.1	8,082.18	4,545.43	27.48
Paris Club	1,020.18	994.45	8,070.79	4,519.87	0.00
Non-Paris Club	13.26	11.65	11.39	25.56	27.48
2. Multilateral	509.23	487.28	471.66	426.8	392.77
IBRD	286.05	264.80	265.23	241.56	203.72
IDA	7.27	29.85	31.25	31.96	32.87
IFAD	1.14	2.43	2.43	1.80	1.11
ADB	192.04	168.92	154.14	136.40	139.26
ADF	2.76	3.48	3.70	3.66	4.24
ECOWAS FUND	2.13	4.57	0.84	0.40	0.00
EIB	17.84	11.40	4.74	5.03	3.87
EDF	0.00	1.83	9.33	5.99	7.70
B. Private:	266.63	261.38	387.08	1,757.02	601.79
1. London Club (Par Bonds)	90.21	90.15	169.86	1,584.58	102.59
2. Promissory Notes	176.42	171.23	213.55	170.84	476.60
3. Other Commercial	0.00	0.00	3.67	1.60	22.60
Grand Total	1,809.3	1,754.76	8,940.92	6,729.19	1,022.04

¹The 2007 payments made on London Club debt were in respect of Oil Warrants only, as there was no London Club stock as at end of 2007.

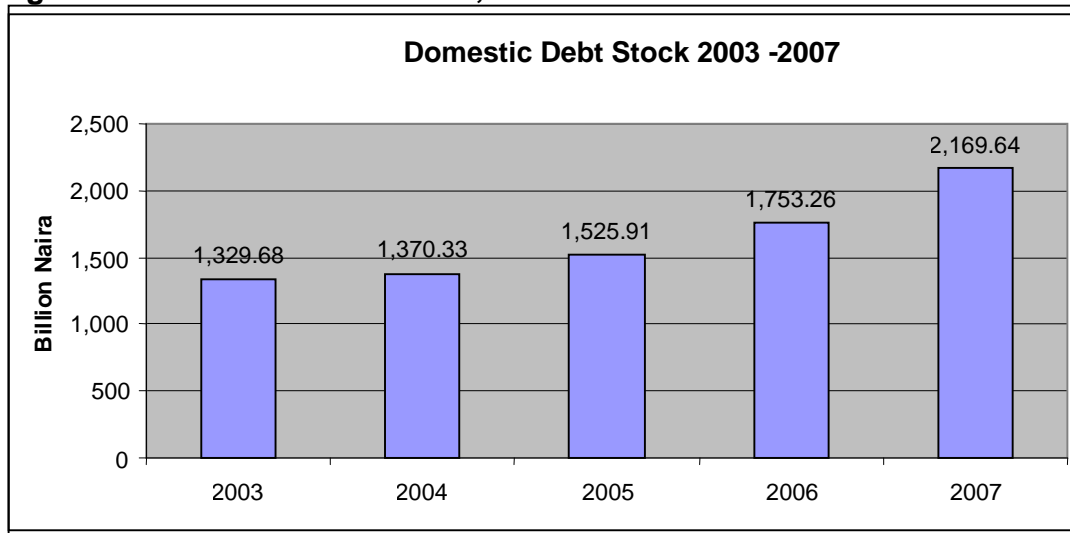


3.4 DOMESTIC DEBT

3.4.1 STRUCTURE AND COMPOSITION OF DOMESTIC DEBT

Total domestic debt stock stood at ₦2,169.64 billion as at 31st December 2007, compared to ₦1,753.26 billion as at 31st December 2006 representing an increase of ₦416.38 billion, or 23.75 percent. The increase is attributed to recognition and securitization of local contractors' debt, financing of the budget deficit, pension arrears and settlement of entitlements of ex-staff of the defunct Nigeria Airways, among others.

Figure 3.5: Domestic Debt Stock, 2003-2007



As at end December 2007, the structure of the nation's domestic debt was made up of the following:

1. NTBs:
 - i. 91-day
 - ii. 182-day
 - iii. 365-day

2. FGN Bonds:
 - i. 2-year
 - ii. 3-year
 - iii. 5-year
 - iv. 7-year
 - v. 10-year

3. Treasury Bonds; and,

4. Federal Republic of Nigeria (FRN) Development Stocks.

Table 3.6: Domestic Debt by Instrument Type (N billion)

Instrument	2003	2004	2005	2006	2007
Nigerian Treasury Bills	825.05	871.58	854.83	695.0	574.92
Treasury Bonds	430.61	424.94	419.27	413.6	407.93
FRN Stocks	1.46	1.25	0.98	0.72	0.62
FGN Bonds	72.56	72.56	250.83	695.00	1,186.16
TOTAL	1,329.68	1,370.33	1,525.91	1,753.26	2,169.64

Of the total domestic debt in 2007, the FGN Bonds of ₦1,186.16 billion accounted for 54.67 percent, while Treasury Bills of ₦574.93 billion accounted for 26.50 percent of the total domestic debt stock. The decrease of NTBs from 56 percent of the total debt stock in 2006 to the present level of 26.50 percent is attributable to the refinancing of this class of obligations with long tenor instruments. Treasury Bonds amounted to ₦407.93 billion or 18.80 percent, while FRN Development Stocks accounted for ₦0.62 billion or 0.03 percent of the total domestic debt stock at end 2007. This is compared with the Treasury Bonds amount of ₦413.60 billion or 23.59 percent and FRN Development Stock of ₦0.72 billion or percent 0.04 percent in December 2006.

3.4.2 MATURITY STRUCTURE OF DOMESTIC DEBT

At the end of 2007, the maturity structure of Nigeria's domestic debt shows that short-term debt (not more than one year to maturity) accounted for ₦709.77 billion (32.72 percent) of the portfolio. Of this, ₦129.07 billion (18.19 percent) were FGN Bonds and ₦574.92 billion (81.00 percent) were Treasury Bills. The medium term (more than one year and up to five years) debt constituted ₦784.93 billion (36.18 percent) of the portfolio, FGN bonds of ₦721.23 billion (91.89 percent) and Treasury Bonds of ₦63.18 billion (8.05 percent). The long term debt is made up of 31.11 percent of the domestic debt stock (See Table 3.7).

Table 3.7: Domestic Debt by Outstanding maturities as at 31st December, 2007 (₦)

Composition Of Debt	Up to 1 YR	1-5 YRS	5 YRS & Above	TOTAL
FGN BONDS	129,072,665,000	721,239,034,000	335,848,956,000	1,186,160,655,000
TREASURY BILLS	574,929,428,000	-	-	574,929,428,000
TREASURY BONDS	5,670,000,000	63,180,000,000	339,078,150,000	407,928,150,000
DEVELOPMENT STOCKS	100,000,000	520,000,000	-	620,000,000
TOTAL	709,772,093,000	784,939,034,000	674,927,106,000	2,169,638,233,000
PERCENTAGE OF GRAND TOTAL	32.71	36.18	31.11	100

It can therefore, be inferred from the above table that the Domestic Debt portfolio is moving towards long tenored instruments as the medium to long term instruments constitute a significant proportion (about 67.29 percent) of the portfolio.

3.4.3 HOLDINGS OF DOMESTIC DEBT

The banking sector dominated the holdings of domestic debt instruments accounting for ₦1, 394.75 billion or 64.28 percent holdings as at 31st December 2007. The Non-bank public accounted for ₦484.29 billion or 22.32 percent, while the Central Bank of Nigeria (CBN) accounted for ₦290.59 billion or 13.39 percent of the total holdings. The holdings of the banking sector have been on the increase since 2003 due to the following factors: the overall superior returns on FGN Bond, the quality of investment and the growing efficiency of the secondary market.

Table 3.8: DOMESTIC DEBT STOCK BY HOLDER TYPE 2003 - 2007
(in billions of Naira)

Instruments	2003	2004	2005	2006	2007	Percentage in 2007
CENTRAL BANK	607.44	403.46	501.97	335.53	290.59	13.39
BANKS & DISCOUNT HOUSES	506.78	669.07	759.61	882.85	1,394.75	64.29
NON-BANK PUBLIC	215.46	297.80	264.33	534.87	484.29	22.32
TOTAL	1329.68	1370.33	1,525.91	1,753.25	2,169.63	100

Similarly, the holdings of the non-bank public increased drastically between 2005 and 2006 due to inclusion of Parastatals among the non-bank public classification category. It increased from N264.33 billion in 2005 to N534.87 billion in 2006 before declining to N484.29 billion as at December 31, 2007.

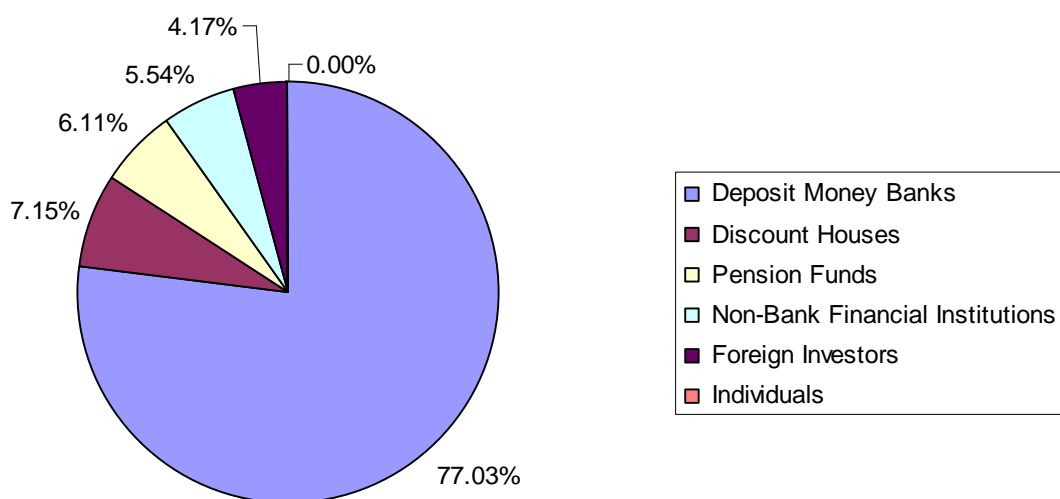
3.4.4 HOLDINGS OF THE 4TH FGN BONDS ISSUED IN 2007

An analysis of the holdings of the 4th FGN Bond (i.e. issued in 2007) shows that deposit money banks accounted for N480.70 billion, representing 81.20 percent. Discount Houses accounted for N42.31 billion (7.15 percent), Pension Funds held N36.18 billion (6.11 percent) and N32.80 billion (5.54 percent) was held by Non-Bank Financial institutions. The balance of N0.0032 billion representing 0.00005 percent was held by individuals.

Table 3.9: GLOBAL ANALYSIS OF ALLOTMENT FOR THE 4TH FGN BOND 2007 SERIES (N MILLION)

TOTAL AMOUNT OFFERED		592,000.14
TOTAL SUBSCRIPTION		1,167,597.48
	AMOUNT	% OF TOTAL ALLOTMENT
TOTAL ALLOTMENT	592,000.14	100
a) Deposit Money Banks	456,012.95	77.03
b) Discount Houses	42,314.64	7.15
c) Pension Funds	36,184.80	6.11
d) Non-Bank Financial Institutions	32,798.18	5.54
e) Foreign Investors	24,686.41	4.17
f) Individuals	3.17	0
RANGE OF BIDS		6.00%-18.00%
RANGE OF MARGINAL RATES (COUPONS)		7.00%-10.75%
SUBSCRIPTION/OFFER		197.23

Figure 3.6: Global Analysis of Allotment for the 4th FGN Bond 2007 Series



3.4.5 DOMESTIC DEBT SERVICE

Domestic debt service payments increased from ₦166.84 billion in 2006 to ₦185.37 billion in 2007, representing an increase of 11.10 percent. However, the ratio of interest payments to debt stock decreases from 9.52 percent in 2006 to 8.54 percent in 2007. The declining trend achieved since 2003 reflects the reducing cost of borrowing to the government as a result of the increased investor base of the FGN Bonds.

Table 3.10: Domestic Debt Stock and Domestic Interest Payments, 2003-2007 (N' billion)

Year	Debt Stock	Interest payments	Interest payments/Debt Stock (%)
2003	1,329.72	200.00	15.04
2004	1,370.32	203.64	14.86
2005	1,525.91	150.45	9.86
2006	1,753.26	166.84	9.52
2007	2,169.64	185.37	8.54

4.0 RISKS IN THE EXISTING DEBT PORTFOLIO

4.1 INTRODUCTION

This chapter examines the exposure of Nigeria's public debt portfolio to various risk elements (All results in this section are as at end of 2007). Some of the risks examined include foreign currency risk, interest rate risk, refinancing risk, balance of payments risk, and market risk.

4.2 FOREIGN CURRENCY RISK

Foreign currency risk is the risk that arises from the change in the value of one currency against another. This risk is imminent when a country's debt portfolio has a multi-currency composition.

The significant increase in the share of domestic currency debt has considerably reduced the foreign currency risk in the total debt portfolio. The total debt portfolio consists of 83.56 percent in domestic currency debt. Only 16.44 percent is foreign currency debt. This favourable change reflects the success in addressing the external debt problem thereby, mitigating Nigeria's foreign exchange risk exposure. Within the foreign currency debt portfolio, the SDR was 54.45 percent, Euro was 28.31 percent, US Dollar was 16.93 percent and CHF, JPY and KRW accounted for less than 1 percent. This shows that over 80 percent of the external debt stock is in currencies other than US Dollar which is used to service Nigeria's debts. This exposes us to foreign exchange risk due to the weakness of the Dollar against other major currencies.

Figure 4.0: Currency Composition of Nigeria's External Debt As at 31st December 2007.

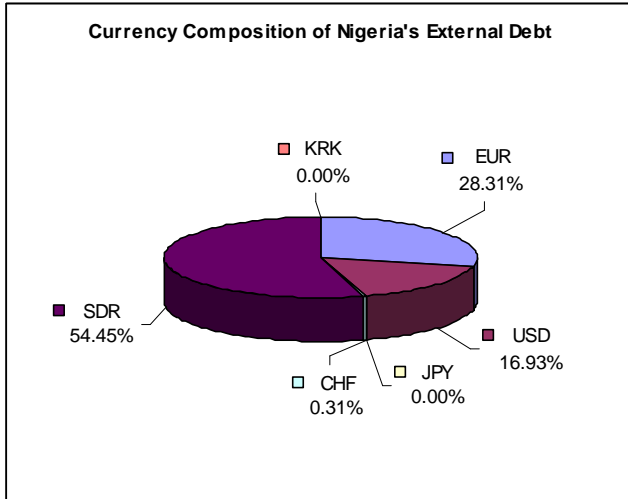
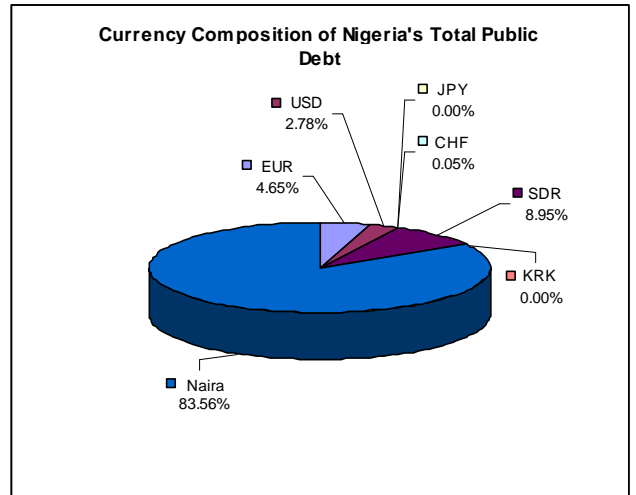


Figure 4.1: Currency Composition of Nigeria's Total Debt as at 31st December 2007



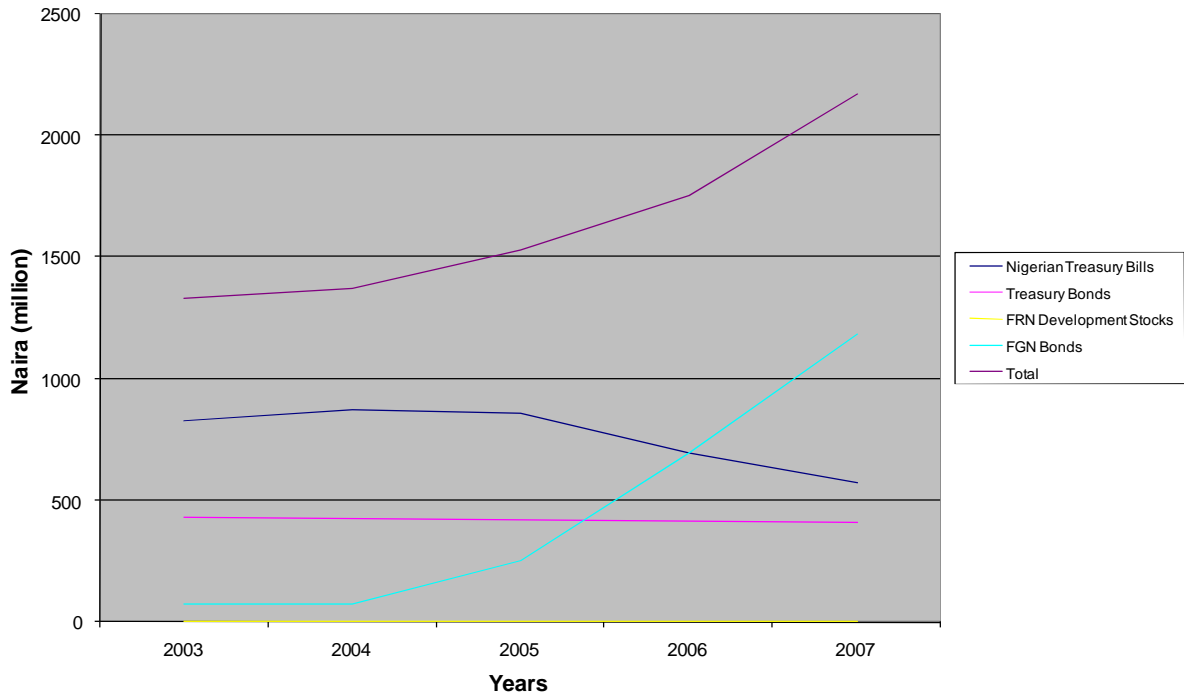
4.3 REFINANCING RISK

Refinancing risk refers to the risk that a borrower faces when the actual cost of re-borrowing funds may exceed projected cost of financing existing obligations. In a rising inflationary environment, it is pertinent to note that shorter maturities impose significant refinancing risk than the longer ones.

An assessment of the redemption profile indicates that there is a moderate refinancing risk in the overall debt portfolio. The composition of the domestic debt portfolio has also undergone significant changes over the past few years. As a result, the share of short term instruments with maturities not more than 1 year has been reduced to about 32.70 percent of the total domestic debt by end-December 2007. Until 2003, 62.93 percent of the portfolio consisted of short term Treasury Bills of less than one year maturity, 36.93 percent of Treasury Bonds and 0.14 percent of Federal Republic of Nigeria (FRN) Development Stock. Beginning in 2003, two and three-year fixed and floating rate instruments were introduced followed by the introduction of 10 year FGN Bond fixed rate instruments in 2007.

It is therefore clear that the refinancing risk in Nigeria's public debt portfolio has been substantially reduced through the restructuring of short-tenored domestic debt to longer-tenored ones.

Figure 4.2: Lengthening Maturity Structure of Domestic Debt



Overall, 27.79 percent of the total public debt outstanding will mature within one year or less. However, looking at the sub- portfolios, the share of domestic debt maturing in less than one year in total domestic debt is 32.72 percent, while the share of foreign currency debt maturing in less than one year in total foreign currency debt outstanding is 3.01 percent.

Another measure for refinancing risk is the average time to maturity. This indicator describes the weighted average time (in years) it takes for the debt portfolio to mature. It is a summary measure that expresses the redemption profile in a single number. The greater the number, the more likely that the redemption cash flows are distributed further out in the future. For the total external debt portfolio, the average time to maturity is 32 years. Disaggregating domestic source of finance by instruments, it is apparent that the Nigerian Treasury Bills, FGN Bonds, Treasury Bonds and Development stocks average time to maturity are 249 day, 6 years and 21 years respectively.

This underscores the importance of developing the domestic debt market and extending the maturities so that refinancing risk could be further reduced.

Figure: 4.3: Nigeria's Total Public Debt Projected Maturity Profile, 2008-2028

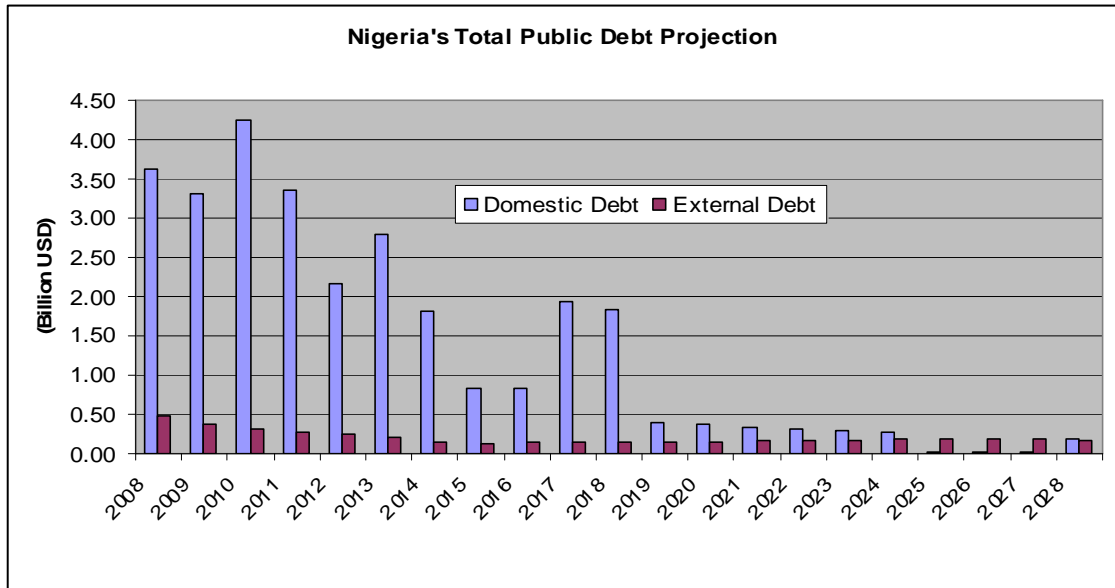
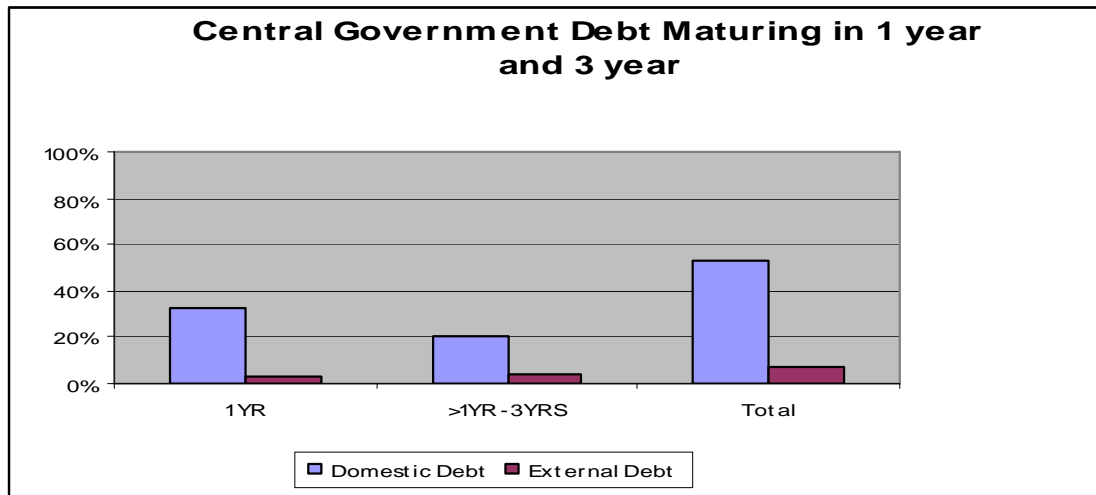


Figure 4.4: Federal Government Debt Maturing in 1 Year and 3 Years

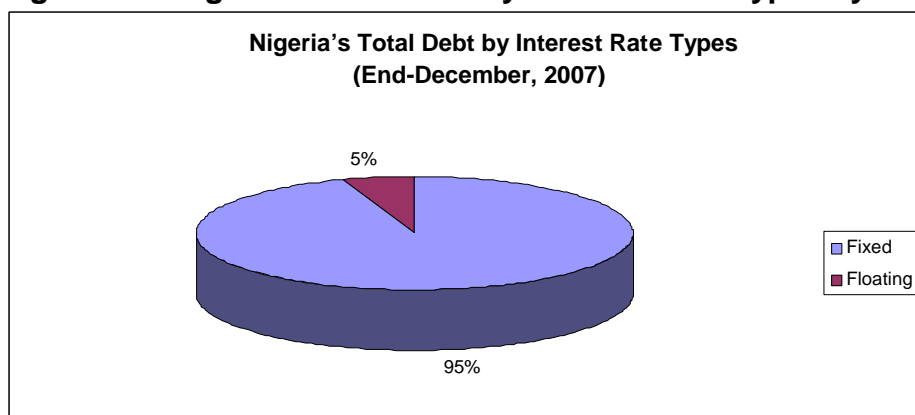


4.4 INTEREST RATE RISK

Interest rate risk refers to the risk that change in market interest rate could negatively affect the cost of the portfolio. This is usually important when there is preponderance of floating rate instruments in the debt portfolio.

Interest rate risk does not represent a significant risk in Nigeria's existing debt portfolio, as the share of fixed rate debt in the total debt portfolio is 95 percent while only 5 percent is floating rate debt. Within the domestic debt portfolio, the share of floating rate debt is less than 2 percent, while for the foreign currency portfolio, this share is 8.8 percent. Since all concessional debt is fixed rate, the floating rate debt in total foreign currency debt is attributable to non-concessional foreign borrowing.

Figure 4.5: Nigeria's Total Debt by Interest Rate Types by End 2007



4.5 BALANCE OF PAYMENTS RISK

Balance of payment risk is the risk that a country's portfolio faces if it is not able to promptly service its debt obligations due to a deficit balance of payments position. Given the fact that Nigeria has been operating a current account surplus for the past 4 years, balance of payments related risks have been very minimal. It should be recalled that the Balance of Payments as at December 31, 2007 was US\$12,453.70 million while the foreign reserve stood at US\$51.33 billion.

4.6 SUMMARY

In the context of Total Public Debt:

- a) Foreign exchange risk is relatively low, given the high share of the domestic currency debt in the total debt portfolio. However, within the external debt portfolio, there is significant risk because over 80 percent of the debt stock is in currencies other than the US Dollar which is used to service Nigeria's debt. This exposes us to foreign exchange risk due to the weakness of the Dollar against other major currencies.
- b) Refinancing risk is relatively moderate, given the proportion of the domestic debt maturing in less than 1 year;
- c) Interest rate risk is low, given the low proportion of floating rate debt in the total portfolio.

5.0 DEBT SUSTAINABILITY SCENARIOS

5.1 ASSUMPTIONS

In order to assess the sustainability of Nigeria's external debt position, four different scenarios were constructed for the projection period 2008-2028 to assess the impact of changing macroeconomic variables on the two main debt indicators of solvency and liquidity. The set of assumptions for the main macroeconomic variables in each of the scenarios follow below.

5.1.1 BASELINE SCENARIO

The **baseline scenario** underlying this DSA makes the following assumptions:

- a) An average GDP growth rate of 6.4 percent (NPC, 2007), which will be driven mainly by the non-oil sector. The latter contributes 67.5 percent of the GDP, while the oil sector contributes 32.5 percent. Hence, the non-oil sector is estimated to grow at 8.0 percent over the period while the oil sector is estimated to grow at 3.0 percent.
- b) A double-digit inflation rate averaging 10.8 percent over the period 2008-2010, is estimated. This is based on expected high food prices, envisaged removal of subsidies on petroleum products, additional fiscal releases by the government, and the non performing power sector which will drive the cost of production. Improvement in the power sector as from 2012 is expected to drive the inflation down to single digits. Overall, inflation rate will average single digit over the projection period.
- c) Crude oil prices, would average \$120 per barrel for the period 2008-2011. This is because of high world demand, particularly from China and India, and the unlikelihood of recently discovered oil fields (e.g. Ghana and Uganda) impacting significantly on world supply. However, by 2012, oil prices will fall to \$80, maintaining such average until 2018. For the

rest of the projection period, oil prices will average \$50. Over the entire projection period, oil prices will average \$80.

- d) An overall deficit not exceeding 3% of GDP is maintained throughout the projection period.
- e) An increasing oil price fiscal rule benchmark, which changes every year, from the present \$59, along with changing oil prices. The benchmark becomes 70 to 80% of the market price, largely due to political pressure. From 2018, the fiscal rule benchmark and the actual price of oil are expected to converge.
- f) Annual average growth rate of export is expected at 3-4%, following world demand.
- g) An annual average growth rate of import is estimated at 6-9%, due to the high import content of infrastructure development projects and importation of refined petroleum products until the new refineries come on stream.
- h) Exchange rates are on an appreciating trend, which stabilizes at US\$1 =NGN118 over the projection period.

5.1.2. COUNTRY-SPECIFIC SCENARIOS

Three country-specific scenarios were constructed to simulate potential shocks the economy could experience. The impacts of such shocks on Nigeria's debt sustainability were analyzed. These scenarios are described below.

A. OIL PRODUCTION SHOCK

Considering the significant contribution of crude oil to Nigeria's revenue and continuing activities of militants in the Niger Delta which directly affects oil production and oil revenue, it became imperative for the Debt Sustainability Analysis to factor these variables.

In this scenario, the output of crude oil is reduced by 40% of current levels, due to possible escalation of the Niger Delta crisis in the 3 years, from 2009 – 2011.

Consequently, the GDP growth rate drops by about 30 percent (the average oil sector contribution to GDP) from the baseline 6.4 percent to 4.5 percent in 2009, dipping further to 2.3 percent by 2011 before recovering marginally to 3.3 percent in 2012. Full recovery to baseline levels is achieved thereafter. Oil revenues and exports earnings also dropped but domestic consumption is not affected by the shock.

It is assumed that the reduction in Nigeria's crude oil output and exports does have material effect on government revenue. Increases in the price of crude induced by the production shock is not enough to compensate for the loss in government revenues due to the fall in output. Overall, given that Nigeria is also an importer of refined oil, the net effect of the reduction in crude production on government revenues is negative.

The reduction in export revenues, and thus in total government revenues, increases financing gap for the years 2009-2011.

B. RECOGNITION OF GOVERNMENT CONTINGENT LIABILITIES

The management of contingent liabilities poses a very big challenge to effective public debt management in Nigeria. This is occasioned by entrenched poor public finance management at all tiers of government in Nigeria. It is significant to note that in spite of the high level of government contingent liabilities (estimated at 8 percent of GDP), they do not presently constitute part of public debt. There is a high and imminent probability of crystallization of these liabilities which could have serious implications on debt sustainability.

In this scenario, Federal Government contingent liabilities are estimated at ₦2,063.0 billion at the end of 2007. This represents about 8 percent of GDP. Of this, the government would be assumed to have verified ₦1,877.2 billion, (91 percent) consisting of Federal Government's share of ₦1,547.25 billion which is assumed to crystallize in 2009, and States/Local Governments' share of

₦329.95 billion. The latter comprises of pension arrears, local contractors' debts and salary arrears, which have not been recognized in the States/Local Governments' debt portfolios, as well as previously unrecorded commercial bank loans (CBN Survey, 2007).

The Federal Government is assumed to be prepared to securitize 75 percent of the ₦1,877.2 billion, i.e. ₦1,407.9 billion. This is to be phased over five years, from 2009. Taking cognizance of the baseline maturity profile, we can avoid bunching by redistributing the additional issuance for 7, 10 and 15 year maturities. Interest rate is assumed to average 10.0%. Effectively, no gaps are created as the annual issuance is increased by ₦ 281.6 billion each year. The balance of 25 percent will also be repaid in 2009 through budgetary provision.

Federal Government's on-lending to States is expected to commence in 2010 and continue up to 2012 at about ₦100 billion each year, in order to take care of the States' contingent liabilities. Therefore, the effective interest cost of the additional issuances is adjusted downwards by the revenue of 1% spread accruing to the Federal Government on the on-lent loans.

Thus, new financing for the period 2008-2012, when contingent liabilities crystallize, is obtained 100 percent through domestic debt, in the form of Federal Government Bonds.

C. ACCELERATED GDP GROWTH FOR THE ACHIEVEMENT OF VISION 2020

Any debt sustainability analysis in Nigeria has to be anchored on the wider macroeconomic vision of the current administration. Since this was not captured in the baseline because the NEEDS-2 and the '7 Point Agenda' are yet to be harmonized, it becomes imperative to capture this in a country-specific scenario.

The GDP is assumed to grow at a higher rate than in the baseline following the harmonization of the NEEDS-2 and 7-Point Agenda Macroeconomic Framework, targeted at meeting Vision 2020. It is also in line with the envisaged step-up efforts aimed at tackling the country's infrastructure deficit.

It is assumed that investment in infrastructure, including power, will gain momentum and by 2011 the power problems would significantly be resolved. Consequently, capacity utilization in manufacturing as well as in other non-oil sectors would be enhanced, leading to a higher level of overall GDP growth. The contribution of non oil to GDP is assumed to increase progressively from the level of 67.5 percent to an average of about 72.0 percent by 2028, made possible by anticipated development of Nigeria's infrastructure.

The GDP growth rate follows a natural cyclical trend. It will grow from 9 percent in 2008 to peak at 11 percent in 2011. Thereafter, the GDP growth will slow down to an average of 9.25 percent in 2012-2015. This further decline to 7 percent in 2016-2020 before rising marginally to 8 percent in 2021-2028.

Government revenues are expected to grow at a faster rate than the growth in the nominal GDP, due to the anticipated deepening of the reforms of revenue collection agencies such as the FIRS and Nigeria Custom Service. However, the annual revenue levels are expected to fall short of the huge resource requirement for the achievement of the targeted growth. Given the required huge investment in the non-oil sector, government expenditure is expected to grow by an annual average of 30 percent of GDP.

In order to achieve the envisaged level of growth in GDP, government needs additional resources to finance the obvious gaps created as a result of the faster growth rate of expenditure over revenue. For the period 2008-2018, government would need an additional (over the baseline) annual average amount of over N550 billion, if the projected level of GDP growth rate is to be

realized. Subsequently, from 2019 to 2028, the annual average of the additional resources required by the government is expected to decline to ₦21 billion, thus reducing the pressure on government expenditure. Decomposing the deficit further shows that the bulk of the deficit would be accounted for by the domestic (fiscal) deficit, especially during the period 2008-2018, while the Current Account Balance (CAB) will record minimal surpluses during the same period. However, from 2019, the country will begin to experience a deficit in the CAB, which will rise progressively from ₦1 billion to about ₦48 billion in 2028. The corresponding pressure on the reserve position is, however, not serious at less than US\$0.5 billion.

5.2 FINANCING OPTIONS

This section analyses the different financing strategies that suit the various scenarios considered in this analysis.

5.2.1 BASELINE SCENARIO

As an IDA only country Nigeria may be able to access external borrowing only from the concessional window. New financing split between external and domestic sources in this scenario is assumed in the following proportions:

- 25:75 percent, during the period 2008-2011;
- 30:70, during the period 2012-2019;
- 40:60, during the period 2020-2028.

Correspondingly, the total amount of new external debt will be made up of 100 percent concessional loans during the period of 2008-2011. During the period 2012 to 2016 only about 65 percent of new external financing will be concessional and by 2017 to 2028, new external financing will be composed of 50 percent concessional and 50 percent non-concessional. This is due to the fact that as the country develops, it will no longer be IDA only but will be able to borrow more on commercial terms, as well.

5.2.2 COUNTRY-SPECIFIC SCENARIOS

A. OIL PRODUCTION SHOCK

New financing to fill the gaps generated in this scenario is to be split between external and domestic sources in the following proportions:

- 30:70, in 2008-2011;
- 40:60, in 2012-2019;
- 45:55, in 2020-2028.

Of the total amount of new external debt, concessional loans will constitute 25 percent, while non-concessional loans are 75 percent. The new domestic debt will consist of 80 percent FGN Bonds and 20 percent NTBs during 2008-2011.

As in the baseline, during the period 2012 to 2016 about 65 percent of new external financing will be concessional and by 2017 to 2028 new external financing will be composed of 50 percent concessional and 50 percent non-concessional.

B. RECOGNITION OF CONTINGENT LIABILITIES

New financing will be based on domestic sources only, through securitization of liabilities using FGN Bonds, as well as budgetary provision.

C. ACCELERATED GDP GROWTH FOR THE ACHIEVEMENT OF VISION 2020

New financing to fill the gaps generated in this scenario is to be split between external and domestic sources in the following proportions:

- 25:75, in 2008;
- 60:40, during the period 2009-2015;
- 55:45, during the period 2016-2028.

Of the total amount of new external debt during 2009-2028, concessional loans will average 16 percent, while non-concessional loans will be 84 percent. New domestic debt will consist of FGN bonds at 75 percent of the total and of NTBs for the remaining 25 percent.

6.0 RESULTS AND ANALYSIS

This chapter presents and analyzes the results of all the scenarios. Specifically, it analyzes external debt sustainability using the simulations in the external template and the total debt sustainability using the fiscal template. In each case, the values obtained for each debt indicator are compared against the indicative CPIA threshold, which ranks countries according to the quality of their policies and institutions. Currently, Nigeria is ranked under the CPIA as a 'poor performer', which means that the framework predicts that Nigeria can sustain lower levels of debt stock and debt service obligations when compared with a medium or strong performer. The indicative thresholds are presented in table 6.1 below.

Table 6.1: Thresholds for Debt indicators based on CPIA Index (%)

	Quality of Country's Policies and institutions		
	Poor Performer	Medium Performer	Strong Performer
NPV of Debt as a percentage of:			
GDP	30	40	50
EXPORT	100	150	200
REVENUE	200	250	300
Debt Service as a percentage of:			
EXPORTS	15	20	25
REVENUE	25	30	35

6.1 EXTERNAL DEBT SUSTAINABILITY ANALYSIS

The results from the external debt template are presented below:

(A) SOLVENCY RATIOS OF EXTERNAL DEBT UNDER THE BASELINE SCENARIO

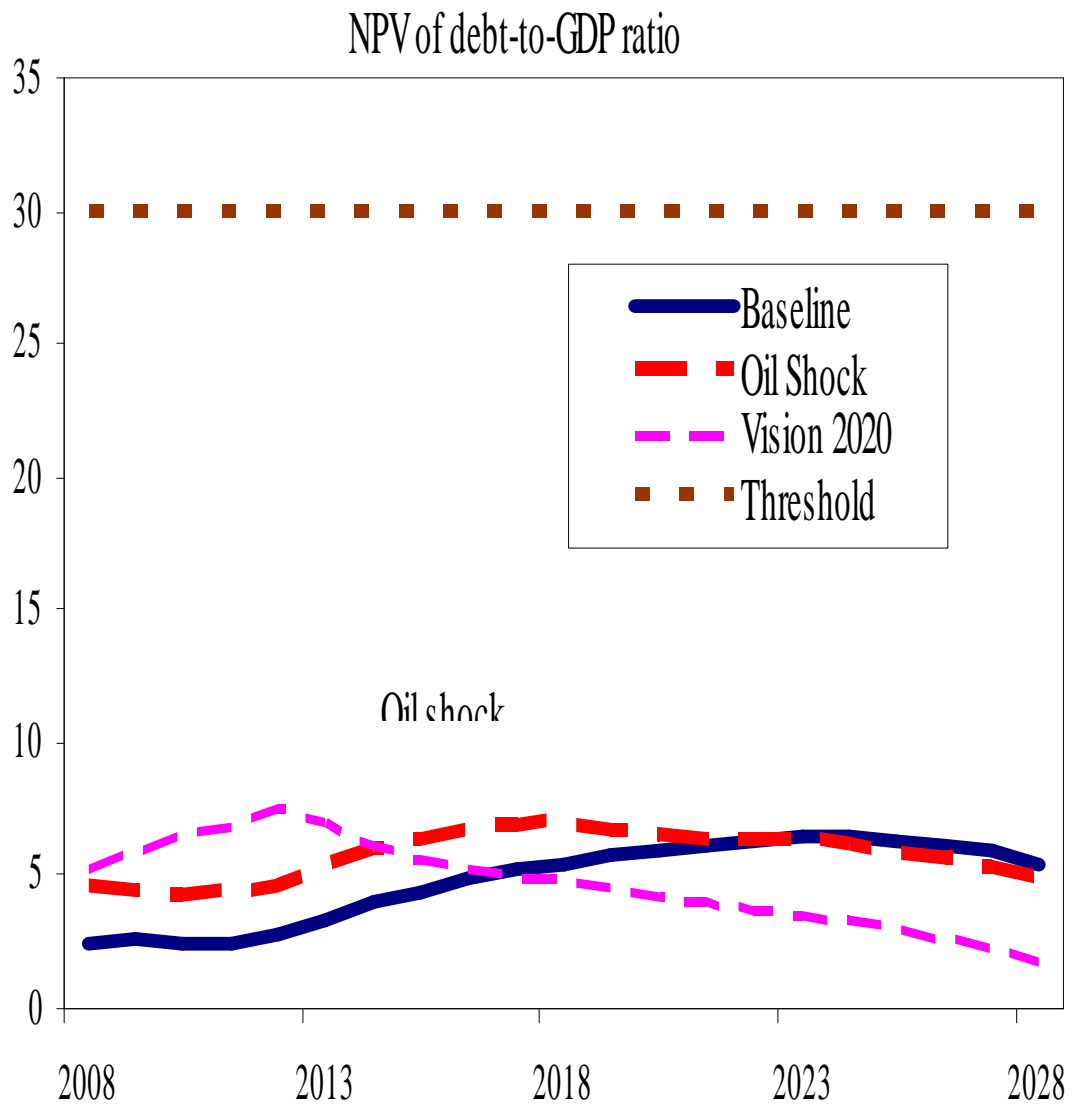
In the baseline scenario, the external debt stock-to-GDP ratio is projected to remain low and fairly stable over the period 2008-2028. The annual average ratio is projected at 2.5 percent for the period 2008-2011. However, the ratio progressively increased from 2.5 percent in 2011 to 6.5 percent in 2024 and, thereafter, declined to 5.5 percent in 2028. Further analysis shows that the ratio remains well below the 30 percent sustainability threshold. The other two solvency ratios, namely external-debt-stock-to-exports and external-debt-stock-to-revenues are also well within their threshold levels (Table 6.2 and Figure 6.1).

Table 6.2: Solvency indicators

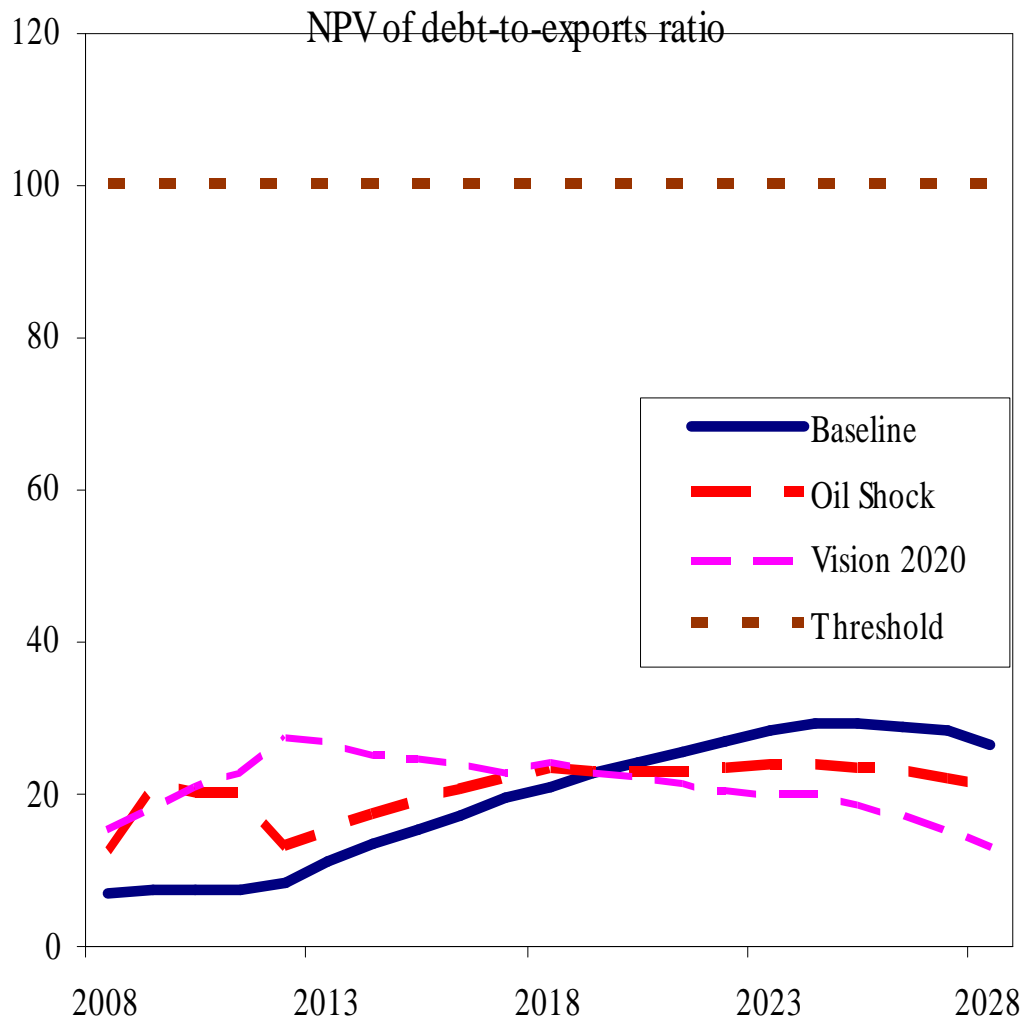
	2008	2009	2010	2011	2012	2017	2018	2024	2028
NPV of debt-to-GDP ratio									
Baseline	2.5	2.5	2.5	2.5	2.7	5.2	5.4	6.5	5.5
Oil Production Shock	4.5	4.4	4.3	4.3	4.5	6.9	6.9	6.1	4.9
Vision 2020	5.3	6.0	6.5	6.7	7.6	4.9	4.9	3.3	1.8
Threshold	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
NPV of debt-to-exports ratio									
Baseline	7.0	7.3	7.5	7.6	8.6	19.3	21.1	29.3	26.6
Oil Production Shock	12.5	20.8	20.2	20.2	12.8	22.1	23.3	23.8	20.9
Vision 2020	15.2	18.2	20.8	23.0	27.7	22.8	24.1	19.8	12.9
Threshold	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NPV of debt-to-revenue ratio									
Baseline	9.1	8.1	7.9	7.6	8.6	15.9	19.4	23.1	18.2
Oil Production Shock	16.9	16.1	11.6	11.4	11.7	18.8	19.1	16.4	19.2
Vision 2020	17.2	19.4	20.7	21.4	24.2	16.5	18.1	13.9	7.9
Threshold	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0

Figure 6.1: External Debt Ratios Under the Baseline and Alternative Scenarios, 2008-28 (Solvency Ratios)

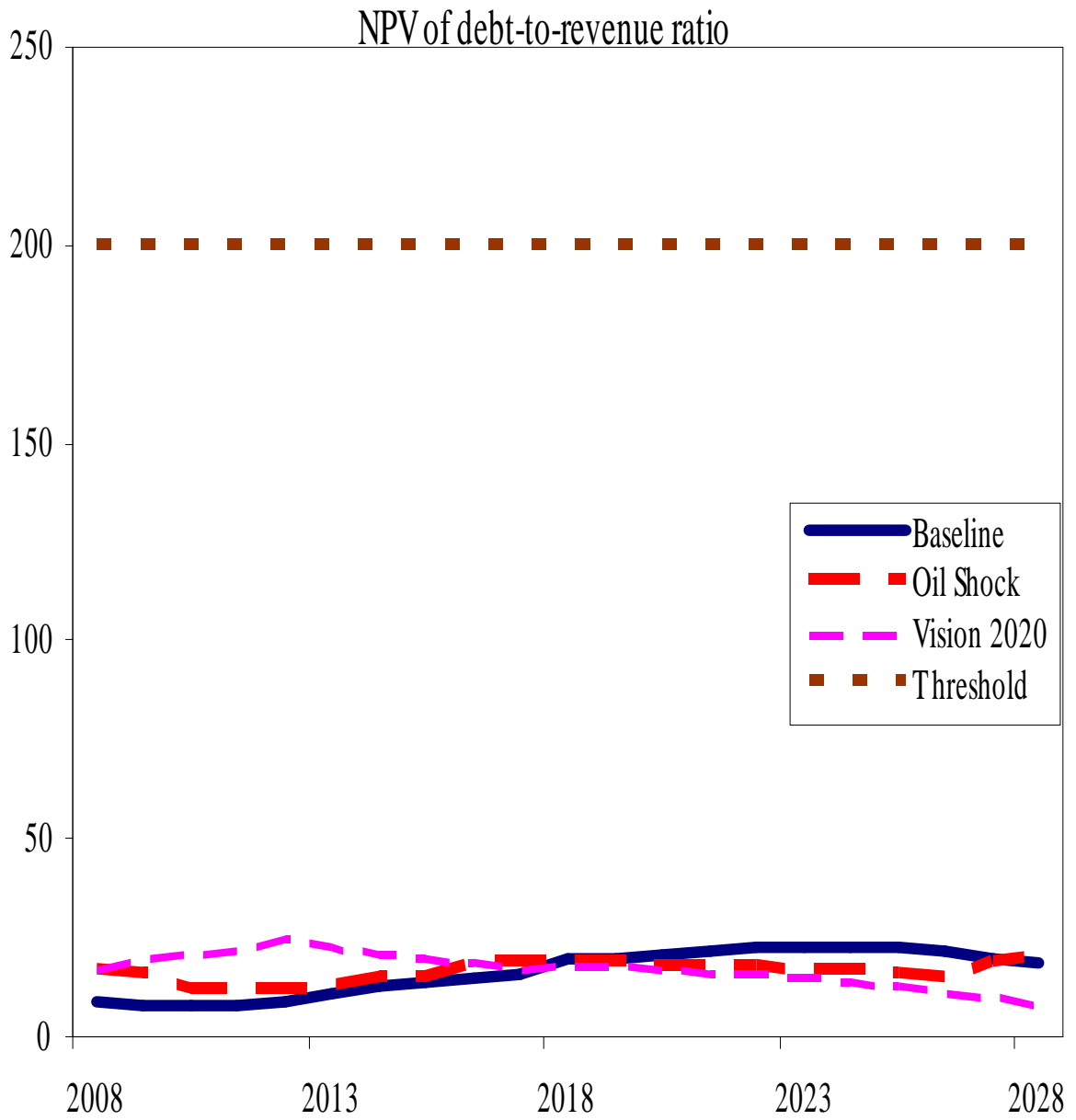
(a)



(b)



(C)



(B) LIQUIDITY RATIOS OF EXTERNAL DEBT UNDER THE BASELINE SCENARIO

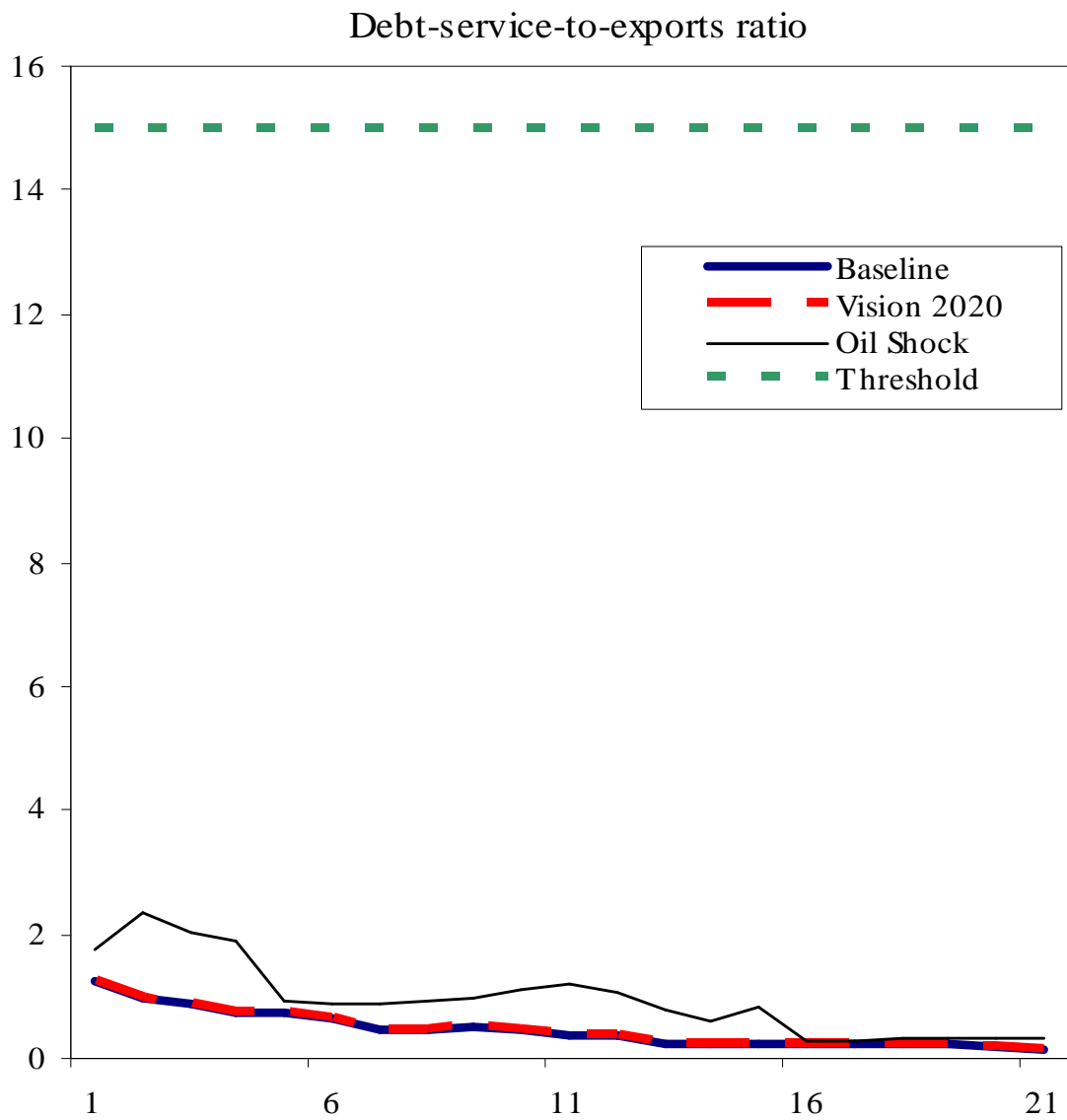
The liquidity ratios in the baseline scenario display a declining trend over the projection period. The debt-service-to-export-ratio is decreasing over time falling from 1.2 percent in 2008 to below 1.0 percent throughout the projected period. The debt-service-to-revenue ratio is also at a sustainable level of 1.6 percent in 2008 declining to 0.1 percent in 2028. Hence, the ratios are well below their respective thresholds of 15 and 25 percent (Table 6.3 and Figure. 6.2).

Table 6.3: Liquidity Indicators

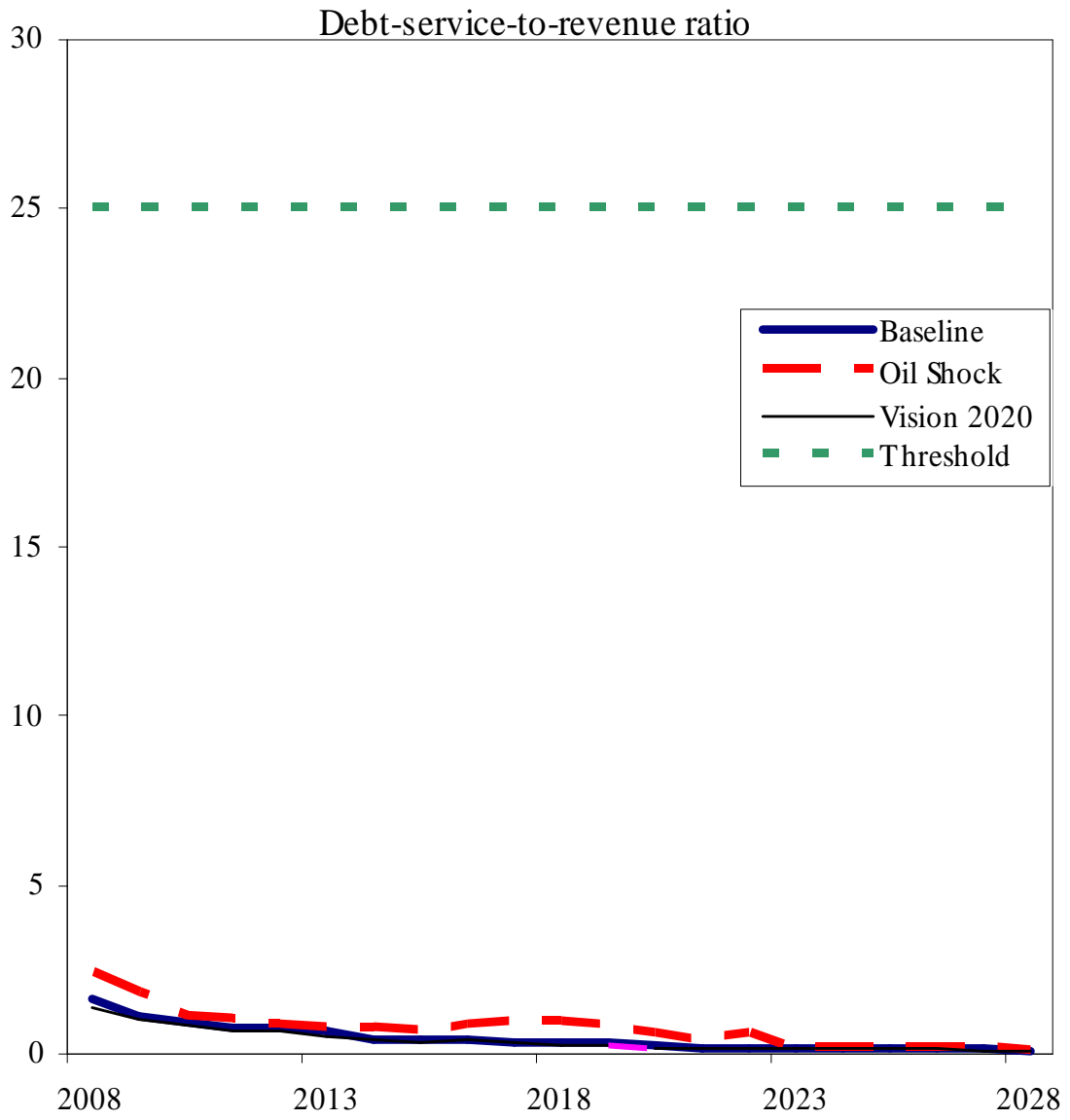
	2008	2009	2010	2011	2012	2017	2018	2024	2028
Debt service-to-exports ratio									
Baseline	1.2	1.0	0.9	0.8	0.8	0.4	0.4	0.2	0.1
Oil Production Shock	1.8	2.4	2.0	1.9	0.9	1.1	1.2	0.3	0.3
Vision 2020	1.2	1.0	0.9	0.8	0.7	0.4	0.4	0.2	0.1
Threshold	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Debt service-to-revenue ratio									
Baseline	1.6	1.1	0.9	0.8	0.8	0.4	0.4	0.2	0.1
Oil Production Shock	2.4	1.8	1.2	1.1	0.8	0.9	1.0	0.2	0.1
Vision 2020	1.4	1.0	0.9	0.7	0.6	0.3	0.3	0.1	0.1
Threshold	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

Figure 6.2: External Debt Ratios Under Baseline and Alternative Scenarios, 2008-28 (Liquidity Ratios)

(a)



(b)



SOLVENCY AND LIQUIDITY RATIOS OF EXTERNAL DEBT UNDER THE ALTERNATIVE SCENARIOS (BOUND TEST)

Standardized stress tests (Appendix 1) show that there might not be sustainability problems during the projection period. The historical stress test¹ predicts falling ratios for all debt indicators throughout the projection period. However, under the most extreme stress test², the debt-stock-to-GDP ratio peaks at 712.9 percent in 2010, compared to its 30 percent threshold, suggesting that, if the extreme conditions envisaged in that scenario should actually materialize, there could be sustainability problems.

C) SOLVENCY AND LIQUIDITY RATIOS OF EXTERNAL DEBT UNDER THE COUNTRY SPECIFIC SCENARIOS

The results of the country's specific scenarios are presented alongside that of the baseline scenarios in Table 6.2 and Figure 6.1.

In the "Oil Production Shock" scenario, Nigeria's external debt ratios remain sustainable throughout the projection period. The country is not likely to face any solvency or liquidity problems. The NPV of debt-to-GDP steadily increases from 4.5 percent in 2008 to 6.9 percent in 2018 and declines to 4.9 percent in 2028. In addition, the other solvency ratios, namely debt-to-export and debt-to-revenue ratios are well below their respective thresholds. The liquidity indicators (debt service-to-export and debt-service-to-revenue ratios) also remain sustainable at their respective thresholds of 15.0 and 25.0 percent.

A comparative analysis of the baseline and the Oil Production Shock scenario on one hand, and the baseline and Vision 2020 scenarios on the other, shows that Nigeria could experience serious debt sustainability issues.

¹ In the historical stress test key variables are projected at their historical averages, for the period 2008-28.

² The most extreme stress test presents a shock situation where the real GDP growth, the export value growth, the US\$ deflator and the net non-debt-creating flows at their historical averages are deflated by one standard deviation in 2008-09.

In terms of solvency, the ratios increase and move towards the threshold as we move from the baseline to the country specific scenarios. In the case of the Oil Production Shock, the NPV of debt to GDP ratios double for the period 2008 to 2017 and does not fall back to the baseline level until 2028. The NPV of debt to export ratio triples in 2011 and remains well above the baseline until 2028. The picture is the same for NPV of debt to revenue ratios. The liquidity ratios under the oil production shock though, not as high as in the solvency ratios, do not also fare better during the projection period.

In the “Accelerated Growth for the Achievement of Vision 2020” scenario, Nigeria’s external debt ratios remain sustainable throughout the projected period both for the solvency and liquidity criteria. However, the solvency ratios in the short to medium term trended towards unsustainability, reflecting increased borrowing for infrastructural investments. In the long term, as the capacity of the economy improves, allowing for enhanced absorption of more borrowing, the ratios tended to decline (higher sustainability) even better than the baseline ratios. The initial increase of the ratios reflects envisaged policy shift to take on more non-concessional loans to allow for the massive resource requirements under the scenario. If this scenario is compared with other country-specific tests constructed (Oil Production Shock and Contingent Liabilities) a more robust picture in terms of sustainability in the long term is presented.

However, the solvency indicators in the Accelerated GDP Growth for Vision 2020 Scenario are at least twice as high as that of the baseline, indicating that, as in the case of the Oil Production shock, Nigeria’s capacity for debt sustainability is reduced by half.

The liquidity indicators are very low in this scenario indicating that the gaps, though wide, were effectively filled because there was access to non-concessional financing. This indicates that the objectives of Vision 2020 could be achieved even with higher non-concessional borrowing without undermining debt sustainability.

6.2 TOTAL PUBLIC DEBT SUSTAINABILITY ANALYSIS

In recent years, following the Paris and London Clubs debt exits, the major focus of debt management in Nigeria has shifted to domestic debt. To further deepen the domestic debt market, the maturity profile of the Federal Government Bonds has been lengthened under the regular monthly issuance programme. Over the past few years, the portfolio of domestic debt has increased rapidly. The incorporation of domestic debt into the analysis also shows that overall public debt sustainability is maintained.

It should be noted that the thresholds used here to analyze total public debt sustainability are in fact those that the international community recognizes as sustainability thresholds for external debt only. This makes the tests more stringent than if the proposed ratios in Nigeria's Public Debt Management Framework had been used. For example, while the Framework proposes NPV of total public debt stock-to-GDP of 45 percent, the threshold used here is 30 percent.

(A) SOLVENCY AND LIQUIDITY RATIOS OF TOTAL PUBLIC DEBT UNDER THE BASELINE SCENARIO

As is the case with external sustainability, the total public debt sustainability baseline is relatively robust. The ratios of NPV of debt to GDP and revenue remain low and sustainable over the period. The ratio of NPV of debt-to-GDP is below 10 percent over the period, against the threshold of 30 percent, whereas the ratio of NPV of debt-to-revenue and grants is under 40 percent during the same period against a threshold of 200 percent (Table 6.4 and Figure 6.3).

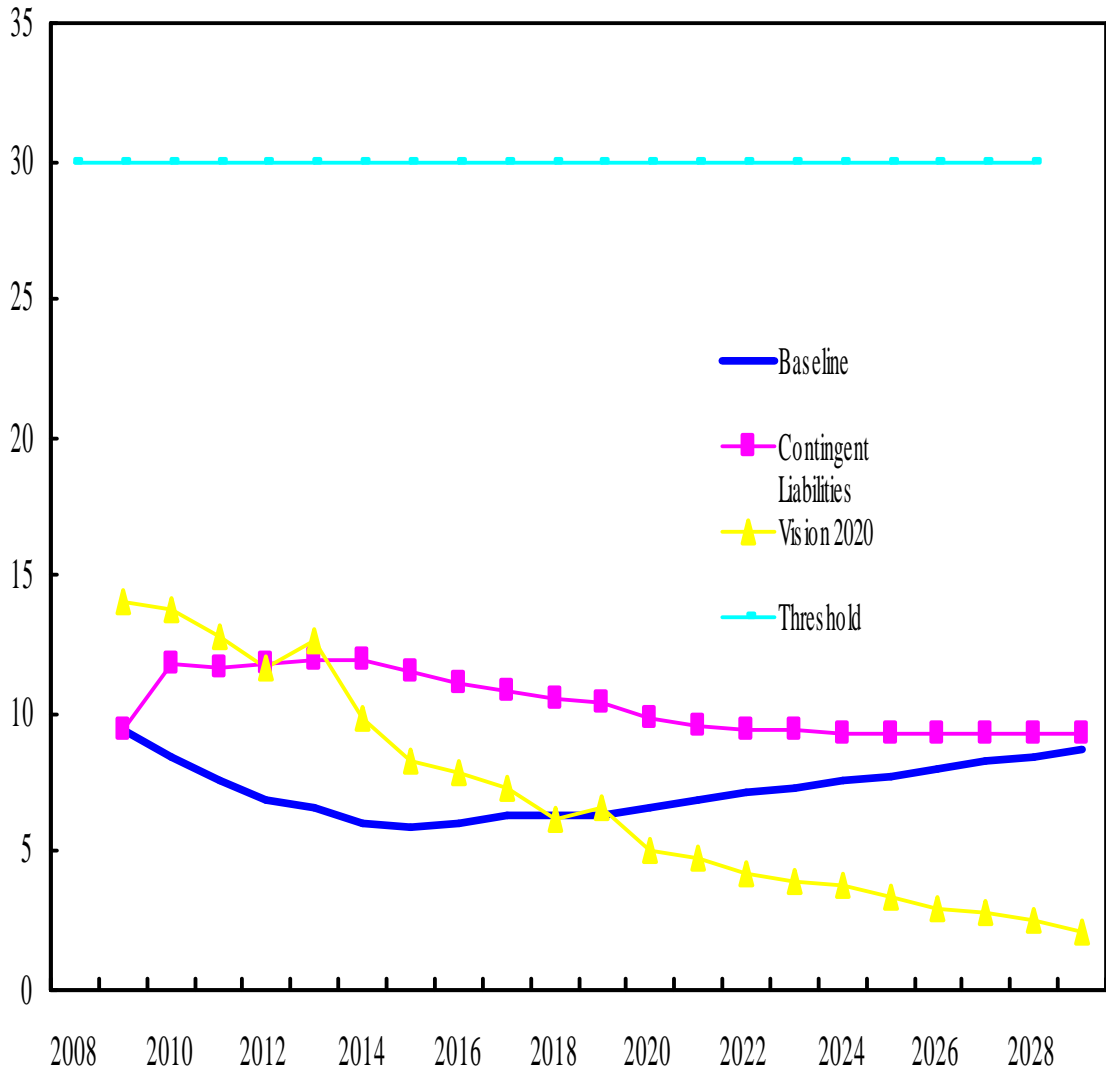
Table 6.4: Key Indicators of Total Public Debt Under Alternative Scenarios, 2008–28 (Percent)

	2008	2009	2010	2011	2012	2017	2018	2024	2028
NPV of debt-to-GDP ratio									
Baseline	9.5	8.5	7.5	6.9	6.5	6.4	6.4	7.8	8.7
Oil Production Shock	9.5	10.4	12.8	15.9	7.2	7.4	7.4	13.1	17.1
Vision 2020	14.0	13.8	12.8	11.7	12.6	6.2	6.7	3.4	2.1
Contingent Liabilities	9.5	11.8	11.7	11.7	12.0	10.6	10.4	9.3	9.3
Threshold	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0	30.0
NPV of Debt-to-Revenues-and-Grants Ratio									
Baseline	33.1	25.9	22.2	20.3	19.9	18.9	21.9	26.1	27.1
Oil Production Shock	34.2	44.9	52.3	61.7	20.8	19.7	23.1	40.9	50.2
Vision 2020	45.4	44.3	40.5	37.1	40.1	20.9	24.6	14.4	9.0
Contingent Liabilities	33.1	36.0	34.4	34.5	36.5	31.3	35.5	31.2	29.1
Threshold	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0	200.0
Debt Service-to-Revenue-and-Grants Ratio									
Baseline	11.1	8.0	9.8	7.2	4.7	3.1	3.2	0.4	0.2
Oil Production Shock	11.4	11.4	14.2	10.2	4.9	3.2	3.3	0.5	0.3
Vision 2020	11.5	10.1	13.2	9.9	7.3	4.3	7.0	0.9	1.0
Contingent Liabilities	11.1	17.0	12.1	11.1	9.4	5.1	5.5	3.1	2.1
Threshold	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0	25.0

Figure 6.3: Country Indicators of Total Public Debt, 2008-2028

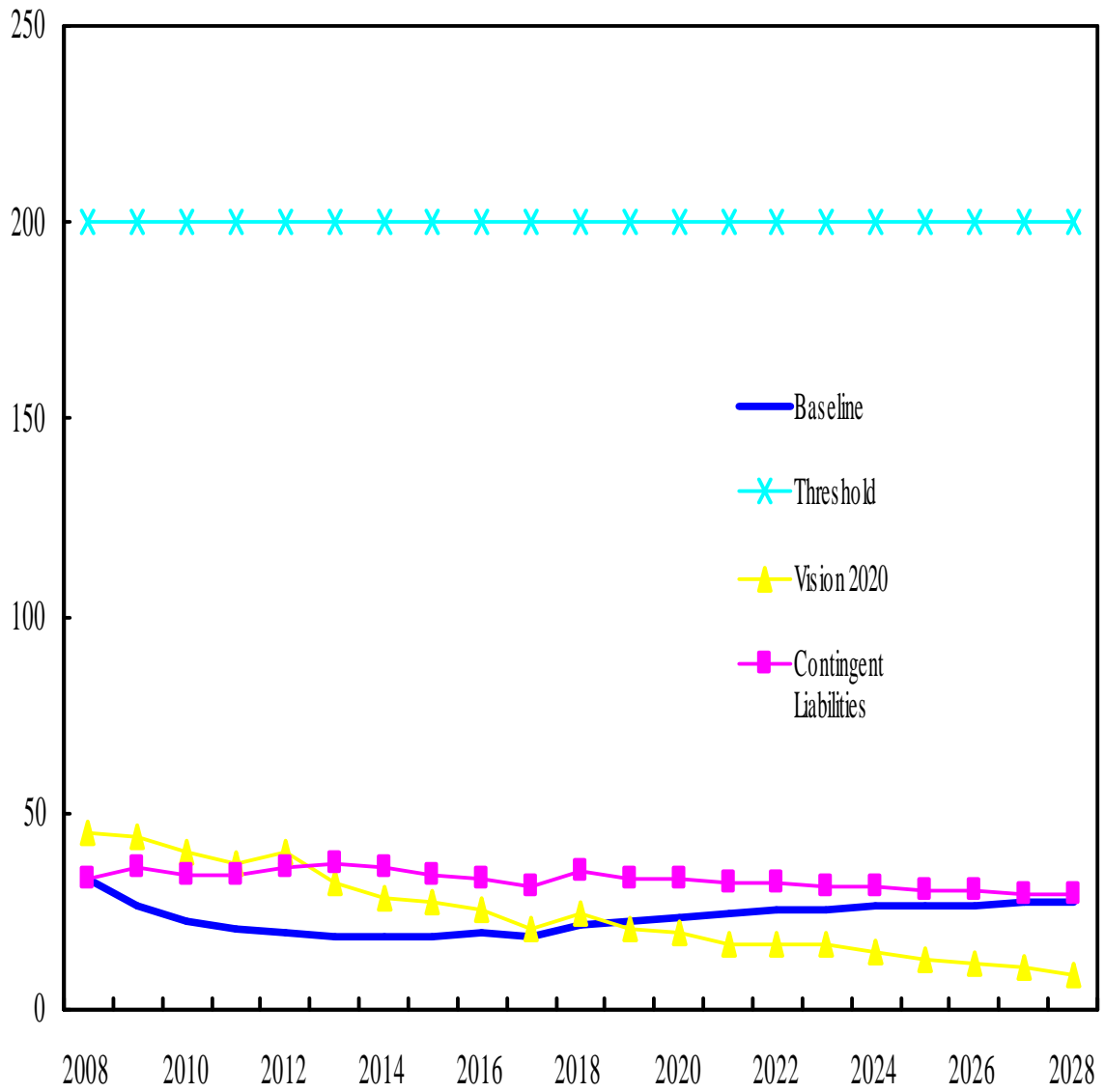
(a)

NPV of Debt-to-GDP Ratio



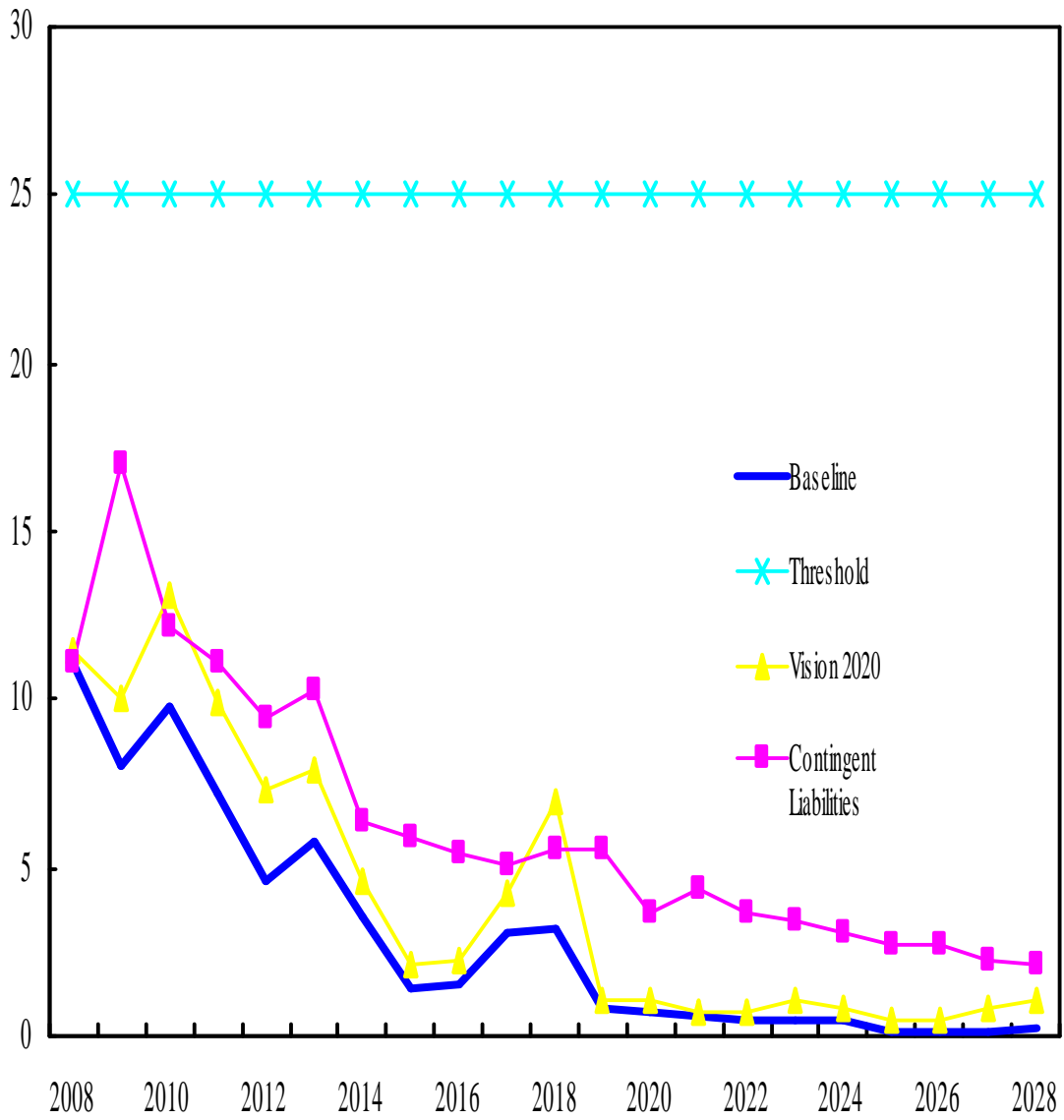
(b)

NPV of Debt-to-Revenue Ratio



(C)

Debt-Service-to-Revenue Ratio



The debt-service-to-revenue-ratio also decreases over the projection period, falling from 11.1 percent in 2008 to 0.2 percent in 2028, thus remaining well below the threshold of 25 percent as shown in Table 6.4 and Figure 6.3 above.

B) SOLVENCY AND LIQUIDITY RATIOS OF TOTAL PUBLIC DEBT UNDER THE ALTERNATIVE SCENARIOS (BOUND TESTS)

Considering the standardized stress tests (Appendix 2), figures show that there is not likely to be any sustainability problem during the projection period. This is the case in the Historical and the No Reform³ stress tests, where the ratios are generally low and decreasing, remaining well within their sustainability thresholds. However, under the Most Extreme stress test, all ratios spiral out of control, suggesting that, if the extreme conditions envisaged in that scenario crystallize, there could be sustainability problems. The most extreme stress test presents a shock situation where the real GDP growth, the export value growth, the US\$ deflator and the net non-debt-creating flows at their historical averages are deflated by one standard deviation in 2008-09.

C) SOLVENCY AND LIQUIDITY RATIOS OF TOTAL PUBLIC DEBT UNDER COUNTRY SPECIFIC SCENARIOS

The Country-specific Scenarios (Table 6.4 and Figure 6.3) also show a very sustainable picture.

In the Oil Production shock scenario, Nigeria's total public debt ratios remain sustainable throughout the projection period. All debt ratios are well below their threshold levels. The NPV of debt-to-GDP ratio hovers around an average of 10.65 percent over the projection period. Also, average NPV of debt-to-revenues and the debt service-to-revenues ratios over the projection periods are 34.28 percent and 2.63 percent, respectively. This is against the

³ In the "No reform" stress test, the primary balance is assumed not to change from the value recorded in 2007.

indicative thresholds of 30 percent, 200 percent and 25 percent, respectively.

In the “Accelerated Growth for the Achievement of Vision 2020 scenario, Nigeria’s total public debt ratios remain sustainable over the projection period, although their values are higher than those of the baseline, particularly in the period 2008-2012. The annual average ratios of NPV of debt to GDP and Revenue as well as debt-service-to-revenue are 6.98 percent, 24.49 percent, and 4.19 percent, respectively. This occurs as a result of the higher amount of borrowing that government must undertake in order to finance the growth levels outlined in the to be Harmonized NEEDS-2 and 7-Point Agenda Macroeconomic Framework, focusing on infrastructure financing and on non-oil GDP growth.

The fiscal position is sustainable, but with the recognition of “Contingent Liabilities”, the total public debt stock would increase, resulting in a rise in total current expenditure arising from interest payments. The debt ratios remain at sustainable levels throughout the projection period, although the annual average ratios over the projection period are higher compared to those in the other two scenarios. The annual average ratios of NPV of debt to GDP and revenue, as well as debt service-to-revenue over the projection period are 10.3 percent, 33.1 percent and 6.3 percent, respectively as compared to the respective indicative thresholds of 30 percent, 200 percent and 25 percent.

7.0 RECOMMENDATIONS AND CONCLUSION

7.1 RECOMMENDATIONS

- i. Although there is significant gap between our present sustainability level and the thresholds for all the ratios, this should not be interpreted to mean that the gap should be filled immediately with increased borrowing. Government should be cautious in future borrowing as the present level could change within a short period if prudent borrowing and investment decisions are not taken in the short and medium term.
- ii. Even with the low base of the total public debt stock, there is a big sustainability issue arising from the possible simultaneous occurrences of a number of shocks, including oil production shock and crystallization of contingent liabilities shock. As a matter of deliberate action, therefore, debt management policy must be geared towards effectively managing these shocks.
- iii. Concessional borrowing and continuation of the current reform momentum would guarantee debt sustainability in the next twenty years. The preference should, therefore, be for concessional borrowing. However, the achievement of the Vision 2020 objectives will require accessing non-concessional borrowing, which will still not pose sustainability problems. In particular, such non-concessional borrowing under proper debt management will also not pose any immediate liquidity problems for government expenditure, if the proceeds are utilized for imported capital goods needed to develop the country's infrastructure.
- iv. As the analysis shows, there is the potential for the crystallization of a stock of contingent liabilities of the Federal, State and Local Governments amounting to ₦1.87 trillion. This figure is based partly on the CBN study of State Governments obligations, which had not been recognized in the book and figures from Federal Government agencies. This has serious implications for debt sustainability and the Federal

Government should, as a matter of urgency, recognize these contingent liabilities and work out a way of securitizing the portion that crystallizes in a phased programme. In the case of the States, the Federal Government may use its on-lending programme by sourcing funds from the domestic bond market on their behalf to reduce the volume of their contingent liabilities. It should be noted that the build-up of contingent liabilities by governments, is a direct consequence of poor public finance management. In order to avoid future build-up of contingent liabilities, there is the need for all tiers of governments to recognize and settle such liabilities as at when due through their relevant Ministries, Departments and Agencies and to only incur liabilities that have been duly provided for in the approved government budgets. The compliance by governments with the provisions of the Fiscal Responsibility legislation will facilitate the satisfaction of this condition. The DMO's plan of helping States to establish their Debt Management Departments (DMDs) should be implemented with a sense of urgency. This will increase capacity for collecting and collating debt data from all agencies so that all liabilities are captured on time.

- v. The Oil Production Shock Scenario shows that an oil production shock of about 40 percent has the potential for reducing the capacity for sustainability by half, (even though the resultant condition would still fall within the acceptable limits). It is, therefore, imperative that:
 - (a) In the short and medium terms, necessary measures are taken to ensure sufficiently smooth oil production activities; and,
 - (b) In the medium and long terms, strategic and structural measures are taken to achieve considerable diversification of the economy.
- vi. In general, as shown by the results of the "Accelerated GDP Growth for the Achievement of Vision 2020" Scenario, there is the need to build the infrastructural base, especially the power sector. This is because the development of the power sector is a sine qua non to sustained economic growth.

7.2 CONCLUSION

An understanding of the background to the conduct of the 2008 DSA will place the outcome of the exercise in proper perspective. The exit from the Paris and London Clubs debts significantly reduced Nigeria's external debt stock. This, combined with a sustained period of high oil prices, along with prudent fiscal policy stemming from the application of an oil-price based fiscal rule, have transformed Nigeria's debt outlook. The Federal Government has reaffirmed its commitment to limit borrowing to concessional sources, except in justifiable cases as provided for in the Fiscal Responsibility Act, so as to preserve the current strong external position. In addition, the Debt Management Office has initiated a programme of assisting the States in setting up their Debt Management Departments.

The rosy picture of a higher sustainable debt position derives directly from a very low base of Nigeria debt portfolio following the massive reduction in the debt stock as a result of Paris and London club debt exit. At US\$3.7 billion total external public debt, it is expected that the country has wide unutilized capacity to assume more borrowing.

Although the current policy of contracting only concessional loans will ensure that Nigeria maintains a sustainable debt profile, there is a window of non-concessional borrowing that can be leveraged upon to fund the Vision 2020 without undermining debt sustainability. Moreover, Nigeria's concessional envelope as an IDA only country (estimated at about US\$290.508.00 million in 2008) will not be sufficient for the resource requirements of Vision 2020.

In the light of the peculiar characteristics of Nigeria's fiscal federalism and the tendency for fiscal indiscipline, economy-wide debt sustainability will depend to a large extent on the capacity of sub-national governments to manage their debt effectively.

Finally, Nigeria's dependence on oil presupposes that volatilities in the sub-sector must be contained and reduced to the barest minimum, while efforts must be doubled to diversify the productive base of the economy.

**Appendix 1. Key Indicators of Public and Publicly Guaranteed External Debt Under
the Standard Stress Tests, 2008–28 (Percent)**

	2008	2009	2010	2011	2012	2018	2028
NPV of debt-to-GDP ratio							
Historical scenario	2.5	4.3	4.1	3.3	2.1	-5.3	-11.5
Most Extreme Shock	2.5	-166.9	712.9	696.5	678.4	572.8	285.5
Threshold	30.0	30.0	30.0	30.0	30.0	30.0	30.0
NPV of debt-to-exports ratio							
Historical scenario	7.0	12.4	11.9	10.0	6.5	-20.6	-55.9
Most Extreme Shock	7.0	-153.7	216.8	217.8	221.1	228.8	143.4
Threshold	100.0	100.0	100.0	100.0	100.0	100.0	100.0
NPV of debt-to-revenue ratio							
Historical scenario	9.1	13.8	12.6	10.0	6.5	-19.0	-38.3
Most Extreme Shock	9.1	-533.2	2210.2	2121.8	2142.7	2038.9	951.4
Threshold	200.0	200.0	200.0	200.0	200.0	200.0	200.0
Debt service-to-exports ratio							
Historical scenario	1.0	0.2	0.1	0.1	0.1	-0.1	-0.3
Most Extreme Shock	1.0	-0.9	5.1	6.0	5.8	16.6	13.8
Threshold	15.0	15.0	15.0	15.0	15.0	15.0	15.0
Debt service-to-revenue ratio							
Baseline	1.6	1.1	0.9	0.8	0.8	0.4	0.1
Historical scenario	1.3	0.2	0.1	0.1	0.1	-0.1	-0.2
Most Extreme Shock	1.3	-3.0	52.3	58.2	56.4	147.9	91.5
Threshold	25.0	25.0	25.0	25.0	25.0	25.0	25.0

**Appendix 2: Key Indicators of Total Public Debt Under Alternative Stress Tests,
2008–28 (Percent)**

	2008	2009	2010	2011	2012	2018	2028
NPV of debt-to-GDP ratio							
Historical scenario	9.5	13.5	15.4	15.4	14.9	12.7	11.6
Most extreme stress test	9.5	13.8	23.2	39.2	62.4	464.8	3932.8
No Reform	9.5	10.4	10.1	7.8	5.0	-13.2	-35.2
Threshold	30	30	30	30	30	30	30
NPV of Debt-to-Revenues-and-Grants Ratio							
Historical scenario	33.3	41.4	45.6	45.1	45.6	43.5	36.4
Most extreme stress test	33.3	42.1	68.4	114.9	189.5	1585.0	12093.8
No Reform	33.3	31.7	29.9	22.8	15.1	-45.3	-109.7
Threshold	200	200	200	200	200	200	200
Debt Service-to-Revenue-and-Grants Ratio							
Historical scenario	11.1	6.0	11.3	9.0	6.2	4.2	3.9
Most extreme stress test	11.1	8.1	15.1	19.5	27.2	173.8	1275.5
No Reform	11.1	7.1	10.0	6.3	1.3	-7.5	-21.8
Threshold	25	25	25	25	25	25	25

Appendix 3: Traditional Bound Tests

A. Alternative Scenarios

- A1. Key variables at their historical averages in 2008 – 2027.
- A2. New Public Sector loans on less favourable terms in 2008 – 2027.

B. Bound Tests

- B1. Real GDP growth at historical average minus one standard deviation in 2008 -2009.
- B2. Export value growth at historical average minus one standard deviation in 2008 – 2009.
- B3. US Dollar GDP deflator at historical average minus one standard deviation in 2008 – 2009.
- B4. Net non-debt creating flows at historical average minus one standard deviation in 2008 – 2009.
- B5. Combination of B1 – B4 using one-half standard deviation shocks.
- B6. One-time 30 percent nominal depreciation relative to the baseline in 2008.

Appendix 4: DSA TECHNICAL GROUP MEMBERSHIP

TECHNICAL ADVISORS/RESOURCE PERSON

- | | | |
|-------------------------|---|--------|
| 1. Baba Musa (Mr.) | - | WAIFEM |
| 2. Ceesay Mod K. (Mr.) | - | WAIFEM |
| 3. Dinneya Godson (Dr.) | - | DMO |

CORE TEAM

- | | | |
|---------------------------------|---|-----|
| 1. Amidu Miji (Mr.) | - | DMO |
| 2. Asheikh Maidugu (Dr.) | - | DMO |
| 3. Funmi Ilamah (Mrs.) | - | DMO |
| 4. Pellegrini Giulia (Ms.) | - | DMO |
| 5. Rapu Sam C. (Mr.) | - | CBN |
| 6. Sa'id Jummai (Mrs.) | - | DMO |
| 7. Sanni G.K. (Mr.) | - | CBN |
| 8. Suleiman-Onuja Hanatu (Mrs.) | - | DMO |

TECHNICAL GROUP MEMBERS

- | | | |
|-----------------------------|---|-----|
| 1. Agbede Olanrewaju (Mr.) | - | DMO |
| 2. Aimola Akin (Mr.) | - | DMO |
| 3. Bartholomew Aja (Mr.) | - | DMO |
| 4. Ceejay Ojong (Mr.) | - | DMO |
| 5. Fred Onukposi (Mr.) | - | DMO |
| 6. Greg Anowuru (Mr.) | - | DMO |
| 7. Ibrahim Natagwandu (Mr.) | - | DMO |
| 8. Ifeyinwa Ofunne (Ms.) | - | DMO |
| 9. Lawal Babatunde (Mr.) | - | NPC |
| 10. Mahmoud Ibrahim (Mr.) | - | DMO |
| 11. Nasir M. Mahmoud (Mr.) | - | DMO |
| 12. Ngozi Nwokedi (Mrs.) | - | NBS |
| 13. Nazir Bello (Mr.) | - | BOF |
| 14. Okoye u. C. (Mrs.) | - | FMF |
| 15. Tanko M. M. (Mr.) | - | BOF |

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