

Response of the Nigerian stock market to changes in selected macroeconomic variables (1999 -2021)

Okoro, Victor Ogadimma

Department of Banking and Finance, Michael Okpara University of Agriculture, Umudike, Nigeria. Email: okoro.victor@mouau.edu.ng

Arikekpar, Obaima Ateibueri

Department of Business Education, Isaac Jasper Boro, College of Education Sagbama, Nigeria. Email: obaimaa@yahoo.com

Okoro, Okoro Kelechi

Department of Banking and Finance, Michael Okpara University of Agriculture, Umudike, Nigeria. Email: okoro.kelechi@mouau.edu.ng

ABSTRACT

The study examined the effect of macroeconomic variables on the stock market performance in Nigeria from 1999 to 2021 using the Auto Distributive Lag Model (ARDL) of Multiple Regression. Market capitalization (MCAP), aggregate spending (AGS), money supply (MS), the exchange rate (EXR), inflation rate (INF), and interest rate (INT) data were sourced from the CBN Annual report. ARDL cointegration bound test and error correction model estimation techniques were employed. The findings of the ARDL revealed that the exchange rate, interest rate, and money supply were all significantly related to market capitalization in Nigeria at 5% levels of significance, while aggregate spending was insignificant. The results also concurred with the a priori expectations as the inflation rate showed a negative effect on the stock market performance. The study concluded that there exists a long-run relationship between macroeconomic variables and market capitalization in Nigeria, and recommended that the Nigerian government should foster economic policy capable of ensuring stability in the stock market as it has a commensurate effect on the general growth of the economy.

Keywords:

Macroeconomic, Market, Capitalization, ARDL Model, Inflation Rate.

Article History:

Received: 10 Feb 2023

Accepted: 02 Apr 2023

Available Online: 02 Jun 2023



© 2023 The authors. Licensee Nnamdi Azikiwe University & ZARSMI Publishing. This is an open access article under the Creative Commons Attribution-NonCommercial-NonDerivatives 4.0

1. INTRODUCTION

According to Akbar et al. (2012), it has been common practice to research the connection between macroeconomic development and stock market performance. The local economy has a significant impact on stock markets, which can be used to forecast future economic situations (Fama, 1965; Binswanger, 2000). Every nation and stock market has distinctive factors that are particular to it. They may therefore respond differently to the same examined variables. Macroeconomic variables are the indices and numbers generated by regular business operations at the micro-company level. These variables are compiled, compressed, and stored by the relevant authority. The variables offer precise representations of the volume, nature, and source of business interactions within the system. The system's overall output and production are measured using macroeconomic indicators, which also include average interest rates, exchange rates, and inflation rates as well as other factors. Macroeconomic factors are extremely important to the whole economy and have an impact on all economic activity as well as a significant portion of the population in a nation. It is commonly accepted that several macroeconomic parameters, including interest rate, exchange rate, money supply, gross domestic product (GDP), and inflation, which are actively watched by governments, firms, and consumers, have an impact on and affect the capital market. This means that investors' decisions to invest in stocks and shares or not may be influenced by macroeconomic conditions, which will then have an impact on stock return rates and the overall performance of the capital market. Consequently, both theoretical and empirical literature holds that a country's economy, which is composed of various macroeconomic factors and variables like foreign direct investment, money supply, remittances, inflation, gross domestic product, interest rate, inflation, exchange rate, and others, directly influence the growth of that country's capital market (Aduda, Masila & Onsongo, 2012). A modern market-based economic system relies heavily on the capital market because it serves as a conduit for the flow of long-term financial resources from capital savers to capital borrowers. Therefore, prosperity and economic expansion depend on a functioning capital market. Consequently, a rising capital market is a sign that the economy is growing. The Nigerian capital market exists to offer long-term finance for economic and infrastructure development, much like any other capital market anywhere in the globe. Making it possible for business entities and the government to generate quick funds to spur economic growth was one of the main goals for creating the Nigerian capital market. In keeping with this goal, the Nigerian capital market has

become more well-known by greatly expediting the sale and privatization of several state-owned businesses (Akingunola, Adekunle & Ojodu, 2012).

According to Gan, Lee, Yong, and Zhang as cited in Etale & Eze (2019), the gauge of the capital market performance is its market index, and several macroeconomic factors influence this movement, ranging from economic, political, sociocultural, and international. Arguably, some fundamental macroeconomic factors such as expenditure, interest rate, exchange rate, inflation rate, etc. could play major roles in determining stock prices or stock market index movement, which will consequently affect the performance of the capital market. According to Abdullahi & Fakunmoju (2019) and Kuhe (2018), the persistent decline in gross industrial production, undervaluation of the local currency (the naira) in comparison to other currencies, and inflation have all contributed to the high stock return volatility, declining market capitalization, and information asymmetry in the Nigerian stock market. This has also contributed to the decline in the number of people interested in Nigeria's capital market, which has negatively impacted the market's performance. Foreign investors are discouraged by the Nigerian capital market's poor performance due to the market's lack of liquidity and high cost of trading. This study aims to investigate how macroeconomic factors affect the performance of the Nigerian capital market in light of these issues. To address this aim, the study will use Market Capitalization as a proxy for the capital market performance in Nigeria. Specifically, the study will evaluate the effect of exchange rates, aggregate spending, inflation rate, interest rate, and money supply on the stock market in Nigeria.

2. CONCEPTUAL REVIEW

The review of the literature for this study will focus on the relationship that exists between macroeconomic variables (money supply, exchange rate, inflation rate) and stock returns. Stock market performance or stock market returns are gains (including dividends) that investors generate from buying and selling stocks in a stock market. Returns are usually subject to market risks. To maximize returns, investors should buy at low prices and sell at high prices. Rational investors act on informed decisions and conduct either technical or fundamental analysis to determine the future trend of stocks (Ibenta, 2005). The technical analysis mainly focuses on scrutinizing the historical price movements of a particular stock to predict the future trend of the stock. However, fundamental analysis focuses more on the cash flows, profit growth of companies, and any other information that could potentially lead to an

increase in the share price of a particular stock. Different macroeconomic factors contribute to the change in earnings of the market. For instance, changes in inflation, exchange rate, interest rate, money supply, and so forth, usually influence long-term stock market trends. The stock market is an impulsive environment with trends that can either give investors positive or negative returns. An increase in volatility of the stock market raises the level of risk involved and decreases the returns on stocks. The conceptual graphical nexus between the macroeconomic variables and the capital market is presented below.

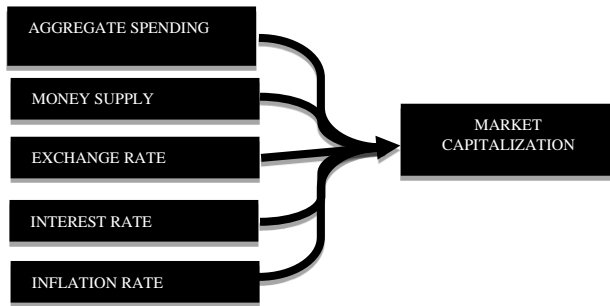


Fig. 1: Conceptual Framework
Source: Author (2023)

2.1 Theoretical Framework

Stephen Ross, an economist, created the Arbitrage Pricing Theory (APT) in 1976. This theory in finance refers to either the market theory of indicators, which postulates that each factor's sensitivity to change is indicated by its respective beta coefficient, or the general theory of asset pricing, which maintains that the expected return of a financial asset can be linearly modeled as the function of various factors. The APT forecasts the presence of a securities market line connecting projected return variance to multi-factor risks. This demonstrates that APT developed the model connection between the projected return spread and the risks associated with many macroeconomic parameters. Three essential propositions are used by the APT:

- (i) Well-functioning stock markets do not allow for the persistence of arbitrage opportunities.
- (ii) Stock returns are explained by the macro-multi-risk factors model.
- (iii) There are sufficient stocks to diversify away the unsystematic risk.

Both the Arbitrage Pricing Theory (APT) and the Capital Asset Pricing Model (CAPM) assert that there is a linear relationship between assets' expected returns and their covariance with other random variables. Stephen Ross (1976) developed the Arbitrage Pricing Theory to address the concerns and shortcomings of the Capital Asset Pricing Model (CAPM). This Arbitrage Pricing Theory entails determining macroeconomic variables that influence stock risks and return spreads. When investors apply the Arbitrage Pricing Theory, in most cases, it allows them to relax constraints associated with the Capital Asset Pricing Model (CAPM). Hence, the correlation between assets and the macroeconomic risk factors associated with them is used to predict their returns in the Arbitrage Pricing Theory. This is achieved by combining exogenous macroeconomic variables in a linear manner (Eita, 2011). Thus, a measurement of an asset's exposure to macroeconomic risk factors is based on the use of factor beta. The Arbitrage Pricing Theory is a one-period model in which every investor believes that the stochastic properties of returns of capital assets are consistent with a factor structure.

2.2 Efficient Market Hypothesis (EMH)

Fama developed the Efficient Market Hypothesis (EMH) in 1965. According to the Efficient Market Hypothesis (EMH), all relevant information is immediately and completely reflected in a security's market price. In other words, the Efficient Market Hypothesis (EMH) states that prices reflect all available information at any given time. Furthermore, past or current data cannot be used to identify undervalued stocks. When applied to the financial markets, the Efficient Market Hypothesis implies that no trading mechanism can consistently outperform the market. According to the Efficient Market Hypothesis, financial markets are efficient based on traded asset prices that reflect all known information and are thus unbiased because they represent all investors' collective

beliefs about prospects. The previous test of the Efficient Market Hypothesis has relied on long-range dependence, because of the narrowness of the market arising from the immature regulatory and institutional arrangement (Lo, 1991; Nyong, 2003; Nagayasu, 2003). However, the Efficient Market Hypothesis is classified into three main levels based on the nature of assumed information to be utilized in setting prices in the market. These include the weak form of the Efficient Market Hypothesis, the semi-strong form of the Efficient Market Hypothesis, and the strong form of the Efficient Market Hypothesis. Some assumptions are made for a capital market to be seen and perceived as efficient. To begin with, for a capital market to be efficient, a large number of participants with increased profit levels must be independent of one another and analyze and value market securities. Second, the timing of one announcement of new information about securities that uniquely emerge in the market is mostly independent.

2.3 Empirical Review

Oladosu and Topbie (2022) recently investigated the effects of macroeconomic factors on the performance of the Nigerian capital market. Money supply (M2), the exchange rate (EXR), consumer price index (CPI), and prime lending rate (PLR) served as proxies for macroeconomic factors (explanatory variables), while market capitalization equities (MCE) served as a proxy for Nigerian capital market performance (explained variable). The study used monthly time-series data from the Nigerian Stock Exchange, Central Bank of Nigeria, and Financial Market Dealers Association spanning the years 2000M01 to 2019M12. The Quantile Regression Technique was used to examine the Quantile process estimates, as well as the Quantile slope equality test and the Quantile symmetric test. The finding from Quantile process estimates revealed that there was significant variability in market capitalization equities across all quantiles caused by money supply and the exchange rate. Additionally, market capitalization equities (MCE) bore the insignificant and significant brunt of the consumer price index and prime lending rate across all quantiles. The finding of the Quantile slope equality test further confirmed that the connection between explanatory variables and explained variables understudy varies across quantile values, whereas the inter-quantile range proved that the slope equality test does not vary across quantiles. Furthermore, the finding of the Quantile symmetry test demonstrated evidence of significant asymmetry between quantiles. However, the individual coefficient restriction test values exhibited evidence of symmetry across quantiles for all the variables understudy, except for the prime lending rate, which showed evidence of asymmetry.

Pole and Cavusoglu (2021) used monthly secondary data from the Nigerian Stock Exchange (NSE) factbook and the Central Bank of Nigeria (CBN) statistical bulletin to investigate the effect of macroeconomic factors on stock return in the Nigerian stock market between 1998 and 2019. The study used Autoregressive Distributed Lag (ARDL) as a data analysis method. The study's findings revealed that money supply and aggregate industrial production positively and significantly affect stock return in the Nigerian stock exchange market, whereas exchange and inflation rates negatively affect the stock return. According to the study, macroeconomic factors have a significant impact on stock return in the Nigerian stock market in both the short and long run. Similarly, Sanya and Isaac (2020) investigated the macroeconomic determinants of stock market performance in Nigeria between 1985 and 2018, sourcing their data from the World Bank Development Indicator, 2020 edition, and the Central Bank of Nigeria statistical bulletin. The study applied the ARDL co-integration method as an estimation technique. The results of the study's findings reported that the inflation rate, real interest rate, world oil price, and real effective exchange rate were the major determinants of Nigeria's stock market performance within the periods of study. Based on these findings, the study concluded that both endogenous and exogenous macroeconomic variables determine Nigeria's stock market performance.

Etale and Eze (2019) investigated the impact of some selected macroeconomic variables on the Nigerian Stock Exchange stock market performance (NSE). The broad money supply (BMS), interest rate (ITR), inflation rate (IFR), and exchange rate (EXR) were used as independent variables to capture selected macroeconomic variables, while the all-share index (ASI) was used as a proxy for stock market performance and the dependent variable. Secondary data for the variables were sourced from the Central Bank of Nigeria (CBN) Statistical Bulletins from 1985 to 2017. The study utilized multiple regression techniques, the Augmented Dickey-Fuller unit root test, the Johansen co-integration test, and the Error Correction Model (ECM) as methods for analyzing the relationship between variables under study. E-views 9.0 software was used as a tool to

facilitate this analysis. The results of the finding revealed that an existed long-run equilibrium and short-run relationships between the selected macroeconomic variables and stock market performance in the Nigerian Stock Exchange. The results further displayed that all the independent variables under study had a significant influence on stock market performance. However, the impact of the individual macroeconomic variables indicated that the exchange rate and broad money supply had a significant positive effect on the all-share index, whilst the inflation rate and interest rate showed an inverse relationship with the all-share index. Thus, the study recommended that the monetary authorities should put in place sound monetary policies that would bring about positive developments in the stock market. In a similar study, John (2018) used annual time series data from 1981 to 2016 to model the effect of money supply, interest rate, exchange rate, and inflation rate on Nigerian stock market capitalization. The ex-post facto research design used Augmented Dickey-Fuller (ADF) and Ordinary Least Squares (OLS) tests and discovered that money supply has a significant positive effect, the interest rate has a significant negative effect, and the exchange rate and inflation rate have no statistically significant effect on Nigerian stock market performance. According to the study, further research should be conducted to capture other factors that may be determining factors in this linkage.

Using the augmented dickey fuller unit root test and autoregressive distributed lag models in testing secondary data spanning the years 1986 to 2014, Udoka, Nya, and Bassey (2018) investigated the impact of gross domestic product, exchange rate, interest rate, and inflation rate on the average stock price. The study model showed that there was no long-term correlation between the explanatory and explained variables, and it thus recommended strategies to encourage capital market investment in the nation. Macroeconomic factors' effects on stock market performance in four significant African nations, including Kenya, Ghana, Nigeria, and South Africa, were examined by Worlu & Omodero (2017). The conventional least squares method was used in the investigation. The data showed that the real exchange rate, GDP, and inflation rate harmed Nigeria's stock price index. The outcome showed that the real exchange rate had no impact on the stock market in South Africa and that the relationship between the inflation rate and GDP and the stock market was inverse. While the other markets have no impact, Ghana's stock market has a negative GDP.

The real exchange rate and the Kenyan stock market were shown to be negatively correlated, but neither. A similar study was carried out to investigate the macroeconomic determinants of share price in the stock market of Vietnam Duy & Hau (2017), using a VECM as a technique. The results from the findings indicated that the share price index in the stock market of Vietnam was determined by some selected macroeconomic variables, which include the exchange rate, money supply, consumer price index, and market price index. The result further revealed that the share price index is directly related to the money supply and market price index. It also indicated that an increase in money supply invariably leads to improvement or development of an economy based on that cash flow rises and share price will gain from the expansionary policy.

Adekunle, Alalade&Okulenu (2016) investigated the impact of macroeconomic variables on capital market growth with particular emphasis on the effect of macroeconomic pricing variables such as interest rate, inflation rate, and exchange rate on capital markets growth. The study utilized multiple regression analysis of the ordinary least square to determine the impact of interest rate as well as other macroeconomic variables like exchange rate, and inflation rate, on capital market growth and pooled data regression method to estimate the specified model equations for the periods between 1985 and 2013.

The result of the findings revealed that interest rates hurt capital market growth. The Regression analysis results reveal that a 1% increase in interest rate will lead to a 44% decrease in all share price indexes; this implies that as the rate of interest increases, the performance of the capital market deteriorates. Whereas, the inflation rate and exchange rate were not significant at the 5 percent level. The study revealed further that the negative linkage between interest rate and All Share Index sufficiently proved when independently examined, multiple regression with variables such as inflation rate and exchange rate shows its dominant effect on the dependent variable. The study recommended that the capital market should be strategically positioned to exploit the opportunities in the market, by engaging professionals and setting mechanisms that will enable it with challenges of macroeconomic variables.

3. RESEARCH METHOD

To ensure adequate and comprehensive research for the study, Annual time series data on Market Capitalization (MCAP), Aggregate spending (AGS), Money supply (MS), the exchange rate (EXR), inflation rate (INF) and interest rate (INT) were represented as the explanatory variables and were secondarily sourced from Nigerian CBN statistical Bulletin from 1999 through 2021. Some of the variables were logged to achieve asymmetry for all data utilized to achieve an efficient model.

3.1 Model Specification

The model used by Oladosu &Topbie (2022) was relevant and serve as guide for the present study.

The model was stated as;

$$LMCE = f(LM2, LEXR, PLR, CPI)..... 1$$

By augmenting, the study included aggregate spending to the remaining variables in the model, the modified model for the study was stated in equation 3.2 as:

$$\ln MCAP_t = \alpha_0 + \alpha_1 \ln AGS_t + \alpha_2 \ln MS_t + \alpha_3 EXR_t + \alpha_4 INF_t + \alpha_5 INT_t + \mu_t..... 2$$

Where:

$MCAP_t$ = Market Capitalization;

AGS_t = Aggregate Spending;

MS_t = Money Supply;

EXR_t = Exchange Rate;

INF_t = Inflation Rate;

INT_t = Interest Rate;

μ_t = Error Term

$\alpha_1 - \alpha_5$ = Coefficients of explanatory variables

\ln = Natural Logarithm

Our *a priori* expectation is that at the end of the analysis, aggregate spending, money supply, exchange rate and interest rate will have positive effect on the stock market while inflation is expected to have negative effect on the stock market. This can be summarized as; $\alpha_1 > 0$; $\alpha_2 > 0$; $\alpha_3 > 0$; $\alpha_4 < 0$; $\alpha_5 > 0$

3.2 Estimation Technique

Autoregressive Distributed Lag model (ARDL) was employed in the study. The technique of ARDL became essential for the study because it can simultaneously establish shortrun and longrunrelationships at a time. More so, ARDL is superior to Johansen cointegration based on mixed stationarity level i.e. I(0) and I(1) but must not exceed I(1) unlike Johansen cointegration which rule stated that all variables should be associated of the same order.

3.3 Test for Stationarity or Unit Root Test

Prior to testing for cointegration, the time series properties of the variables need to be examined. The study made use of Augmented Dickey-Fuller (ADF) test for unit root regression test which was estimated by equation (3) as follow:

$$\Delta Y_t = \alpha_0 + \beta Y_{t-1} + \gamma_1 \Delta Y_{t-1} + \gamma_2 \Delta Y_{t-2} + \gamma_3 \Delta Y_{t-3} + \gamma_4 \Delta Y_{t-4} + \gamma_k \Delta Y_{t-k} + \epsilon_t 3$$

Where Δ is the difference operator, Y_t the series to being tested, k is the number of lagged differences, and ϵ_t is error term. The standard Augmented Dickey-Fuller (1979) test for a unit autoregressive root tests the null hypothesis $H_0: \delta = 0$ against the one side alternative, $H_1: \delta < 0$ in the regression. Under the null hypothesis Y_t has a stochastic trend; under the alternative hypothesis Y_t is stationary. The ADF statistic is the OLS t -statistic testing t -statistic $\delta = 0$. The lag length k can be estimated using the BIC or AIC (Stock & Watson, 2003). The rule of the thumb stated that the series must be mixed with I(0) and I(1) and significant at either 1%, 5% and 10%.

3.4 ARDL Approach to Co-Integration

ARDL estimated the long run relationship in the model. To do this, Autoregressive distributed lag (ARDL) model proposed by Pesaran, Shin and Smith (2001) was employed. The rule of the thumb was that should the F-statistic exceeds the upper critical bounds value, then the H_0 (null hypothesis) is rejected; should the F-statistic falls between the bounds, it is inconclusive and should the F-statistic fall below the lower critical bounds value, it is no cointegration. When long-run relationships exist, the F-test indicates which variable should be normalized.

4. RESULTS AND DISCUSSION

4.1 Unit Root Test

Table 4.1 Showed the result of the Augmented Dickey-Fuller unit root test. The result showed that Money supply, inflation rate attained stationarity at level, market capitalization, Aggregate spending interest rate and exchange rate attained stationarity at first difference. While Market cap, Money supply, Exchange rate and Inflation rate attained there cointegrations at 5%, Aggregate spending and Interest rate cointegrated at 1% level of significance at there various specified levels.

Table 4.1: Unit Root Test

Items	Test statistics	Critical value	Order of Integration
LNMCAP	-3.872365	-3.012363	I(1)**
LNAGS	-8.401982	-3.012363	I(1)***
LNMS	-3.446997	-3.769597	I(0)**
EXR	-3.948841	-3.012363	I(1)**
INF	-4.221353	-3.012363	I(0)**
INT	-5.388574	-3.012363	I(1)***

Note: (* ** ***) denotes 10%, 5% and 1% level of significant respectively
Source: Authors Computation using E-view 9.0

4.2 Cointegration

Null Hypothesis: No long-run relationships exist

Table 4.2: ARDL Bound Test Result

NULL HYPOTHESIS	F - STATISTIC	CRITICAL VALUES BOUNDS		
		SIG...	I(0)	I(1)
No long-run relationships exist	3.921737	10%	2.26	3.35
		5%	2.62	3.79
		2.5%	2.96	4.18
		1%	3.41	4.68

Source: Authors Computation using E-view 9.0

With no doubt, F-stat of 14.60065 was much higher than the I(1) table value at any % level of significance. The study rejected the null hypothesis. Hence, evidence of long-run relationship among the variables was found among the variables.

4.3 Long and Short Run Estimation

Table 4.3: Long Run Co-Integrating Coefficients

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LNAGS	0.037490	0.327333	0.114532	0.9103
LNMS	0.982689	0.202243	4.858958	0.0002
EXR	0.011151	0.002092	5.329341	0.0001
INF	-0.032092	0.012019	-2.670183	0.0175
INTR	-0.073753	0.016747	-4.403902	0.0005
C	0.387288	1.002390	0.386364	0.7047

Source: E-view 9.0

Table 4.3 showed that the Aggregate spending was positive and statistically insignificant at the long run. Money supply was positive and statistically significant which implied money supply has a long run relationship with market capitalization in Nigeria. Hence, 1% change in money supply yielded 0.98% increase in Market Capitalization. Interest rate and inflation rate portrayed a significant negative relationship with Market Capitalization which implied that the rate of interest rate and inflation decreased Market Capitalization by 0.07% and 0.03% respectively. Lastly, exchange rate significantly affected Market Capitalization in Nigeria. Hence, 1% increase in exchange rate accelerated the pace of Market Capitalization inflow by 0.01%.

4.4 Error Correction Model

Table 4.4. ECM Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LNAGS)	0.031090	0.270976	0.114735	0.9102
D(LNMS)	0.814937	0.208000	3.917960	0.0014
D(EXR)	0.009247	0.001919	4.819668	0.0002
D(INF)	-0.026614	0.010804	-2.463316	0.0263
D(INTR)	-0.061163	0.017516	-3.491805	0.0033
CointEq(-1)	-0.829293	0.100401	-8.259817	0.0000

Source: E-view 9.0

The Error Correction Model (ECM) intends to validate the presence of long-run relationship and incorporate the short-run dynamics into the long-run equilibrium relationship. Evidence from Table 4.4 explored that the coefficient of ECM is correctly signed and significant. The value of the coefficient is estimated to be -0.829293 and this implied 82.92% of the disequilibrium in the level of market capitalization of last year's shock adjusted back to the long run equilibrium in the present year. The short run effect showed that aggregate spending has a positive effect on the market capitalization also exchange rate and money supply had direct impact on Market Capitalization in Nigeria, this implied that the exchange rate and money supply 1 unit change will bring about increase to Market Capitalization in Nigeria to the tone of 0.01 and 0.81 respectively, Interest rate, interest rate and inflation rate had negative and significant impact on the Market Capitalization in Nigeria a unit change in the both macroeconomic variables will bring about decrease to market capitalization to the tone of 0.02 and 0.06 respectively. Inflation rate, Interest rate and Money supply were significant at 5%, exchange rate was significant at 1% while aggregate spending was insignificant.

5. DISCUSSION OF FINDINGS

Having empirically analyzed the annual time series data sourced with respect to the macroeconomic factors' effects on the performance of the Nigerian capital market, the findings generated are discussed in this section as follows: The hypothesis that assumes the exchange rate, inflation rate, interest rate, and money supply have no significant effect on market capitalization in the Nigerian stock exchange market was rejected at the 5% level of significance. This indicates that both the exchange rate, inflation rate, interest rate, and money supply significantly affect the performance of the capital market in Nigeria. These findings were in line with the findings of Oladosu & Topbie (2022), Nya and Bassey (2018), Duy & Hau (2017), who provided empirical evidence that the share price index is directly related to the money supply and market price index. Thus, an increase in economic activities and money supply raised the price of the stock market. This finding is also related to the finding of Etale & Eze (2019), which stated that the impact of the individual macroeconomic variables indicated that broad money supply and the exchange rate had a significant positive effect on all share indexes of the Nigerian Stock Exchange (NSE). Secondly, the results of this study revealed that the exchange rate has a positive and significant effect on market capitalization equities (LMCAP) of the Nigerian capital market. The finding is consistent with the result of Evans (2014), which established that a sound macroeconomic environment reflective of a coherent exchange rate positively stimulates stock market returns in Nigeria.

Furthermore, the findings of this study showed that inflation has a significantly negative effect on market capitalization equities (MCE) of the

Nigerian capital market. This is in agreement with the a priori expectation. The result showed consistency with the earlier findings of Worlu & Omodero (2017). Worlu & Omodero (2017), in their study on the impact of macroeconomic variables on stock market performance in Africa, found that there was a negative effect of the inflation rate on the stock price index in Nigeria. Lastly, the findings of this study showed that the interest rate, proxied by prime lending rate, has a significantly negative effect on market capitalization equities (LNMCA) of the Nigerian capital market. The finding concurred with that of Oladosu & Topbie (2022), Adekunle, Alalade & Okulenu (2016), who provided empirical evidence that interest rates have an adverse effect on capital market growth.

5.1 Conclusion

This study has been able to establish the association between the effect of selected macroeconomic factors (money supply, aggregate spending, inflation rate, interest rate and exchange rate) on Nigerian stock market. Consequently, this study concludes that macroeconomic factors significantly affect market capitalization both in short and long.

5.2 Recommendation

The following policy recommendations are suggested based on the findings of this study: The Central Bank of Nigeria should monitor the level of money in circulation to maintain an adequate/optimum level of money supply; as this will ensure the availability of financial resources to invest in the capital market which in turn enhances economic activities and productivity as well as economic growth. The Central Bank of Nigeria should employ a deflationary fiscal policy to manage inflation and avoid higher rates of inflation that may reduce the performance of the Nigerian Stock Market. The Central Bank of Nigeria should employ Adaptive Stabilization Method of Exchange Rate policy such as (buy up a foreign exchange for the reserves, reduction in the purchase of volume of foreign exchange and incentive to induce owners of foreign currencies to acquire local currency denominated assets) in achieving stable exchange rate.

6. 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.
- Adekunle, O. A., Alalade, Y. S. A. & Okulenu, S. A. (2016). Macro-economic variables and its impact on Nigerian capital market growth. *International Journal of Economics and Business Management*, 2(2), 22-37
- Aduda, J., Masila, J. M. & Onsongo, E. N. (2012) The determinants of stock market development: The case for the Nairobi Stock Exchange. *International Journal of Humanities, and Social Science*, 2(9), 214-230
- Akingunola, R. O., Adekunle, O. A. & Ojodu, H. (2012). Impact of interest rate on capital market growth: A case of Nigeria). *Universal Journal of Management and Social Sciences*, 2(11), 15-39.
- Duy, K. & Hau, H. (2017). Investigated the macroeconomic determinants of share price in the stock market of Vietnam. *International Research Journal of Finance and Economics*, 2(5), 78-88.
- Etale, L. M. & Eze, G. P. (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.
- Fama, F. (1965). The behavior of stock market prices. *Journal of Business Management*, 3(8), 34-105.
- Gan, C., Lee, M., Yong, H. A. H. & Zhang, J. (2006). Macroeconomic variables and stock market interactions: New Zealand evidence. *Investment Management and Financial Innovations*, 3(4), 89-101.
- 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.
- Josiah, M. & Akpoveta, E. B. (2019). Macroeconomic variables and Nigeria stock market returns. *Accounting & Taxation Review*, 3(1), 55-68.
- Kuhe, D. A. (2018). Modeling volatility persistence and asymmetry with exogenous breaks in the Nigerian stock returns. *CBN Journal of Applied Statistics*, 9(1), 167- 196.
- Oladosu I O, Topbie J. A. (2022). Macroeconomic Factors' Effects On The Performance Of The Nigerian Capital Market. *Global Journal of Arts Humanity and Social Sciences*. Vol-2 Iss-4, page 203-213
- Pole, H. & Cavusoglu, B. (2021). The effect of macroeconomic variables on stock return volatility in the Nigerian stock exchange market. *Asian Journal of Economics, Finance and Management*, 3(3), 32-43.
- Ross. S. (1976). The arbitrage theory of capital asset pricing. *Journal of Economic Theory*, 13: 341-360.
- Sanya, O. & Isaac, T. A. (2020). Macroeconomic determinants of stock market performance in Nigeria. *Business and Economic Research*, 10(4), 139-159.
- 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.
- 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.