UNIVERSITY OF PORT HARCOURT JOURNAL OF ACCOUNTING AND BUSINESS DEPARTMENT OF ACCOUNTING UNIVERSITY OF PORT HARCOURT, CHOBA PORT HARCOURT, RIVERS STATE NIGERIA VOL. 10 NO. 1 MARCH 2023

ECONOMIC GROWTH AND STOCK MARKET RETURNS IN NIGERIA: AN EMPIRICAL EVIDENCE

PROF. OWUALAH SUNDAY IKECHUKWU Department of Finance, Babcock University

DR. AKINTOLA FRANCIS ABOLADE Department of Finance, Babcock University

&

ADESANYA ADEBOYE OLUBUKUNMI Department of Finance, Babcock University.

Abstract

This study investigated how economic growth drives stock market returns in the Nigeria. Secondary time series datasets from the first guarter of 2010 to the last guarter of 2022, a period of 13 years was used for the study. The study applied the Autoregressive Distributed Lag (ARDL) to examine the short run and long run impact of economic growth on stock market returns in Nigeria. The empirical estimation showed evidence of long-run relationship between the gross domestic product and stock returns in Nigeria. In the long run there is evidence that gross domestic product and stock market capitalization and stock turnover ratio have positive and significant relationship with stock returns, implying that increases in gross domestic product, stock market capitalization, and stock turnover ratio lead to significant increase in stock returns in Nigeria. From the result, in the short-run, gross domestic product and stock turnover ratio have positive and significant relationship with stock returns in conformity with the results obtained in the long run where gross domestic product and stock turnover ratio were significant factors influencing changes in stock market returns. However, for the stock market capitalization there is evidence of a negative and significant relationship with the stock returns. The study concluded that economic growth positively and significantly drive stock market returns in Nigeria and recommended that the Securities and Exchange Commission should

improve governance, transparency, and accountability on the market to increase investor confidence. Keywords: Stock returns; Economic growth; Gross domestic product (GDP); Nigerian Stock Market

Introduction

Macroeconomic variables are dynamic either at random or from external shocks and allows at every turn for the understanding of economic forces that affects the workings and efficiency of the stock market in order to ensure attractive and sustainable returns to investors. The stock market, an important segment of the financial market which has been empirically confirmed to be playing a vital role in the economic development of emerging countries like Nigeria.

A stock market, wanting of liquidity will hinder a lot of worthwhile investments that requires long-term funding from being executed because most investors would be reluctant and indisposed to commit their funds for longer time periods. Contrary, liquid equity markets enable investors to get rid of their shares when the need arises in so doing allowing organizations to increase capital on suitable terms that is equity in nature. By enhancing longer term, additional, cost-effective investment projects, liquid markets improve the distribution of capital and augments projection to grow the economy for long-term period. (Ezenduka & Joseph, 2020).

Capital market is a well-structured market that offers services to increase long-term loans in order to fund, expand and modernize industries. It is also set up to offer a stage where capital suppliers can speedily and simply refurbish their liquidities .The important roles executed by the capital markets are catalysts for rapid economic development and growth. This was the purpose and reason for setting up the NSE in March in the year 1960 as Stock Exchange of Lagos. Stock exchange in Nigeria controls the market responsible for the purchases and sales of stocks, Government bonds and debentures and they are all referred to as securities. (Ezenduka & Joseph, 2020).

The extant literature has established that the rate at which a nation records economic progress is dependent on how well its stock market can mobilize savings for investment. In industrialized economies, the financial markets are well developed; on the other hand capital markets in developing and emerging markets are usually characterized as shallow and unstable, leading to extreme sensitivity of stock returns to developments in the economy. These features underscore the role macroeconomic variables play in the performance of capital markets. It is therefore evident that the performance of the stock market is contingent on the overall macroeconomic environment. (Olokoyo et al., 2020).

In order to remedy the predominant macro-economic and structural imbalances in the economy, most developing countries implemented the Structural Adjustment Programme in the 1980s. This reform centred on liberalisation, privatization, economic stability and deregulation. Thus, when Nigeria adopted the Structural Adjustment Programme on 27th June 1986, policies on agricultural regulations, trade, business, and foreign exchange systems were all reformed. Despite all efforts by the Nigerian government since 1986, the Nigerian Capital market could still not be categorized as an efficient market. (Adeyefa, 2022).

The behavior of economy-wide aggregates, such as the gross domestic product, economy-wide price indices, and total employment, is what macroeconomists are most frequently interested in. However, because decisions in market economies are made by specific people and businesses, the majority of the underlying theories for the models are

developed at the microeconomic level before being combined to create a macroeconomic model. In order to achieve this aggregate, significant simplifications are typically made, such as the assumption that all consumers are similar or that variations between specific consumer goods are meaningless. (Parker, 2011). GDP conveys the broad measure of benefits generated in a nation. Gross domestic product growth is also considered to be a measure of how financially prosperous an economy is; the market is generally thought to be performing better as it grows, a barometer of economic growth (Duda, 2021).

From previous empirical literature, the industrial production index, credit to the private s ector, exchange rate, interest rate, external debt, money supply, financial openness, foreign domestic investment, crude oil price, treasury bills, financial capital flow, and unemployment are recognised macroeconomic variables from recent studies in Nigeria (Hammed & Okunoye, 2023; Okoebor, 2022; Ayeni & Fanibuyan, 2022; Gbadamosi et al., 2022; Adeyefa, 2022; Olokoyo et al.,2020; Aremo et al., 2020). Despite the fact that increased economic activities can influence the level of returns in the stock market, many similar publications, particularly in Nigeria, have not examined the impact of economic growth p as a macroeconomic variable. Hence, this study aims to explore the effect of gross domestic product (GDP) as a macroeconomic determinant that drives stock returns in the Nigerian Stock Market using the Autoregressive Distributed Lag (ARDL) model to explain the short run and long run relationship.

Literature Review

According to Islam et al. (2020), there is a positive correlation between GDP growth and stock market performance, indicating that an increase in GDP corresponds to an increase in stock market returns. This was revealed by the empirical analysis of their work on The Impact of Gross Domestic Product on the Bangladesh Stock Market: An Empirical Analysis. This connection can be explained by the fact that rising GDP results in rising consumer spending, rising corporate activity, and rising investment opportunities, all of which boost the stock market. The findings also showed that the stock market stimulates entrepreneurship and expands job prospects, both of which have a beneficial impact on the economy.

Many academics have tried to investigate the relationship between GDP growth and stock market growth using different structural models. The results of the research have really not been consistent because of the complicated interrelationship between the two variables that varies from one country to another. Some researchers came to the conclusion that a significant portion of the difference in stock market return could be explained, primarily by time-varying anticipated returns and forecast of real economic activity. Many other researchers believe that financial development is a critical component of economic growth in a liberalized financial environment because it allows for the deployment of greater financial savings and grant capital for more productive uses, which may increase the amount of cash on hand and its productivity while also promoting economic growth. (Duda, 2021)

The study by Stanley et al., (2022) examined the impact of crisis, (pre and during pandemic) using as variables: capital inflow, foreign direct investment and foreign exchange rate on gross national savings of Nigeria, gross domestic product of Nigeria and market capitalization of Nigeria. The findings of the study are: crisis, capital inflow, foreign direct investment and foreign exchange rate significantly affects gross national savings of Nigeria while in the same vein, crisis, capital inflow, foreign direct investment and foreign exchange rate significantly affect market capitalization of Nigeria. The work went on to recommend that Nigeria should carefully do analysis and examination of fluctuations in the economy of countries in which they dependent on, to prevent it from having a more adverse effect on the country's economy.

Alam et al. (2020) conducted am empirical study with purposefully to inspect whether association exist among the China stock exchange (SSE), Pakistan Stock Exchange (KSE-100) selecting macroeconomic variables (Gross Domestic Product, Balance of Trade, Foreign Direct Investments, Lending interest rate and Money Supply). The annual time series data from 1995 to 2019 used to find out the results, Macroeconomic variables have an essential role in any changes in every economy. Any unexpected variations amongst these variables influence the economy in several ways. The finding of the study exposed that GDP is negative significant 10% with SSE and 1% at level with KSE, FDI is insignificant with SSE. negative significant 10% at level with KSE and the result of BOT shows positive significant 5% at level with SSE while insignificant with KSE, M2 is significant 5% at level with SSE but insignificant with KSE and LI are shown statistically significant 1% at level with SSE While positive significant 10% with KSE. It is determined that it is significant and an insignificant relationship among the variables with both stock markets returns.

Serem et al., (2020) analysed relationship between macroeconomic indicators and the stock market prices in the context of Nairobi Securities Exchange using longitudinal research design and engaging monthly secondary data sourced from NSE, KNBS and Central Bank of Kenya for the period 2005 to 2018. Findings exposed a long-term existence between variables and the stock market prices, Exchange rate and nominal GDP had positive and significant effects on stock price, and Inflation and interest rate negatively and significantly affected stock market prices

Ogbebor et al., 2020 using a robust set of econometric approach involving data pre estimation test, co-integration, vector error correction model and granger causality submitted that market opening positively impacts economic growth due to reduction in the cost of capital and international risk diversification, amongst others in Nigeria.. The study, concluded that there are bi-directional causalities both in the short term and the long term between the dependent variable, Gross domestic product growth rate and stock market development; financial liberalization; inflation; foreign direct investment; trade openness; banking sector development; the other explanatory variables

Methodology

Sources of Data

This study examine how economic growth drives stock market returns in the Nigerian Stock Exchange (NSE). For this purpose, it utilized secondary time series datasets from the first quarter of 2010 to the last quarter of 2022, amounting to 52 quarterly observations. This chosen scope is primarily based on the availability of data for the variables of the study. The variables used in this study are All Share Index (ASI) used to calculate the stock market returns, gross domestic product used to proxy economic growth and control variables such as stock market capitalization and stock turnover ratio. The datasets are sourced from the quarterly reports of the Central Bank of Nigeria (CBN), Nigerian Stock Exchange (NSE), and National Bureau of Statistics.

Model Specification

The theoretical framework proposed for this study is the Arbitrage Pricing Theory (APT), a multifactor technical model which is designed to capture how sensitive assets returns to changes in certain macroeconomic variables. Multiple regression model fits into the theoretical foundation proposed because the model is appropriate and has been used in the works of (Omodero et.al 2021; Akintola & Cole,2021; Adesanya et al., 2020; Danso, 2020; Etale & Eze, 2019) to examine how multiple independent variables relates to a dependent variable. Thus, to investigate how economic growth drives stock market returns in Nigeria, the baseline model is specified as follows;

ASI=f(GDP, SMC, STR)(1)

Where ASI is the all share index, GDP is the gross domestic product, SMC is the stock market capitalization, and STR is the stock turnover ratio. The structural form of equation (1) is specified in equation (2).

 $ASI_{t} = \alpha_{0} + \alpha_{1}GDP_{t} + \alpha_{2}SMC_{t} + \alpha_{3}STR_{t} + \mu_{t}$ (2)

Where the variables ASI, *GDP*, *SMC* and *STR* are as explained earlier in equation (1). α_0 is the constant term and μ_t is the disturbance term. The parameters αi (i= 1, 2 . . , 5) are the coefficient of the respective variables. To obtain the estimable ARDL model, short run and the long run parameters of equation (2) is specified below in equation (3).

$$\Delta ASI_{t} = \alpha_{0} + \sum_{i=1}^{n1} \alpha_{1} \Delta ASI_{t-i} + \sum_{j=0}^{n2} \alpha_{2} \Delta GDP_{t-j} + \sum_{j=0}^{n3} \alpha_{3} \Delta SMC_{t-j} + \sum_{j=0}^{n4} \alpha_{5} \Delta STR_{t-j} + \beta_{0} ASI_{t-1} + \beta_{1} GDP_{t-1} + \beta_{2} SMC_{t-1} + \beta_{3} STR_{t-1} + u_{t}$$
(3)

Where the differenced variables are the short run estimates of the effect of GDP, SMC, and STR on ASI while the one-time lagged variables are the long run parameters generated by normalizing β_0 on β_1 , β_2 , and β_3 to yield β_1/β_0 for GDP, β_2/β_0 for SMC, and β_3/β_0 for STR. The lag order of the short run estimates denoted by n1 to n4 are determined by the Schwarz information criterion (SIC).

To generate the speed of adjustment process of the ARDL approach, Pesaran et al. (2001) proposed the error correction framework that explain how the deviation from equilibrium is attained. Therefore, the error correction form of equation (3) is stated below as;

$$\Delta ASI_{t} = \alpha_{0} + \sum_{i=1}^{n1} \alpha_{1} \Delta ASI_{t-i} + \sum_{j=0}^{n2} \alpha_{2} \Delta GDP_{t-j} + \sum_{j=0}^{n3} \alpha_{3} \Delta SMC_{t-j} + \sum_{j=0}^{n4} \alpha_{5} \Delta STR_{t-j} + \vartheta ECT_{t-1}$$
(4)

Where ECT_{t-1} represent a one-time lagged error correction term which is expected to be negative, less than one in absolute value, and statistically significant.

Empirical Findings and Discussion of Results

In this section, the results of the effect of economic growth on stock market returns in Nigeria is discussed. Specifically, this section entails the descriptive statistics and unit root testing which is used to determine the order of integration of the series, and finally, the ARDL technique.

Table 1 presented the descriptive statistics for the variables. There is evidence that the mean values of all share index, gross domestic product, stock market capitalization, and stock turnover ratio are positive but all except stock turnover ratio are very large. The minimum and maximum values show that there is variation in the variables over time. Moreover, the standard deviation indicates that except stock turnover ratio, all other variables are highly dispersed from their mean values.

Variables	Mean	Maximum	Minimum	Std. Dev.	Obs
ASI	32290.19	51697.89	20550.60	7987.51	52
GDP	22151.72	43710.86	12583.48	10694.26	52
SMC	5561.82	10639.91	2350.20	2552.72	52
STR	1.72	3.98	0.74	0.80	52

Table	1:	Descriptive	Statistics
-------	----	-------------	------------

Source: Researcher's Computation 2023

Notes: Table 1 shows the mean, maximum, minimum and standard deviation of the variables. The dependent variable is the returns on All Share Index (ASI). The explanatory variables are Gross Domestic Product (GDP), Stock Market Capitalization (SMC), and Stock Turnover Ratio

VOL. 10 NO. 1

(STR). The sample period is from 2010-2022 representing 52 quarterly observations. The estimation process was facilitated using Eviews 12.

Table 2 reported the results of the unit root tests based on the Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) tests. The outcome of the tests revealed that all share index, gross domestic product, and stock market capitalization are not stationary at level but stock turnover ratio is stationary at level. Meanwhile, it was found that all share index, gross domestic product, and stock market capitalization are stationary at first difference. This indicated that there is existence of mixed order of integration among the variables; hence, this motivated the use of the ARDL technique that allows the adoption of variables with level and first difference stationarities.

Variables	ADF	PP	Remarks
ASI	-2.754	-2.140	
ΔASI	-4.736***	-4.694***	I(1)
GDP	-1.965	-2.075	
ΔGDP	-6.513***	-6.750***	I(1)
SMC	-2.552	-1.969	
ΔSMC	-4.772***	-4.904***	I(1)
STR	-3.893**	-3.525**	I(O)
ΔSTR	-3.866**	-4.262***	

Table 2. Results of the Unit Root Tests

Source: Researcher's Computation, 2023.

Notes: Table 2 presents the unit root test. The dependent variable is the returns on All Share Index (ASI). The explanatory variables are Gross Domestic Product (GDP), Stock Market Capitalization (SMC), and Stock Turnover Ratio (STR). The sample period is from 2010-2022 representing 52 quarterly observations. The estimation process was facilitated using Eviews 12. The critical value at 5 for intercept and trend is -3.50 and for intercept alone is -2.93. ** and *** indicates significant at 5 and 1 per cent respectively.

Based on the estimated model in Table 3, the estimated equation is given as

$ASI_t = \alpha_0 + \alpha_1 LGDP_t + \alpha_2 LSMC_t + \alpha_3 STR_t + \varepsilon_t$						
ASI _t = 8.960	+	0.618LGDPt +	0.584LSMCt	+	$0.088STR_t$	
t-test = 5.687		4.605	4.941		2.270	

Bound Test

Using the bound test to ascertain the possibility of long-run relationship, the results show that the bound test statistics of 5.674 is statistically significant at 5 per cent level. This is because the statistics of 5.674 is greater that the critical values of 4.26, 3.5 and 3.13 at 1 percent. This implies that the variables there are possibility of a long-run cointegrating relationship. Based on the possibility of a long-run relationship between the gross domestic product and stock returns, the study then estimates the long-run and the short-run elasticity. The empirical results for the model for the effects of gross domestic product and stock returns, in the short and long run are reported in Table 3.

The Long-Run Dynamics

The estimated long-run coefficients (elasticities) for the UECM model are given in the tables Panel A of Tables 3. In the long run, there is evidence that gross domestic product, stock market capitalization, and stock turnover ratio have positive relationship with stock returns. This implies that increases in gross domestic product, stock market capitalization, and stock turnover ratio would lead to increase in stock returns in Nigeria.

Concerning the magnitude of the parameters, there is evidence that a 1 per cent increase in gross domestic product, stock market capitalization, and stock turnover ratio would lead to 0.618, 0.584, and 0.088 per cent increase in stock returns in Nigeria respectively in the long run.

Furthermore, there is evidence of a long-run significant relationship that gross domestic product, stock market capitalization, and stock turnover ratio with stock returns in Nigeria (LGDP = 0.618, t-test= 4.605, $\rho < 0.05$, LSMC = 0.584, t-test = 4.941, $\rho < 0.05$, and STR = 0.088, t-test= 2.270, $\rho < 0.05$). This implies that gross domestic product, stock market capitalization, and stock turnover ratio were significant factors influencing changes in stock returns in Nigeria.

Short-run Dynamics

The purpose of this section is for two reasons. First, is to examine if changes and the statistical significance experienced in the long run also exist in the short run model. Second, is to examine the degree of adjustment back to equilibrium using the error correction term. The short-run adjustment process is measured by the error correction term ECM_{t-1} and it shows how quickly variables adjust to a shock and return to equilibrium. For stability, the coefficient of ECM_{t-1} should carry the negative sign and be statistically significant.

The result shows that in the short-run gross domestic product and stock turnover ratio have positive and significant relationship with stock returns. This result is in conformity with the results obtained in the long run where gross domestic product and stock turnover ratio were significant factors influencing changes in stock market capitalization. However, for the stock market capitalization there is evidence of a negative and significant relationship with the stock returns.

In addition, the estimated coefficient for the ECM_{t-1} reported in Panel B of 3 is negative and statistically significant (ECM= -0.487, t-test = -5.580, p < 0.05). This implies that deviations from stock returns equilibrium path are corrected by nearly 49 per cent over the following quarter. In other words, the adjustment process is relatively high in Nigeria. The statistical significance of the ECM_{t-1} confirms the presence of long-run equilibrium relationship between gross domestic product and stock returns in Nigeria.

The Adjusted R-square is 0.508; this implies that gross domestic product, stock market capitalization, and stock turnover ratio explains about 51 per cent changes in stock returns, while the remaining 49 per cent were other factors affecting changes in stock returns but were not captured in the model.

To test the hypothesis for objective one, the F-statistics of 19.460 was used and it is statistically significant at 5 per cent level, thus on the overall, the null hypotheses that there is no significant effect of gross domestic product on stock returns in Nigeria was rejected and accept the alternative hypothesis that there is a significant effect of gross domestic product on stock returns in Nigeria.

Post-Estimation test

Five different diagnostic tests were carried out to determine the accuracy and reliability of the parameter estimates and to enable the drawing of reliable conclusions from the data. The serial correlation test, which is used to determine whether the error term may be correlated, is first. The second step is to determine whether the error terms' finite variances are equal. The third test is the normality test, which measures the degree of asymmetry, flatness, and peakedness of the distribution. If the Jarque-Bera test is not significant, normality is assumed. The fourth test is the linearity test, which determines if the model is linearly specified using the Ramsey RESET test. The stability test, which employs the CUSUM and CUSUMSQ, comes in at number five. The plot of the CUSUM and CUSUMSQ statistics must remain within a 5 percent significance threshold, which is represented by two straight lines, for the calculated model to be stable.

From Panel C on Table 3, the F-statistic of 0.269 and a probability value of 77% are greater than the 5% level, indicating that the successive error terms are not serially associated. However, the results do not rule out the null hypothesis that there is no serial correlation in the residuals. According to the study's findings, there was no correlation between the consecutive

error components in the estimated model for gross domestic product and stock returns. There is evidence that the variance of the error terms is homoscedastic because the heteroscedasticity results also show that the F-statistic of 1.815 with a probability value of 10% is not statistically significant at the 5% level of significance. Thus, the error term of the estimated model is homoscedastic.

The Ramsey RESET test for linearity, which has an F-statistics of 1.307 and a probability value of 26% that is higher than the 5 per threshold, is also not statistically significant. Thus, there exist a linear relationship between gross domestic product and stock returns in Nigeria, the results provide proof that the estimated model is linearly and corrected specified. Similar to this, is the Jarque-Bera normality test resulted in an F-statistic of 0.136 and a probability statistic of 93%, which is greater than the threshold of significance of 5%. As a result, the null hypothesis of normality was not rejected. Thus, the error term from the estimated model follows a normal distribution. Additionally, the CUSUM and CUSUMSQ statistics provided in Panel C, as well as Figures 1 and 2, demonstrate the stability of the estimated model because the plot of the CUSUM and CUSUMSQ statistic remains within a 5 percent significant threshold, as shown by two straight lines.

The findings reported in this study corroborated the results reported by previous empirical studies such as Serem et al., (2020) that analysed the relationship between macroeconomic indicators and the stock market prices in the context of Nairobi Securities Exchange using longitudinal research design and engaging monthly secondary data sourced from NSE, KNBS and Central Bank of Kenya for the period 2005 to 2018 and reported evidence of a long-term relationship between variables and the stock market prices. Additionally, exchange rate and nominal GDP was found to be positively and significantly affect stock price in the sampled countries. Similarly, Okeke and Amusa (2020) also examined the effect of macroeconomic variables proxy with inflation rate, unemployment rate, real gross domestic product and balance of payment on stock performance in Nigeria, and reported evidence that balance of payment and real gross domestic product had positive effect on all shares index.

Also, the study of Olokoyo et al. (2020) which employed the VECM analysis found that macroeconomic variables and stock market performance are cointegrated and thus linked in the long run, with interest rate, inflation and trade bearing a negative relationship with stock market performance and exchange rate, while GDP growth rate and foreign capital flows are positively related to stock market performance. In a similar vein, Elhassan and Braima (2020) applied the autoregressive distributed lag (ARDL) bounds test to estimate the impact of the Khartoum Stock Exchange market performance on economic growth of Sudan from 1995Q1 to 2018Q4 employing secondary data from the stock exchange and Central Bank of Sudan. The results show that Khartoum Stock Exchange market performance has a restricted impact on economic growth. Market capitalization has a positive and significant impact on economic growth in the long term, but the turnover ratio and stocks traded value showed insignificant negative impacts on economic growth.

Dependent Variable: ASI						
Panel A: Long -Run Estimates						
Variable	Coefficient	S.E	t-stat	Prob		

С	8.960	1.576	5.687	0.000
LGDP	0.618	0.134	4.605	0.000
LSMC	0.584	0.118	4.941	0.000
STR	0.088	0.039	2.270	0.029
Panel B: Short -Run Estimates				
Variable	Coefficient	S.E	t-stat	Prob
D(LASI(-1))	0.320	0.103	3.115	0.003
D(LGDP)	0.636	0.293	2.174	0.036
D(LSMC)	-0.636	0.245	-2.597	0.013
D(LSMC(-1))	-0.492	0.292	-1.685	0.100
D(STR)	0.121	0.037	3.255	0.002
ECM(-1)	-0.487	0.087	-5.580	0.000
Panel C: Diagnostic Tests		Statistic	Prob.	
Bound Test		5.674	0.000	
Adjusted R-square		0.508		
F-Statistic		19.460	0.000	
Serial Correlation		0.269	0.766	
Heteroscedasticity		1.815	0.102	
Linearity Test		1.307	0.259	
Normality Test		0.136	0.934	
		CUSUM	CUSUMSQ	
Stability Test		Stable	Stable	

Source: Researcher's Computation 2023

Notes: Table 3 reports the long-run estimates, short run estimates and the diagnostic tests for the relationship between gross domestic product and stock returns. The dependent variables is the All Share Index returns (ASI). The explanatory variables are Gross Domestic Product (GDP), Stock Market Capitalization (SMC), and Stock Turnover Ratio (STR)@5% level of significance

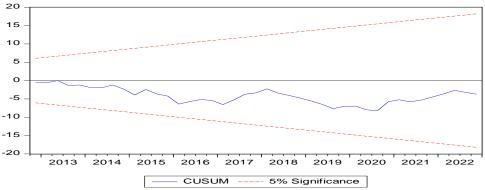


Figure 1: Stability Test - Plots of Cumulative Sum of Residual

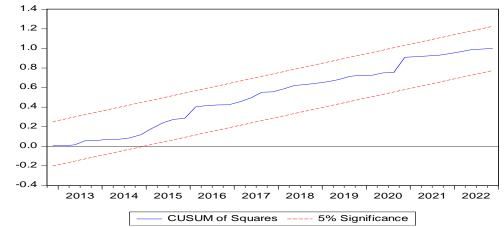


Figure 2: Stability Test - Plots of Cumulative Sum of Square Residual

Conclusion and Recommendation

This study evaluated how economic growth drives stock market returns in the Nigerian Stock Exchange. For this study, secondary time series datasets from the first quarter of 2010 to the last quarter of 2022, amounting to 52 quarterly observations were utilized. This chosen scope is primarily based on the availability of data for the variables of the study. The variables used in this study are All Share Index (ASI) used to calculate the stock market returns, gross domestic product used to proxy economic growth and control variables such as stock market capitalization and stock turnover ratio. The datasets are sourced from the quarterly reports of the Central Bank of Nigeria (CBN), Nigerian Stock Exchange (NSE), and National Bureau of Statistics. The study applied the Autoregressive Distributed Lag (ARDL) to examine the short run and long run impact of economic growth on stock market returns in Nigeria.

The empirical estimation showed evidence that the bound test confirmed the presence of long-run relationship between the gross domestic product and stock returns in Nigeria. In the long run, there is evidence that gross domestic product, stock market capitalization, and stock turnover ratio have positive and significant relationship with stock returns, implying that increases in gross domestic product, stock market capitalization, and stock turnover ratio lead to significant increase in stock returns in Nigeria. The result shows that in the short-run gross domestic product and stock turnover ratio have positive and significant relationship with stock returns. This result is in conformity with the results obtained in the long run where gross domestic product and stock turnover ratio were significant factors influencing changes in stock market capitalization. However, for the stock market capitalization there is evidence of a negative and significant relationship with the stock returns.

Based on the evidence of the study, it is concluded that economic growth positively and significantly drive stock market returns in Nigeria. Hence, it is recommended that Securities and Exchange Commission should improve on governance, transparency, and accountability on the market increase investor confidence through regular review of regulations and promoting best ethical business practices. The government through Ministry of roads and housing prioritize infrastructure development, such as roads,

electricity, and water supply, to reduce cost of doing business, improve business productivity and efficiency. Export promotion council to venture more into non-oil exports promotion to boost our exports volume and value which is will attract more foreign direct investment, leading to increased GDP and stock returns.

References

- Abdullahi, I. B., & Fakunmoju, S. K. (2019). Market Liquidity and Stock Return in the Nigerian Stock Exchange Market. *Binus Business Review, 10*(2), 87-94. <u>https://doi.org/10.21512/bbr.v10i2.5588</u>
- Adesanya, B. M., Adediji, A. M. & Okenna, N. P. (2020) Stock exchange market activities and Economic Development: Evidence from the Nigerian economy. *Bingham Journal of Economics and Allied Studies (BJEAS) Vol. 4* No. 2, 1-19
- Adeyefa, F.A. (2022). Financial Sector Liberalisation and Capital Market Growth in Nigeria. International Journal of Research and Innovation in Social Science (IJRISS) /Volume VI, Issue VIII, www.rsisinternational.org
- Akintola, A. F. & Cole, A.A. (2020). Capital Market and Economic Growth in Nigeria (1984-2015) *Journal of Humanities and Social Science Volume 25*, Issue 4, DOI: 10.9790/0837-2504063846 <u>www.iosrjournals.org</u>
- Alam, I., Mohsm, M., Latif, K. & Zia-ur- Rehman, M. (2020) The impact of macroeconomic factors on stock market, An evidence from China and Pakistan. *NICE Research Journal, Vol.13* No.2
- Aremo, A.G., Olabisi, O.E & Adeboye O.O. (2020) Effect of Selected Macroeconomic Variables on Stock Market Returns in Nigeria. Asian Journal of Economics, Business and Accounting 16(3)56-70
- Ayeni, E. & Fanibuyan, O. (2022). The dynamics of uncertainty, macroeconomic variables, and capital market performance: A case study of Nigeria. *Research in Globalization*, 5,100107, https://doi.org/10.1016/j.resglo.2022.100107
- Danso, E.I (2020) Assessing the impact of macroeconomic variables on the performance of the US stock market. *Research Journal of Finance and Accounting Vol.11*, No.14. DOI: <u>10.7176/RJFA/11-14-08</u>
- Duda, A. (2021). A study of interlinkage between Stock Market and GDP growth. *European Journal of Molecular & Clinical Medicine*, 7(10), 3860-3866.
- Elgiziry, K. A. M. & Awad, M. M. (2017). Test of the arbitrage pricing theory in the Egyptian Stock Exchange, Journal of Behavioural Economics, Finance, Entrepreneurship, Accounting and Transport, 5(1), 30-38.
- Elhassan, T. & Braima, B. (2020). Impact of Khartoum Stock Exchange Market Performance on Economic Growth: An Autoregressive Distributed Lag ARDL Bounds Testing Model. *Economies*, 8(4), 86. MDPI AG. Retrieved from http://dx.doi.org/10.3390/economies8040086

- Elshqirat, M. K. (2019). An empirical examination of the arbitrage pricing theory: Evidence from Jordan. *Journal of Studies in Social Sciences, 18*(2), *46-67.*
- Etale, L.M. & Eze P.G. (2019). Analyzing stock market reaction to macroeconomic variables: Evidence from Nigerian stock exchange (NSE). *Global Journal of Arts, Humanities and Social Sciences, 7*(3), 14-28.
- Ezenduka, V. G., & Joseph, E. M. (2020). Stock market performance and economic growth in Nigeria (1985–2018). *International Journal of Accounting Research*, *5*(4), 143-168.
- Gbadamosi I.I., Ayoola F.J., Adeosun O.T. (2022), Crude Oil Price and Macroeconomic Variables Nexus: Impact on Nigeria's Economic Growth. *African Journal of Mathematics and Statistics Studies 5*(3), 126-141. DOI: 10.52589/AJMSSGWHHVFP
- Hammed, Y. S. & Okunoye A. I. (2023) Foreign Capital and Macroeconomic Variables: fresh evidence. *African Journal of Economic Review, Volume 11* (1).
- Islam, K. M. Z. Akter, Y. & Alam, M.N., (2020) Macroeconomic variables and stock returns in Bangladesh: An empirical analysis in the presence of structural break. <u>Journal of</u> <u>Economic Development</u>, Chung-Ang Unviersity, Department of Economics, vol. 45(2), pages 115-141.
- Kahuthu, L. W. (2017). The effect of stock market liquidity on stock returns of companies listed on Nairobi securities exchange (Thesis), 2017. Strathmore University
- Obadiaru, E. D., Obasaju, B. O., Omankhanlen, A. E. & Eyiolorunshe, D. T. (2020). Dynamic links between the Nigerian equity market and those of selected regional and developed countries. *Heliyon*, 6(9), e04782. https://doi.org/10.1016/j.heliyon.2020.e04782
- Ogbebor, P. I., Okolie, O. R.& Siyanbola T. T.(2020) Market opening and economic growth in Nigeria *Journal of Economics and International Finance Vol.* 12(1), pp. 20-28, DOI: 10.5897/JEIF2019.1019
- Okereke, I.G. & Amusa, B.O. (2020). Macroeconomic variables and stock performance in Nigeria: Evidence from Vector Error Correction Model. *International Journal of Innovative Science and Research Technology*, 5(12), 1239-1248
- Okoebor, S. E. (2022). Effects of macroeconomic variables on stock market performance in Nigeria: 1986 – 2020. African Journal of Social and Behavioural Sciences, 12(1). Retrieved
 from https://journals.aphriapub.com/index.php/AJSBS/article/view/1496
- Olokoyo, F.O., Ibhagui O.W. & Babajide, A. (2020).Macroeconomic indicators and capital market performance: Are the links sustainable? *Cogent Business & Management*, 7 :(1) 1792258, DOI: 10.1080/23311975.2020.1792258
- Omar, A. B., Ali A, Mouneer, S., Kouser, R., Al-Faryan, M.A.S (2022). Is stock market development sensitive to macroeconomic indicators? A fresh evidence using ARDL bounds testing approach. *PLoS ONE 17*(10): e0275708. <u>https://doi.org/10.1371/journal.pone.0275708</u>

- Omodero, C.O., Adetula, D., & Adeyemo, K.A. (2021). Stock Market Reaction to Monetary Policy Modifications: Evidence from an Emergent Market. *Academic Journal of Interdisciplinary Studies*, 10, 59-59.
- Onyekwelu, O.V. (2022) Selected macroeconomic variables and performance of deposit money banks in Nigeria International Journal of Innovative Finance and Economics Research 10(2):81-89
- Parker, J.A. (2011). On measuring the effect of fiscal policy in recessions. *Journal of Economic Literature* 49(3), 703-718. http://www.jstor.org/stable/23071728
- Pesaran, M. H., Shin, Y., & Smith, R. J. (2001). Bounds testing approaches to the analysis of level relationships. *Journal of applied econometrics*, *16*(3), 289-326.
- Serem, C.K., Saina, E. & Serem, A. (2020) Cointegrating Relationship between Macroeconomic Variables and Stock Market Prices in Nairobi Securities Exchange . Journal of Global Economy, Volume 8:2, DOI: 10.37421/economics.2020.8.345
- Stanley O.K., Kingsley,I. E., Uju, A.F. & Gloria I.A. (2022) Global crisis (financial) and the Nigerian. Economy during period of 2001-2022 *Asian Journal of Economics, Finance and Management 8*(1): 34-44.