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The Relationship between Stock, Bond Markets and Economic Growth in Nigeria

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Abstract: ***The study examined the relationship between stock, bond market and economic growth in Nigeria from 1981 to 2020, using an expo facto research design. The data was sourced from secondary source, the variables extracted were economic growth indicator proxied with real gross domestic product, bond market indicators proxied with bond market capitalization and treasury bills rate, indicators for stock market include equity market capitalization, composite all share index while the controlling variables include exchange rate and interest rate. The study employed descriptive statistics, Unit root test, Johansen co-integration test, vector error correction mechanism methods of analytical tools and inferences were made at 5% significant level. The study showed that Composite all share index has no significant effect on economic growth of Nigeria (R^2 =0.3690, F= 0.6627, P= 0.7858) the study concluded that all share index has no significant impact on economic growth of Nigeria. Equities market capitalization has a significant effect on economic growth of Nigeria (R^2= 0.4327, T=5.8646, P=0.0083). The third model also shows that there is a significant effect of bonds market capitalisation on economic growth of Nigeria (R^2= 0.5545, T=5.4108, P=0.0459). The findings of the fourth hypothesis showed that Treasury bills rate has no significant impact on economic growth of Nigeria (R^2= 0.5362, T=5.3105, P=0.0137). The study concluded that all share index has no significant impact on economic growth of Nigeria. The result from the last hypothesis obtained showed that exchange rate and interest rate does not have a controlling effect on the equities, bonds market and economic growth of Nigeria (R^2= 0.577, T=4.5481, P=0.0321). The findings thus imply that stock and bond market does enhance economic growth of Nigeria within the period under review. Consequently, the study recommended that refined policy measures should be adopted to strengthen and improve the role of stock and bond market in order to expedite and maintain the strong growth of the economy.***

Keywords: Bonds market capitalization, Composite all share index, Exchange rate, Interest rate, Treasury bill rate, Real Gross Domestic Product

1. Introduction

A high sustainable level of economic growth indicates a continuous increase in the economic activities of a nation measured by its gross domestic product. This implies that economic growth is primarily driven by improvement in productivity which involves producing more goods and services with the same input of factors of production (land, labour, capital and entrepreneur). In the past, empirical studies such as Adigwe, Nwanna and Amala (2015); Taiwo, Alaka and Afieroho (2016) have considered factors such as capital, labour and technology as the only factors which are important to the attainment of a sustainable economic growth. However, with recent developments in the economic growth theory, there has been a shift in the focus of growth literature from the traditional factors such as capital, labour and technology to other factors such as bond market and stock market development which also contribute to the growth process.

In developed economies such as United State of America and Canada, Jiang, Tang and Eve (2015) argued that the development of stock market and bond market mitigates the adverse impact of financial crises or reduce the likelihood that a financial crisis will happen. The authors noted that the development of the stock and bond markets could provide an alternative source of financing if other financing channel such as bank financing, dry up. Also, Greenspan (2014) emphasized the importance of having multiple avenues of financial intermediation, which served the United State of America well during credit crunch of the late 1980s when bond markets substituted for the loss of bank financial intermediation in a banking system crisis. Moreover, this view has gained popularity in recent years, especially after the aftermath of the Asian financial crises. However, Hernandez and Valdez (2016) stated that whether the stock and bond markets constitutes such an effective source of alternative financing in developed economies depend critically on the co-movement between bank lending, bond and equity financing in a domestic setting and the absence of contagion in the international capital markets, especially for countries with open capital account.

In developing and emerging economies, Rasidah (2017) established that the stock and bond markets have contributed to the financing of the growth of large corporations in certain emerging economies such as Malaysia, Brazil, Russia and South Africa. In Kenya, Aigbovo and Izekor (2015) noted that liquid equity market makes investment less risky and more attractive because they allow savers to sell their equity quickly and cheaply if they need access to their savings. In other words investors will have confidence in markets that are accessible whenever the need arises. The more accessible the participants are to the market, the more liquid the market will become.

Soludo (2015) stated that the bond market holds a lot of positive prospect for the economy through its alternative financing role, diversification of risks, stimulation of capital investments, mitigation of bank's financial crises through its alternative financing function and stimulating infrastructural development amongst others. This implies that a well-

functioning and developed bond market provides a secure and flexible investment outlet for investors as well as stimulates economic activities through provision of appropriate long-term finance for both government and non-governmental borrowers, Thus, the market contributes towards financial system diversification, reduces the concentration of risk in the banking system while promoting long-term savings.

In Nigeria, the stock market has witnessed tremendous growth over the year as reflected in the All Share Index and Market Capitalization. According to the Nigeria Stock Exchange (2018), the All Share Index (ASI) stood at 31,430.50, ETF market capitalization was ₦6.13 billion while the equity market capitalization was ₦11.7 trillion. The report further indicated that in 2018, the federal government raised the sum of ₦1.2 trillion while states and corporations raised the sum of ₦157 billion. The market however, witnessed foreign outflow of ₦642.6 billion as at December 31 2018, representing an increase of 47.6% from a total of ₦435.31 billion in 2017 highlighting the flight of foreign investors to higher yielding assets with lower risk in developed markets. This implies that the market is very vulnerable to external factors such as the price of crude oil, exchange rate and level of external reserves (NSE, 2018).

Over the years, the huge fiscal deficits incurred by governments for executing developmental projects with long gestation period have majorly been financed through borrowing from banks (money Market) and printing of currency as last resort. These activities have generated huge inflationary consequences for the economy with adverse effects on capital formation and further investment prospect for the domestic economy. Sourcing of fund from banks to finance long term projects is in effect a financial mismatch funding strategy. Deposit Money Banks majorly provide short term finances. The huge financial intermediation burden placed on banks has further worsen their financial crisis and made the banks vulnerable to financial risks. These problems were caused mainly by a lack of well-developed bond market, which is the major channel of raising funds in the market by the government (Nkwede, 2017). The Nigerian bond market has no doubt witnessed some level of stability over the years and also recorded impressive growth over the years. However, it remains to be satisfactorily verified whether the long-term funds regularly provided by the Nigerian bond market has made a significant impact in a sustainable manner on the economic growth of Nigeria.

Moreover, since the introduction of Structural Adjustment Programme (SAP) in the late 1980's, the stock and bond market in Nigeria has witnessed great transformation in its operating environment. This transformation put pressure on the stock and bond markets which was occasioned by the high interest rate in the money market, this led enterprises in the private sector to patronize the capital market for debt and equity capital thereby reducing the exposure of deposit money banks (DMBs) to financial risks. This created a greater opportunity for the private sector to source for long term funds thereby enhancing capital accumulation and investment prospect for the domestic economy. Thus, the stock and bond market unavoidably is an important factor in the achievement of a sustainable level of economic growth in any country (Nkwede, 2017).

Research in this area in Nigeria has focused attention majorly on the relationship between the stock market and economic growth while the relationship between the bond market as a segment of the financial market and economic growth has not been adequately addressed. In order to fill this important void in the literature, this research work aims at assessing the relationship between stock, bond markets and economic growth in Nigeria.

2. Objective of the Study

1) Examine the effect of composite all share index on economic growth of Nigeria;
2) Determine the effect of equity market capitalization on economic growth of Nigeria;
3) Investigate the effect of bond market capitalization on economic growth of Nigeria;
4) Assess the effect of treasury bills rate on economic growth of Nigeria;
5) Investigate the controlling effect of exchange rate and interest rate on the relationship
6) Between the equities and bond markets and economic growth of Nigeria

Hypotheses

1) Ho1: Composite all share index has no significant effect on economic growth of Nigeria
2) Ho2: Equity market capitalization has no significant effect on economic growth of Nigeria
3) Ho3: There is no significant effect of bond market capitalization on economic growth of Nigeria
4) Ho4: Treasury bills rate has no significant effect on economic growth of Nigeria.
5) Exchange rate and interest rate does not have a controlling effect on the equities, bond markets and economic growth of Nigeria

Research Questions

The following research questions are proposed in this study:

1) What is the effect of composite all share index on economic growth of Nigeria?
2) How does equity market capitalization affect the economic growth of Nigeria?
3) What is the effect of bond market capitalization on economic growth of Nigeria?
4) What is the effect of treasury bills rate on economic growth of Nigeria?
5) What is the controlling effect of exchange rate and interest rate on equities, bond markets and economic growth of Nigeria?

3. Literature Review

Stock Market: The stock market is a place for medium to long-term securities and it comprises the primary market for the issue of new securities and the secondary market where existing shares are traded. The main essence of the stock market is to consolidate growth in the financial systems, and enhance the consequent impact of the latter on economic growth. Adigwe, Nwanna and Ananwude (2015)

emphasized that in principle, the stock market is expected to accelerate economic growth by providing a boost to domestic savings thereby increasing the quantity and the quality of investment. Equally, the stock market can increase economic growth by making available information on firms' prospects and redistributing investible capital.

Composite All Share Index: The composite all share index reflects the performance and condition of the stock market. It measures the general market movement of all listed equities on the stock exchange. Here, investors hold portfolios of many assets but it is cumbersome to follow progress on each security in the portfolio. Thus, it is prudent to observe the entire market under the notion that their portfolio moved in the same direction as the aggregate market (Ogbebor & Siyanbola, 2018).

Equity Market Capitalization: This is calculated by dividing the value of listed companies (market capitalization) by gross domestic product (GDP). It gives a measure of the size of the stock market relative to the size of the economy. It is a good measure of the relative size of the stock market in the economy. It measures market movements by measuring the total value of stock in a particular market by aggregating the market value of the quoted stocks. Changes in market capitalization occur due to fluctuations in share prices or issuance of new shares and bonus issues. The implication is that increased level of activity at the market may signal more investments in the market (Ogbebor & Siyanbola, 2018).

Bond Market: According to Akinsokeyi, Abidemi and Edafe (2016) a bond simply is an IOU issued by a corporation or government agency that pays interest to the lender. Oladunni (2015) defined a bond as a long-term debt instrument issued by an entity, company or government as an evidence of a promise to pay. Bonds are generally issued for a fixed term (the maturity) longer than one year. Also, Onaolapo and Adebayo (2017) gave the description of a bond as a contract which the holder has a financial claim on the issuer. The bond market (also known as the credit or fixed income market) is a financial market where participants can issue new debt, known as the primary market or buy and sell debt securities known as the secondary market. The primary goal of the bond market is to provide a mechanism for long term funding of public and private expenditures.

Bond Market Capitalization: Bond market capitalization is a key indicator of bond market size and liquidity as it measures the total value of all bonds listed on the stock exchange. Bond market capitalization reveals the market liquidity which has tendency to boost bond market development in an economy. For both corporate and domestic bond instruments, bond liquidity entails transferability of bonds. A liquid bond market therefore entails an enhanced trading efficiency of the bond market (Oladunni, 2015). Rigidity which could be measured by the bid-ask spread, which is a feature of bond liquidity provides an insight on the financial commitment of the market participants in executing transactions. Depth and resilience are also considered to shape the nature of liquidity of the bond market. The depth of the market determines the extent to which the bond market could cope with huge transactions, while maintaining little or no variations in bond prices. Resilience on the other hand determines the rate of dissipation of price variations (Muharam, Imam & Erman, 2018).

Treasury Bill Rate: This is the rate on short-term sovereign debt securities maturing in one year or less. Treasury bills are sold at a discount and redeemed at par. These bills are by nature, the most liquid money market securities and are backed by the guarantee of the federal government. Oladunni (2015) stated that treasury bills are basically government owned and guaranteed debt instruments issued by the monetary authority or central bank of a country to control money supply. Therefore, treasury bills rate is the interest rate paid by government to investors who purchase government bills or monetary authorities. Moreover, since treasury bills are discount instruments, rather than making interest, they are issued at a discount to the face value and mature at face value. The interest rate is a function of the purchase price, the face value and the time remaining till maturity.

Economic Growth: Anyanwu (2015) stated that economic growth is the increase in the amount of goods and services produced in an economy which is measured by positive changes in a country's gross domestic product. Economic growth is the increase in national income, as reflected in the capacity of production of goods and services regardless of whether the increase is on a larger or smaller population growth rate. According to Robert Solow, cited in Adebiyi (2015) economic growth is a positive change in the level of production of goods and services by a country over a certain period of time.

4. Theoretical Review

Supply Leading Hypothesis: This theory was propounded by Schumpeter in 1911. The supply leading hypothesis suggests that the development of the financial sector fuels growth. The theory is based on the assumption that if transaction, information and monitoring costs are sufficiently high, then, no exchange among economic agents is necessary. These desires led to the emergence of financial institutions and markets that make up the financial sector. Early economists like Schumper (1911) and Shaw (1973) have strongly supported the view of finance led caused relationship between finance and economic growth (Marlyse, 2018). These authors are of the opinion that causality proceeds from financial to economic development, it is only at a later stage that financial development leads on to growth.

In support of the supply leading hypothesis, Ogbebor, Ajibade and Awonuga (2020); Karimo and Ogbonna (2017) noted that financial development leads to growth, which implies that an improvement in the efficiency of capital accumulation or an increase in the rate of savings enhances financial sector development which thereby leads to economic growth. Specifically, the supporters of supply leading hypothesis opined that as entrepreneurs have new access to the supply leading funds, their expectation increases and new opportunities/horizon materializes which

fuels economic growth due to access to private sector credit which is an important indicator of deepening of the financial sector.

Thanvegelu (2014) criticized the supply leading hypothesis on the basis that financial sector development does not exert significant impact on economic growth but rather when economy grows, more financial institutions, financial product and innovation come into the market in response to higher demand of financial services. Furthermore, one major criticism of the supply leading hypothesis is based on the possibility that the development of the financial sector may result to an impediment to growth when it induces volatility and discourages risk unenthusiastic investors from investing. Specifically, financial innovation allows risk reduction and may low precautionary savings and investment thus slow down growth.

In relation to the study, a well-developed financial intermediary facilitates the development of the economy through mobilization of savings, facilitation of trading and the diversification of risks. These important services lead to efficient allocation of resources; a more rapid accumulation of physical and human capital; and a faster technological innovation which eventually leads to a faster and long-term economic growth. Hence, this theory is relevant to this study as it shows the link between financial sector development and economic growth.

5. Theoretical Framework

The study employed the supply leading hypothesis as the underpinning theory based on their relevance and suitability of the theories' philosophical alignment with the study. This theory is of the opinion that a well-developed financial intermediary facilitates the development of the economy through mobilization of savings, facilitation of trading and the diversification of risks. These important services lead to efficient allocation of resources; a more rapid accumulation of physical and human capital; and a faster technological innovation which eventually leads to a faster and long-term economic growth. Therefore, the theories postulate that the development of the bond market and stock market enhances the growth process in any economy.

Empirical Review

Ogbebor, Oguntodun and Olayinka (2017) examined financial liberalization and stock market development: Evidenced from emerging equity market of Nigeria. Using time series data and OLS estimation techniques, the study investigated the relationship between financial liberalization and stock market development in Nigeria. The study found that financial liberalization has impacted stock market development in Nigeria. The conclusion drawn was that more efforts should be geared towards sustaining the tempo of financial liberalization in Nigeria and in fact, more opening of the financial markets should be encouraged. The study further recommended that a more liberalized financial markets in Nigeria will not only deepen the development of the stock market but will lead to greater macro-economic development of the country.

Onyinye and Jonathan (2018) examined the impact of stock market development and foreign private investment on economic growth in Nigeria over the period of 1985 to 2016, using secondary data from various publications of the Central Bank of Nigeria. The ordinary least square (OLS) technique was employed in the study while the Engel and Granger co-integration approach was applied to determine the long-run relationship between the variables. The result showed that market capitalisation, all share index and real exchange rate have statistically significant impact on economic growth, while foreign direct investment, trade openness and gross national savings have insignificant impact on growth. The study also showed that there is a long-run relationship among stock market development, foreign private investment and economic growth in Nigeria. The error correction model (ECM) results showed that the model adjusts to equilibrium in the short run and that about 51 per cent of the disequilibrium between gross domestic product and the independent variables is corrected each year. The study recommended that policymakers and monetary authorities should gear efforts towards formulating policies that will fine-tune stock market performance and reduce issues, such as, unpaid dividends, delay in dividend payments and unhealthy transfer of stocks. This is pertinent to encourage greater population of the citizenry to invest in the stock market. Finally, the study concluded that provision and improvement of infrastructure and power as well as enforcement of investor-friendly policies by the government is needed as these will encourage the establishment of more firms and industries that will participate in the stock market, thereby contributing to the growth of the economy.

Harjum, Imam and Erman (2018) examined bond market development, economic growth and the role of foreign direct investment in several countries. The objective of the research was sovereign bond with a sample of some developing countries in Asia, America, Europe, and Africa during the period of 2004–2015. The study employed Vector Autoregressive (VAR), Vector Error Correction Model (VECM) and Granger causality. The result showed that there are short- and long-run co-integrations in each sample. On the other hand, there is no causality in all sample countries but there is only univariate correlation in Indonesia, Thailand, and Mexico.

Araoye, Ajayi and Aruwaji (2018) investigated the impact of stock market development on economic growth in Nigeria from 1985 to 2014. The economic growth was proxied by the GDP while the stock market variables considered included; market capitalization and market turnover ratio as proxy for stock market development in terms of size and liquidity. The study utilized the Johansson's co integration test in establishing if a long run relationship does exist between stock market development and economic growth in Nigeria. The empirical results suggested that the stock market is significant in determining economic growth in Nigeria using the error correlation model and it was found that the stock market has impacted insignificantly on the economic growth. The study recommended that policy makers should ensure improvement in the market capitalization, by encouraging foreign direct investment participation in the market.

Ogbebor and Siyanbola (2018) examined the impact of stock market on economic growth in Nigeria following the recent liberalization and the subsequent market integration resulting from globalization. The study found long run relationship between the Gross Domestic Product per Capital Growth Rate (GDPGR) and the explanatory variables (stock market capitalization ratio; total value of shares traded, stock turnover ratio and financial liberalization). The Granger Causality test results showed that there is a bi-directional relationship that runs from turnover ratio (TNVR) to stock market capitalization (SMCR) and vice versa within 5% and 10% level of significance. Also, the results also showed that gross domestic product per capital growth rate (GDPGR), stock market capitalization ratio (SMCR), total value of shares traded (STR), and financial liberalization (FINLIB) jointly have causal effects on stock turnover ratio (TNVR).The study concluded that economic growth and development has not been found invariant to dis-equilibrium in the stock market in Nigeria. The study recommended that a policy rethink should be fashioned out to strengthen the stock market so as to enable it to play its pivotal role in the economic growth and development of Nigeria.

6. Methodology

The study investigated the relationship between stock, bond market and economic growth in Nigeria from 1981 to 2020. The study adopted the *ex-post* facto research design. This is premised on the fact that ex-post facto research design allows the use of variables that already exist when investigating the causal relationship between at least two variables of interest where one is dependent and the other one is considered as independent. The study utilized Nigeria Economy as its research context and focused on annual time series data which covered 1981 to 2020 {forty years}, regarding the Stock and Bond Markets and Economic Growth of Nigeria. The study considered seven {7} components which include Stock Market proxies, Bond Market proxies, Control Variables and Economic Growth proxy. The sample size for this study is obtained by multiplying the number of variables under study, by the total number of years to be covered. It is (7*40) = 280. Thus, the number of observations for this study consisted of two hundred and eighty (280). The approaches that were used to analyse the time series data for this study are descriptive and inferential analysis approaches with the aid of Econometric-Views version 10 (E-views10) statistical software.

Model Specification

The stud adopted the model by Pradhan, *et al.* (2018) and Harjum, *et al.* (2018) with some modifications to investigate the relationship between Stock Market, Bond Market and Economic growth. Therefore, the VECM multivariate framework for the time series data are specified as follows:

$$\Delta RGDP_t = \alpha_0 + \sum_{i=1}^{k} \alpha_1 \Delta RGDP_{t-i} + \sum_{i=1}^{k} \alpha_2 \Delta ASI_{t-i} + \sum_{i=}^{k} \alpha_3 \Delta EMCAP_{t-i} + \sum_{i=1}^{k} \alpha_4 \Delta BMCAP_{t-i} + \sum_{i=1}^{k} \alpha_5 \Delta TBILL_{t-i} + \sum_{i=1}^{k} \alpha_6 \Delta EXR_{t-i} + \sum_{i=1}^{k} \alpha_7 \Delta IR_{t-i} + \lambda_1 ECM_{t-1} + \varepsilon_{1t} \quad (4)$$

$$\Delta ASI_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta RGDP_{t-i} + \sum_{i=1}^{k} \beta_2 \Delta ASI_{t-i} + \sum_{i=}^{k} \beta_3 \Delta EMCAP_{t-i} + \sum_{i=1}^{k} \beta_4 \Delta BMCAP_{t-i} + \sum_{i=1}^{k} \beta_5 \Delta TBILL_{t-i} + \sum_{i=1}^{k} \beta_6 \Delta EXr_{t-i} + \sum_{i=1}^{k} \beta_7 \Delta IR_{t-i} + \lambda_2 ECM_{t-1} + \varepsilon_{2t} \quad (5)$$

$$\Delta EMCAP_t = \theta_0 + \sum_{i=1}^{k} \theta_1 \Delta RGDP_{t-i} + \sum_{i=1}^{k} \theta_2 \Delta ASI_{t-i} + \sum_{i=}^{k} \theta_3 \Delta EMCAP_{t-i} + \sum_{i=1}^{k} \theta_4 \Delta BMCAP_{t-i} + \sum_{i=1}^{k} \theta_5 \Delta TBILL_{t-i} + \sum_{i=1}^{k} \theta_6 \Delta EXR_{t-i} + \sum_{i=1}^{k} \theta_7 \Delta IR_{t-i} + \lambda_3 ECM_{t-1} + \varepsilon_{3t} \quad (6)$$

$$\Delta BMCAP_t = \pi_0 + \sum_{i=1}^{k} \pi_1 \Delta RGDP_{t-i} + \sum_{i=1}^{k} \pi_2 \Delta ASI_{t-i} + \sum_{i=}^{k} \pi_3 \Delta EMCAP_{t-i} + \sum_{i=1}^{k} \pi_4 \Delta BMCAP_{t-i} + \sum_{i=1}^{k} \pi_5 \Delta TBILL_{t-i} + \sum_{i=1}^{k} \pi_6 \Delta EXR_{t-i} + \sum_{i=1}^{k} \pi_7 \Delta IR_{t-i} + \lambda_4 ECM_{t-1} + \varepsilon_{4t} \quad (7)$$

$$\Delta TBILL_t = \mu_0 + \sum_{i=1}^{k} \mu_1 \Delta RGDP_{t-i} + \sum_{i=1}^{k} \mu_2 \Delta ASI_{t-i} + \sum_{i=}^{k} \mu_3 \Delta EMCAP_{t-i} + \sum_{i=1}^{k} \mu_4 \Delta BMCAP_{t-i} + \sum_{i=1}^{k} \mu_5 \Delta TBILL_{t-i} + \sum_{i=1}^{k} \mu_6 \Delta EXR_{t-i} + \sum_{i=1}^{k} \mu_7 \Delta IR_{t-i} + \lambda_5 ECM_{t-1} + \varepsilon_{5t} \quad (8)$$

$$\Delta EXR_t = \delta_0 + \sum_{i=1}^{k} \delta_1 \Delta RGDP_{t-i} + \sum_{i=1}^{k} \delta_2 \Delta ASI_{t-i} + \sum_{i=}^{k} \delta_3 \Delta EMCAP_{t-i} + \sum_{i=1}^{k} \delta_4 \Delta BMCAP_{t-i} + \sum_{i=1}^{k} \delta_5 \Delta TBILL_{t-i} + \sum_{i=1}^{k} \delta_6 \Delta EXR_{t-i} + \sum_{i=1}^{k} \delta_7 \Delta IR_{t-i} + \lambda_6 ECM_{t-1} + \varepsilon_{6t} \quad (9)$$

$$\Delta IR_t = \varphi_0 + \sum_{i=1}^{k} \varphi_1 \Delta RGDP_{t-i} + \sum_{i=1}^{k} \varphi_2 \Delta ASI_{t-i} + \sum_{i=}^{k} \varphi_3 \Delta EMCAP_{t-i} + \sum_{i=1}^{k} \varphi_4 \Delta BMCAP_{t-i} + \sum_{i=1}^{k} \varphi_5 \Delta TBILL_{t-i} + \sum_{i=1}^{k} \varphi_6 \Delta EXR_{t-i} + \sum_{i=1}^{k} \varphi_7 \Delta IR_{t-i} + \lambda_7 ECM_{t-1} + \varepsilon_{7t} \quad (10)$$

Where,

RGDP	=	Real Gross Domestic Product
ASI	=	Composite All Share Index for equities, bond and ETF
EMCAP	=	Equity Market Capitalization
BMCAP	=	Bond Market Capitalization
TBILL	=	Treasury bills rate
EXR	=	Exchange Rate
IR	=	Interest Rate
ε_{t-1}	=	Error Correction Term

The α, β, θ, π, μ, δ and φ are coefficients. Subscript *i* represents the lag length 1 to k, while subscript *t* represents time. The optimal lag length k is determined by Final prediction error (FPE), Akaike information criterion (AIC), and Hannan-Quinn information criterion (HQ) values. Also, Causality inferences in the multi-variate framework are

made by estimating the parameters of the following VECM equations above.

7. Discussions of Results

7.1 Summary Statistics

Descriptive Analysis

Table 1: Descriptive Statistics

	RGDP	ASI	EMCAP	BMACP	TBILL	EXR	IR
Mean	38991551	17246.61	4501.183	2617.165	11.86444	112.0037	18.20694
Median	31874994	16133.30	1037.200	24.90000	11.87500	119.7686	17.58500
Maximum	71387827	57990.20	21063.17	17501.90	26.90000	358.8117	29.80000
Minimum	16997518	127.3000	2.700000	3.100000	1.640000	0.893800	9.250000
Std. Dev.	19710399	15405.91	5576.186	4214.691	4.878981	100.1918	4.041181
Skewness	0.491394	0.552632	1.063800	1.870832	0.631840	0.781215	0.635628
Kurtosis	1.632799	2.454982	3.270828	6.162517	4.384735	2.868896	4.398595
Jarque-Bera	4.252667	2.277980	6.900040	36.00234	5.271567	3.687560	5.358242
Probability	0.119274	0.320142	0.031745	0.000000	0.071663	0.158218	0.068623
Sum	1.40E+09	620878.1	162042.6	94217.95	427.1200	4032.133	655.4500
Sum Sq. Dev.	1.36E+16	8.31E+09	1.09E+09	6.22E+08	833.1561	351344.1	571.5902
Observations	36	36	36	36	36	36	36

Source: Extracted from E views output

The descriptive statistics analysed were in form of mean, median, standard deviation, skewness and kurtosis as provided in the table above. From the table 1, the averages of the variables included in the model are 38991551, 17246.61, 4501.18, 2617.17, 11.86, 112.00 and 18.21 for real gross domestic product (RGDP), all share index (ASI), equities market capitalisation (EMCAP), bonds market capitalisation (BMCAP), treasury bill rate (TBILL), exchange rate (EXR) and interest rate (IR) respectively. The maximum values of the variables are 71387827, 57990.20, 21063.17, 17501.90, 26.90, 258.81 and 29.80 for real gross domestic product (RGDP), all share index (ASI), equities market capitalisation (EMCAP), bonds market capitalisation (BMCAP), treasury bill rate (TBILL), exchange rate (EXR) and interest rate (IR) respectively while minimum values of the variables are 16997518, 127.30, 2.70, 3.10, 1.64, 0.89 and 9.25 for real gross domestic product (RGDP), all share index (ASI), equities market capitalisation (EMCAP), bonds market capitalisation (BMCAP), treasury bill rate (TBILL), exchange rate (EXR) and interest rate (IR) respectively. The standard deviation showed that all the variables are highly volatile except treasury bill rate and interest rate in the time series.

The skewness and kurtosis statistics provide useful information about the symmetry of the probability distribution of various data series as well as the thickness of the tails of these distributions respectively. In terms of the skewness statistic, all variables included in the study were positively skewed. The kurtosis statistics on the other hand, showed that equities market capitalisation (3.2708), bonds market capitalisation (6.1625), treasury bill rate (4.3847) and interest rate (4.3986) were peaked relative to the normal because there kurtosis statistics are greater than 3.0. On the other hand, kurtosis statistics for real gross domestic product (1.6328), all share index (2.4550) and exchange rate (2.8689) were less than 3.0 which indicated the extent of flatness (platykurtic) of the distribution of the data series relative to normal. The Jarque-Bera statistic rejected the null hypothesis of normal distribution for equities market capitalisation (EMCAP) and bonds market capitalisation (BMCAP) at 5% critical value.

Inferential Analysis

Test of Hypothesis One: Composite all share index has no significant effect on economic growth of Nigeria

Table 2: All Share Index and Economic Growth

D(ASI) = C(17)*(LNRGDP(-1) + 5.0839078625E-06*ASI(-1) - 0.0411180762442*LNEMCAP(-1) - 0.131406708084*LNBMCAP(-1) - 0.02750458357*TBILL(-1) - 0.000591680362218*EXR(-1) + 0.0255798780034*IR(-1) - 16.6287892649) + C(18)*D(LNRGDP(-1)) + C(19)*D(LNRGDP(-2)) + C(20)*D(ASI(-1)) + C(21)*D(ASI(-2)) + C(22) *D(LNEMCAP(-1)) + C(23)*D(LNEMCAP(-2)) + C(24)*D(LNBMCAP(-1)) + C(25)*D(LNBMCAP(-2)) + C(26)*D(TBILL(-1)) + C(27)*D(TBILL(-2)) + C(28)*D(EXR(-1)) + C(29)*D(EXR(-2)) + C(30)*D(IR(-1)) + C(31)*D(IR(-2)) + C(32)

	Coefficient	Std. Error	t-Statistic	Prob.
C(17)	-448.9383	44675.73	-0.010049	0.9921
C(18)	-36224.58	94291.84	-0.384175	0.7056
C(19)	-7747.294	81677.25	-0.094853	0.9255

C(20)	-0.343148	0.472908	-0.725613	0.4779
C(21)	-0.758209	0.393157	-1.928515	0.0707
C(22)	1863.185	12099.76	0.153985	0.8794
C(23)	371.7679	10736.94	0.034625	0.9728
C(24)	3393.545	7971.528	0.425708	0.6757
C(25)	7352.134	6130.098	1.199350	0.2468
C(26)	487.4955	824.0028	0.591619	0.5619
C(27)	-73.01560	626.4187	-0.116560	0.9086
C(28)	-66.43818	134.2174	-0.495004	0.6269
C(29)	45.41813	120.7520	0.376127	0.7115
C(30)	-137.2017	865.2334	-0.158572	0.8759
C(31)	-117.0108	742.9557	-0.157494	0.8767
C(32)	1179.013	7015.291	0.168063	0.8685

R-squared	0.368973	Mean dependent var	1214.540
Adjusted R-squared	-0.187815	S.D. dependent var	8480.604
S.E. of regression	9242.750	Akaike info criterion	21.40747
Sum squared resid	1.45E+09	Schwarz criterion	22.13305
Log likelihood	-337.2232	Hannan-Quinn criter.	21.65160
F-statistic	0.662681	Durbin-Watson stat	2.104707
Prob(F-statistic)	0.785788		

***Source**: Authors' Computation, 2021*

From the result in table 2, R-squared is estimated at 0.3690, which shows that the model explains about 36.9% of the variations in economic growth in Nigeria. The result revealed a negative and insignificant relationship between composite all share index and economic growth of Nigeria. This implies that a unit increase in composite all share index reduces economic growth in Nigeria. The Durbin Watson statistics which is 2.1047 does not suggest evidence of auto-correlation. The F-value of 0.6627 is insignificant at the 1 per cent level because the critical value of P(F-statistic) is 0.7858, indicating that the variables included in the model does not explains approximately the variations caused on economic growth that can be attributed to all share index in Nigeria. The result obtained in the table 2 above suggest that the null hypothesis which states that "Composite all share index has no significant effect on economic growth of Nigeria" is accepted because p-value is greater than 0.05. The study concluded that all share index has no significant impact on economic growth of Nigeria.

Test of Hypothesis Two: Equity market capitalization has no significant effect on economic growth of Nigeria

Table 3: Equities Market Capitalisation and Economic Growth

D(LNEMCAP) = C(33)*(LNRGDP(-1) + 5.0839078625E-06*ASI(-1) - 0.0411180762442*LNEMCAP(-1) - 0.131406708084*LNBMCAP(-1) - 0.02750458357*TBILL(-1) - 0.000591680362218*EXR(-1) + 0.0255798780034*IR(-1) - 16.6287892649) + C(34)*D(LNRGDP(-1)) + C(35)*D(LNRGDP(-2)) + C(36)*D(ASI(-1)) + C(37)*D(ASI(-2)) + C(38) *D(LNEMCAP(-1)) + C(39)*D(LNEMCAP(-2)) + C(40)*D(LNBMCAP(-1)) + C(41)*D(LNBMCAP(-2)) + C(42)*D(TBILL(-1)) + C(43)*D(TBILL(-2)) + C(44)*D(EXR(-1)) + C(45)*D(EXR(-2)) + C(46)*D(IR(-1)) + C(47)*D(IR(-2)) + C(48)

	Coefficient	Std. Error	t-Statistic	Prob.
C(33)	-5.254114	2.149112	-2.444783	0.0257
C(34)	-0.903278	3.418159	-0.264259	0.7948
C(35)	-0.495273	2.960869	-0.167273	0.8691
C(36)	-2.60E-05	1.71E-05	-1.518640	0.1472
C(37)	-2.27E-05	1.43E-05	-1.593251	0.1295
C(38)	0.648551	0.438627	1.478595	0.1575
C(39)	0.040849	0.389223	0.104949	0.9176
C(40)	0.170183	0.288975	0.588920	0.5637
C(41)	0.138437	0.222221	0.622971	0.5416
C(42)	-0.009556	0.029871	-0.319899	0.7529
C(43)	0.018786	0.022708	0.827258	0.4196
C(44)	-0.000185	0.004865	-0.037952	0.9702
C(45)	-0.000879	0.004377	-0.200836	0.8432
C(46)	0.024500	0.031365	0.781109	0.4455
C(47)	-0.003096	0.026933	-0.114960	0.9098
C(48)	0.122422	0.254310	0.481390	0.6364

R-squared	0.432742	Mean dependent var	0.259666
Adjusted R-squared	-0.067780	S.D. dependent var	0.324249
S.E. of regression	0.335058	Akaike info criterion	0.957374
Sum squared resid	1.908480	Schwarz criterion	1.682953
Log likelihood	0.203333	Hannan-Quinn criter.	1.201509
F-statistic	5.864582	Durbin-Watson stat	2.254915
Prob(F-statistic)	0.008289		

***Source**: Authors' Computation, 2021*

The result presented in table 3 above revealed that R-squared is 0.4327, which shows that the model explains about 43.3% of the variations in economic growth in Nigeria. The result revealed a positive and insignificant relationship between equities market capitalisation and economic growth of Nigeria. This implies that a unit increase in equities market capitalisation will promote by economic growth by 5.25 per cent in Nigeria. The result conforms with the empirical findings of Adam and Sanni (2005), Riman, Esso and Eyo (2008) and Obamiro (2005) who found a positive and significant relationship between equities market capitalisation and growth. The F-value of 5.8646 is significant at the 1 per cent level because the critical value of P(F-statistic) is 0.0083, indicating that the variables included in the model explains approximately the variations caused on economic growth that can be attributed to equities market capitalisation in Nigeria. The Durbin Watson statistics which is 2.2549 does not suggest evidence of auto-correlation. The estimated result in table 3 suggests that the null hypothesis which states that equities market capitalisation has no significant effect on economic growth of Nigeria is rejected. This implies that the alternative hypothesis is accepted because the t-statistics value of 5.8646 and a corresponding probability value of 0.0083. This study concluded that there is a significant relationship between equities market capitalisation and Economic growth in Nigeria.

Test of Hypothesis Three: There is no significant effect of bond market capitalization on economic growth of Nigeria

Table 4: Bond Market Capitalisation and Economic Growth

D(LNBMCAP) = C(49)*(LNRGDP(-1) + 5.0839078625E-06*ASI(-1) - 0.0411180762442*LNEMCAP(-1) - 0.131406708084*LNBMCAP(-1) - 0.02750458357*TBILL(-1) - 0.000591680362218*EXR(-1) + 0.0255798780034*IR(-1) - 16.6287892649) + C(50)*D(LNRGDP(-1)) + C(51)*D(LNRGDP(-2)) + C(52)*D(ASI(-1)) + C(53)*D(ASI(-2)) + C(54) *D(LNEMCAP(-1)) + C(55)*D(LNEMCAP(-2)) + C(56)*D(LNBMCAP(-1)) + C(57)*D(LNBMCAP(-2)) + C(58)*D(TBILL(-1)) + C(59)*D(TBILL(-2)) + C(60)*D(EXR(-1)) + C(61)*D(EXR(-2)) + C(62)*D(IR(-1)) + C(63)*D(IR(-2)) + C(64)

	Coefficient	Std. Error	t-Statistic	Prob.
C(49)	-0.249523	1.895700	-0.131626	0.8968
C(50)	2.534562	4.001032	0.633477	0.5349
C(51)	4.857424	3.465764	1.401545	0.1790
C(52)	-3.14E-06	2.01E-05	-0.156284	0.8777
C(53)	-4.60E-06	1.67E-05	-0.275441	0.7863
C(54)	0.193434	0.513422	0.376755	0.7110
C(55)	-0.017713	0.455595	-0.038880	0.9694
C(56)	0.269958	0.338251	0.798100	0.4358
C(57)	-0.007664	0.260115	-0.029463	0.9768
C(58)	-0.024550	0.034964	-0.702144	0.4921
C(59)	-0.019358	0.026580	-0.728268	0.4764
C(60)	-0.000249	0.005695	-0.043646	0.9657
C(61)	0.009830	0.005124	1.918536	0.0720
C(62)	0.015749	0.036714	0.428964	0.6733
C(63)	0.018112	0.031525	0.574507	0.5731
C(64)	-0.261509	0.297676	-0.878503	0.3919

R-squared	0.554526	Mean dependent var	0.252575
Adjusted R-squared	0.161460	S.D. dependent var	0.428289
S.E. of regression	0.392192	Akaike info criterion	1.272274
Sum squared resid	2.614853	Schwarz criterion	1.997854
Log likelihood	-4.992525	Hannan-Quinn criter.	1.516410
F-statistic	5.410772	Durbin-Watson stat	2.083434
Prob(F-statistic)	0.045864		

***Source**: Authors' Computation, 2021*

From the result in table 4, R-squared is estimated at 0.5545, which shows that the model explains about 55.5% of the variations in economic growth in Nigeria. The result revealed a negative and insignificant relationship between bonds market capitalisation and economic growth of Nigeria. This implies that a unit increase in bonds market capitalisation will reduce economic growth in Nigeria. The Durbin Watson statistics which is 2.0834 does not suggest evidence of auto-correlation. The F-value of 5.4108 is significant at the 1 per cent level because the critical value of P(F-statistic) is 0.0459, indicating that the variables included in the model explains approximately the variations caused on economic growth that can be attributed to bonds market capitalisation in Nigeria. The result obtained in the table 4 above suggests that the null hypothesis which states that "there is no significant effect of bonds market capitalisation on economic growth of Nigeria" is rejected since t-statistics value is high and the corresponding probability value is less than 0.05. This study concluded that there is significant relationship between bonds market capitalisation and Economic growth in Nigeria.

Test of Hypothesis Four: Treasury bills rate has no significant effect on economic growth of Nigeria.

Table 5: Treasury Bills Rate and Economic Growth

D(TBILL) = C(65)*(LNRGDP(-1) + 5.0839078625E-06*ASI(-1) - 0.0411180762442*LNEMCAP(-1) - 0.131406708084*LNBMCAP(-1) - 0.02750458357*TBILL(-1) - 0.000591680362218*EXR(-1) + 0.0255798780034*IR(-1) - 16.6287892649) + C(66)*D(LNRGDP(-1)) + C(67)*D(LNRGDP(-2)) + C(68)*D(ASI(-1)) + C(69)*D(ASI(-2)) + C(70) *D(LNEMCAP(-1)) + C(71)*D(LNEMCAP(-2)) + C(72)*D(LNBMCAP(-1)) + C(73)*D(LNBMCAP(-2)) + C(74)*D(TBILL(-1)) + C(75)*D(TBILL(-2)) + C(76)*D(EXR(-1)) + C(77)*D(EXR(-2)) + C(78)*D(IR(-1)) + C(79)*D(IR(-2)) + C(80)

	Coefficient	Std. Error	t-Statistic	Prob.
C(65)	29.21925	19.91007	1.467562	0.1605
C(66)	-46.85476	42.02185	-1.115009	0.2804
C(67)	24.65516	36.40006	0.677338	0.5073
C(68)	0.000257	0.000211	1.220075	0.2391
C(69)	-6.79E-05	0.000175	-0.387776	0.7030
C(70)	-7.121767	5.392347	-1.320717	0.2041
C(71)	2.929577	4.784998	0.612242	0.5485
C(72)	-0.014584	3.552570	-0.004105	0.9968
C(73)	-0.450755	2.731923	-0.164996	0.8709
C(74)	0.062373	0.367223	0.169849	0.8671
C(75)	-0.230418	0.279168	-0.825373	0.4206
C(76)	-0.077389	0.059815	-1.293809	0.2130
C(77)	0.040648	0.053814	0.755343	0.4604
C(78)	0.072234	0.385598	0.187331	0.8536
C(79)	0.044398	0.331104	0.134092	0.8949
C(80)	1.988257	3.126416	0.635954	0.5333

R-squared	0.536243	Mean dependent var	-0.306364
Adjusted R-squared	0.127046	S.D. dependent var	4.408661
S.E. of regression	4.119099	Akaike info criterion	5.975549
Sum squared resid	288.4387	Schwarz criterion	6.701128
Log likelihood	-82.59656	Hannan-Quinn criter.	6.219684
F-statistic	5.310478	Durbin-Watson stat	1.999553
Prob(F-statistic)	0.013713		

***Source**: Authors' Computation, 2021*

From the result in table 5, R-squared is estimated at 0.5362, which shows that the model explains about 53.6% of the variations in economic growth in Nigeria. The result revealed a positive and insignificant relationship between treasury bill rate and economic growth of Nigeria. This implies that a unit increase in treasury bill rate increases economic growth in Nigeria. The Durbin Watson statistics which is 2.0000 does not suggest evidence of auto-correlation. The F-value of 5.3105 is significant at the 1 per cent level because the critical value of P(F-statistic) is 0.0137, indicating that the variables included in the model explains approximately the variations caused on economic growth that can be attributed to treasury bill rate in Nigeria. The result obtained from table 5 above indicates that treasury bills rate has no significant effect on economic growth of Nigeria.

Test of Hypothesis Five: Exchange rate and interest rate does not have a controlling effect on the equities, bond markets and economic growth of Nigeria

Table 6: Exchange Rate, Equities, Bond Markets and Economic Growth

Exchange Rate, Equities, Bond Markets and Economic Growth

D(EXR) = C(81)*(LNRGDP(-1) + 5.0839078625E-06*ASI(-1) - 0.0411180762442*LNEMCAP(-1) - 0.131406708084*LNBMCAP(-1) - 0.02750458357*TBILL(-1) - 0.000591680362218*EXR(-1) + 0.0255798780034*IR(-1) - 16.6287892649) + C(82)*D(LNRGDP(-1)) + C(83)*D(LNRGDP(-2)) + C(84)*D(ASI(-1)) + C(85)*D(ASI(-2)) + C(86) *D(LNEMCAP(-1)) + C(87)*D(LNEMCAP(-2)) + C(88)*D(LNBMCAP(-1)) + C(89)*D(LNBMCAP(-2)) + C(90)*D(TBILL(-1)) + C(91)*D(TBILL(-2)) + C(92)*D(EXR(-1)) + C(93)*D(EXR(-2)) + C(94)*D(IR(-1)) + C(95)*D(IR(-2)) + C(96)

	Coefficient	Std. Error	t-Statistic	Prob.
C(81)	135.1913	89.42317	1.511815	0.1489
C(82)	-182.5877	188.7350	-0.967429	0.3469
C(83)	-222.6809	163.4856	-1.362083	0.1909
C(84)	-0.000973	0.000947	-1.027488	0.3186
C(85)	0.001360	0.000787	1.728122	0.1021
C(86)	-12.75917	24.21894	-0.526826	0.6051
C(87)	-52.54114	21.49112	-2.444783	0.0257
C(88)	14.84644	15.95585	0.930470	0.3652
C(89)	2.032331	12.27004	0.165634	0.8704
C(90)	1.959510	1.649328	1.188066	0.2511
C(91)	0.552385	1.253843	0.440553	0.6651
C(92)	-0.010730	0.268650	-0.039940	0.9686
C(93)	-0.362653	0.241698	-1.500438	0.1518
C(94)	-2.669250	1.731856	-1.541266	0.1417
C(95)	-1.163173	1.487104	-0.782173	0.4449
C(96)	43.97639	14.04184	3.131810	0.0061

R-squared	0.549876	Mean dependent var	10.75133
Adjusted R-squared	0.152708	S.D. dependent var	20.09847
S.E. of regression	18.50034	Akaike info criterion	8.979858
Sum squared resid	5818.461	Schwarz criterion	9.705437
Log likelihood	-132.1677	Hannan-Quinn criter.	9.223993
F-statistic	4.384492	Durbin-Watson stat	2.109996
Prob(F-statistic)	0.047649		

***Source**: Authors' Computation, 2021*

Table 7: Interest Rate, Equities, Bond Markets and Economic Growth

Interest Rate, Equities, Bond Markets and Economic Growth

D(IR) = C(97)*(LNRGDP(-1) + 5.0839078625E-06*ASI(-1) - 0.0411180762442*LNEMCAP(-1) - 0.131406708084*LNBMCAP(-1) - 0.02750458357*TBILL(-1) - 0.000591680362218*EXR(-1) + 0.0255798780034*IR(-1) - 16.6287892649) + C(98)*D(LNRGDP(-1)) + C(99)*D(LNRGDP(-2)) + C(100)*D(ASI(-1)) + C(101)*D(ASI(-2)) + C(102)*D(LNEMCAP(-1)) + C(103)*D(LNEMCAP(-2)) + C(104) *D(LNBMCAP(-1)) + C(105)*D(LNBMCAP(-2)) + C(106)*D(TBILL(-1)) + C(107)*D(TBILL(-2)) + C(108)*D(EXR(-1)) + C(109)*D(EXR(-2)) + C(110)*D(IR(-1)) + C(111)*D(IR(-2)) + C(112)

	Coefficient	Std. Error	t-Statistic	Prob.
C(97)	-46.66108	17.89982	-2.606791	0.0184
C(98)	37.53520	37.77905	0.993545	0.3344
C(99)	82.21210	32.72488	2.512220	0.0224
C(100)	0.000225	0.000189	1.185692	0.2521
C(101)	0.000139	0.000158	0.882112	0.3900
C(102)	-3.250258	4.847901	-0.670446	0.5116

C(103)	-1.700640	4.301874	-0.395325	0.6975
C(104)	-6.364055	3.193880	-1.992578	0.0626
C(105)	-4.213407	2.456091	-1.715494	0.1044
C(106)	-0.747889	0.330146	-2.265331	0.0368
C(107)	-0.495865	0.250981	-1.975703	0.0647
C(108)	-0.001347	0.053776	-0.025050	0.9803
C(109)	0.023847	0.048381	0.492900	0.6284
C(110)	0.213307	0.346665	0.615311	0.5465
C(111)	-0.051767	0.297673	-0.173905	0.8640
C(112)	-1.929929	2.810753	-0.686623	0.5016

R-squared	0.577351	Mean dependent var	-0.136061
Adjusted R-squared	0.204425	S.D. dependent var	4.151811
S.E. of regression	3.703209	Akaike info criterion	5.762679
Sum squared resid	233.1338	Schwarz criterion	6.488259
Log likelihood	-79.08421	Hannan-Quinn criter.	6.006815
F-statistic	4.548164	Durbin-Watson stat	1.779115
Prob(F-statistic)	0.032165		

***Source**: Authors' Computation, 2021*

The result in tables above revealed that 55.0% of the variation in equities, bond markets and economic growth is caused by exchange rate while 57.7% of the variation in the same is caused by interest rate. The result further revealed that exchange rate has a positive and insignificant impact while interest rate has a negative and significant impact on economic growth of Nigeria. The result obtained showed that the null hypothesis which states that exchange rate and interest rate does not have a controlling effect on the equities, bonds market and economic growth of Nigeria is accepted. This implies that the alternative hypothesis is rejected. The study concluded that there is significant relationship among interest rate, exchange rate, equities, bonds market and Economic growth in Nigeria. The result obtained showed that the null hypothesis which states that exchange rate and interest rate does not have a controlling effect on the equities, bonds market and economic growth of Nigeria is accepted. This implies that the alternative hypothesis is rejected. The study concluded that there is significant relationship among interest rate, exchange rate, equities, bonds market and Economic growth in Nigeria.

8. Discussion of Findings

The result obtained showed that Composite all share index has no significant effect on economic growth of Nigeria (R^2 =0.3690, F= 0.6627, P= 0.7858) because p-value is greater than 0.05. The study concludes that all share index has no significant impact on economic growth of Nigeria. The study also ascertained that equities market capitalization has a significant effect on economic growth of Nigeria (R^2= 0.4327, T=5.8646, P=0.0083). This implies that the alternative hypothesis was accepted because the t-statistics value of 5.8646 and a corresponding probability value of 0.0083. The third model showed that there is a significant effect of bonds market capitalization on economic growth of Nigeria (R^2= 0.5545, T=5.4108, P=0.0459), since t-statistics value is high and the corresponding probability value is less than 0.05. The findings of the fourth hypothesis showed that treasury bills has no significant effect on economic growth of Nigeria (R^2= 0.5362, T=5.3105, P=0.0137) because p-value is greater than 0.05. The study concludes that all share index has no significant impact on economic growth of Nigeria The result from the last hypothesis obtained showed that the exchange rate and interest rate does not have a controlling effect on the equities, bonds market and economic growth of Nigeria (R^2= 0.577, T=4.5481, P=0.0321). This implies that the alternative hypothesis is rejected.

9. Conclusion

The empirical results in this study support the view of presence of a causal link relationships between stock and bond markets and economic growth in Nigeria. Hence, the study concluded that stock and bond market has not facilitated required improvement in economic growth of Nigeria. The study further concluded that the stock and bond market has not enhanced the desired improvement in economic growth of Nigeria within the period under review. The findings of the study have important implication on policy makers and regulators in relations to the formulation of policies that will improve the stock and bond market to induce economic growth. The result of the findings indicated that equity market capitalization has a significant effect on economic growth of Nigeria; this implies that since the activities of the equity market increase the economic growth of Nigeria, the government should put more developmental measures in place in order to sustain the growth of the nation's economy. The study revealed that bonds market capitalization has a significant effect on economic growth of Nigeria, thus an increase in market capitalization will result to availability of more investment funds to the entrepreneurs, thereby leading to economic growth. Furthermore, one of the key implications of this study is directed towards pursuance of strong stock market development whose returns will be higher than the treasury bill rate returns through the formulation and implementation of sound monetary and fiscal policies since treasury bill rate has no significant effect on economic growth.

10. Recommendation

The following recommendations were given:

1) Refined policy measures should be adopted to strengthen and improve the role of stock market in order to expedite and maintain the strong growth of the economy.
2) The government should put more developmental measures in place in order to sustain the growth of the nation's economy.
3) The government should put in place a robust policy measures which will increase the bond market capitalization to further gear overall improvement in the availability of more investment funds to the entrepreneurs, thereby leading to economic growth.
4) Policy makers should pursue strong stock market development whose returns will be higher than the treasury bill rate returns through the formulation and implementation of sound monetary and fiscal policies
5) Policy makers as well as market practitioners should factor in the relationship between the exchange and interest rate when making investment decisions

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