

## Domestic Debts and Economic growth in Nigeria (1980-2011)

<sup>1</sup> Ozurumba, Benedict Anayochukwu and <sup>2\*</sup> Kanu, Success Ikechi

<sup>1</sup> & <sup>2</sup> Department of Management technology (FMT), Federal university of technology, Owerri (FUTO)  
P.M.B 1526, Owerri, Imo State, Nigeria.

\* E-mail of the Corresponding Author: [ikechykanu@yahoo.com](mailto:ikechykanu@yahoo.com)

### Abstract:

The impact of different types of domestic debt on economic growth of Nigeria was studied using multiple regression technique. Outcome of the study indicates that in the short run, FGN Bond proved to have a positive significant relationship with economic growth, while Development stock maintained a significant negative relationship. In the long run; Treasury Bills and the lagged value of GDP (in the second year), taken as independent variables were found to be positively significant. Result of the Granger causality test revealed that, while there is a unidirectional relationship between economic growth and FGN Bonds on one hand, there exists a bidirectional relationship between Treasury bills and economic growth on the other hand. The study, therefore recommends that, it is not a bad idea after all borrowing from within, since debt could be deployed to good purposes. However, the rule of thumb is that the returns (for a business) and societal welfare (in the case of a government) derivable from deploying the funds generated from the loans **MUST** surpass the interest being paid on such loan. As a way out of the woods, government must undertake an aggressive cut-down of her bogus / burgeoning recurrent expenditure which is over 70% of the total expenditure profile. This will help free up the much-needed savings for infrastructural development. The study further recommends that the Nigerian government should stop accumulating unproductive debts that have no positive multiplier effect. If at all she must borrow from within, then such loans must be tied to some specific, viable and growth enhancing projects that could pay its way through.

**Keywords:** Domestic debt, Economic growth, Treasury bills, Treasury certificates, Treasury Bonds, Development stock, FGN Bonds, Promissory notes

### 1.0. Introduction

Debt is an outstanding credit obligation. It refers to payment which must be, but has not yet been paid to somebody. Legally, debt is a chose in action transferable by the creditor to some other person provided that the transfer is in writing and that whole and not merely a part of the debt is so assigned. (Anyafu: 1995).

Public debt is an amount of money owed by the government to institutions, government agencies and other bodies either resident in or outside a country. When debts are owed to residents within a country, it is known as domestic public debt. Specifically in Nigeria, the sources of domestic public debt are the central bank of Nigeria, commercial banks, merchant banks and the non bank public. (Nzotta:2004) .

It is the objective of every sovereign nation to improve the standard of living of its citizenry and to promote her economic well being. Due to the scarcity of resources, nations borrow from within and externally to foster economic growth and to achieve sustainable economic development (Adepoju, Salau & Obayelu, 2007). The necessity for governments to borrow in order to finance a deficit budget has led to the development of both internal and external debts (Osinubi & Olaleru, 2006; Obadan, 2004b).

By way of definition, domestic debts refer to the portion of a country's debt that was borrowed from within the confines of a country. These loans are usually obtained from the central bank of Nigeria, deposit money banks, discount houses and other non bank financial houses. This study therefore is set to assess the degree to which the different components of domestic debts have impacted on the economic growth of Nigeria over the period 1980-2011.

### 1.1 Statement of Research Problem

The reliance by the federal government in borrowing from the banking system, particularly the CBN, to finance its large and unsustainable fiscal deficits has hindered the attainment of macroeconomic stability and sustainable economic growth in Nigeria. In addition, this has crowded out the private sector from the credit market, thereby stalling investment and output growth.

A review of Nigeria's domestic debt profile indicates that, it has been on the increase in recent times. Various factors account for the phenomenal rise. This includes the increased financing needs of government for developmental purposes and other socio-economic needs before the advent of the oil boom. There was also the need to finance the large fiscal deficits of the government after the oil boom period. Other factors include the financing gaps in the government revenue-expenditure profile and other financing needs of the government. All these had led to the enhanced domestic debt stock of Nigeria

In spite of her continued penchant for domestic loans, Nigerian economy is still characterized by low per capita income, high unemployment rates, dwindling economies, inadequate basic amenities and poor infrastructural developments and falling growth rates of GDP; problems that publicly procured funds are supposed to take care of. Paradoxically; it does not appear as if our craving for domestic loans is in any way commensurate to our low level of economic growth and development.

The natural question that readily comes to mind is: What has our leaders and the political class been doing with the huge sums of money procured on our behalf as domestic debts and how beneficial has these sources of loans been to the economic growth of Nigeria? It is against this background that this study will seek to investigate the various components of our domestic debt profile. This is with a view to ascertaining the usage, to which the proceeds were put, and the direction / significance of the effects of such funds. - That is the crux of the matter!

### **1.2) Research objective**

Centrally, the study is intended to ascertain the impact of various components of domestic debt on the economic growth of Nigeria. It will investigate the mismatch between the huge domestic debts incurred by Nigeria, within the period (1980-2011) and the stunted level of economic growth in Nigeria. The study will seek to determine the impact of domestic debts procured through Treasury bills, Treasury certificates and Treasury Bonds on the economic growth of Nigeria. It will also seek to determine the impact of Development stock, FGN Bonds and Promissory notes on the economic growth of Nigeria, herein, represented by Gross Domestic Product (GDP).

### **1.3 Research Question**

Having stated the above objective, the following research questions are therefore considered relevant to the study.

- To what extent has domestic debts procured through treasury bills, treasury certificates and treasury bonds affected the level of economic growth in Nigeria.
- To what extent has domestic debts procured via development stocks, FGN Bonds and Promissory notes affected with the level of economic growth in Nigeria.

The present study would search for answers to the above questions:

### **1.4 Hypothesis of the study:**

The following hypotheses shall be tested in this study:

**H<sub>01</sub>:** There is no significant long run relationship between the segregated components of Domestic debt and the level of economic growth in Nigeria.

**H<sub>02</sub>:** Domestic debts individually do not have any significant impact on the level of economic growth in Nigeria.

**H<sub>03</sub>:** There is no causality relationship between domestic debts and economic growth in Nigeria

### **1.5 Scope of the Study**

Domestic debt and economic growth is a very broad area. This study as a matter of fact is limited only to the Nigerian economy. The scope of investigation is delineated from 1980-2011, a period of 32 (thirty two years).

## **2.0 LITERATURE REVIEW**

### **2.1 Conceptual Framework.**

Domestic Debts are debts that originate from within a country. They are usually contracted through debt instruments such as treasury bills, treasury certificates and treasury bonds. Others are development stocks, FGN bonds and Promissory notes. Briefly, we will elucidate herein on the conceptual framework surrounding domestic debts and economic growth in Nigeria.

## **Treasury Bills**

These are debt instruments used by the federal government to borrow funds for short periods of about three months pending the collection of its revenues. Treasury bills were first introduced in UK in the days of Walter Bagehot (1877), and at that time were modeled as commercial bills. Here in Nigeria, on the strength of the Treasury bill Act of 1959, No 11 which came into effect on the 19<sup>th</sup> of March 1959, the first public issue of TB in Nigeria was made on April 7, 1960. The success achieved encouraged further issues of this monetary instrument (Anyanfo: 1993). Presently, the allotment of treasury bills are issued by an auction-based system and in multiples of ₦1000.00 per tender. Usually, subscriptions are sold through an authorized dealer.

## **Treasury Certificate**

Treasury certificates are medium term government securities which have a maturity of between one to two years. It serves as bridge between treasury bills (Short term instruments) and long term government stocks. Treasury certificates were introduced in Nigeria in 1968 and are similar to treasury bills in all respects, except that the tenure is different. Both instruments are eligible for rediscount at the secondary market.

Treasury certificates have played a major role in the development of the money market in Nigeria. The instrument has also assisted government in meeting its financial needs, especially during the civil war years and the reconstruction period of the 1970's. Further issues were suspended in 1975 due to excess liquidity in the system occasioned by the oil boom. The TC.s were again introduced in 1976 as a result of pressure on government finances.

## **Bonds**

Treasury bonds emerged towards the end of 1989 when the monetary authorities of Nigeria decided to convert ₦11.35 billion of maturing treasury bills into 5% denominated treasury bonds with maturity profile in excess of ten years. Treasury bonds came not as a result of issuance of new instruments by that name but as an integral aspect of internal debt management strategy aimed at stretching debt maturity profile. The import of this concept is that the instruments are not eligible to be traded at the money market and cannot serve as an instrument for open market operations. The major objective of treasury bonds is to provide a cost effective source of deficit financing for the government and to seek to minimize debt service obligations in government debts occasioned by the high level of deficit financing by the government. (Nzotta :2004)

## **Development Stock**

These are fairly long term debt instruments issued by the CBN on behalf of the federal government. They have fixed rates of return and definite maturity. In an attempt to improve the liquidity and profitability of banks, the central bank classified government development stocks of less than 3 years to maturity as eligible liquid assets for the purpose of computing the liquidity of banks. This move further broadened the scope of activities in the money market. (Nzotta: 2004)

## **FGN Bonds**

FGN Bonds are debt securities (liabilities) of the federal government of Nigeria issued under the authority of Debt Management Office (DMO) and listed on the Nigerian stock exchange. The FGN has an obligation to pay the bondholder the principal and agreed interest as they fall due. A bond holder has simply lent to the federal government for a specified period of time. The FGN bond is considered as the safest of all investments in domestic currency securities market because it is backed by the full faith and credit of the federal government. They have no default risk, meaning that it is virtually certain your interest and principal will be paid as and when due. The income thus earned is exempt from state and local taxes. The minimum subscription of FGN Bond is ₦10,000.00 + multiples of ₦1000.00 thereafter. Most FGN Bonds have fixed interest rates which are paid semi-annually. Tenor of an FGN Bond is for a minimum of two years. ([www.dmo.gov.ng](http://www.dmo.gov.ng))

## **Promissory Notes:**

Promissory notes are documents stating that a person promises to pay another a specified sum at a certain date. Since it is a negotiable instrument, it is very similar to a bill of exchange. By virtue of the Government Promissory Notes Act 1960 No 6, the federal government of Nigeria can raise domestic public loans via this source.

## 2.2. Empirical review

Existing studies on domestic debts and economic growth in Nigeria are still scanty. We intend to restrict our reviews strictly from the Nigerian perspective.

**Adofu and Abula (2010)** investigated the relationship between domestic debts and economic growth in Nigeria for the period 1986 to 2005. Outcome of their study revealed that domestic debt has affected the growth of the economy negatively. In the light of this finding, the study recommends that government's domestic borrowing should be discouraged and that an increment in her revenue base via tax reforms need be encouraged.

**Onyeiwu (2012)** examined the relationship between domestic debt and economic growth in Nigeria. Result of this study found that domestic debt holding of government is far above a healthy threshold of 35 percent of bank deposit. This portends a crowding out effect on private investments. The study affirmed that the level of debt has negative effect on economic growth in Nigeria. The study recommended that government should maintain a debt- bank deposit ratio below 35 percent, increase its usage of tax revenue to finance developmental projects and to divest itself of all projects the private sector can handle while providing enabling environment for private sector investors and most importantly improved infrastructural facilities.

**Aminu Umaru et al (2013)**, asserted that domestic debts if properly manage can lead to high growth level. A major policy implication of this result is that concerted effort be made by policy makers to manage debts effectively by channeling them to productive activities (real sector), so as to increase the level of output in Nigeria. Another policy implication of the study is that most developing countries contract debt for selfish reasons rather than for the promotion of economic growth through investment in capital formation and other social overhead capital. The paper also recommends that government should rely more on domestic debt in stimulating growth rather than external debt.

The last is yet to be heard on this discuss. The above studies only served as reference material for future and further works in the area of domestic debt management in Nigeria.

## 2.3. Problems Associated with Domestic Debt Management in Nigeria

Like the external debt overhang problem, the issue of domestic debt management has recently generated enough interest. Some of the key problems associated with domestic debt management in Nigeria include:

- Harmonizing fiscal policy needs of government with that of monetary policy thrusts.
- Ascertaining what is an optimal size of debt stock for the country
- Absence of a comprehensive debt management strategy that could sustain and realize the objectives of keeping the domestic debt service low, sustaining the financing needs of government and achieving macro-economic stability.
- Dearth of a credible data base for domestic debt. This relates more to the un-securitized debt stock of the country consisting of debts owed to local banks and contractors. This makes it difficult to fully integrate them into the general macroeconomic objectives of the country.
- It is noteworthy to state here, that establishment of a debt management office will lead to better debt management strategy for the country.

## 2.4 Factors that contributed to Nigeria's domestic debt problems.

- The Federal Government and many states of the federation are just collecting arbitrary loans. The basis for collecting some of the loans are ambiguous, tenuous and unclear
- The high cost of governance in Nigeria is also affecting the burgeoning level of domestic debts in the country
- Corruption, greed, avarice and the attendant effects are helping to fuel the increased level of domestic debt. There is so much money in the economy, but we have not cared to ascertain where they end up- in productive ventures or profligacy?
- The increase in domestic debts could equally be attributed to a shortfall in revenue and the controversial oil subsidy expenditure

## 2.5 The Implications of Nigeria's Rising Domestic Debt burden

The escalating debt profile of the Federal Government had crowded out the real sector of the economy and the equities market. For example, compare the allocation of N161.4 billion for Energy/power in 2012 budget to debt servicing figure of N560 billion for the same period. This is like three and a half times as big as the allocation to power that is deemed very important in the country. The allocation for works is N180.8 billion while it is N26.5 billion for Lands and Housing. The allocation for agriculture, the largest contributor to GDP, is N79.9 billion. Compare what the country is spending on debt servicing to budgetary allocations to critical sectors. The critical questions to ask are: How sustainable is this and how beneficial are these to the entire country?

The capital being formed by the way of debt is what the government is using to finance consumption and not investment. It is contributing next to nothing to the economy. "It is an action that is destabilizing the economy by increasing interest rate and inflation rate. By increasing these two rates, the government is causing more problems to the economy."

As the quest for more debts continue unchecked, so will the debt servicing amount continue to climb. Not much is being paid back out of these loans, as they continue to pile up.

The relatively 'high' interest rate of the risk-free Treasury Bills is the reason many funds providers would not lend to businesses that are riskier than treasury bills. A cursory look at the composition of domestic debts reveals that a large chunk of it was incurred as a result of CBN's issuance of Treasury Bills. The unduly high interest rates make the treasury bills attractive to investors, more so to the foreign investors

## 2.6 Maturity, structure, size and growth of the Nigerian domestic Debt

Domestic debts carry different maturities such as short, medium and long-term debts. Short term debts have original maturity of not more than one year and include treasury bills, ways and means advances, while medium term debts have original maturity spanning over the year and includes treasury certificates. Long term debts on the other hand, have original maturity between 3 and 25 years and include development stocks and treasury bonds. The above determines the relative ease with which interests and principal payments are made. Thus, the maturity structure reflects a time dimension.

Domestic debts in Nigeria had its origin in 1946 when the first national development stock valued at N600, 000 was floated by the colonial government. The first treasury bills of N8m and treasury certificates valued at N20.00m were issued in 1960 and 1968 respectively. Since then, the volume of government domestic debt has risen from N1,040m in 1970 up to N343,674 million by 1996 and finally up to more than N1.3 trillion by year 2003.

One of the key problems encountered in the management of domestic debts in the economy was that fiscal policy goals were not harmonized with monetary policy thrusts to achieve the desired macro-economic objectives. With this development, the quantum of domestic debts in the country continued unabated. For example, the stock of federal government domestic debt as at December 2011 was =N=5622.8 billion, representing an increase of 23.5 percent over the level in 2010. This development reflected the substantial borrowing through the issuance of FGN Bonds and the Nigerian treasury bills. The banking system remained the dominant holder of the outstanding instrument with 76.2 percent, and the non bank public accounted for the balance of 23.8 percent. Disaggregation of the banking system's holdings indicated that =N=3790.8 billion or 88.4 percent, was held by the deposit mobilizing banks and discount houses and =N=495.2 billion or 11.6 percent by the CBN and the sinking fund

Analysis of the maturity structure of the domestic debt showed that instruments of two(2) years and below accounted for =N=3,124.9 billion or 55.6 percent, followed by instruments of above two(2) years to five(5) years at =N=1,064.4 billion, or 18.9 percent; those with tenors of five (5) to ten (10) years totaled =N=715.2 billion or 12.7 percent and tenors of over ten(10) years at =N=718.3 billion or 12.8 percent. (CBN:2011 Annual Report)

## 2.7 Critical issues in Domestic Debt Management

In a liberalized economic system, issues like high interest rates, high fiscal deficits, over dependence of the government on the central bank, maturity profile of the public debt and the intervention and dependence of the government on the financial markets are serious issues that underlie and create the need for public debt management. Taking this into consideration, there is then the need to harmonize public debt management and monetary management, which often times run at cross purposes.

## 2.8. Treasury bonds as a Debt Management Strategy

According to Nzotta (2004), one significant development in domestic debt management in Nigeria is the conversion of Treasury Bills and Certificates to treasury bonds at their maturity starting from 1989. Here, the central bank as banker and financial adviser to the federal government introduced Treasury bonds as an instrument of domestic debt management rather than as money market tool. The import of this is that the instruments are not eligible to be traded at the money market and cannot serve as an instrument for open market operations. The major objective of treasury bonds is to provide a cost effective source of deficit financing for the government. Secondly, the bonds seek to minimize debt service obligations in government debts occasioned by the high level of deficit financing by the government. Treasury bonds increase from N20, 000m in 1989 up to N27, 502.2m in 1995. The quantum of outstanding treasury bonds continued unabated. According to a CBN 2011 annual report, amount of outstanding treasury bonds stood at =N=3,541.2 billion and accounted for about 63% of Nigeria's total domestic debts.

## 2.9 Elements of an Effective Domestic Debt Management

There is a compelling need for an effective domestic debt management strategy for Nigeria. The attempt to lengthen the average maturity of debt instruments through the conversion of treasury bills and treasury certificates to treasury bonds is a bold attempt in this regard. It is envisaged that, with the establishment of a debt management office, Nigeria is in for an effective domestic debt management strategy.

## 3.0 Research Methodology

### Data collection

Data for this study was sourced from the Central Bank of Nigeria (CBN) Statistical Bulletin, and the Debt management office Abuja, for the period 1980 to 2011. Various sources of domestic debt were regressed on Gross domestic product (GDP) figures for the corresponding period. The F-test was used to test the overall significance of the explanatory variables taken together, while the student t-test was used to test for the significance of each explanatory variable or components of domestic debt contribution to the level of economic growth in Nigeria. The coefficient of multiple determinations ( $R^2$ ) was used to test for goodness of fit of the study

### 3.1 Model specification

In this study, a multiple regression analysis is used with GDP as dependent variable, while the components of Domestic debt are treated as independent variables. The model is presented thus as:

$$Y_1 = f(x_1, x_2, x_3, x_4, x_5, x_6)$$

Explicitly, the model could be stated as:

$$Y_1 = \beta_0 + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \beta_5 x_5 + \beta_6 x_6 + e.$$

Where  $Y_1$  = dependent variable and  $x_1, x_2, x_3, x_4, x_5, x_6$  = independent variable

Better still, the above model could be stated in the short run as follows:

$$GDP = \beta_0 + \beta_1 Trb_t + \beta_2 Trc_t + \beta_3 Trbd_t + \beta_4 Dvpts_t + \beta_5 Fgnbd + \beta_6 Prmn_t + e \dots \dots \dots \text{Equation 3.1}$$

### Model formulation in the long run:

Since **GDP** is not usually stationary at "level", we need to apply the lag effect of GDP at the point it becomes stationary. This is usually at "second difference"; thus, we will apply the second differenced value of **GDP** at the point VAR model demands for stationary data. Therefore, in the long run, our impact assessment model will read thus:

$$GDP_t = \beta_0 + \beta_1 Trb_t + \beta_2 Trc_t + \beta_3 Trbd_t + \beta_4 Dvpts_t + \beta_5 Fgnbd + \beta_6 Prmn_t + \beta_7 GDP_{(t-1)} + \beta_7 GDP_{(t-2)} + \varepsilon \dots \dots \dots \text{Equation 3.2}$$

Where **GDP** = Gross domestic product, standing in for Economic growth

**X1=Trb<sub>t</sub>** =Domestic debts via Treasury Bills in year, t.

**X2=Trc<sub>t</sub>** = Domestic debts via Treasury certificates in year, t.

**X3=Trbd<sub>t</sub>**= Domestic Debts via Treasury Bonds in year, t.

**X4= Dvpts<sub>t</sub>**= Domestic Debts via Development stock in year, t.

**X5=Fgnbd** = Domestic debts via FGN Bonds in year, t

**X6=Prmn** = Domestic debts incurred via promissory notes in year, t

And  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5, \beta_6$  = coefficient of  $X_1, X_2, X_3, X_4, X_5,$  and  $X_6$

t = Time and  $\epsilon$  = Estimated Error term

### 3.2.) Justification of the chosen variables

#### Economic Growth (GDP<sub>t</sub>):

There are many factors that are used in measuring economic development in a given nation. In this study, we have chosen to adopt the concept of gross domestic product. It is the standard measure of a nation's production and income, as it captures the salient aspect of economic growth as well as economic development (Enu: 2009)

**Treasury Bills (Trb<sub>t</sub>), Treasury Certificates (Trc<sub>t</sub>), Treasury Bonds (Trbd<sub>t</sub>), Development Stock (Dvls), FGN Bonds (Fgnb<sub>t</sub>) and Promissory notes.( Prmn<sub>t</sub>).**

These are adjudged to be the major sources of internal or domestic loans in Nigeria. Their inputs are expected to impact positively on the economic growth and development of the nation. Therefore, their respective coefficients  $\beta_1, \beta_2, \beta_3, \beta_4$  and  $\beta_5$  are expected to be positive i.e.  $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$  and  $\beta_6 > 0$

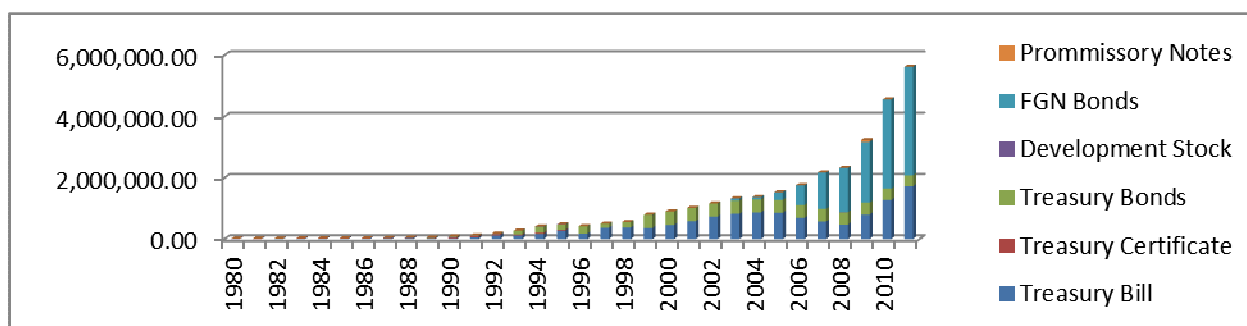
### 4.0 Data Presentation and Analysis

As a prime objective, this section focuses on analysis of data for the study. Also, it aims to interpret the results obtained therein, so that policy implications can be drawn. Two (2) hypotheses of this study were individually tested using a multiple regression model to ascertain the relationship between components of domestic debts and economic growth in Nigeria, while the third will be subjected to a granger causality test.

#### 4.1 Data Presentation:

Data for our estimation was generated from various publications of the Central Bank of Nigeria and the Debt Management office, Abuja. These are aptly captured in the chart below:

**Graphic representation of Nigeria's domestic debt components**



## 4.2. Data Estimation

**4.2.1 Unit Root Tests:** The unit root test is carried out using Elliot –Rothenberg stock optimal test and the Phillips–Perron test to determine whether the data set is stationary or not and the order of integration. From the output table below, we observed a mixed bag scenario. While some variables turned stationary at ‘‘ level’’, others were at ‘‘ first difference’’; and yet a third group at ‘‘second difference’’.

**Table 4.1 Unit Root Test**

Elliot Rothenberg Stock Point –Optimal unit Root Test					Phillips –Perron Unit Root Test				
Variables	T-Stat.	Critical Value	Order of Integration	Sig.	Variables	T-Stat.	Critical Value	Order of Integration	Sig.
TRB	51.29	2.97	1 <sup>st</sup> Diff	**	TRB	-5.78	-2.97	2 <sup>nd</sup> Diff	**
TRC	5.90	2.97	Level	**	TRC	-4.26	-2.97	1 <sup>st</sup> Diff	**
TRBD	15.64	2.97	2 <sup>nd</sup> Diff	**	TRBD	5.20	-2.97	1 <sup>st</sup> Diff	**
DVPTS	6.61	2.97	1 <sup>st</sup> Diff	**	DVPTS	-11.36	-2.97	2 <sup>nd</sup> Diff	**
FGNBD	8.05	2.97	1 <sup>st</sup> Diff	*	FGNBD	-5.90	-2.97	2 <sup>nd</sup> Diff	**
PRMN	NA	NA	NA	NA	PRMN	-19.27	-2.97	2 <sup>nd</sup> Diff	**
GDP	15.17	2.97	2 <sup>nd</sup> Diff	**	GDP	-13.79	2.97	2 <sup>nd</sup> Diff	**

Source: E-views statistical package-version 7

In the above table, one of the sources of domestic debt in Nigeria - promissory note (PRMN) was observed to be non-stationary, even at second difference. The data set was consequently thrown out. This situation is justified by the fact that, the variable only featured once in a 32 year time series data. Its value and content was hitherto subsumed in other variables

### 4.2.2. Johansen Co-integration Test:

Result of Johansen Co-integration tests below strongly reject the null hypothesis of no co integration .i.e. no long run relationship between the dependent and the independent variables in favor of at least 3, co-integrating vectors.



**Table4.2: Johansen Co-integration Test**

Trace test					Max Eigen value test				
Hypothesized No. of CEs	Eigen value	Trace Stats	0.05 Critical value	Prob**	Hypothesized No. of CEs	Eigen value	Max-Eigen Stats	0.05 Critical value	Prob**
None *	0.967031	241.5245	95.75366	0.0000	None *	0.967031	102.3660	40.07757	0.0000
At most 1 *	0.886139	139.1585	69.81889	0.0000	At most 1 *	0.886139	65.18328	33.87687	0.0000
At most 2 *	0.758450	73.97524	47.85613	0.0000	At most 2 *	0.758450	42.62033	27.58434	0.0003
At most 3 *	0.452153	31.35492	29.79707	0.0328	At most 3	0.452153	18.05276	21.13162	0.1279
At most 4	0.284670	13.30215	15.49471	0.1042	At most 4	0.284670	10.05033	14.26460	0.2086
At most 5	0.102726	3.251821	3.841466	0.0713		0.102726	3.251821	3.841466	0.0713
Trace test indicates 4co-integrating equations at the 0.05 level * denotes rejection of the hypothesis at the 0.05 level					Max-eigenvalue test indicates 3 co-integrating equations at the 0.05 level.* denotes rejection of the hypothesis at the 0.05 level				

Source: E-view statistical package- version 7

### 4.3 Test of Hypotheses

**Hypothesis 1: There is no significant long run relationship between segregated components of Domestic debt and the level of economic growth in Nigeria.**

**Summary of Global Statistics: Ordinary least Square (OLS) & Vector Autoregressive (VAR) Models.**

Table 4.3: Test Statistics	Model 1( OLS)	Model2(VAR)
R-Square	0.973596	0.993027
Adjusted R-Square	0.968518	0.990808
S.E of Regression	1870442.	1028820.
Sum of Squared Residual	9.10E+13	2.33E+13
Log Likelihood	-504.2177	-453.2335
Durbin Watson Statistics	0.477149	1.987108
Mean Dependence Variance	7088640.	7557974.
SD Dependence Variance	10541818	10730710
Akaike Infor. Criterion	31.88861	30.74890
Schwarz Criterion	32.16343	31.12255
F-Statistics	191.7402	447.5470
Prob-(F-Statistics)	0.000000	0.000000

Source: E-view statistical package- version 7

In the short run, OLS model posted an R-Square of 97.35%, Adjusted R-Square 96.785%, Standard Error 1870442, Log Likelihood- 504.21, Akaike information criterion 31.88 and Schwarz criterion of 32.16. In order to confirm the specification status of our model, we employ the analysis of variance or ANOVA, for short.

Since F-ratio calculated (191.7) is greater than F-ratio critical (3.59, 2.47), at both 1% and 5% Alpha levels. We conclude thus; that domestic debts have a significant relationship with the level of economic growth in Nigeria in the short run.

In the long run, the VAR model posted an R-Square of 99.3%, Adjusted R-Square 99.08%, Standard Error 1028820, Log Likelihood -453.2, Akaike information criterion 30.74 and Schwarz criterion of 31.12. Applying the rule of ANOVA, since F-ratio calculated (447.5) is greater than F-ratio critical (3.36, 2.36), at both 1% and 5% Alpha levels,. Thus, we reject  $H_{01}$  and conclude that domestic debts have a significant long run relationship with the level of economic growth in Nigeria,

**Test of hypothesis 2: Domestic debts indicators individually do not have any significant impact on the level of Economic growth in Nigeria.**

Having tested the significance of the model, we go a step further to test the significance of components of domestic debts in contributing to the total variation in the level of economic growth in Nigeria. This is achieved through the student t-test. We refer to the regression result in table 4.4 below:

**Table 4.4: T-Statistics Table- in the short run**

Test Statistics	TRB	TRC	TRBD	DVPTS	FGNBD
Coefficient of the variable	0.44	-2.34	4.07	-2311.86	7.86
Standard Error	2.10	30.49	5.13	746.32	0.79
T-Statistics Calculated	0.21	-0.08	0.79	-3.09	9.89
T-Statistics Tabulated@1%	2.78	2.78	2.78	2.78	2.78
T-Statistics Tabulated@5%	2.06	2.06	2.06	2.06	2.06
Significance	0.83	0.94	0.43	0.004	0.0000

Source: E-views version 7.0 statistical package

From table 4.4 above, FGN Bond proved to have a positive significant relationship with economic growth in Nigeria, at both 1% and 5% Alpha levels in the short run, while Development stock maintained a significant negative relationship with economic growth. Other components of domestic debt had no significant impact on economic growth in Nigeria..

**Note:** F-ratio tabulated DF@ Short run = (6, 26); 1% = 3.59, 5% =2.47, T-ratio DF (26), 1% =2.78, 5%= 2.06., F-ratio tabulated DF@ long run = (8, 24); 1% =3.36, 5%= 2.36, T-ratio DF (24), 1% =2.8, 5% = 2.06

The resulting estimated model for Nigeria in the short run is given as:  **$GDP = 9405436 + 0.449542TRB_t - 2.35 TRC_t + 4.07TRBD_t - 2311.86DVPTS_t + 7.86FGNBD_t$** .....Equation 4.1.

Next, is to ascertain the impact of domestic debts on the economic growth of Nigeria in the long run.

**Table 4.5: T-Statistics Table- in the Long Run**

Independent Variable	TRB	TRC	TRBD	DVPTS	FGNBD	GDP <sub>(t-1)</sub>	GDP <sub>(t-2)</sub>
Coefficient of the Variable	3.664268	5.978621	-2.790438	-283.8561	-0.232056	0.317216	0.866208
Standard Error	1.378516	17.10656	3.341309.	627.3357	1.160963	0.181056	0.232765
T-Statistics Calculated	2.658126	0.349493	-0.835133	-0.452479	-0.199882	1.752037	3.721378
T-Statistics Tabulated@1%	2.80	2.80	2.80	2.80	2.80	2.80	2.80
T-Statistics Tabulated@5%	2.06	2.06	2.06	2.06	2.06	2.06	2.06
Significance	0.0144	0.7300	0.4126	0.6554	0.8434	0.0937	0.0012

Source: E-views version 7.0 statistical package

From table 4.5 above, only Treasury Bills and the lagged values of GDP (in the second year), taken as independent variable were found to be positively significant in the long run. Other sources of domestic debt like Treasury bond, FGN Bond and Development stock maintained a negative relationship with economic growth, though not statistically significant. The resulting estimated model for Nigeria in the long run is given as:

$$\text{GDP} = 993784.1 + 3.66\text{TRB}_t + 5.98\text{TRC}_t - 2.79\text{TRBD}_t - 283.86\text{DVPTS}_t - 0.23\text{FGNBD}_t + 0.32\text{GDP}_{(t-1)} + 0.87\text{GDP}_{(t-2)} \dots \text{Eq.4.2}$$

**Test of Hypothesis 3:** There is no causality relationship between domestic debts & economic growth in Nigeria

**Table 4.6: Result of the Granger Causality Test**

Null Hypothesis	Observations	F-Statistic	Prob
GDP does not Granger Cause FGNBD	30	11.1391	0.0003
FGNBD does not Granger Cause GDP		0.53163	0.5941
TRB does not Granger Cause GDP	30	12.7170	0.0002
GDP does not Granger Cause TRB		6.92651	0.0040

Source: E-Views version 7 statistical package.

For the period under review (1980- 2011), result of the Granger causality test indicates that, there exists a unidirectional relationship between economic growth and FGN Bonds on one hand and a bidirectional relationship between Treasury bills and economic growth on the other hand. Other sources of domestic debt did not have any significant relationship with economic growth in Nigeria

#### 4.5 Application of Research Findings and Contribution to Knowledge

One of the major contributions of present study therefore is that it is possible from the model of equations 4.1 and 4.2 respectively, to predict the result or level of economic growth in Nigeria( At both the short and long runs), given that the levels of disaggregated components of domestic debts are known

$$GDP_t = 9405436 + 0.449542TRB_t - 2.35 TRC_t + 4.07TRBD_t - 2311.86DVPTS_t + 7.86FGNBD_t \dots \text{Eqn4.1}$$

$$GDP_t = -993784.1 + 3.66TRB_t + 5.98TRC_t - 2.79TRBD_t - 283.86DVPTS_t - 0.23FGNBD_t + 0.32GDP_{(t-1)} + 0.87GDP_{(t-2)} \dots \text{Equation.4.2}$$

#### 5.0. Findings, Conclusion and recommendations

It is pertinent at this juncture to briefly summarize the outcome of our research efforts, thereafter we make some policy recommendations based on the findings.

##### 5.1 Summary of findings

- In the short run, FGN Bond proved to have a positive significant relationship with economic growth in Nigeria, at both 1% and 5% Alpha levels. While Development stock maintained a significant negative relationship, the other variables had no significant impact on the economic growth of Nigeria.
- In the long run, Treasury Bills and the lagged value of GDP (in the second year), taken as independent variable were found to be positively significant.
- Results of the Granger causality test indicate that, there exist a unidirectional relationship between economic growth and FGN Bonds on one hand and a bidirectional relationship between Treasury bills and economic growth on the other hand. Other sources of domestic debt did not have any significant relationship with economic growth in Nigeria

##### 5.2 Conclusions:

This research has made us to understand that not all components of our domestic debt profile are contributing positively to the economic growth of Nigeria, both in the short and long runs. This calls for caution and a rethink on the burgeoning level of our domestic debt profile. Government should not be seen as borrowing money for the sake of it. Domestic loans should only be called for, when it is absolutely necessary.

##### 5.3 Recommendation

- ❖ It is not a bad idea after all borrowing from within, since debt could be deployed to good purposes. However, the rule of thumb is that the returns (for a business) and societal welfare (in the case of a government) derivable from deploying the funds generated from the loans MUST surpass the interest being paid on such loans. Seen in this light, the question is whether our current debt profile is sustainable given the high interest being paid on these loans. As a way out of the woods, the government must undertake an aggressive cut-down of the bogus recurrent expenditure which is over 70% of her total expenditure profile. This will help free up the much-needed funds for infrastructural development
- ❖ If Government must take loans then, such loans must be tied specifically to some viable and growth enhancing projects that could pay its way through. Nigerian government should stop accumulating unproductive debts, which has no positive multiplier effect. In recent times, much of our budgetary expenditure went to security, which is totally unproductive, to the detriment of budgetary capital expenditure, which is a catalyst for economic growth
- ❖ The Economic and Financial crime commission should beam their search light on the various state governors on how they are spending the inflows from domestic loans. Again, they should go after the corrupt politicians to wherever they are and recover at least part of the stolen loot. After all, the ex-governors, ministers, LG chairmen are not covered by the "immunity clause".
- ❖ Nigerian citizens demands for more accountability and transparency from governments - be it at the federal, state or local government levels.

- ❖ Going forward, the government should resort to acquiring funds through bonds. The government should desist from borrowing short to finance long term projects
- ❖ Now is the time for the CBN to pursue a pro-growth strategy by reducing prime rate (MPR). If MPR is reduced, it will have a knock-on effect on interest rate on treasury bills and government bonds, since all interest rates are tied to the MPR. This will reduce the government's cost of borrowing and free up more funds for capital expenditure. For banks and other lending institutions, lending rates are also tied to the MPR. Reducing MPR will therefore induce a reduction in lending rates, meaning that more serious entrepreneurs will have an opportunity to access loans at more reasonable rates
- ❖ Going by the high interest rates on treasury bills, rational investors are more at home investing on a risk free asset such as the Treasury bill rather than taking a risk by buying into a company's stock, with all the attendant hazards. There is need to reduce the high interest rates payable on treasury bills. Our regulatory authorities should have a rethink on this. There is also need to tackle head long the issue of inflation. It has a contributory effect on the burgeoning level of domestic debts in the country.
- ❖ Lastly, the bitter truth must be said - the revenue from oil is not forever. The future generations will blame us for putting them into debts without so much to show for it and with a reduced capacity (in the absence of the oil revenue) to repay. This is what every patriotic Nigerian, regardless of party affiliation or tribe/religion, should be addressing.

#### 5.4. Suggested area for further research

Present study has been in the area of domestic debts in Nigeria. We strongly suggest that further research and evaluation be carried out in the area of external debt financing. The essence is to ascertain the totality of Nigeria's outstanding debt obligations to her nationals and to the outside world. There is need for due process in our quest for financial borrowings. If Nigeria must continue to borrow from within and externally, then her loan obligations must be tied specifically to some viable and growth enhancing projects that could pay its way through.

#### References

- Adifu and Abula (2010), "Domestic Debt and the Nigerian Economy", Current Research Journal of economic theory 2 (1).
- Aminu, Hamidu and Musa (2013), "External Debt and domestic debt impact on the growth of the Nigerian economy" - International journal of educational research 2013, volume 1 issue 2.
- Anyafu.A.M.O. (1996) Public finance in a developing economy- the Nigerian case, Enugu
- Asogwa and Ezema(2006)-Domestic government debt structure, risk characteristics & monetary conduct: Evidence from Nigeria-International research project on macroeconomic policy challenge for low income countries.
- CBN statistical Bulletins (Various issues)
- Concerns over Nigeria's rising domestic debt-A case for balancing fiscal policy risks- [www.bgl.group.com](http://www.bgl.group.com).
- J.S. Kehinde (2012) "Debt and Debt volatility; Effect on economic growth in Nigeria". Asian Economic & financial review, Volume 2, No.2, pp325-329.
- Ngozi Okonjo-Iweala (2013): Clarifying Nigeria's Debt status- [www.channelstv.com](http://www.channelstv.com)
- Nzotta, S.M (2002): Money, Banking and Financial Theory and Practice Lagos: International Educational Books and Publishers
- Onyeiwu Charles (2012), "Domestic Debt and the growth of Nigeria economy". Research journal of finance and accounting, volume 3, No. 5.