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Impact of Broad Money Supply, Exchange Rate, Monetary Policy Rate and Inflation on Nigerian Stock Market Returns (1985-2023)

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Abstract

The stock market plays a vital role in mobilizing long-term capital, and its performance is influenced by key macroeconomic conditions. This study examines the impact of monetary policy variables on stock market returns in Nigeria from 1985 to 2023. Specifically, it investigates the effects of broad money supply (M2), exchange rate (FXR), monetary policy rate (MPR), and inflation (INF) on the All Share Index (ASI), which serves as a proxy for stock market performance. Employing an ex post facto research design, secondary data were obtained from the Central Bank of Nigeria Statistical Bulletin. The Augmented Dickey-Fuller (ADF) test was used to assess stationarity, while cointegration and the Autoregressive Distributed Lag (ARDL) model were employed to analyze both short-run and long-run relationships among the variables. The stationarity results reveal that M2, FXR, and INF are integrated of order zero [I(0)], whereas ASI and MPR are integrated of order one [I(1)], indicating a mixed order of integration. The findings show that inflation negatively affects stock market

returns, while the exchange rate has a positive long-run influence but an insignificant short-run effect. Moreover, both the monetary policy rate and broad money supply exert positive effects on the ASI, with the latter demonstrating a statistically significant impact. The study concludes that monetary policy variables have both positive (M2 and MPR) and negative (FXR and INF) influences on stock market performance in Nigeria. It recommends that policymakers strengthen institutional and policy frameworks to ensure effective monetary management, focusing on domestic policy instruments that can mitigate the adverse effects of external economic shocks.

Keywords: macroeconomic variables, stock market returns, all share index, monetary policy rate, exchange rate

1.0 Introduction

The stock market plays a critical role in mobilizing long-term capital for economic growth and development. It serves as a platform where corporations and governments raise funds through the issuance of equity and debt instruments, while investors trade securities to accumulate wealth (Gbanador, 2021). Beyond providing a marketplace for buyers and sellers, the stock market facilitates price discovery, ensures liquidity and transparency, and reflects the overall health of the economy (Uguru, Nwokoro, & Okpara, 2024; Maton-Awaji, Ezebunwa, & Amadi, 2024). Consequently, the performance of stock markets is influenced not only by firm-specific factors such as dividend payments and profitability but also by a range of macroeconomic variables.

Macroeconomic variables are key indicators of a nation's economic performance and stability (Yanushevsky & Yanushevsky, 2018). Economists and financial analysts rely on these variables (such as gross domestic product (GDP), government expenditure, inflation, exchange rate, and interest rates) to understand economic trends and inform policy or investment decisions. Empirical evidence (Ogbulu, Torbira, & Umezinwa, 2015; Ndubuisi & Uma, 2016; Akinlo & Emmanuel, 2017; Aremo, Olabisi, & Adeboye, 2020; Oladipo, Ado, Alesinloye, & Yusuf, 2024; Adesokan, Oluwayemisi, Adeleke, & Ojo, 2025) suggests that these variables significantly influence stock market performance through their effects on investor confidence, capital flows, and corporate earnings.

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Theoretical and empirical studies have established both direct and indirect linkages between macroeconomic variables and stock market returns. Two main perspectives dominate the literature: one suggests that macroeconomic conditions drive stock market performance (Amadi & Odubo, 2002), while the other posits that stock markets influence economic growth (Smith, 1990). From a fundamental analysis perspective, changes in money supply, interest rates, and inflation are expected to affect investors' required rate of return, thereby influencing stock prices (Osamwonyi & Evbayiro-Osagie, 2012). Moreover, empirical findings show that monetary policy announcements and exchange rate fluctuations can trigger significant adjustments in stock prices (Gbanador, 2024).

Despite the breadth of existing research, findings remain inconclusive and context-dependent, with no consensus on the direction or magnitude of macroeconomic influences on stock market performance in Nigeria. Furthermore, while several studies have examined interest rates, few have explicitly analyzed the monetary policy rate (MPR), which is a key policy instrument that guides interest rate movements in Nigeria. Similarly, limited attention has been paid to the distinction between short-run and long-run effects of macroeconomic variables on stock market returns. Addressing these gaps is essential for understanding the transmission mechanisms of monetary policy and their implications for investment decisions and market stability.

Therefore, this study investigates the impact of selected monetary policy variables: broad money supply (M2), exchange rate (FXR), monetary policy rate (MPR), and inflation (INF), on stock market returns in Nigeria, as proxied by the All-Share Index (ASI), over the period 1985–2023. By applying the Autoregressive Distributed Lag (ARDL) model, the study captures both short- and long-run dynamics, providing empirical evidence to guide policymakers and investors in promoting a stable and efficient financial market.

2.0 Literature Review
Exchange Rate and Stock Market Returns
The exchange rate represents the value of one nation's currency relative to another (Ibukun, Ogundele, Effange, & Aruleba, 2021). A strong and stable exchange rate signals economic strength, while persistent depreciation reflects vulnerability and macroeconomic instability (Hassan, Abubakar, & Dantama, 2017). Exchange rate volatility can trigger real economic shocks by influencing price levels, business profitability, and overall market performance.

Kenneth and Onyedikachi (2021) argue that due to globalization and trade liberalization, exchange rates and stock market prices are increasingly interconnected as global investors diversify across markets. Exchange rate fluctuations affect the returns on foreign investments, thereby influencing portfolio allocation decisions. Privara, Gohar, and Alzoubi (2024) identify the exchange rate as one of the most significant determinants of stock market movements. Similarly, Soukotta, Yusuf, and Efendi (2023) observe that investors often prefer low-risk domestic assets when foreign currency markets become volatile.

Empirical findings on the relationship between exchange rates and stock returns are mixed. Saputra, Veny, and Mayangsari (2022) found that exchange rate movements significantly influence stock prices, while Kartikaningsih, Nugraha, and Sugiyanto (2022) confirmed that exchange rates are a fundamental determinant of stock price behavior. Conversely, Fauziyah and Novi (2022) reported a negative association between currency depreciation and stock market performance, indicating that exchange rate instability can erode investor confidence and asset valuation.

Money Supply and Stock Market Returns

The money supply, a key instrument of monetary policy, is central to macroeconomic management due to its influence on economic activity and financial market performance (Osamwonyi & Evbayiro-Osagie, 2012). When the growth in money supply outpaces the production of goods and services, it fuels inflationary pressures, prompting investors to shift their portfolios from financial to real assets as a hedge against declining purchasing power (Gbanador, 2024). Udegbunam and Oaikhenan (2002) similarly note that excessive liquidity can drive inflation, leading to a decline in real stock returns.

Given Nigeria's rapid monetary expansion, it is expected that changes in money supply may significantly influence stock market behavior. While an adequate money supply can enhance market liquidity and investment, uncontrolled expansion could weaken asset values by reducing real returns. Hence, maintaining an optimal level of money growth is essential for promoting stock market stability.

Inflation Rate and Stock Market Returns

Inflation represents a sustained increase in the general price level and reflects changes in money relative to output. From a monetary perspective, managing inflation is central to monetary policy objectives (Osuagwu, 2009). Although equities are theoretically considered a hedge against inflation because they represent claims on real assets, empirical evidence has consistently shown a negative relationship between inflation and stock returns (Fama, 1981; Benderly & Zwick, 1985; Har, Ng, Lee, Hooi, & Tan, 2024).

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Rapid increases in consumer prices reduce the real value of equity returns, thereby diminishing investor confidence. Chandra (2004) posits a bidirectional relationship between inflation and corporate performance, as some sectors may benefit from rising prices while others suffer reduced profitability. Fama (1990) found that both expected and unexpected inflation adversely affect stock prices, primarily because inflation interacts with taxation and accounting systems. For instance, the taxation of nominal capital gains and historical-cost depreciation lowers real corporate earnings, leading to reduced equity valuations (Amadi & Odubo, 2002; Okechukwu, Mbadike, Geoffrey, & Ozurumba, 2019). Similarly, Ordue, Yua, Ityavyar, and Tarnongo (2024) argue that in inflationary environments, investors often undervalue corporate stocks, linking equity pricing more closely to nominal than to real interest rates.

Monetary Policy Rate and Stock Market Returns

The monetary policy rate (MPR), formerly known as the minimum rediscount rate, serves as the benchmark for short-term interest rates in Nigeria and represents a crucial instrument of monetary control. According to Friedman (1956), higher interest rates discourage borrowing in the money market, prompting investors to liquidate their stock holdings or issue new equity, which can exert downward pressure on stock prices. Kashyap (1997) and Bofinger (2001) similarly suggest that increases in policy rates can reduce stock valuations in the short term due to higher discount rates on future earnings.

Conversely, Abu and Ibekwe (2023) note that higher interest rates attract investors toward money market instruments such as Treasury bills, considered risk-free alternatives to equities. However, in the long run, a stable and predictable interest rate environment may enhance stock market performance by fostering investment confidence. Empirical findings remain mixed: while Shrestha and Subedi (2015) found that the stock market in Nepal responds positively to broad money growth and inflation but negatively to interest rates, Ordue et al. (2024) observed a significant relationship between interest rate changes, monetary policy adjustments, and stock market dynamics in developing economies.

2.2 Theoretical Framework

The question of how stock returns are determined and the factors that influence them has been approached from multiple theoretical perspectives. Among the most prominent is the Efficient Market Hypothesis (EMH**),** which posits that stock prices fully reflect all available information in the market. According to the EMH, fundamental variables such as earnings per share, dividends per share, payout ratio, company size, dividend yield,

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managerial efficiency, and portfolio diversification largely determine stock prices (Srinivasan, 2012). This implies that investors cannot consistently achieve abnormal returns, as prices already incorporate all relevant information about a firm's performance and prospects.

However, in real-world markets, perfect efficiency is rarely achieved due to information asymmetry. Khan (2009) argues that information asymmetry arises because managers possess superior knowledge of their firm's prospects compared to outside investors. As a result, not all stakeholders have simultaneous access to market information. This uneven distribution of information can lead to mispricing of assets, delayed market adjustments, and volatility in stock returns.

In the context of this study, the EMH provides a foundation for understanding how macroeconomic and monetary policy variables influence stock market returns. If markets are efficient, changes in variables such as money supply, exchange rate, monetary policy rate, and inflation should be quickly incorporated into stock prices. However, in an environment characterized by information asymmetry, these macroeconomic shocks may not be fully or immediately reflected, leading to short-term inefficiencies and fluctuations in returns.

Thus, the theoretical framework recognizes that while stock market performance may be guided by efficient market principles, the presence of informational gaps and policy uncertainties—common in emerging economies like Nigeria—can cause deviations from perfect efficiency, thereby influencing the responsiveness of stock returns to monetary policy variables.

2.3   Empirical Review

Using data from 1995 to 2015, Islam, Mostofa, and Tithi (2017) investigated the macroeconomic and institutional factors that influence stock market performance. The macroeconomic determinants were represented by the GDP, CPI, inflation rate, and FDI inflows, while the institutional determinants of capital market performance were represented by the Dhaka Stock Exchange's market capitalisation, total issued capital, and market turnover. Using both descriptive and inferential statistics, it was discovered that macroeconomic and institutional factors had a major impact on the performance of the capital market. The macroeconomic drivers of GDP and CPI, as well as the institutional determinant of total market capitalisation, were determined to be important.

Khalid and Khan (2017) used annual time series data spanning the 1991–2017 period to empirically examine the impacts of interest rates, exchange rates, and inflation

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rates on Pakistan's stock market performance. Using Autoregressive Distributed Lag Bounds, the results showed that interest rates had a significant and negative impact on the market index, whereas inflation and the exchange rate had a long-term positive effect on stock market volatility. In the same way, Ekpo and Udobia (2015) investigated the dynamic interaction between fiscal deficit and inflation in Nigeria using evidence from ARDL Bounds Test. The findings revealed that, in the long run, there is a positive but statistically insignificant relationship between fiscal deficit and inflation in Nigeria. The study recommends policymakers adopt fiscal and monetary discipline and moderate deficit financing to avoid persistent inflationary pressures that could negatively affect the purchasing power of Nigerians.

Kolapo, Oke, and Olaniyan (2018) dissected how macroeconomic fundamentals affected Nigerian stock market performance between 1986 and 2015. Data on the money supply, interest rates, inflation rates, currency rates, gross domestic product, and all-share index were collected for this study. The estimating method used in this work was the Auto Regressive Distributed Lag (ARDL) bounds testing methodology. It discovered that the money supply and GDP had a major influence on Nigeria's stock market performance. In addition, there was a long-term relationship (co-integration) between macroeconomic fundamentals and stock market performance, and all the study's features (apart from the money supply and interest rate) were positively correlated with stock market success.

In order to identify the macro-factors influencing stock market returns in Nigeria, Aremo, Olabisi, and Adeboye (2020) looked at the effects of a few chosen macroeconomic variables on stock market returns in the country between 1985 and 2014. Using time series data from 1985 to 2014 and the Autoregressive Distributed Lag (ARDL), the results demonstrate that while money supply and trade openness have a significant positive long-term impact on stock market returns, foreign direct investment inflows and external debt have no discernible effect.

Udo, Odey, and Jacob (2022) looked into how certain macroeconomic factors affected Nigeria's stock market performance. Time-series data were used in the investigation. There was a long-term association between the variables in the estimated model, according to the Autoregressive Distributive Lag (ARDL) finding. The outcome demonstrates that macroeconomic factors, including the GDP, the broad money supply, the exchange rate, and the savings interest rate, all positively impact Nigeria's stock market performance. However, the findings indicated that Nigeria's stock market performance is negatively impacted by the rate of inflation.

Gbanador (2024) investigated how Nigerian stock prices were affected by macroeconomic factors. This analysis was conducted using annual time series data

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from 1995 to 2021. The data was analysed using the Phillips-Perron and Parsimonious Error Correction models as well as the Augmented Dickey Fuller (ADF) model. The short-term results indicate that, with the exception of inflation, which has a positive and significant impact on stock price, none of the macroeconomic variables used in the study have a positive and significant impact. According to the long-term analysis, the money supply and interest rates have a negligible and inverse impact on the behaviour of stock prices. In Nigeria, the exchange rate has a positive and considerable impact on the behaviour of stock prices, whereas inflation has a positive but negligible effect.

Maton-Awaji, Ezebunwa, and Amadi (2024) examined how macroeconomic factors affected Nigeria's stock market performance between 1985 and 2023, with a particular emphasis on the connections between GDP, exchange rates, inflation rate, and stock market returns (SMR). The study uses the Autoregressive Distributed Lag (ARDL) technique to examine short-term dynamics between the variables using data from reliable financial and economic databases. The results show that GDP significantly improves SMR over the short and long term, indicating that economic expansion boosts market performance and investor confidence. On the other hand, INFR shows a negative effect on SMR, underscoring the negative consequences of increasing inflation on the dynamics of the stock market. Furthermore, EXR has a long-term favourable impact on SMR, albeit a less noticeable one in the short term. The study concluded that a strong stock market environment in Nigeria requires efficient economic policies targeted at boosting GDP growth, containing inflation, and stable exchange rates.

Adesokan et al. (2025) examined the effect of some macroeconomic variables on stock market performance in Nigeria from the years 1993-2020 using the autoregressive distributed lag (ARDL) technique. The macroeconomic variables used in this study are inflation (INF), gross domestic product (GDP), interest rate (INT), exchange rate (EXR) and money supply (MS). This study observed that INF, which is an important variable in the model, affects stock market performance negatively. It was also observed that GDP has a positive relationship with stock market performance, and it is statistically insignificant, which implies that an increase in gross domestic product leads to a decrease in stock market performance. The study also observed a negative relationship between exchange rate and stock market that is statistically insignificant, which means that an increase in exchange rate would reduce stock market performance. Interest rate also had a positive relationship with stock market performance and is statistically insignificant, which implies that an increase in interest rate would reduce stock market performance. Money supply was observed to have a positive relationship with stock

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market performance, and it is statistically significant, and an increase in money supply would lead to an increase in stock market performance.

Akanbi (2025) conducted research on the relationship between stock market performance and macroeconomic conditions. In order to investigate the relationship between macroeconomic factors and stock market performance in Nigeria between 2003 and 2022, the study used the Autoregressive Distributed Lag (ARDL) cointegration approach. The ARDL results showed that there was no long-term link between the variables and that there was a short-term linear association. Although it was a negligible effect, the data indicated that GDP growth had a favourable impact on Nigerian stock performance. Nonetheless, the analysis discovered that inflation, interest rate spread, and the macroeconomic climate as a whole had a negative but negligible impact on stock market performance.

Jabil, Ibbih, and Akawu (2025) investigated the impact of macroeconomic factors on Nigerian stock market returns. The data was analysed using the error correction mechanism, and the findings show that macroeconomic variables had a positive but negligible effect on stock market returns throughout the 1990–2024 study period. Therefore, the study suggests that Nigeria's interest rate be lowered because it is excessively high. The study also supports stable macroeconomic policies that will support the expansion of the private sector. It also suggested that the government should enhance national security and build the infrastructure required to boost the nation's economy and, in particular, stock market returns.

3.0   Methodology

This investigation used an ex post facto design because it was conducted after the events had taken place. This design was chosen because the researchers had no control over the independent variables, and the conclusions about the relationship between the variables were drawn without accounting for any current interaction between the dependent and independent variables. The ADF unit root test, trend analysis of stylised facts for key indicators, and the autoregressive distributed lag model are some of the econometric methods used in the design. The all-shares index (ASI) is the study's dependent variable, and broad money supply (M2), monetary policy rate (MPR), foreign exchange rate (FXR), and inflation rate (INF) are the independent variables. The model for this study, in its functional form, is expressed as:

That is ASI = f (M2, FXR, MPR, INF) ………………............……… (i)

The model can therefore be restated mathematically as

$ASI = \beta_0 + \beta_1 M2 + \beta_2 FXR + \beta_3 MPR + \beta_4 INF + \mu_t$…………………………(ii)

Where:
ASI = All Share Index
M2 = Broad money supply
FXR = Foreign exchange rate
MPR = Monetary policy rate
INF = Inflation
μt = Error term or unexplained variable
$\beta 0$ = Parameter of constant ASI
$\beta 1, \beta 2, \beta 3, \beta 4$ = Regression intercept or parameters of M2, FXR, MPR, INF

The cointegrated Autoregressive Distributed Lag (ARDL) model is the primary analytical tool used in this study, while the ordinary least squares (OLS) technique was used for estimation. This method is effective for determining the level of relationships between integrated variables of mixed orders.

As the fundamental idea of time series processes, it is crucial to evaluate the series for stationarity before determining any potential long-term relationships. In order to determine whether a unit root exists, the order of integration of the variables is examined using the Argument Dickey-Fuller (ADF) (Dickey & Fuller, 1979) Unit Root Test. Since the variables are expected to be integrated of order $\{I(1)$ and $I(0)\}$, the study then used the ARDL bound test approach to investigate the long-term relationship of the variables.

Because of its adaptability to handling data, robustness for small and finite sample sizes (as applicable to this study), and ability to draw conclusions about the variables under investigation, this study uses the Auto-Regressive Distributive Lag (ARDL) approach developed by Pesaran, Shin, and Smith (2001). The autoregressive distributed lag model's (ARDL) fundamental premise is that all variables are integrated of Level I (0) and Order I (1). The long-term effects of particular macroeconomic factors on economic growth are tested using this model. When compared to alternative cointegration methods, the autoregressive distributed lag (ARDL) model offers a number of benefits. First, endogeneity issues are avoided by the ARDL paradigm. Second, it concurrently estimates the short- and long-term characteristics. Third, the methodology is suitable whether the primary variables are I (0), I (1), or mutually integrated; therefore, pre-testing for unit roots is not necessary. Fourth, it is assumed that every variable is endogenous. The model eliminates the issue of serial correlation in general to particular modelling frameworks and takes enough lags to describe the data collection process. Accordingly, the ARDL approach has less of an issue with endogeneity (Baharumshah, Mohd, & Mansur, 2009).

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Below is a presentation of the ARDL model:

$$\Delta ASI_t = \beta_0 + \beta_1 M2_{t-1} + \beta_2 FXR_{t-1} + \beta_3 MPR_{t-1} + \beta_3 INF_{t-1} + \sum \lambda_1 \Delta M2_{t-i} + \sum \lambda_2 \Delta FXR_{t-i} + \sum \lambda_3 \Delta MPR_{t-i} + \sum \lambda_4 \Delta INF_{t-i} + U_t \dots\dots\dots (iii)$$

where,

λ = the first difference operator

β = the drift component

U_t = white noise with zero mean

λ = speed of adjustment

$\beta i, \lambda I$ = parameter coefficients of the variables

Having established evidence of cointegration among the variables in the models, the long-run parameters are estimated based on the specifications below:

$$ASI_t = \beta_0 + \beta_1 M2_{t-1} + \beta_2 FXR_{t-1} + \beta_3 INF_{t-1} + \beta_4 MPR_{t-1} + U_t \dots\dots\dots\dots (iv)$$

To estimate the short-run relationship between the variables and the speed of adjustment of the model to equilibrium, the corresponding error correction equation is estimated for model (4).

$$\Delta ASI_t = \lambda_0 + \sum \lambda_1 \Delta M2_{t-i} + \sum \lambda_2 \Delta FXR_{t-i} + \sum \lambda_3 \Delta MPR_{t-i} + \sum \lambda_4 \Delta INF_{t-i} + \lambda_5 ECM_{t-i} + U_t \dots\dots\dots (v)$$

where,

ECM = Error Correction Term

$\Lambda 5$ = Speed of adjustment of the model in respect of its convergence to equilibrium.

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4.0 Analysis and Results

This section deals with data interpretation and discussion of findings made from the analysis.

Table 1: Descriptive Statistics

	ASI	M2	FXR	MPR	INF
Mean	20256.34	11413.87	141.1169	13.68077	19.71744
Median	20730.63	2131.820	125.8300	13.50000	12.20000
Maximum	74773.77	63512.40	645.1900	26.00000	76.76000
Minimum	127.3000	22.30000	0.890000	6.000000	0.220000
Std. Dev.	18550.46	15939.55	143.6582	3.708021	17.57168
Skewness	0.822583	1.523376	1.475941	0.738538	1.835734
Kurtosis	3.268904	4.659653	5.335976	4.965430	5.397890
Jarque-Bera	4.515675	19.56037	23.02689	9.822587	31.24802
Probability	0.104576	0.000057	0.000010	0.007363	0.000000
Sum	789997.4	445140.9	5503.560	533.5500	768.9800
Sum Sq. Dev.	1.31E+10	9.65E+09	784231.5	522.4781	11733.02
Observations	39	39	39	39	39

Source: Researcher's Computation

The mean, which is calculated by adding up the series and dividing by the number of observations, is the average of all the data used for each variable. Table 1 displays the average yearly performance of the variables, showing ASI (20256.34), M2 (11413.87), FXR (141.1169), MPR (13.68077), and INF (19.71744). The standard deviation gauges the degree of dispersion among the variables, while the mean serves as a gauge of central tendency. A dispersion of 18550.46, 15939.55, 143.6582, 3.708021, and 17.57168 is revealed by the standard deviation results for stock market returns, money supply, foreign exchange rate, monetary policy rate, and inflation, respectively.

Skewness and kurtosis statistics are referred to as "shape statistics" since they characterise the distribution's shape. A distribution's symmetry is gauged by its skewness. A normal distribution is said to have zero skewness, whereas a positive

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skewness indicates that the distribution has a long right tail, and a negative skewness indicates that the distribution has a long left tail. It is evident from the preceding table that all of the variables have a long right tail and that the all-share index (0.822583), monetary policy rate (0.738538), money supply (1.523376), inflation (1.835734), and exchange rate (1.475941) all have positive values. Kurtosis quantifies a distribution curve's tail-heaviness. Since each variable's kurtosis value is more than one, their distributions are referred to as leptokurtic distributions; that is, they have heavier tails than a normal distribution.

A goodness-of-fit test called the Jarque-Berra test compares the skewness and kurtosis of the series to those from a normal distribution. The null hypothesis that the variable is normally distributed is accepted if the p-value of the Jarque-Bera statistic is greater than 0.05. Conversely, if the p-value is less than 0.05, the null hypothesis is rejected, and it is determined that the variable is not normally distributed. As can be seen from the table, the p-values of the Jarque-Bera statistics for money supply, exchange rate, monetary policy rate and inflation (0.000057, 0.000010, 0.007363, and 0.000000, respectively) are less than 0.05. As a result, the normal distribution null hypothesis is rejected, and it is determined that the variables are not normally distributed. The null hypothesis is accepted since the p-value for the entire share index is 0.104576, which is higher than 0.05.

Table 2: Unit Root Test

Variables	Levels		First DIFF		
	t-stat	Prob	t-stat	Prob	
ASI	-0.111280	0.9409	-5.196403	0.0001	I (0)
M2	3.652305	0.9999	-4.718603	0.0005	I (1)
FXR	3.820788	0.9999	-4.601704	0.0008	I (1)
MPR	-3.381728	0.0179	-8.404934	0.0000	I (0)
INF	-2.680060	0.0876	-3.628148	0.0121	I (1)

Source*: Author's Computation*

According to the unit root rule, a variable is not stationary at levels if its probability is higher than 5%. We then test the variable's second form to determine if it is stationary at the first difference. The variable is considered stationary at first difference, I(1), if the probability of its second form is less than 5%. If the probability of a variable's first form is less than 5%, then the variable is stationary at level I (0). According to the

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unit root test results shown in the table above, the ASI, M2, FXR, MPR, and INF variables are all stationary at the first difference.

Table 3: Cointegration result

Series: ASI M2 FXR MPR INF

Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.639938	89.24536	69.81889	0.0007
At most 1 *	0.483836	51.45060	47.85613	0.0221
At most 2	0.357138	26.98138	29.79707	0.1021
At most 3	0.185153	10.63386	15.49471	0.2350
At most 4	0.079323	3.057919	3.841466	0.0803

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.639938	37.79477	33.87687	0.0162
At most 1	0.483836	24.46922	27.58434	0.1192
At most 2	0.357138	16.34752	21.13162	0.2052
At most 3	0.185153	7.575939	14.26460	0.4235
At most 4	0.079323	3.057919	3.841466	0.0803

Source: *Author's Computation*

The cointegration analysis in table 3 was used to determine the level of integration among the dependent and independent variables for the period under study. The trace result shows that there are 2 cointegrating equations, while Max-Eigen shows 1 cointegrating equation. This suggests that there is a long-run relationship between proxies of macroeconomic variables and all share indices.

4.1 Autoregressive Distributed Lag Model (ARDL)

The ARDL model estimates the independent variables' (macroeconomic variables') short- and long-term effects on the dependent variable (stock market returns). The table below displays the findings of the ARDL model analysis:

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Table 4: ARDL Long Run Analysis

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-21.45310	21.85823	-1.937686	0.0846
ASI(-1)*	-0.953219	0.225307	-4.230760	0.0022
D(M2)	6.618548	2.439689	2.712865	0.0239
D(M2(-1))	-2.707447	2.298831	-1.177750	0.2691
D(FXR)	-1.038749	1.079241	-0.962481	0.3610
D(FXR(-1))	-0.899970	1.327051	-0.678173	0.5147
D(MPR)	0.866656	0.093461	0.927187	0.3780
DMPR(-1)	0.208872	0.135243	1.544428	0.1569
D(INF)	-0.029792	0.051634	-0.576997	0.5781
D(INF(-1))	-0.060707	0.045287	-1.340485	0.2129

Source: Author's Computation

The impact of macroeconomic factors on long-term stock returns in Nigeria was displayed in Table 4 above. Long-term results revealed that C is the regression equation's intercept, and its coefficient, which is -21.45310, is determined to be non-statistically significant. There was a weak and negative relationship with inflation. The monetary policy rate demonstrated a positive but negligible correlation. The foreign exchange rate is negligible and negative. The money supply demonstrated a strong and favourable correlation.

Table 5: ARDL Error Correction Regression

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(INF)	-0.029792	0.024396	-1.221198	0.2530
D(INF(-1))	-0.060707	0.022348	-2.716472	0.0237
D(MPR)	0.086656	0.043005	2.015010	0.0747
D(MPR(-1))	-0.053535	0.027380	-1.955271	0.0823
D(FXR)	-1.038749	0.470774	-2.206473	0.0548
D(FXR(-1))	-0.899970	0.548168	-1.641776	0.1351
D(M2)	6.618548	1.086303	6.092729	0.0002
D(M2(-1))	6.159465	2.133197	2.887434	0.0180
CointEq(-1)*	-0.761431	0.158297	-6.021703	0.0002
R-squared	0.861224			
Adjusted R-squared	0.770207			

Source: Author's Computation

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Inflation and stock market performance are negatively and negligibly correlated in the short term. In keeping with the a priori expectation, the initial lag also displayed a substantial and negative connection. This suggests that stock market returns will decrease by 0.061% for every 1% increase in inflation; nevertheless, the first lag also demonstrated a positive but negligible correlation with stock market returns. Stock market returns are negatively and significantly impacted by foreign exchange rates, while the first lag was negatively and insignificantly correlated with stock market returns. With the first lag displaying a negative and insignificant link, while the second lag, the monetary policy rate and stock market returns, demonstrated a positive and insignificant relationship, with a 1% increase in the monetary policy rate translating into a 0.08% increase in stock market returns. Money supply and stock market returns are positively and significantly correlated. The first lag is also positively and significantly correlated with stock market returns, indicating that, when all other factors are held constant, a 1% increase in money supply will result in a 6.6% and 6.1% increase in stock market returns.

The ECMt-1 estimate was statistically significant, negative, and less than one in absolute terms. According to the coefficient, which is -0.761431, or roughly 76%, the rate of adjustment or convergence to long-run equilibrium is 76%. With an R-squared of 0.861222, it was determined that 86% of the systematic fluctuations in the association between macroeconomic variables and stock market returns in Nigeria throughout the research period could be explained by the independent variables. Considering the independent variables in the model, the adjusted R-squared of 0.770207 indicated that the outcome is acceptable. According to the corrected R^2 value, the independent factors (macroeconomic variables) account for almost 77% of the variation in ASI, while the remaining 23% could be accounted for by external variables.

4.2   Discussion

The findings of this study reveal that the monetary policy rate (MPR**)** exerts a positive but statistically insignificant effect on the All-Share Index (ASI). This suggests that higher policy rates, which typically translate into higher lending rates, do not necessarily discourage investment in the Nigerian stock market. Rather, investors appear willing to engage in equity investments regardless of prevailing interest rate conditions. This outcome implies that the MPR does not significantly deter stock market performance, possibly due to other overriding factors such as investors' expectations and market sentiment.

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Inflation (INF), which is an important indicator of macroeconomic stability and investment attractiveness, was found to exert a negative but insignificant effect on stock market returns. This finding indicates that rising inflation tends to erode stock market performance by diminishing the real value of returns. Although the impact was statistically insignificant, the negative relationship aligns with theoretical expectations that inflation introduces uncertainty, reduces purchasing power, and undermines investors' confidence in equity markets.

The study also established a negative, though statistically insignificant, relationship between the exchange rate (FXR) and stock market returns. This suggests that currency depreciation or volatility may reduce the performance of the stock market. In practical terms, a higher exchange rate (indicating weaker domestic currency) could discourage foreign portfolio investment and increase import costs for listed firms, thereby depressing stock prices.

Conversely, the broad money supply (M2) exhibited a positive and statistically significant relationship with stock market returns. This implies that an increase in money supply enhances liquidity in the financial system, stimulates investment activities, and ultimately boosts stock market performance. The observed positive effect can be attributed to the high level of liquidity resulting from persistent fiscal deficits and expansionary monetary conditions in Nigeria. Although the Central Bank of Nigeria (CBN) has implemented measures to sterilize excess liquidity, money in circulation has remained elevated, sustaining the positive link between monetary expansion and stock market activity.

Overall, these findings are consistent with the empirical evidence reported by Muktadir-Al-Mukit (2013); Chen and Xie (2016); Islam, Mostofa, and Tithi (2017); Khalid and Khan (2017); Aremo, Olabisi, and Adeboye (2020); Udo, Odey, and Jacob (2022); Gbanador (2024); Maton-Awaji, Ezebunwa, and Amadi (2024); Adesokan et al. (2025); and Jabil, Ibbih, and Akawu (2025), who found that key macroeconomic variables significantly influence stock market behavior across different economies, including China, Nigeria, and Iran.

In summary, while the effects of MPR, inflation, and exchange rate on stock market returns are statistically weak, their directional influence aligns with economic theory. The significant positive effect of money supply underscores the importance of liquidity and monetary expansion in sustaining market performance within Nigeria's evolving financial environment.

5.0   Conclusion

It is evident that macroeconomic variables are critical for sustainable stock market performance. From the findings of this study, it is evident that the overall effectiveness of macroeconomic management has a mixed impact on stock market returns in Nigeria. Specifically, there are positive effects stemming from money supply and the monetary policy rate, while exchange rate fluctuations and inflation exert negative effects.

Based on the findings, it is recommended that Nigeria should have exemplary economic management through appropriate institutional arrangements and policies. Instead of concentrating on factors like international economic conditions that are influenced by forces outside the nation's control, these policies and institutional arrangements ought to concentrate on areas that are under its control. While an unstable macroeconomic environment drives both domestic and foreign investors to seek safer investment options and shift their funds to stock markets abroad, macroeconomic stability is crucial for sustained long-term stock market performance.

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