EXCHANGE RATE FLUCTUATIONS AND ALL-SHARE INDEX IN NIGERIA (1990 – 2024)

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ABSTRACT
This study investigated the effect of exchange rate fluctuations on capital market All-Share Index (ALSI) in Nigeria for the period 1990 to 2024. Naira-to-US Dollar exchange rate, Naira-to-British Pound exchange rate and Naira-to-Swiss Franc exchange rate were the exchange rates considered while the NGX All-Share Index (ALSI) stood as the dependent variable. Yearly time series data on these variables were sourced from Central Bank of Nigeria (CBN) statistical bulletin for 2023 and 2025(Q1). The natural log form of the data set generated was exposed to descriptive analysis, ADF unit root test, Johansen cointegration test, pairwise granger causality test, ECM estimation and a set of post estimation (diagnostic) tests. Johansen cointegration test showed that there is no long run relationship between exchange rate fluctuations and All-Share Index. Granger causality test indicated that there is no relationship between the variables. Error Correction Model (ECM) estimation revealed that Naira-to-US Dollar exchange rate has a negative insignificant effect on ALSI while Naira-to-British Pound exchange rate and Naira-to-Swiss Franc exchange rate have positive influences on ALSI. However, only the effect of Naira-to-British Pound exchange rate was statistically significant. Hence, the study concluded that exchange rate fluctuation has an insignificant effect on capital market All-Share Index (ALSI) in Nigeria. As such, there is need to properly address the structural defects associated with the Nigerian economy so that government's naira devaluation policies will achieve one of its core objectives of attracting more foreign investors into the Nigerian capital market. It is also imperative that the Nigerian capital market is brought to par with its contemporaries in Africa and beyond.
Keywords: *Exchange Rate, Exchange Rate Fluctuations, All-Share Index, Nigeria*

Introduction

The capital market is a traditional market that facilitates the buying and selling of medium and long term financial instruments. This market accommodates those who want to borrow long term funds and those who want to invest their funds for the long term. What plays out in the capital market is that investors invest their funds by buying shares and debentures of corporate entities or bonds of the government while these corporate entities and the government borrow funds by selling shares, bonds and debentures (Saleh, 2019). This translates to financial intermediation in the long term. Thus, the capital market mobilizes long-term debt and equity finance for investments in long-term undertakings thereby creating a bridge between suppliers of funds and users of funds. Put differently, the capital market plays a key role in economic growth through optimal allocation of resources, improvement of liquidity of assets, and financing of enterprises. This is because for sustainable economic growth to be achieved, it is exigent for domestic savings and foreign capital to be

channeled to high-yield productive activities (Gbadebo, 2023). Put differently, a functional capital market supports corporate entities and the government in raising medium to long term funds for new projects and/or expansion of existing ones.

Accordingly, a functional capital market is a sine-qua-non for growth and development. However, the performance of a typical capital market can be gauged using market capitalization, All-Share index, volume and value of transactions, number of listed and traded securities, turnover ratio etc. (Joseph, 2022) The All-Share index is a major performance metric that represents all listed companies on a particular stock exchange. It gives a comprehensive view of the overall market trends. It is also viewed as the barometer that reflects the health status of a stock market. This indicator also reflects the cumulative value and activity of all traded shares in a stock market. In Nigeria, it is called the NGX All-Share Index (ASI) which is a primary benchmark index that tells the overall performance of listed companies in the Nigerian Exchange Limited (NGX). However, other notable NGX indices are NGX 30 Index, NGX Premium Index, NGX Banking Index and NGX Consumer Goods Index (Olowookere, 2019).

Nevertheless, the performance of a capital market is affected by countless factors and variables. One of these factors exchange rate volatility, fluctuation or instability (Zhang, 2020). Exchange rate is the rate at which the currency of a country exchanges with those of the other countries over time. A relatively stable exchange rate is a strong macroeconomic signpost. It signals how strong and viable an economy is. On the other hand, a relatively volatile exchange rate signals downturn in economic activities. It is a reflection of a very vulnerable and weak economy. Exchange rate instability has real economic shocks because it negatively affects price level, profit level of firms and even the entire activity in an economy (Bala-Sani & Hassan, 2018). This accounts for one of the reasons why foreign exchange rate stability is a major macroeconomic goal of countries. A stable exchange rate is characterized by less fluctuations, volatility or movements. As a typical developing country, the Nigerian naira has over the years fluctuated highly against the United States dollar, British pound sterling, European euro and Swiss Franc. For instance, a pound which exchanged for ₦1.2495 in 1981 rose to ₦460.67 in 2020 and ₦523.67 in 2022. Similarly, a dollar rose from ₦0.6100 in 1981 to ₦358.81 in 2022 and ₦445.71 in 2022 (CBN, 2022).

The capital and foreign exchange markets are two vital markets that exist in virtually every economy. They affect and reinforce each other and they are essential for the functionality of every economy (Mechri, Ben-Hamad, Charfi & Peretti, 2018). Basically, the capital market attracts foreign inflows of capital and the foreign exchange market determines the value of such inflows. Hence, without a formidable foreign exchange market, foreigners cannot comfortably invest in the capital market of other countries because there must always be a basis for currency conversion. It is against this backdrop that the Nigerian government over the years has come up with policies and measures geared towards repositioning and improving the Nigerian capital and foreign exchange market. The success of these drives have been a matter of debate but it must be stated that the performance of the Nigerian capital market is dwarfed by those of South Africa and Taiwan who had a capital market size of US $1.230 trillion and US $2.020

trillion respectively in 2023 (World Bank, 2024).

On the empirical front, the likes of Duruechi, Ojiegbe & Ekweozor (2023); Gbadebo (2023); Ihenyen, Epekele & Owonaro (2023); Tamunowariye & Anaele (2022); Banjo (2022) and Omoregie, Olofin & Ikpesu (2020) embarked on various studies on exchange rate volatility and capital market performance but some limitations were observed. One of the limitations is that most of these studies did not properly disaggregate exchange rate in terms of the exchange rate of the naira with respect to other currencies. Again, going by the reviewed studies, the only study that attempted to disaggregate exchange rate beyond Naira-US Dollar rates spanned between 1995 and 2021 (Duruechi, Ojiegbe & Ekweozor, 2023). This created a currency gap.

Review of Related Literature

Conceptual Review

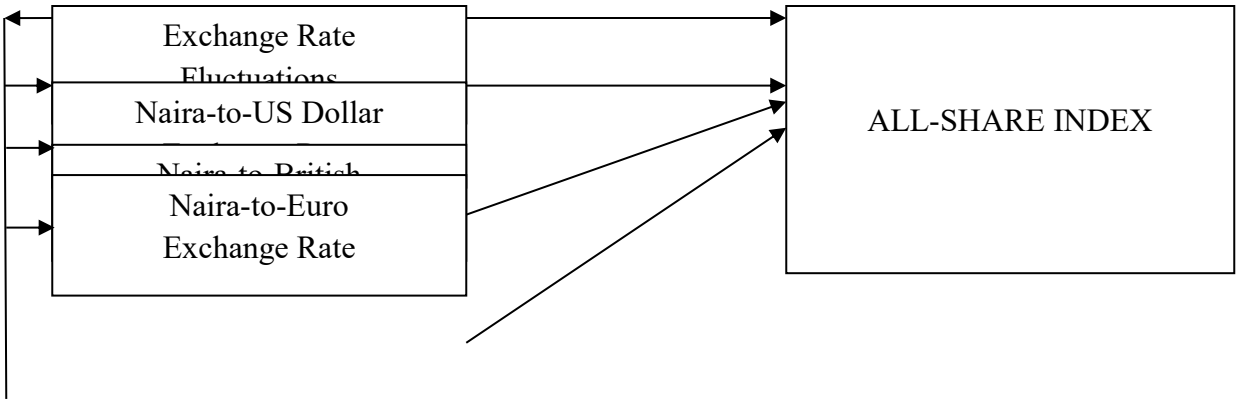

Fig. 1: Operational Conceptual Framework

Exchange Rate

Exchange rate or foreign exchange rate is simply seen as the price of a country's currency. According to Moussa and Delhoumi (2021), it is the rate at which the currency of one country is bought and sold in terms of the currency of another country. Similarly, Dwivedi (2008) sees it as the price of a currency for another currency (Dwivedi, 2008). Thus, foreign exchange rate is primarily seen as the price for which the currency of a country is exchanged with the currency of another country. Basically, exchange rate is determined by the interaction of demand and supply of foreign exchange (foreign currency). If the demand for a currency rises with the supply being constant, the exchange rate of the currency will appreciate; conversely, if the demand for a currency falls with the supply being constant, the exchange rate of the currency will depreciate. The need for buying and selling of foreign currency arises for payments to the country from which imports are made (Gbadebo, 2023). In foreign trade, goods and services are traded across national boundaries but the currency of one country is not acceptable in other countries. This creates problem of payments, for instance, Nigeria Naira is not accepted as a medium of exchange in other countries, nor is the currency of any other country acceptable as a general medium of exchange in Nigeria. The payments for imports have, therefore, to be made in the currency of the exporting country. Hence, the rate of exchange is one

of the most important macroeconomic variables in developing and developed countries. It affects inflation, and causes changes in exports and imports thereby influencing price of commodities traded.

Exchange Rate Fluctuation

Exchange rate fluctuation refers to upward and downward swings in the rate at which the currency of a country measures up with the currencies of other countries in the foreign exchange market (Gay, 2016). Tamunowariye and Anaele (2022) defined it as the risk associated with unexpected movements in the exchange rate. Fluctuations in exchange rates are caused by monetary flows regarding changes in trade balances (deficit or surplus), budgets, interest rate and inflation. Thus, domestic currency appreciates whenever credit transactions exceed debit transactions. Also, domestic currency depreciates whenever debit balance exceeds credit balance. Increases in interest rates provide higher rates to lenders which attract more foreign exchange, thereby, causes a rise in exchange rate and appreciation of the domestic currency (Ezenwakwelu, Okolie, Attah, Lawal & Akoh, 2019).

Exchange rate fluctuation also refers to the tendency for foreign currencies to appreciate or depreciate in value, thus affecting the profitability of foreign exchange trades. Volatility is seen as an unobservable or latent variable, deterministic or stochastic. They are never static. The supply and demand of significant currencies fluctuate over time. There have however been studies that try to make the exchange rate volatility an observable variable, with varied results (Bauwens & Sucarrat, 2015).

All-Share Index

The All-Share Index is a stock market index that represents the performance of all listed companies on a particular stock exchange. It gives a comprehensive view of the overall market trends. It is equally seen as a barometer for the stock market's health, reflecting the cumulative value and activity of all traded shares (Chen, 2021). Thus, it is a standardized way to track the performance of a group of stocks, assets, etc. According to Hadden and Haug (2017), an index is a broad-based indicator that captures the entire market such as the Standard and Poor's 500 Index or Dow Jones Industrial Average (DJIA); or more specialized such as indexes that track a particular industry or segment such as the All-share index (ASI) which tracks only a class of stocks. The All-Share index is an indicator that shows the average prices of stocks on the Nigeria Stock Exchange (NSE). Usually, it is used to determine the intensity of the Nigeria stock market generally. Indexes use base years for computational purposes and January 1, 1984 is the base year for Nigeria's All-Share Index (Nzotta, 2005). This index is given as:

$$ASI = \sum \frac{Pa.Qa}{Pb.Qb} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Where:

P = Price of stocks
Q = Quantity of stocks
a = Current period
b = Base period

This index (ASI) nonetheless is used in examining the previous high points and low points in the stock market. It is very important in predicting or determining the trends and reversals in the stock market. According to Nzotta (2005), we have three movements with stocks which are: primary, secondary and minor movements. The primary movement is a long term movement

of upwards of one year which determines a company's term trend in stock market prices. Secondary movement is a short term movement of 0 - 12 months duration that is expected to counter the primary trend or to correct the error in the primary trend. Minor movement are daily or hourly movements in stock market prices (Daggiza, 2019).

Theoretical Review

Mundell Fleming Model

According to Javangwe and Takawira (2022), the first theory which explains the effect of stock prices on exchange rate is the Mundell Fleming Model. Mishkin (2021) provides an explanation on the extent to which an increase in stock prices influences exchange rate movement. Mishkin (2021) argues that there are different channels through which the two variables are related. A rise in stock prices result in an increase in investment by companies. In this regard, the stock price is regarded as a function of investment function. Thus:

Investment = f (Interest Rate, Stock Price) …… (2.2)

In essence, an increase in share price influences investment positively as it results in capital gains. On the other hand, interest rate is negatively related to investment given that it is the cost of borrowing and increases costs to a company. Thus, when stock prices go up, this will result in investment and consumption increasing. This also result in the IS (investment and savings) curve shifting upwards since consumption and investment falls in the goods market. The higher level of interest rate will attract more capital flows which will result in the domestic currency appreciating. This therefore shows that the effect runs from stock prices to exchange rate. Also, the theory suggests that the link between exchange rate and stock prices is dependent on the interest rate (Javangwe & Takawira, 2022).

Efficient Market Hypothesis (EMH)

This theory is also known as the stock market efficiency theory. The proponents of this theory are Working (1934), Kendall (1953), Roberts (1959), Osborne (1959), Rayner and Little (1966), and Fama (1970). The findings of these experts have now come to be known as the efficient market hypotheses. They believe that in an efficient market, security prices adjust so quickly to new information that they fully reflect available information about the security and that changes in security prices are independent since they have random movements (Lumby & Jones, 2023). Thus, this theory states that the price seen on an asset today is its true value, reflecting any data that could drive its price up or down. According to Fama (1970), this theory has three versions:

1. **Weak Form:** states that current stock prices reflect all information available on past stock market prices.
2. **Semi-Strong Form:** states that current stock market prices reflect all public available information.
3. **Strong Form:** states that the current market price of a stock reflects all information, both public and non-public.

Flow Oriented Model

According to Zubair and Aladejare (2017), this model was developed on the premise that a causal association flows from exchange rate to the prices of stock in the stock market. The flow-oriented model is based on microeconomic foundations. The model maintains that a causal relationship runs from the exchange rate to market capitalization. In other words, exchange rate movements affect the market capitalization.

Flow oriented model considers capital flows to have an impact on international competitiveness of enterprises and profits of firms. The profits and international competitiveness of firms will have an influence on stock market. In other words, the model suggests that fluctuation of exchange rate influences the share value of domestic and multinational firms.

Saleh (2019) argued that the flow-oriented model implies that currency movements affect international competitiveness and balance of trade positions and consequently the real output of the country, which in turn affects the current and future expected cash flow of firms and their stock prices. This is because many companies conduct their business on the international market and changes in the exchange rate will have either positive or negative effects on the business operations. Choi and Papaioannou (2009) held that an appreciation of local currency under a floating regime might lead to decrease in company's benefit and competitiveness of exporting products and thus its stock price. Exchange rate changes affect the competitiveness of firms through their impact on input and output prices (Joseph, 2022). When the exchange rate appreciates, exporters will be negatively affected. An appreciation of the currency will cause their goods and services to be dearer on the international market. This will cause their exports to decline, as buyers on the international market will see them as expensive. This will result in them losing competitiveness internationally. Consequently, their profits will decline and if profits decrease, the firms will lose competitiveness on the domestic stock market. Their attractiveness on the domestic stock market will decrease and this will result in their stock prices decreasing in value. Resultantly, a negative relation between domestic currency and stock price can be confirmed.

Theoretical Framework

The adopted theory for this study is the flow oriented model/theory which postulates that there is a unidirectional relationship between exchange rate movements and performance of the capital market. The causality between the stock exchange market and the capital market is such that activities in the former affect activities in the later. Simply put, the flow oriented model provides a valuable framework for analyzing financial markets, helping investors and analysts understand the capital and exchange rates markets dynamics and make informed decisions in terms of arbitraging and managing risk properly. Put differently, the model simplifies and focuses on the flow of funds into and out of a country's capital market with respect to exchange rate appreciation and depreciation. Given that the Nigerian capital market is a developing one saddled with so many market imperfections, and given that the bulk of investors in the Nigerian market are foreigners, it is pertinent to state that exchange rate movements, holding other factors constant, goes a long way in explaining the inflow and outflow of funds into and out of the Nigerian capital market.

Empirical Review

Yuorkuu, Kamasa and Forson (2024) examined the effect of exchange rate volatility and its transmission pathways on economic growth in post-exchange rate liberalization in Ghana. Exchange rate volatility was measured using the nominal exchange rate, crude oil price, and interest rate. Thus, the study modeled exchange rate

volatility using GARCH (1,1) and analyzed its impact on economic growth in Ghana, with a particular focus on the post-exchange rate liberalization period. Additionally, to assess the pathways through which exchange rate volatility affects economic growth by employing the Autoregressive Distributed Lagged (ARDL) model, and found evidence that exchange rate volatility has a negative impact on economic growth in Ghana. In addition, inflation and interest rates are significant transmission pathways through which exchange rate volatility impact growth in post-exchange rate liberalized Ghana.

Qabhobho, Mishi, Kleynhans, Vengesai and Mtimka (2024) investigated the risk synchronization between stock returns, exchange- rate returns, geopolitical risk (GPR), and global economic policy uncertainty (GEPU) of countries within the Southern African Development Community (SADC) between February 2005 and August 2021 by using the wavelet techniques to address the study's objectives. The bivariate results showed that there is a positive interdependence between the stock market and the currency market in Botswana and Mauritius from 2007 to 2012. In South Africa, there was a significant co-movement between the two markets. The partial wavelet showed that while both increasing geopolitical risk and global economic policy uncertainty influence the correlation between stock returns and exchange-rate returns, geopolitical risk has a greater impact than global economic policy uncertainty.

Duruechi, Ojiegbe and Ekweozor (2023) examined the association between movements in foreign exchange rates and performance of the Nigerian stock market between 1995 and 2021. Naira-U.S Dollar, Naira-British Pounds, Naira-Euro, and Naira-Swiss Franc exchange rates were used to capture exchange rate movements while stock market capitalization represented the performance of the Nigerian stock market for the said period. The main tools of analysis was Johansen cointegration test, Vector Error Correction Mechanism (VECM) and Pairwise Granger Causality tests were the major analytical tools employed for data analysis. Results showed that a long run insignificant association subsists between movements in foreign exchange rates and performance of the Nigerian capital market.

Gbadebo (2023) evaluated the impact of exchange rate volatility on stock market development in Nigeria for the period 1985 to 2020. The study employed a simple static regression model of stock market indicators with autoregressive adjustment component which absorb autocorrelation. Findings from the study revealed that exchange rate volatility has negative impact on stock market development. It further revealed that other correlated controls factors impinge different impacts on the stock market indicators. The implication is that the volatility may discourage investors, reduce firm performance, and lead to reduction on the returns of firm shares.

Ihenyen, Epekele and Owonaro (2023) examined the association between currency depreciation and capital market performance in Nigeria for a period of 10 years (2012-2022). The study adopted a quantitative approach. The study employed purposive sampling technique and the sample size consisted of all the publicly listed companies on the Nigerian Stock Exchange. The Ordinary Least Square (OLS) multiple regression analysis was used for data analysis. From the results, depreciation of a currency was found to correlate negatively with the performance of capital markets even after controlling for other variables in the model.

Javangwe and Takawira (2022) examined the relationship between the stock

market and exchange rate in South Africa for the period 1980 to 2020. The dependent variable was JSE- stock market index; while the independent variables were exchange rate, consumer price index (measuring inflation) and interest rate. These data were quarterly data collected from the SARB database, the JSE database and Quantec Easy database. Using quarterly data, the study adopted the popular Autoregressive Distributed Lag (ARDL) model approach. The empirical results revealed that there is a long-term relationship between the variables of interest. The results also revealed that there is a negative relationship between the stock market and exchange rate movement.

Banjo (2022) examined the relationship between foreign exchange fluctuations, capital market performance and industrial output in Nigeria by utilizing annual time series data covering the period 1980 to 2018. The study adopted both descriptive and analytical methodology in its investigation. Results showed a stable long run relationship between industrial value added and exchange rate fluctuations, All Share Index, industrial value, total reserve, and inflation. It was further revealed that exchange rate fluctuation has negative insignificant effect on industrial value added; All Share Index has positive insignificant effect on industrial value added; while total reserve and inflation have positive and significant effect on industrial value added, all in the short run.

Amewu, Owusu and Amenyitor (2022) probed into the co-movement of Ghana's equity index and exchange rate with international equity markets and further determined whether these co-movements are driven by global uncertainties. They also determine how the COVID-19 pandemic altered the dynamics of these relationships. The study employed the wavelet technique to data from January 19, 2012 to March 1, 2021 to the split between pre-COVID-19 and COVID-19 periods. The results revealed that the dynamics of co-movement of exchange rate and Ghana Stock Exchange composite index has evolved over time and across frequencies. In addition, they found evidence to support low-medium term lead-lag connections between exchange rate and Ghana Stock Exchange Composite Index in 2013 to 2014 and 2016.

Mohammed, Mohammed and Nketiah-Amponsah (2021) examined the effect of interest rates on exchange rate volatilities in Ghana. It utilized quarterly time series dataset spanning 2000 Q1 to 2017 Q2; while using the Autoregressive Distributed Lag model and the Vector Error Correction model to investigate the long-run and short-run relationships between the variables. Results showed that in the long-run model, exchange rate volatility is influenced by money supply, inflation, Central Bank's policy rate, and the Ghana Stock Exchange composite index. However, in the short-run model, exchange rate volatility was significantly influenced by its past values and Central Bank's policy rate.

Gap in Literature

Unlike what was observed with existing studies, this study properly considered exchange rate fluctuation from the stand point of the naira-to-United States dollar, naira-to-British pound, and naira-to-swiss franc. Also, this study is an improvement on the earlier study carried out by Duruechi, Ojiegbe and Ekweozor (2023) that covered the period 1995 – 2021.

Methodology

In a bid to achieve the objectives of this study, the quasi-experimental research

design was adopted. This is because a quasi-experimental experiment is almost a true experiment and the design does not allow a researcher to randomly select specific elements (frequently the participants) in the research/experiment. However, it allows an independent variable to be manipulated to see the cause-and-effect of the dependent variable (Esene, 2022).

For this study, only secondary data was used. These data were on Naira-to-US Dollar exchange rate, Naira-to-British Pound exchange rate, Naira-to-Swiss Franc exchange rate, and All-Share Index (ALSI) between 1990 and 2023. Annual data on these variables were collected from Central Bank of Nigeria (CBN) statistical bulletins for 2023 and 2025Q1.

The stationarity process of each of the economic time series data utilized in this work was captured using the Augmented Dickey Fuller (ADF) approach to unit root test as proposed by Dickey and Fuller (1981). This stationarity approach was applied in testing the null hypothesis of a unit root against the alternative hypothesis of no unit root at the conventional 5 percent level. For each of the variables included in the unit root model, it is expected to be I(0) or I(1), but not I(2). Thus, we accept H_0 (null hypothesis) and reject H_1 (alternative hypothesis) if the absolute value of ADF test statistic is less than the absolute critical value at 5% level; otherwise, reject H_0 and accept H_1.

After the unit root test, the researcher delved into co-integration analysis. This is because according to Granger and Newbold (2012), to test for co-integration, we must ensure that the variables involved are stationary at first difference only. The essence of this analysis is to find out if there is co-integration among variables, to determine the number of co-integration equations and to define normalization of equations (Emanakuku, 2010). The test procedure adopted for the co-integration analysis was Johansen-Juselius (JJ) technique, which is used to find a possible correlation between time series processes in the long term. In other words, the choice of the Johansen-Juselius (JJ) technique for co-integration analysis was because it allows for more than one co-integrating relationship and it is subject to asymptotic properties (large sample size), since a small sample size will produce unreliable results (Engel & Granger, 1987). This technique utilizes two test statistics to determine the number of co-integrating vectors. These are trace and maximum eigenvalue test statistics. To test for co-integration, we compare the value of likelihood ratio to the critical value at 5 percent. If the likelihood ratio test value is greater than the critical value at 5%, Cardiff (2013) advised that we accept the null hypothesis (H_1) and conclude that there is co-integration among the variables.

According to Granger and Newbold (2012), granger causality test measures the impact, effect or influence of one variable on the other. Causality test shows the direction of effect and also measures the short and long-run economic problem(s) so as to enable policy makers know which of the economic policies to be implemented at one point or the other (Ehiedu, 2015). In simple terms, this is a bi-variable test that shows between two variables that have a relationship, the variable that is dictating the pace of the relationship. That is, which variable is granger-causing the other to move. This test was used to determine causality between all possible pairs of listed series or group of series in model two. The directions in this test are:

i. Unidirectional;
ii. Bi-directional; and
iii. Non-directional

It is unidirectional if one variable is granger causing the other. It is bi-directional if both variables granger causes each other. Finally, it is non-directional if none of the variables granger causes each other. If it is unidirectional, it is said to be short term economic problem. If it is bi-directional, it is said to be a long-term economic problem (Ehiedu, 2015). The hypothesis for this test is given as:

H_0: Variable X does not granger cause variable Y

H_1: Variable X granger causes variable Y

Model Specification

ALSI = f(NTDR, NTPR, NTSR) ..... (1)

ALSI = $B_0 + B_1NTDR + B_2NTPR + B_3NTSR + e$ ..... (2)

Where:

ALSI	=	All-Share Index
NTDR	=	Naira-to-US Dollar exchange rate
NTPR	=	Naira-to-British Pound exchange rate
NTSR	=	Naira-to-Swiss Franc exchange rate
B_0	=	Intercept term of the model
B_1	=	Regression slope of NTDR
B_2	=	Regression slope of NTPR
B_3	=	Regression slope of NTSR
f	=	Functional notation
e	=	Error term of the model

A priori Expectations (Test): $B_1, B_2, B_3 > 0$.

Interpretation of Results

Descriptive Analysis

Table 1: Result of Descriptive Analysis

	ALSI	NTDR	NTPR	NTSR
Mean	23204.60	174.5241	252.3629	168.5162
Median	23965.15	130.5350	232.6950	106.6800
Maximum	74773.77	843.9100	1048.650	952.3200
Minimum	513.8000	9.000000	16.89000	5.020000
Std. Dev.	18066.67	161.5029	195.8380	186.0454
Skewness	0.736043	2.338895	2.062815	2.450765
Kurtosis	3.310355	9.845760	9.196925	10.38404
Jarque-Bera	3.206426	97.39037	78.51549	111.2778
Probability	0.201249	0.000000	0.000000	0.000000
Sum	788956.5	5933.820	8580.340	5729.550
Sum Sq. Dev.	1.08E+10	860744.8	1265633.	1142225.
Observations	35	35	35	35

Source: E-Views 10 Output (2026)

Descriptive analysis revealed that the mean of ALSI is 23204.60 and ranges from 513.8 to 74773.77 with a standard deviation of 18066.67. Also, the analysis showed that between 1990 and 2024, naira-to-pound exchange rate has the highest average value of ₦252.36 followed by naira-to-US dollar and naira-to-euro with rates of ₦174.52 and ₦168.52 respectively. However, all the variables are positively skewed (0.736043, 2.338895, 2.062815 and 2.450765) with leptokurtic kurtosis values that are greater than 3 (3.310355, 9.845760, 9.196925 and 10.38404)

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Unit Root Test

Table 2: Summary of Unit Root Test Result

Variables	ADF Statistics	5% Critical Value	P-values	Integration
Log_ALSI	-4.552488	-2.957110	0.0010	I(1)
Log_NTDR	-5.695590	-2.957110	0.0000	I(1)
Log_NTPR	-5.983583	-2.957110	0.0000	I(1)
Log_NTSR	-6.352955	-2.957110	0.0000	I(1)

Source: Extract from E-Views 10 Output (2026)

Unit root test result showed that the variables Log_ALSI, Log_NTDR, Log_NTPR and Log_NTSR were stationary at first level of differencing at 5% level of significance. Thus, their probability values at this point (0.0010, 0.0000, 0.0000 and 0.0000) are less than 0.05.

Johansen Cointegration Test

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None	0.535245	45.65665	47.85613	0.0793
At most 1	0.360634	21.13685	29.79707	0.3492
At most 2	0.180726	6.823945	15.49471	0.5982
At most 3	0.013815	0.445167	3.841466	0.5046

Trace test indicates no cointegration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None	0.535245	24.51981	27.58434	0.1176

At most 1	0.360634	14.31290	21.13162	0.3399
At most 2	0.180726	6.378778	14.26460	0.5651
At most 3	0.013815	0.445167	3.841466	0.5046

Max-eigenvalue test indicates no cointegration at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Source: E-Views 10 Output (2026)

Johansen cointegration test revealed that the variables are not cointegrated. In other words, there is no long run equilibrium relationship between exchange rate fluctuations and All-Share Index. Thus, Naira-to-US Dollar, Naira-to-British Pound and Naira-to-Swiss Franc exchange rates have no long term effect on capital market All-Share Index (ALSI) in Nigeria.

4.4 Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
LOG_NTDR does not Granger Cause LOG_ALSI	32	1.30108	0.2888
LOG_ALSI does not Granger Cause LOG_NTDR		0.22795	0.7977
LOG_NTPR does not Granger Cause LOG_ALSI	32	1.04327	0.3661
LOG_ALSI does not Granger Cause LOG_NTPR		0.31806	0.7302
LOG_NTSR does not Granger Cause LOG_ALSI	32	2.18051	0.1325
LOG_ALSI does not Granger Cause LOG_NTSR		1.28659	0.2926
LOG_NTPR does not Granger Cause LOG_NTDR	32	2.98460	0.0674
LOG_NTDR does not Granger Cause LOG_NTPR		3.34004	0.0506
LOG_NTSR does not Granger Cause LOG_NTDR	32	1.74237	0.1942
LOG_NTDR does not Granger Cause LOG_NTSR		36.7302	2.E-08
LOG_NTSR does not Granger Cause LOG_NTPR	32	3.17838	0.0576
LOG_NTPR does not Granger Cause LOG_NTSR		21.4095	3.E-06

Source: E-Views 10 Output (2026)

Granger causality test showed that there is a unidirectional causal relationship between Naira-to-US Dollar exchange rate and Naira-to-British Pound exchange rate; Naira-to-US Dollar exchange rate and Naira-to-Swiss Franc exchange rate; and Naira-to-British Pound exchange rate and Naira-to-Swiss Franc exchange rate. Thus, there is no directional relationship between these exchange rates and All-Share Index (ALSI)

4.5 ECM Estimation

Variable	Coefficient	Std. Error	t-Statistic	Prob.

C	0.054857	0.056699	0.967502	0.3416
D(LOG_NTDR)	-0.974634	0.657201	-1.483007	0.1492
D(LOG_NTPR)	1.562193	0.670822	2.328773	0.0273
D(LOG_NTSR)	0.250283	0.167480	1.494406	0.1463
ECM(-1)	-0.409479	0.167104	-2.450449	0.0208

R-squared	0.381066	Mean dependent var	0.150921
Adjusted R-squared	0.292647	S.D. dependent var	0.308731
S.E. of regression	0.259656	Akaike info criterion	0.279810
Sum squared resid	1.887796	Schwarz criterion	0.506553
Log likelihood	0.383140	Hannan-Quinn criter.	0.356102
F-statistic	4.309766	Durbin-Watson stat	1.745561
Prob(F-statistic)	0.007669		

Source: E-Views 10 Output (2026)

ECM estimates revealed that Naira-to-US Dollar exchange rate has a positive effect on ALSI while Naira-to-British Pound and Naira-to-Swiss Franc exchange rates have positive effects on All-Share Index. However, only Naira-to-British Pound exchange rate has a significant effect. The above table also shows that these rates have a significant joint effect of about 38.1% on ALSI in Nigeria.

4.4 Diagnostic Tests

Test	Criterion	Test Statistic Value	P-value
Normality	Jarque-Bera	1.164395	0.558669
Autocorrelation	Q-Statistic	-	> 0.05
Heteroscedasticity	Breusch-Pagan-Godfrey	1.193994	0.3352
RESET	Ramsey	2.718360	0.1108

Source: Extract from E-Views 10 Output (2026)

Since the probability value of Jarque-Bera statistic (0.558669) is greater than 5% (0.05), it follows that the errors of the model are normally distributed. In other, the errors mirror a normal distribution when plotted on a graph. Secondly, given that the probability values of Q-statistic are greater than 0.05, it implies absence of autocorrelation. In essence, there is no correction between successive values of the error terms as anticipated. Thirdly, with the probability value of F-statistic being greater than 5% (0.05), it follows that there is no presence of heteroscedasticity in the model. This explains that the variances of the error terms are homoscedastic or constant. Finally, Ramsey RESET test shows that the model is well specified as the probability value of F-statistic is once more greater than 5% (0.05). Hence, the model was adequately specified.

4.5 Discussion of Findings

Three major findings emanated from this study. First, Naira-to-US Dollar exchange rate has negatively and insignificantly affected All-Share Index in the Nigerian capital market. This implies that exchange rate depreciation or devaluation with respect to the naira in terms of United States dollar leads to a meaningless fall in a major capital market performance indicator like the All-Share Index. This outcome was not expected because in an event where the value of the naira keeps depreciating, the value of the United States dollar will keep appreciating

and with the same unit on US dollar, foreign investors can buy more stocks in the Nigerian capital market. Such a move will enhance the value and volume of trade in the capital market which will ultimately push the performance of the market upward (Duruechi, Ojiegbe & Ekweozor, 2023; Bala-Sani & Hassan, 2018). Nevertheless, the unexpected outcome observed can be attributed to the structural defects associated with the Nigerian economy which adversely affects the number of investors the country has attracted in recent times (Olowookere, 2019).

Second, the effect of Naira-to-British Pound exchange rate on capital market All-Share Index in Nigeria is both positive and significant. This outcome which was expected implies that the more the British pound appreciates at the expense of the Nigerian naira, foreigners with British pounds will be able to acquire more stocks with the same unit of currency which will increase the number and value of deals in the market and as well enhance the performance of the market provided all things are held constant. This drive will invariably push the value of All-Share Index up (Yuorkuu, Kamasa & Forson, 2024; Amewu, Owusu & Amenyitor, 2022).

Finally, the Naira-to-Swiss Franc exchange rate has a positive insignificant influence on All-Share Index in the Nigerian capital market. This study expected the influence of the Naira-to-Swiss Franc exchange rate on All-Share Index to be positive given the reason adduced earlier for the other two major exchange rates. Also, the Swiss Franc is a major currency whose value outweighs the naira to the extent that an appreciation in its value at the expense of the naira will enhance the performance of the Nigerian capital market. However, the study never expected the influence of the Naira-to-Swiss Franc exchange rate to be insignificant. It is possible that the underdeveloped nature of the Nigerian capital market may be responsible for this undesired outcome (Banjo, 2022; Gbadebo, 2023; Ihenyen, Epekele & Owonaro, 2023).

5.0 CONCLUSION AND RECOMMENDATIONS

5.1 Conclusion

Given the outcome of the ECM analysis, the study concluded that exchange rate fluctuation has an insignificant effects of on capital market All-Share Index (ALSI) in Nigeria for the period studied. This can be attributed to the structural defects of the Nigerian economy and the underdeveloped nature of the Nigerian capital market.

5.2 Recommendations

1. There is need to squarely address the structural defects associated with the Nigerian economy so that government's naira devaluation policies will achieve one of its core objectives of attracting more foreign investors into the Nigerian capital market.
2. It is imperative that the Nigerian capital market is brought to par with its contemporaries in Africa and beyond. This translates to developing the Nigerian capital market in all ramifications in order to ensure that it can adequately attract investors.
3. To ensure that exchange rate fluctuations work in favour of the Nigerian capital market, there is need for improved political stability and security of lives and properties because investments tend to flow away from environments where there is instability, uncertainty and insecurity.

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