DEBT MANAGEMENT OFFICE
NIGERIA

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REPORT OF THE ANNUAL NATIONAL DEBT SUSTAINABILITY ANALYSIS (DSA)

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EXECUTIVE SUMMARY

The 2012 DSA reveals that Nigeria is at a low risk of debt distress under the existing macroeconomic framework, which is anchored on fiscal consolidation, positive external balance and robust growth. It further reveals that under the most extreme shock – fall in crude oil price below the US$50 per barrel mark - the risk of debt distress will rise. This indicates that the nation's debt burden, define in revenue terms, is highly susceptible to crude oil price variability. The 2012 DSA, therefore, recommends amongst others, shift of emphasis from domestic to external borrowing, direct budgetary provisions for maturing obligations in 2013 and speedy implementation of the policy actions aimed at raising the contribution of the non-oil sector to the revenue base of the country to help mitigate risks of debt distress in the event of drastic fall in crude oil prices in the international market.

The Annual Debt Sustainability Analysis (DSA) Workshop for 2012 was carried out from May 3 - 13, 2012 by the Debt Management Office in collaboration with the Federal Ministry of Finance (FMF), Central Bank of Nigeria (CBN), National Planning Commission (NPC), Budget Office of the Federation (BOF), and the National Bureau of Statistics (NBS). The West African Institute for Financial and Economic Management (WAIFEM) provided technical support.

The exercise utilized the updated World Bank/IMF Debt Sustainability Framework for Low Income Countries (DSF-LIC) released in April 2012. As in the previous years, Nigeria retained her classification as a medium-performer economy with a score of 3.44 under the World Bank's Country Policy and Institutional Assessments (CPIA) Index.

The objectives of the DSA exercise are as follows:

(i) update the 2011 DSA Report;

(ii) set borrowing limits for the government and advise on funding options; and

(iii) generate necessary inputs required to update the Medium Term Expenditure Framework (MTEF).

The DSA is undertaken under three main scenarios - Baseline, Optimistic and Pessimistic. The Baseline scenario is premised on the assumptions of the 2012 Budget of the Federal Government of Nigeria, the MTEF and the Transformation Agenda. The Optimistic scenario evaluates debt sustainability within the context of the Vision 20:2020. The Pessimistic scenario was designed against the background of worse case assumptions on some key country-specific macroeconomic indices.

The 2012 DSA result indicates that **Nigeria is at a low risk of debt distress**. Specifically, under the baseline and alternative scenarios and the standard stress tests, Nigeria's debt outlook remains very robust. Also under the country-specific scenario where a pessimistic crude oil price assumption was applied, all the external debt burden indicators remain sustainable as under the baseline. However, all the fiscal sustainability indicators, except the debt-to-GDP ratio, appear susceptible to revenue shocks especially when crude oil price is set at USD50.00pb and below, indicating an urgent need for more stable sources of revenue other than crude oil which presently contributes about 75% of budgetary revenue. The vulnerabilities, therefore, relate to the debt-to-revenue and debt service-to-revenue ratios in the fiscal block.

The other key findings are high refinancing risks, as more than 34% of the total public debt outstanding is maturing in the near term. The analysis also show that domestic debt service has risen sharply in the last two years due to the combined effects of the continued rollover of maturing debts and the lag effects of inflation targeting monetary policy stance of the monetary authorities.

Key Recommendations

The specific recommendations are as follows:

i. **In order to keep the debt-to-GDP ratio within the 25% country-specific benchmark, the new borrowing limit for 2013 is estimated at USD7.25 billion. To be consistent with Nigeria's Medium Term Debt Management Strategy (MTDS) which recommends a shift from domestic to external borrowing, the proposed amount should be raised in the ratio of 60 percent (USD4.35 billion) from external sources and 40 percent (USD2.90 billion) from domestic sources. The Naira equivalent of new domestic borrowing in 2013 would be N340.73 billion; net of the refinancing cost of maturing obligations amounting to N108.50 billion.**

ii. Given the relatively low level of debt to GDP ratio for external debt and the fact that cost of external debt service is much lower than the domestic debt, the authorities may consider a shift of emphasis from domestic to external borrowing in order to help reduce the level of domestic debt service and allow more borrowing space for the private sector in the domestic debt market.

iii. Direct budgetary provisions would be required to retire maturing debt obligations falling due in 2013, as this would help to reduce the size of the total public debt outstanding and refinancing risks in the near term.

iv. Furthermore, the on-going policy actions for re-introduction of sinking funds should be hastened to ensure that future debt obligations are settled as and when due to effectively hedge against rising rate of debt accumulation.

v. The Government needs to fast-track the on-going policy initiatives and actions geared towards increasing the contribution of non-oil revenue to the revenue base of the country in order to effectively minimise risks to debt sustainability in the medium term.

vi. There is need for the Government to speed-up the implementation of the policies on Public Private Partnership (PPP), concessioning and privatisation by incentivising the private sector to assume more prominent role in the development of commercially viable critical infrastructure in key growth sectors of the economy. This would help to reduce the size of direct new government borrowings for the purpose of infrastructure development and slow-down the rate of debt accumulation.

vii. Government agencies and stakeholders in fiscal and monetary policy management would need to strengthen collaboration and information sharing among them in order to improve the efficacy of Government policies, stabilise and strengthen the operating macroeconomic environment for more robust output growth.

Executive Summary Box 1: Determination of the 2013 Borrowing Space

To avoid a relapse into the experiences pre-dating the debt relief of 2005 and 2006, the Federal Executive Council (FEC) had in 2010 adopted a more restrictive country-specific debt-to-GDP benchmark of 25% for a five-year period ending 2014. It is, however, important to note also that in view of recent realities, a revised 30% benchmark is being considered to be appropriate. Notwithstanding, the 2013 borrowing space is derived in line with the 25% benchmark, following which the 2012 DSA report recommends N340.73 billion and USD4.35 billion as additional domestic and external borrowings respectively, for 2013.

The 2013 borrowing limit is derived as follows:

By end-2012, the Debt-to-GDP ratio is projected at 20.2%. When compared with the 25% limit, the sustainable additional borrowing space for 2013 and 2014 is estimated at 4.8% of GDP. The proportionate additional borrowing space in 2013 is, therefore, 2.4% of GDP, bringing the expected total Debt Stock-to-GDP ratio to about 22.6% by end-2013.

Given a projected nominal GDP of USD301.9 billion, for Nigeria, by 2013, the maximum additional borrowing space (domestic plus external) in 2013 will translate to USD7.25 billion.

To be consistent with Nigeria's Medium Term Debt Management Strategy (MTDS) 2012-2015, which recommends a shift away from domestic to more external borrowing during the programme period, the USD7.25 billion maximum **additional** borrowing space for 2013, is expected to be raised in the ratio of 0.4 and 0.6 domestic and external sources, respectively. (It is pertinent to note that the total borrowing planned in the MTEF for 2013 —USD7.49 billion — is sufficiently close to the USD7.25 billion recommended in the DSA)

Against this backdrop, the naira equivalent of the additional domestic borrowing is projected at N449.23 billion. However, when refinancing cost of N108.50 billion for maturing domestic FGN bonds in 2013 is factored into the borrowing space, the allowable limit drops to N340.73 billion.

The shift to more external sources of funding, which would include issuance of a Eurobond and Diaspora Bonds and possibly, borrowing from the commercial windows of the multilaterals, as well as bilateral sources could further be appreciated, when viewed in the light of the likely gains for Nigeria. These include:

- External borrowing costs are much lower than the cost of borrowing in the domestic market. Even the most costly external borrowing type is still about 9% per annum cheaper than domestic borrowing. For concessional loans which constitute about 86% of Nigeria's external debt stock, the cost is about 13.5% per annum cheaper than the domestic cost of debt.
- Moreover, Nigeria's foreign debt portfolio enjoys low currency risk exposure: over 50% of its debt is denominated in USD and with more than 80% of its external reserves also in USD, the country is adequately covered in terms of currency risk.
- Furthermore, Nigeria's External Creditors Funding Account from where external debt service payments are made is maintained in USD, thereby helping to ringfence cross-currency risks and stabilise the exchange rate exposures.
- The proposed shift away from domestic to more external borrowing would also help to slow down the rising trend in domestic debt outstanding and domestic debt service, while creating more space for the private sector to borrow from the domestic debt market.

In view of the various benefits derivable from shifting towards the external borrowing window as outlined above, it appears strategically plausible that much of the planned domestic borrowing under the Medium Term Expenditure Framework (MTEF) for fiscal 2013, should be substituted with external borrowing. Deliberate efforts will however be made to effectively communicate to the general public, the essence and advantages of this strategic shift in the portfolio mix.

The 2012 DSA, therefore concludes that the additional domestic and external borrowing space for 2013, should be *N340.73* billion and *USD4.35* billion, respectively.

CHAPTER ONE

INTRODUCTION

The Annual Debt Sustainability Analysis (DSA) of Nigeria's public debt portfolio was conducted by the Debt Management Office (DMO) and other relevant stakeholders from May 3 - 13, 2012, in line with the World Bank/IMF Debt Sustainability Framework (DSF) and in accordance with the key mandate of the DMO. The DSA utilized the updated World Bank/IMF Debt Sustainability Framework for Low Income Countries (DSF-LIC) released in April 2012. The World Bank/IMF under the Country Policy and Institutional Assessment (CPIA) Index rates Nigeria as a Medium Performer with a 3-year-long score of 3.44 points over a 6.0 index mark.

The DSA exercise has the following broad objectives:

(i) updating the 2011 DSA using the 2012 budget and recent national/global economic developments;

(ii) set new borrowing limit for the Government and advise on funding options for 2013; and,

(iii) provide inputs necessary for the updating of Medium Term Expenditure Framework (MTEF).

The DSA as a major debt management tool, uses macroeconomic and debt data to assess the country's debt sustainability in line with global debt burden thresholds. It seeks to ascertain the current debt ratios, debt burden indicators, determine borrowing limits and financing options, as well as projects the future debt ratios. Such financing options include the testing of continued focus on domestic debt market to fund government budget deficit, the viability of intensifying the use of the Public Private Partnership (PPP) framework for growth-inducing infrastructure projects to help minimise government's direct borrowing and diversification of the sources of Government's revenue, amongst others.

Three scenarios were used in analysing the medium to long term debt sustainability of the country. These are the continuation of existing policies and programmes (baseline), the worse case (pessimistic) and the more ambitious (optimistic) scenarios. The Baseline Scenario adopts assumptions of the 2012 fiscal budget, the MTEF (2012-2015) and the Transformation Agenda of the FGN. The Pessimistic Scenario is based on perceived adverse shocks in key macroeconomic variables, e.g. oil prices, while the Optimistic Scenario is designed within the context of Nigeria's Vision 20:2020 assumptions and Transformation Agenda.

The scope of the 2012 DSA covers both the external and domestic debts of the Federal and State Governments. In addition, the exercise includes contingent liabilities of the Federal Government, which consist of the guaranteed AMCON bonds, contractors' obligations and pension arrears.

The Report is in seven chapters, including this introductory chapter. Chapter two reviews the recent developments in the domestic and global economies. Chapter three analyses the country's debt portfolio. Chapter four outlines the scenario assumptions. Chapter five analyses the DSA results. Chapter six reviews the risks in the public debt portfolio, while Chapter seven presents the key findings and recommendations.

CHAPTER TWO

RECENT MACROECONOMIC DEVELOPMENTS

The global economic environment was relatively more volatile in 2011 when compared with the preceding year. This development was attributable to some factors that impaired growth in both developed and emerging countries. These includes high prices of crude oil in the international commodity market, high cost of food prices, heightening of euro zone debt crisis and political crisis in the Middle East and North African Countries (MENA). Consequently, the global real output recorded a growth rate of 3.8 per cent compared with the 5.2 percent growth in 2010. The growth recorded at the global level was mainly driven by emerging countries, especially China, India and Brazil. The financial turmoil generated by the intensification of the fiscal crisis in Europe spread to both developing and high-income countries. Capital flows to developing countries declined by almost half when compared with 2010. Growth in several major developing countries (Brazil, India, South Africa, Turkey and to a lesser extent Russia) slowed partly in reaction to domestic policy tightening measures.

The recession witnessed by the leading economies impacted on emerging and developing countries in the form of decreased demand for commodities thereby causing unemployment and poverty to rise. The development is threatening the attainment of targets under the Millennium Development Goals (MDGs) of 2015.

The Nigerian economy, as an integral part of the world economy, was not fully insulated from the global economic down-turn. The slow growth experienced in the global economy dove-tailed into reduced output growth in 2011. Consequently, Nigeria's GDP growth rate dropped from 7.98% in 2010, the highest in the last five years, to 7.36% in 2011. In nominal terms, the GDP increased from N34.0 trillion in 2010 to N37.3 trillion in 2011, indicating a per capita income of N213,351.43 or US$1,419.69 in 2010, as against N226,920.19 or $1,474.56 in 2011. The growth in output in 2010 caused an improvement in Nigeria's ranking from the 44th position in 2009 to 41st position in 2010 in the Global GDP Index published by the IMF in 2011.

A detailed breakdown of the growth recorded in 2010 reveals that the oil sector had a negative growth of 0.57% compared with a positive figure of 5.25% in 2010. The non-oil sector grew by 8.51% in 2011 compared with 8.85% in 2010. The performance in the non-oil sector was driven by improved agricultural production, which grew by 5.7% due to favourable weather conditions, improved supply of inputs, as well as impact of various tiers of government intervention programmes and policies. Other drivers of growth include sustained increase in investments in

infrastructure, increased building and construction activities across the country and continued expansion in the telecommunications sub-sector, amongst others.

Nigeria's average headline inflation rate declined from 13.7% in 2010 to 10.8% in 2011. The year-on-year rate also dropped from 11.8% in December 2010 to 10.3% in 2011, due partly to increased agricultural output, which helped to increase food supply during the year.

The overall fiscal gap of the Federal Government was 2.96% of GDP in 2011 compared with 3.8% for 2010. This remained within the 4% target of the West African Monetary Zone (WAMZ) benchmark. The fiscal deficit was financed mainly through issuance of debt securities in the domestic and international capital markets. For instance, the DMO raised US$500.00 million Euro Bond in January 2011 from the international capital market to complement funding of projects in key growth sectors of the economy.

In broad terms, Federal Government's fiscal operations in 2011 continued to be anchored on an oil-price-based-fiscal rule. The fiscal operation was strictly guided by fiscal prudence and budget implementation as outlined in the MTEF. In addition, Government in 2010 commenced the process of putting in place a robust institutional framework for the management of accruals into the excess crude account. This led to the passage of the Nigerian Sovereign Investment Authority Act, 2011. The Act seeks to effectively channel the funds accruing from sale of crude oil over and above the budget benchmark into a Future Generations Fund, Nigeria Infrastructure Fund, and a Stabilization Fund. The Petroleum Industry Bill (PIB), which is receiving attention by the respective arms of government, when passed is expected to enhance transparency in the oil sector.

The overall Balance of Payments improved in 2011 from a deficit of N1,491.5 billion or 5.97% of GDP to a surplus of N40.34 billion owing to the sustained rise in crude oil prices in the international market and increased financial remittances from Nigerians in Diaspora. The external reserves stood at US$34.64 billion at end-December, 2011. This could finance 6.5 months of imports as against the standard international requirement of 3 months. Though the Naira depreciated on the average, at the official Wholesale Dutch Auction System (WDAS) and the inter-bank market, the gap between the two was still within the tolerable limit of 5%. The average exchange rate was N153.85 per US dollar in 2011 compared with N149.74 per US dollar in the preceding year. The end-period exchange rate depreciated from N150.66 per US Dollar in 2010 to N158.27 per US dollar in 2011.

Broad money supply (M2), grew by 23.35% in 2011, much lower than the 29.3% target for the fiscal year. The increase in money supply was largely driven by the rise in the foreign assets net of the banking system.

The CBN sustained the reforms in the Nigerian banking sector in 2011. The reforms include the withdrawal of universal license, the categorization of banks into international, national, and regional banks to offer commercial, merchant and specialized banking services.

The Assets Management Corporation of Nigeria (AMCON) which commenced operations in 2010 acquired the non-performing loans in the banking system. AMCON issued N1.74 trillion bonds, which were guaranteed by the FGN through the DMO. Three (3) banks were nationalized and taken over by AMCON in 2011. The non-interest banking, which seeks to widen the scope of financial services available to the banking public got a boost with the commencement of the operation of JAIZ Bank, a private bank.

Government's commitment to increased private sector participation in agriculture was boosted with the launching of Nigeria Incentive-Based Risk Sharing System for Agricultural Lending (NIRSAL) by the Federal Government in 2011.

CHAPTER THREE

PUBLIC DEBT PORTFOLIO REVIEW: 2007 - 2011

3.1 Total Public Debt Outstanding

Nigeria's total public debt stock rose sharply in the last three years up to 2011. The external and securitized domestic debt of the Federal and State Governments was US$47,898.11 million at the end of 2011, representing an increase of US$7,798.11 million or 19.45 per cent percent over the level at the end of 2010. The total domestic debt stock of the FGN was US$35,882.86 million or 74.92 per cent of the total public debt stock, while the total domestic debt of the sub-nationals was US$6,348.57 million or 13.25 per cent. Altogether, the total domestic debt of the Federal and State governments was US$42,231.43 million or 88.17 per cent of total debt, while the remaining 11.83 per cent of the total represent external debt. The share of the domestic debt has continued to dominate the trend in the total public debt since 2007 (Table 3.1).

Table 3.1: TOTAL PUBLIC DEBT OUTSTANDING, 2007-2011 (US$ MILLION)

Type	2007	2008	2009	2010	2011
External Debt Stock	3,654.21	3,720.36	3,947.30	4,578.77	5,666.58
% share of Total Debt	*(16.44)*	*(17.39)*	*(15.29)*	*(11.42)*	*(11.83)*
As % of GDP	*(2.23)*	*(1.82)*	*(2.37)*	*(2.01)*	*(2.38)*
Domestic Debt Stock	18,575.67	17,678.55	21,870.12	30,514.33	35,882.86
% share of Total Debt	*(83.56)*	*(82.61)*	*(84.71)*	*(76.10)*	*(74.92)*
As % of GDP	*(11.31)*	*(8.65)*	*(13.13)*	*(13.39)*	*(15.07)*
States Domestic Debt	NA	NA	NA	5,006.90	6,348.57
%share of Total Debt	0	0	0	*(12.48)*	*(13.25)*
As % of GDP				*(2.20)*	*(2.67)*
TOTAL	**22,229.88**	**21,398.91**	**25,817.42**	**40,100.00**	**47,898.11**
As % of GDP	***(13.54)***	***(10.47)***	***(15.50)***	***(17.20)***	***(20.12)***

The total public debt stock as a percentage of GDP maintained a rising trend from 10.47 per cent in 2008 to 20.12 per cent in 2011. However, compared to the global threshold of 40 per cent set for medium performers, Nigeria's debt stock remained within sustainable limits.

3.2 Total Public Debt Service Payments

Total public debt service payments (external and domestic debt service of FGN and States) for the year 2011 amounted to US$5,262.85 million, representing 14.11 percent of GDP as against US$4,153.34 or 12.22 per cent of GDP in 2010. Of the total debt service payments in 2011, 93.32 per cent was used for FGN and States domestic debt service payments, while the balance of 6.68 per cent went to external debt service.

Over the period of 2007 to 2011, the external debt service payments shown a steady downward trend, while that of the domestic debt rose significantly. The downward trend in the external debt service payments is largely due to Government policy to depend more on the concessional windows for external financing and the reliance on the domestic bonds market to meet the bulk of the FGN's borrowing requirements since 2007.

TABLE 3.2: TOTAL PUBLIC DEBT SERVICE PAYMENTS, 2007-2011 (US$ MILLION)

Type	2007	2008	2009	2010	2011[1]
External Debt Service *(% of share Total)*	1,022.04 *(32.09)*	464.63 *(11.46)*	428.04 *(18.33)*	354.42 *(8.53)*	351.62 *(6.68)*
Domestic Debt Service *(% of share Total)*	2,162.91 *(67.91)*	3,590.67 *(88.54)*	1,907.45 *(81.67)*	2,373.98 *(57.16)*	3,429.42 *(65.16)*
States Domestic Debt Service *(% share of Total)*	NA 0	NA 0	NA 0	1,424.94 *(34.31)*	1,481.81 *(28.16)*
TOTAL	**3,184.95** (100)	**4,055.30** (100)	**2,335.30** (100)	**4,153.34** (100)	**5,262.85** (100)

[1] Official CBN Exchange Rate of ₦156.7/US$1 as at 31/12/11

3.3 External Debt Stock

Total external debt stock outstanding as at 31st December 2011 was US$5,666.58 million, reflecting an increase of US$1,087.81 million or about 24 percent over the US$4,578.77 million in 2010 (Table 3.3). The increase was due to additional disbursements on existing loans and the US$500 million Eurobond issuance, as well as net adverse cross exchange rate movements between the different currencies in the external loan portfolio.

Trends in Nigeria's external debt stock over the five-year period ending 2011 revealed a gradual increase, with the highest annual increment of 24 per cent occurring in 2011.

TABLE 3.3: EXTERNAL DEBT OUTSTANDING BY SOURCE, 2007-2011 (US$ Million)

CREDITOR CATEGORY	2007	2008	2009	2010	2011[1]
A. Official					
1. Bilateral: Non-Paris Club	184.90	182.42	181.60	163.20	453.83
2. Multilateral	3,080.91	3,172.87	3,504.51	4,217.76	4,568.92
Sub-Total	**3,265.81**	**3,355.29**	**3,686.11**	**4,380.96**	**5,022.75**
B. Private					
1. Eurobond	0.00	0.00	0.00	0.00	500.00
2. Other Commercial	388.40	365.07	261.19	197.81	143.82
Sub-Total	**388.40**	**365.07**	**261.19**	**197.81**	**643.82**
Grand Total	**3,654.21**	**3,720.36**	**3,947.30**	**4,578.77**	**5,666.57**
Source as % of Total					
A. Official					
1. Bilateral: Non-Paris Club	5.06	4.90	4.60	3.56	8.01
2. Multilateral	84.31	85.28	88.78	92.12	80.63
Sub-Total	**89.37**	**90.19**	**93.38**	**95.68**	**88.64**
B. Private					
1. Eurobond	0.00	0.00	0.00	0.00	8.82
2. Other Commercials	10.63	9.81	6.62	4.32	2.54
Sub-Total	**10.63**	**9.81**	**6.62**	**4.32**	**11.36**
Grand Total	**100.00**	**100.00**	**100.00**	**100.00**	**100.00**

1. Official CBN exchange rate of US$1/N156.7 as at 31/12/2011

3.4 External Debt Service Payments

The total external debt service payment was US$351.61 million in 2011. This was lower than the US$354.41 million paid in 2010 by US$2.80 million or 0.79 percent. The fall was due to the repayment of principal on Non-Paris Club commercial loans in 2011 and the full redemption of some maturing IBRD and Non-Paris Club loans in the preceding year.

Table 3.4: EXTERNAL DEBT SERVICE PAYMENTS, 2007–2011 (US$ MILLION)

CREDITOR CATEGORY	2007	2008	2009	2010	2011
A. Bilateral					
1. Non-Paris Club	27.48	6.63	12.66	24.18	51.52
2. Multilateral	392.77	380.63	260.52	212.61	172.27
Sub-Total	**420.25**	**387.26**	**273.18**	**236.79**	**223.79**
B. Private					
1. London Club (Oil Warrants)[1]	102.59	41.72	41.72	41.72	41.72
2. Promissory Notes	476.6	0.00	0.00	0.00	0.00
3. Others (including Non-Paris Commercial Debts)	22.60	35.65	113.13	75.90	69.23
4. ICM (Euro Bond)	0.00	0.00	0.00	0.00	16.87
Sub-Total	**601.79**	**77.37**	**154.85**	**117.62**	**127.82**
Grand Total	**1,022.04**	**464.63**	**428.04**	**354.41**	**351.61**

[1]Payments made to London Club debt were in respect of Oil Warrants **only**, as there has been no London and Paris Clubs debts since 2007.

3.5 Federal Government Domestic Debt Stock

The FGN securitized total domestic debt outstanding amounted to N5,622.84 billion end-2011, compared to N4,551.82 billion end-2010, reflecting an increase of 23.52 percent (Table 3.5). Of this amount, FGN bonds amounted to N3,541.2 billion or 62.98 per cent, the NTBs was N1,727.91 billion or 30.73 per cent, while Treasury Bonds accounted for the balance of N353.73 billion or 6.29 per cent. Table 3.5 shows that the stock of FGN's domestic debt rose steadily since 2007. The increase over the years is attributed to the funding of the budget deficit and refinancing of the maturing debt obligations, as well as issuances of bonds for special projects including the funding of Nigerian Cotton & Textile Garment Development Scheme, the Commercial Agriccultural Credit Scheme, Airport and Outer Northern (Kubwa Road) and Express Ways in Abuja.

TABLE 3.5: TREND OF DOMESTIC DEBT OUTSTANDING BY INSTRUMENTS, 2007 – 2011 (₦ BILLION)

INSTRUMENTS	2007	2008	2009	2010	2011
FGN BONDS	1,186.16	1,445.60	1,974.93	2,901.60	3,541.20
NIGERIAN TREASURY BILLS	574.92	471.93	797.48	1,277.10	1,727.91
TREASURY BONDS	407.93	402.26	392.07	372.90	353.73
DEVELOPMENT STOCK	0.62	0.52	0.52	0.22	-
PROMISSORY NOTE	-	-	63.03	-	-
TOTAL	**2,169.63**	**2,320.31**	**3,228.03**	**4,551.82**	**5,622.84**

3.6 FGN Domestic Debt Service Payments

The total domestic debt service payments was ₦537,390.57 million in 2011. Comparative analysis of Table 3.6 shows that this is about 51.75 percent higher than the level in 2010. The total domestic debt service payments as a percentage of the total domestic debt stock outstanding was 9.56 percent in 2011, which was higher than the 7.78 percent recorded in 2010. The increase in debt service-to-debt stock ratio is due to the rise in the cost of borrowing in the domestic debt market, following successive increases in the CBN's benchmark monetary policy rate (MPR) in the course of the year. The CBN raised the MPR from 6.25% to 12% in 2011.

TABLE 3.6: DOMESTIC DEBT SERVICE PAYMENTS, 2007 - 2011 (₦ MILLION)

INSTRUMENTS	2007	2008	2009	2010	2011
NTBs	47,815.83	43,556.22	38,788.80	65,070.20	186,723.14
FGN Bonds	143,668.39	261,403.33	193,787.57	231,112.92	293,794.55
FGN Special Local Contractors' Debt	13,179.26	111,315.90	0.00	0.00	0.00
Treasury Bonds	38,504.01	44,890.50	48,898.78	57,597.63	56,639.13
Development Stock	85.50	169.88	65.00	346.25	233.75
Pension Arrears	9,375.00	9,939.91	0.00	0.00	0.00
TOTAL DEBT SERVICE	**252,627.99**	**471,275.74**	**281,540.15**	**354,127.00**	**537,390.57**

Note: Debt service excludes refinanced FGN Bonds worth N233.67 billion

3.7 COMPOSITION OF STATES GOVERNMENTS' DOMESTIC DEBT BY MATURITY STRUCTURE

The total domestic debt of the 36 States in 2011 was N994.82 billion as against N796.19 billion in 2010, indicating an increase of 24.95 percent. The increase was due to accumulation of arrears and new issuance of bonds in the capital market by some State Governments. Data analysis show that there was a notable change in tenor as the share of short-term debt dropped from 86 per cent in 2010 to 68 per cent in 2011, while the share of the medium/long-term debts increased from 14 per cent in 2010 to 32 per cent in 2011. This is an indication of some of the positive results of the DMO's capacity building efforts towards effective debt management at the sub-national levels over the years.

TABLE 3.7: STATES' DOMESTIC DEBT BY MATURITY (IN NAIRA)

DESCRIPTION	2010	2011
SHORT-TERM DEBT	684,685,106,586.66	680,836,846,573.59
MEDIUM/LONG-TERM	111,500,000,000.00	313,984,328,626.84
TOTAL	**796,185,106,586.66**	**994,821,175,200.43**
% of Short-term debt to Total	86%	68%
% of Med/Long-Term Debt to Total	14%	32%

CHAPTER FOUR

UNDERLYING ASSUMPTIONS OF 2012 DSA

This chapter analyses the different assumptions underlying the three scenarios – Baseline, Optimistic and Pessimistic- in the 2012 DSA.

4.1 Baseline Scenario Assumptions

The underlying macroeconomic assumptions are anchored on the 2012 Federal Government Budget, the MTEF and the Transformation Agenda of the Federal Government. The assumptions are summarized in Box 2.

Box 2: Macroeconomic Assumptions in the Baseline Scenario

Real GDP Growth Rate: Real GDP is projected to grow by 7.2 % in 2012 and by averages of 7.7% and 6.7% in the medium-term (2012-2016) and long-term (2017-2032), respectively. Growth would be driven largely by the non-oil sector, which is expected to contribute more than 95% of the overall growth during the projection period of 2012-2032. The expectation of robust growth in the projection period is based on the assumption that Government would continue to focus attention on creating the enabling environment for active participation of the private sector in key growth sectors of the economy. The key growth sectors are agriculture, manufacturing, oil and gas, power, transport, solid minerals, housing, and trade and investment.

Inflation Rate (Headline Year-on-Year): The 2012 DSA adopted the single digit inflation in the immediate term as in the 2012 FGN Budget. It also applied single digit inflation in the medium to long term, on the assumption that the positive impact of various policy initiatives in the real sector coupled with the effects of the on-going fiscal consolidation and its coordination with monetary policy actions would help stabilize inflation expectations within the single digit corridor.

Crude Oil Production: This is projected at 2.48 million barrels per day (mbpd) for 2012, 2.55mbd for 2013, and to average 2.9mbpd from 2014 to 2032. These assumptions are based on expected and sustained investment in crude oil exploration and relative peace in the oil producing areas of the Niger Delta following successful implementation of the Presidential Amnesty Programme, as well as the expected gradual recovery of the global economy as from 2016 with implications for increased demand for crude oil.

Crude Oil Benchmark Price: The US$72 per barrel used for 2012 FGN's Budget was adopted, while the price in 2013-2032 is projected to range from US$70 to US$75 per barrel, in line with best forecast on global oil markets.

Current Account Position: The current account balance (CAB) is projected to remain in surplus on the strength of higher export of goods and services due to expected increase in non-oil exports. The change in CAB as a per cent of GDP is estimated at 3.4% in 2012, but would average about 2.1% in the medium-term and about 1.2% of GDP in the long-term. Exports of goods and services are estimated to reach 42% of GDP on the average during the projection period. Imports of goods and services are projected to slow from 34% in 2011 to an average of 32% of GDP by the end of 2032 in response to on-going agricultural and import substitution policy initiatives of the Government during the period.

Budget Deficit for the Federal Government: Based on the fiscal consolidation programme of the FGN, the overall balance is projected at 2.74% of GDP in 2012, which would slow-down to 1.6% of GDP by 2016. Consequently, the fiscal primary balance is projected at 1.33% of the GDP in 2012, and drops to 0.62% of GDP by 2016.

Nominal Exchange Rate of Naira: Projected at N155.00/US$1 for 2012, and expected to remain same on the average during 2012-2016.

4.2 Optimistic Scenario Assumptions

The macroeconomic assumptions under the Optimistic scenario are based on the aspirations of the Federal Government as articulated in the Vision 20:2020 programme. These assumptions are summarized as follows:

Box 3: Macroeconomic Assumptions - Optimistic Scenario

Average Real GDP Growth Rate: Assumed a real GDP growth rate of 8.23% for 2012 and an average of 10.86% per annum for 2013-2032. Real growth is programmed to be driven largely by the non-oil sector, with the non-oil exports playing a key role, while the share of crude-oil exports is estimated to decline during the programme period.

Inflation Rate: Applied a single-digit headline inflation of 9.5% for 2012-2032. This is based on the assumption of effective implementation of non-inflationary fiscal and monetary policies during the programme period.

Budget Oil Price: Projected to average US$72pb in 2012, and range between US$76.50 and US$80.00pb from 2013 to 2032

Crude Oil Production: Projected at 2.5mbpd for 2012, and to average 3.6mbpd over 2013-2032.

Budget Deficit for the Federal Government: Estimated at 2.74% of the GDP in 2012, which would reduce to 1.6% by 2016. The primary fiscal balance as a per cent of GDP is estimated at 1.33%, which will drop to 0.6 % by end-2016.

Current Account Position: Is projected at 7.5% of GDP in 2012 up from 7.0% in 2011. This is estimated to average 9.0% and 10.0% of GDP in the medium and long term, respectively. Growth in current account surplus will be driven by the exports of goods and services which are projected to average 43% of GDP, while imports of goods and services are expected to stand at about 31.0% of GDP during the programme period.

Nominal Exchange Rate: From 2012 to 2016, the exchange rate is projected to stabilize at about N 155.00/US$. This is anchored on expected effective coordination of monetary and fiscal policies actions and reduced import of food items and non-capital goods.

4.3 Pessimistic Scenario Assumptions

The macroeconomic assumptions under this scenario is based on declining crude oil prices and weakening non-oil revenue base, which will lead to overall reduction in the revenue profile of the Government during the programme period.

Box 4: Macroeconomic Assumptions in the –Pessimistic Scenario

Average Real GDP Growth Rate: Assumed a real GDP growth rate of 6.75% for 2012, and an average of 4.71% per annum from 2013 to 2032. The slowdown will be due to adverse weather condition for agricultural production and excess crude oil supply at the international market, weak global demand and economic recession.

Inflation Rate: A double digit inflation rate of 13% is assumed for 2012, which is expected to reach an average of 18.5% in 2013-2032, due to poor performance of the key productive sectors and weak coordination between fiscal and monetary authorities leading to unstable macroeconomic environment.

Crude Oil Price: Projected at US$72pb for 2012, drops to US$50pb in 2013 and averages US$43.02pb for the rest of the programme period of 2014 to 2032 due to the effects of weak demand and economic recession.

Crude Oil Production: Projected at 2.48mbpd for 2012 but to average 1.80mbpd in 2013-2016 owing to relative insecurity in the oil producing regions of the country coupled with weak demand in the international crude oil market.

Budget Deficit of the Federal Government: Projected at 2.74% of GDP for 2012 and to range from 2.43% to 2.97% of GDP in 2013-2016. Consequently the ratio of primary deficit to GDP is estimated at 1.33% in 2012 and to range between 1.2% and 1.9% in 2013-2016.

Current Account Balance: Current account surplus is projected at 8.6% of GDP from 2012 to 2016, reflecting average imports and exports of goods and services of about 38% and 46% of GDP between 2012 and 2016, respectively.

Nominal Exchange Rate of the Naira: The exchange rate is programmed to depreciate to N186.08/US$ by 2032

Table 4.1: Selected Macroeconomic Variables (Actual and Projected) - Baseline

S/N	**Macroeconomic Variable**	**2009**		**2010**		**2011**		2012	2013	2014	2015	2016
		Projected	**Actual**	**Projected**	**Actual**	**Projected**	**Actual**					
1	Real GDP Growth	6.9	7.0	8.2	7.9	7.0	7.36	7.2	7.6	7.8	7.9	7.8
2	Inflation Rate	12.4	11.9	9.5	11.5	9.5	10.8	9.5	9.5	9.5	9.5	9.5
3	Oil Price	45.0	62.1	60.0	60.0		75	72	70	70	70.0	72.0
4	Crude Oil Production {mbpd}	2.3		2.2		2.3		2.48	2.55	2.57	2.60	2.60
5	Nominal Exchange Rate $=N	-	149.5	-	150.6		153.8	155.0	155.0	155.0	155.0	155.00
6	Ratio of FGN's Budget Deficit to GDP	-3.3	-6.6	-6.7	-6.06	-2.96	-3.86	-2.74	-2.14	-1.51	-1.13	-1.61
7	Ratio of FGN's Capital Expenditure/GDP {%}	4.1	4.6	6.0	3.0		11.1	10.0	9.2	8.2	7.1	7.7
8	Current Account Position {$bn)	-	13.3		2.5	-	18.8	25.28	28.19	32.52	38.25	48.88
9	Foreign Capital Inflow {$ bn)	-	11.6	-	9.64		12.37	12.87			16.70	23.36
10	External Reserve ($) bn)	-	42.4		32.3	-	32.34	32.34	32.34	32.34	32.34	32.34

CHAPTER FIVE

RESULTS ANALYSIS

The analysis is presented in three integrated steps. It begins with the baseline that is hinged on existing Government policies. To reaffirm the robustness of the baseline results, the alternative scenarios and the standard stress tests as contained in the DSA template were applied. This is followed by the pessimistic scenario, which captures country-specific issues, such as the effects of a sharp fall in crude oil price on revenue and other debt burden indicators. The last major presentation is the optimistic scenario, which is based on robust macroeconomic assumptions. The results of the overall analysis show that Nigeria remains at a low risk of debt distress, but appears vulnerable to revenue shocks. Accordingly, the report strongly advices on the need to increase the non-oil sources of revenue in order to strengthen the revenue base and mitigate risks to debt sustainability in the medium term.

5.1 BASELINE SCENARIO

The baseline analysis is premised on the assumptions of the 2012 Federal Government Budget, the MTEF and the Transformation Agenda (2011-2015) of the administration.

5.1.1 External Debt Sustainability

Federal and States: Solvency Indicators

The result obtained based on the assumptions that key macroeconomic gains in the recent years would be sustained, indicates that Nigeria is at a low risk of debt distress. The result is more favourable than the one obtained in 2011 (Box 5 and Figure 5.1). In particular, the Present Value (PV) of External Debt-to-GDP ratio is estimated at 2.5% and 2.9% in 2012 and 2016, respectively. Based on the projected external borrowings, it is expected to increase to 3.7% in 2022 before dropping to 2.0% by 2032. The PV in the medium term (2012-2016) averaged 2.7%, while the long-term ratio (2017-2032) stood at 3.2%, still very well below within the indicative threshold.

Based on the assumption that Nigeria's stock of external reserves would continue to support more than six months of its import requirements as in the previous years, the PV of debt-to-exports ratio is projected at 6.1% and 6.8% in 2012 and 2016, respectively. It is expected to rises to 8.9 percent in 2022 before dropping to 4.6 percent in 2032. The medium and long-term ratios are 6.6 and 7.5 per cent, respectively. All these indicate a strong debt sustainability outlook when compared to the 150 per cent threshold.

The PV of debt-to-revenue ratio based on the assumption of a budget oil price of US$72 pb shows a healthy outlook. The ratio rose initially to reach 16.3, 21.0 and 47.3 percent in 2012, 2016 and 2022, respectively and thereafter trended downward to 44.4 percent in 2032. The medium and long-term PV of debt-to-revenue ratios are within the indicative threshold of 250 per cent.

Box 5: External Debt Sustainability Indicators, the Baseline Scenarios (Federal and States) in Percent

Description	Threshold	DSA Result					Medium	Long
		2012	2013	2016	2022	2032	2012-2016	2017-2032
PV of Debt/GDP (FS)	40	2.5	2.6	2.9	3.7	2.0	2.7	3.2
PV of Debt/GDP (F)	*40*	*2.5*	*2.6*	*2.9*	*3.7*	*2.0*	*2.7*	*3.2*
PV of Debt/Export (FS)	150	6.1	6.4	6.8	8.9	4.6	6.6	7.5
PV of Debt/Export (F)	*150*	*6.1*	*6.4*	*6.8*	*8.9*	*4.6*	*6.6*	*7.5*
PV of Debt/Rev. (FS)	250	16.3	16.6	21.0	47.3	44.4	18.1	45.3
PV of Debt/Rev (F)	*250*	*30.1*	*31.4*	*41.3*	*92.1*	*93.5*	*34.5*	*90.1*
Debt Service/Exports (FS)	20	0.3	0.3	0.3	0.5	0.5	0.3	0.5
Debt Service/Exports (F)	*20*	*0.3*	*0.3*	*0.3*	*0.5*	*0.5*	0.3	0.5
Debt Service/Rev (FS)	30	0.8	0.8	0.9	2.7	5.2	0.9	3.5
Debt Service/Rev (F)	*30*	*1.5*	*1.6*	*1.7*	*5.3*	*10.9*	*1.6*	*7.1*

Note: FS means FGN and States, while F refers to FGN Only

Federal and States: Liquidity Indicators

The liquidity burden indicators did not show any breach of the established thresholds (Box 5). Specifically, the debt service-to-export ratio averaged 0.3 and 0.5 percent, while the debt service-to-revenue averaged 0.9 and 3.5 per cent in the medium and long-term, respectively.

5.1.2 Fiscal Sustainability

Federal and States: Solvency and Liquidity Indicators

The result shows that solvency indicators are within sustainable limits, even though the liquidity ratio (debt service to revenue ratio) temporarily breached the indicative threshold in 2013. The average debt service-to-revenue in the medium and long-term did not exceed the threshold (Box 6 and Table 1a).

Box 6: Debt Sustainability Indicators under the Baseline Scenarios (Federal and States & FGN Only) in Percent								
Description	Benchmark	DSA Result					Medium Term	Long Term
		2012	2013	2016	2022	2032	2012-2016	2017-2032
PV of Debt/GDP (FS)	40	20.2	18.0	13.0	8.1	3.0	16.4	7.0
PV of Debt/GDP (F)		*17.9*	*16.1*	*12.3*	*7.5*	*2.6*	*14.9*	*6.5*
PV of Debt/Rev. (FS)	250	125.8	111.4	91.5	96.5	61.8	105.4	88.0
PV of Debt/Rev. (F)		*211.0*	*192.7*	*175.5*	*182.7*	*119.2*	*186.7*	*170.8*
Debt Service/Rev (FS)	30	15.7	35.2	9.4	14.8	8.8	20.2	10.8
Debt Service/Rev (F)		*29.7*	*68.1*	*18.9*	*30.2*	*20.1*	*39.2*	*22.7*

Federal Only: External and Fiscal Sustainability

Solvency and Liquidity Indicators

The results of the analysis on the Federal Government (FGN only) debt stock also show that the debt burden indicators are within sustainable limits (Boxes 5 and 6). However, the revenue ratios though within threshold, appear less sustainable when compared with the result obtained under the combined Federal and States analysis.

5.1.2: Standard Stress Test Result for Combined Federal and State Governments

The results of the baseline scenario are re-examined under alternative scenario[1] and stress tests[2] to assess robustness to shocks (Figures 1 & 2). The results obtained under the stress tests do not violate the indicative thresholds as all ratios are well within limits. The most extreme stress test, which yields the highest debt service-to-revenue ratio (about three times the baseline ratio) due to the negative influence of exports shock in 2022, did not surpass the indicative debt burden threshold. It maintained a flat trend from 2022 to the end of the projection period

[1] The alternative scenarios are A1 which assumed real GDP growth and primary balance at their historical averages; and A2 is the primary balance of the budget left unchanged from the 2012 level; while A3 is the GDP kept permanently lower than the baseline.

[2] The standard stress test comprised B1, B2, B3, B4, B5 and B6 shocks. B1 is Real GDP growth at historical average minus one standard deviation in 2013-2014; B2 is Export value growth in historical average minus one standard deviation, B3 is US Dollar GDP deflator at historical average minus one standard deviation in 2013-2014; B4 is Net non-debt-creating flows at historical average minus one standard deviation in 2013-2014; B5 is Combination of B1-B4 using one-half standard deviation shocks; B6 is one-time 30 percent nominal depreciation relative to the baseline in 2013.

(Figure 5.1f and Table 3b). Furthermore, even when new public sector loans were assumed to have been acquired on less favourable terms, the thresholds are not violated. Borrowing on less favourable terms assumes that interest rate on new borrowing is 200 basis points higher than in the baseline. Also when export value growth is kept at its historical average minus one standard deviation in 2013-2032, the PV of debt-to-revenue ratio managed to reach its highest point of 155.0 per cent in 2022 compared with the threshold of 250 per cent.

The fiscal sustainability analysis shows that the results of A1 under PV of debt-to-GDP and debt service-to-revenue ratios are not significantly different from the baseline result. While A1 under PV of debt-to-revenue was consistently higher than the baseline it remained within the indicative benchmark. A2 and A3 are also consistently higher than the baseline in all the three ratios, while A2 under the PV of debt-to-revenue category exceeds the 250 per cent threshold in 2032 (Table 2a).

The primary balance (B2) and most extreme growth shock (B3), which is the combined shocks of B1 and B2 using one half standard deviation stress test remained persistently above the baseline most of the years in the projection period (Figure 2). The analysis suggests that even though the results of the standard shocks to baseline are broadly within the indicative thresholds, the baseline appears vulnerable to revenue shocks. Against this background, an additional oil price shock analysis is applied under a more pessimistic assumption.

5.2 PESSIMISTIC SCENARIO: Country-Specific Alternative Scenario

The Country-Specific Alternative Scenario considers the impact of a lower Crude Oil Price (Boxes 7 and 8). This scenario illustrates the effects of a fall in oil price benchmark from USD72.00 in the baseline to a range of USD50.00 to USD42.00 pb on the debt burden indicators.

Box 7: External Sustainability Indicators under Country-Specific Alternative Scenario (FGN Only)								
Description	Threshold	DSA Result					Medium Term	Long Term
		2012	2013	2016	2022	2032	2012-2016	2017-2032
PV of Debt/GDP	40	2.8	3.5	5.1	7.7	5.5	4.0	6.8
PV of Debt/Export	150	6.0	7.4	10.2	14.2	9.2	8.4	12.5
PV of Debt/Revenue	250	32.1	60.8	95.6	170.3	166.8	67.8	159.9
Debt Service/Exports	20	0.3	0.3	0.4	0.8	1.0	0.3	0.9
Debt Service/Revenue	30	1.5	2.6	3.4	10.1	18.1	2.8	12.7

5.2.1 External Debt Sustainability

Solvency and Liquidity Indicators

The result shows that external debt sustainability indicators are not impaired by the additional oil price shock due to the overwhelming influence of the size of concessional loans in the external debt portfolio and robust real GDP growth. The three solvency indicators (PVs of Debt-to-GDP, Debt-to-Exports and Debt-to-Revenue) are well below their respective thresholds of sustainability. However, all the ratios show rising trends, peak in 2022 and thereafter slide down by end-2032.

The liquidity indicator, (debt service-to-revenue ratio) shows a rising trend till end-2032, but well within limit. Similarly, debt service-to-export ratio remains stable within the indicative threshold during the projection period.

5.2.2 Total Debt Sustainability

Solvency and Liquidity Indicators

The analysis of fiscal sustainability, which is designed against the back-drop of a much lower budget oil price, shows mixed results (Box 8). The PV of Debt-to-GDP ratio remains within the benchmark, due to the assumption of continued fiscal consolidation and strong economic growth. The PV of debt-to-revenue ratio and debt service-to-revenue ratio worsen as the primary balance is kept unchanged from the 2012 level. The ratio also worsens if the primary balance and the GDP are kept at their historical averages under the bound tests.

In particular, the trend analysis shows that the PV of Debt-to-Revenue ratio breaches the 250% indicative benchmark, except in 2012 (213 percent). Debt service-to-revenue ratio also breaches the benchmark 59.5 percent in 2013 and 2022 rising from 29.7 percent 2012, drops below the benchmark in 2016 and rises to about 30.0 per cent in 2032. In addition, the average debt service-to-revenue ratio in the medium and long term exceeds the benchmarks.

The violation of the benchmarks, attributable to the effects of the fall in crude oil prices below USD 50.00 pb, is a wakeup call for urgent and necessary policy actions to further strengthen contribution of non-oil revenue to the revenue base of the country in order to check threats to debt sustainability.

Box 8: Fiscal Sustainability Indicators under An Additional Alternative Scenario (FGN Only)

Description	Threshold	DSA Result					Medium Term	Long term
		2012	2013	2016	2022	2032	2012-2016	2017-2032
PV of Debt/GDP	40	18.6	17.5	17.7	13.9	8.5	17.6	12.7
PV of Debt/Rev.	250	213.0	300.9	327.7	301.1	255.5	286.3	287.3
Debt service/Rev	30	29.7	59.5	27.9	35.0	29.5	39.7	30.0

5.3 OPTIMISTIC SCENARIO (External and Fiscal Debt Sustainability)

The result of the optimistic scenario, which is based on key assumptions of the Vision 20:2020, indicates that all debt burden indicators are within the indicative threshold (Boxes 8 and 9).

Box 9: External Sustainability Indicators under the Optimistic Scenario

Description	Threshold	DSA Result					Medium Term	Long Term
		2012	2013	2016	2022	2032	2012-2016	2017-2032
PV of Debt/GDP	40	2.7	3.1	3.3	2.4	0.7	3.2	1.9
PV of Debt/Export	150	6.5	7.3	8.0	5.9	1.7	7.6	4.7
PV of Debt/Revenue	250	32.2	35.2	47.6	80.3	79.4	39.9	77.4
Debt Service/Exports	20	0.3	0.3	0.6	0.3	0.2	0.3	0.3
Debt service/Revenue	30	1.5	1.5	1.8	4.6	8.7	1.7	6.0

5.3 .1 Optimistic: External Debt Sustainability (Federal Only)

Solvency Indicators

The results of the external debt sustainability analysis show robust outlook throughout the projection period. The analysis indicates a down-ward trending of the PV of debt to GDP ratio from 2.7 per cent in 2012, to 2.4 per cent in 2022 and to about 1.0 per cent by 2032 (Box 9). The most extreme stress test (combination of B1 to B4) depicts a PV of debt-to-GDP ratio rising from 2.7 percent in 2012 to 10.1 percent in 2022, and thereafter drops to 2.1 percent in 2032.

The PV of debt to export ratio, which has a threshhold of 150 per cent shows that the ratio moves from 6.5 per cent in 2012 to 8.0 per cent in 2016 and later to 5.9 per cent in 2022 following planned increase in non-oil exports during the projection period. All the ratios indicated no breach of the required threshold. The most extreme shock reveals a sharp rise in the ratio from 6.5 per cent in 2012 to 75.4 per cent in 2016, drops significantly to 36.8 per cent in 2022, and further to 7.4 per cent in 2032.

The PV of debt-to-revenue ratio on the other hand, shows a rising trend but remains within sustainable limit during the projection period. The ratio is projected at 32.2 percent by end of 2012, and peaks at 80.30 per cent in 2022 before declining marginally to 79.4 percent in 2032. The extreme stress test also indicates a rising trend from 32.2 per cent in 2012 to 331.4 per cent in 2022, which temporarily breach the 250 percent threshold, before dropping to 228.8 per cent to stay within limit in 2032.

Liquidity Indicators

The external debt service-to-export ratio in the baseline scenario shows a robust outcome during the projection period of 2012 - 2032. The ratio is projected at 0.3 percent by end of 2012 and 0.2 per cent in 2032.

The debt service to revenue ratio was also within its indicative threshold. The ratio is projected at 1.5 percent by the end of 2012, rising to 4.6 percent in 2022 and peaks at 8.7 percent in 2032. The most extreme shock combination also revealed no breach of the 30 percent threshold even though the ratio trended upward from 1.5 percent in 2013 to 25.4 percent in 2022 and further to 27.5 percent in 2032.

5.3.2 Optimistic: Total Debt Sustainability (Federal Only)

Solvency and Liquidity Indicators

Total debt sustainability shows a robust result as the PV of debt to GDP ratio trends downwards from 18.9 per cent in 2012 to 1.4 percent in 2032 showing the combined effects of the decreasing rate of debt accumulation and a higher GDP growth rate (Table 5.6). The PV of debt to revenue ratio also shows a declining trend from 223.7 percent in 2012 to 147.3 percent in 2032. The liquidity indicator was also within the indicative threshold of 30 percent (Box 10).

Box 10: Fiscal Sustainability Indicators under Optimistic Scenario								
Description	Threshold	**DSA Result**					**Medium Term**	**Long Term**
		2012	2013	2016	2022	2032	2012-2016	2017-2032
PV of Debt/GDP	40	*18.9*	*16.1*	*12.8*	*5.4*	*1.4*	*15.2*	*4.8*
PV of Debt/Revenue	250	*223.7*	*180.2*	*182.3*	*173.7*	*147.3*	*188.2*	*169.5*
Debt Service/Revenue	30	17	*35.8*	*16.1*	*20.6*	*16*	*23.7*	*17.6*

5.4 Borrowing Limit for 2013

To avoid a relapse into the experiences pre-dating the debt relief of 2005 and 2006, the Federal Executive Council (FEC) had in 2010 adopted a more restrictive country-specific debt-to-GDP benchmark of 25% for a five-year period ending 2014. It is, however, important to note also that in view of recent realities, a revised 30% benchmark is being considered to be appropriate. Notwithstanding, the 2013 borrowing space is derived in line with the 25% benchmark, following which the 2012 DSA report recommends N340.73 billion and USD4.35 billion as additional domestic and external borrowings respectively, for end-2013.

The 2013 borrowing limit is derived as follows:

i. By end-2012, the Debt-to-GDP ratio is projected at 20.2%. When compared with the 25% limit, the sustainable additional borrowing space for 2013 and 2014 is estimated at 4.8% of GDP. The proportionate additional borrowing space in 2013 is, therefore, 2.4% of GDP, bringing the expected total Debt Stock-to-GDP ratio to about 22.6% by end-2013.

ii. Given a projected nominal GDP of USD301.9 billion for Nigeria by 2013, the maximum additional borrowing space (domestic plus external) in 2013 will translate to USD7.25 billion.

iii. To be consistent with Nigeria's Medium Term Debt Management Strategy (MTDS) 2012-2015, which recommends a shift away from domestic to more external borrowing during the programme period, the USD7.25 billion maximum **additional** borrowing space for 2013, is

expected to be raised in the ratio of 0.4 and 0.6 domestic and external sources, respectively. (It is pertinent to note that the total borrowing planned in the MTEF for 2013 — USD7.49 billion — is sufficiently close to the USD7.25 billion recommended in the DSA)

iv. Against this backdrop, the Naira equivalent of the additional domestic borrowing is projected at N449.23 billion. However, when refinancing cost of N108.50 billion for maturing domestic FGN bonds in 2013 is factored into the borrowing space, the allowable limit drops to N340.73 billion.

v. The shift to more external sources of funding, which would include issuance of a Eurobond and Diaspora Bonds and possibly, borrowing from the commercial windows of the multilaterals, as well as bilateral sources could further be appreciated, when viewed in the light of the likely gains for Nigeria. These include:

a) External borrowing costs are much lower than the cost of borrowing in the domestic market. Even the most costly external borrowing type is still about 9% per annum cheaper than domestic borrowing. For concessional loans which constitute about 86% of Nigeria's external debt stock, the cost is about 13.5% per annum cheaper than the domestic cost of debt.

b) Moreover, Nigeria's external debt portfolio enjoys low currency risk exposure: over 50% of the debt is denominated in USD, and with more than 80% of the external reserves in USD, the country is adequately covered in terms of currency risk.

c) Furthermore, Nigeria's External Creditors Funding Account from where external debt service payments are made is maintained in USD, thereby helping to ringfence cross-currency risks.

d) The proposed shift away from domestic to more external borrowing would also help to slow down the rising trend in domestic debt outstanding and domestic debt service, while creating more space for the private sector to borrow from the domestic debt market.

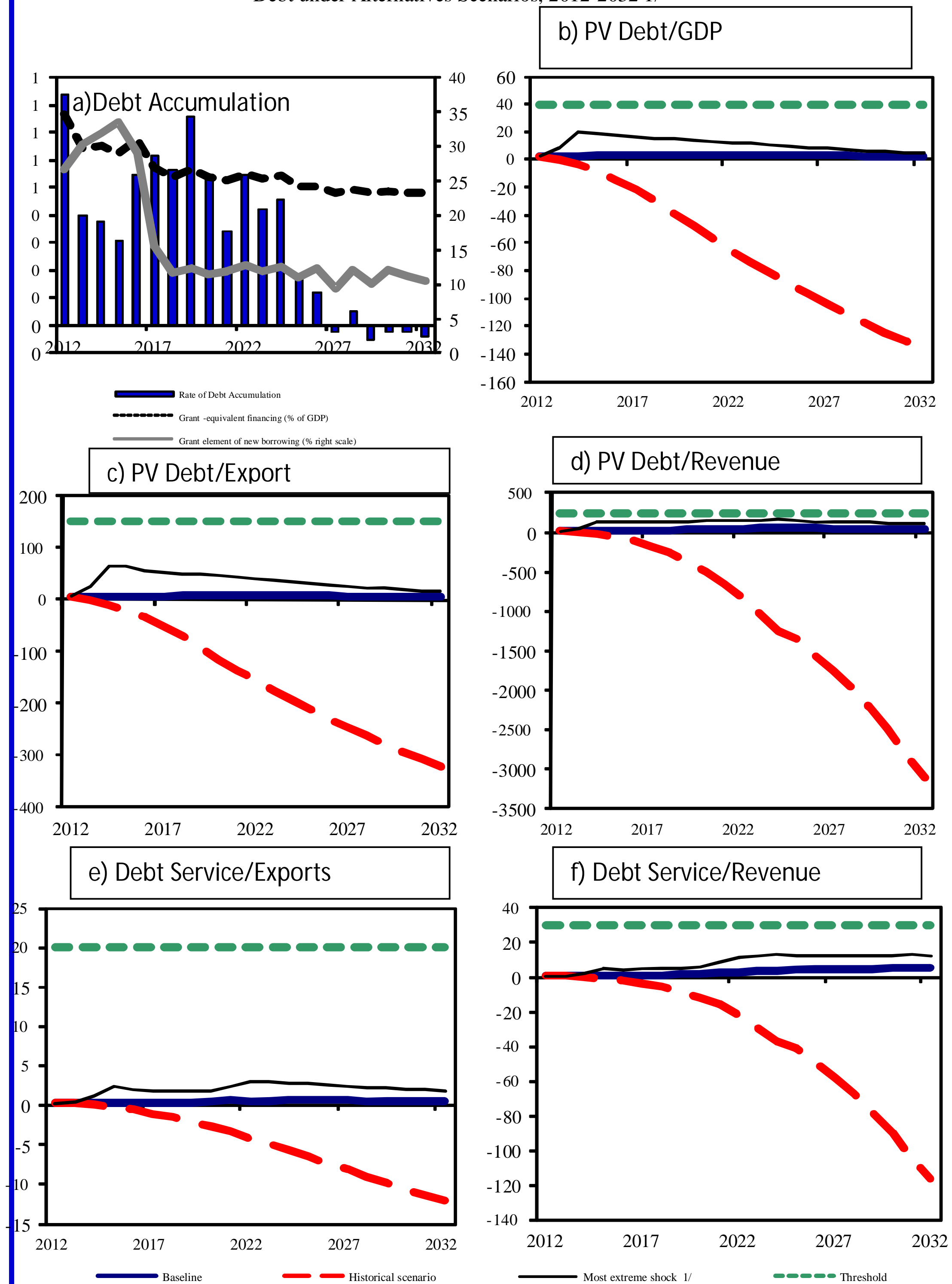
vi. In view of the various benefits derivable from shifting towards the external borrowing window as outlined above, it appears strategically plausible that much of the planned domestic borrowing under the Medium Term Expenditure Framework (MTEF) for fiscal 2013 should be substituted with external borrowing. Deliberate efforts will however be made to effectively communicate to the general public, the essence and advantages of this strategic shift in the portfolio mix.

vii. **The 2012 DSA, therefore, recommends *N340.73* billion and *USD4.35* billion as additional domestic and external borrowings, respectively for 2013.**

5.5 Conclusion

The results of the 2012 DSA under the baseline scenario reveal that Nigeria is at a low risk of debt distress. Various shocks to the baseline scenario show that the debt-to-GDP ratio remains within sustainable limits over the period. However, all the solvency and liquidity indicators under the fiscal sustainability analysis appear vulnerable to revenue shocks especially when crude oil price falls below USD50.00 pb. There is, therefore, need for Government to step-up on-going policy actions aimed at increasing the non-oil revenue based of the country in order to effectively minimise risks to debt sustainability in the medium term.

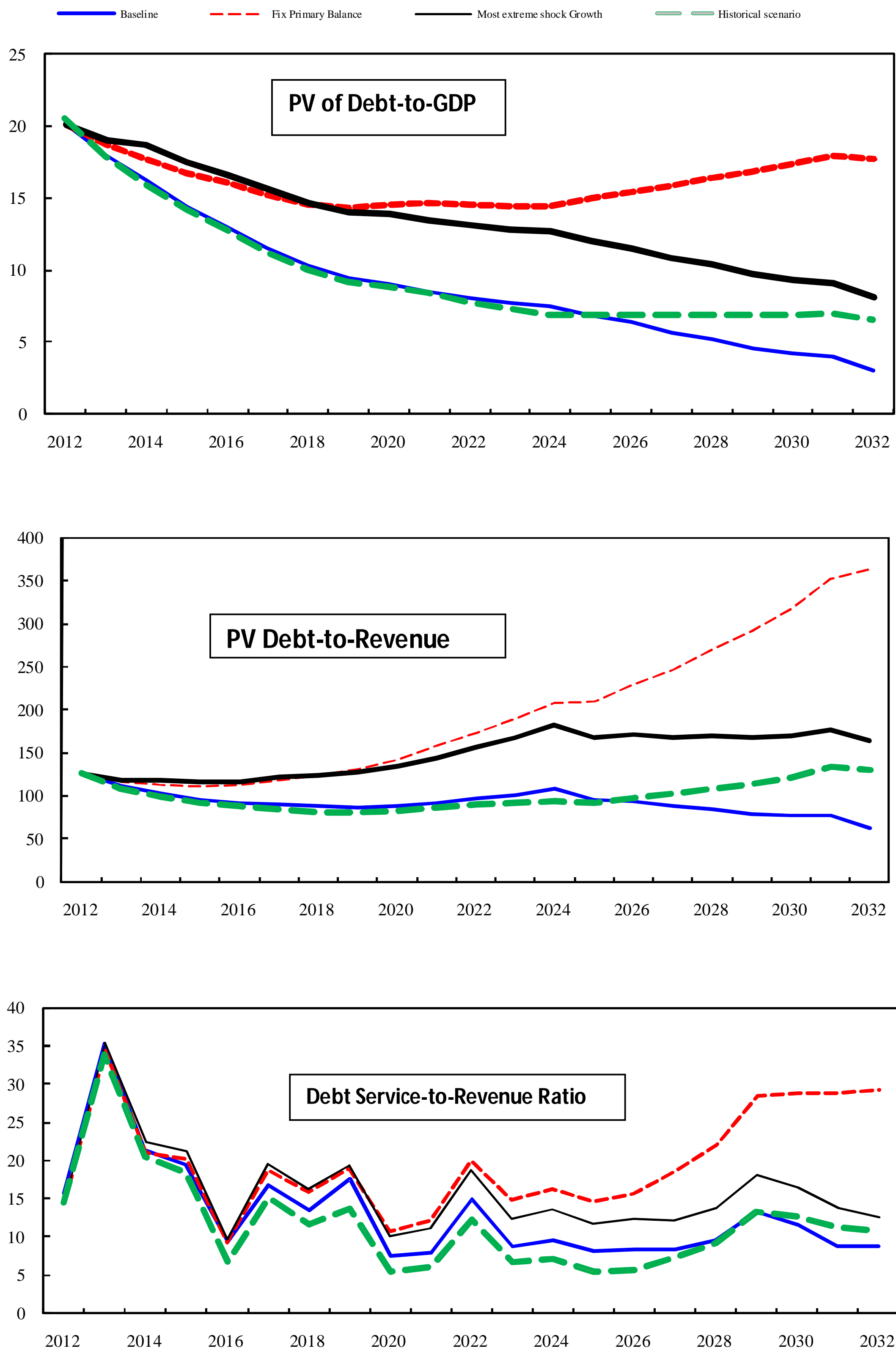
Figure 5.1. Nigeria: Indicators of Public and Publicly Guaranteed External Debt under Alternatives Scenarios, 2012-2032 1/



Sources: Country authorities; and staff estimates and projections.

1/ The most extreme stress test is the test that yields the highest ratio in 2022. In figure b. it corresponds to a Exports shock; in c. to a Exports shock; in d. to a Exports shock; in e. to a Exports shock and in figure f. to a Exports shock

Figure 5.2.Nigeria: Indicators of Public Debt under Alternative Scenarios, 2012-2032 1/



Sources: Country authorities; and staff estimates and projections

1/ The most extreme stress test is the test that yields the highest ratio in 2022
2/ Revenues are defined inclusive of grants

CHAPTER SIX

ANALYSIS OF RISKS IN THE PUBLIC DEBT PORTFOLIO

Table 6.1 presents the various forms of risks inherent in the public debt portfolio. These are: exchange rate, interest rates and refinancing risks.

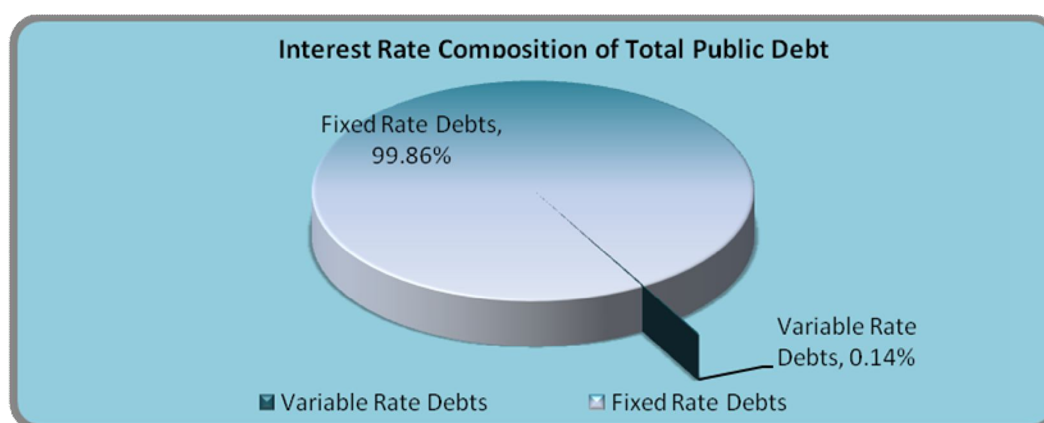
Table 6.1: Risk of Nigeria's Existing Debt as at end December 2011

Description	Domestic Debt	External Debt	Total Debt
Exchange Rate Risk			
Share of Total Debt (%)	86.40	13.60	100.00
In % of GDP	15.07	2.38	17.45
Interest Rate Risk			
Variable Rate Debt (%)	0.01	0.13	0.14
Fixed Interest Rate Debt due for Re-fixing in 1 year	26.55	0.71	27.31
Average Time to Re-fixing (yrs)	4.06	15.90	5.83
Refinancing Risk			
Debt Maturing in 1 year (%)	26.54	0.65	27.19
Average Time to Maturity (yrs)	4.06	15.90	5.84

6.1 Interest Rate Risk

The share of variable interest rate loans in Nigeria's public debt portfolio was only 0.14 percent (domestic 0.01 percent and external 0.13 percent) in 2011. This means that the portfolio is prone to very low interest rate risk as about 99.86 percent of the debt was on fixed interest rate. This structure has helped in insulating the country's debt against fluctuations in interest rates. The proportion of total public debt subject to interest rate re-fixing in one year was 27.31 per cent in 2011, which comprised 26.55 percent domestic debt and 0.71 percent external debt. This means that the domestic debt component had a higher interest rate risk because the average time to re-fixing was as short as 5.83 years. The relatively short average time to re-fixing was due to the effects of the significantly large domestic debts (26.54 per cent) maturing within one year, Table 6.1.

Figure 6.1: Interest Rate Composition of Total Public Debt



6.2 Refinancing Risk

About 27.19 percent of total debt was required to be refinanced at a relatively high interest rate following the sustained increase of CBN's MPR (575 basis points hike) in 2011. Thus, in spite of the low share of variable rate debts in the total debt portfolio, interest rate risk remained a concern, owing to high share of debt (domestic) maturing within one year (see Table 6.1).

The average time to maturity (ATM) of the entire portfolio was 5.84 years in 2011 as against 6.5 years in 2010. This is an indication that ATM has worsened between 2010 and 2011. The ATMs for external and domestic debts was 15.9 and 4.06 years, respectively in 2011. The sharp drop in the ATM of the entire debt portfolio was caused mainly by the domestic debt component. Table 6.1 shows that 27.19 percent of total debts was refinanced in 2011, of which 26.54 percent was domestic debt component, while only 0.65 percent was external debt. The dominance of short-term debt in the portfolio indicates the presence of high refinancing risk.

The redemption profile also explain the extent to which the public debt portfolio is exposed to refinancing risks. Unusually high debts to be repaid or refinanced due to bunching of maturities make it difficult to roll over maturing obligations at more favourable rates. Table 6.2 and Figure 6.2 show that 33.86 percent of the debt would mature in the next one year, while 56.17 percent would mature in the next 3 years. This implies a high level of refinancing needs for the debt portfolio.

TABLE 6.2: PERCENTAGE OF TOTAL PUBLIC DEBT OUTSTANDING BY REMAINING MATURITY AS AT 31ST DECEMBER, 2011

Category	Short-Term (0-1 yr)	Medium-Term (>1-3 yrs)	Long-Term (Over 3 years)	Total
External Debt (%)	0.02	0.49	13.13	**13.64**
Domestic Debt (%)	33.84	21.82	30.70	**86.36**
Total	**33.86**	**22.31**	**43.83**	**100.00**

Figure 6.2: Percentage Total Public Debt By Remaining Maturity as at 31st December, 2011

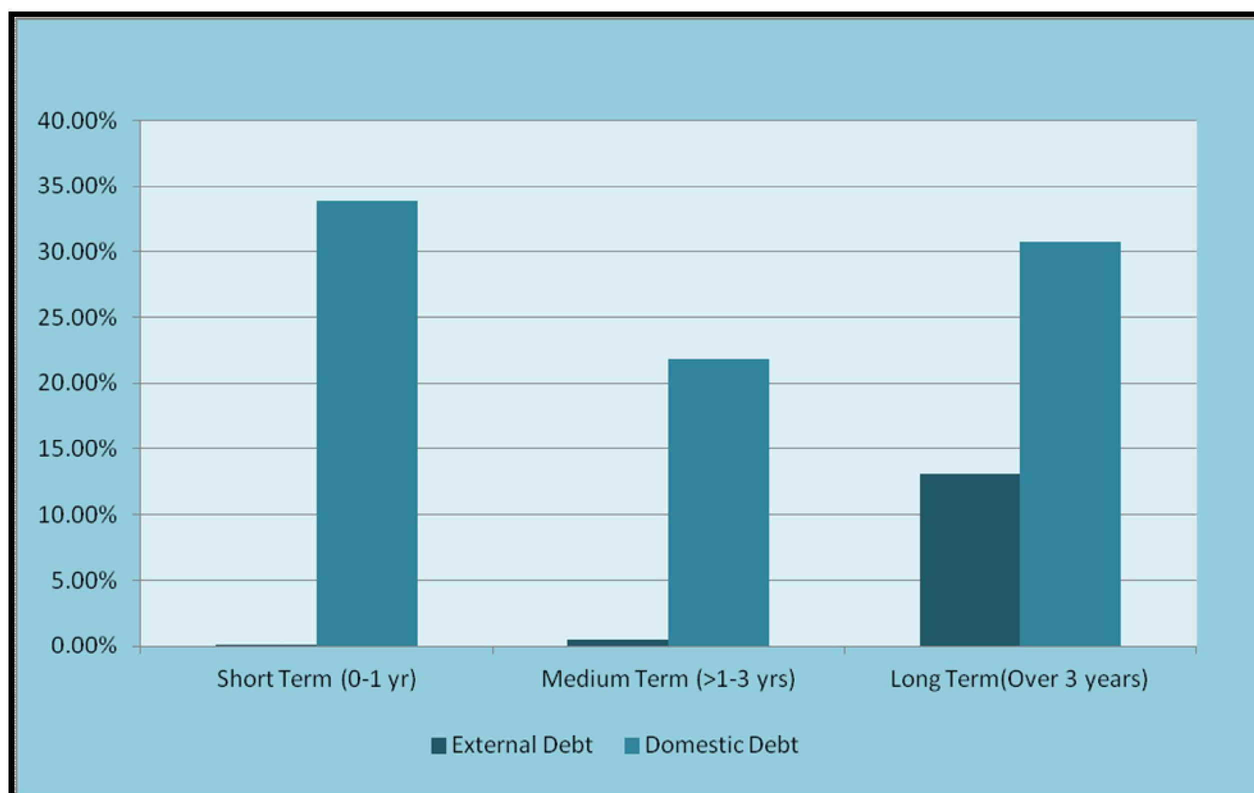


Figure 6.3 shows the redemption profile of external debt for Nigeria from 2012 to 2060. It indicates a relatively even profile, which gradually trends downwards except in 2021, when the 10-year 6.75% Nigerian Eurobond would mature. On the other hand, Figure 6.4 depicts an uneven redemption profile for domestic debts. It shows that a relatively high proportion of domestic debt would be maturing in 2012 and 2013, meaning that the risks are higher in domestic than in external debt. This therefore, underscores the need for an appropriate debt strategy to mitigate likely refinancing risk, particularly in 2013.

Figure 6.3: External Debt Redemption Profile (US$ Million)

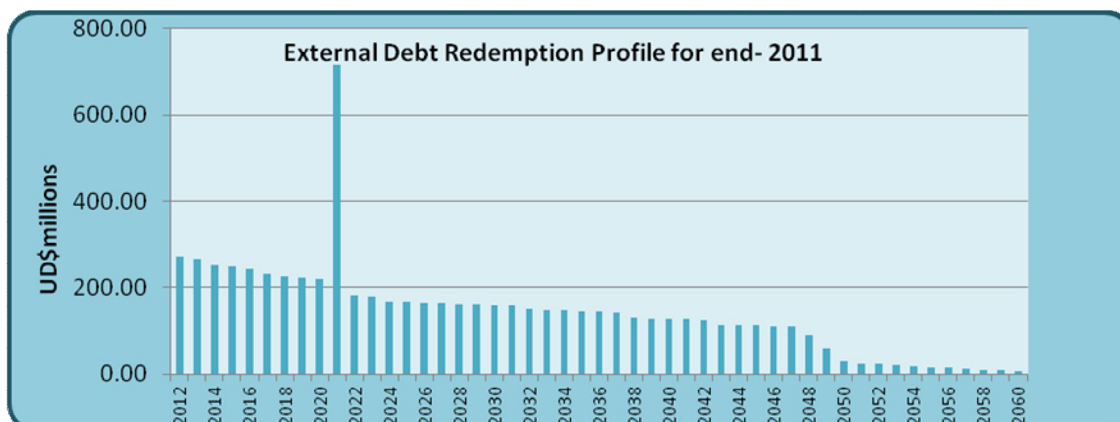
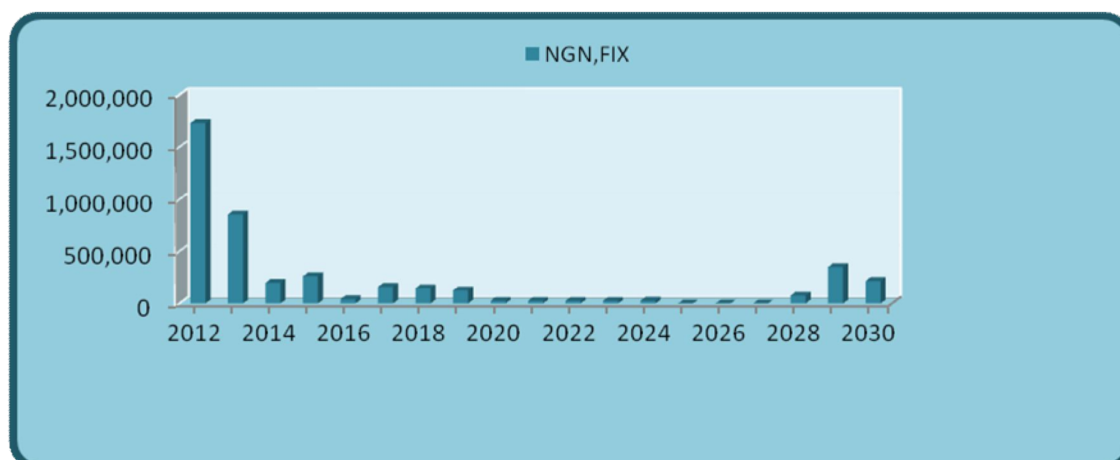


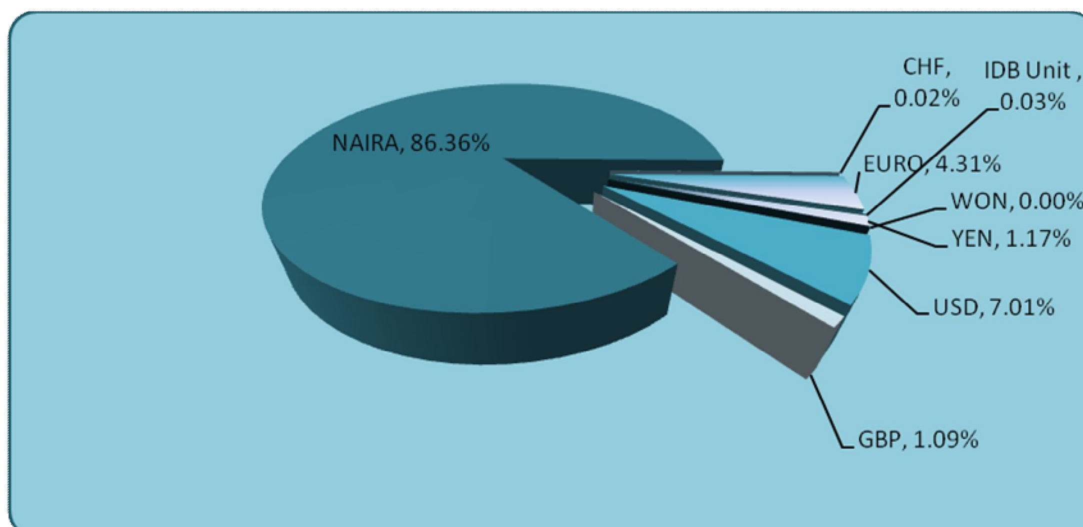
Figure 6.4: Domestic Debt Redemption Profile(₦ Million)



6.3 Exchange Rate Risk

The exchange rate risk could be measured by the currency denomination of the total debt portfolio. At the end of 2011, 86.36 percent of the portfolio was denominated in local currency while 13.64 percent was in foreign currencies (Figure 6.5). This implies that exchange rate risk is relatively low in Nigeria's debt portfolio, given the low share of foreign currency denominated debt in the portfolio.

Figure 6.5: Currency Composition of Public Debt Portfolio as at Dec. 31, 2011



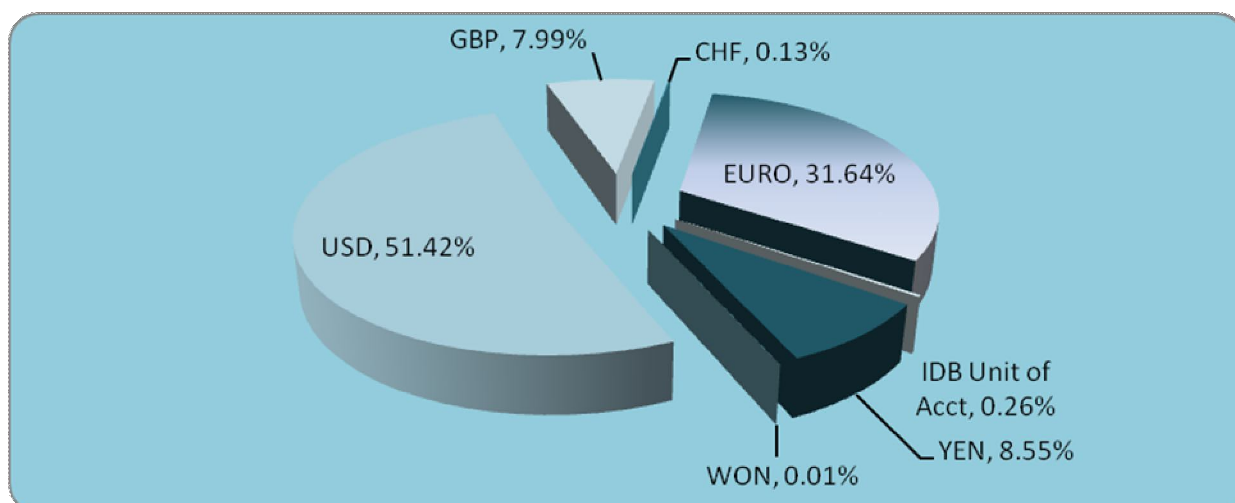
Within the foreign currency debt portfolio, the composition appears to be in favour of the U.S. Dollar and the Euro, with the share of 51.42 percent and 31.64 percent, respectively (Table 6.3 and Figure 6.5).

The risk of the country's inability to meet its external debt service payment obligations could be measured by its currency exposure. In this regard, the currency composition of the external reserves and external debt portfolio serve as a useful yardstick. Table 6.3 shows that the country had a very low level of currency risk in for 2011 as a large proportion of the reserves assets were denominated in US Dollar (84.84 percent). Others are the Euro (10.72 percent), the GBP (3.22 percent) and other currencies (1.22 percent). The Chinese Yuan was introduced in 2011 into the country's external reserve to ensure that currency risk resulting from transactions in that currency was equally well covered.

TABLE 6.3: NIGERIA'S EXTERNAL DEBT/RESERVE ASSET AS AT 31ST DECEMBER, 2011

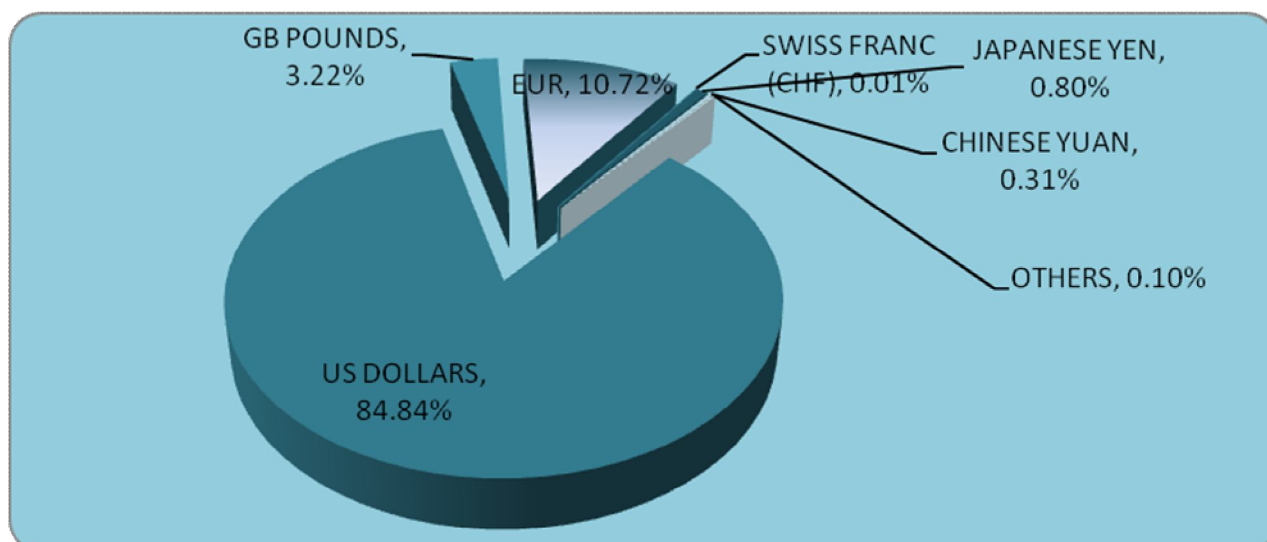
Currencies	USD	GBP	EURO	CHF	JPY	Others
External Debt Stock Currency Composition (%)	51.42	7.99	31.64	0.13	8.55	0.27
External Reserve Currency Composition (%)	84.84	3.22	10.72	0.01	0.80	0.42

Figure 6.6: Currency Composition of External Debt as at Dec. 31, 2011



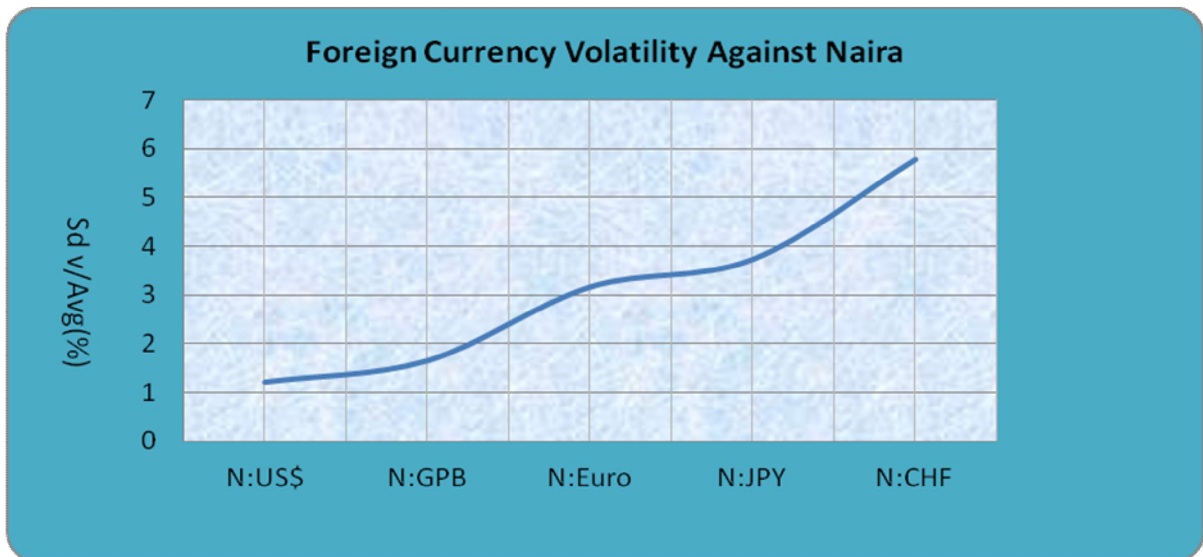
When compared with the currency composition of the country's foreign reserves for the same period, the pattern seems to be replicated, which gives adequate cover against capital losses resulting from currency fluctuations (Figure 6. 7). As at December 31, 2011 the total foreign reserve assets stood at USD32.604 billion, while the total external debt was USD5.666 billion.

Figure 6. 7: Currency Composition of External Reserves as at December 30, 2011



The country was well covered under currency risk because the US Dollar, which is the main currency of the country's external debt had the least fluctuations against the Naira. The average rate of fluctuation between the US Dollar and the Naira was 1.2 percent in 2011, compared to other currencies with average fluctuations of over 3.59 percent within the same period. This has been further illustrated in Figure 6.8 below.

Figure 6.8: Exchange Rate Volatility 2002 – 2011



Similarly, the Nigeria's external debt service payment which is funded through the External Creditors Funding Account (ECFA), and denominated in US Dollars as at December 2011 serve as strong cushion against exchange rate risk.

6.4 Contingent Liability Risk Management

6.4.1 Contractors' Liabilities

As at March 31, 2011, verified contractors liabilities of MDAs stood at N226.52 billion. The FGN has put in place a Resolution Model – Special Purpose Vehicle (SPV), anchored on a private sector platform to raise funds to finance the payment of the liabilities by issuing bonds. The bond is a five-year split-coupon (zero coupon for the first 3 years and coupon bearing in the last 2 years), which will mature in 2016. The bond was guaranteed by the FGN. To avoid default, there is an arrangement by the FGN to establish a Sinking Fund to offset the debt obligations as and when due. Thus, the FGN has instituted measures to offset verified contractor's debt obligations as at end-March 2011.

6.4.2 Pension Liabilities

Over the years, Pension Liabilities have remained a major concern as a source of contingent liability of the FGN. However, these liabilities are currently being paid off gradually through budgetary provisions. As at December 31, 2011 the total sum outstanding was N1,401.98 billion or 3.7 per cent of GDP.

6.4.3 FGN's Guarantee on AMCON Bonds:

As part of efforts to resolve the banking sector crisis and engender financial stability in the system, the FGN established the Asset Management Corporation (AMCON) in 2010 to purchased non-performing loans (NPLs) of deposit money banks. As at December 31, 2011 the FGN, through the DMO had guaranteed **N1,742 billion** 3-year Zero-Coupon 2013 AMCON Tradable Bonds issued to Eligible Financial Institutions in exchange of NPLs. A sinking fund has been set up for the redemption of the bonds upon maturity.

Table 6.4: Federal Government Contingent Liabilities (₦ Billion)

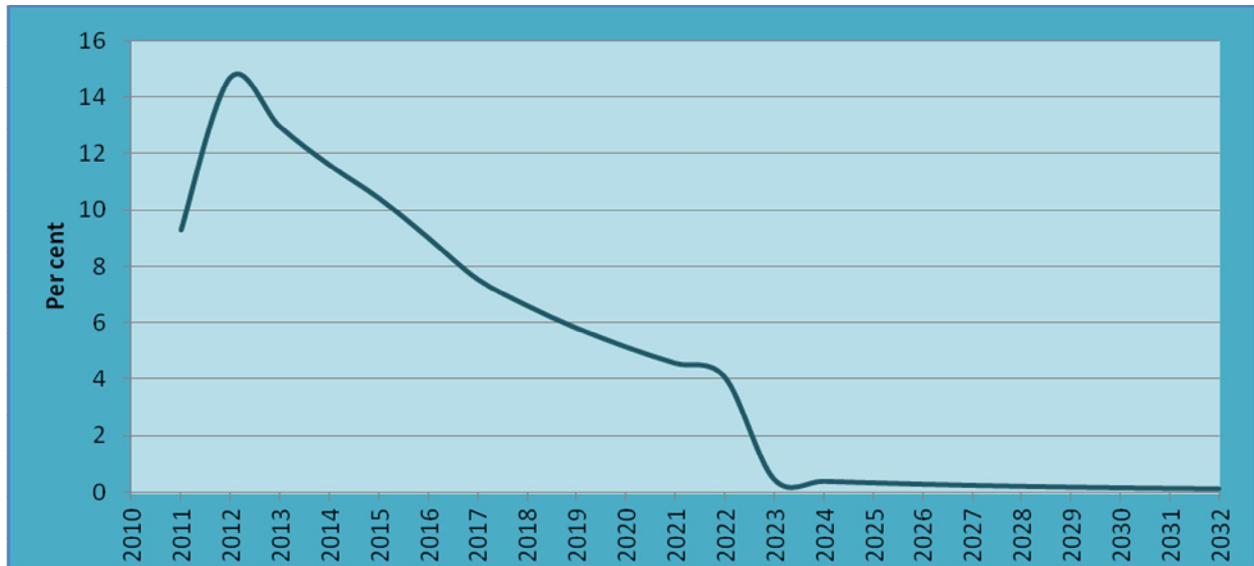
S/N	Liability Type	2010	2011	2012 Projections
1	Pension Liabilities	1,499.66	1,401.98	1,310.71
2	Contractor's Liabilities*	5.64	226.52	226.52
3	Pending Litigations**	83.37	92.00	80.00
4	Guarantee on Agriculture	NA	15.88	1.44
5	FGN's Guarantee on AMCON Bonds	1,000.00	1,742.00	4,500.00
	Total	**2,588.67**	**3,478.38**	**6,118.67**

Figures are only in respect of available data based on response from MDAs.

*The figure represents only a portion of FGN Contractors' Liabilities verified for selected Ministries as at Mar 31, 2012 as submitted to DMO by the BOF
** Source: Federal Ministry of Justice

The estimated total contingent liabilities for the FGN in 2011 was N3,478.38bn, while the projection for 2012 is N6,118.67bn. Thus, the ratio of the outstanding contingent liabilities of the FGN to the GDP was 9.32 percent in 2011, and this is expected to go up to 14.69 percent by the end of 2012 as a result of projected increase issuance of AMCON Bonds.

Fig 6.9: Contingent Liabilities to GDP (%)



Note: By the end of 2012, the guarantee to AMCON is expected to reach N4,500 billion, indicating a sharp increase from the figure for 2011 (N1742 billion). This will last for a period of 10 years and terminate by 2022.

Fig 6.10: Contingent Liabilities to Total Revenue Ratio (2011-2032)

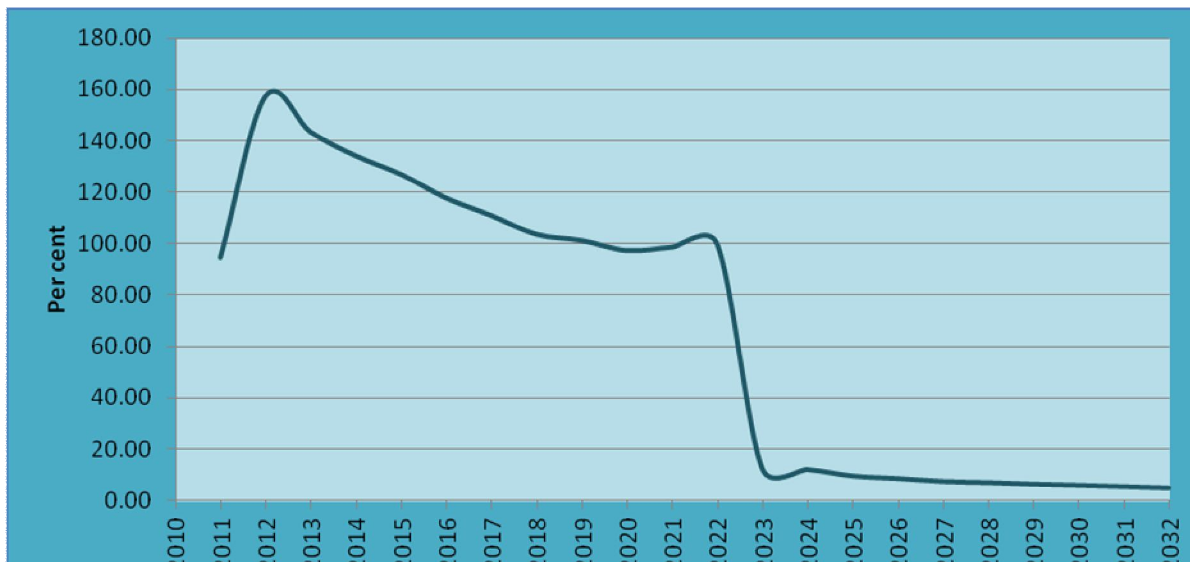


Figure 6.10 shows that the ratio of contingent liabilities to total revenue rose sharply between 2011 and 2012 reaching a peak of 157.53 percent, after which it trended downward and by 2022 dropped significantly to 12.19 per cent following the retirement of the AMCON Bonds.

CHAPTER SEVEN

FINDINGS AND RECOMMENDATIONS

7.1 SUMMARY OF KEY FINDINGS

The summary of key findings from the 2012 DSA are as follows:

a) Nigeria is at low risk of debt distress as all solvency and liquidity ratios under the baseline scenario are below the internationally recommended peer group and conservative country-specific debt-to-GDP thresholds of 40% and 25%, respectively.

b) Furthermore, under the standard stress test and the most extreme shock, all the external debt burden indicators did not breach the respective thresholds.

c) However, debt burden indicators under the fiscal sustainability analysis appear vulnerable to revenue shocks, especially when crude oil price is set below USD50.00 per barrel under the country-specific alternative scenario.

d) Refinancing risk is high as about 34% of the total public debt outstanding is maturing in the near term and could worsen if current high interest rate trends persist.

e) The debt service on total domestic debts has risen sharply in the last two years owing to the inflation-targeting monetary policy stance of the Central Bank of Nigeria, a trend which may continue as long as the monetary authorities seek to defend the external value of the Naira.

f) Due to the continued rollover of maturing debt obligations, total domestic debt outstanding has risen sharply in the last couple of years leading to high rate of debt accumulation and debt service cost. This could threaten the overall debt sustainability in the medium term except the Government sets up a sinking fund that could be used to repay the debts as they fall due.

7.2 RECOMMENDATIONS

Against the backdrop of the results and findings the 2012 DSA recommend as follows:

i. In order to keep the debt-to-GDP ratio within the 25% country-specific benchmark, the new borrowing limit for 2013 is estimated at USD7.25 billion. This should be raised in the ratio of 60 percent (USD4.35 billion) from external sources and 40 percent (USD2.90 billion) from domestic sources. The Naira equivalent of new domestic borrowing in 2013 would be N340.73 billion net of the refinancing cost of maturing obligations amounting to N108.50 billion.

ii. Given the relatively low level of debt to GDP ratio for external debt and the fact that cost of external debt service is much lower than the domestic debt, the authorities may consider additional borrowing from the international debt market in order to help reduce the level of domestic debt service and allow more borrowing space for the private sector in the domestic debt market.

iii. Direct budgetary provisions would be required to retire maturing debt obligations falling due in 2013, as this will help to reduce the size of the total public debt outstanding and refinancing risks in the near term.

iv. Furthermore, the on-going policy actions for re-introduction of sinking funds should be hastened to ensure that future debt obligations are settled as and when due to effectively hedge against rising rate of debt accumulation.

v. There is need for the Government to fast-track the on-going policy initiatives and actions geared towards increasing the contribution of non-oil revenue to the revenue base of the country in order to effectively minimise risks to debt sustainability in the medium term.

vi. There is need for the Government to speed-up the implementation of policy on Public Private Partnership (PPP), concessioning and privatisation by incentivising the private sector to assume more prominent role in the development of commercially viable critical infrastructure key growth sectors of the economy. This would help to reduce the size of direct new government borrowings for the purpose of infrastructure development and slow-down the rate of debt accumulation.

vii. Government agencies and stakeholders in fiscal and monetary policy management would need to strengthen collaboration and information sharing among them in order to improve the efficacy of Government policies, stabilise and strengthen the operating macroeconomic environment for more robust growth in output.

Annex 1

Table 1a.Nigeria: Public Sector Debt Sustainability Framework, Baseline Scenario, 2009-2032
(In percent of GDP, unless otherwise indicated)

	Actual			Average 5/	Standard Deviation 5/	Estimate			Projections						
	2009	2010	2011			2012	2013	2014	2015	2016	2017	2012-17 Average	2022	2032	2018-32 Average
Public sector debt 1/	15.4	15.3	17.2			20.7	18.7	17.0	15.2	13.9	12.5		8.9	3.5	
o/w foreign-currency denominated	2.4	2.0	2.4			3.1	3.3	3.5	3.6	3.8	4.0		4.5	2.4	
Change in public sector debt	3.8	-0.1	1.9			3.6	-2.1	-1.7	-1.7	-1.4	-1.4		-0.4	-1.0	
Identified debt-creating flows	3.6	7.0	11.1			15.4	12.8	11.3	10.1	8.2	7.0		4.2	-0.2	
Primary deficit	2.8	2.8	1.9	0.6	1.6	1.7	0.9	0.7	0.6	0.6	0.7	0.9	0.8	-0.1	0.2
Revenue and grants	21.1	17.9	18.5			16.0	16.2	15.7	15.1	14.2	12.8		8.4	4.9	
of which: grants	0.8	1.4	0.5			0.5	0.5	0.5	0.5	0.5	0.5		0.5	0.5	
Primary (noninterest) expenditure	23.9	20.7	20.5			17.7	17.1	16.4	15.7	14.8	13.5		9.1	4.8	
Automatic debt dynamics	1.2	-3.3	0.1			-0.7	-0.9	-0.8	-0.7	-1.2	-1.0		-0.5	-0.2	
Contribution from interest rate/growth differential	1.1	-3.1	0.0			-0.6	-0.8	-0.7	-0.7	-1.0	-0.9		-0.4	-0.2	
of which: contribution from average real interest rate	1.9	-2.0	1.1			0.6	0.7	0.6	0.6	0.1	0.1		0.2	0.1	
of which: contribution from real GDP growth	-0.8	-1.1	-1.0			-1.2	-1.5	-1.4	-1.2	-1.1	-1.0		-0.6	-0.2	
Contribution from real exchange rate depreciation	0.1	-0.2	0.0			-0.1	-0.1	0.0	0.0	-0.2	-0.2		...	...	
Other identified debt-creating flows	-0.4	7.5	9.1			14.4	12.7	11.4	10.2	8.8	7.3		3.9	0.1	
Privatization receipts (negative)	-0.4	0.0	0.0			0.0	0.0	0.0	0.0	-0.1	-0.1		0.0	0.0	
Recognition of implicit or contingent liabilities	0.0	7.5	9.1			14.4	12.7	11.4	10.2	8.9	7.4		4.0	0.1	
Debt relief (HIPC and other)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Other (specify, e.g. bank recapitalization)	0.0	0.0	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
Residual, including asset changes	0.2	-7.1	-9.1			-11.8	-14.8	-13.0	-11.8	-9.5	-8.5		-4.6	-0.7	
Other Sustainability Indicators															
PV of public sector debt	...	...	16.8			20.2	18.0	16.2	14.4	13.0	11.6		8.1	3.0	
o/w foreign-currency denominated	...	...	2.0			2.5	2.6	2.7	2.7	2.9	3.1		3.7	2.0	
o/w external	...	...	2.0			2.5	2.6	2.7	2.7	2.9	3.1		3.7	2.0	
PV of contingent liabilities (not included in public sector debt)	...	...	...			...	...	...	...	...	...		...	...	
Gross financing need 2/	7.0	6.5	6.7			8.3	12.3	9.3	8.0	5.6	5.9		3.8	1.1	
PV of public sector debt-to-revenue and grants ratio (in percent)	…	…	90.8			125.8	111.4	103.0	95.3	91.5	90.6		96.5	61.8	
PV of public sector debt-to-revenue ratio (in percent)	…	…	93.1			129.6	114.8	106.2	98.3	94.7	94.1		102.2	68.4	
o/w external 3/	…	…	11.1			16.3	16.6	17.8	18.7	21.0	25.0		47.3	44.4	
Debt service-to-revenue and grants ratio (in percent) 4/	6.8	6.6	7.8			15.7	35.2	21.2	19.4	9.4	16.9		14.8	8.8	
Debt service-to-revenue ratio (in percent) 4/	7.1	7.2	8.0			16.2	36.3	21.9	20.1	9.7	17.5		15.7	9.8	
Primary deficit that stabilizes the debt-to-GDP ratio	-1.0	2.9	0.0			-1.9	3.0	2.4	2.3	1.9	2.2		1.2	0.9	
Key macroeconomic and fiscal assumptions															
Real GDP growth (in percent)	7.0	8.0	7.4	8.9	4.7	7.6	7.6	7.8	7.9	7.8	7.6	7.8	7.0	5.7	6.6
Average nominal interest rate on forex debt (in percent)	3.0	1.5	2.6	6.5	9.4	2.6	2.3	2.3	2.2	2.3	2.4	2.4	3.2	3.0	3.1
Average real interest rate on domestic debt (in percent)	17.6	-14.0	8.2	1.7	10.4	4.0	3.9	3.9	4.2	0.2	0.7	2.8	2.2	0.0	2.4
Real exchange rate depreciation (in percent, + indicates depreciation)	5.0	-8.2	1.5	-5.6	10.4	-4.0	...	...	...	...	...	...	...	...	...
Inflation rate (GDP deflator, in percent)	-4.6	28.4	2.8	11.3	10.9	3.8	2.6	2.2	1.8	5.9	5.5	3.6	3.9	2.4	3.5
Growth of real primary spending (deflated by GDP deflator, in percent)	0.0	-0.1	0.1	0.1	0.1	-0.1	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
Grant element of new external borrowing (in percent)	...	...	...	…	…	26.8	30.4	32.0	33.7	29.2	15.5	27.9	12.8	10.5	...

Sources: Country authorities; and staff estimates and projections.

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

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

3/ Revenues excluding grants.

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

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

Annex 2

Table 3a.: External Debt Sustainability Framework, Baseline Scenario, 2009-2032 1/
(In percent of GDP, unless otherwise indicated)

	Actual			Historical 6/ Average	Standard 6/ Deviation	Projections									
	2009	2010	2011			2012	2013	2014	2015	2016	2017	2012-2017 Average	2022	2032	2018-2032 Average
External debt (nominal) 1/	**2.4**	**2.0**	**2.4**			**3.1**	**3.3**	**3.5**	**3.6**	**3.8**	**4.0**		**4.5**	**2.4**	
o/w public and publicly guaranteed (PPG)	2.4	2.0	2.4			3.1	3.3	3.5	3.6	3.8	4.0		4.5	2.4	
Change in external debt	0.4	-0.4	0.4			0.8	0.2	0.2	0.1	0.2	0.2		0.1	-0.2	
Identified net debt-creating flows	-6.6	-4.4	-10.3			-10.4	-8.1	-6.3	-5.0	-2.6	-0.5		6.8	14.9	
Non-interest current account deficit	**-8.1**	**-1.1**	**-7.7**	**-10.4**	**7.8**	**-7.8**	**-5.5**	**-3.8**	**-2.5**	**-0.3**	**1.7**		**8.7**	**16.2**	10.8
Deficit in balance of goods and services	-15.4	-55.9	-64.4			-7.6	-8.0	-8.4	-8.8	-10.1	-9.7		-10.2	-10.4	
Exports	34.1	32.4	39.8			41.4	41.1	40.8	40.3	42.3	43.0		42.0	42.5	
Imports	18.7	-23.5	-24.7			33.8	33.1	32.4	31.5	32.2	33.3		31.8	32.1	
Net current transfers (negative = inflow)	-11.4	-8.8	-9.1	-7.1	4.5	-8.6	-8.0	-7.5	-7.1	-6.4	-5.9		-4.1	-2.4	-3.6
o/w official	-0.6	-0.4	-0.4			-0.1	-0.1	-0.1	-0.1	-0.1	-0.1		-0.1	-0.1	
Other current account flows (negative = net inflow)	18.7	63.6	65.8			8.5	10.5	12.1	13.4	16.3	17.3		23.0	29.0	
Net FDI (negative = inflow)	**0.9**	**-2.7**	**-2.6**	**-0.3**	**1.3**	**-2.5**	**-2.4**	**-2.4**	**-2.3**	**-2.2**	**-2.1**		**-1.7**	**-1.3**	-1.6
Endogenous debt dynamics 2/	**0.5**	**-0.6**	**-0.1**			**-0.1**	**-0.1**	**-0.2**	**-0.2**	**-0.2**	**-0.2**		**-0.2**	**-0.1**	
Contribution from nominal interest rate	0.1	0.0	0.0			0.1	0.1	0.1	0.1	0.1	0.1		0.1	0.1	
Contribution from real GDP growth	-0.2	-0.1	-0.1			-0.2	-0.2	-0.2	-0.3	-0.2	-0.3		-0.3	-0.1	
Contribution from price and exchange rate changes	0.6	-0.5	0.0			…	…	…	…	…	…		…	…	
Residual (3-4) 3/	**7.0**	**4.0**	**10.7**			**11.1**	**8.2**	**6.5**	**5.1**	**2.8**	**0.7**		**-6.7**	**-15.1**	
o/w exceptional financing	0.0	-4.4	0.0			0.0	0.0	0.0	0.0	0.0	0.0		0.0	0.0	
PV of external debt 4/	...	...	2.0			2.5	2.6	2.7	2.7	2.9	3.1		3.7	2.0	
In percent of exports	...	...	5.0			6.1	6.4	6.7	6.8	6.8	7.2		8.9	4.6	
PV of PPG external debt	**...**	**...**	**2.0**			**2.5**	**2.6**	**2.7**	**2.7**	**2.9**	**3.1**		**3.7**	**2.0**	
In percent of exports	**...**	**...**	**5.0**			**6.1**	**6.4**	**6.7**	**6.8**	**6.8**	**7.2**		**8.9**	**4.6**	
In percent of government revenues	**...**	**...**	**11.1**			**16.3**	**16.6**	**17.8**	**18.7**	**21.0**	**25.0**		**47.3**	**44.4**	
Debt service-to-exports ratio (in percent)	**0.8**	**0.5**	**0.4**			**0.3**	**0.3**	**0.4**	**0.3**	**0.3**	**0.3**		**0.5**	**0.5**	
PPG debt service-to-exports ratio (in percent)	**0.8**	**0.5**	**0.4**			**0.3**	**0.3**	**0.4**	**0.3**	**0.3**	**0.3**		**0.5**	**0.5**	
PPG debt service-to-revenue ratio (in percent)	**1.3**	**0.9**	**0.8**			**0.8**	**0.8**	**0.9**	**0.9**	**0.9**	**1.0**		**2.7**	**5.2**	
Total gross financing need (Billions of U.S. dollars)	-11.4	-8.3	-24.9			-27.3	-23.5	-20.0	-17.2	-9.7	-1.1		59.0	302.0	
Non-interest current account deficit that stabilizes debt ratio	-8.4	-0.8	-8.0			-8.5	-5.7	-4.0	-2.6	-0.5	1.6		8.5	16.4	
Key macroeconomic assumptions															
Real GDP growth (in percent)	7.0	8.0	7.4	8.9	4.7	7.6	7.6	7.8	7.9	7.8	7.6	7.8	7.0	5.7	6.6
GDP deflator in US dollar terms (change in percent)	-23.8	27.6	0.0	9.1	16.0	1.5	4.2	2.2	1.8	5.9	5.5	3.5	3.9	2.4	3.2
Effective interest rate (percent) 5/	3.0	2.4	2.6	6.6	9.3	2.6	2.3	2.3	2.2	2.3	2.4	2.4	3.2	3.0	3.1
Growth of exports of G&S (US dollar terms, in percent)	-34.2	31.0	31.9	23.5	30.3	13.6	11.4	9.3	8.6	20.0	15.4	13.0	11.1	8.3	10.0
Growth of imports of G&S (US dollar terms, in percent)	-22.4	-273.2	12.7	-19.5	96.8	-249.8	9.8	7.7	7.1	16.7	17.2	-31.9	11.0	8.3	9.8
Grant element of new public sector borrowing (in percent)	...	...	...	...	...	26.8	30.4	32.0	33.7	29.2	15.5	27.9	12.8	10.5	11.6
Government revenues (excluding grants, in percent of GDP)	20.3	16.6	18.1			15.6	15.7	15.3	14.7	13.7	12.3		7.9	4.4	7.1
Aid flows (in Billions of US dollars) 7/	1.5	3.5	6.1			2.7	2.3	2.6	2.7	3.3	3.3		5.7	10.0	
o/w Grants	1.3	3.1	1.2			1.3	1.4	1.6	1.7	2.0	2.2		3.8	9.3	
o/w Concessional loans	0.2	0.4	5.0			1.4	0.8	1.0	1.0	1.4	1.1		1.9	0.6	
Grant-equivalent financing (in percent of GDP) 8/	...	...	...			0.8	0.6	0.7	0.6	0.7	0.6		0.6	0.5	0.5
Grant-equivalent financing (in percent of external financing) 8/	...	...	...			48.6	61.8	62.5	67.1	57.4	50.4		48.9	81.4	63.6
Memorandum items:															
Nominal GDP (Billions of US dollars)	166.5	229.5	246.4			269.2	301.9	332.6	365.4	417.4	474.1		819.6	1992.8	
Nominal dollar GDP growth	-18.5	37.8	7.4			9.3	12.1	10.2	9.9	14.2	13.6	11.5	11.1	8.3	10.1
PV of PPG external debt (in Billions of US dollars)			4.8			6.9	7.9	9.1	10.1	12.1	14.7		30.9	39.7	
(PVt-PVt-1)/GDPt-1 (in percent)						0.8	0.4	0.4	0.3	0.5	0.6	0.5	0.6	0.0	0.3
Gross workers' remittances (Billions of US dollars)	18.4	19.8	21.9			22.8	23.7	24.6	25.6	26.5	27.4		32.8	48.1	
PV of PPG external debt (in percent of GDP + remittances)	...	...	1.8			2.3	2.4	2.5	2.6	2.7	2.9		3.6	1.9	
PV of PPG external debt (in percent of exports + remittances)	...	...	4.1			5.1	5.3	5.6	5.8	5.9	6.3		8.1	4.4	
Debt service of PPG external debt (in percent of exports + remittances)	...	...	0.3			0.2	0.3	0.3	0.3	0.2	0.3		0.5	0.5	

Sources: Country authorities; and staff estimates and projections.

1/ Includes both public and private sector external debt.

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

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

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

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

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

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

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

Table 2a.Nigeria: Sensitivity Analysis for Key Indicators of Public Debt 2012-2032

	Projections							
	2012	2013	2014	2015	2016	2017	2022	2032
PV of Debt-to-GDP Ratio								
Baseline	20	18	16	14	13	12	8	3
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	20	18	16	14	12	11	7	6
A2. Primary balance is unchanged from 2012	20	19	18	17	16	15	15	18
A3. Permanently lower GDP growth 1/	20	18	17	16	15	14	13	12
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	20	19	19	18	17	16	13	8
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	20	19	19	17	15	13	9	4
B3. Combination of B1-B2 using one half standard deviation shocks	20	19	18	16	15	13	10	5
B4. One-time 30 percent real depreciation in 2013	20	19	17	15	14	12	8	3
B5. 10 percent of GDP increase in other debt-creating flows in 2013	20	27	24	22	20	18	12	5
PV of Debt-to-Revenue Ratio 2/								
Baseline	126	111	103	95	92	91	97	62
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	126	109	99	91	88	85	89	130
A2. Primary balance is unchanged from 2012	126	116	113	111	113	119	173	364
A3. Permanently lower GDP growth 1/	126	113	108	103	103	107	152	243
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	126	118	119	116	117	122	156	165
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	126	119	119	111	106	105	111	74
B3. Combination of B1-B2 using one half standard deviation shocks	126	116	112	106	104	105	119	97
B4. One-time 30 percent real depreciation in 2013	126	117	108	100	96	95	101	69
B5. 10 percent of GDP increase in other debt-creating flows in 2013	126	168	155	145	139	138	145	106
Debt Service-to-Revenue Ratio 2/								
Baseline	16	35	21	19	9	17	15	9
A. Alternative scenarios								
A1. Real GDP growth and primary balance are at historical averages	14	34	20	18	7	15	12	11
A2. Primary balance is unchanged from 2012	14	34	21	20	9	19	20	29
A3. Permanently lower GDP growth 1/	14	35	21	20	8	18	19	19
B. Bound tests								
B1. Real GDP growth is at historical average minus one standard deviations in 2013-2014	14	35	22	21	10	20	19	13
B2. Primary balance is at historical average minus one standard deviations in 2013-2014	14	34	21	21	10	18	14	6
B3. Combination of B1-B2 using one half standard deviation shocks	14	35	21	20	9	18	15	8
B4. One-time 30 percent real depreciation in 2013	14	34	21	20	8	16	15	8
B5. 10 percent of GDP increase in other debt-creating flows in 2013	14	34	23	29	13	21	16	8

Sources: Country authorities; and staff estimates and projections.

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

2/ Revenues are defined inclusive of grants.

Table 3b.Nigeria: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012-2032
(In percent)

	Projections							
	2012	2013	2014	2015	2016	2017	**2022**	2032
PV of debt-to GDP ratio								
Baseline	3	3	3	3	3	3	**4**	2
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	3	0	-4	-9	-15	-22	**-66**	-136
A2. New public sector loans on less favorable terms in 2012-2032 2	3	3	3	3	4	4	**5**	4
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	3	3	3	3	3	3	**4**	2
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	3	9	19	18	17	16	**12**	5
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	3	3	3	3	4	4	**5**	2
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	3	11	18	17	16	15	**11**	4
B5. Combination of B1-B4 using one-half standard deviation shocks	3	10	16	16	15	14	**11**	4
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	3	4	4	4	4	4	**5**	3
PV of debt-to-exports ratio								
Baseline	6	6	7	7	7	7	**9**	5
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	6	0	-10	-21	-35	-51	**-156**	-321
A2. New public sector loans on less favorable terms in 2012-2032 2	6	7	8	8	8	9	**12**	8
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	6	6	7	7	7	7	**9**	5
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	6	26	66	64	57	52	**41**	15
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	6	6	7	7	7	7	**9**	5
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	6	26	44	42	38	35	**27**	10
B5. Combination of B1-B4 using one-half standard deviation shocks	6	23	39	38	34	31	**25**	10
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	6	6	7	7	7	7	**9**	5
PV of debt-to-revenue ratio								
Baseline	16	17	18	19	21	25	**47**	44
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	16	0	-26	-59	-107	-177	**-830**	-3094
A2. New public sector loans on less favorable terms in 2012-2032 2	16	18	20	22	26	31	**65**	80
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	16	17	19	20	23	27	**51**	49
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	16	56	126	125	125	130	**155**	106
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	16	19	22	23	26	31	**59**	56
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	16	68	117	117	116	122	**145**	100
B5. Combination of B1-B4 using one-half standard deviation shocks	16	61	108	107	107	113	**138**	97
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	16	24	25	26	30	35	**67**	64

Table 3b.Nigeria: Sensitivity Analysis for Key Indicators of Public and Publicly Guaranteed External Debt, 2012-2032 (continued)
(In percent)

Debt service-to-exports ratio

Baseline	0	0	0	0	0	0	**1**	1
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	0	0	0	0	-1	-1	**-4**	-12
A2. New public sector loans on less favorable terms in 2012-2032 2	0	0	0	0	0	0	**1**	1
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	0	0	0	0	0	0	**1**	1
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	0	0	1	2	2	2	**3**	2
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	0	0	0	0	0	0	**1**	1
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	0	0	1	2	1	1	**2**	1
B5. Combination of B1-B4 using one-half standard deviation shocks	0	0	1	1	1	1	**2**	1
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	0	0	0	0	0	0	**1**	1

Debt service-to-revenue ratio

Baseline	1	1	1	1	1	1	**3**	5
A. Alternative Scenarios								
A1. Key variables at their historical averages in 2012-2032 1/	1	1	0	-1	-2	-3	**-22**	-116
A2. New public sector loans on less favorable terms in 2012-2032 2	1	1	1	1	1	1	**3**	7
B. Bound Tests								
B1. Real GDP growth at historical average minus one standard deviation in 2013-2014	1	1	1	1	1	1	**3**	6
B2. Export value growth at historical average minus one standard deviation in 2013-2014 3/	1	1	2	5	4	5	**12**	13
B3. US dollar GDP deflator at historical average minus one standard deviation in 2013-2014	1	1	1	1	1	1	**3**	6
B4. Net non-debt creating flows at historical average minus one standard deviation in 2013-2014 4/	1	1	3	4	4	4	**11**	12
B5. Combination of B1-B4 using one-half standard deviation shocks	1	1	3	4	4	4	**10**	12
B6. One-time 30 percent nominal depreciation relative to the baseline in 2013 5/	1	1	1	1	1	1	**4**	7
Memorandum item:								
Grant element assumed on residual financing (i.e., financing required above baseline) 6/	8	8	8	8	8	8	**8**	8

Sources: Country authorities; and staff estimates and projections.

1/ Variables include real GDP growth, growth of GDP deflator (in U.S. dollar terms), non-interest current account in percent of GDP, and non-debt creating flows.
2/ Assumes that the interest rate on new borrowing is by 2 percentage points higher than in the baseline., while grace and maturity periods are the same as in the baseline.
3/ Exports values are assumed to remain permanently at the lower level, but the current account as a share of GDP is assumed to return to its baseline level after the shock (implicitly assuming an offsetting adjustment in import levels).
4/ Includes official and private transfers and FDI.
5/ Depreciation is defined as percentage decline in dollar/local currency rate, such that it never exceeds 100 percent.
6/ Applies to all stress scenarios except for A2 (less favorable financing) in which the terms on all new financing are as specified in footnote 2.

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