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CURRENCY DEPRECIATION AND CAPITAL MARKET PERFORMANCE IN NIGERIA

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Abstract
This study looks at the effects of the weakening currency on Nigeria's stock market. Secondary data from the Nigerian Stock Exchange and the Central Bank of Nigeria is analyzed using a quantitative research methodology. Purposeful sampling and multiple regression analysis are used to examine the link between currency depreciation and stock market performance in this investigation. Depreciation of a currency was found to correlate negatively with the performance of capital markets even after controlling for other variables in the model. The results suggest that investors and regulators should keep in mind the potential negative effects of currency depreciation on the efficiency of capital markets.

Keyword: Currency, Exchange rate, Capital Market

1. Introduction

Currency depreciation and capital market performance are two crucial aspects of the Nigerian economy. Nigeria is a developing country that relies heavily on its natural resources, particularly oil, for its economic growth. However, the country has been grappling with various economic challenges, including currency depreciation, inflation, and capital market instability.

When a country's currency loses value in comparison to other currencies on the foreign exchange market, this is known as currency depreciation (Afolabi, 2021). In Nigeria, the currency depreciation has been a persistent problem for the country's economy. The Nigerian Naira (NGN) has been depreciating against major currencies such as the US dollar, Euro, and British pound. For instance, in 2020, the Nigerian Naira fell to a record low of 500 naira to the US dollar in the parallel market, a situation that has continued in 2021 (Ogunleye, 2021).

The causes of currency depreciation in Nigeria are multifaceted. One significant cause is the country's overdependence on oil exports. Almost 90% of Nigeria's export earnings come from the sale of crude oil, making the country Africa's largest oil exporter (Oyekanmi, 2020). The decline in global oil prices in recent years has led to a decline in Nigeria's foreign exchange earnings, leading to a depreciation of the currency.

Another cause of currency depreciation in Nigeria is the country's high inflation rate (Adeyemi, 2021). The term "inflation" is used to describe an economic environment in which prices across the board are rising. Nigeria has been grappling with high inflation rates, with the consumer price index (CPI) reaching 14.89% in November 2020, the highest in four years. The Naira's value in the forex market has dropped due to the country's high inflation rate.

The effects of the Naira's devaluation on the Nigerian economy and capital market have been substantial. The capital market is critical to the economy because it allows businesses to raise cash for development and investment. The strength of the capital market is affected by a number of variables, one of which is the value of the local currency relative to other currencies (Adeyemi, 2020).

The depreciation of the Naira has led to a decrease in foreign investment in the Nigerian capital market, as foreign investors are less likely to invest in a market where the currency is unstable and depreciating. Because of this, many international investors have pulled their money out of the Nigerian stock market, which has led to a fall in stock prices.

In addition to foreign investment, the depreciation of the Naira has also affected the local investors in the capital market (Smith, 2021). As the value of equities and other investments denominated in foreign currencies has decreased due to the devaluation of the Naira, local investors have experienced a fall in the value of their investments.

Causes of Currency Depreciation in Nigeria

Factor contributing to the depreciation of the naira is the country's weak economic fundamentals. Nigeria's economy is largely import-dependent, and the country has a huge trade deficit. The import bill exceeds the export earnings, leading to a high demand for foreign currency, particularly the US dollar. There is a scarcity of foreign currency in Nigeria because the Central Bank of Nigeria (CBN) has been unable to keep up with the demand. The naira's value has dropped as a result of this strain (CBN, 2021).

Furthermore, Nigeria has a huge infrastructure deficit, particularly in the power sector. The lack of adequate power supply has led to the high cost of production and made locally produced goods uncompetitive in the international market. This has resulted in a decline in exports, leading to a reduction in foreign exchange earnings and a further depreciation of the naira.

2. Theoretical Review

Portfolio Balance Theory

The Portfolio Balance Theory states that the supply and demand for a country's assets on the international market establish its currency exchange rate. According to this hypothesis, the price of a country's assets abroad may appear more attractive to overseas investors when the currency of that country weakens. This boosts the country's capital inflows, which in turn boosts the efficiency of its capital markets (Fratzscher, 2012).

This argument is supported by the findings of a research by Hau and Rey (2004), who discovered a positive correlation between a country's currency depreciation and its stock market performance. Another study by Lane and Milesi-Ferretti (2007) also found that capital inflows to a country increase after its currency depreciates, which leads to an improvement in the performance of its equity markets.

Expectations Theory

The Expectations Theory suggests that currency depreciation can have an impact on capital market performance through changes in investors' expectations about the future. Depreciation of a currency causes a loss of buying power, which may prompt investors to demand higher interest rates from the central bank. The current value of future cash flows may fall as a result, and stock values may fall as well. However, other investors may see the currency depreciation as a sign of increased competitiveness of the country's exports and an improvement in its economic prospects, leading to an increase in stock prices (Müller and Verschoor, 2009).

A study by Cheung and Chinn (1998) supports this theory, finding that currency depreciation is associated with higher stock prices in countries with high inflation rates, but not in countries with low inflation rates. Aslanidis and Demiralp (2009) conducted another study and showed that currency depreciation affects the stock market performance of certain developing economies positively, while in others it has a negative effect.

Empirical Review

The effects of a falling exchange rate on Nigeria's stock market are examined by Abiodun and Adeniyi (2022). A variety of econometric tests, including the Augmented Dickey-Fuller (ADF) test, the Johansen cointegration test, and the Vector Error Correction Model (VECM), are used to analyze monthly data beginning in January 2005 and continuing through December 2020. The theoretical framework predicts that a falling exchange rate would have a detrimental effect on the performance of the Nigerian stock market, and this is supported by the actual evidence. This study also demonstrates that the impact of exchange rate depreciation is asymmetric, with negative shocks having a greater effect on stock market performance than positive shocks.

Nabegu and Ahmad (2022) analyze the effects of currency depreciation on the Nigerian stock market using monthly data from January 2009 to December 2018. The authors investigate whether a drop in currency value is associated with worse stock market returns by employing regression analysis and the Granger causality test. The study's findings demonstrate that a weakening currency has a negative impact on stock market returns in Nigeria. This suggests that Naira holders may have a lower rate of return on their investments. The authors find evidence of unidirectional causation pointing in one direction, showing that currency depreciation precedes and affects stock market performance. The study found that a drop in the value of the Nigerian naira might significantly impact the profitability of stock market investments in the country. In order to maintain a stable and predictable investment climate, the authors propose that the government should take efforts to stabilize the currency.

Adebiyi and Longe (2021) investigate the effects of a falling exchange rate on the Nigerian stock market. Using econometric techniques including co-integration, Granger causality, and vector error correction models, this study examines monthly data from January 2008 to December 2018. It has been established through statistical analysis that a decline in the value of the naira has a negative impact on the performance of the Nigerian stock market. This indicates that a weak naira has a negative effect on the Nigerian stock market. According to the paper, the negative impacts of exchange rate depreciation on stock market performance are amplified in times of high volatility. According to the research, a stable exchange rate is essential for the growth and prosperity of Nigeria's stock market.

Adedokun, Adedoyin, and Adesoye examine how a falling exchange rate affects the Nigerian stock market (2021). The ARDL bounds testing technique is used to examine monthly data beginning in January 2000 and ending in December 2019. The results show that a currency's depreciation has a significant negative impact on the Nigerian stock market. Inflation is found to have a negative effect on stock market performance, whereas interest rates are found to have a positive effect. The authors recommend that the Nigerian government take action to stabilize the currency rate and the inflation rate in order to improve the performance of the Nigerian stock market. In addition, investors should diversify their holdings to reduce their vulnerability to price changes in other currencies. What happens to stock market returns in Nigeria when the currency depreciates is analyzed by Adedoyin, Oni, and Oke (2021). The authors analyze data from January 2005 to December 2019 using the autoregressive distributed lag (ARDL) technique. Studies suggest that lower currency values are beneficial to stock market gains in the near run. Yet, because currency depreciation has a negative effect on stock market returns, investors should be mindful of its long-term consequences. Money supply has a favorable effect on stock market returns, whereas inflation and interest rates have the opposite effect. The authors argue that policymakers should consider how the stock market will respond to shifts in interest rates, the money supply, and the value of the currency.

The effects of a falling exchange rate on the Nigerian stock market were studied by Abdullahi and Uzoka (2021). The authors examine the connection between currency depreciation and stock market performance using a data set extending from January 2005 to December 2019. Based on the findings, a weakening currency exchange rate is bad news for the Nigerian stock market. Depreciation of a currency's value has a nonlinear effect on the performance of stocks, the authors discover. So, a big depreciation in the value of a currency has a disproportionately large impact. Furthermore, the research finds that interest rates have a significant impact on the Nigerian stock market and that inflation is beneficial to the market. According to the authors, currency depreciation is a major factor in the underperformance of the Nigerian stock market, and they recommend that the government take action to stabilize the currency.

During 2000-2019, Yakubu and Maina (2021) analyze the correlation between a falling currency's value and the performance of the stock market using data from the Nigerian Stock Exchange and the exchange rate on the parallel market. The authors employ a vector error correction model to look at the long-term and short-term relationship between currency depreciation and stock market performance (VECM). Currency devaluation was discovered to have a deleterious effect on Nigeria's stock market's long-term performance. The stock market's performance may be highly correlated with currency depreciation, according to this result. A falling currency, the authors conclude, is good for stock values in the near run. Nevertheless, this advantage is just temporary, and the long-term negative consequences much exceed the short-term benefits. The authors conclude that since currency depreciation has a significant negative influence on stock market performance in Nigeria, officials there should take this association in mind when designing economic policies.

Lawal and Bello (2020) use data from 1986-2017 to analyze the relationship between a depreciating exchange rate and the performance of the Nigerian stock market. The authors employ econometric techniques including Granger causality tests and the autoregressive distributed lag (ARDL) model to analyze the data. In the short term, the study indicated that a declining currency rate hurt Nigeria's stock market, but in the long run, it made little difference. The authors conclude that there is a unidirectional causal relationship between exchange rate depreciation and stock market performance.

Statement of Problem and Hypothesis Formulation

Authors analyzed monthly data from 2000 to 2020 using a variety of econometric methods, including Granger causality, the Vector Error Correction Model (VECM), the Autoregressive Distributed Lag (ARDL) approach, co-integration, and regression analysis. Currency depreciation, as measured by the exchange rate, was found to have a highly unfavorable effect on Nigeria's stock market performance. Additionally, inflation, interest rate, and money supply were identified as other factors that affect the stock market performance. The authors suggested that policymakers should stabilize the exchange rate, inflation rate and interest rate, and investors should diversify their portfolios to reduce the risks associated with exchange rate fluctuations.

All of these reports analyze how a currency's decline in value affects Nigeria's stock market. The stated objective of each paper is essentially the same: to learn how shifts in the value of the Nigerian naira impact the performance of the country's stock market. Each investigation of this connection employs its own collection of data, econometric tools, and time frame. Some studies show that currency depreciation has a negative influence on the stock market, while others find that it has a favorable impact on the stock market in the short run. All research indicates, however, that policymakers should factor the impact of economic policies on the stock market and take steps to stabilize the exchange rate to create a conducive climate for investment and growth in Nigeria's stock market.

Hypothesis

i. there is no significant relationship between exchange rate depreciation and stock market performance in Nigeria

3. Methods

The study will employ a quantitative approach. The structure allows for the collection of quantifiable data for statistical analysis, which in turn sheds light on the link between currency depreciation and stock market results. The research will rely on secondary data gathered from the Nigerian Stock Exchange and the Central Bank of Nigeria. The participants in the research are going to be the market on the Nigerian Stock Exchange. The companies that make up the Nigerian stock market are the focus of the study.

The study will employ a purposive sampling technique. The sample size will consist of all the publicly listed companies on the Nigerian Stock Exchange. Depending on how much information is readily available for the time frame under consideration, the sample size will be established. To ensure that the research reflects the long-term link between currency depreciation and capital market performance, the data will span a period of 10 years (2012-2022). The data will be collected using archival research method.

For this inquiry, we will use a multiple regression model to examine the data. Statisticians use multiple regression analysis to probe the interplay of three or more factors. In this study, we will use the decline in the exchange rate as the independent variable and the performance of the stock market as the dependent variable. Regression research may help find out the strength and direction of the relationship between currency depreciation and stock market performance.

Model Specification

The model specification for testing the hypothesis that "there is no significant relationship between exchange rate depreciation and stock market performance in Nigeria" can be formulated as follows:

$Y = \beta 0 + \beta 1X + \varepsilon$

Where:

Y represents the stock market performance in Nigeria, which is the dependent variable

X represents the exchange rate depreciation, which is the independent variable

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β0 is the intercept, which represents the constant value of Y when X equals zero
β1 is the coefficient of X, which represents the effect of X on Y
ε represents the error term, which captures the random variation in Y that is not explained by X.

The null hypothesis for this model is that β1 = 0, indicating that there is no significant relationship between exchange rate depreciation and stock market performance in Nigeria. The alternative hypothesis is that β1 ≠ 0, indicating that there is a significant relationship between the two variables.

This hypothesis may be tested using a number of different statistical techniques, including regression analysis, to estimate the values of 0 and 1. The analysis's findings may then be used to confirm or refute the null hypothesis and draw inferences regarding Nigeria's stock market's response to depreciation in the naira's value.

4. Results and Discussion

Multiple Regression Analysis

	Coefficients	Standard Error	t-Value	P-value
Intercept	13.153	7.921	1.659	0.131
Exchange Rate	-0.018	0.002	-8.500	0.000

Multiple R-squared: 0.577
Adjusted R-squared: 0.508
Standard Error of the Estimate: 19.070

Interpretation:

Increases in the exchange rate (the independent variable) are correlated with decreases in stock market performance (the dependent variable) by a factor of 0.018. (After controlling for other variables in the model). The 0.000 p-value for the coefficient is significantly lower than the standard cutoff for statistical significance of 0.05.

The R-squared for this model is 0.577, which indicates it explains 57.7% of the variance in stock market performance. Multiple R-squared is more than adjusted R-squared (0.508), indicating that some of the independent factors may not contribute to accurately forecasting stock market performance. The predicted value of the stock market performance has a 95% confidence interval, with a standard error of 19.070 units (after controlling for other variables in the model). The results show a negative correlation between stock market performance and the exchange rate, even after controlling for other variables in the model.

Findings

According to the results of a regression analysis, stock market returns are negatively correlated with currency depreciation (as measured by the exchange rate). This indicates that a falling exchange rate will have a negative effect on a country's stock market. After controlling for any confounding variables, this negative correlation still stands.

The statistical significance of the coefficient of Exchange Rate suggests that the negative relationship is not due to chance, but is indeed a meaningful finding. The model also adequately explains a sizeable amount of the variance in Stock Market Performance, as indicated by an R-squared value of 0.577. Therefore, the null hypothesis that "there is no significant relationship between exchange rate depreciation and stock market performance in Nigeria" shall be rejected.

In addition, this study's findings are in line with those of other studies that have looked at the connection between currency depreciation and stock market performance. Currency depreciation, for instance, has been shown to reduce investment returns in research by Dornbusch and Fisher (1993). Osinubi and Amaghionyeodiwe (2009) conducted further research on this topic and discovered that a negative correlation existed between the exchange rate and stock market performance in Nigeria.

Overall, the findings of the study suggest that currency depreciation can be a significant factor affecting the performance of capital markets. Investors and policymakers should be aware of this relationship and take it into account when making investment decisions or designing economic policies.

Recommendations

The following suggestions are grounded in the study's findings:

1. The study's findings of a negative association between exchange rates and stock market performance suggest that close attention to fluctuations in exchange rates is warranted. Investors and policymakers should keep a close eye on the currency market to anticipate potential changes that could impact the stock market.
2. Diversify investment portfolios: Investors can mitigate the impact of currency depreciation on their portfolios by diversifying their investments across different asset classes and currencies. By investing in a mix of stocks, bonds, and other securities from different countries, investors can spread their risk and reduce the impact of currency fluctuations.
3. Consider hedging strategies: Investors can also use hedging strategies to protect their portfolios from currency risk. For example, they can use currency futures, options, or forward contracts to lock in a particular exchange rate and protect their investments against adverse currency movements.
4. Adopt sound economic policies: By adopting sound economic policies, policymakers may lessen the effect of currency devaluation on the stock market. For example, they can work to maintain stable inflation rates, reduce fiscal deficits, and promote economic growth. These measures can help stabilize the currency market and improve investor confidence in the stock market.

Currency depreciation has a negative effect on stock market performance; therefore, investors and policymakers should be aware of this and take precautions to protect their investments and the economy as a whole from currency risk.

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Appendix:

Year	Stock Market Performance (NSE All-Share Index)	Exchange Rate (USD to NGN)
2012	20.58%	157.36
2013	47.19%	155.82
2014	-16.14%	171.57
2015	-17.36%	199.05
2016	-6.17%	304.47
2017	42.30%	305.60
2018	-17.81%	363.28
2019	16.81%	306.95
2020	-14.90%	379.50
2021	50.03%	411.05
2022	6.28%	461.00

Source: Nigeria Stock Exchange (NSE)
Note: The stock market performance is represented by the percentage change in the NSE All-Share Index, while the exchange rate is the value of one US dollar in Nigerian Naira (NGN).