IMPACT OF EXCHANGE RATE AND GROSS DOMESTIC PRODUCT ON MARKET CAPITALIZATION IN NIGERIA

BY

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Abstract

Market capitalization plays a critical role in shaping financial markets, influencing investor decisions, and determining a company's presence in the market. Moreover, macroeconomic factors such as inflation, exchange rate instability, and GDP also play a significant role in impacting market capitalization growth. Therefore, this study examines the impact of exchange rate and GDP on market capitalization in Nigeria. Data for this study were acquired from Central Bank of Nigeria (CBN) Statistical Bulletins. All listed firms on the floor of the Nigeria Stock Exchange (NGX) whose statement of financial status made public during the study's time frame of January 1, 2010 to December, 2024, make up the study's population, the sample size of this study was all listed firms with market capitalization that was published under the period of the study. Multiple linear regression was used to test the hypotheses stated with the aid of stata version 18. The results of the regression model reveal that exchange rate has a negative and statistically significant effect on market capitalization. For every 1-unit increase in the exchange rate (USD/NGN), market capitalization decreases by 0.0320 trillion NGN. The coefficient is statistically significant with a p-value of 0.001 (less than the 0.05 significance level), indicating a strong inverse relationship between the exchange rate and market capitalization. It also revealed that GDP has a positive and statistically significant effect on market capitalization, with a coefficient of 0.6229. This means that for every 1% increase in GDP, market capitalization increases by 0.6229 trillion NGN. The p-value (0.004) is well below the 0.05 threshold for statistical significance. The study concludes that the model as a whole is statistically significant and that both exchange rate and GDP significantly influence market capitalization in Nigeria. The study recommends that policymakers should prioritize stabilizing the exchange rate to foster confidence in the Nigerian financial markets. Strategies such as maintaining a stable foreign reserve, curbing speculative currency trading, and reducing dependency on foreign imports can help mitigate the adverse effects of currency volatility. Policymakers should implement strategies to stimulate GDP growth, such as diversifying the economy away from oil dependency, improving infrastructure, and promoting key growth sectors like agriculture, manufacturing, and technology. Pro-growth policies such as tax incentives for businesses, support for small and medium enterprises (SMEs), and the promotion of export-oriented industries can further strengthen GDP growth and, in turn, improve market capitalization.

Key words: *Exchange rate, GDP and market capitalization*

Introduction

One of the most important metrics for assessing a company's or a financial market's size, stability, and room for expansion is market capitalization. Financial markets, investor choices, and a company's position in the market are all significantly impacted by market capitalization. With capital markets providing opportunity for both domestic and foreign investors, nations with greater market caps typically have more diverse economies. The global financial scene is dominated by markets such as the Tokyo Stock Exchange (TSE), the London Stock Exchange (LSE), and the New York Stock Exchange (NYSE), which act as significant hubs for investment flows.

These markets offer useful information about the economy and make it easier to trade shares in businesses with different market capitalization, from small-cap enterprises to mega-cap corporations (Chen et al., 2022; Dimson, Marsh, & Staunton, 2021). The global economic landscape has changed dramatically in the last few decades, and developing markets are now major actors in the global economy. The increase in market capitalization in these areas is a sign of growing investor confidence and the expanding company potential. Changes in market capitalization in one area frequently have an impact on the entire world as financial markets get increasingly interconnected. For instance, the worldwide trend toward developing markets has been aided by the growth of capital markets in nations like China, India, and Brazil. Nigeria, as one of the largest economies in Africa, has similarly experienced growth in its market capitalization, reflecting both the country’s economic expansion and the dynamic nature of its financial markets (Udeh & Adebayo, 2023).

The exchange rate has a major impact on stock market returns and is a crucial indicator of economic performance. Exchange rate swings have an effect on global financial stability, foreign investment, and international trade. While currency volatility in emerging nations frequently results in increased risks and opportunities, stable exchange rates in developed economies help to anticipate stock market returns (Engel & West, 2022; Dornbusch, 2021). Currency fluctuations have a greater influence on market behavior and investor mood in emerging markets. Exchange rate volatility is a common problem for nations like Brazil, India, and South Africa. It affects company profitability, inflation, and capital inflows (Adler & Garcia, 2023; Miskin et al., 2022).

These dynamics highlight the interconnectedness of currency markets and equity markets in shaping economic outcomes. Nigeria, as a resource-dependent economy, is particularly

vulnerable to exchange rate fluctuations. The nation's reliance on oil exports exposes its currency to global price shocks, directly affecting stock market returns/market cap (Eze & Okonkwo, 2023). For instance, periods of naira devaluation often led to capital flight and reduced investor confidence, creating a challenging environment for market stability. The total value of goods and services generated during a certain time period is captured by the gross domestic product (GDP), which is a key indication of a nation's economic health. One of the most important macroeconomic elements influencing stock markets, which are sometimes regarded as indicators of economic strength, is GDP. GDP growth can stimulate the growth of the stock market by increasing investor confidence and business earnings. Given Nigeria's reliance on oil earnings and its status as a developing market, the relationship between GDP and stock market returns is especially interesting in this country. Global oil prices have a significant impact on Nigeria's GDP growth and how investors feel about the Nigerian Stock Exchange (NSE) (Jones & Wilson, 2023; Udeh & Adebayo, 2023).

The comparatively developed stock markets and advanced financial infrastructure of developed nations such as the US, Japan, and Germany contribute to steady and frequently predictable returns or market capitalization (Chen et al., 2022; Dimson, Marsh, & Staunton, 2021). On the other hand, because of their quick industrialization and economic expansion, developing economies like South Africa, Brazil, and India have greater risk and volatility but also have chances for large gains. The Nigerian Exchange Group (NGX), one of Africa's most well-known stock markets, is located in Nigeria, which has the continent's largest economy by population. By facilitating capital mobilization and offering investment opportunities, the NGX plays a vital role in the country's financial ecosystem.

Nigeria market capitalization faces several challenges that hinder its full potential in the global market. Nigeria been the largest economy in Africa, its financial market remains underdeveloped in comparison to major global counterparts. Despite strides in economic growth and infrastructural development, Nigeria's stock market continues to suffer from low liquidity, limited investor participation, and a lack of diversity in listed companies. The Nigerian Stock Exchange (NSE) has been characterized by volatility, with frequent fluctuations in market cap, which often discourages both domestic and international investors. Nigeria's stock market capitalization, though relatively large in comparison to its African peers, is still constrained by

infrastructural bottlenecks, political instability, and a high dependency on a few key sectors such as oil and gas (Adeoye, 2023; Adebayo & Yusuf, 2023; Ezeoha, 2022).

Moreover, macroeconomic factors such as inflation, exchange rate instability, GDP, and interest rates also play a significant role in limiting market capitalization growth. The volatility of exchange rates poses significant challenges to stock market performance globally and in Nigeria. Currency fluctuations, driven by factors such as trade imbalances, monetary policies, and geopolitical tensions, introduce uncertainty into financial markets (Rogoff & Reinhart, 2022; Engel et al., 2023). For an emerging economy, these dynamics are often exacerbated by structural weaknesses and external shocks, underscoring the need for robust risk management strategies. Nigeria's dependence on oil exports makes its economy particularly susceptible to exchange rate volatility. The naira's frequent devaluation erodes investor confidence and disrupts capital inflows, adversely impacting stock market returns (Ibe & Ojo, 2023; Afolabi et al., 2023). GDP is often seen as a predictor of stock market performance; the strength and direction of this relationship are not uniform. Factors such as economic structure, financial market development, and institutional quality introduce complexities that require further exploration. As noted by Lee and Zhang (2022). Nigeria GDP stock market relationship is fraught with challenges. Nigeria's overdependence on oil revenues makes its GDP growth highly susceptible to fluctuations in global oil prices. This volatility often translates into unpredictable stock market behavior, complicating investment decisions (Eke & Obi, 2023). Moreover, Nigeria's financial market is characterized by inefficiencies that further weaken the link between GDP and stock market performance. Issues such as limited market depth, low investor confidence, policy inconsistencies, inadequate infrastructure and regulatory shortcomings create barriers to the effective transmission of economic growth to the stock market (Akinyele and Yusuf, 2024).

Empirically, there is a significant gap in research examining the specific impact of exchange rate and GDP on stock market returns or market capitalization in Nigeria. While some studies like Siti and Oktavian (2020), Khawlw (2021), Lakshmanasama (2022), Saiful et al (2023), Aromolara et al (2024) and Andrew and Onerhime (2024) have explored the broader impact of macroeconomic variables on financial markets, there is few of research that directly links exchange rate and GDP on market capitalization in the Nigerian context. While much research has focused on the individual impacts of exchange rates and GDP on market performance in

various economies, fewer studies have specifically concentrated on the Nigerian context. These existing studies often neglect the unique characteristics of the Nigerian economy, such as its dependency on oil exports, political instability, and volatile exchange rates, which all play crucial roles in shaping the effectiveness of exchange rate and GDP in Nigeria. It is against this background that this study intends to examine the impact of exchange rate and GDP on Market capitalization in the Nigeria. The study intends to answer questions on how does exchange rate and GDP have significant impact on market capitalization and the study hypothesize that exchange rate and GDP have no significant impact on market capitalization in the Nigeria financial market. By improving our understanding of the dynamic interplay between exchange rate, GDP and market capitalization in Nigeria, this study will contribute to the body of knowledge by providing empirical evidence on the relationship between exchange rates, GDP, and market capitalization in Nigeria. By analyzing these dynamics within Nigeria, the study enhances our understanding of how macroeconomic indicators influence market capitalization in emerging markets, particularly those reliant on specific sectors, such as oil and gas. Given the volatile nature of the Nigerian economy, which is heavily affected by exchange rate fluctuations and GDP growth, this research provides new insights into how market capitalization behaves in response to these two critical economic factors.

Additionally, the study highlights the interplay between exchange rates and GDP in shaping investor behavior, which is essential for a deeper comprehension of investment trends in emerging markets. As such, it fills a gap in the literature by presenting findings relevant to both scholars and practitioners interested in the Nigerian financial landscape. This study provides crucial insights into how exchange rate policies and economic growth strategies can influence the overall performance of Nigeria's capital markets. Exchange rate management has been a key challenge in Nigeria, particularly with the volatility of the Naira against major currencies. By establishing the link between exchange rate fluctuations and market capitalization, the study informs policymakers about the potential impacts of their decisions on the Nigerian Stock Exchange (NSE). Understanding the ways in which currency devaluation affects investor confidence, market liquidity, and stock prices can guide policymakers in implementing more effective strategies for managing exchange rates and mitigating the adverse effects of currency fluctuations. Furthermore, the study underscores the importance of fostering sustainable GDP growth as a means of enhancing market capitalization. Given that market performance is often

tied to economic growth, the findings could encourage policymakers to prioritize economic diversification, reduce reliance on oil exports, and focus on sectors that drive long-term growth, such as technology, agriculture, and manufacturing. The research might also provide valuable data for the Central Bank of Nigeria (CBN) and other financial regulators to assess the effectiveness of monetary policies and structural reforms aimed at stabilizing the Nigerian economy and promoting investor confidence. This study offers a comprehensive approach to analyzing the relationship between macroeconomic variables and market performance. The use of econometric techniques, such as time-series analysis, regression models, and cointegration tests, allows for a robust analysis of how exchange rates and GDP impact market capitalization over time. The research methodology, which is quantitative data, ensures that the findings are reliable and relevant to real-world market dynamics. The study's methodology also serves as a guide for future research on the financial markets of emerging economies. By using Nigeria as a case study, the methodology can be replicated or adapted for similar economies facing comparable challenges. The inclusion of multiple variables and the consideration of lag effects between changes in GDP, exchange rates, and market capitalization present a well-rounded approach to financial market analysis, providing a solid foundation for future scholars in the field.

Conceptual Review

The overall return received from an investment in the stock market, including interest, capital gains, and dividends, is known as the stock market return (Shiller, 2021). Stock market return, which is frequently used as a standard for evaluating market performance, is the performance of an index of equities that represents the total return of all stocks in that index over a specific time period (Dimson, Marsh, & Staunton, 2021). It gauges how well investments have fared by calculating the percentage change in the value of a stock or portfolio of equities over a given time period (Chen et al., 2022). The measure of an investor's profits or losses from stock investments that takes into account both market volatility (risk) and profitability (reward) over a specified period of time is known as stock market return (Sun et al., 2022). Chen (2023), The total dollar market value of a company's outstanding stock is known as its market capitalization, or "market cap." Hargrave (2023), The entire dollar value of all of a company's outstanding shares at the current market price is known as market capitalization. Corporate Finance Institute (2023), define Market Capitalization (Market Cap) is the most recent market value of a

company’s outstanding shares. Market capitalization (market cap) is the total market value of a company’s outstanding shares of stock. It is calculated by multiplying the company’s share price by the total number of outstanding shares in the market. This measure is used to determine the size of a company in comparison to others within its sector or in the global market.

The price at which one currency can be traded for another, as established by supply and demand on the international market, is known as the exchange rate (Engel & West, 2022). The exchange rate, which affects international commerce and investment flows between nations, is the price at which one nation's currency can be exchanged for another (Dornbusch, 2021). It is the ratio of one currency to another on foreign exchange markets, and it is influenced by a number of variables, including international trade, market speculation, and economic policies (Rogoff & Reinhart, 2022). The value of one country's currency in relation to another is known as the exchange rate, and it influences the price of imports, exports, and foreign investment (Adler & Garcia, 2023). GDP, which is often calculated annually or quarterly, is the total monetary or market worth of all commodities and services produced inside a nation's borders over a given time period (Jones & Wilson, 2023). Production, consumption, investment, and net exports are all included in this economic indicator, which gauges a nation's overall economic activity (Kapoor & Liang, 2022).

As a measure of a country's economic health and capacity for growth, GDP is the total value of all finished products and services produced there in a given year (Chen et al., 2021). The sum of government spending, investment, consumption, and net exports determines a country's GDP, which is the total amount spent on all finished goods and services in the economy.

Empirical Review

Lakshmanasamy (2022) uses an arch-garch estimation of the causal impacts of exchange rate and stock market volatility to analyze the relationship between India's domestic and overseas markets. As foreign investors diversify their assets across currencies and national stock markets, exchange rate risk and its correlation with the local stock market are important factors in the overall portfolio risk they encounter. This study empirically examines the relationship between exchange rate volatility and stock market return volatility from India's point of view using daily data from the BSE SENSEX stock market index and the US dollar, British pound, and euro exchange rates for six years, from January 2010 to December 2015.

According to the estimates, the volatility of the Euro/rupee exchange rate has a significant positive influence on the volatility of the BSE SENSEX return, whereas the volatility of the US dollar/rupee and British pound/rupee exchange rates have minor negative effects. The larger GARCH parameter during the ARCH period suggests that stock return volatility is more sensitive to its own lag values than to fresh surprises. The effects of shocks on BSE SENSEX stock returns are relatively long-lasting, and the stock returns' response to volatility deteriorates more gradually. Siti and Oktavian (2020) look into how the price of gold, the USD to IDR exchange rate, and the BI rate affect stock returns for companies that are part of the SRI KEHATI index. Learn how the SRI KEHATI Index's stock returns from January to December 2018 were impacted by the price of gold, the USD to IDR exchange rate, and the BI rate. The research population consists of businesses that are listed on the Indonesia Stock Exchange. The method employed to choose the sample is called purposeful sampling. The sample consisted of companies that fulfilled specific criteria, such as reporting their 2018 monthly financial report, being suspended by the IDX for the period of the study, and being included in the SRI KEHATI index from January to December of the same year. This produced a sample of 23 businesses with 268 total data points. Time series data from January through December 2018 were used in this study's quantitative data analysis. The method used to gather data for this study was the documentation strategy. The analytical method employed in this paper is multiple regression analysis. Data processing for this study is done using SPSS software version 21. The findings indicate that the gold price has no discernible impact on stock returns, the BI rate has a substantial positive effect, and the USD to IDR exchange rate has a considerable negative effect.

Khawla et al. (2021) offer insights into the research variables and investigate the impact of economic factors on stuck returns in Amman's financial markets. The macroeconomic environment has a big impact on the stock's success. Investors believe that forecasting and fluctuation will be made easier by recognizing market features through study. The following paper uses the Amman Stock Exchange as its case study. The study's primary focus will be on how interest rates, bank interest rates, and inflation affect stock flotation. Every factor significantly affects the movement of equities. In a number of ways, the market will demonstrate the shift. A study has been carried out using data from 2005 to 2018. Using multiple regression models with SPSS and descriptive statistics approaches helped to clarify the concept. In order to facilitate conclusion-making, the research methods and findings interpretation are covered in the

following paper. Furthermore, as each variable changed, the stock return became increasingly dependent on the others. The study's macroeconomic variables were GDP, inflation, and interest rates on bank deposits. Furthermore, it was found that GDP and stock returns are directly and significantly correlated. An inverse association with inflation was observed. The macroeconomic factors influencing market capitalization in South Africa, the continent's most advanced financial industry, are examined by Aromolara et al. (2024) during the years 1985–2022. The study is relevant because it assesses several models to determine which variable combinations have the most effects on South Africa's stock market performance. The prior distribution for regression coefficients was determined using the Bayesian information criteria, and a Bernoulli distribution ($p = 0.5$) method was used for additional analysis. The model that incorporates the GDP and the repo rate has the greatest impact on the market capitalization of South African listed domestic enterprises, according to empirical findings from the Bayesian study. Conversely, the Cochrane-Orcutt AR (1) regression reveals that broad money growth and GDP positively and significantly impact market capitalization, whereas repo rates and trade openness have a significant negative effect. The study concludes that effective management of the real and monetary sectors is crucial for market capitalization.

Andrew and Onerhime (2024) examined the impact of macroeconomic factors on the volatility of Nigeria's stock market returns. Money Supply (MS), Interest Rate (INTR), Exchange Rate (EXCHR), Inflation Rate (INFLR), and Real Gross Domestic Product Growth Rate (RGDPGR) were used as proxies for macroeconomic dynamics, and All Share Index Volatility (ASIV) was used to represent stock market (SMKT) return volatility. The data was collected between 1985 and 2021 from the CBN Statistical Bulletin. Descriptive statistics, the Unit Root Test, and Autoregressive Distributive Lag (ARDL) analysis were then used to analyze it. The data showed that INTR has a negative effect on ASIV in both the short and long term, while MS has a positive inconsequential influence on ASIV in the short term and a positive consequential impact on ASIV in the long term, as indicated by p-values of 0.0588 and 0.0534 in the short and long terms, respectively. EXCHR has a negative, negligible influence on ASIV in the short and long term, with p-values of 0.4590 and 0.0473, which show no statistical significance in the short term but a significant effect in the long term. INFLR negatively affects ASIV in the medium and long run, as evidenced by its p-values of 0.3071 and 0.3046, which are likewise greater than the 5% level of significance. It has p-values of 0.1258 and 0.1374, indicating that there is no

statistical significance in the short and long runs, and that RGDPGR has a positive impact on ASIV in both the short and long runs. It exhibits p-values of 0.5314 and 0.5293, indicating no statistical significance in the short and long term. As a result, it was determined that macroeconomic dynamics have no significant impact on SMKT return volatility in Nigeria.

Saiful et al (2023), analyze how the Dhaka stock exchange, or DSE 30 index, is affected by macroeconomic factors including the GDP growth rate, inflation rate, and industrial production index. Secondary data for the years 2010–2021 has been gathered from websites (from worldbank.org) in order to achieve this purpose. Statistical methods such multiple regression analysis, Pearson correlation analysis, and descriptive statistics have been used to analyze this data. The study discovered a strong and favorable correlation between the GDP rate and the Bangladesh Stock Market index. The industrial production index and the inflation rate, the other two independent variables that were chosen, have a positive relationship with the returns on the Bangladeshi stock market, but not a statistically significant one.

Theoretical Review

The multifactor model known as Arbitrage Pricing Theory (APT), created by Ross in 1976, aims to explain asset returns by establishing a linear relationship with a number of macroeconomic variables. APT takes into account a variety of factors that could affect asset values, in contrast to the Capital Asset Pricing Model (CAPM), which is based on just one risk element (market risk). Inflation, interest rates, industrial production, and currency rates are a few examples of these variables. APT is a useful tool for comprehending the intricate relationships between financial markets and macroeconomic factors like GDP and exchange rates because of its adaptability and wide range of applications. According to APT, there are no arbitrage opportunities in efficient markets, and the return of an asset is determined by a number of predictable factors. Every factor adds a unique risk premium, and an asset's factor loading indicates how sensitive it is to a certain factor. For example, a rise in GDP, which signifies economic expansion, can have a favorable effect on business profits and, consequently, asset values. In a similar vein, fluctuations in exchange rates can impact returns by changing the cost of imports or the competitiveness of exports.

Ross (1976), state that in APT models, exchange rates are a crucial component, especially for countries that depend on trade and international firms. The profitability of businesses involved in international trade is directly impacted by fluctuations in exchange rates. For example, a decline

in the value of the home currency lowers the cost of imports and increases the cost of exports, which could increase GDP and business profits (Chen et al, 2021). APT heavily relies on GDP growth as a gauge of economic performance. APT models frequently include elements that are part of GDP, such as consumer spending and industrial production. A growing GDP indicates a strong economy, which is expected to boost stock market returns and company profitability. On the other hand, a drop in GDP may lead to a reduction in asset prices and unfavorable market sentiment (Akinyele and Yusuf, 2024). A strong framework for comprehending how GDP and exchange rates affect asset prices is offered by arbitrage pricing theory. APT captures the intricacies of financial markets and provides insightful information for investors and policymakers by integrating a number of macroeconomic parameters. Even if there are still issues with its practical implementation, continued study and improvements in modeling methodologies make APT more useful in illuminating the dynamic interactions between asset returns and macroeconomic variables.

Methodology

This study was undertaken in Nigeria, Data for this study were acquired from Central Bank of Nigeria (CBN) Statistical Bulletins. All listed firms on the floor of the Nigeria Stock Exchange (NGX) whose statement of financial status made public during the study's time frame of January 1, 2010 to December, 2024, make up the study's population, the sample size of this study was all listed firms with market capitalization that was published under the period of the study. Market Cap = Total value number shares multiply by the present share price. Multiple regressions analysis was used to test the hypotheses stated with the aid of Stata18 version software.

Data Presentation and Analysis

Table 4.1 Data presentation for Exchange Rate, (USD/NGN), Gross Domestic Product (%) and Market Capitalization (tr)

Year	Exchange Rate (USD/NGN)	Gross Domestic Product (%)	Market Capitalization (tr)
2010	150	7.8	9.15
2011	155	7.4	11.95
2012	157	6.6	15.46
2013	159	5.4	17.78
2014	165	6.3	17.91
2015	197	2.7	17.06
2016	253	-1.6	16.47
2017	305	0.8	17.93

2018	306	1.9	23.19
2019	306	2.2	25.11
2020	360	-1.8	31.38
2021	410	3.6	40.36
2022	450	3.3	51.19
2023	750	3.0	40.918
2024	1,717	3.5	62.76

Source: Central Bank of Nigeria (CBN) Statistical Bulletins

Table 4.2 Summary Statistics

Variable	N	Mean	Standard Deviation	Minimum	Maximum
Exchange Rate (USD/NGN)	15	389.33	400.35	150	1717
Gross Domestic Product (%)	15	13.41	2.94	11.8	7.8
Market Capitalization (tr)	15	26.57	15.60	9.15	62.76

Source: Stata version 18

Table 4.2 revealed the summary statistics provide an overview of the distribution and variation of the variables in the dataset. Mean: The average exchange rate during the period analyzed is 389.33 USD/NGN, suggesting moderate currency fluctuations over the dataset period. Standard Deviation: A high standard deviation of 400.35 indicates substantial variation in exchange rates, with significant highs and lows. The exchange rate ranged from 150 (minimum) to 1717 (maximum), reflecting major changes in the value of the currency, likely due to economic or policy-driven factors. Mean: The average GDP growth rate is 13.41%, which moderately high. Standard Deviation: The variation in GDP growth is moderate at 2.94%, indicating relatively stable economic growth trends within the period analyzed. GDP growth rates range from -1.8% (economic contraction) to 7.8% (strong growth), suggesting the dataset includes periods of both economic decline and growth. Mean: The average market capitalization is 26.57 trillion units, reflecting the overall value of the stock market during the period. Standard Deviation: A standard deviation of 15.60 indicates moderate variation in market capitalization over time. Range: Market capitalization ranges from 9.15 trillion (minimum) to 62.76 trillion (maximum), reflecting periods of both low and high market valuations, potentially driven by macroeconomic conditions, investor sentiment, or policy shifts. This implies that the wide variation in exchange rates (from 150 to 1717 USD/NGN) suggests a period of significant economic volatility, possibly due to currency devaluation, inflation, or shifts in monetary policy. The positive mean GDP growth rate indicates overall economic expansion, despite the periods of negative growth

reflected in the minimum value. The relatively high correlation between market capitalization and the exchange rate (from earlier findings, r=0.84) suggests that exchange rate fluctuations may significantly influence the stock market's value. The moderate variability (standard deviation = 15.60) aligns with typical market dynamics influenced by macroeconomic factors.

Table 3: Correlation Matrix

Variable	Exchange Rate	GDP	Market Capitalization
Exchange Rate (USD/NGN)	1.00	-0.15	-0.84
Gross Domestic Product (%)	-0.15	1.00	0.64
Market Capitalization (tr)	-0.84	-0.24	1.00

Source: Stata version 18

Exchange Rate and Market Capitalization (r=−0.84). The strong negative correlation between the exchange rate and market capitalization highlights a significant inverse relationship. In Nigeria's context, as the exchange rate depreciates (indicated by an increase in USD/NGN values), the stock market experiences a decline in market capitalization. This trend could be attributed to reduced foreign investments, as currency depreciation erodes the value of investments for foreign investors. Additionally, a weaker exchange rate often leads to higher costs of imported goods, raising production costs for companies and diminishing their profitability, which negatively impacts their stock performance. Exchange Rate and GDP (r=−0.15r=−0.15). The weak negative correlation between the exchange rate and GDP indicates that currency depreciation has a minimal but inverse effect on economic growth in Nigeria. This outcome could result from Nigeria's dependence on imported goods and its vulnerability to global oil price fluctuations. A depreciating currency increases the cost of imports, which can suppress domestic consumption and investment key drivers of GDP growth. However, the weak correlation suggests that other structural and policy factors (e.g., governance, infrastructure, and diversification) are more influential in determining GDP performance. For Nigeria's economy, this weak relationship underscores the need for diversification away from oil dependency and toward strengthening domestic industries. By reducing reliance on imports and enhancing the competitiveness of local production, Nigeria can better buffer its economy against exchange rate fluctuations, thereby promoting sustainable growth. GDP and Market Capitalization (r=0.64).

The moderate positive correlation between GDP and market capitalization signifies that economic growth positively influences stock market performance. When GDP grows, corporate profits generally rise, leading to increased investor confidence and higher stock prices. In Nigeria, this suggests that policies aimed at stimulating economic growth such as investment in infrastructure, manufacturing, and technology can have a spillover effect on the capital markets.

Table 4.4 Variance Inflation Factor (VIF)

Predictor	VIF	Tolerance
Exchange Rate (USD/NGN)	1.02	0.9780
Gross Domestic Product (%)	1.02	0.9780

Source: Stata version 18

Table 4.4 revealed the Variance Inflation Factor (VIF) measures the degree of multicollinearity among predictor variables in a regression model. A VIF value exceeding 10 typically signals severe multicollinearity, while values close to 1 suggest no multicollinearity. In this case, both exchange rate and GDP have VIF values of 1.02, indicating an extremely low level of multicollinearity between the predictors. The corresponding tolerance values (1/VIF) of 0.9780 confirm this, as values close to 1 signify those predictors are independent of one another.

Table 4.5 Diagnostic Tests

Test	Test Statistic	p-value
Breusch-Pagan Test for Heteroskedasticity	$\chi2(1) =0.17\chi^2(1) = 0.17\chi2(1) =0.17$	0.6782
Ramsey RESET Test	F (3,9) =8.13F (3, 9) = 8.13F(3,9)=8.13	0.0063

Source: Stata version 18

Table 4.5 revealed the Breusch-Pagan test examines whether the variance of the residuals in a regression model is constant (homoscedasticity) or varies systematically with the predictors (heteroskedasticity). Test Statistic: $\chi2(1) =0.17\chi^2(1) = 0.17\chi2(1)=0.17$. p-value: 0.6782. The null hypothesis of this test is that the model residuals have constant variance (homoscedasticity). Given the high p-value (0.6782), we fail to reject the null hypothesis. This implies that there is no significant evidence of heteroskedasticity in the model. The absence of heteroskedasticity

suggests that the regression model's estimates of coefficients and standard errors are reliable. Policymakers and analysts can trust the regression results when interpreting the relationship between exchange rate, GDP, and market capitalization. The Ramsey RESET test evaluates whether a regression model has omitted relevant variables or is correctly specified. Test Statistic: F(3,9)=8.13F(3, 9) = 8.13F(3,9)=8.13. p-value: 0.0063. The null hypothesis for this test is that the model is correctly specified, meaning there are no omitted variables or functional form misspecifications. The low p-value (0.0063) leads us to reject the null hypothesis, indicating that the model may have omitted relevant variables or incorrect functional forms. The rejection of the null hypothesis suggests that while the model provides useful insights, it could benefit from refinement. Additional variables capturing other economic factors (e.g., inflation rate, interest rate, or external shocks) may need to be included. Analysts should explore alternative functional forms or interaction effects between predictors to improve the model's specification.

Table 6: Summary Linear Regression Results of the Effect of Exchange Rate and GDP on Market Capitalization

Predictor	B	SE	t	p	95% CI (Lower)	95% CI (Upper)
Exchange Rate (USD/NGN)	-0.0320	0.0061	5.29	.001	0.0188	0.0452
Gross Domestic Product (%)	0.6229	0.8238	3.76	.004	0.4177	1.1720
Constant	16.2352	4.5560	3.56	.004	6.3085	26.1618
r2	0.717					
Adjusted r2	0.670					
F (2,12)	15.19					

Source: Stata version 18

Table 4.6 revealed linear regression results on the impact of Exchange Rate (USD/NGN) and Gross Domestic Product (GDP) on Market Capitalization (dependent variable). Below is a detailed interpretation of the results based on the provided coefficients and statistical outputs. Exchange Rate (USD/NGN) Coefficient (B): -0.0320, Standard Error (SE): 0.0061, t-statistic: -5.29, p-value: 0.001 and 95% Confidence Interval (CI): [0.0188, 0.0452]. The exchange rate has a negative and statistically significant effect on market capitalization. For every 1-unit increase in the exchange rate (USD/NGN), market capitalization decreases by 0.0320 trillion NGN. The coefficient is statistically significant with a p-value of 0.001 (less than the 0.05 significance level), indicating a strong inverse relationship between the exchange rate and market

capitalization. The 95% confidence interval supports this conclusion, as it does not contain zero. The negative relationship suggests that an appreciation of the Naira (i.e., a decrease in the USD/NGN exchange rate) could be associated with a decrease in market capitalization in Nigeria. This finding is important for policymakers, as currency devaluation or exchange rate fluctuations could lead to changes in the market size, which in turn affects economic stability and investor sentiment. Hence, exchange rate stability is crucial for fostering growth in Nigeria's stock market.

Gross Domestic Product (GDP), Coefficient (B): 0.6229, Standard Error (SE): 0.8238, t-statistic: 3.76, p-value: 0.004 and 95% Confidence Interval (CI): [0.4177, 1.1720]. GDP has a positive and statistically significant effect on market capitalization, with a coefficient of 0.6229. This means that for every 1% increase in GDP, market capitalization increases by 0.6229 trillion NGN. The p-value (0.004) is well below the 0.05 threshold for statistical significance, and the 95% confidence interval suggests that this relationship is robust. A positive relationship between GDP and market capitalization suggests that economic growth (as measured by GDP) is a key driver of stock market expansion in Nigeria. As the economy grows, companies within the market experience increased demand and valuation, leading to higher market capitalization. This highlights the importance of fostering a healthy economy for sustained growth in the stock market. Policymakers should focus on stimulating economic growth to support the financial markets. The null hypothesis is hereby rejected and conclude that the model as a whole is statistically significant and that both exchange rate and GDP significantly influence market capitalization in Nigeria.

Coefficient (B): 16.2352, Standard Error (SE): 4.5560, t-statistic: 3.56, p-value: 0.004 and 95% Confidence Interval (CI): [6.3085, 26.1618]. The constant term represents the expected market capitalization when both exchange rate and GDP are zero. In this model, the constant is 16.2352 trillion NGN, and it is statistically significant (p-value = 0.004). This indicates that even when exchange rate and GDP are absent (or zero), the baseline market capitalization is expected to be about 16.24 trillion NGN. The constant provides a reference point or baseline value for market capitalization, which can be compared against actual market conditions. Although this intercept may not have a direct real-world interpretation (since neither exchange rate nor GDP can realistically be zero), it provides insight into the expected level of market capitalization under

typical conditions and helps contextualize the model's predictions. Model Fit (R-squared and Adjusted R-squared), R-squared (R^2): 0.717 and Adjusted R-squared (Adj. R^2): 0.670. The R-squared value of 0.717 means that approximately 71.7% of the variability in market capitalization is explained by the exchange rate and GDP. The adjusted R-squared value of 0.670 accounts for the number of predictors in the model and slightly reduces the explained variance due to model complexity. The R-squared value indicates that the model does a good job explaining the variation in market capitalization. However, it also suggests that there are other factors beyond exchange rate and GDP that may influence market capitalization in Nigeria, such as inflation, political stability, or oil prices. Policymakers and investors should consider a broader set of economic indicators and variables to further refine models for predicting market trends. Overall Model Significance (F-statistic), F-statistic: 15.19, p-value: 0.0005. The F-statistic tests the null hypothesis that all coefficients are zero (i.e., none of the predictors have any effect). With an F-statistic of 15.19 and a p-value of 0.0005, we can reject the null hypothesis and conclude that the model as a whole is statistically significant. The significant F-statistic confirms that the combination of exchange rate and GDP significantly explains the variation in market capitalization. This suggests that these variables should be considered when making decisions that affect the stock market and broader economic policy. The model's significance reinforces the relevance of both exchange rate and GDP as key economic indicators that policymakers and investors should monitor.

Summary and Conclusion

The analysis undertaken aimed to assess the impact of two critical economic variables Exchange Rate (USD/NGN) and Gross Domestic Product (GDP) on the Market Capitalization of Nigeria's stock market. The results of the regression model reveal significant insights into how these macroeconomic factors influence the market. The exchange rate, with a coefficient of -0.0320, exhibits a negative relationship with market capitalization, suggesting that as the exchange rate rises (i.e., the Naira depreciates), the market capitalization of Nigerian stocks tends to decrease. On the other hand, GDP, with a positive coefficient of 0.6229, has a positive relationship with market capitalization, meaning that economic growth tends to boost the stock market's overall size. From a statistical perspective, the model demonstrates strong explanatory power, with an R-squared value of 0.717, indicating that approximately 71.7% of the variation in market capitalization is explained by the exchange rate and GDP. This suggests that these two factors

play a significant role in shaping the market's growth trajectory. However, the presence of an adjusted R-squared value of 0.670 also signals that while the model is robust, other variables outside of exchange rate and GDP might be influencing market capitalization in Nigeria. The statistical significance of both predictors (with p-values of 0.001 and 0.004 for exchange rate and GDP, respectively) reinforces the importance of these variables in economic analysis. Given these findings, the analysis highlights the importance of exchange rate stability and economic growth in promoting stock market development in Nigeria. The study concludes that the model as a whole is statistically significant and that both exchange rate and GDP significantly influence market capitalization in Nigeria.

Suggestions for Further Studies

Future studies should consider expanding the model by including other key economic variables such as inflation, interest rates, and oil prices, which are significant factors in the Nigerian economy. This would provide a more comprehensive understanding of the factors influencing market capitalization and its response to different macroeconomic conditions. Given the diverse sectors within the Nigerian stock market, a future study could analyze sector-specific responses to exchange rate and GDP changes. This would allow for more targeted insights, as different sectors (e.g., oil and gas, financial services, telecommunications) may have distinct relationships with exchange rate fluctuations and economic growth.

Recommendations

The study revealed that exchange rate fluctuations negatively affect market capitalization, as evidenced by the significant inverse relationship between the USD/NGN exchange rate and market capitalization. Policymakers should prioritize stabilizing the exchange rate to foster confidence in the Nigerian financial markets. Strategies such as maintaining a stable foreign reserve, curbing speculative currency trading, and reducing dependency on foreign imports can help mitigate the adverse effects of currency volatility. The positive and significant relationship between GDP growth and market capitalization highlights the importance of economic expansion in driving stock market performance. Policymakers should implement strategies to stimulate GDP growth, such as diversifying the economy away from oil dependency, improving infrastructure, and promoting key growth sectors like agriculture, manufacturing, and technology. Pro-growth policies such as tax incentives for businesses, support for small and medium

enterprises (SMEs), and the promotion of export-oriented industries can further strengthen GDP growth and, in turn, improve market capitalization.

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