Effect of Macroeconomic Shocks on Stock Market Performance in Nigeria Between (2000q1 - 2024q4)

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ABSTRACT

Macroeconomic indicators are essential tools for assessing the health of an economy and guiding economic governance. These indicators, such as economic growth, inflation rate, returns on equity, exchange rate, and interest rate among others are used by policymakers to make informed decant by citizens to evaluate the performance of their leaders. The study examines the effect of macroeconomic shocks on stock market performance in Nigeria between 2000q1 and 2024q4 using Structural VAR model. The unit root test shows that all share index, money supply, exchange rate and inflation rate are stationary at first difference while interest rate is stationery at level. The impulse response function shows that exchange rate transmits negative shock to all share index in Nigeria. Inflation rate transmits positive shock to all share index in Nigeria. Interest rate transmits negative shock to all share index in Nigeria. Money supply transmits positive shock to all share index in Nigeria. The study concludes that macroeconomic shocks play a significant role in shaping stock market performance in Nigeria. The direction and magnitude of these effects underscore the importance of macroeconomic stability. The study recommends that Central Bank of Nigeria (CBN) should improving foreign exchange supply, diversifying export earnings, and reducing import dependence will help mitigate currency volatility and strengthen investor confidence in the capital market and Central Bank of Nigeria (CBN) should ensure adequate liquidity in the financial system, especially during periods of economic downturn, to support capital market activities.

Keywords: macroeconomics variables, Stock market, SVAR JEL Classification: E44, E52, C32

INTRODUCTION

Macroeconomic indicators are crucial for evaluating the health of an economy and informing policy decisions. Metrics such as economic growth, inflation, exchange rates, interest rates, and returns on equity are used by policymakers to guide economic governance and by citizens to assess government performance (Mügge, 2015). Studies have further explored their impact on specific sectors, including stock prices and CO_2 emissions, demonstrating the wide-ranging influence of these variables (Adaramola, 2011; Demirel, 2017; Abdul-Maliq & Sule, 2017). Analyses of causality between economic confidence and macroeconomic fundamentals highlight the predictive value of economic sentiment in anticipating shifts in key indicators (Demirel, 2017). Increasingly, macroeconomic indicators are adjusted to reflect environmental and ecological factors, supporting sustainable development and informing environmental policies (Notte, 2019). Research has established strong comovements among these indicators and their significant role in shaping economic cycles. Their development trends also inform national economic policies, as exemplified in Slovakia's raw material policy (Pavolová, 2019; Adiga, Haruna, Yua, & Adigwe, 2020). Many scholars have used macroeconomic factors to explain stock return and found that changes in interest rate are associated with risk premium. They interpreted the observation to reflect changes in the rate of inflation and othe macroeconomics determinant such as exchange rate and interest rate, given the finding of Fama (1977) that changes in the rate of inflation are fully reflected in interest rates (Emenuga, 1994).

This line of thought is what researchers in the field of finance refer to as the macroeconomic approach. It is a method of using factor analysis techniques to determine the factors affecting asset returns. The focus of the macroeconomic approach is to examine how stock market is affected by macroeconomic variables. This approach maintains that movement of stock prices are influenced by changes in money supply, interest rate,

inflation rate, exchange rate, international crude oil prices, external debt, and external reserve and so on. There have been controversies among scholars, researchers and finance professionals with regards to what triggers movement in stock prices from their fundamental value. If the rate of interest paid by depositing money banks to depositors is increased, investors will pull out their funds from the capital market to patronize the banks for quick immediate returns, the lesser investment in the stock market (Winful, Sarpong & Sarfo, 2016). This interaction decreases stock market performance as well as the productivity of the economy at large.

On the other hand, the high interest rate increases the cost of borrowing and at the same time reduces corporate profit and dividends, thereby affecting share prices of firms. High inflation rate increases the standard of living which moves scarce resources from investment in stocks to household consumption. The inflationary economic situation results in a decrease in the demand for investment in financial assets. The relationship between inflation and stock market performance can be positive or negative depending on whether the economy is confronted with foreseen or unforeseen inflation (Talla, 2013). These have generated questions and led to efforts to find out if market and economic fundamental are responsible for such deviations.

LITERATURE REVIEW

Conceptual literature

Stock Market Performance and Influencing Factors

Stock market performance measures the returns and associated risks of investing in equities. It is influenced by macroeconomic variables, governance quality, and external factors, including foreign capital inflows and developments in cryptocurrency markets. Research demonstrates a positive correlation between institutional quality and stock market outcomes; countries with stronger governance tend to achieve higher returns and lower risk (Hooper, 2005; Adoms, Yua, Okaro, & Ogbonna, 2020). Macroeconomic factors such as remittances, money supply, exchange rates, and interest rates also influence market performance, with effects varying across economies (Rakhal, 2018; Abdul-Maliq, Ali, & Yua, 2021). Additionally, stock market deregulation and cryptocurrency market developments have been identified as key determinants of stock market dynamics (Auzairy, 2011; Sami, 2020). Causal relationships between stock performance and macroeconomic variables emphasize the interconnectedness of the real economy and financial markets (Tripathi, 2014; Shrestha, 2014; Oskooe, 2010; Tite, 2022).

Stock Market Performance in Nigeria

The Nigerian stock market has been widely studied to understand the impact of macroeconomic variables on performance. Key indicators include GDP growth, inflation, exchange rates, interest rates, and returns on equity. Findings generally indicate that interest rates and inflation negatively affect stock market performance, whereas exchange rates, GDP growth, and foreign capital inflows have positive effects (Olokoyo, 2020). The stock market serves as an efficient channel for financial intermediation, supporting economic growth by mobilizing savings, facilitating investment, and improving capital allocation (Riman et al., 2008).

Historical data from Nigeria illustrate this development. Market capitalization increased from N6.6 billion in 1985 to N285.8 billion in 1996, fluctuated slightly in the late 1990s, and surged to N472.3 billion by 2000. By 2010, it reached N9,918.2 billion and continued to rise steadily until 2015, before declining during the 2016 recession. Post-crisis recovery saw capitalization grow to N21,904.0 billion by 2020 (CBN, 2020). The all-share index showed similar growth trends, rising from 127.3 points in 1985 to 41,329.2 in 2013, before dropping to 31,430.5 in 2020. Such trends highlight the sensitivity of the stock market to macroeconomic conditions, which guides investors and policymakers in their decision-making.

Empirical studies emphasize that stable macroeconomic conditions are necessary to improve stock market performance. Policies targeting lower interest rates, increased foreign capital inflows, and improved trade conditions are suggested to enhance market outcomes (Olokoyo, 2020). Regulatory bodies are advised to adopt measures to minimize volatility and restore investor confidence (Okechukwu, 2019). However, some studies find that stock prices in Nigeria are not always leading indicators of macroeconomic trends, suggesting a

complex, context-specific relationship between the market and broader economic variables (Okoro, 2017; Olabanji, 2013).

Several studies have confirmed that both endogenous and exogenous macroeconomic variables, such as inflation, real interest rate, exchange rate, and global oil prices, influence the Nigerian stock market (Ogunsakin, 2020; Sanya & Isaac, 2020). Other research highlights the effect of money supply, GDP, consumer price index, and crude oil prices on market capitalization and returns, illustrating the long-run and short-run dynamics between macroeconomic fundamentals and stock performance (Odi et al., 2021; Sylvester, 2020).

THEORETICAL FRAMEWORK

The study is grounded in the Efficient Market Hypothesis (EMH), which posits that asset prices reflect all publicly available information at any given time. Under this model, it is theoretically impossible to consistently achieve returns exceeding market averages using public information, as prices adjust rapidly to new data. EMH suggests that stock market efficiency facilitates economic growth by lowering the cost of capital and enabling productive investment (Greenwood & Smith, 1997). While some critics argue that market inefficiencies allow for abnormal returns, EMH remains a key theoretical lens for examining the interplay between macroeconomic indicators and stock market performance.

Empirical Literature

Empirical research in Nigeria has consistently examined the nexus between macroeconomic indicators and stock market performance. Ordue et al. (2024) analyzed data from 1986–2022 using time-series methods, including unit root and co-integration tests, as well as error correction models. Their findings indicate a strong long-run positive relationship between stock performance, GDP, and inflation, while equity and interest rates showed negative associations. Short-term dynamics highlighted momentum effects, particularly from past stock returns and inflation, whereas GDP, exchange rates, and interest rates were less significant.

Odey, Owan, & Owan (2023) explored financial indicators and stock market performance, finding that market profitability, liquidity, and efficiency positively influence stock outcomes. Recommendations included implementing strong corporate governance, facilitating capital-raising opportunities, and maintaining high trading volumes to enhance market efficiency. Similarly, Sanya & Isaac (2020) identified inflation, real interest rate, real effective exchange rate, and oil prices as key determinants of Nigerian stock market performance, highlighting the importance of monitoring global oil market trends in policy formulation.

Odi et al. (2021) reported that crude oil prices and money supply positively affected market capitalization, while CPI negatively influenced it, with GDP showing an insignificant effect. They observed unidirectional and bidirectional causal relationships between selected macroeconomic variables and market performance. Sylvester (2020) confirmed significant effects of private sector credit, exchange rates, and interest rates on the all-share index, while inflation was negatively associated. Emem & Victoria (2020) found significant long-run relationships between stock market indicators and economic growth, highlighting the importance of market capitalization, turnover ratios, and number of listed securities in driving financial deepening.

Adeleke et al. (2020) examined the effects of selected macroeconomic variables on stock returns, concluding that money supply and trade openness positively influence stock market returns, while foreign direct investment and external debt showed limited impact. Justin & Ekwugha (2020) found that monetary policy variables, including lending rates and money supply, have both short-run and long-run effects on stock market performance, emphasizing the need for policymakers to account for these relationships when making decisions. Suoye & Itotenaan (2020) highlighted GDP and inflation as key macroeconomic determinants of stock market capitalization, while exchange rates and external reserves play secondary roles. Ibrahim (2019) identified interest rates, inflation, and foreign reserves as influential on banking sector stock prices, recommending lower policy rates to stimulate liquidity.

METHODOLOGY

Model specification

The model of the study is adopted from the work of Sylvester (2020), the model is specified as

$ASI = F(PSC, EXR, INFL, INTR)$ ………………………………………………..(3.1)

The model is modified by removing private sector credit and incorporating money supply. Therefore, the model of study is specified as

$ASI = F(EXR, INFL, INTR, MS)$ ……………………………..……………….……….(3.2)

$ASI = \beta_0 + \beta_1 EXR + \beta_2 INFL + \beta_3 INTR + \beta_4 MS$ …………………….……………(3.3) Where

$ASI = All\ share\ index$

$EXR = Exchange\ rate$

$INFL = Inflation\ rate$

$INTS = Interest\ rate$

$MS = Money\ Supply$

Structural Vector Autoregressive (SVAR) Model

To analyze macroeconomic shocks and their effects on stock market performance, the study employs a Structural Vector Autoregressive (SVAR) model. SVAR treats all variables as potentially endogenous, capturing dynamic interrelationships and quantifying the transmission of shocks across the system. This approach allows for assessment of the relative impact of macroeconomic variables on stock market outcomes and facilitates policyrelevant insights (Enders, 2015).

The structural VAR model is represented by the following system of equations:

$EXR_t = \alpha_{10} - \alpha_{20} INFL - \alpha_{30} INTR_t - \alpha_{40} MS_t - \alpha_{50} ASI_t + \sum_{t-1}^{p} \beta_{10}^{t} EXR_{t-1} + \beta_{10t} INFL_{t-1} +$

$\beta_{12t} INTR_{t-1} + \beta_{13t} MS_{t-1} + \beta_{14t} ASI_{t-1} + \mu_{tEXR}$………………………….…….….………...(3.4)

$INFL = \alpha_{10} - \alpha_{20} EXR - \alpha_{30} INTR_t - \alpha_{40} MS_t - \alpha_{50} ASI_t + \sum_{pt-1} \beta_{10t} INFL_{t-1} + \beta_{10t} EXR_{t-1} + \beta_{12t} INTR_{t-1} + \beta_{13t} MS_{t-1} + \beta_{14t} ASI_{t-1} + \mu_{tINFL}$…………………….…….….…..…………….(3.5)

$INTR_t = \alpha_{10} - EXR - \alpha_{30} INFL_t - \alpha_{40} MS_t - \alpha_{50} ASI_t + \sum_{pt-1} \beta_{10t} INTR_{t-1} + \beta_{10t} EXR_{t-1} +$

$\beta_{12t} INFL_{t-1} + \beta_{13t} MS_{t-1} + \beta_{14t} ASI_{t-1} + \mu_{tINTR}$……………………………….…………….(3.6)

$MS_t = \alpha_{10} - \alpha_{20} EXR - \alpha_{30} INFL_t - \alpha_{40} INTR - \alpha_{50} ASI_t + \sum_{pt\_1} \beta_{10t} MS_{t-1} + \beta_{10t} EXR_{t-1} +$

$\beta_{12}^{t} INFL_{t-1} + \beta_{13}^{t} INTR_{t-1} + \beta_{14}^{t} ASI_{t-1} + \mu_t^{MS}$………………….…………………...…….....(3.7)

$ASI_t = \alpha_{10} - \alpha_{20} EXR - \alpha_{30} INFL_t - \alpha_{40} INTR_t - \alpha_{50} MS_t + \sum_{pt\_1} \beta_{10t} ASI_{t-1} + \beta_{10t} EXR_{t-1} +$

$\beta_{12t} INFL_{t-1} + \beta_{13t} INTR_{t-1} + \beta_{14t} MS_{t-1} + \mu_{tASI}$……………………………….……….(3.8)

a a

$[^{INTR}INFLEXRASIMS]$ $=$ $[CCCCC_{24513}]$ $[$ $AAAAI_{51312141}$ $AAAAI_{12423252}$ $AAAAI_{53431323}$ $AAAAI_{24341454}$ $AAAAI_{35154525}$ $]$ $[INTRINFLEXRASIMS_{ttt--tt---11111}]$ $+$ $[$ $a00I_{21}$ aaI_{324212} aaI_{431323} $a10024$ 0000 $UUUU_{ttINTRINFLtEXRtMS}$

a_{51} a_{52} a_{53} a_{54} $I]$ $[U_{tASI}]$

Where

$$1\ A\quad A$$

$$A = \quad AA_{2141}\ AI_{1242}\ AA_{431323}\ AAI_{1424}\ AAA_{251545}\qquad\qquad CCC_{241}\qquad INTRINFLEXRMS\ ,Z_{t-1}$$
$$= \quad INTRINFLEXRMS_{tt-tt---1l11}\ ,U_{t-1}=\quad UUUU_{ttINTRINFLtEXRtMS}\quad \text{and } a =$$

$$A_{31}\ A_{32}\ 1\ A_{34}\ A_{35}\ ,C = C_3\ ,Z =$$

$$[A_{51}\ A_{52}\ A_{53}\ A_{54}\ 1\ ]\qquad [C_5]\qquad [ASI]\qquad [ASI_{t-1}]\qquad [U_{tASI}]$$

$$a_{11}\ a_{12}\ a_{13}\ a_{14}\ a_{15}$$

$$a_{21}\ a_{22}\ a_{23}\ a_{24}\ a_{26}$$

$$aa_{3141}\ aa_{3242}\ aa_{3343}\ aa_{3444}\ aa_{3545}\quad such\ that\ U_t \sim\ iid\ (0, a^2)$$

$$[a_{51}\ a_{52}\ a_{53}\ a_{54}\ a_{46}]$$

z_t is a 5×1 vector of dependent variables; Z_t *is* a 5×1 vector of lagged variables; A is a 5×5 matrix of the parameters to be estimated and identified with 1 as a diagonal elements, C is a 5×1 vector of constants, a is a 5×5 matrix of the coefficients of lagged variables and $\square_t$ is a 5×1 vector of the structural/ orthogonal zed errors which are assumed to be serially uncorrelated with a mean of zero and a constant variance.

RESULT AND DISCUSSION

Descriptive statistics

Table 4.1 Descriptive statistics

Statistics	ASI	MS	EXR	INFL	INTR
Mean	4.895784	1.276936	2.288705	1.110099	0.868465
Median	4.676670	1.295352	2.196761	1.109801	0.870160
Maximum	6.767325	1.437414	2.813567	1.521688	1.043919
Minimum	4.301104	1.053098	2.007310	0.731428	0.514326
Std. Dev.	0.593406	0.116649	0.221402	0.171519	0.103695
Skewness	0.297370	-0.568901	0.715891	0.062906	-0.311384
Kurtosis	4.635598	2.105559	2.279771	3.207929	6.327410
Jarque-Bera	39.19942	8.727574	10.70303	0.246096	74.79404
Probability	0.000000	0.012730	0.004741	0.884221	0.000000
Sum	489.5784	127.6936	228.8705	111.0099	86.84646
Sum Sq. Dev.	34.86094	1.347089	4.852872	2.912468	1.064503
Observations	100	100	100	100	100

Source: Researcher computation using E-views 13.

Table 4.1 depicts the result of descriptive statistics of the study, it indicates that the standard deviations of the variables of used in the study are not far away from their means, this means that there is a minimum chance to have an error in the model. The Skewness of the distribution in the table shows that all share index, exchange rate and inflation rate are skewed to the right and less than while money supply, and interest rate are skewed to the right and less than one, by implication all the variables employed are normally distributed. The Kurtosis shows that money supply and exchange rate are normally distributed because their values are less than 3 while variable like all share index, inflation rate and interest rate are not normally distributed because their values are greater than 3. The Jarque-Bera test for normality is also estimated. It indicates that all share index, money

supply, exchange rate and interest rate are normally distributed as their p-values is greater than 5% with the exception of interest rate.

Unit Root Test

**Table 4.2 Augmented Dickey Fuller (ADF), Phillips Perron (PP)**

	Test at level		Test at first difference		Order of Integration
Variables	**ADF Statistics**	**PP Statistics**	**ADF Statistics**	**PP Statistics**	
ASI	-1.679820	-1.718809	-9.781356	-9.781356	I(1)
MS	-1.612159	-1.624160	-9.813897	-9.813897	I(1)
EXR	-0.858239	-0.851735	-10.02276	-10.02423	I(1)
INFL	-2.076311	-2.190023	-9.869763	-9.869763	I(1)
INTR	-3.060271	-3.275739	-	-	I(0)

Source: Researcher computation using E-views 13.

Table 4.2 present Augmented Dickey Fuller (ADF) and Phillips Perron (PP) unit root test, the tests indicate that variables; all share index, money supply, exchange rate and inflation rate are stationary at first difference while interest rate is stationery at level.

Impulse Response Functions (IRF)

Impulse Response Functions (IRFs) are tools of the unrestricted VAR approach for ascertaining the interaction among the variables in this study. They reflect how individual variables respond to shocks from other variables in the system. When graphically presented, the IFRs show a visual representation of the behavior of variables in response to shocks. The results can be shown in the figure **4.1** below:
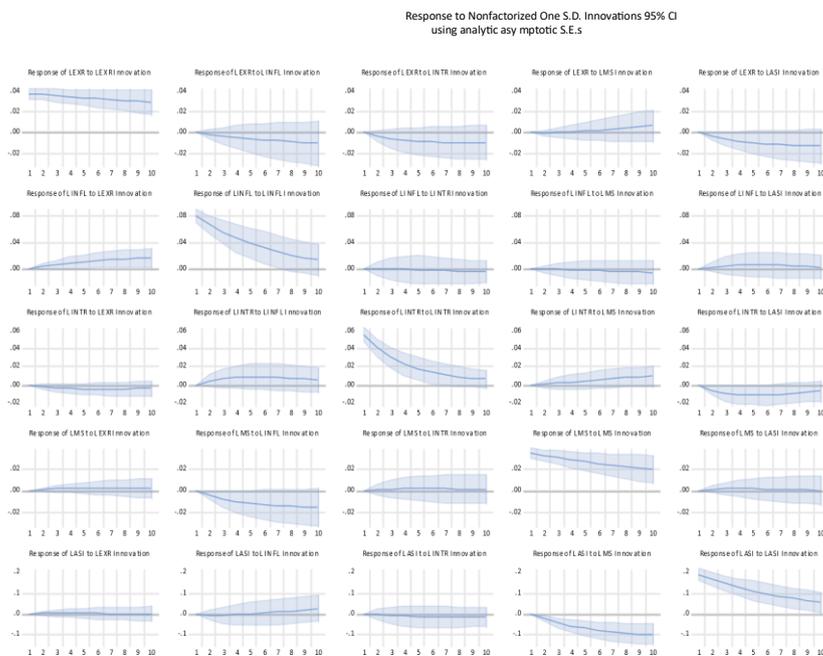
Source: Researcher computation using E-views 13.

The impulse response function presented above indicated that, one-unit response of exchange rate shock to its own is positive throughout the horizon in period. The response of exchange rate to inflation rate is negative from period one to 10. The response of exchange rate to interest rate is negative from period one to 10. The response of exchange rate to money supply is positive from period one to 10. The response of exchange rate to all share index is negative from period one to 10.

The response of inflation rate to exchange rate is positive throughout the horizon period. The response of inflation rate to interest rate is negative throughout the horizon period. The response of inflation rate to money supply is negative throughout the horizon period. The response of inflation rate to all share index is positive from period one to ten.

The response of interest rate to exchange rate is negative throughout the horizon period. The response of interest rate to inflation rate is positive throughout the horizon period. The response of interest rate to money supply is positive throughout the horizon period. The response of interest rate to all share index is negative throughout the horizon period.

The response of money supply to exchange rate is positive throughout the horizon period. The response of money supply to inflation rate is negative from period one to ten. The response of money supply to interest rate is positive throughout the horizon period. The one-unit response of money supply to all share index is positive throughout the horizon period.

The response of all share index to exchange rate is positive from period one to ten. The response of all share index to inflation rate is positive from period one to ten. The response of all share index to interest rate is negative from period one to ten. The response of all share index to money supply is negative from period one to ten.

Variance Decomposition

The change of exchange rate is always caused by 100 percent to itself in the first year. The fluctuation in real gross domestic product in both the short-run and long-run are explained by its own shock, approximately 98 percent in the 3 period and only to fall to 90 percent in periods 10. The shock attributable to all share index is very high, capable to explain only 80 percent of all share index variability in the short-run while in the short run is only 5 percent. Inflation rate in the short run explained itself by 97 percent in first period, in periods 3 also is 95 percent and it continues to fall in long run to 86 percent. The shock attributable to all share index is 19 percent in the short run and 7 percent in the long run. Interest rate in the short run explained itself by 98 percent in first period, in periods 3 also is 96 percent and it continues to fall in long run to 82 percent. The shock attributable to all share index is 1 percent in the short run and 6 percent in the long run. Money supply in the short run explained itself by 98 percent in first period, in periods 3 also is 97 percent and it continues to fall in long run to 86 percent. The shock attributable to all share index is 8 percent in the short run and 11 percent in the long run. All share index in the short run explained itself by 70 percent in first period, in periods 3 also is 72 percent and it continues to fall in long run to 65 percent. The shock attributable to exchange rate, inflation rate, interest rate and money supply are 47, 14, 3, and 8 percent in the short run.

SVAR Stability Test

The Structural VAR stability test was employed to know whether all the Eigen values are less than one or all the moduli are lies inside the unit circle. The figure 2 shows that all the moduli lies inside the unit circle. This means that SVAR model is stable, it signifies that the impact of the shocks are finite and calculable. Hence, the Structural VAR condition is satisfying.

Figure 2 SVAR Stability Test
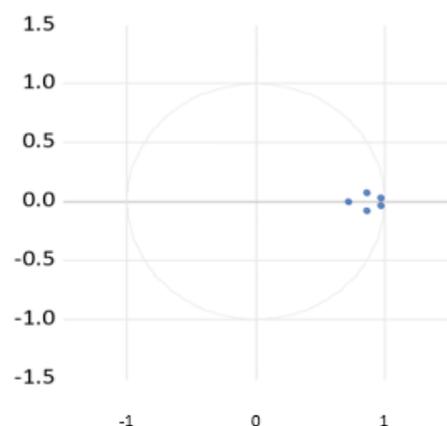
Source: Researcher computation using E-views 13.

Post estimation Test

The post estimation test is conducted to check the consistency and reliability of the estimated coefficients used in the model. The tests are; Serial Correlation, Heteroscedasticity and normality test.

Table 4.3 post estimation test

Residual serial correlation LM tests		
Lags	LM-Stat	Prob
1	28.60280	0.9975
Residual heteroscedaticity tests		
Chi-square	Df	
249.7700	150	0.4910
Residual Normality tests		
Jarque-Bera	Df	
4824.329	10	0.0000

Source: Researcher computation using E-views 13.

From table 4.3, it shows that the model is free from serial correlation and Hetroskedasticity because their pvalues are greater than 5% while Normality test indicates that we cannot reject the null hypothesis because its pvalue is less than 5%.

CONCLUSIONS AND RECOMMENDATIONS

The study examines the effect of macroeconomic shocks on stock market performance in Nigeria between 2000q1 and 2024q4. The unit root test indicates that all share index, money supply, exchange rate and inflation rate are stationary at first difference while interest rate is stationery at level. The impulse response function shows that exchange rate transmits negative shock to all share index in Nigeria. Inflation rate transmits positive shock to all share index in Nigeria. Interest rate transmits negative shock to all share index in Nigeria. Money supply transmits positive shock to all share index in Nigeria. The study concludes that macroeconomic shocks play a significant role in shaping stock market performance in Nigeria. The direction and magnitude of these effects underscore the importance of macroeconomic stability. The study recommends that Central Bank of Nigeria (CBN) should improving foreign exchange supply, diversifying export earnings, and reducing import dependence will help mitigate currency volatility and strengthen investor confidence in the capital market and Central Bank of Nigeria (CBN) should ensure adequate liquidity in the financial system, especially during periods of economic downturn, to support capital market activities.

REFERENCES

1. Abdul-Maliq, A., & Sule, A. (2017). Macroeconomic variables and stock market performance in developing economies. Journal of Economics and Finance, 9(2), 45–59.
2. Abdul-Maliq, A., Ali, S., & Yua, H. (2021). Remittances and stock market performance: Evidence from emerging economies. International Journal of Financial Research, 12(1), 88–102.
3. Adaramola, A. O. (2011). The impact of macroeconomic indicators on stock prices in Nigeria. Developing Country Studies, 1(2), 1–14.
4. Adeleke, A. I., Olowe, S. O., & Fasesin, O. O. (2020). Effects of selected macroeconomic variables on stock market returns in Nigeria. Journal of Economics and Sustainable Development, 11(4), 35–49.
5. Adiga, I. O., Haruna, D., Yua, H., & Adigwe, P. K. (2020). Macroeconomic indicators and national development policies. Journal of Policy Modeling, 42(3), 567–583.

6. Adoms, C., Yua, H., Okaro, C. S., & Ogbonna, O. E. (2020). Governance quality and stock market performance in emerging economies. Journal of Accounting and Finance, 20(6), 110–126.

7. Auzairy, N. A. (2011). Stock market deregulation and performance: Evidence from developing economies.
Asian Economic Review, 53(1), 72–90.

8. Central Bank of Nigeria. (2020). Statistical bulletin. Central Bank of Nigeria.

9. Demirel, E. (2017). Economic confidence and macroeconomic indicators: Evidence from emerging markets. Journal of Economic Studies, 44(2), 312–329.

10. Emem, O. I., & Victoria, E. E. (2020). Stock market performance and economic growth in Nigeria. International Journal of Economics and Finance, 12(7), 45–61.

11. Emmanuel, O. (2020). Money supply and economic performance in developing countries. African Journal of Economic Policy, 27(1), 89–104.

12. Enders, W. (2015). Applied econometric time series (4th ed.). Wiley.

13. Greenwood, J., & Smith, B. D. (1997). Financial markets in development and the development of financial markets. Journal of Economic Dynamics and Control, 21(1), 145–181.

14. Gurioveleen, K., & Bhatai, S. (2015). Inflation and stock market performance: Empirical evidence. Global Journal of Management and Business Research, 15(2), 21–30.

15. Hooper, V. (2005). Government institutions and stock market performance. Journal of International Financial Markets, Institutions and Money, 15(4), 385–402.

16. Ibrahim, M. A. (2019). Effect of unstable macroeconomic indicators on banking sector stock price behaviors in Nigerian stock market. Journal of Finance and Banking Studies, 8(3), 14–29.

17. Issahatu, G., Ustarz, Y., & Domanban, P. B. (2013). Interest rate dynamics and stock market performance. International Journal of Economics and Business Research, 5(4), 401–416.

18. Justin, O., & Ekwugha, U. P. (2020). Monetary policy and stock market performance: Evidence from Nigerian stock exchange. Journal of Monetary and Economic Studies, 12(1), 66–85.

19. Mechri, N., Hamad, S. B., Peretti, C., & Charfi, S. (2019). Exchange rate volatility and stock market performance. Research in International Business and Finance, 47, 100–115.

20. Mügge, D. (2015). Political economy and macroeconomic indicators. Review of International Political Economy, 22(2), 365–390.

21. Muthike, S. W., & Sakwa, M. (2012). Exchange rate fluctuations and stock market returns. International Journal of Business and Social Science, 3(21), 234–241.

22. Notte, A. L. (2019). Adjusting macroeconomic indicators for ecosystem degradation. Ecological Economics, 159, 189–200.

23. Odey, F. I., Owan, E. J., & Owan, V. J. (2023). Financial indicators and stock market performance in Nigeria. Asian Journal of Economics and Banking, 7(2), 112–131.

24. Odi, N., Eze, G., & Uche, U. (2021). Stock market performance and macroeconomic fundamentals in Nigeria. Journal of African Business, 22(4), 567–586.

25. Okechukwu, E. E. (2019). Stock market volatility and regulatory responses in Nigeria. Nigerian Journal of Economic Studies, 8(1), 55–71.

26. Okoro, E. (2017). Macroeconomic variables and stock market returns in Nigeria. International Journal of Finance and Economics, 22(3), 230–245.

27. Olabanji, O. E. (2013). Stock market performance as a leading indicator of macroeconomic variables in Nigeria. Journal of Economics and Development Studies, 1(2), 45–60.

28. Olokoyo, F. O. (2020). Interest rate, inflation and stock market performance in Nigeria. African Journal of Economic Review, 8(1), 89–106.

29. Ordue, G. E., Briggs, A. S., & Jack, E. O. (2024). Evaluating the nexus between macroeconomic indicators and stock market performance in Nigeria. Journal of Applied Economics, 27(1), 1–20.

30. Osamwonyi, I. O. (2012). The relationship between macroeconomic variables and stock market index in Nigeria. Journal of Economics, 3(1), 55–63.

31. Oskooe, S. A. P. (2010). Emerging stock markets and macroeconomic variables. Journal of Economic Studies, 37(2), 149–163.

32. Pavolová, H. (2019). Macroeconomic indicators and raw material policy in Slovakia. Resources Policy, 62, 220–230.

33. Rakhal, S. (2018). Macroeconomic determinants of stock market performance. Journal of Financial Markets, 40, 1–15.

34. Riman, H. B., Essoh, E. A., & Bassey, J. U. (2008). Stock market development and economic growth in Nigeria. International Journal of Finance and Economics, 13(1), 98–109.
35. Sami, M. (2020). Cryptocurrency markets and stock market dynamics. Journal of Digital Finance, 2(1), 45–61.
36. Sanya, O., & Isaac, O. (2020). Macroeconomic determinants of stock market performance in Nigeria. Journal of African Finance, 5(2), 77–96.
37. Shrestha, P. K. (2014). Macroeconomic variables and stock market performance. Journal of Business and Economics, 5(4), 564–577.
38. Suoye, O. E., & Itotenaan, T. (2020). Perceived macroeconomic factors and stock market capitalization in Nigeria. International Journal of Economics and Financial Issues, 10(3), 56–67.
39. Sylvester, O. C. (2020). Effects of macroeconomic variables on stock market performance in Nigeria. Journal of Economics and Management, 40(2), 99–118.
40. Tite, M. A. (2022). Stock market performance and macroeconomic fundamentals in emerging markets. Journal of Financial Economics, 144(3), 789–805.
41. Tripathi, V. (2014). Stock market performance and macroeconomic variables. International Journal of Economics and Finance, 6(8), 1–13.
42. Winful, E. C., Sarpong, D., & Sarfo, A. K. (2016). Interest rate and stock market performance. Journal of Finance and Investment Analysis, 5(3), 25–40