Financial Market Long-Tenured Debt Instruments and Economic Growth in Developing Nations: Empirical Evidence from Nigeria

ELEJE, Edward Ogbonnia (PhD), NWANI, Christopher Onyemaechi & EZUEM, Daniel Moyotole
Department of Banking and Finance, Federal University, Wukari, Taraba State, Nigeria

Abstract: **Extant studies have attempted to establish the possible connection between financial market long tenured debt instruments and economic growth of nations especially, the developing countries. Results so far have appeared inconclusive and in some cases contradictory due to data set, timing, and even country peculiarities; hence, the continued need for further research in this dimension. The present study is therefore a contribution in this regard. The study basically evaluates the impact of bond, a major financial market long-tenured debt instrument on economic growth of a prototype developing nation, Nigeria. Specifically, it investigates the possible effect of federal, state, and corporate bonds on economic growth within a period (2003-2020). A computer based regression and correlation analysis aided by the Special Package for Social Science (SPSS) version 20 was employed to test three formulated hypotheses. The findings from the empirical evaluation reveal that federal government bonds have strong positive impact on economic growth whereas both state government and corporate bonds have weak but positive effect on economic growth in Nigeria. Consequently, the paper recommends among others that federal government should continue to explore domestic bond market financing option for capital projects while investors should invest on the FGN bond instruments due to their riskless characteristics. Besides, state and local governments as well as corporate entities should intensify more efforts at exploring the financing potentials of the bond market to boost local level growth and contribute meaningfully to economic growth and development of Nigeria.**

Keywords**: Financial Market, FGN bond, State bond, Corporate bond, Economic growth**

I. INTRODUCTION

Financial market long tenured debt instruments have increasingly become very relevant to the economy of many developing nations especially, the Nigerian emerging economy due to its significance to economic growth. Topical among these instruments in Nigeria is the bond instrument. A bond is a generic name for a tradable loan security usually issued to raise capital by public and private entities (Sec, 2010). The bond market is an integral aspect of the capital market. Interestingly, the Nigerian bond market is composed of both corporate bonds and government bond (Oke, Dada, & Aremo, 2021). Globally, the bond market, no doubt forms the mechanism through which the savings surplus unit of the economy is transformed into medium and long-term investment in the economy. As, such, bond markets have been acclaimed by many researchers as a 'big' player in economic growth and development. For instance, citing the significant role of bond market in Asian economic crisis of 1997, Mu, Phelps and Stotsky (2013) argue that bond market aids sustainable economic stability through its intermediation between capital savers and capital user. It is evident that bond market aids channeling of more funds into domestic investment. Studies suggest that government bonds have the tendency to constrain corporate bonds issuance in Nigeria mostly due to the high frequency and mode of issue (Isah, 2012; Fasoranti & Amasoma, 2013).

Government issues bonds for the purpose of infrastructural development in Nigeria. Consequently, they are permitted to issue bonds at various levels including federal, state, local governments and even at community level otherwise called municipal bonds. A noticeable example is the issuance of N75 billion federal government special purpose bonds of 2003 and 2014 issued to settle pension amount outstanding at that period (SEC, 2019). Again, Federal Capital Territory (FCT) alone funded N4.612 trillion of the total deficits of N7.986 trillion arising from fiscal operations through bond issuance in the Nigerian domestic bond market. Various state governments also issued state government bonds at different intervals, in as much as they met the Central Bank of Nigeria requirements for issuance of such bonds in the country (SEC, 2019).

The increasing tempo of budget deficit in Nigeria has left the country with the veritable alternative of raising funds from the bond market. Specifically in 2003, the Nigerian fiscal deficit stood at N202.72 billion, representing 2.04% of the nation's GDP; dropping in 2004, to N172.6 billion or 1.51 % of GDP. By 2005, national deficit level fell again to N161.86 billion or 1.11% of GDP; before beginning soaring to N341.86 (2.35% of GDP) representing 111.79% jump. The deficit level jumped again to N580.19 billion (3.64%); and then N537.95 billion in 2008. In 2009, deficit was N836.6 billion, 3.02% GDP (Fasoranti & Amasoma, 2013; Eleje & Osayi, 2017). The figure more than doubled once more as government's revenue obviously stagnated as needs mounted federal government's fiscal operations resulted in a 2010 deficit of N1.993 trillion, the highest within the 10 years period. It dropped to N1.136 trillion or 2.96% in the following year; and N1.135 trillion or 2.85% in 2012 (Ezeabasili, Tsegba & Ezi, 2012).

Meanwhile, research controversies abound on the basic determinants of bond market growth in general. Also in Nigeria, there exist conflicting opinions on what ideally stimulates the bond markets to cause growth in the economy. While some scholar's argue that bond market growth is triggered by fundamental institutional factors, others posit that the market is perhaps propelled by fundamental macroeconomic agents like inflation rate, exchange rate, banking sector development, trade openness, fiscal balances, foreign direct investment, and savings among other. The Nigerian bond market has increased substantially in the last decades. Available statistics indicate that bond market growth reached $1.8 trillion in 2012, from $1.2 trillion in 2011 (CBN 2013). Bond market growth in Nigeria has surpassed other financial market short tenured debt instruments including treasury bills, treasury certificates and even equities both in absolute terms and as a percentage of GDP (DMO, 2013, Chidi-Okeke, Ogbonna, & Okeke (2020).

There are several studies that document the impact of bond market growth on economic growth but the direction of causality is still an open question in the academia (Said 2013; Kapingura & Makhetha-Kosi, 2014). In search of the possible causal relationship between the bond market and the real sector of the economy in developed economies, five major hypotheses have emerged including; supply-leading, demand-leading, interdependence; no causal relationship and finally, negative causality from finance to growth. Supply leading hypothesis maintains that accumulation of financial assets stimulates economic growth. The theoretical basis of the supply-leading hypothesis begins with the work of McKinnon (1972) and Shaw (1973).

The size of the Nigerian domestic bond market is still small when compared with some developing countries in Africa like South Africa. It is therefore imperative that a deeper and more liquid bond market will no doubt aid Nigerian government finance huge infrastructural gap estimated at $20 billion per year. Bond market will also enable corporate firms raise long-term capital that will in turn generate employment and promote output growth.

In Nigeria, bonds are generally classified into government bonds and corporate bonds (Oke, Dada, & Aremo 2021). Government bonds are bond issued by the federal, state, and local governments while corporate bonds are issued by corporate entities. The present research empirically ascertains if federal, state and corporate bonds have respectively been able to significantly impact economic growth in Nigeria. The study shall benefit the government, corporate institutions, financial market operators and regulators, economic watchers, policy analysts and the general public.

Conceptual Clarification

By definition, a bond is a debt instrument issued by a government or a corporate entity to raise fund to finance budget or projects (Eleje, Agha, & Oyavuru, 2020). It is usually issued for a period of time more than a year. It is an 'IOU' with a preset interest rate, redeemable at the expiration of a specified tenor. Individual investors can borrow money to expand their businesses through bond with different options from pension funds or mutual funds. Largely, bond is meant to be a promise to pay back the principal alongside with interest, which is the coupon, on a specified date, usually referred to as maturity date. The investor who buys/invests in bond becomes a creditor of the issuer. Unlike in the case of equities, the buyer of bond does not gain any kind of ownership right to the issuer. However, in the time of financial distress, the shareholders have lesser claim on an issuer's assets compared to bond holder. Companies issue bonds and sell them to the public at various interest rates, and investors buy with the full knowledge that the company will repay the original principal with interest at the maturity date.

A bond is generic name given to a tradable loan security issued by either corporate bond (companies) or governments for the purpose of raising capital (SEC 2020; Oke, Dada, & Aremo, 2021). It is an interest bearing security that guarantees the holder the financial obligation of repayment of capital at future specific date and a fixed rate of interest. This fixed rate of interest is often called coupon. Again, bond can generally be conceptualized as a financial debt instrument (Ogilo, 2014). By this definition, it means that a borrower issues bond as an issuer, with the financial obligation to pay-back to the lender both the amount borrowed plus interest within a defined time frame. In this case, the lender is regarded as the investor. Suffice it to say therefore, that in a general simple market language, the bond issuer is the seller while the lender is the buyer. Further, SEC (2010:2) specifically express that a bond is: a generic name for a tradable loan security issued by governments and companies as a means of raising capital. The bond is an interest bearing security. It guarantees its holder both repayment of capital at a future specified date (Maturity date) and a fixed rate of interest also known as the coupon. Therefore, simply put, when a firm or corporation or government needs to raise funds from public on long term arrangement, it often achieves such financial needs by selling or issuing securities. These instruments/securities can be described as bond.

Numerous corporations worldwide, including developed and developing economies consistently issue bonds as a reliable alternative source of finance. Hence, a bond is not only a debt instrument but also a tradable financial instrument that serves the purpose of raising capital which will take the maturity period of more than one year. It must have an attribute of negotiability, which makes it tradable in the markets.

More so, according to Mishkin and Eakins (2000) bonds are securities that represent a debt owned by the issuer to the investor. They maintain that bonds bring about financial obligations to the issuer; such that the obligation requires timely repayment of interest. A bond contains a face value usually called the "par value". The interest rate payable on the maturity date of the bond is also usually contained on the face of the bond. In financial terminology, the interest rate is

technically called "coupon rate" and it is customarily fixed for the gestation of the bond. Bond coupon rate does not fluctuate with the general market interest rate. However, should the situation arise where the bond issuer could not meet up with the repayment obligation, the holder of bond is legally permitted to lay claims on the property (assets) of the issuer. In collaboration, Onaolapo and Adebayo (2010: 2) add that a bond can be defined as a 'contract which gives the holder a financial claim on the issuer', such that the claim duly protect the holder of the bond in a situation where the issuer cannot pay the agreed amount as at when due. They further submits that in bond arrangement, the entity borrowing money is called the 'issuer', whereas the person lending money is known as the investor and the buyer. A bond being a contract is justifiable from the fact that the issuer of bond pledges to pay the buyer an interest sum called 'coupon' because of the concession of utilizing the borrower's money in the course of his business. Outside the payment of interest, the buyer also pays back the principal sum borrowed including the interest of the bond in a periodic interval within the maturity periods of the bond. The periodic interest payment and the principal payment on the bond brought about the term- 'fixed income security associated with bonds issue' (Onaolapo and Adebayo, 2010:5).

Bonds with fixed coupons rate usually divide the stated coupon into parts as may be stipulated by the payment arrangement (e.g. annual and semi-annual). Apart from the bonds with fixed coupon rate, bonds can also go with floating coupon rates. Such bonds often have combined calculation schedules where the floating rate is arranged shortly before the next payment schedules (Afolabi, 2014). Outside the fixed coupon bond and the floating bonds, zero- coupon bonds also exist. A zero-coupon bond implies that they do not require payment of interest but they are issued based on deep discount which indirectly could be an implied interest. Trading of all these bonds is immensely dependent on the investor's ability and partly on three other factors such as interest rate, issuer factor and economic conditions. Essentially, all these factors can probably make a bond investor to make profit and on the contrary, count loses (Afolabi, 2014). Tax does not favor bond interest compared to dividend income that enjoys favorable taxation rates. This means that bond interest is duly taxable as 'ordinary income'. Although in many countries, government bonds or municipal bonds are exempted from taxes depending on the countries regulations.

The presence of the bond market in Nigeria is traceable to the early twentieth century and also floating of a bond in 1946 by the then colonial government. The federal government development bonds which were formally introduced in 1959 was designed to provide long term finance for government projects and later most proceeds were leased on regular basis till 1986 when deregulation of the capital market started.

Classification of the Bond Market

Ideally, bond market could be classified into government bond and corporate bond markets. Government bond or securities comprise federal government development stock, treasury bonds (TBs), treasury Certificates (TCs), and development bonds issued by states and local governments, while corporate securities are mainly in the form of debentures or loan stock. It may also be classified based on time, such as medium or long term bond to indicate the time dimension. Bonds are also called fixed-income securities due to the "fixed" amount of income bond attract. Bonds generate the same amount irrespective of what happens or who holds the bond.

a) *Government bond:* Generally, these are the type of bonds issued by a government with assurance of paying a periodic interest alongside with the principal at maturity. This type of bond usually comes in the country's own currency; others that issued in foreign currency are called sovereign bonds. Mostly, debt securities that are issued in the domestic currency are used to support the government spending. Government debt is money owed by any level of government and is backed by the full faith of the government. Generally, there are several risks associated with national bonds. These include political risk, inflation risk, country risk and interest rate risk that investors need to assess before investing in government bonds.
b) *Corporate Bonds:* This is the type of bond with which companies sell their debts through the public securities market. Most companies make bond attractive enough to interest investors and avoid the incidence of very low subscription. Corporate bonds generally have higher interest rates than government bonds due to the risk that the company could default on the bonds or go bankrupt. . Some corporate bonds are referred to as convertible bonds, as, they can be converted into stock, if certain requirements are met. Mostly, a short-term corporate bond is less than 5 years; intermediate is 5 to 12 years while the long term is over 12 years. Cooperate bond is classified as follows:

Debenture Stock: This type of bond is common globally. It is a form of loan contract issued by the government or private company, stipulating requirement to pay the interest and the borrowed funds. This kind of bond is secured by part or all the companies 'properties. Lenders are issued certificates showing the stock amount attached with the coupon for interest. Stockholders' interest is covered by the trust deed; which enables a trustee to act on behalf of the stockholders. Should the lender defaults, a receiver may be appointed by the debenture holder to seize and gather assets from the borrower and repay the money recovered. Debentures occur in different forms such as:-

Secured or Naked Debenture: In this type of bond, interest could be charged on the movable assets or fixed assets of the issuing company or may be unsecured by any charge.

Unsecured or Clean Debenture: This kind of debenture might consider a negative pledge during the tenor of the bond. It does not give room for other lenders to have any entitlement to specific charge of the company's assets. Generally, blue chip companies with sound cash flow prospects are allowed to make clean lending with negative pledge.

Redeemable debentures: This is a type of debenture that may be issued by a company limited by shares, or at the option of the company are liable to be redeemed. An unlimited liability company or a public liability company may not be able to issue this type of debenture as the law specifically refers to a company limited by shares.

Convertible Debentures: Convertible debenture permits the company or the holder, to convert the debenture to shares in the company based on the conditions specified in the debentures. These bonds are related to the terms and conditions that are in lieu of repayment or redemption; they always have provision that permit bond conversion to equity by holders in the future subject to the applicable conversion terms.

Non-convertible Debentures: These are debentures that have specific coupon rate and are the most common type of debt instruments. The repayment and tenor is usually structured in one or more tranches.

Floating Rate Debentures: These are the type of debentures that the interest rates are fixed. The interest rates are normally fixed to either monetary policy rate or other determining indicative rate, but it must be with a ceiling or benchmark. The fixed interest rates were to protect the issuing company and the investors, should a rise in the interest rates occur during the tenor of the bond.

c) *State/Local Governments/Municipal Bonds:* This is the debt security issued by a state government to finance their capital expenditures. It is also called Municipal bonds, and is exempted from federal government, state and local taxes. This type of bond offer competitive interest rates just like corporate bonds. The most popular means for state to generate income is through raising taxes on its citizens but in this situation, the federal government permits the state government to trade bonds that are free of federal income tax on the interest paid.

Nigeria's Bond Market Instruments

Federal Government of Nigeria (FGN) Development Stocks: These are stocks issued for development financing and are project-tied. They are securities on which interest rates are paid yearly and usually issued in tranches. They also have stable interest rate and maturity dates. They are usually issued in tranches and the interest is paid bi-annually. The history of the Nigerian bond market may be traced to the 1946 issue of N600, 000.00 Federal Government Stock of 7-25 years tenor, with the primary objective of promoting development finance for all tiers of government (CBN, 2021). Over the years, the share of government stocks in the capital market has declined, owing partly to the Federal Government recourse to other sources of financing outside the capital market.

Federal Government of Nigeria (FGN) Treasury Bonds: The Central Bank of Nigeria introduced the Federal Government Treasury Bonds in 1989, with the objective of minimizing debt service obligations of the Federal Government. The bonds grew from the conversion of treasury certificates that had been used to finance the Federal Government deficits over the years. Thus, the instrument is used to finance the fiscal deficits of the government each year and held solely by the CBN. Over the years, the value of the bonds has grown relative to total debt instruments. The management of the debt was handled by the CBN before the creation of the Debt Management Office (DMO).

State and Local Governments Bonds: The inadequacy of bank financing has necessitated the lower tiers of government to seek funds from the bond market to augment their internally generated revenues and allocation from the Federation Account, with the aim of financing vital development projects. The 1st Lagos Island LGA bond (FRRB), coupon rate 24.75 and valued at N100m was issued in 1992 while the 1st State bond, the Bendel State Loan Stock for housing development was floated in 1978 (SEC; 2019). Since then several other states and local governments have been patronizing the bond market.

Industrial Loan Stocks: These are project-tied loans, issued by companies on the stock exchange and carry fixed or floating rates, with a maturity date, and are backed by sinking fund arrangements for the retirement of the loans. Since the 1990s, industrial loan stocks have become popular as they provide cheaper sources of funds. Industrial loan stocks take the form of debenture stocks, preferred shares and corporate bonds. Firms in the banking sector including UBA, First Bank, GTBank, Diamond Bank and Access Bank provided the lead in corporate bond offerings seeking to raise additional funds.

Unsecured Zero Coupon Redeemable Convertible Stocks: Unsecured Zero Coupon Redeemable Convertible Stock was introduced in a bid to further diversify securities traded on the Stock Exchange. The security listing is unsecured and has no periodic interest payments obligation. It is redeemable at full face value at maturity, and could be converted into ordinary shares after a specified period of moratorium.

AMCON Bonds: The Asset Management Corporation of Nigeria (AMCON) has played a vital role in distress resolution in the banking sector in Nigeria since its establishment. The AMCON bought a total of N1,230.0 billion non-performing loans (NPL) of the banking system in December 2010. The company issued 2 three- year

consideration bonds to 22 DMBs with the face value of N534.48 billion in the first half of 2011, in exchange for the DMBs eligible assts. This made the total face value of the bonds issued by AMCON to sum up to N1,764.48 billion, against the eligible assets of the banks valued at N2,827.0 billion, which was acquired by the company at end-June 2011. This represents 33.28 per cent of the entire outstanding bonds issued in the market.

Theoretical Framework

The bond market is a vital aspect of an economy and is guided by quite a number of theories. However, the current study focused on two of the related theories viz a viz; the term structure theory and the Ricardian Equivalence theory respectively.

Term Structure of Interest Rates Theory: This theory addresses the relationship between the maturity of debt and its cost (Pandey, 2010:662). It is best estimated through yields in the default risk free government securities (SEC, 2019). Interest rates and monetary policy issues are germane in assessing bond market performance. Monetary policy authorities, which must be concerned with the structure and operation of the bond market, use bonds to define the yield curve and to ensure stability of short term rates (Nkwede, Uguru, & Nkwegu, 2016).

Barro-Ricardian Equivalence Theory: The theory was first initiated by David Ricardo in the nineteenth century, and later developed by Robert Barro who posits that government effort to stimulate demand through debt-financed government spending, does not have impact in the long run because of the savings attitude of the public towards future tax increases. The argument from the Ricardian school of thought is that since government would naturally raise taxes to pay back its debt, the savings attitude of the public towards taxes would eventually neutralize the impact of government borrowing, which in the long run renders demand unaltered. The theory negates the aspect of project finance, which is the main crux of debt financing in the contemporary society. Project-driven financing implies calculated borrowing such that the returns or cash flow generated from a project is enough to finance the project. This means that if money is borrowed to generate infrastructure such as electricity, it would be planned in such a way as to ensure that the income generated from such an infrastructure is able to pay back the loan (including interest) that accrues to it. This would boost production, enhance business activities, encourage competitiveness, and lead to efficiency within the economy. The implication of such stimulation of economic activities is that demand would eventually be enhanced. For developing nations where structures are still largely underdeveloped, avenues exist for mismanagement of funds and wrong channeling of funds. This has a tendency towards distortions in the numbers. This could even make it more difficult to establish empirically whether or not demand is enhanced as a result of government borrowing.

Review of Empirical Studies

Theoretical arguments over the years have spurred a growing body of empirical analyses, including firm-level, industry-level, individual country-studies, time-series studies, panel studies, and broad cross-country comparisons all in attempt to demonstrate the possible link between bond market and economic growth. For instance, Oke, Dada, & Aremo (2021) evaluated the impact of bond market development on the growth of the Nigerian economy from 1986–2018. Data were analyzed using the co-integration bounds test approach while the robustness of the estimates was also checked. Results reveal that government bond exhibited an insignificant positive relationship; corporate bond and value of bond traded were positive and statistically significant while bond yield manifested a negative relationship with the growth of the Nigerian economy.

Similarly, Chidi-Okeke, Ogbonna, & Okeke (2020) examined the effect of bond market development on economic development in Nigeria. The study employed a time series of 33-as sample period sourced from CBN statistical bulletin and the Debt Management Office (DMO) and online version of World Bank economic development indicators. The ARDL regression model was carried out for both Long Run and Short-Run Dynamics. The finding of the study revealed that bond market could not facilitate significant economic development in Nigeria.

Jang & Atukeren (2019) examined the determinants of foreign investors' Korea Treasury Bond (KTB) investments by means of a lag-augmented vector autoregressive model with exogenous variables (LA-VARX). The model specification includes variables capturing the domestic, international, and risk factors. The study found that expected return rates, country default risks, and global economic conditions have a significant impact on foreign investors' KTB investment, but geopolitical risks have only a short-term negative impact.

Ubesie, Nwanekpe, & Ejilibe (2020) accessed the impact and determinant of capital market on economic growth in Nigeria. The study employed the ordinary least square method (OLS) in analyzing the time series variables obtained for the study. The results of the findings show that all the variables of interest were significant in explaining the behavior of capital market on the growth of Nigeria Economy except Labour force. More so, the result show that the model employed for the analysis is adequate and best in fitting the variables obtained.

Gerhard, Peter, & Sirma (2003) investigated the relationship between the development of the aggregate bond markets and real GDP in 13 highly developed economies. Granger causality test and co-integration approach were employed to support the conjecture. The study provided empirical evidence for causality patterns supporting the supply-leading approach in the USA, UK, Switzerland, Germany, Austria, the Netherlands and Spain over the 1950 to 2000 period. In the cases of Japan, Finland and Italy the study found evidence of

interdependence between bond market capitalization growth and real output growth.

Chukwuemeka (2018) investigated the impact of capital market on the economic growth in Nigeria: Annual time series data were obtained from the Central Bank of Nigeria Statistical Bulletin and Securities and Exchange Commission for the period 1981 to 2016 on the variables used for the study. Unit root test was conducted using Augmented Dickey-Fuller test technique and the result showed that the variables were stationary though at different levels. Co-integration test was also conducted using Johanssen co-integration test method and the result showed that the variables in the model are co-integrated meaning that the variables have a long run relationship. The error correction mechanism showed that the coefficient of determination (R^2) in the over-parameterized model was 0.722639 while it was 0.594782 in the parsimonious model. The short run regression result showed that market capitalization and number of deals have a positive impact on economic growth in Nigeria while total listed equity and volume of transaction have a negative impact on the economic growth in Nigeria. The result from long run dynamic analysis also revealed that total listed equity has a positive and significant impact on the economic growth in Nigeria while number of deals has a negative and non-significant impact on the economic growth in Nigeria.

Echekoba, Ezu & Egbunike (2013) examined the impact of capital market on the growth of the Nigerian economy under a democratic rule. The study relied on time series data while multivariate regression method was used to analyze the data. The results show that while total market capitalization and all share index exert positive influence on the GDP growth rate, the total value of stock has a negative effect on the GDP growth rate, and none is significant.

Capturing the immediate past global economic crisis period, Eleje, Ani, & Ezeudu, (2013), evaluated External Borrowings and Economic Performance in Developing Nations with Empirical Evidence from Nigeria. Accordingly, the study utilized time series annualized data on Nigeria's aggregate outstanding external debt, gross domestic product (GDP) at current basic price and gross fixed capital formation over a ten year period covering 2001-2010. The study applied the computer-based linear regression approach using the statistical package for social science (SPSS) version 17. Results show negative and significant effect of government external borrowings on GDP as well as gross fixed capital formation.

Some studies also examined the contribution of the use of public debt as a strategic component of policy directed at increasing the level and pace of economic growth. For example, Abbas and Christensen (2007) develop a model that shows that moderate levels of debt can increase growth and higher levels can undermine it. They conclude that if domestic debt is marketable and part of it is held outside the banking system, it can contribute to economic growth.

II. METHODOLOGY

Empirical Design and Data: The study adopted the ex-post-facto research design since research data already exist in secondary form and no attempt was made to control or manipulate relevant independent variables. It is of note that with the ex post facto research design, the researcher is more into data gathering and interpretation (Cohen, Manion & Morison, 2000; Simon & Goes, 2013). Accordingly, time series data spanning the period 2003-2020 were generated and employed in the analysis. The data used basically were generated from publications of the Nigerian Stock Exchange (NSE), National Bureau of Statistics (NBS), Securities and Exchange Commissions (SEC) and the CBN Statistical Bulletin. Specifically, FGN Bond and GDP were retrieved from CBN Statistical Bulletin 2020; State and Corporate Bonds were compiled from SEC Annual Reports and FMDQ Daily Quotations List (DQL).

Model Specification: The multivariate linear regression model in line with Eleje, Agha, & Oyavuru, (2020) was adopted for the study. Patterning the said authors, the research model for the study is specified as follows:

$$GDP = \alpha_0 + \alpha_1 (FGNbond) + \alpha_2 (StateBond) + \alpha_3 (CorpBond) + e_t$$

Where:

GDP	=	Gross Domestic Product at Current Basic Price in Nigeria.
FGNbond	=	Federal Government of Nigeria Bond over the timeframe.
StateBond	=	State Government Bond in Nigeria over the timeframe.
CorpBond	=	Corporate Bond in Nigeria over the timeframe.
α_1	=	Constant of the regression equation
$\alpha_1, \alpha_2, \alpha_3$	=	Coefficients of the explanatory variables at time *t*
e_t	=	error term at time *t*

A'priori Expectation

A positive relationship is expected to exist between bond market development and economic growth. Thus, it is expected that $\alpha_1, \alpha_2, \alpha_3 > 0$.

III. RESULTS AND DISCUSSIONS

*Model 1***:** The regression model above is translated from the SPSS result (see appendix 1) thus:-

GDP = 18616.173 + 11.686 (FGNbond) + 0.043 (StateBond) + 0.037 (CorpBond) + e

The above equation shows a constant value of 18616.173. The value is positive and statistically significant (0.000) at both 95% and 99%. The constant value is the intercept of the regression line. It indicates that GDP in Nigeria would be approximately N18616.173 billion if other variables are zeros. The coefficient FGN bond is 11.686 The value is positive and

significant (0.000) at both 95% and 99% confidence level. The meaning is that in every 1% increase in FGN bond over the time studied, GDP in Nigeria increased by 11.686%. Similarly, the coefficient of State bond is 0.043. Hence, a 1% increase in State bond slightly improved GDP by 0.043% over the time studied. Similarly, a 1% change in corporate bond slightly improved GDP by 0.037%.

The above results were further verified. Confirming the nature of the relationship between the variables, the Pearson correlation coefficient was estimated. The coefficient showed strong positive relationship (98.6%) between FGN bond and GDP; weak positive correlation (3.8%) between GDP and State bond, and weak positive correlation (1.7%) between GDP and corporate bond respectively. The multiple correlation coefficient (R) defines the correlation between the predicted and the observed values of the dependent variable. The values for R range from 0 to 1. The larger value for R suggests strong relationship between the predicted and the observed values of the dependent variable. From the model summary in appendix 1, the R value is 0.989. This indicates that there is a strong positive relationship between the predicted and the observed values of the dependent variable.The R^2 statistics is 0.979. This implies that 97.9% of the variations in the dependent variable is explained by the independent variables in the regression model. The remaining 2.1% is due to other factors not accounted for in the model.

Test of Hypotheses

Hypothesis One: The null and the alternate forms

of hypothesis one are stated thus:

H_{01}: FGN bond does not have significant positive effect on economic growth in Nigeria

H_{A1}: FGN bond has significant positive effect on economic growth in Nigeria.

Decision Rule: The decision rule is to reject the null hypothesis and accept the alternate hypothesis when the significant value (p-value) is less than 0.05 otherwise, do not reject the null.

For hypothesis one above, the p-value is 0.000<0.05. Based on the above decision rule, the null hypothesis is thus rejected. Hence, the study accepted the alternate hypothesis (H_{A1}) which states that; FGN bond has significant positive effect on economic growth in Nigeria.

*Hypothesis Two:*The null and the alternate forms of hypothesis two are stated thus:

H_{02}: State bond does not have significant positive effect on economic growth in Nigeria.

H_{A2}: State bond has significant positive effect on economic growth in Nigeria.

For hypothesis two, the p-value is 0.203>0.05. Based on the above decision rule, the null hypothesis is accepted which states that; State bond does not have significant positive effect on economic growth in Nigeria.

Hypothesis Three: The null and the alternate forms of hypothesis two are stated thus:

H_{O3}: Corporate bond does not have significant positive effect on economic growth in Nigeria.

H_{A3}: Corporate bond has significant positive effect on economic growth in Nigeria.

Similarly, the p-value is 0.567>0.05 for hypothesis three. Based on the above decision rule again, the null hypothesis is again accepted which states that; Corporate bond does have significant positive effect on economic growth in Nigeria.

IV. CONCLUSIONS

This research basically examined the impact of bond instruments on economic growth in Nigeria within the most recent period up to 2020. The study specifically sought to evaluate the significant impact of FGN bond, State government bond, and corporate bond on economic growth in Nigeria measured from the prism of the GDP. By applying both the descriptive and inferential statistics on data generated for the study, the following conclusions are drawn from the findings of the research:

- FGN bond has strong positive impact on economic growth in Nigeria. That is, the more federal government generates long term developmental funds through FGN bond; the better the economy.
- On the other hand, there is weak positive effect of State bond on economic growth in Nigeria. This implies that the rate of growth that is expected to be achieved through State bond financing has not been fully achieved.
- Similarly, corporate bond has weak positive impact on economic growth in Nigeria. This is also an indication that the economic growth expectation for corporate bond has not been adequately harnessed.

V. RECOMMENDATIONS

Based on the foregoing findings and conclusions, the following recommendations are made:

- Government should continue to raise funds through FGN bond while investors should invest on the instrument due to its riskless characteristics.
- State governments should explore the financing potentials of the capital market debt facilities to boost the economy of their state.
- Similarly, corporate entities should leverage on the potentials of the capital market in financing their economic activities in order to meaningfully contribute to economic growth and development of Nigeria.

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