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The Impact of Exchange Rate Fluctuations on Nigeria Capital Market Performance

Ihugba, Okezie A.[1], Okoroafor, Stella N.[2]

[1]Department of Economics, Alvan Ikoku Federal University of Education, Owerri

[2]Department of Accountancy, Alvan Ikoku Federal University of Education, Owerri

ABSTRACT: This paper empirically investigates the impact of exchange rate fluctuations on Nigerian capital market performance by using yearly time series data during the period 1981–2022. We examined the long-run and short-run elasticities of variables using the bounds testing (ARDL) approach to cointegration. The results of the analysis show that exchange rate fluctuations negatively influence market capitalization, inflation consistently has a negative effect, and GDP shows a complex relationship with both positive and negative effects, suggesting initial gains followed by corrections. The effects of foreign direct investment (FDI) exhibit a range of outcomes, including notable negative consequences from previous investments. The paper concludes that the findings indicate that the negative impact of exchange rate fluctuations on market capitalization underscores the need for stable exchange rate policies. The government should promote GDP growth, lower exchange rate volatility, ensure stable inflation, attract foreign investment, rectify overvaluation, and establish a strong policy framework to maintain market performance and economic indicators.

KEYWORDS: Market Performance, Exchange Rate Stability, Foreign Investment, Policy Framework, Nigeria

(Jell Code: E44,F31, F21, G18,O55)

1. INTRODUCTION

Exchange rate fluctuations significantly impact capital markets, GDP, foreign direct investment, and economic stability. For Nigeria, this is particular relevant due to its over-reliance on natural resources like crude oil, subject to global market forces (Eyung, Aben, and Chukwuebuka, 2021). Stabilizing the foreign exchange market and achieving exchange rate convergence are crucial for the capital market's health (Iheanachor and Ozegbe, 2021).

By encouraging import substitution, raising exports, attracting more foreign investment, and improving tourism, a lower currency can increase GDP growth. This increases demand for domestic goods and services, raising domestic output and employment. Additionally, a country's currency depreciation increases its appeal to foreign investors, bringing in more FDI. Furthermore, a depreciating currency might make goods and services more competitive internationally, which could enhance trade balances and economic stability. But it's crucial to control related risks, such as inflation and rising import prices (Krugman and Obstfeld, 2017).

The Nigerian capital market faces numerous challenges, including inefficiencies, insufficient information about listed companies, the financial crisis, low participation rates, low returns on investments, a lack of transparency among stockbrokers, inadequate regulation, poor policies, subpar customer service, and a decline in investor confidence. Significant investor withdrawals were caused by inefficiencies in registrars, a lack of information about listed companies, and the 2009 financial crisis. Low participation rates and low returns discourage investors, and stockbrokers often deceive clients. Poor regulation allows unethical practices, while inadequate policies after the 2009 financial meltdown deter potential investors. Poor customer service is another issue, with many brokerage firms failing to provide timely feedback. Market instability and a lack of listed companies have led to investor losses and skepticism, further affecting the Nigerian capital market (InfoGuide, 2024).

Exchange rate fluctuations have a multifaceted impact on the capital market performance, influencing investors' confidence, foreign investment, corporate earnings, and economic stability. Managing these fluctuations is vital for fostering a stable and attractive investment environment. Between 1981 and 2022, Nigeria experienced a 99.6% negative change in currency value, leading to a 124.8% GDP increase and a 128% rise in government revenue. However, inflation slightly reduced from 20.8% in 1981

to 18.9% in 2022. During the 2019-2020 periods, a 16% currency fall saw market capitalization rise by 49.1%, from 25,890.22 trillion to 38,589.58 trillion, although GDP growth rate dropped by 181.2% (CBN, 2022).

Uguru, Enwere, and Amos (2024) explored the impact of exchange rate volatility on Nigeria's stock prices alone without including other indicators and metrics, while Adedeji (2023) studied the impact of exchange rate volatility on stock market indicators like returns, capitalization, liquidity, and transaction volume in Nigeria from 1985 to 2020. This study aims to address gaps using the autoregressive distributed lag (ARDL) model by including all the major indicators like the number of deals (volume), market capitalization, stock prices, FDI, and inflation in the short and long periods. It also captured the pre- and post-SAP periods and beyond, as well as policy effectiveness and comparative analysis. By addressing these areas, this study will contribute to a more comprehensive understanding of the relationship between exchange rate fluctuations and Nigeria's capital market performance.

The remainder of the paper is structured as follows: Section 2 presents an overview of Nigeria's capital market. Section 3 discusses the theoretical and empirical literature on exchange rates and the capital market. Section 4 discusses the ARDL model (data and econometric methodology) used in this study. Section 5 discusses the empirical results, while Section 6 discusses the conclusions and recommendations.

2. OVERVIEW OF THE NIGERIA'S CAPITAL MARKET

The Colonial Administration issued the first development stock worth £300,000 in 1946, marking the beginning of capital market activity in Nigeria. The Lagos Stock Exchange founded the Nigerian Stock Exchange (NSE) in 1960, and it transformed into the Nigerian Stock Exchange (NSE) in 1977. The NSE changed its trading system from manual call-over to screen-based electronic trading, and it currently lists more than 200 securities. Since its establishment in 1962, the Securities and Exchange Commission (SEC) has undergone significant changes. Businesses and governments can use assets like stocks, debt instruments, and collective investment plans to approach the capital market for funding. Businesses offer debt instruments to finance infrastructure projects, while they issue equity to raise money for growth and development. Investment or savings accounts that offer a consistent stream of income to investors are known as collective investment plans (SEC, 2015).

Collective Investment Schemes (CIS) are investment or unit trust businesses that raise money from the capital market by offering investors units of open-ended or closed-ended securities. Investors use these funds to buy bonds, stocks, and other securities. Benefits of CIS include diversifying risk exposure, being appropriate for people who don't have much time to watch their investments, having a small but diversified portfolio, professional fund management, and cost savings from the fund manager's lower commissions in larger trades. The primary market, where businesses issue securities for infrastructure or business expansion, and the secondary market, where investors buy and sell shares they have already purchased from the primary market, are the two main parts of the capital market. The Central Securities Clearing System (CSCS), a stockbrokerage firm, and the dematerialization of share certificates are all involved in the process. The CSCS settles capital market transactions within four business days (SEC, 2015).

Over the last decade, the Nigerian capital market has experienced significant growth and transformation, with the revised Nigerian Capital Market Master Plan (RCMMP) serving as a blueprint for positioning the market as an efficient and internationally competitive market. Key points include Nigeria's emerging status as a frontier market, the Medium-Term National Development Plan (MTNDP), which emphasizes the development of a deep, broadened, and competitive financial system while addressing challenges and opportunities, as well as prior successes such as the dematerialization of stock certificates, automated dividend management, and improved corporate governance standards. The RCMMP aims to strike a balance between risk-taking and investor protection while promoting economic growth and positioning the capital market as an engine of economic growth and development (Oxford Business Group, 2023).

Nigeria's capital market has expanded favorably in spite of local obstacles and worldwide headwinds. The following are some salient points (Nairametrics, 2022, December 28):

- By the end of 2022, the Nigerian Exchange (NGX), which had undergone a rebranding, had produced an astounding 19.9% return on investment, ranking it as the fourth-best-performing index globally. This success highlights the robustness and appeal of the market.
- Blue-Chip Listings: To maintain this momentum, it is critical to get blue-chip businesses listed on the NGX. Promoting these listings will increase the liquidity and depth of the market.
- Retail Channels: It's critical to grow retail channels to facilitate simpler access to financing markets. Paperless transactions, digitization, stricter controls, and new rules all help to improve the market's attractiveness.

- Product Innovation: Although Nigeria's capital markets presently offer a range of products, we believe that more innovations would broaden and improve the market. Adding new financial products and diversifying your portfolio will draw in more investors.
- International Interest: Nigeria continues to draw interest from both outside and domestically, even in the face of volatility in the bond and sukuk (Islamic bond) markets. Its appeal will increase with strategic reforms.

3. LITERATURE REVIEW

3.1 Theoretical Framework

1 Purchasing Power Parity (PPP) theory: Certainly! The Purchasing Power Parity (PPP) theory is an essential concept in international economics. It posits that exchange rates should adjust to equalize the purchasing power of different currencies. Here's how it works:

- Absolute PPP: This version assumes that identical goods should cost the same in different countries when expressed in a common currency. For instance, if a bag of corn costs $10 in the United States and N600 in Nigeria, the exchange rate should be such that $10 = N600.
- Relative PPP: This version considers the inflation rates between two countries. It suggests that exchange rates should adjust based on relative price changes. If the US inflation rate is higher than Nigeria's, the dollar should depreciate against the naira to maintain parity.

The formula for PPP is: $Exchange\ Rate = \frac{\text{Price level in foreign country}}{\text{Price level in home Country}}$

It provides a way to compare levels of growth and standards of living in various nations, each of which has its own currency. However, in practice, deviations occur due to factors like transaction costs, non-tradable goods, and market imperfections. Still, PPP remains a useful theoretical framework for understanding exchange rate dynamics (Investopedia, 2024).

2 Interest Rate Parity (IRP) Theory: The theory known as interest rate parity (IRP) holds that the difference in interest rates between two nations is equivalent to the difference in the forward and spot exchange rates. Because it links interest rates, spot exchange rates, and foreign exchange rates, it is crucial to the foreign exchange markets (CFA Journal, 2024). This basic equation governs the link between interest rates and currency exchange rates. The fundamental idea behind IRP is that hedging returns on investments made in all currencies should be equal, regardless of interest rates. In foreign exchange markets, the concept of no-arbitrage, or the simultaneous purchase and sale of an item to profit from a price differential, is known as IRP. Investors cannot purchase one currency at a lower price, lock in the current exchange rate, and then purchase another currency from a country offering a higher interest rate (Investopedia, 2024).

The IRP formula is: $Fo = So \times \left(\frac{1 + i_c}{1 + i_b} \right)$

Where:

Fo =Forward Rate

So =Spot Rate

i_c =Interest rate in country c

i_b =Interest rate in country b

Forward exchange rates (IRP) are exchange rates at a future point in time, unlike spot exchange rates (current rates). They are available from banks and currency dealers for periods ranging from less than a week to five years and more. The difference between the forward rate and the spot rate is known as swap points, and a forward premium is positive if the forward rate minus the spot rate is positive, and a negative difference is a forward discount. A currency with lower interest rates will trade at a forward premium in relation to a currency with a higher interest rate. When forward contracts can satisfy the no-arbitrage condition, the IRP becomes "covered", and it becomes "uncovered" when no forward contracts can satisfy the no-arbitrage condition. However, critics have criticized IRP for its assumptions, which include the assumption of infinite funds available for currency arbitrage and the absence of futures or forward contracts to mitigate foreign exchange risk (Investopedia, 2024).

3 International Fisher Effect (IFE): In the 1930s, American economist Irving Fisher proposed the International Fisher Effect (IFE) as an economic theory. It sheds light on the connection between exchange rates and nominal interest rates. This is a succinct synopsis:

- Theory: According to the IFE, the difference in the nominal interest rates of two countries is roughly equivalent to the predicted difference in exchange rates between them.
- Prediction: In a given nation, higher nominal interest rates typically lead to higher inflation. As a result, the currency loses value relative to other currencies. On the other hand, nations with lower interest rates can witness a rise in their currency's value.

IFE is calculated as: $E = \frac{i_1 - i_2}{1 + i_2} \approx i_1 - i_2$

Where:

The symbol (E) indicates the percentage change in the currency rate.

For nation A, the interest rate is (i_1).

For nation B, the interest rate is (i_2).

For example, if country B has a 5% interest rate and country A has a 10% interest rate, the value of country B's currency should increase by about 5% relative to that of country A. Although the IFE provides a solid foundation, it is currently more common to estimate currency exchange movements based on predicted inflation (Investopedia, 2023).

4 The monetary model of exchange rate determination: is one of the most traditional methods for determining the exchange rate. The monetary model relies on a simple demand-for-money curve and utilizes the IS/LM/Phillip Curve model as its foundation. According to the paradigm, shifts in money supply and demand ultimately determine the exchange rate. The law of one price, sometimes known as purchasing power parity, is valid (EconomyWatch, 2021). The interaction between those who wish to trade in their currency (the currency supply) and those who want to receive it (the currency demand) determines exchange rates (Khan Academy, 2024).

5 The asset market model: is a theory that suggests that a currency will be in more demand and hence will likely appreciate in value if the flow of funds into other financial markets of the country, such as equities and bonds, increases, and vice versa (Forexkarma, 2024). The model is used to analyze the behavior of exchange rates. It implies that the flow of money into a country's other financial assets, such as bonds and securities, increases demand for its currency, and vice versa (Forexcentral, 2024).

6 Empirical and Practical Implications: Exchange rate movements can impact corporate earnings, valuation, foreign direct investment (FDI), inflation, and interest rates. Firms with foreign currency debt and local currency earnings may experience financial performance impacts, such as increased debt servicing costs and reduced profitability. Volatile exchange rates can discourage investment, reduce capital inflows, and have a negative impact on the capital market. Additionally, fluctuations in exchange rates can lead to inflationary pressures, prompting the Central Bank of Nigeria to adjust interest rates, dampening economic growth and increasing borrowing costs (Taylor, Wang, and Xu, 2021).

3.2 Empirical Literature

Uguru et al. (2024), in their study, investigated the relationship between exchange rate volatility and stock market performance in Nigeria from 1981 to 2022 using the EGARCH model. The results show that stock prices in Nigeria respond negatively to exchange rate fluctuations, with significant volatility persisting between stock prices and exchange rate flux. Investors should carefully analyze the nature of exchange rate volatility and stock market prices in order to make informed investment decisions, according to the study. Adedeji (2023) evaluated the impact of exchange rate volatility on the stock market's indicators, such as returns, capitalization, liquidity, and transaction volume, based on Nigerian evidence. The paper examines an existing model of exchange rate-stock market interactions, which incorporates an autoregressive adjustment component that absorbs autocorrelation, as suggested by El-Wassal (2013). The models were tested on annual data (1985–2020). The study found that exchange rate volatility has a negative impact on stock market development in terms of returns, capitalization, and volume. One implication of the finding is that volatility may discourage investors, reduce firm performance, and lead to a reduction in the returns of firm shares. It recommends that policymakers put in place growth-inducing infrastructural investments to make the business environment more conducive to attracting foreign capital while also positioning the capital market with several initiatives to increase trading activities.

Bhargava and Konku (2023) employed various statistical methods, like unit root tests, cointegration models, and GARCH models, analyzed the relationship between exchange rate fluctuations of a number of major currencies and its impact on US stock market returns, as proxied by the S&P 500, and found that the spillover is asymmetric for Australian dollars. The study found that volatility in the Australian dollar, Canadian dollar, and euro impacted market returns, with the volatility of the Australian dollar and euro spilling over to the volatility of the S&P 500. Overall, the study underscores the importance of considering exchange rate movements when analyzing stock market behavior and provides valuable insights for investors and policymakers navigating global financial markets.

In 2022, Ewubare, Chukwu, and Ezekwe looked at how the nominal exchange rate, the real effective exchange rate, the real interest rate, and the inflation rate affected market capitalization. To do this, they used time series data from the WDI and World Federation Exchanges databases from 1993 to 2020. They applied the unit root test, cointegration test, ARDL estimation method, and Granger causality tests to analyze the data. The study found a long-term relationship between market capitalization and explanatory variables, with the real effective exchange rate positively impacting market capitalization. The nominal exchange rate had insignificant positive effects, while the real interest rate had a significant negative effect. Inflation also negatively affected market capitalization. The study recommends policymakers prioritize realistic exchange rate management to enhance global competitiveness and market capitalization. Fapetu et al. (2022) analyzed the relationship between capital market performance and macroeconomic dynamics in Nigeria from 1993 to 2020 using secondary data. It found a significant long-term causality between the exchange rate, inflation, money supply, and unemployment rate. This supports the Arbitrage Pricing Theory (APT) proposition in Nigeria, which suggests that the linear relationship between an asset's expected returns and macroeconomic factors can predict its returns. The results validate the APT's recommendations in Nigeria.

Gokmenoglu, Eren, and Hesami (2021) employed the quantile-on-quantile approach to investigate the relationship between exchange rates and stock markets in emerging economies. The empirical results suggest that exchange rate flexibility has a crucial role in determining market returns depending on bearish or bullish conditions. Considering the asymmetric nature of the relationship between the exchange rate and the stock market, the presented results can aid governmental authorities and investors in designing dynamic economic policies and investment strategies. Gnagne and Bonga-Bonga (2020), in their study, examined the impact of exchange rate volatility on the security markets in BRICS economies. They apply a multivariate GARCH-M with BEKK specifications to weekly data obtained from Thomson Reuters DataStream to achieve this objective. The paper's findings show that exchange rate volatility has a positive impact on bond yields in all BRICS countries, except for South Africa. In 2022, Umoru et al. used the dynamic conditional correlation (DCC) and BEKK-GARCH models to look at volatility transmission and persistence in some African countries. They found evidence that exchange rate volatility can go both ways between all of the countries in the study.

Manu and Bhaskar (2018) studied the effect of exchange rate volatility on stock market performance. The study selected four exchange rates (EURO/INR, USD/INR, GBP/INR, and YEN/INR) and three stock indices on the BSE (SENSEX, BSE 500) and NSE (Nifty 50). The study used the GARCH model to analyze the effect of exchange rate volatility. Overall, the study found a great influence of exchange rate volatility on performance stock indices. Exchange rate fluctuations affect the prices of the stock index the following day. Jibrin, Terfa, and Abraham (2017) examined the exchange rate returns of the Rand (relative to the US dollar) and the Naira (relative to the US dollar) for volatility. It also examines how exchange rate returns affect the performance of their respective stock markets. They collected data from January 2013 to December 2016 from sources such as Bloomberg, the Central Bank of Nigeria, and the Nigerian Stock Exchange. The augmented Dickey-Fuller test was employed to examine the series for the presence of a unit root and determine the order of integration. The ARCHGARCH model was used to estimate exchange rate volatility for South Africa and Nigeria. The paper concludes that the Nigerian stock exchange will benefit from policies aimed at stabilizing the exchange rate and encouraging the quotation of more non-oil stocks. Raising the listing requirement for firms quoted in the UK FTSE 100, as well as those seeking listing or already listed in the JSE, would be a viable strategy for the Johannesburg stock exchange. For both countries, however, curtailing swings in their exchange rate returns would help attract new investments and sustain existing ones, hence helping to spur growth.

Obura and Anyango (2016) investigated how interest rates and changes in foreign exchange rates impacted the Nairobi Securities Exchange (NSE) market's performance. They found that interest rates moderate the association between exchange rate swings and the performance of the securities market. This correlational study analyzes secondary data from January 2006 to December 2010 using hierarchical regression. The research proposes the development of rules that regulate interest rates, taking into account their notable influence on the performance of the NSE market.

4. METHODOLOGY

4.1 Research Design

We chose an ex post facto research design for this study due to its unique nature. This is predicated on the idea that the study's data are preexisting and unchangeable. This study design also provides the foundation for investigating the cause-and-effect relationship between the independent and dependent variables.

4.2 Data Sources

The data employed in this study are yearly time series data of Market Capitalization (MCAP), No of Deals (DLS), Stock Market Price (STP), Gross Domestic Product (GDP), Foreign Direct Investment (FDI), Exchange Rate (EXCR), and Inflation Rate (INF). The World Bank's and the Nigerian Central Bank's statistical databases are the sources of all data. All the variables are displayed as natural logarithms.

Table 1: Measurement of Variables and Data Sources

S/No	Variables	Definition & Measurement	Sources of Data
1.	Market Capitalization (MCAP)	Market capitalization represents the aggregate value of a business's outstanding shares. It is computed by multiplying the total number of shares by the share's current market value.	Central bank of Nigeria (CBN) statistical bulletin volume 33, December 2022. **A.21.3**
2.	No of Deals (DLS)	The no of deals or volume of trade is defined as the total number of shares or contracts traded for a specified security. It can be used to measure any type of security traded during a trading day.	Central bank of Nigeria (CBN) statistical bulletin volume 33, December 2022. **A.21.1**
3.	Stock Market Price (STP)	The current price at which a specific stock is available for purchase or sale on the stock exchange is known as the stock market price. It reflects the market's latest price agreed upon by buyers and sellers.	Central bank of Nigeria (CBN) statistical bulletin volume 33, December 2022. **A.21.1**
4.	Gross Domestic Product (GDP)	GDP is the total value of all goods and services produced within a country's borders during a specific time period, serving as a comprehensive indicator of a country's economic health.	Central bank of Nigeria (CBN) statistical bulletin volume 33, December 2022. **C.1.1**
5.	Foreign Direct Investment (FDI)	Refers to when a business or government makes a significant, long-term investment in a foreign enterprise.	https://data.worldbank.org/indicator/BX.KLT.DINV.CD.WD?locations=NG
6.	Inflation Rate (INF)	A broad increase in the cost of goods and services over time indicates inflation, which is a progressive loss of purchasing power.	https://data.worldbank.org/indicator/FP.CPI.TOTL.ZG?locations=NG
7.	Exchange Rate (EXCR)	This is the Bilateral exchange rate between Nigeria and the USA. It is the monthly average official exchange rates of the Naira vis-à-vis the US dollar.	https://data.worldbank.org/indicator/PA.NUS.FCRF?locations=NG

Source: Authors Compilation, 2024

4.3 Model Specification

The model specification for this study used market capitalization, stock price, and number of deals (volume of trade) as the dependent variables, as well as exchange rate, gross domestic product, inflation rate, and foreign direct investment as independent variables. The functional forms of the models are outlined below:

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Model 1: $MCAP = f(GDP, FDI, INF, EXCR)$ (1)

Model 2: $DLS = f(GDP, FDI, INF, EXCR)$ (2)

Model 3: $STP = f(GDP, FDI, INF, EXCR)$ (3)

Where:

MCAP= Market Capitalization

DLS= No of Deals

STP = Stock Market Price

GDP = Gross Domestic Product

FDI = Foreign Direct Investment

INF = Inflation Rate

EXCR = Exchange Rate

The autoregressive distributed lag (ARDL) model 1 for this study is specified as follows:

$$\Delta LMCAP_t = \beta_0 + \beta_1 LMCAP_{1t-1} + \beta_2 LGDP_{2t-1} + \beta_3 LFDI_{3t-1} + \beta_4 LINF_{4t-1} + \beta_5 LEXCR_{5t-1} + \sum_{j=0}^{p} \delta_j \Delta LMCAP_{1t-j} + \sum_{1=0}^{q} \varphi_1 \Delta LGDP_{2t-1} + \sum_{m=0}^{q} \delta_m \Delta LFDI_{3t-m} + \sum_{n=0}^{q} \eta_n \Delta LINF_{4t-n} + \sum_{n=0}^{q} \eta_n \Delta LEXCR_{5t-n} + \varepsilon_t \quad (4)$$

The autoregressive distributed lag (ARDL) model 2 for this study is specified as follows:

$$\Delta LDLS_t = \beta_0 + \beta_1 LDLS_{1t-1} + \beta_2 LGDP_{2t-1} + \beta_3 LFDI_{3t-1} + \beta_4 LINF_{4t-1} + \beta_5 LEXCR_{5t-1} + \sum_{j=0}^{p} \delta_j \Delta LDLS_{1t-j} + \sum_{1=0}^{q} \varphi_1 \Delta LGDP_{2t-1} + \sum_{m=0}^{q} \delta_m \Delta LFDI_{3t-m} + \sum_{n=0}^{q} \eta_n \Delta LINF_{4t-n} + \sum_{n=0}^{q} \eta_n \Delta LEXCR_{5t-n} + \varepsilon_t \quad (5)$$

The autoregressive distributed lag (ARDL) model 3 for this study is specified as follows:

$$\Delta LSTP_t = \beta_0 + \beta_1 LSTP_{1t-1} + \beta_2 LGDP_{2t-1} + \beta_3 LFDI_{3t-1} + \beta_4 LINF_{4t-1} + \beta_5 LEXCR_{5t-1} + \sum_{j=0}^{p} \delta_j \Delta LSTP_{1t-j} + \sum_{1=0}^{q} \varphi_1 \Delta LGDP_{2t-1} + \sum_{m=0}^{q} \delta_m \Delta LFDI_{3t-m} + \sum_{n=0}^{q} \eta_n \Delta LINF_{4t-n} + \sum_{n=0}^{q} \eta_n \Delta LEXCR_{5t-n} + \varepsilon_t \quad (6)$$

Where:

$\beta_0 =$ Constant parameter

$\beta_1 - \beta_5 =$ Short run estimates of the regressors

$\varepsilon_t =$ Error term

$\Delta =$ First difference operator

$p =$ Maximum lag order

As a result, Equation (4, 5, and 6) can be rewritten as follows by adding the error correction term:

$$\sum_{j=0}^{p} \delta_j \Delta LMCAP_{1t-j} + \sum_{1=0}^{q} \varphi_1 \Delta LGDP_{2t-1} + \sum_{m=0}^{q} \delta_m \Delta LFDI_{3t-m} + \sum_{n=0}^{q} \eta_n \Delta LINF_{4t-n} + \sum_{n=0}^{q} \eta_n \Delta LEXCR_{5t-n} + \lambda(ECM)_{t-1} + \varepsilon_{t-1} \quad (7)$$

$$\sum_{j=0}^{p} \delta_j \Delta LDLS_{1t-j} + \sum_{1=0}^{q} \varphi_1 \Delta LGDP_{2t-1} + \sum_{m=0}^{q} \delta_m \Delta LFDI_{3t-m} + \sum_{n=0}^{q} \eta_n \Delta LINF_{4t-n} + \sum_{n=0}^{q} \eta_n \Delta LEXCR_{5t-n} + \lambda(ECM)_{t-1} + \varepsilon_{t-1} \quad (8)$$

$$\sum_{j=0}^{p}\delta_j\Delta LSTP_{1t-j}+\sum_{1=0}^{q}\varphi_1\Delta LGDP_{2t-1}+\sum_{m=0}^{q}\delta_m\Delta LFDI_{3t-m}+\sum_{n=0}^{q}\eta_n\Delta LINF_{4t-n}+\sum_{n=0}^{q}\eta_n\Delta LEXCR_{5t-n}+\lambda\left(ECM\right)_{t-1}+\varepsilon_{t-1} \quad (9)$$

4.4 Method of Data Analysis

In order to assess the dynamic long- and short-term relationship between capital market performance and the explanatory factors, this study used the ARDL approach developed by Pesaran and Shin (1999) and Pesaran, Shin, and Smith (2001). The ARDL model is a versatile tool for analyzing dynamic relationships between variables, allowing for simultaneous estimation of short-run and long-run dynamics. It offers flexibility with stationarity, provides a comprehensive view of exchange rate and market performance, and is effective even with limited data. To assess the reliability of the estimated model, we also performed post-estimation on the estimated model to assess its reliability.

In the model, the ordinary least squares (OLS) approach estimates the lagged levels of variables, and the F-test examines the joint significance of these levels. To investigate the long-term association between variables, we employ the Wald test. We examine the test findings using the F-statistic, which is non-standard under the null hypothesis. If the F-statistics exceed the upper bound, we reject the null hypothesis and indicate long-term cointegration. Once we implement the ARDL method, we can estimate the short- and long-term dynamic relationships.

The Error Correction Model (ECM) is a statistical analysis tool that measures the short- and long-term relationships between variables. The Error Correction Model (ECM) employs an error correction term (ECT) to gauge the rate of adjustment of long-run equilibrium deviations. To demonstrate long-term equilibrium, the ECTt−1 term must be statistically significant and negative, indicating a force driving the variables towards equilibrium (Sargan, 1964). The Wald test will also be used to determine if the variables associated with the coefficients contribute to the model.

4.5 Empirical Results

4.5.1 Preliminary Analysis

Table 2 shows that while LMCAP, LDLS, LSTP, LGDP, LFDI, and LEXCR are stationary after first differencing, inflation rate (LINF) is stationary at levels when intercept and trend are taken into account. This demonstrates that the only variables present are I(0) and I(1). Therefore, it is appropriate to use the autoregressive distributed lag (ARDL) method.

Table 2: Unit Root Tests Result

Variables	ADF Test Statistic				PP Test Statistic			
	Constant	Constant & Trend	None	First Difference	Constant	Constant & Trend	None	First Difference
LMCAP	-0.62	-1.16	2.19	-4.97*	-0.61	-1.41	3.08	-4.99*
LDLS	-1.47	-0.88	1.78	-5.49*	-1.47	-0.99	1.66	-5.49*
LSTP	-0.81	-1.11	1.09	-5.89*	-0.81	-1.21	0.84	-5.89*
LGDP	-1.45	-0.15	2.06	-3.50*	-1.08	-0.60	4.47	-3.42*
LFDI	-1.95	-2.99	0.32	-10.12*	-1.64	-3.05	0.56	-10.12*
LEXCR	-2.16	-1.40	1.98	-5.43*	-2.31	-1.40	1.44	-5.43*
LINF	-3.53*	-4.48*	-0.78	-7.18*	-3.40*	-3.30	-0.52	-9.63*

Source: Authors' construct using Eviews 12 (2024).

The PP test outperforms the ADF test in that it corrects for heteroscedasticity and serial correlation in the error terms. The non-parametric PP test estimates the autoregressive process using a given number of lags, but it does not pretest for serial correlation. Next, we modify the test statistic to account for the serial correlation of the errors. In contrast, lag selection is an essential part of the testing process for other unit root tests, including the Augmented Dickey-Fuller (ADF) test. Table 2 above shows the results of the ADF and PP tests.

4.6 Results for Model 1: How Exchange Rate Impacts on Market Capitalization

Bounds Test for Cointegration

The limits test for cointegration provides a strong basis for determining the probability of a long-term link. This is necessary for the ARDL model to function.

Table 3: Results of Model 1 Bounds Test for Cointegration

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	5.023073	10%	2.2	3.09
k	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

The F-statistics value (5.023073) in Table 3 is higher than the upper bounds' values, or I(1). This means that the study rejects the null hypothesis that there is no level of relationship and finds that there is long-run joint cointegration.

Long-Run Coefficients

We use the ARDL framework to better understand the long-run coefficients when the bounds test for cointegration reveals a long-term relationship between market capitalization and the explanatory variables.

Table 4: Long-Run Effect of Exchange rate on Market Capitalization

Selected Model: ARDL(1,2,3,1,1)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LMCAP(-1)	0.270052	0.167089	1.616218	0.1186
LGDP	2.154012	0.480804	4.480018	0.0001
LGDP(-1)	0.448168	0.600597	0.746203	0.4625
LGDP(-2)	-1.334521	0.402819	-3.312957	0.0028
LFDI	0.076843	0.059235	1.297269	0.2064
LFDI(-1)	0.112714	0.058590	1.923782	0.0658
LFDI(-2)	-0.017529	0.057856	-0.302980	0.7644
LFDI(-3)	-0.158649	0.057782	-2.745670	0.0110
LEXCR	-0.273196	0.135329	-2.018756	0.0544
LEXCR(-1)	-0.137703	0.142889	-0.963712	0.3444
LINF	-0.106745	0.059642	-1.789759	0.0856
LINF(-1)	-0.167067	0.069580	-2.401083	0.0241
C	-4.973079	1.769339	-2.810699	0.0095

R^2=0.997873

Source: Authors' construct using Eviews 12 (2024).

Table 4 records the estimation for equation 4 that both current and lagged GDP variables show significant relationships with market capitalization. The current GDP level has a significant positive effect on market capitalization (p = 0.0001), whereas the second lag of GDP has a negative and significant impact (p = 0.0028). Foreign direct investment shows mixed results, with current FDI not significantly affecting market capitalization. However, the third lag of FDI has a negative and significant impact (p = 0.0110). The current exchange rate negatively affects market capitalization, approaching significance (p = 0.0544). Inflation variables also negatively affect market capitalization, with the lagged value being significant (p = 0.0241). The constant term is significant (p = 0.0095), indicating a baseline negative effect on market capitalization. The ARDL model suggests that GDP and its lags, FDI lags, exchange rates, and inflation significantly influence Nigeria's market capitalization. This analysis provides insights into the complex dynamics of how exchange rate fluctuations and macroeconomic variables impact the capital market in Nigeria.

Short-run Dynamics

The ARDL has three components; the short-run, the long-run and the error-correction term (ECT). From Table 5, ECT is -0.729948 and it is significant at 1% with the expected negative sign. This gives another confirmation of the existence of a long-run relationship, indicating that fluctuations in exchange rate (that is; above or below its equilibrium level) are adjusted at a speed of approximately 73%. To ensure long-run convergence to equilibrium

Table 5: Short Run Effects of Exchange rate on Market Capitalization

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGDP)	2.154012	0.335294	6.424248	0.0000
D(LGDP(-1))	1.334521	0.295454	4.516851	0.0001
D(LFDI)	0.076843	0.047495	1.617916	0.1182
D(LFDI(-1))	0.176178	0.050063	3.519143	0.0017
D(LFDI(-2))	0.158649	0.044020	3.604032	0.0014
D(LEXCR)	-0.273196	0.097093	-2.813761	0.0094
D(LINF)	-0.106745	0.044526	-2.397351	0.0243
ECT(-1)*	-0.729948	0.121378	-6.013828	0.0000

R^2= 0.750408

Table 5 records the estimation for equation 7 which again revealed that, in the short run, changes in GDP have a highly significant positive effect on market capitalization. The one-period lag of changes in GDP also has a significant positive effect on market capitalization. In the short run, current FDI changes are not statistically significant. Lagged FDI changes have a significant positive effect on market capitalization. Changes in the exchange rate have a significant negative effect on market capitalization. Changes in inflation have a significant negative effect on market capitalization. The error correction term is negative and highly significant, indicating a strong adjustment towards long-run equilibrium. This analysis indicates that, in the short run, exchange rate fluctuations, GDP changes, and lagged FDI changes have a significant impact on Nigeria's market capitalization. The negative coefficient for the exchange rate suggests that an increase in exchange rate volatility reduces market capitalization, while positive GDP and lagged FDI changes support market growth.

Table 6: Result of the Wald Test

Test Statistic	Value	df	Probability
F-statistic	2.132318	(2, 25)	0.1396
Chi-square	4.264635	2	0.1186

Source: Authors' construct using Eviews 12 (2024)

The Wald test is used to simultaneously test the significance of multiple coefficients in a regression model. In this case, results in Table 6 indicate that the coefficients of the exchange rate's first and second lags are not significantly different from zero. This implies that in the model, the exchange rate does not have a significant impact on market capitalization.

Diagnostic and Stability Test

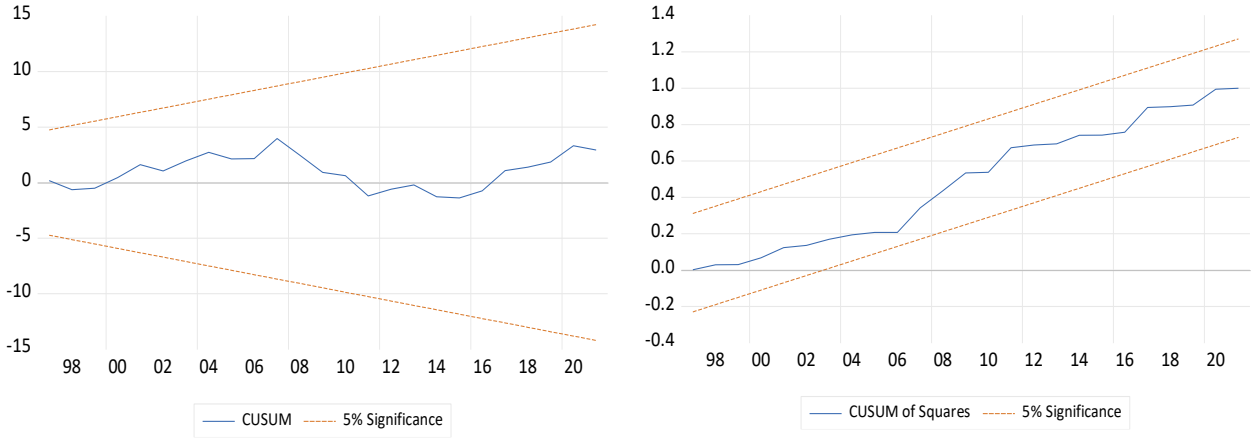
The post-estimation result in Table 7 indicates the model is free from serial correlation, heteroscedasticity, underfitting or overfitting, but not normal. Brown et al. (1975) proposed the cumulative sum of recursive residuals (CUSUM) and squared residuals (CUSUMSQ) to test the stability of the estimated parameters. The CUSUM and CUSUMSQ test results show that the parameters of the LMCAP model are relatively stable over time. Figure 1 below presents the plots. At the 5% significance level, the red lines represent critical bounds.

Table 7: Outcome of Diagnostic and Stability Tests

S/No	Method	Lm Version	F-Stat Version
1.	Serial correlation	χ2(1) = 2.085442 (0.3525)	F (2,23) = 0.667768 (0.5225)
2.	Heteroscedasticity ARCH	χ 2 (37) = 1.202403 (0.2728)	F (1, 35) = 1.175612 (0.2857)
3.	Heteroscedasticity Breusch PG	χ 2 (38) = 8.832365 (0.7172)	F (12, 25) = 0.630862 (0.7964)
4.	Normality (Jarque-Bera)	13.27134 (0.001313)	Not Normal
5.	CUSUM	Within 5% critical region	Stable
6.	CUSUMSQ	Within 5% critical region	Stable

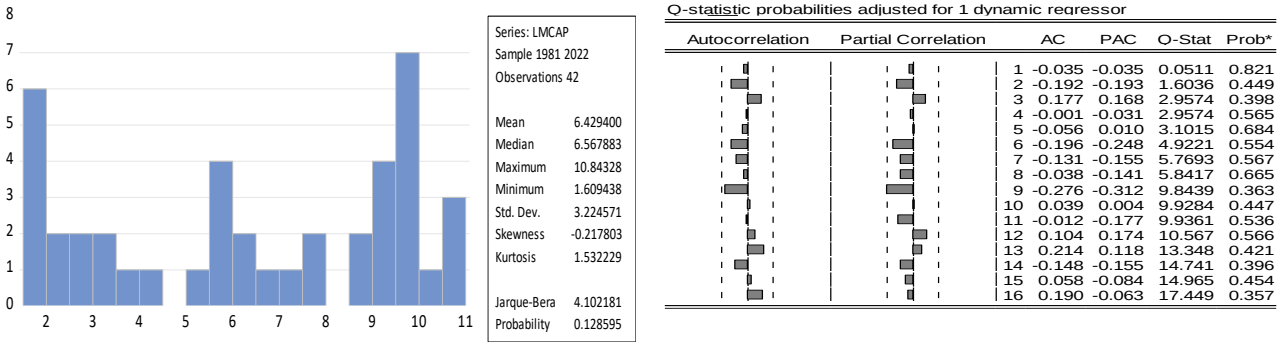
Source: Authors' construct using Eviews 12 (2024)

Figure 1:



The Jarque-Bera test reveals that our model's residuals lack a normal distribution, with a p-value of less than 0.05. To address this, we applied a logarithmic transformation to the dependent variable to stabilize the variance and approximate normality. Furthermore, we will use robust standard errors to ensure our inference remains valid despite the non-normality of residuals. We will also use graphical techniques such as Q-Q plots to visually evaluate the enhancements in normality that occur after the transformations. Figure 2 presents the graphic results.

Figure 2:



4.7 Results for Model 2: How Exchange Rate Impacts on the Number of Deals or Volume of Trade

Table 8: Results of F Bounds Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	4.799822	10%	2.2	3.09

k	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Table 8 shows that the results of the bounds cointegration test indicate that the computed F-statistic (4.799822) exceeds the corresponding critical value (3.49) at the 5 percent level. The cointegration of the variables implies the rejection of the null hypothesis that no long-run relationships exist. This suggests that the increase in the number of deals or volume of trade has a long-term relationship with LGDP, LFDI, LEXCR, and LINF. This, therefore, provides the empirical basis for estimating the ARDL model.

Table 9: The long-run effects

Selected Model: ARDL(3, 1, 1, 4,3)

Variable	Coefficient	Std. Error	t-Statistic	Prob.*
LDLS(-1)	0.173698	0.213960	0.811826	0.4264
LDLS(-2)	-0.349389	0.214888	-1.625912	0.1196
LDLS(-3)	0.233922	0.181783	1.286817	0.2129
LGDP	1.738517	0.949249	1.831465	0.0820
LGDP(-1)	-1.758263	0.856940	-2.051792	0.0535
LFDI	0.149422	0.117400	1.272756	0.2177
LFDI(-1)	0.218433	0.117648	1.856660	0.0782
LEXCR	-0.618247	0.281400	-2.197042	0.0400
LEXCR(-1)	-0.058425	0.341835	-0.170914	0.8660
LEXCR(-2)	0.898785	0.304974	2.947086	0.0080
LEXCR(-3)	-0.200038	0.338837	-0.590367	0.5616
LEXCR(-4)	0.460933	0.232742	1.980446	0.0616
LINF	-0.591388	0.158430	-3.732813	0.0013
LINF(-1)	-0.187133	0.171616	-1.090415	0.2885
LINF(-2)	-0.399467	0.181371	-2.202492	0.0395
LINF(-3)	-0.188585	0.142104	-1.327089	0.1994
C	6.149375	2.813704	2.185509	0.0409

R-squared: 0.985423

Table 8 records the estimation for equation 5; the results indicate that both GDP and exchange rate fluctuations have significant effects on the number of deals in the Nigerian capital market, although their impacts vary over different lags. Inflation also has a significant negative effect during the current and second lag periods.

Table 10: Short Run Effects

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LDLS(-1))	0.115468	0.134257	0.860047	0.4000
D(LDLS(-2))	-0.233922	0.120918	-1.934548	0.0673
D(LGDP)	1.738517	0.377315	4.607602	0.0002
D(LFDI)	0.149422	0.071080	2.102164	0.0484
D(LEXCR)	-0.618247	0.199301	-3.102079	0.0056
D(LEXCR(-1))	-1.159680	0.283563	-4.089666	0.0006
D(LEXCR(-2))	-0.260895	0.206531	-1.263222	0.2210
D(LEXCR(-3))	-0.460933	0.202052	-2.281261	0.0336
D(LINF)	-0.591388	0.120022	-4.927339	0.0001

D(LINF(-1))	0.588052	0.143732	4.091302	0.0006
D(LINF(-2))	0.188585	0.120345	1.567035	0.1328
CointEq(-1)*	-0.941769	0.156964	-5.999889	0.0000
R-squared: 0.684095				

Table 10 records the estimation for equation 8 show that the short-term impact of GDP (LGDP) is significantly positive. The short-run effect of foreign direct investment (FDI) is positive, especially in the immediate lag. The exchange rate has consistently negative short-run effects, aligning with long-term findings. The short-run effects of inflation (D(LINF)) are negative and align with the long-term findings. In the long run, the error correction term (ECT(-1)) is significant and negative, indicating a strong adjustment back to equilibrium.

Table 11: Result of the Wald Test

Test Statistic	Value	df	Probability
F-statistic	3.527871	(5, 20)	0.0190
Chi-square	17.63936	5	0.0034

Source: Authors' construct using Eviews 12 (2024)

The Wald test results in Table 11 suggest that the coefficients of the exchange rate's lags are significantly contribute to explaining the number of deals in the Nigeria capital market within the period of study.

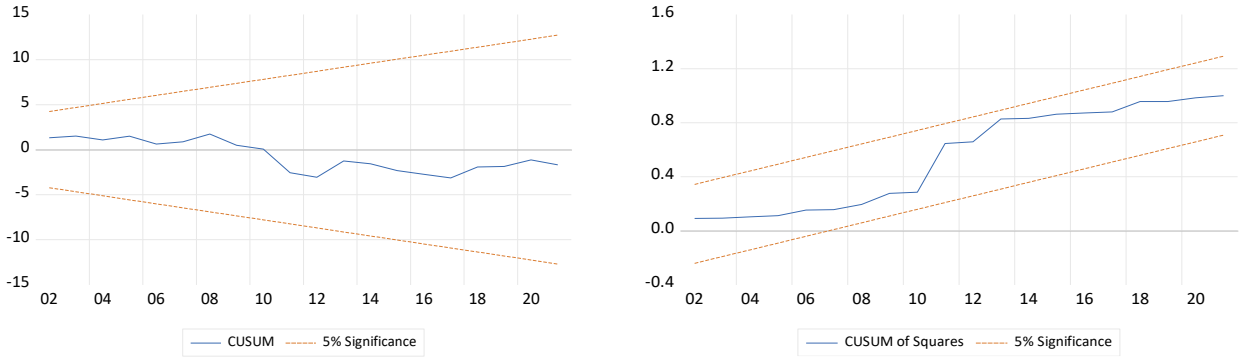
Diagnostic and Stability Test

Table 12: Outcome of Diagnostic and Stability Tests

S/No	Method	Lm Version	F-Stat Version
1.	Serial correlation	$\chi 2 = 4.460977$ (0.1075)	F (2,18) = 0.667768 (0.5225)
2.	Heteroscedasticity ARCH	χ 2 = 0.736967 (0.3906)	F (1,34) = 0.710570 (0.4051)
3.	Heteroscedasticity Breusch PG	χ 2 (37) = 17.11529 (0.3782)	F (16, 20) = 1.075907 (0.4325)
4.	Normality (Jarque-Bera)	0.938640 (0.126647)	Normal
5.	CUSUM	Within 5% critical region	Stable
6.	CUSUMSQ	Within 5% critical region	Stable

Table 12 demonstrates that the specified model meets all its assumptions. We cannot reject any of the null hypotheses, which include no serial correlation, a normal distribution of the residuals, or homoscedasticity. Figure 3 shows the cumulative sum of recursive residuals (CUSUM) and of squared recursive residuals (CUSUMSQ).

Figure 3:



4.8 Results for Model 3: How Exchange Rate Impacts on the Price of Stocks

Table 13: Results of F Bounds Test

F-Bounds Test		Null Hypothesis: No levels relationship		
Test Statistic	Value	Signif.	I(0)	I(1)
			Asymptotic: n=1000	
F-statistic	3.371804	10%	2.2	3.09
k	4	5%	2.56	3.49
		2.5%	2.88	3.87
		1%	3.29	4.37

Table 13 shows that the results of the bounds cointegration test indicate that the computed F-statistic (3.371804) does not exceeds the corresponding critical value (3.49) at the 5 percent level. The cointegration of the variables implies the acceptance of the null hypothesis that no long-run relationships exist. This suggests that the increase in the price of stocks does not have a long-term relationship with LGDP, LFDI, LEXCR, and LINF. This, therefore, provides the empirical basis for estimating the short-term relationship.

Table 14: Short Run Effects

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LGDP)	2.914870	0.876667	3.324945	0.0029
D(LGDP(-1))	2.469444	0.736719	3.351948	0.0028
D(LEXCR)	-1.000515	0.245236	-4.079804	0.0005
D(LEXCR(-1))	-0.528909	0.242344	-2.182468	0.0395
D(LEXCR(-2))	-0.007962	0.244128	-0.032613	0.9743
D(LEXCR(-3))	-0.763520	0.280284	-2.724094	0.0121
D(LINF)	-0.519963	0.180947	-2.873559	0.0086
D(LINF(-1))	0.684693	0.179880	3.806390	0.0009
CointEq(-1)*	-0.423624	0.085361	-4.962744	0.0001

R-squared: 0.626709

Table 14 records the estimation for equation 9 reveals that a 1% increase in GDP leads to a 2.91% short-term increase in stock prices. A 1% increase in lagged GDP leads to a 2.47% increase in stock prices. Conversely, a 1% increase in the exchange rate reduces stock prices by 1% in the short run. Lagged exchange rates have a negative effect, causing a 0.53% decrease in stock prices. In three lags, the exchange rate had a significant negative impact of 0.76%. Inflation reduces stock prices by 0.52%, while lagged inflation has a positive effect, resulting in a 0.68% increase in stock prices. The current period corrects 42.36% of the previous period's disequilibrium.

Table 15: Result of the Wald Test

Test Statistic	Value	df	Probability
F-statistic	2.411411	(5, 23)	0.0674
Chi-square	12.05706	5	0.0340

Source: Authors' construct using Eviews 12 (2024)

Compared to the F-statistic, the findings of the Chi-square test in Table 15 offer more proof against the null hypothesis. The results of the Wald test show that stock price lags are significant as a whole. This means that factors related to stocks had a big effect on the Nigerian capital market during the study period.

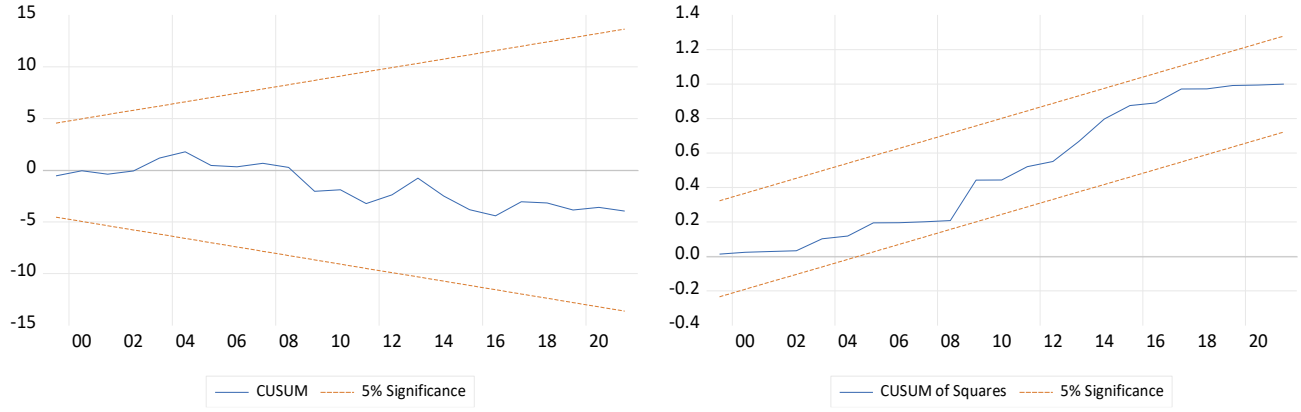
Diagnostic and Stability Test

Table 16: Outcome of Diagnostic and Stability Tests

S/No	Method	Lm Version	F-Stat Version
1.	Serial correlation	$\chi 2 = 6.692059$ (0.0352)	F (2,21) = 2.318423 (0.1231)
2.	Heteroscedasticity ARCH	χ 2 = 2.717024 (0.0993)	F (1,34) = 2.775557 (0.1049)
3.	Heteroscedasticity Breusch PG	χ 2 (13) = 16.15053 (0.2411)	F (13, 23) = 1.370491 (0.2461)
4.	Normality (Jarque-Bera)	0.768269 (0.681040)	Normal
5.	CUSUM	Within 5% critical region	Stable
6.	CUSUMSQ	Within 5% critical region	Stable

Table 16 demonstrates that the specified model meets all its assumptions except the Breusch-Godfrey Serial Correlation LM Test that presented a mixed result where the F-statistic indicates no serial correlation, and the Chi-Square statistic indicates a serial correlation. Figure 4 shows the cumulative sum of recursive residuals (CUSUM) and of squared recursive residuals (CUSUMSQ).

Figure 4:



5. DISCUSSION OF FINDINGS

5.1 The ARDL Model 1 (1, 2, 3, 1, 1)

Both current and lagged GDP values have significant effects on market capitalization. Notably, LGDP and LGDP-2 have significant positive and negative impacts, respectively, indicating a complex relationship between GDP and market capitalization. The positive result is consistent with studies by Adedeji (2023), who found a significant positive impact on stock market capitalization in Nigeria. The positive effect of current GDP on market capitalization suggests that economic growth boosts market performance. However, the negative effect of GDP with a two-period lag indicates potential overvaluation or adjustments that correct for initial gains. The effects of foreign direct investment (FDI) are mixed. While the current FDI (LFDI) is not significant, LFDI (-3) has a significant negative effect, suggesting that past FDI impacts market performance negatively. The mixed impact of FDI suggests that while immediate investments may not significantly influence the market, past investments could have a corrective or adverse effect. The exchange rate's current value negatively affects market capitalization, although LEXCR (-1) is not significant in line with Adedeji (2023), who found the same for Nigeria between 1985 and 2020. The significant negative effect of the exchange rate highlights the sensitivity of the Nigerian capital market to currency fluctuations, underscoring the need for stable exchange rate policies. The findings are not in line with the study of Ewubare et al. (2022). Inflation has a significant negative impact on market capitalization, with both the current (LINF) and lagged (LINF(-1)) values showing negative effects. The consistent negative impact of inflation underscores the importance of maintaining low inflation to support market performance.

The ECM (Error Correction Model) regression results show that the current change in GDP significantly affects market capitalization with a large positive coefficient, suggesting that economic growth boosts the capital market in the short run. The lag in GDP also has a significant positive effect, indicating that past economic performance continues to influence current market performance. The positive impact of both current and lagged GDP changes highlights the importance of sustained economic

growth for improving market performance. The immediate change in FDI is not significant, but the lagged changes (D(LFDI(-1)) and D(LFDI(-2)) are significant and positive, indicating that past FDI inflows have a cumulative beneficial impact on market performance. The significant positive effects of lagged FDI suggest that attracting and sustaining foreign investments is crucial for long-term capital market development. The change in the exchange rate has a significant negative effect, showing that exchange rate depreciation adversely affects the capital market. The negative impact of exchange rate fluctuations emphasizes the need for stable exchange rate policies. Volatility in the exchange rate can deter investment and negatively affect market performance. Inflation change has a significant negative effect, suggesting that higher inflation reduces market capitalization. The adverse effect of inflation on market capitalization underscores the importance of maintaining low and stable inflation. High inflation erodes investor confidence and reduces market returns. The significant error correction term indicates that the market corrects deviations from equilibrium relatively quickly. This suggests that the market is resilient and adjusts to shocks, but maintaining stability is essential.

5.2 The ARDL Model 2 (3, 1, 1, 4, 3)

The coefficients of LDLS (-1) and LDLS (-3) are not statistically significant, indicating that the past values of the number of deals in the capital market do not have a strong influence on their current value. LDLS (-2) has a negative coefficient but is also not statistically significant, suggesting a weak influence of the number of deals in the capital market from two periods ago. The current LGDP has a positive coefficient, which is significant at the 10% level, indicating that a higher current GDP positively influences the number of deals in the capital market. LGDP (-1) has a significant negative coefficient, suggesting that past GDP negatively affects the current number of deals in the capital market. This could imply that economic conditions have a delayed effect on the market. Current LFDI is not significant, indicating that immediate foreign investment does not have a strong impact on the number of deals in the capital market. LFDI(-1) has a positive coefficient and is significant at the 10% level, suggesting that past foreign investments positively influence the number of deals in the capital market over time. The current exchange rate (LEXCR) has a significant negative impact on market capitalization, indicating that currency depreciation reduces the number of deals in the capital market. LEXCR (-2) is significantly positive, indicating that past exchange rate movements (two periods ago) had a positive effect on the current number of deals in the capital market. The result supports the study of Jibrin et al. (2017), who found that the Nigerian stock exchange will benefit from policies aimed at stabilizing the exchange rate and encouraging the quotation of more non-oil stocks. The current inflation rate (LINF) has a significant negative impact, showing that higher inflation reduces the number of deals in the capital market. LINF (-2) is also negatively significant, indicating that inflation from two periods ago has had a negative effect on the current number of deals in the capital market.

The error correction result shows a positive and highly significant current GDP, indicating that changes in GDP positively affect the volume of deals in the capital market. Current FDI is both positive and significant, demonstrating that an increase in FDI has a short-term positive effect on the number of deals in the capital market. The inflation rate is strongly negative and significant, emphasizing its negative impact on the quantity of transactions in the capital market. The error correction term is highly significant and negative, confirming the existence of a long-term equilibrium relationship and the model's ability to correct deviations from this equilibrium.

5.2 The ARDL Model 3

ECM Regression Results show that GDP is positive and highly significant, suggesting that economic growth drives market capitalization. Policies that encourage GDP growth through diversification and infrastructure investment will improve market performance. According to Uguru et al.'s (2024) study on Nigeria's stock market performance from 1981 to 2022, exchange rate volatility has a negative impact on stock prices. Our results support the idea that the exchange rate relationship with stock prices is negative and highly significant. The negative impact of exchange rate fluctuations highlights the need for stable exchange rate policies to minimize adverse effects on the capital market. Prudent monetary policies and building foreign exchange reserves can achieve this. Inflation is well-signed and significant, indicating that controlling it is critical for capital market performance. Effective inflation control measures will benefit both the capital market and overall economic stability. The error correction term is highly significant and negative.

6.1 CONCLUSIONS

The analysis reveals that both current and lagged GDP values have a significant impact on market capitalization, implying that economic growth boosts market performance. However, lagged GDP can indicate potential market corrections. Foreign direct investment (FDI) has mixed effects, with past FDI negatively influencing market performance. Exchange rate fluctuations have a

negative impact on market capitalization, highlighting the need for stable exchange rate policies. Inflation consistently reduces market capitalization, emphasizing the importance of low inflation for market stability.

6.2 RECOMMENDATIONS

1. The government should enact measures that promote GDP growth, such as infrastructural development and economic diversification, in order to improve market performance.
2. The government should implement steps to lower exchange rate volatility, such as cautious monetary policies and greater foreign exchange reserves, in order to shield the capital market from negative effects.
3. To sustain investor confidence and market returns, the government should ensure low and stable inflation through effective monetary policy.
4. Attract and retain foreign investment while monitoring its long-term impact on market performance. This may entail enhancing the atmosphere for doing business and providing incentives for long-term commitments.
5. The government needs to come up with plans to rectify the effects of overvaluation brought on by variations in GDP.
6. Establish a strong policy framework that takes into account the interactions between market performance and economic indicators and enables swift modifications to preserve equilibrium.

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