

Macroeconomic Variables and Share Price Movement: A Study of Listed Deposit Money Bank in Nigeria

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ABSTRACT

This study was carried out to investigate the relationship between macroeconomic variables and share price movement in the Nigerian Banking sector within the periods from 2007 to 2021. Three macroeconomic variables were chosen as the independent indices; including the exchange rate, inflation rate, and interest rate. The dependent variable was actual closing share prices of Nigerian banks on the 17th day of February, May, August and November of each year. Information from the annual time series covering the period between 2007 and 2021 was used. The analysis started with examining the characteristics of each time series by testing their normality and correlation. The result of the data analysis using Panel Least Squares regression on e-views 10 shows that only inflation rate is significant in determining the movement of share prices of the deposit money banks in Nigeria during the period covered by the study. On the other hand, interest rate and exchange rate returned an insignificant result which implies that they cannot be used to explain variations in share price movement in the banking sector of Nigeria. Based on these findings, the study recommends that there is need to promote domestic production and diversification of the economy so as to control inflation, while further studies may focus on finding out more relevant macroeconomic variables that affect share price movement of Nigerian banks.

Keywords: *Interest Rate, Inflation Rate, Exchange Rate, Banking Sector and Share Price.*

1.1. Introduction

Share price movement is a significant part of every stock market, and is an indication of the extent to which the market is active. Shares whose prices remain static over a period of time are regarded as dormant stocks and this reflects the perception held towards the issuer of the shares by the participating general public. Share prices can move either downwards or upwards depending on the forces driving the shift at any point in point. With an active market, investors can either gain or lose substantial proportions of their investment within a couple of minutes due to sudden price movements, which are determined by a number of factors ranging from market sentiments to macroeconomic variables. These factors transmit into the share prices through the mechanism of price

discovery which is based on the economic theory of demand and supply (NGX Factbook, 2021).

Macroeconomic variables are the indices and figures generated from the day-to-day business transactions at the macro business levels, are collated, summarized and stored by the relevant authorities (Musa & Ibrahim, 2014). The variables are veritable pictures of the volume and characteristic of the business transactions in the system and how they emanate. These variables comprise interest rate, exchange rates, inflation rates, money supply and gross domestic product.

This study was based on the apriori expectation that macroeconomic variables affect the share price movement in the Nigerian banking

sector. The variables of interest in this work are exchange rate, interest rate and inflation rate.

Exchange rate is the value of one currency in terms of a unit of another currency. It is the purchasing power of a nation's currency when compared with the currency of another nation. Interest rates are the direct costs of borrowing money, otherwise known as the cost of capital and they impact on the solvency of individuals. An increase in interest rates means higher loan installments amounts to be paid by borrowers. Generally, interest rates become higher during a period of high inflation, high demand for business/consumable loans, strict monetary policy, or due to higher reserve requirements for deposit money banks. Inflation is an indicator of price stability and it affects the solvency of individuals and the corporate entities. High inflation rate affects the real value of money thereby diminishing the purchasing power. In periods of rising prices, people find it difficult to meet their daily consumption needs as a result of the decline in the purchasing power of money in their hands (Inyiama & Nwoha, 2014).

The relationship between macroeconomic variables and stock market behavior has drawn substantial research attention. Fama (1965), Chen, Roll and Ross (1986), Binswanga (2000), and Acikalin, Aktas and Unal (2008) were among the early works. Further, Musa and Ibrahim (2014), Asekome and Agbonkhese (2015), and Lawal, Somoye, Babajide and Nwanji (2018) all concluded that the stock market volatility is sensitive to changes in the selected macroeconomic variables. On the contrary, Udoka, Nya and Bassey (2018), Omodero and Mlanga (2019), and John (2019) established that macroeconomic variables cannot be used to determine share price movement. The divergence in research findings call for further examination on this subject.

The objective of this study is to investigate if interest rate, inflation rate and exchange rate affect movement in the prices of banks listed on the Nigerian Exchange, between 2007 and 2021. The rest of this paper is arranged as follows: section 2 contains the review of literature and the methodology is explained in section 3. Data analysis and results are presented in section 4, while section 5 presents the conclusion and recommendations.

2.0 Literature Review

This section discusses the conceptual framework, empirical as well as theoretical reviews for the study.

Conceptual Framework

Before carrying out the model estimation, detailed literature was reviewed conceptually, empirically and theoretically. The concepts of share price, exchange rate, interest rate and inflation rate were reviewed.

Share Price: Share price is simply the value or worth of a unit of shares of an entity on a particular date. Determination of Share price for listed entities is simply obtained from the Daily Official List of the relevant Exchange where the Company is listed. Share price refers to the present value or current market price of shares rather than the nominal book value at which the shares are registered at the Corporate Affairs Commission. According to Udenwa and Uwaleke (2015), the current market price is the price at which the last deal was done at the Stock Exchange on a particular trading day, while the public quotation price is the nominal value per share into which the company have divided its total shares and useful mainly for accounting balance sheet purposes. Udoka, Nya and Bassey (2018) examined the influence of gross domestic product, exchange rate, interest rate and inflation rate on average stock price.

The work by Chen, Roll and Ross (1986) conceptualized on impact of macroeconomic indices on the stock market behavior by testing the effect of movement in selected variables on expected dividends, discount rates and stock prices. Similarly, Fama (1981) confirmed that a long run association exists between macroeconomic variables and stock market in United States of America. This work follows the same pattern with the expectation that interest rate, inflation rate and gross domestic product can have significant effects on movement in the general price of equities shares with particular reference on the Nigerian banking sector.

Interest Rate: Interest rates are the direct costs of borrowing money, otherwise known as the cost of capital. Put in a simple way, interest rate is an amount charged or paid for the use of money and is always expressed in annual percentage terms. It is calculated by dividing the amount of interest by the amount of principal. Lawal et al (2018) argued that one of the transmission mechanisms of the government's monetary policy to the capital market is through the 'interest rate channel'. This means that increase in interest rate will lead to increase in a Company's cost of capital thereby altering its present value of future cash flows and transmit into lower stock prices. They added that upward shifts in interest rate limits the level of a Company's investment which in turn reduces the present value of its future cash flows; reduce its wealth and capital formation, thereby transmitting to a fall in its share price.

Inflation Rate: Inflation is an indicator of price stability. Inflation rate affects the purchasing power of individuals, families, companies and economies. In periods of high prices of goods and services, people find it difficult to meet their daily consumption needs as a result of the decline in the purchasing power of money in their hands. Olofin (2001)

stated that inflation means a persistent rise in the general level of prices of goods and services. Chen et al. (1986) argued that the relevant macroeconomic variables that affect transactions in the stock market are aggregate production, inflation, short-term interest rates, the maturity risk premium and default risk premium. Two basic causes of inflation exist in economic literature viz: Demand-Pull inflation and Cost-Push Inflation. Chen et al (1986) listed inflation among the determinants of stock market transaction levels.

Exchange rate is known as the worth of one currency in terms of a unit of another currency. It can also be explained to mean the real purchasing power of one country's currency when compared with the currency of another nation. Adegbite (2007) defined exchange rates as a means of effecting trade and capital flows across international borders.

Empirical Review

Inyiama and Nwoha (2014) examined the relationship between macroeconomic variables and the movement of share prices in Nigeria brewery industry, with emphasis on Nigeria Breweries Plc. Between 2000-2012, Nigerian Breweries Plc share price was the dependent variable while the explanatory variables are exchange rate, interest rate and inflation rate. The ordinary least squares result indicated an insignificant relationship for all the variables. The test was not robust enough because based on the R-Squared, only 13% of the variations in share price could be explained by the independent variables.

Asekome and Agbonkhese (2015) conducted a study aimed at examining the variables that contributed to the Nigerian Stock Market bubble, its consequent melt-down and gradual recovery during the period between 2007 – 2013. The work relied on Ordinary Least Square (OLS) regression technique adopting five different variables: gross domestic

product, broad money supply, exchange rate, capacity utilization and inflation as proxy for the independent variables; while the dependent variable is represented by All Share Index as proxy. Based on the results, only Gross Domestic Product and broad money supply were significant, hence exchange rate, capacity utilization and inflation rate were insignificant. The paper observed that some government policies contributed to the gradual recovery witnessed in the stock market after the melt-down.

Okoro (2017) investigated the effect of selected macroeconomic proxies on Nigeria all-share index using the ordinary least squares and spanning the years 1986-2015. Non of the variables (gross domestic product, money supply, interest rate, inflation rate and exchange rate) proved to exert any effect on the dependent variable as they all returned as insignificant coefficients.

In India, Kedia and Vashisht (2017) examined the relationship between the Bombay Stock Exchange Index as the regress and while inflation rate, interest rate and exchange rate were used as the regressors between 2005 – 2014. The analysis was conducted through multiple ordinary least squares regression estimation. There was no proof of a strong relationship between the dependent and independent variables which were interpreted to mean that changes in interest rate, inflation rate and exchange rate does not affect movement in Bombay Stock Exchange Index.

Mbah, Okoli and Amassoma (2017) investigated the impact of macroeconomic variables on stock price movements in Nigeria using VAR model and granger causality tests to analyse the long run and short run dynamics of stock price movement and the macroeconomic variables with time series data spanning from 1981 – 2014. The study tested the hypothesis that: Macroeconomic variables

(exchange rate, interest rate, inflation rate, industrial production index, broad money supply and gross domestic product) does not granger cause all share index. The Johansen cointegration revealed a long run equilibrium relationship between all share index and the explanatory variables. The Granger causality test revealed a uni-directional causality running from exchange rate, industrial production index, real Gross Domestic Product to all share index and from all share index to broad money supply respectively, but there is nocauality running from interest rate and inflation rate to all share index.

John (2018) modelled the effect of money supply, interest rate, exchange rate and inflation rate on Nigerian stock market capitalization using annual time series data from 1981 to 2016. The ex-post facto research design was conducted by Augmented Dickey-Fuller (ADF) and Ordinary Least Squares (OLS) tests and found that money supply has a significant positive effect; interest rate has a significant negative effect; whereas, exchange rate and inflation rate have no statistically significant effect on stock market performance in Nigeria.

Udoka, Nya and Bassey (2018) examined the influence of Gross Domestic Product, exchange rate, interest rate and inflation rate on average stock price using the augmented dickey fuller unit root test and autoregressive distributed lag models in testing secondary data covering between 1986 and 2014. The study model revealed no long run relationship between the explanatory and explained variables, and therefore suggested policies that will promote capital market investment in the country.

Omodero and Mlanga (2019) investigated the macroeconomic determinants of Nigeria stock market performance using annual time series data in an ex-post facto study covering a period

from 2009 to 2018. The results from the Ordinary Least Squares (OLS) regression analysis indicated that exchange rate and interest rate do not have significant effect on all share price index. On the other hand, inflation (negative) and gross domestic product (positive) were found to be the determining factors in this circumstance.

Akinmulegun (2018) measured the impact of capital market development (indexed by market capitalization, all share index, gross domestic product, exchange rate and interest rate) on foreign portfolio investment (FPI) in Nigeria between and including the years 1985 and 2016. The study methodology was *ex-post-facto* while the estimation method was the Vector Error Correction Mechanism (VECM) and Granger Causality tests. Though the Granger causality test revealed the absence of causality between the variables, the study concluded that capital market significantly determines FPI inflow in Nigeria because the VECM produced significant coefficients for market capitalization and all share index.

Kolapo, Oke and Olaniyan (2018) unraveled the impact of six macroeconomic fundamentals on all share index in Nigeria between 1986 – 2015. The macroeconomic fundamentals used as explanatory proxies were gross domestic product, money supply, interest rate, inflation rate and exchange rate. The study hypothesized that there is no significant relationship between macroeconomic fundamentals and stock market performance in Nigeria. Autoregressive distributed lag model was used to test secondary time series data under the *ex-post fact* research design. Only gross domestic product and money supply were found to significantly affect stock market performance, but the cointegration analysis showed presence of a long run association between the explanatory variables and all share index. It was recommended that government should make policies aimed at reducing

poverty and unemployment rates while promoting capital formulation.

Assagaf, Murwaningsari, Gunawan and Mayangsari (2019) tested the effect of macroeconomic variables on the Indonesian stock market returns over the period November 2016 – June 2018. The study regressed inflation rates, interest rates, money supply, and foreign exchange rates on the Indonesian composite stock price index being the proxy for the stock market returns through the method of ordinary least squares (OLS). All the explanatory indices returned significant coefficients and this made the authors to recommend that similar research should be done with an extended period of time of up to 5 to 10 years timeframe to make the test more robust.

Mahmah and Kandil (2019) explored the impact of oil price variations on fiscal consolidation in the United Arab Emirates (UAE) between 1980 – 2015 adopting Ordinary Least Squares technique. The dependent variables comprised bank's liquidity, domestic credit, foreign direct investment and non-oil GDP growth. The work proved that oil price movements significantly affect bank's liquidity, domestic credit and foreign direct investment. However, its effect on non-oil GDP growth was insignificant.

Agu, Ogu and Ezeanyej (2019) modelled an Ordinary Least Squares (OLS) and Autoregressive Distributed Lag (ARDL) to measure implications of movement in Foreign Portfolio Investment (FPI), exchange rate and interest rates on Stock Market Returns (proxied by market capitalization) in Nigeria between 1986 and 2017. Based on the test output, exchange rate and FPI were significantly positive while the coefficient of interest rate was insignificant and negative.

Olaolu and Nwankpa (2021) conducted a research titled macroeconomic variables and stock market movement in Nigeria. The objective was to examine the impact of five selected macroeconomic variables (exchange rate, interest rate, inflation rate, crude oil price and foreign portfolio investment) on stock market capitalization in Nigeria from 1988 to 2019. The study was ex-post facto in design and used secondary data. The bounds cointegration test showed that the variables have long-run equilibrium among themselves.

In conclusion of the empirical review, all the works reviewed are different in terms of their methodology, nature of data, location, timeframe and findings. Inyama and Nwoha (2015) studied the effect of macroeconomic variables on share price movement in the Nigerian brewery industry. Udoka, Nya and Bassey (2018) used average share price as dependent variable for a study on the effect of macroeconomic variables on share price movement of the entire listed stocks. Agu, Ogu and Ezeanyej (2019) modeled an Autoregressive Distributed Lag (ARDL) to measure the implications of movement in selected variables on Stock Market Returns (proxied by market capitalization) in Nigeria between 1986 and 2017. This study is peculiar because: it focused on the banking sector; it used quarterly data for a period of 15 years, while testing actual share prices of Nigerian Banks and macroeconomic variable figures on the 17th day of February, May, August and November in each year. Also it used Panel regression and the work is current as it captured data up to the first quarter of the year 2021.

Theoretical Framework

This section is focused on discussing the economic theory relevant to the topic. Here, the theory which underpins the study is presented.

The Arbitrage Pricing Theory (APT) has been proved empirically as an effective way of linking macroeconomic variables and stock market behavior. Under the APT, multiple risk factors can be used to describe the features of stock values (Ross, 1976). The emergence of APT in finance literature was necessitated as result of the fact that the Capital Asset Pricing Model (CAPM) which preceded it assumes the existence of only one risk factor which is not realistic.

Nkechukwu, Onyeagba and Oko (2015) used APT model and explained that the model is premised on a multi-factor assumption where investors are likely to leverage on arbitrage opportunities in the stock market. Therefore, the return on an asset is measured as the opportunity cost of return on other assets while giving due consideration to several other risk elements. The Arbitrage Price Theory (APT) have been adopted for this study. The justification of the choice is because the APT can conveniently be used to examine the study conceptual framework. Under this research, the multi risk factors of the APT have been proxied by the three macroeconomic variables which are expected to affect the movement of stock market activities in Nigeria. The variables are exchange rate, interest rate and inflation rate. The left side of the APT equation was proxied by the share prices while the right hand side was proxied by the interest rate, exchange rate and inflation rate. Many studies have been based on the APT, including those of Kuwornu and Owusu-Nantwi (2011), Adu (2012), Carino et al (2013), Tripathy and Kumar (2015), Islam and Habib (2016), Worlu and Omodero (2017), Kolapo et al (2018), Ditimi et al (2018), Adesanmi (2018), John (2019), and Olaolu and Nwankpa (2021).

3.0. Methodology

This study adopted ex-post facto research design which fits well to address the study objective; The population comprised all the

eleven deposit money banks listed on the floor of Nigerian Exchange Limited. Sampling was not needed because the required data was extracted with ease on aggregate basis from the reliable database, covering the 15 years period from 2006 – 2020.

The sources of data were the Central Bank of Nigeria (CBN) 2020 Statistical Bulletin which was obtained from CBN website. Similarly, information was sourced from the Nigerian Exchange (NGX) database and Factbooks. The data were subjected to tests for normality, descriptive statistics and correlation. After the preliminary tests, the random effects Panel regression test was conducted to determine the nature of relationships between the variables.

E-views 10 software was used to run the analysis.

The model for this study was stated as follows:

$$CSP = F (INT, INF, EXR).....(1)$$

The model is stated econometrically as;

$$CSP_{it} = \beta_0 + \beta_1 INT_{it} + \beta_2 INF_{it} + \beta_3 EXR_{it} + \varepsilon_t$$

Where;

CSP_t = Closing Share Price of Nigerian Banks listed on the Nigerian Exchange at time t

INT_t = Interest Rate at time t

INF_t = Inflation Rate at time t

EXR_t = Exchange Rate of Naira to the United States Dollar at time t

ε = error term

β_0 = Intercept of the regression line

β_1 - β_3 = Coefficient of the independent variables

Table 3.1: Variable Measurement

Variable	Notation	Nature of Data	Measurement	Sources
Share Price	SP	Dependent Variable	The Closing Share Price of Banks that are traded on the floor of the Nigerian Exchange on the 17 th february/May/August/November each year.	Nigerian Exchange Factbook 2021
Interest Rate	INT	Independent Variable	Cost of borrowing money proxied by the weighted average lending(Prime) rate of deposit money banks in February/May/August/November each year.	Central Bank of Nigeria Statistical Bulletin 2021
Inflation Rate	INF	Independent Variable	Consumer Price Index Inflation represented by the 12-month average inflation rate as at the months February/May/August/November in each year.	Central Bank of Nigeria Statistical Bulletin 2021
Exchange Rate	EXR	Independent Variable	Exchange rate of Nigerian Naira to the United States Dollars on the 17 th of February/May/August/November of each year.	Central Bank of Nigeria Statistical Bulletin 2021

Source: Field Survey, October 2021.

4.0. Data Analysis and Results

Table 4.1: Panel Least Squares Regression Result

Variable	Coefficient	Std. Error	t-Statistic	Probability
C	33.94168	9.751272	3.480743	0.0005
EXCHANGE_RATE	-0.005139	0.014153	-0.363126	0.7166

INFLATION_RATE	-1.935276	0.358623	-5.396402	0.0000
INTEREST_RATE	0.066321	0.581120	0.114126	0.9092
R-squared	0.318846			
Adjusted R-squared	0.303393			
Durbin-Watson Statistic	1.215158			
F-Statistics	4.9267			
Prob (F-Statistics)	0.0000			

Source: Authors Computation from E-Views Software, October 2021 (Eview-10)

The analysis shows that a one Naira increase in exchange rate leads to reduction of share prices by 0.005 kobo, an increase of 1% in inflation rate results to a decline N1.93 in share prices, while an increase of 1% in interest rate leads to an increase of 0.07 kobo in the share prices of Nigerian banks during the period under study from January 2007 to March 2021. The constant term in the regression equation returned a value of 33.94. With this result, the line of best fit for predicting the future share prices of banks in Nigeria is stated as follows: $Share\ Price = 33.94 - 0.01EXR - 1.94INF + 0.07INT$. The analysis shows that the R-squared measured as the coefficient of determination is 0.3188 which implies that 31.88% of the total variations in Nigeria banks share price is represented by the explanatory variables which are EXR, INF, and INT, while the remaining 68.12% accounts for the changes in the dependent variables, which were not included in the equation.

Statistical Test of Hypothesis

The test of the three hypotheses of this study was done as stated below.

Hypothesis One (H₀₁): There is no significant relationship between interest rate and Share prices of Nigerian Banks. The empirical result shows that there is an insignificant positive effect of interest rate on banking sector share price movement in Nigeria. The result in table 4.1 above clearly showed that the p-value of ($P = 0.909$; $\beta =$, $t =$) fell outside the acceptable region of 5% level of significance. Hence the null hypothesis of “no significant relationship” was not rejected. The interpretation of this

result is that whatever impact which interest rate exerts on Nigerian Banks share price is inconsequential and does not really matter. Focus should therefore be on other more important variables instead of interest rate. This finding is in agreement with the works of Okoro (2017) and of Akwe, Garba and Dang (2018) where interest rate was found to be insignificant in affecting share prices in Nigeria.

Hypothesis Two (H₀₂): There is no significant relationship between inflation rate and Nigerian banks share price movement. The empirical result shows that there is a significant negative effect of inflation rate on banking sector share price movement in Nigeria. Considering the result output in table 4.1, the p-value of 0.0000 ($P = 0.000$; $\beta =$, $t =$) is comfortably sitting within the rejoin of acceptable error of 5% level of significance and shows the level of importance of the effect of inflation rate on banking sector shares movement in Nigeria. Hence, this study rejected the null hypothesis of no significance. This implies that share prices of banks in Nigeria decreases with increase in inflation rate. The explanation for this is that a rise in inflation rate raises the living cost and shifts productive resources from investments to consumption. This gives rise to a reduction in demand for financial instruments (particularly, ordinary shares), which in turn brings about decrease in the share prices due to the interplay of demand-supply forces. The result is in agreement with theoretical prediction and

empirical findings of Akwe et al (2018), and Udoka et al (2018).

Hypothesis Three (H₀₃): There is no significant relationship between exchange rate and Nigerian Banking sector share price movement. The empirical result shows that there is an insignificant negative effect of exchange rate on banking sector share price movement in Nigeria. The result output in table 4.1 indicates that the p-value of 0.7166 ($P = 0.717$; $\beta = , t =$) is outside the acceptable 5% level of significance. Hence, this study could not reject the null hypothesis. This result implies that the effect of exchange rate on Nigerian Banks share price is not important in this study. Focus should therefore be on other important variables instead of exchange rate. The result is contrary to Hasanzadeh and Kianvand (2012) in which stock prices showed significantly negative relationship with nominal effective exchange rate in Tehran. It however aligns with the result of Okoro (2017).

5.0. Conclusion and Recommendations

This study was conducted to test the relationship between selected macroeconomic variables and share prices of banks in Nigeria. The findings showed that inflation rate have significant effect on the Nigerian banking sector share price movement, while exchange rate and interest rate returned insignificant coefficients. The panel regression showed that 31.88% of the total variations in Nigeria banking sector share prices is represented by the explanatory variables which are INT, INF and EXR, while the remaining 68.12% accounts for the changes in the dependent variable which were not included in the equation.

On the basis of the findings above, the study made the following recommendations:

- i. The Investment advisers and investors in the Nigeria stock market may

consider to take note of the systematic risks revealed by inflation when structuring portfolios and diversification strategies.

- ii. The CBN should consider policies that will lead to a sustainable exchange rate in the country. For instance, encouraging domestic production of goods and services and diversification of the nation's sources of foreign revenue will boost the economy of the country and strengthen the local currency thereby making the banks shares more reliable and more driven by true company fundamentals.
- iii. The Central Bank of Nigeria should continue to pay particular attention to interest rate stability as one of the key macroeconomic objectives as this will help reduce the cost of borrowing by quoted companies in Nigeria. The reduction in the domestic interest rate can increase corporate profitability and enhance share prices.

Suggestion for future research

Future empirical investigations by other researchers may consider models aimed at finding out other macroeconomic variables such as money supply, that may impact significantly on share price movement in the banking sector in Nigeria.

References

- Acikalin, S., Aktas, R., &Unal, S. (2008). Relationships between stock markets and macroeconomic variables: An empirical analysis of the Istanbul stock exchange. *Investment Management and Financial Innovations*, 5(1), 8-16.
- Adegbite, E. O. (2007). *Essentials of Money and Banking*. Lagos, Nigeria: Chumek Ventures Publishers.

- Adesanmi, A. A. (2018). The impact of national and global macroeconomic factors on emerging stock markets: A multi-statistical analysis of the mint countries. *Thesis Submitted to London School of Commerce and Cardiff Metropolitan University in Partial Fulfillment of the Requirements for the Degree of Doctor of Philosophy*.
- Adu, D. A. (2012). Effect of macroeconomic variables on stock market return in Ghana: An analysis using arbitrage pricing model. *A Thesis to the Institute of Distance Learning, Kwame Nkrumah University of Science and Technology, in Partial Fulfillment of the Requirement for the Degree of Commonwealth Executive Master of Business Administration*.
- Agu, A. O., Ogu, C., & Ezeanyej, C. I. (2019). Foreign portfolio investment and stock market returns in Nigeria. *IOSR Journal of Economics and Finance*, 10(6), 1-9.
- Akinmulegun, S. O. (2018). Capital Market development and foreign portfolio investment inflow in Nigeria (1985–2016). *Advances in Economics and Business*, 6(5), 299-307.
- Akwe, J. A., Garba, S. B. & Dang, Y. D. (2018). Effects of macroeconomic factors on stock returns in Nigeria. *International Journal of Finance and Accounting*, ISSN 2513-4311X (online), www.iprjb.org, 3(1), 66-82.
- Asekome, M. O., & Agbonkhese, A. O. (2015). Macroeconomic variables, stock market bubble, meltdown and recovery: Evidence from Nigeria. *Journal of Finance and Bank Management*, 3(2), 25-34.
- Assagaf, A., Murwaningsari, E., Gunawan, J., & Mayangsari, S. (2019). The effect of macroeconomic variables on stock return of companies that listed in stock exchange: Empirical evidence from Indonesia. *International Journal of Business and Management*, 14(8), 108-116.
- Binswanger, M. (2000). Stock market booms and real economic activity: Is this time different? *International Review of Economics and Finance*, 9(2000), 387-415.
- Carino, C. J. F., Ong, C. K. C., & Orbeta, M. C. G. (2013). Philippines: Time series analysis of stock market returns and their macroeconomic impacts for Years 2002 through 2011. *A Paper Presented to Dr. Cesar C. Rufino and Submitted to School of Economics, De La Salle University – Manila, In Partial Fulfillment of ECOMET 2 Course Requirement*, 1-7.
- CBN (2020). *Central Bank of Nigeria Statistical Bulletin, 2019*. Retrieved from <https://www.cbn.gov.ng/documents/Statabulletin.asp>
- Chen, N., Roll, R., & Ross, S. A. (1986). Economic forces and the stock market. *The Journal of Business*, 59(3), 383-403.
- Ditimi, S., Sunday, K., & Emma-Ebere, O. (2018). Dynamic interrelationship between macroeconomic fundamentals and stock prices in Nigeria. *Journal of Finance and Marketing*, 2(1), 50-59.

- Fama, E. F. (1965). The behaviour of stock market prices. *The Journal of Business*, 38(1), 34-105.
- Fama, E. F. (1981). Stock returns, real activity, inflation and money. *The American Economic Review*, 71(4), 545-565.
- Gumus, G. K., Duru, A., &Gungor, B. (2013). The relationship between foreign portfolio investment and macroeconomic variables. *European Scientific Journal*, 9(34), 209-226.
- Inyiama, O. I., & Nwoha, C. (2014). Macroeconomic variables and share price movements in Nigeria brewery industry: Evidence from Nigerian breweries plc. *European Journal of Accounting, Auditing and Finance Research*, 2(5), 19-32.
- Islam, K. U., & Habib, M. (2016). Do macroeconomic variables impact the Indian stock market? *Journal of Commerce &Accounting Research*, 5(3), 10-17.
- John, E. I. (2018). Macroeconomic determinants of stock market performance in Nigeria: An econometric approach. *Indonesian Journal of Applied Business and Economic Research*, 1(1), 47-58.
- John, E. I. (2019). Effect of macroeconomic variables on stock market performance in Nigeria. *Journal of Economics, Management and Trade*, 22(6), 1-14.
- Kedia, N., &Vashisht, A. (2017). An empirical study of relationship between Indian stock market and inflation, interest rates and exchange rate. *GE-International Journal of Management Research*, 5(4), 83-91.
- Kolapo, F. T., Oke, M. O., & Olaniyan, T. O. (2018). Unravelling the impact of macroeconomic fundamentals on stock market performance in Nigeria: An ardl-bound testing approach. *Journal of Economics, Management and Trade*, 21(3), 1-15.
- Kuwornu, J. K. M., &Owusu-Nantwi, V. (2011). Macroeconomic variables and stock Market returns: Full information maximum likelihood estimation. *Research Journal of Finance and Accounting*, 2(4), 49-63.
- Lambe, I. (2015) Assessing the Impact of Exchange Rate Risk on Banks Performance in Nigeria. *Journal of Economics and Sustainable Development*, www.iiste.org, ISSN 2222-1700 (Paper) ISSN 2222-2855 (Online) Vol.6, No.6, 2015.
- Lawal, A. I., Somoye, R. O., Babajide, A. A., &Nwanji, T. I. (2018). The effect of fiscal and monetary policies on stock market performance: Evidence from Nigeria. *Future Business Journal*, 5(2018), 16-33.
- Mahmah, A. E., &Kandil, M. E. (2019). The balance between fiscal consolidation and non-oil growth: The case of the UAE. *Borsa Istanbul Review*, 19(1), 77-93.
- Massomeh, H.&Chien-Ping, C.(2019). The Relationship Between Exchange Rate Volatility and Banking Sector Development: Time-Series Evidence from Emerging economies. *Journal of Developing Areas, Tennessee State University, College of Business*, vol. 53(2), pages 179-191, April-Jun.

- Mbah, S. A., Okoli, T. T. & Amassoma, D. (2017). The Impact of Macroeconomic Indicators on the Nigerian Stock Market Performance. *International Journal of Economics, Commerce and Management*, V(8):710-727.
- Miguel, A. T. Z., Fransisco, V. M. & Victor, H. T. P. (2018) Effects of inflation on financial sector performance: New Evidence from panel quantile regression. Facultad de Economía, Universidad Nacional Autónoma de México (UNAM).
- Musa, S. U., & Ibrahim, M. (2014). Stock market development, foreign direct investment and macroeconomic stability: Evidence from Nigeria. *Research Journal of Finance and Accounting*, 5(18), 258-264.
- Nkechukwu, G., Onyeagba, J., & Okoh, J. (2015). Macroeconomic variables and stock market prices in Nigeria: A cointegration and vector error correction model tests. *International Journal of Science and Research*, 4(6), 717-724.
- NGX (2021). *Nigerian Banking Index*. Retrieved from <https://www.ngxgroup.com.ng/market-statistics/indices/banking-index>.
- Okoro, C. O. (2017). Macroeconomic factors and stock market performance: Evidence from Nigeria. *International Journal of Social Sciences and Humanities Review*, 7(1), 1-9.
- Olaolu, E. O., & Nwankpa, E. C. (2021). Macroeconomic variables and stock market movement in Nigeria (1988 – 2019). *International Journal of Advanced Research in Statistics, Management and Finance*, 8(1), 1-10.
- Olofin, S. (2001). *An Introduction to Macroeconomics*. Ibadan, Nigeria: Malthouse Press Limited.
- Omodero, C. O., & Mlangi, S. (2019). Evaluation of the impact of macroeconomic variables on stock market performance in Nigeria. *Business and Management Studies*, 5(2), 34-44.
- Ross, S. A. (1976). The arbitrage theory of capital asset pricing. *International Journal of Economic Theory*, 13, 341-360.
- Tripathy, V., & Kumar, A. (2015). Do macroeconomic variables affect stock returns in BRICS markets? An ardl approach. *Journal of Commerce & Accounting Research*, 4(2), 64-76.
- Udenwa, T. A., & Uwaleke, U. J. (2015). *Understanding Nigerian Financial System*. Port Harcourt, Nigeria: Pearl Publishers.
- Udoka, C. O., Nya, M. J., & Bassey, J. G. (2018). The effect of macroeconomic determinants of stock price movements in Nigeria. *International Journal of Research - Granthaalayah*, 6(1), 203-218.
- Vihang, E. (2001) Foreign Portfolio Equity Investment, Financial Liberalization and economic development. *Review of International Economics*. 9(4) 703-726.
- Worlu, C. N., & Omodero, C. O. (2017). A comparative analysis of macroeconomic variables and stock

market performance in Africa.
International Journal of Research in

Accounting, Finance and Management
Sciences, 7(4), 95-102.