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External Debt and Stock Market Performance in Nigeria

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Abstract
This study examined the effect of external debt on the performance of Nigeria stock market. Time series data were sourced from Central Bank of Nigeria Statistical bulletin. Stock market performance was modeled as the function external debt with multilateral club of creditors and other sources of external debt. Ordinary least square methods of cointegration, Granger causality test, unit root test and error correction model was used. The study found that 40.1 percent variation in stock market performance was traced to external debt. External debt has positive and significant effect on stock market performance. From the findings, the study concludes that external debt has positive and significant effect on Nigeria stock market performance. It recommended that investment policies such as real investment of external debt should be formulated to enhance stock market performance and the regulatory authorities should diversify the sources of external debt beyond multilateral club of creditors to further enhance stock market performance.

Keywords*: External Debt, Stock Market Performance, Multilateral Club of Creditors*

INTRODUCTION

Nigerian like other countries faced financial challenges in her economic operations which resulted in borrowing the deficit proportions outside the countries financial boundary. This is term external borrowing and external debt which is a component of public receipt. It comprises borrowing from foreign lenders such banking institutions, government and international financial institutions (Umaru, Hamidu & Musa, 2013). Nigerian external debt profile include trade areas, balance of payment, support loans, project tied loans and loans for Socio- economic needs (Umoru & Erunke, 2016). In structure, Nigerian external debt comprises Nigerian debt with the multilateral club, Paris club, London club, promissory notes and others (Taiwo, 2012). The Nigerian government has embarked on borrowing externally for the main purpose of financing increased proportion of economic activities for economic growth.

Nigerian Capital market was established in 1960 for the purpose of bridging savings and investment gap and simplifies the sourcing long term fund. It constitute a network of financial institutions and investors interact to mobilize and allocate long term funds to productive investment and funds are exchanged for financial assets issued by borrowers or traded by stock holders which in turn offers access to a variety of financial instruments that enable economic agents to pool, price and exchange risk (Akani & Imegi, 2017).

The Nigeria capital market is classified among the emerging financial market of world and one of the fast growing in Africa (Anyamaobi, 2018). The performance of Nigeria capital market can be measured in term of number of listed companies; number of listed securities; size of the market or market capitalization and all-share price index. According to stock market repots 2019, there are 161 companies quoted on the floor of the exchange, market capitalization

of listed domestic companies as percentage of gross domestic products in Nigeria was reported at 9.8 percent in 2019 while all share decreased 1639 points or 6.10 percent since the beginning of 2020. The above shows that the performance of the Nigeria capital market has fluctuated over time.

In a deregulated financial market like Nigeria, the performance of the market depends on macroeconomic variables, monetary policy variables and capital flight. Capital flight as that part of the outflow of resident capital which is motivated by economic and political uncertainty Schneider (2013), Mahon (1996) argued that capital flight is a way of preserving savings against the depredations of bad politicians. Soesterberg (2016) explained that capital flight is the movement of large sums of money from one country to another to escape political or economic turmoil or to seek higher rates of return.

Government finance public goods that improve financial wellbeing and promote economic growth (Ogunmuyiwa, 2011) debts play an important role in the economic growth within a country. However, there is a contradiction as to external debt affects the economic activities positively or negatively. For a long time, Pakistan could not finance its budget by generating enough revenues. It must look for the other options and to meet the expenditure, the country borrows. The developing countries like Pakistan often look for this foreign debt to meet its financial ends.

Sheikh, Faridi and Tariq (2010) explored the effect of local debt on the financial development of Pakistan for the period 1972-2009 by applying standard least squares (OLS) procedure. The examination finds that local debt positively influences the financial development in Pakistan suggesting that the assets created through residential obtaining have been utilized incompletely to fund those uses of government that add to the development of GDP. The rule is that household just as external debt ought to be spent for long term improvement purposes. Another explanation behind the positive relationship between household debt and monetary development in Pakistan might be that local country debt is attractive. Boopen, Kesseven, and Ramesh (2007) studied the relationship of foreign debts and economic growth of the Mauritius state for the period ranging between 1960 and 2004. The results supported the fact that public debts are negatively related to the economic performance in both the cases of short-run and long run.

The need to balance the savings-investment gap and offset fiscal deficits in developing countries compels government to source for finance outside taxation, its established main source of revenue (Ajayi & Oke, 2012). Multilateral finance institutions including International Monetary Fund (IMF), International Development Association (IDA), Africa Development Bank (ADB) and the World Bank have to the rescue. Chiminya and Nicolaidou (2014), Ebi, Abu and Clement (2013) identified bilateral and consortium of credit sources to include both the London and the Paris clubs. The literature has reported conflicting impact of a country's external debt on the economic agents. The rationale is that a country should borrow provided that the capital borrowed produces a rate of return that is higher than the cost of borrowing. In effect, the marginal product of external debt must be higher than its interest rate.
However, the Nigerian capital market is considered an emerging market compared to capital market of the developed countries such as the United State of America and others. As emerging market it requires large amount of capital for investment that will trigger growth and development and facilitate the realization of macroeconomic goals. Capital flight had long

been identified as one of the major factors facing emerging markets in the last five decades. The outflow of capital from the country has been a matter of fact among policy makers and international communities such as the International Monetary Fund (IMF) and the World Bank, this is because the National Accounting Principle regards outflow as a leakage while inflow as an injection into the economy. Capital flight involves the outflow of resident capital which is motivated by economic and political uncertainty of the country (Ajanny, 2005). It is the illegal conveyance of capital abroad which stays on record in the national income accounting of the developing countries (Lesser & Williamson, 1987). Financial market development as major benefit enables the recipient country to have better economic system that allows a long-term development effort to be meaningful. It allows the increase in the number of financial institutions that allows financial products to be multiplied in the financial system. Furthermore, there are many studies on the effect of external debt, however most of the studies focused on external debt and economic growth, Ugwu and Nzewi (2016), Nwannebuike, and Onuka (2016). From the above knowledge gap, this stud intends to examine the effect of external debt on the performance of Nigeria capital market.

LITERATURE REVIEW'

External Debt

External debt according to World Bank (2004) is defined as debt owed by the government to non-residents repayable in terms of foreign currency, food or service. It is a source of financing capital formation of an economy. Ayadi and Ayadi (2008) opined that the amount of capital available in most developing countries treasury is grossly inadequate to meet their economic growth needs mainly due to their low productivity, low savings and high consumption pattern. The reported financial inadequacies lead countries to source for supplementary financing.

Sulaiman and Azeez (2012) noted that external debt is one major source of aid to developing nations. But the rate at which they borrow depends on the links among foreign and domestic savings, investment and economic growth so that the borrowing countries can increase their capacity output with the aid of foreign savings (Ijirshar, Fefa & Godoo, 2016). It is required that the borrowing nation should be able to invest the borrowed fund wisely especially in financing development projects like railway construction, electricity generation plants, road construction and any other major capital project of the economy. However, Ijirshar et al (2016) pointed out that external debt can only be productive if well managed by making the rate of return higher than the cost of servicing the debt. Notwithstanding that external debt can be used to stimulate the economy, Sanusi (2003) asserted that excessive external debt constitutes limitation to sustainable economic growth and poverty reduction. Excessive external debt stock increases external debt service cost and generates debt overhang problems to the economy. Debt overhang is a phenomenon where substantial resources are used for debt servicing such that it stifles the economic growth as it becomes burden on domestic production (Udeh, Ugwu & Onwuka, 2016). Nakatami and Herera (2007) maintained that debt accumulates because of principle and piled up servicing requirements thereby becomes a self-perpetuating mechanism of poverty aggravation, work over-exploitation and constraint on development in developing countries.

Sources of Nigerian External Debt

Nigeria has contracted a number of debt obligations from external sources, some of which are discussed below:

Paris Club of Creditors

The Club represents only government guaranteed creditors. Membership includes the United States of America, United Kingdom, Federal Republic of Germany, France and Canada, who guarantee the export activities of their nationals, through their Official Export Credit agencies. When the recipient nation's government is unable to pay the foreign exchange equivalent of the domestic currency cover paid by the importer, it becomes government debt owed to creditor nations. The first Paris Club meeting was held in 1956. Such meetings are scheduled to discuss repayment problems and reach debt relief agreements for debtor nations.

London Club of Creditors

These are mainly uninsured and unguaranteed debts extended by their commercial banks to nationals of debtor nations. Members of the Club are commercial banks mainly in industrialized countries. The first London Club meeting was convened in 1976. Such meetings are held to discuss repayment problems and conclude restructuring agreements.

Multilateral Creditors

These are international institutions funded by member nations. They include the World Bank and its affiliates- International Finance Corporation (IFC), International Development Association (IDA) and the Multilateral Investment Guarantee Agency (MIGA); International Monetary Fund (IMF); African Development Bank (ADB);

Capital Market Performance

Stock Market size

A common index often used, as a measure of stock market size is the market capitalization. Market capitalization equals the total value of all listed shares. In terms of economic significance, the assumption is that market size and the ability to mobilize capital and diversify risk are positively correlated. For the two decades covered by the study (1980 -1999) the average market capitalization was ₦78.33 billion with highest capitalization of ₦300 billion in 1999 and lowest capitalization of ₦4.46 billion in 1980 and has increased to 10.8 trillion at the end of 2018. Adeyemi (2008) identified a number of factors that account for lack of interest by Nigerian companies in being listed in the exchange: (i) high cost of public quotation, (ii) reluctance to dilute ownership and control through public quotation, (iii) the interest rate structure in the past which favoured debt financing over equity financing, and (iv) stringent requirement for listing.

Liquidity

Liquidity is used to refer to the ability of investors to buy and sell securities easily. It is an important indicator of stock market development because it signifies how the market helped in improving the allocation of capital and thus enhancing the prospects of long-term economic growth. This is possible through the ability of the investors to quickly and cheaply alter their portfolio thereby reducing the riskiness of their investment and facilitating investments in projects that are more profitable though with a long gestation period. Two main indices are often used in the performance and rating of the stock market: total value traded ratio; and turnover ratio.

Theoretical Review

The Dual Gap Theory

This theory was propounded by Chenery (1966) who postulates that economic growth depends on investment and that is a function of savings. Omoruyi (2005) stated most economies have experienced a shortfall in trying to bridge the gap between the level of savings and investment and have resorted to external borrowing in order to fill this gap. Ayadi and Ayadi (2008) argue that acquisition of external fund depends on the relationship between domestic savings, foreign funds, investment and economic growth. The dual gap theory is coined from a national income accounting identity which connotes that excess investment expenditure (investment- saving gap) is equivalent to the surplus of imports over export (foreign exchange gap).

According to Hunt (2007) it is observed that countries with low income have a weak economic growth. This is as a result of the lack of savings able to support the investment in public sector as well as private sector. In other words, the economic growth is supported and sustained by savings and investments. The economic growth is sustained and maintained when the capital gets to a certain threshold point. The increase of capital and investment caused by the increase in external debt, enhance automatically the economic growth due to the increase of savings over time. Thus this mechanism is known as the dual gap theory.

Mckinnon (1964) explained that the external debt is an urgent support to feel the gap in developing countries. The necessary and sufficient condition of acquiring external debt is to make sure that the borrowed funds will generate a higher return able to meet the debt obligation during the maturity and provide the economic growth to the nation. Therefore, it is expected that the external debt is able to enhance the productivity meaning the nation output. The function of external debt in the developing countries is known as a dual-gap since it allows those countries to invest more than their domestic savings.

Dependency Theory

The dependency theory seeks to outline the factors that have contributed to the development of the underdeveloped countries. This theory is based on the assumption that resources flow from a "periphery" of poor and underdeveloped states to a "core" of wealthy states thereby enriching the latter at the expense of the former. The phenomenon associated with the dependency theory is that poor states are impoverished while rich ones are enriched by the way poor states are integrated into the world system (Todaro, 2003; Amin, 1976).

Dependency theory states that the poverty of the countries in the periphery is not because they are not integrated or fully integrated into the world system as is often argued by free market economists, but because of how they are integrated into the system. From this standpoint a common school of thought is the bourgeoisie scholars. To them the state of underdevelopment and the constant dependence of less developed countries on developed countries are as a result of their domestic mishaps. They believe this issue can be explained by their lack of close integration, diffusion of capital, low level of technology, poor institutional framework, bad leadership, corruption, mismanagement (Momoh & Hundeyin, 1999).

Overhang Debt Theory

This theory was propounded by Krugman (1982) who explained that debt overhang as one whereby the expected repayment amount of debt exceeds the actual amount at which it was contracted. Myer (1977) presented debt overhang as excessive debt that inhibits investment, arising from the fact the benefits derived by the firm using high risky financing accrue largely to existing debt holders instead of shareholders. This theory is built on the principle that if the level of debt will surpass the country's ability to repay with some probability in the future, estimated debt service is expected to be a growing function of the country's output level.

Therefore some of the returns obtained through investing in the domestic economy are efficiently taxed away by current foreign creditors and the investment made by domestic and new foreign investors is not encouraged.

The Capital Asset Pricing Model (CAPM)

The CAPM is a model for pricing an individual security or a portfolio. The CAPM model was developed independently by Sharpe (1964) and Parallel work was performed by Lintner (1965) and Mossin (1966) these model marks the birth of asset pricing theory. The CAPM suggests that the only variables that we need in calculating the expected return on security are: the risk-free rate (a constant), the expected excess return on the market, and the security's beta (a constant). The CAPM model is attractive because of its effectively simple logic and intuitively pleasing predictions relating to how it measures risk and the relation between expected return and risk. Unfortunately, the CAPM simplicity causes the empirical record of model to be poor, poor enough to invalidate the method used in the application of the model. The models empirical problems may reflect true failings or they may also be due to the shortcomings of the empirical tests, most notably, poor proxies for the market portfolio of invested wealth, which plays a crucial role in the models predictions.

The CAPM is built on the model of portfolio choice developed by Harry Markowitz (1959). The Markowitz model is often known as a mean-variance model, it describes the relationship between risk and the expected return of an asset under the conditions of market equilibrium in a capital market where all investors undertake optimal portfolio selection. The model assumes investors are not risk takers and that they care only about the mean and variance of their one-period investment return when choosing among portfolios.

Empirical Review

Xavier and Anahais (2020) examined the impacts of domestic public debt on the capital market development in South America countries. The study variables used were domestic public debt, inflation rates and interest rate on capital markets development. In many ways, the capital market is symmetrical to the country's public debt. In many developing countries, governments have given much attention to domestic debt compared to external indebtedness. Despite the fact that domestic borrowing has many advantages; it also has negative impacts especially when it goes beyond a sustainable amount. Domestic debt affects a country's inflation rates, interest rates among many other factors. Through this study of how various concepts are affected by domestic borrowing, various governments was clearly understand the effects of domestic borrowing on their capital market development and align their domestic debts from the capital market institutions that will finally promote the development of the capital markets. The study used a descriptive research, which involved the measurement, classification, analysis; the study adopted the descriptive study design. This study used 14 South America Countries capital markets as its population. The countries that include Argentina, Bolivia, Brazil, Chile, Colombia, Ecuador, Falkland Islands (United Kingdom), French Guiana (France), Guyana, Paraguay, Peru, Suriname, Uruguay and Venezuela were chosen as the population since they have similar regulations in relation to domestic public debt. Due to the small population, no sampling was conducted. This data was obtained from various sources that include South America Countries Central Banks, World Bank information, National Treasury Public Debt Department. Regression of coefficients results showed that domestic public debt and capital markets development are positive and significantly related (r=-4.518, p=0.030). The results further indicated that inflation and capital markets development are negatively and not statistically significant (r=-0.093, p=0.116). It was further established that interest rate and capital markets development were positively and significantly related

(r=0.345, p=0.003). The study concluded that there is a positive relationship between high domestic public debt and capital market development, an increase in domestic debt causes the capital market development to decrease. When a country borrows more domestic, debt and less external debt it promotes capital markets development in the long run. The regression model used in the study was statistically significant in explaining the effect of domestic public debt on capital markets development in South America Countries. The study further concluded that inflation rate has a negative impact on financial market development this implies that inflation had a negative impact on capital markets development. It also conclude that an increase in interest rate impact positively the capital markets development. The study recommends on continued deepening of the capital markets to lengthen further the maturity profile of domestic debt and diversification of the investor base. The study further recommends on continued implementation of policies to support macroeconomic stability and faster economic growth. This includes restructuring public debt towards external borrowing which is comparably cheaper than domestic debt, and rationalization of recurrent expenditures to contain the widening deficit in the primary balance would be necessary in the medium-term to ensure that public debt remains on a sustainable path to allow for capital markets development.

Akindipe (2018) examined the effect of public debt on financial development between 1981 and 2016 using Dynamic Ordinary Least Square (DOLS). The focused variables are financial development and public debt. The ratio of private credits to GDP, the ratio of broad money, M2 to GDP and the ratio of commercial bank asset to the sum of commercial bank asset and Central Bank asset are used to measure financial development which is the dependent variable. The control variables include GDP deflator, lending rate, gross fixed capital formation, and government expenditure. ADF and PP tests of the unit root are used followed by the test of cointegration using Johansen and Juselius's test. The DOLS results indicate that public debt has a positive effect on financial development in Nigeria. This, therefore, supports the safe asset view. Thus, public borrowing which serves as a safe asset for financial intermediaries will encourage lending to the private sectors which will increase financial development and ultimately economic growth. Furthermore, if government borrowing and private credit are channeled to the productive sector of the economy, the economy will grow which will ultimately promote economic development in Nigeria.

Altayligil and Akkay (2013) investigated the relationship between domestic public debt and financial development for the Turkish economy between 2002Q1-2012Q2. The dependent variable is the finance aggregate while the independent variables are the ratio of domestic debt to GDP, inflation, turnover ratio, and interest rate margin. The results of the time series analysis using Engle-Granger cointegration test support the lazy bank view which advocates the negative relationship between domestic indebtedness and financial development.

Agyapong and Bedjabeng (2022) examined the role external debt and foreign direct investment play in influencing financial development in Africa. Annual data on external debt, foreign direct investment and financial development were extracted from the World Bank World Development Indicators from 2002 to 2015. The data employed were analysed within causal research design and the dynamic panel using generalized method of moment estimation approach. The findings revealed that external debt and foreign direct investment have a significant positive relationship with financial development in African economies. Governments of the sampled economies should enact policies that would help attract high level of foreign direct investment as it contributes positively to financial development. Finally,

governments of the sampled African economies should ensure foreign direct investment and external funds borrowed are channelled to productive sectors.

Takyi and Obeng (2013) carried out a study aimed at investigating the determinants of financial development in the Ghanaian economy. By adopting the ARDL methodology and using quarterly data for the period of 1988–2010, their result indicted a unique co-integrating relationship among government borrowing and financial development in the short run. Nonetheless, government borrowing was insignificantly related to financial development in the long-run and short-run time period.

Kutivadze (2011) examined the link between external debt stock and financial development and found a significant positive relationship existing between external debt stock and financial development. Hassan et al. (2013) consented that external debt is positively associated with economic growth of the Nigerian economy but concluded that external borrowings ought to be directed to the real sectors of the economy for the real effect to be felt. This result means that external debt is profitable but could result in negative complementarities if not directed to real sectors of the economy.

Oke and Sulaiman (2012) assed the impact of external debt on economic growth and the volume of investment in Nigeria for the period of 1980–2008 found a positive association between external debt and growth. The results disclose that the current external debt to GDP ratio stimulates growth in the short term. This indicates that debt is very relevant to achieve the desire level of growth

Indawan (2020) investigated the relationship between financial integration proxied by composition of capital inflows and financial development in emerging economies. The composition of capital inflows are FDI inflow, external debt inflow and portfolio equity inflow, whereas the indicators of financial development are nine indices of new measure of financial development constructed by IMF that include financial development, financial institutions (banks), financial market (stock and debt market) as well as its depth, access and efficiency. Using dynamic panel data GMM estimation from 79 countries in emerging economies, the estimation results find that composition of capital inflow have positive and statistically significant in developing all aspect of financial development in emerging economies. Specifically, FDI inflow as the largest portion of capital inflow in emerging economies is closely associated with financial institutions depth, access and efficiency, and financial market depth and access. External debt inflow is positively affected financial institutions efficiency and financial market depth and efficiency. Moreover, portfolio equity inflow which holds the smallest portion among other inflow is closely related to financial institution depth, access and efficiency, and financial market depth and access. In general, those three compositions of capital inflows are significantly increase the development of financial institutions and market, hence the deepening of financial system in emerging economies.

Emenike, Amu and Chigbu (2016) investigated the sensitivity of capital market development to public debt in Nigeria using descriptive statistic, regression analysis, and the Engle-Granger co integration techniques for the period ranging from 1981 to 2014. The estimates from the descriptive analysis showed that both the market capitalization and public debt series were not normally distributed at 5% significance level. The ADF unit root test showed that the market capitalization and public debt series were integrated of order one (i.e., I (1)). The results from the regression model provide evidence to show that capital market development is not sensitive

to domestic debt at any conventional level, but it is sensitive to external debt at 10% significance level. The estimates of the Engle-Granger co integration tests show that capital market development is not co integrated with public debt. It is recommended that capital market and debt management authorities should formulate policies will enhance linkage between the markets.

Araoye (2021) examined the effect of capital market development on the foreign portfolio investment in Nigeria. The time series secondary data covering the period 1990 to 2019 used for the study were obtained from the Central Bank of Nigeria Statistical Bulletin, Nigeria Stock Exchange fact sheet, National Bureau of Statistics, Articles, Journals libraries and Internet. The study analyzed the data using unit root test to determine the stationarity or otherwise of the time series data with Augmented Dickey Fuller (ADF) unit root test. Vector Error Correction Model was employed in estimating the effect of the independent variables on the dependent variable. Granger causality test was also adopted to establish the direction of causality among the relevant variables. The findings revealed that market capitalization has positive but significant impact on foreign portfolio investment in Nigeria. The granger causality result indicates unidirectional causality movement from market capitalization (MCAP) and real gross domestic product (RGDP) to foreign portfolio investment. The study recommended that capital market regulators should apply all necessary tools to encourage listing of private companies on the floor of stock exchange market.

Adesola and Oka (2017) examined the relationship between financial market performance and foreign portfolio investment in Nigeria for the period 1984 to 2015. The study used the Autoregressive Distributive Lag (ARDL) technique for data analysis. The result of analyses revealed that financial market performance has no long run causal relationship with foreign portfolio investment in Nigeria. The no long run causal relationship could also be seen in the study of Akinmulegun, (2018) that examined the effect of capital market development on foreign portfolio investment in Nigeria over the period 1985 to 2016. The study used Vector Error Correction Mechanism (VECM) to analyze the short run and long run dynamism of the variables with focus on the direction of causality between capital market development and foreign portfolio investment in Nigeria. The finding revealed that capital market development has significant effect on foreign portfolio investment in Nigeria with granger causality test showing that there is no causality between capital market development and foreign portfolio investment in Nigeria.

Agu et al, (2019) examine the impact of foreign portfolio investment on capital market returns in Nigeria for the period 1986 to 2017. The study made use of Ordinary Least Square and Auto Regressive Distributed Lag (ARDL) model to measure the impact of Foreign Portfolio Investment on Stock Market Returns in Nigeria. The finding shows that there is no long run relationship between foreign portfolio investment and stock market returns in Nigeria. The methodology as regard to analysis is considered inappropriate with the simultaneous use of OLS and ARDL.

Literature Gap

The research is being conducted on the basis of a gap in variables, methodology, places, and economic policies that differs by countries. This is due to the fact that, from the studies examined some of the key measures of capital flows were omitted by the precious authors. To

fill these gaps, therefore, this work, include these variables and employed methods of analysis that are characterized by large sample sizes and absence of cointegration issues.

Furthermore, majority of the work is done in foreign countries and with different economic policies and locations different from Nigeria. Majority of the studies reviewed neglect the effect of external debt as capital inflow and the effect on financial sector development but focused more on external debt and economic growth. Given the foregoing, there is a need for this study to focus on external debt and the effect on development of the Nigeria financial market. Furthermore, the study will Autoregressive Distributed Lag Model (ARDL), since it accommodates finite and large sample data, stationarity tests as dynamic test to examine the effect of external debt on the development of Nigeria financial market.

METHODOLOGY

This study adopted the ex-post facto research design approach in analyzing data. Ex-post facto research is systematic empirical inquiry in to a research problem which the researcher does not have direct control of the independent variables because their manifestations have already occurred. Onwumere (2005) opined that the ex-post facto research design is appropriate when the researcher does not intend to control the variables and as such those variables must have been in existence and had already existed in published form. This study employed secondary data sourced mainly from the Central Bank of Nigeria (CBN) statistical bulletin. The data for the study comprises annual time series data of Nigeria economic growth measured by real gross domestic products, debt burden indicators and sources of Nigeria external debt over the periods covered in this study 1990-2022.

Model Specification

The study models are specified below:

SMP = f(MTC, OTS) (1)

$$SMP = \alpha + \beta_1 MTC + \beta_2 OTS + e_i \quad (2)$$

Where:

SMP = Stock market performance
MTC = External debt with multilateral club
OTS = External debt with others
e_i = Error term

Data Analysis Procedure

The main tool of analysis is the Ordinary Least Squares (OLS) using the multiple regression method for a period of 34 years, annual data covering 1990-2022. Statistical evaluation of the global utility of the analytical model, so as to determine the reliability of the results obtained were carried out using the coefficient of correlation (r) of the regression, the coefficient of determination (r^2), the student T-test and F-test.

Stationarity (Unit Root) Tests

The study investigates the stationarity properties of the time series data using the Augmented Dickey Fuller (ADF) test. According to Nelson and Plosser (1982) and Chowdhury (1994) there exists a unit root in most macroeconomic time series. The Null hypothesis of a unit root

is rejected against the one sided alternative if the t-statistic is less than the critical value. Otherwise, the test fails to reject the null hypothesis as a unit root at 5% significance level. We shall therefore subject all the variables to unit root test using the augmented Dickey Fuller (ADF) test specified in Gujarati (2004) as follows.

$$\Delta y_t = \beta_1 + \beta_2 + \delta y_{t-1} + \alpha i \sum_{i-1}^{m} \Delta y_{t-1} + Et \qquad (3)$$

Where:

Δy_t = change time t

Δy_{t-1} = the lagged value of the dependent variables

$\sum_t$ = White noise error term

If in the above δ =0, then we conclude that there is a unit root. Otherwise there is no unit root, meaning that it is stationary. The choice of lag will be determined by Akaike information criteria.

Co-integration Test (The Johansen' Test)

It has already been warned that the regression of a non-stationary time series on another non stationary time series may lead to a spurious regression. The important contribution of the concept of unit root and co-integration is to find out if the regression residual are stationary. Thus, a test for co-integration enables us to avoid spurious regression situation. This approach is based on conducting unit root test on residual obtained from the estimated regression equation. If the residual is found to be stationary at level, we conclude that the variables are co-integrated and as such has long-run relationship exists among them.

$$SMP_t = w_O + \sum_{i=1}^{i} \vartheta_t MTC_{t-i} + \sum_{i=1}^{j} \varpi_i OTS_{jt-i} + \mu_{1t} \qquad (4)$$

Granger Causality Test

One of the objectives of this study is to investigate the causality between the independent and the dependent variables. Granger causality test according to Granger (1969) is used to examine direction of causality between two variables. Causality means the impact of one variable on another, in other-words; causality is when an independent variable causes changes in a dependent variable. The rationale for conducting this test is that it enables the researcher to know whether the independent variables can actually cause the variations in the dependent variable. Thus, Granger causality test helps in adequate specification of model. In Granger causality test, the null hypothesis is: no causality between two variables. The null hypotheses is rejected if the probability of F* statistic given in the Granger causality result is less than 0.05. The pair-wise granger causality test is mathematically expressed as:

$$Y_t \pi_o + \sum_{i=1}^{n} x_1^{\,y} Y_{t-1} \sum_{i=1}^{n} \pi_1^{\,x} x_{t-1} + u_1 \qquad (5)$$

and

$$x_t dp_o + \sum_{i=1}^{n} dp_1^y Yt-1 \sum_{i=1}^{n} dp1^x x_{y-1} + V_1 \quad (6)$$

Where x_t and y_t are the variables to be tested white u_t and v_t are the white noise disturbance terms. The null hypothesis $\pi_1^y = dp_1^y = 0$, for all I's is tested against the alternative hypothesis $\pi_1^x \neq 0$ and $dp_1^y \neq 0$. if the co-efficient of π_1^x are statistically significant but that of $dp1y$ are not, then x causes y. If the reverse is true then y causes x. however, where both co-efficient of π_1^x and dp_1^y are significant then causality is bi – directional.

Vector Error Correction (VEC) Technique

The presence of co-integrating relationship forms the basis of the use of Vector Error Correction Model. E-views econometric software used for data analysis, implement vector Auto-regression (VAR)- based co-integration tests using the methodology developed by Johansen (1991,1995), the non-standard critical values are taken from Osterward Lenun (1992).

ANALYSIS AND DISCUSSION OF FINDINGS

Table 1: Unit Root Test

Variable	ADF	MacKinnon 1%	MacKinnon 5%	MacKinnon 10%	Order of integration	Conclusion
SMP	-7.512301	-3.661661	-2.960411	-2.619160	I(I)	stationary
MTC	-8.004905	-3.653730	-2.957110	-2.617434	I(I)	stationary
OTS	-7.303842	-3.653730	-2.957110	-2.617434	I(I)	stationary

Source: Computation by author using E-view 9.0

From the table 1 the empirical result of the unit root test for stationary of time series property of variables is shown. The criterion is that the Augmented Dickey Fuller results must be strictly greater than the critical at certain level of significance to confirm the presence of stationarity pattern of variables. The unit root values for the variables of understudy reveal that the variables are stationary at difference and integrated in the order of 1(1). This is because the ADF values of the variables are all greater than the critical value at 10% the Null Hypothesis of the presence of unit root in all the variables is rejected.

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.756354	98.78341	69.81889	0.0001
At most 1 *	0.598337	52.18609	47.85613	0.0185
At most 2	0.317493	22.08544	29.79707	0.2938

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.756354	46.59733	33.87687	0.0009
At most 1 *	0.598337	30.10064	27.58434	0.0232
At most 2	0.317493	12.60544	21.13162	0.4891

Source: Author's Computations using E-Views 9.0

Johansen co-integration test determines whether the long-term relationship occurs in variables or not. The test envisages that there can be just one relationship between variables in long term. In most cases, if two variables that are I(1) are linearly combined, the combination will also be I(1). More generally, if variables with differing orders of integration are combined, then the combination will have an order of integration equal to the largest. Johansen-Juselius Cointegration tests are presented in the tables above where the result shows that the variables are cointegrated and significant at the 5% level. Thus, these results suggest that a long run and stable relationship between the variables exists. The maximum Eigen and the trace statistics in the above table show the presence of one co-integrating equation at 5% significant level, which is an indication that there is a long run relationship among the variables.

Table 4: Test of Causality

Null Hypothesis:	Obs	F-Statistic	Prob.
OTS does not Granger Cause SMP	33	5.11855	0.0127
SMP does not Granger Cause OTS		1.52605	0.2349
MTC does not Granger Cause SMP	33	6.71721	0.0041
SMP does not Granger Cause MTC		5.94770	0.0070

Source: Author's Computations using E-Views 9.0

Using the pair wise granger causality test, there is a unidirectional causality from other external debt to stock market performance and bidirectional causality from multilateral club of creditors to stock market performance. The presence of causality implies the rejection of null hypothesis while the variable that has no causal relationship accepts the null hypothesis.

Table 5: Presentation of Parsimonious Error Correction Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
OTS	0.461809	0.177219	2.605862	0.0145
MTC	0.130942	0.058431	2.240948	0.0331
C	-3.751523	3.868032	-0.969879	0.3404
ECM(-1)	0.401689	0.182313	2.203286	0.0360
R-squared	0.652863	Mean dependent var		5.109706
Adjusted R-squared	0.590874	S.D. dependent var		5.063843
S.E. of regression	3.238982	Akaike info criterion		5.347180
Sum squared resid	293.7481	Schwarz criterion		5.616538
Log likelihood	-84.90207	Hannan-Quinn criter.		5.439039
F-statistic	10.53197	Durbin-Watson stat		1.897191
Prob(F-statistic)	0.000009			

Source: Author's Computations using E-Views 9.0

The existence of cointegration among the variables allows us to implement the Error Correction Modeling technique, which describes the systematic disequilibrium adjustment process and the short-run transmission mechanism. The result of the ECM is presented in Table 5 above. We observe that the estimated lagged error-correction term (ECMt-1) emerges as an important channel of influence. The statistically significant error-correction term (apart from that of the exchange rate equation), confirms the existence of long run relationships between stock returns and all the macroeconomic variables. In other words, the series quickly adjusts to eliminate any deviations from the long-run equilibrium relationships that they may share with each other. It is evidence that the coefficient of ECM prove that the variables can adjust at the speed of 40.1 percent. The independent variables 59 percent variation in stock market performance, the model is statistically significant by the value of f-probability. The variables have positive and significant effect on stock market performance.

Discussion of Findings

The estimated model found that external debt with multilateral club and other clubs have positive and significant effect on the performance of the stock market. The results indicate that the variables added 0.46 and 0.13 percent to Nigeria stock market performance, the findings of the study confirm our a-priori expectations. this finding confirm the empirical findings of Xavier and Anahais (2020) that there is a positive relationship between high domestic public debt and capital market development, an increase in domestic debt causes the capital market development to decrease, Akindipe (2018) that public debt has a positive effect on financial development in Nigeria. This, therefore, supports the safe asset view. Thus, public borrowing which serves as a safe asset for financial intermediaries will encourage lending to the private sectors which will increase financial development and ultimately economic growth, Altayligil and Akkay (2013) supported the lazy bank view which advocates the negative relationship between domestic indebtedness and financial development, the findings of Agyapong and Bedjabeng (2022) that external debt and foreign direct investment have a significant positive relationship with financial development in African economies and the findings of Takyi and Obeng (2013) whose findings indicated co-integrating relationship among government borrowing and financial development in the short run. Nonetheless, government borrowing was insignificantly related to financial development in the long-run and short-run time period.

CONCLUSION AND RECOMMENDATIONS

Conclusion

This study examined the effect of external debt on the performance of Nigeria stock market.. From the findings, the probability coefficient of 0.0331 is less than the critical value of 0.05, the study conclude that external debt with multilateral club of creditors have positive and significant effect on Nigeria stock market performance. The probability coefficient of 0.0145 is less than the critical value of 0.05, the study conclude that external debt with multilateral club of creditors have positive and significant effect on Nigeria stock market performance.

Recommendations

i. The study recommends investment policies that proved proper utilization of the external debt to enhance stock market performance and continued deepening of the capital

markets to lengthen further the maturity profile of external debt and diversification of the investor base.

ii. There should be strategies such as restructuring public debt towards external borrowing which is comparably cheaper than domestic debt, and rationalization of recurrent expenditures to contain the widening deficit in the primary balance would be necessary in the medium-term to ensure that public debt remains on a sustainable path to allow for capital markets development.

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