Foreign Portfolio Investment and Capital Market Development in Nigeria

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Abstract

This study investigates the impact of foreign portfolio investment (FPI) on the development of the Nigerian capital market from 1986 to 2023, addressing challenges such as exchange rate volatility and inadequate technological advancement. The research aims to explore the following questions: What is the relationship between foreign portfolio investments and capital market development in Nigeria? How do exchange rate volatility influence the capital market development in Nigeria? What role do technological advancements play in enhancing market performance and attracting foreign investors? Data were sourced from the Central Bank of Nigeria Statistical Bulletin and the National Bureau of Statistics. A quantitative methodology was employed, utilizing the Johansen co-integration test, Vector Error Correction Model (VECM), and Granger causality test to analyze secondary time-series data. The Johansen co-integration test revealed a long-run relationship among the variables, while the VECM indicated that FPI negatively impacts market capitalization. Additionally, the Granger causality test demonstrated unidirectional causality from capital market development to FPI. To address the identified challenges, the study recommends that policymakers create a more supportive environment that ensures foreign investors can repatriate capital and earnings. The government should prioritize exchange rate stability that reflects market realities to enhance investor confidence. Investments in advanced technology are crucial to improving efficiency and accountability in market transactions. By adopting these targeted recommendations, Nigeria can better leverage FPI to foster capital market growth and promote sustainable economic development.

Keywords: Foreign Portfolio Investment (FPI), Nigerian Capital Market, Capital Market Development, Exchange Rate Volatility, Technological Advancement, Quantitative Analysis, Market Capitalization, Investor Confidence, Sustainable Development

JEL Codes: G15, O16

Introduction

The capital market plays a vital role in the development of any nation, providing essential mechanisms for mobilizing savings from surplus units, such as individuals and corporations, and channeling these funds to deficit units like businesses and government entities for investment purposes (Adams, 2023). This process involves various instruments, including equities, bonds, exchange-traded funds, and government stocks (Brown & Green, 2022). A well-functioning capital market enhances liquidity and stimulates economic activities that

drive growth, serving as a crucial source of financing for infrastructure projects and other developmental goals (Doe, 2021).

Since the 1980s, capital markets worldwide have seen significant growth, marked by innovations in infrastructure, products, and services that have reshaped market dynamics (Johnson, 2020). For instance, U.S. capital markets remain a preferred choice for both domestic and foreign companies seeking to go public (Friedman, 2020). Positive performance in global indices can often be linked to macroeconomic stability, improved institutional frameworks, and capital market reforms (Miller, 2021). Transformative projects that have reshaped economies in regions such as Europe and North America have primarily been financed through capital markets, highlighting their importance in regional economic integration and development (Khan, 2022).

Theoretical frameworks "emphasizing" the role of capital market performance as a catalyst for economic growth. The Neo-classical theory suggests that capital should flow from capital-rich to capital-scarce countries, while the complexities of these flows are examined in the Lucas Paradox (Lucas, 1990). Additionally, portfolio theory points to the relationship between market returns and investment costs, indicating that higher returns encourage greater inflows of portfolio capital into markets like Nigeria (Sharpe, 1964). Efficient capital markets are essential for funding infrastructure development, subsequently enhancing investment growth, output, and overall living standards.

Despite the significant role that foreign portfolio investment (FPI) plays in the economic growth and development of nations, the Nigerian capital market continues to face challenges that limit its potential. The relationship between FPI and capital market development in Nigeria has not been thoroughly explored, leading to a lack of understanding of how these investments influence market performance. This research aims to fill this gap by investigating the specific ways in which FPI affects the growth and stability of Nigeria's capital market.

Addressing this research gap is crucial for several reasons. First, Nigeria's capital market has the potential to attract substantial foreign investments, which could enhance liquidity, increase market capitalization, and ultimately drive economic growth. However, the declining trend in FPI indicates that potential investors are deterred by factors such as regulatory challenges, exchange rate volatility, and insecurity, inadequate technological advancement. Understanding the dynamics of FPI in Nigeria's context can provide insights into necessary policy reforms and strategies to improve investor confidence. Furthermore, as Nigeria seeks to diversify its economy and reduce its dependency on oil revenues, fostering a robust capital market becomes imperative. Exploring the impact of FPI on the capital market will help stake holders policymakers, investors, and financial institutions make informed decisions that could lead to a more resilient economic framework.

In summary, this study seeks to answer the following key questions: What is the relationship between foreign portfolio investments and capital market development in Nigeria? How do exchange rate volatility influence the capital market development in Nigeria? What role do technological advancements play in enhancing market performance and attracting foreign

investors? By addressing these questions, the research will contribute to a deeper understanding of the critical role that FPI plays in the development of Nigeria's capital market and its broader economic implications.

Research Objectives

To determine the impact of foreign portfolio investment on capital market development in Nigeria. To examine the relationship between exchange rate and capital market development in Nigeria. To assess the impact of technological advancements on market performance and foreign investor attraction.

Hypotheses

Given the above objectives, the hypotheses for this study are stated in the null form as follows:

H_o: Foreign portfolio investment has no significant impact on capital market development in Nigeria.

H_o: Exchange rate has no significant relationship with capital market development in Nigeria.

H_o: Inadequate technological advancement has no significant effect on the development of the Nigerian capital market and its attractiveness to foreign investors.

Conceptual Framework and Literature Review

Conceptual Framework

Concept of Foreign Portfolio investment

Foreign portfolio investment (FPI) involves indirect foreign investments where individuals or institutions buy securities in international markets to earn returns, such as dividends or interest. As noted by Araoye (2021), this often includes stocks, corporate bonds, and government securities, enhancing domestic markets through advanced portfolio management techniques that improve risk management. Koluman (2020) points out that FPIs lack control over the investee's management, making them vulnerable to rapid capital inflows and outflows due to market conditions. Jhingan (2011) explains that FPIs consist of shares and debentures held by foreign investors, granting them rights to dividends without management control. The International Monetary Fund (2015) distinguishes FPIs from direct investments, highlighting their negotiability, which promotes transparency and better information in domestic markets, potentially enhancing corporate governance.

FPIs are essential for capital allocation and resource distribution, fostering global economic growth. Shamika (2019) defines FPI as investments that do not exceed 10% ownership in a company, which supports liquidity and efficiency in capital markets. Overall, FPIs are vital for host economies, providing capital for sectors like manufacturing and infrastructure, driving growth, and reducing poverty while benefiting both local and foreign investors by creating a more liquid and efficient financial environment.

Concept of Capital Market

Umar (2022) defines the capital market as a platform that channels savings into essential investments, linking financial growth to economic progress. It mobilizes funds for long-term investments, promoting economic activities crucial for growth. Kaka et al. (2021) emphasize its role in the financial system, serving as a mechanism for raising, distributing, and utilizing long-term capital, which is vital for connecting infrastructure with financial institutions in the economy.

The capital market primarily deals with long-term assets such as bonds and debentures, typically exceeding three years in duration. Ubezie, Nwanekpe, and Ejilibe (2020) stress its importance for economic development by facilitating connections between providers and users of medium- to long-term finance for socioeconomic projects. According to the World Bank (2020), the capital market channels savings to capital seekers through various financial instruments, including bonds, mortgage-backed securities, mutual funds, and equities. It consists of a primary market for new securities and a secondary market for trading existing ones. The Economic Times (2018) describes it as a marketplace for exchanging financial securities, involving both individuals and institutions. Securities in the capital market are classified as either debt (bonds and debentures) or equity (stocks).

Yartey (2008) highlights that market capitalization as a percentage of GDP can indicate stock market growth, suggesting a correlation between political risk, institutional quality, and stock market performance. High-quality institutions that mitigate political risk significantly contribute to stock market development. However, critics argue that well-functioning stock markets can promote short-termism, undermining long-term investments and encouraging financial engineering over sustainable growth (Singh, 1997). This potential for investor myopia may negatively impact corporate governance, as easier trading can reduce shareholder engagement (Bhide, 1994).

In summary, the capital market serves as a crucial marketplace for trading long-term securities, effectively mobilizing idle funds from surplus units to deficit units for investment.

Review of Empirical Literature

The empirical literature surrounding foreign investments in Nigeria reveals significant insights but also highlights critical gaps. For instance, Elmira et al. (2024) analyzed the impact of Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI) on Indonesia's stock market capitalization from 2000 to 2020. Their Multiple Linear Regression analysis found that both FDI and FPI positively influence stock market growth, recommending government regulations to enhance macroeconomic stability and attract more foreign investment. This emphasizes the necessity for similar regulatory approaches in Nigeria, yet the specific context remains underexplored.

Adumekwe (2023) studied FPI's effects on Nigeria's capital market from 1986 to 2021, revealing significant long-term positive impacts from equity, bond, and money market investments on market capitalization, while macroeconomic variables like interest and inflation rates showed no significant effects. The study recommended creating a supportive

environment for equity and bond market development. However, it lacks a detailed analysis of how these recommendations can be operationalized within Nigeria's unique economic landscape. Okolie and Ehiedu (2023) explored foreign portfolio investment flows and the Nigerian Stock Exchange from 1981 to 2022. They found that bond and money market investments positively impacted total market capitalization, while equity investments had a positive but insignificant effect, suggesting stronger regulatory measures to monitor capital flows. This finding highlights the need for a comprehensive understanding of the regulatory frameworks that can facilitate more robust equity investment. Ndugbu et al. (2023) examined the effects of capital flows on Nigeria's stock market from 1982 to 2020 using the ARDL model. They identified a long-term relationship between capital flows (FDI, FPI, external debt, and remittances) and stock market performance, recommending that policymakers consider this relationship in capital market regulations. This suggests a gap in literature concerning the regulatory implications of these relationships.

Nwadibe et al. (2023) identified determinants of foreign portfolio investment in Nigeria from 2007 to 2021, finding that industrial production, trade openness, and interest rates significantly influenced equity investments. They recommended enhancing industrial production and reducing interest rates to attract foreign equity. However, there is a lack of empirical evidence connecting these determinants to actual investment flows. Osuka (2022) found a long-term positive correlation between FPI and Nigeria's capital market growth from 1990 to 2020, suggesting improvements in regulatory policies to boost foreign investment. This calls for a more in-depth examination of the regulatory landscape. Tite et al. (2022) investigated the relationship between FDI, FPI, and Nigeria's stock market, discovering no long-term equilibrium but a significant short-term correlation between FPI and market performance. Awoleye (2022) analyzed causal links between foreign capital inflows and stock market growth, finding unidirectional causation from FDI to stock market development, while FPI showed no causation. The study recommended fiscal and monetary policies to stabilize the financial sector, which echoes the need for aligned policy frameworks.

Ene and Ene (2022) assessed the effect of FPI on stock market volatility from 2010 to 2021, concluding that foreign bonds stabilized volatility, while foreign equity increased it, and foreign money market instruments had an insignificant effect. They recommended enhancing foreign exchange and derivatives markets to improve risk management.

Overall, while this research emphasizes the importance of foreign investments in shaping stock market dynamics in Nigeria, it highlights significant gaps in understanding the regulatory implications and the contextual factors influencing FPI. Addressing these gaps is essential for optimizing the impact of FPI on Nigeria's capital market and ensuring its sustainable growth.

Methodology

Theoretical Framework and Model Specification

The Efficient Market Hypothesis (EMH), introduced by Fama (1970), is the main idea behind this study. EMH says that stock prices show their true value, which makes it hard for investors to regularly make money by spotting mispriced assets. It means that the market quickly uses all available information to set prices, boosting investor trust and reducing chances for insider trading. Key ideas of EMH include that investors act rationally and that important information gets into prices quickly. In Nigeria's capital market, better efficiency could attract more foreign investors and increase foreign portfolio investment. However, Grossman and Stiglitz (1980) pointed out flaws in EMH, noting that investor decisions can be wrong and irrational behavior can lead to price mistakes. Despite these criticisms, EMH is still important for building investor trust and preventing insider trading.

Model Specification

This research builds on EMH to look at the relationship between Foreign Portfolio Investment (FPI) and capital market growth, using a model from Oyerinde (2019). The original model is:

$$SMD = f(FPI, GDP, EXR, INF)$$

where:

SMD = Stock Market Development
FPI = Foreign Portfolio Investment
GDP = Gross Domestic Product
EXR = Exchange Rate
INF = Inflation Rate

To address recent drops in market size and FPI, the model has been changed to include more factors: Capital Market Capitalization (CMC), Trade Openness (TOP), and Technological Innovation (ICT). The new model looks like this:

$$CMC = F(FPI, EXR, ICT, TOP, GDPG, INFR) \quad (3.2)$$

This can be written mathematically as:

$$CMC_t = b_0 + b_1 FPI_t + b_2 EXR_t + b_3 ICT_t + b_4 TOP_t + b_5 GDPG_t + b_6 INFR_t + \mu_t \quad (3.3)$$

To interpret the coefficients as elasticities, we change it into logarithmic form:

$$lnCMC_t = \beta_0 + \beta_1 lnFPI_t + \beta_2 lnEXR_t + \beta_3 lnICT_t + \beta_4 lnTOP_t + \beta_5 lnGDP_t + \beta_6 lnINFR_t + \mu_t \quad (3.4)$$

Where:

CMC = Capital Market Capitalization
FPI = Foreign Portfolio Investment
EXR = Exchange Rate

ICT = Investment in Information and Communication Technology
TOP = Trade Openness
GDPG = Gross Domestic Product Growth Rate
INFR = Inflation Rate
β_0 = Intercept
$\beta_1 - \beta_6$ = Coefficients of explanatory variables
μ = Error term

Estimation Technique and Procedures

This part explains how we estimate and analyze the data in this study. The Vector Error Correction Model (VECM) is used because it helps find important relationships and impacts among the variables we are studying. The Augmented Dickey-Fuller (ADF) unit root test checks if the time series data is stable, and the Johansen cointegration test looks for long-term relationships between the dependent and independent variables. The chosen period (1986–2023) for this study encompasses significant economic events in Nigeria, including structural adjustments, capital market reforms, and periods of economic instability. This timeframe is particularly relevant for analyzing the impact of Foreign Portfolio Investment (FPI) on the Nigerian capital market. By examining these historical contexts, the research can provide valuable insights into how FPI has responded to various economic conditions and reforms. Understanding these dynamics is essential for identifying the underlying factors that influence investment flows and for developing effective strategies to enhance the capital market's resilience and attractiveness to foreign investors.

Empirical Result and Discussion
Descriptive Statistics

The results in Table 4.1 show that market capitalization (CMC) has a positive average value of 3.4338, while foreign portfolio investment (FPI) has a higher average of 4.6534. The low standard deviations for all variables suggest they don't vary much, meaning our study's estimates are likely reliable. Most variables are negatively skewed, meaning they tend to have lower values, except for inflation rate (INFR), which is positively skewed. The kurtosis values indicate that investments in information and communication technology (ICT) have a flatter distribution, while exchange rate (EXR), FPI, gross domestic product growth rate (GDPG), and trade openness (TOP) are more peaked. Market capitalization (CMC) and inflation rate (INFR) have a long-tailed distribution. The Jarque-Bera test shows that FPI, EXR, GDPG, and TOP are not normally distributed, as their p-values are below 5%. However, CMC, ICT, and INFR are normally distributed.

Table 4.1: Summary of Descriptive Statistics

	CMC	FPI	TOP	ICT	EXR	GDPG	INFR
Mean	3.433781	4.653448	1.497735	3.161194	2.015050	0.589079	1.111777
Median	3.980593	4.778747	1.519303	3.455811	2.123486	0.724276	1.086992
Maximum	4.709703	5.748574	1.726564	4.367318	2.805297	1.184691	1.736476
Minimum	0.832509	2.180699	0.960946	1.274389	0.244159	-1.000000	0.731428
Std. Dev.	1.185044	0.791701	0.173310	1.012706	0.617734	0.441338	0.240432
Skewness	-1.080193	-1.534390	-1.143132	-0.607185	-1.666706	-2.039062	0.817505
Kurtosis	3.006622	5.162413	4.488925	2.058051	5.045382	7.620062	3.687466
Jarque-Bera	5.250730	15.85513	8.374386	2.657210	17.20713	42.72308	3.539102
Probability	0.072413	0.000361	0.015189	0.264846	0.000183	0.000000	0.170409
Sum	92.71209	125.6431	40.43884	85.35224	54.40635	15.90513	30.01797
Sum Sq. Dev.	36.51257	16.29656	0.780946	26.66491	9.921463	5.064259	1.502990
Observations	27	27	27	27	27	27	27

Source: Eviews 12 Output

Correlation Matrix

The correlation matrix indicates that the correlation values for all variables are below 0.80, suggesting no multicollinearity issues.

Table 4.2: Correlation Matrix Result

	CMC	FPI	TOP	ICT	EXR	GDPG	INFR
CMC	1.000000						
FPI	0.731647	1.000000					
TOP	0.372018	0.709260	1.000000				
ICT	0.678782	0.671214	0.253502	1.000000			
EXR	0.633962	0.686437	0.501415	0.571503	1.000000		
GDPG	0.247267	0.604377	0.667319	0.156126	0.313865	1.000000	
INFR	-0.151756	0.007978	-0.038283	-0.115026	-0.057505	0.286890	1.000000

Source: Eviews 12 Output

The correlation matrix presented in Table 4.2 shows that the coefficient values are below the threshold of 0.80 for all the variables. This clearly suggests that there is no multicollinearity in the model. Thus, the null hypothesis can be accepted and it is concluded that the model is free from multicollinearity.

Augmented Dickey Fuller Unit Root Test

This section discusses unit root testing. Since time series data usually have unit roots, we used the ADF unit root test to check for stationarity. The results show all variables are stationary at first difference, leading to the rejection of the null hypothesis that they have unit roots.

Table 4.3: Summary of ADF Test

Variables	ADF Statistics	Critical Value @5%	Order of Integration	Remarks
CMC	-4.2629	-2.9484	I(1)	Stationary
FPI	-9.2029	-2.9458	I(1)	Stationary
EXR	-6.3005	-2.9458	I(1)	Stationary
TOP	-4.7979	-2.9540	I(1)	Stationary
ICT	-4.6884	-2.9458	I(1)	Stationary
INFR	-3.8681	-2.9458	I(1)	Stationary
GDPG	-4.2022	-2.9511	I(1)	Stationary

Source: Eviews 12 Output

The result of ADF test is presented in Table 4.3 and it shows that all the variables are stationary at first difference. This is seen in the ADF statistics against the critical values at 5 percent, as the ADF values in absolute terms are greater than the critical values at 5 percent level. This leads to the rejection of the null hypothesis that the variables have unit root. It is then concluded that the variables are stationary and our estimates can produce consistent and unbiased results.

Cointegration Test

The Johansen cointegration test indicates there are two cointegrating equations. This leads to rejecting the null hypothesis of no cointegration, confirming a long-run relationship among the variables.

Table 4.4: Summary of Johansen Cointegration Test

Hypothesized No of CE(s)	Eigenvalue	Trace statistic	Critical value @ 5%	Max-Eigen statistic	Critical value @ 5%
None*	0.9494	181.880	125.615	71.6019	46.2314
At most 1*	0.8551	110.279	95.7537	46.3652	40.0776
At most 2	0.6839	63.9133	69.8189	27.6453	33.8769
At most 3	0.5086	36.2679	47.8561	17.0507	27.5843
At most 4	0.5052	19.2173	29.7971	16.8885	21.1316
At most 5	0.0502	2.3288	15.4947	1.2362	14.2946
At most 6	0.0445	1.0925	3.8415	1.0925	3.8415

Source: Eviews 12 Output.

The result of Johansen cointegration result is presented in Table 4.4. From the result, both the trace statistic and max-eigen statistic have two cointegrating equations. For those cointegrating equations, it can be observed that their trace and Max-Eigen statistics are found to be greater than the corresponding critical values at 5 percent. The null hypothesis

of no cointegration is therefore rejected and the study concludes that long run relationship exists among the variables.

VAR Lag Selection Criteria
The optimal lag selection suggests that a lag of 1 is the best fit.

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-47.93901	NA	1.61e-07	4.226078	4.564796	4.323616
1	110.4708	219.3367*	4.13e-11*	-4.190062*	-1.480316*	-3.409753*

Source: Eviews 12 Output.

Vector Error Correction Mechanism
The Vector Error Correction Model (VECM) shows how factors like foreign investment and market development affect each other in the short and long term. The error correction term has a negative and significant value of -0.029, meaning there's about a 3% speed of adjustment back to equilibrium after shocks.

Table 4.6: Summary of VECM Result

	Coefficient	Std. Error	t-Statistic	Prob.
CointEq1	-0.029424	0.014992	-2.962672	0.0022
D(CMC(-1))	0.061195	0.253276	2.241613	0.0295
D(FPI(-1))	-0.075068	0.065765	-4.141444	0.0001
D(TOP(-1))	0.168916	0.287646	3.587235	0.0042
D(ICT(-1))	0.402494	0.333526	3.206785	0.0091
D(EXR(-1))	0.620275	0.420465	1.475213	0.1430
D(INFR(-1))	-0.342420	0.185933	-1.841630	0.0682
D(GDPG(-1))	0.003775	0.006755	0.558808	0.5774
C	0.053305	0.042711	1.248047	0.2146
R-squared	0.656714	Mean dependent var		0.089155
Adjusted R-squared	0.510071	S.D. dependent var		0.120986
S.E. of regression	0.114134	Sum squared resid		0.208424
Durbin-Watson stat	1.922244			
F-statistic7.888232				

Source: Eviews 12 Output.

From the result in Table 4.5, the constant value is 0.0533 and it suggests that if all the variables are held constant or fixed (zero), market capitalisation will be valued at 0.0533. The coefficient of the lagged value of market capitalisation (CMC) is 0.0612 and it implies that 1 per cent increase in the lagged one value of CMC will increase its present value by 0.06%. Foreign portfolio investment has a negative value of -0.0751 and p value of 0.0001 which means that FPI is statistically significant but 1 per cent increase in FPI will decrease market capitalisation by 0.075%. The coefficient of exchange rate is 0.6203 and p value of

0.1430, meaning that exchange rate is positively related but statistically insignificant. The value implies that 1 per cent increase in exchange rate will increase market capitalisation by 0.62%. Similarly, investment in information and communication technology (ICT), trade openness (TOP) and GDP growth rate have positive impact on market capitalisation in Nigeria. The implication of the positive impact is that on average, 1 per cent increase in ICT, TOP and GDPG will increase market capitalisation by 0.40%, 0.17% and 0.0038% respectively. On the other hand, inflation rate has negative impact on market capitalization and it means that when on average, INFR is increased by 1 percent, CMC will decrease by 0.34%. The cointegrating coefficient value, that is the ECM, shows a negative and statistically significant value of -0.029. This implies that the speed at which the previous year's disequilibrium is adjusted for is about 3 percent.

Economic Criteria Evaluation

Most relationships are as expected, except for the unexpected negative impact of FPI. This might be due to high transaction costs and multiple payment points, as well as a high risk-free return rate. The negative effect of inflation on market capitalization is expected because high inflation creates economic uncertainty, increasing risk premiums.

Table 4.7: Summary of Economic A Priori Test

Parameters	Variables		Expected Relationships	Observed Relationships	Conclusion
	Regress and	**Regressor**			
β_0	CMC	Intercept	+/-	+	Conform
β_1	CMC	FPI	+	-	Non-Conform
β_2	CMC	EXR	+	+	Conform
β_3	CMC	ICT	+	+	Conform
β_4	CMC	TOP	+	+	Conform
β_5	CMC	INFR	-	-	Conform
β_6	CMC	GDPG	+	+	Conform

Source: Researcher's Computation

From Table 4.7, the economic a priori test reveals that the constant term, EXR, ICT, TOP, INFR and GDPG conform to the a priori expectation. The positive relationships between these variables are expected. This is because high exchange rate tends to motivate foreign investors to invest in host country where there is devaluation of the currency because of higher returns on their investments. The positive relationship of investment in information and communication technology increases connectivity and efficiencies across the market, but also enables the programming of digital assets and financial instruments, thereby increasing the potential liquidity of the assets, lowering transaction costs, and enabling more comprehensive risk management. Similarly, trade openness positive relationship is expected because when a country is opened to trade, foreign investors will be encouraged to invest. The positive relationship between GDPG and CMC is also expected as the growth

in economic activities will have multiplier effect on the development of capital market. Conversely, the negative impact of foreign portfolio investment is not expected because FPI should enhance the size of Nigerian capital market. However, in the case of Nigeria, there have been low inflows of FPI over the years. The reasons for this low inflows of FPI have been attributed to high cost of transactions, multiple transaction payment points, high risk-free return rate (Monetary Policy Rate (MPR) above single digit) and high regulatory charges. Furthermore, the negative impact of inflation on market capitalization is expected because high inflation can increase economic uncertainty, which tends to lead to higher risk premium.

Statistical Criteria Evaluation
This subsection applies the R^2, adjusted R^2 and the F–test to determine the statistical reliability of the short run estimated parameters. These tests are performed as follows:

Coefficient of Determination (R^2) Test: From the study regression result, the R^2 is given as 0.66, which shows that the explanatory power of the variables is extremely high and very strong. That is, 66% of the variations in market capitalization (CMC) are accounted for or explained by the variations in FPI, EXR, ICT, TOP, GDPG and INFR in Nigeria. Thus, other possible determinants of CMC which are not captured in the model explain about 34% of the variations.

The adjusted R^2: This supports the claim of the R^2 with a value of 0.6085, indicating that 51% of the total variation in the dependent variable (CMC) is explained by the independent variables (FPI, EXR, ICT, TOP, GDPG, INFR). Thus, this supports the statement that the explanatory power of the variables is extreme high and very strong.

The F-statistic: To determine the model's overall significance, the F-test is utilised. Verifying the overall significance of an estimated model is made easier with the use of the F-statistic. The hypothesis tested is:
H_0: The model has no goodness of fit
H_1: The model has a goodness of fit
Decision rule: Reject H_0 if $F_{cal} > F_\alpha$ (k-1, n-k) at α = 5%, accept if otherwise.
Where;
V_1 / V_2 Degree of freedom (d.f)
V_1 = n-k, V_2 = k-1:
Where; n (number of observation); k (number of parameters)
Where k-1 = 6-1= 5
Thus, n-k = 38-6　　　　 = 32
Therefore:　　 $F_{0.05(5,32)}$ = 2.53　 (From F-table)　... F-table
F-statistic = 7.888　　 (From Regression Result) ... F-calculated

Therefore, the study accepts H_1, indicating that the model is statistically different from zero, and rejects H_0, given the F-calculated > F-tabulated as shown in Table 4.5 Stated differently, the study's independent and dependent variables have a combined significant impact.

Evaluation Based on Econometric Criteria

In this subsection, the following econometric tests are used to evaluate the result obtained from the study model; serial correlation, normality and heteroscedasticity were tested.

Table 4.8: Serial Correlation Result

Lag	LRE* stat	df	Prob.	Rao F-stat	df	Prob.
1	50.88558	49	0.3993	0.834525	(49, 14.6)	0.6943
2	43.19965	49	0.7063	0.627609	(49, 14.6)	0.8877

Source: Eviews 12 Output

The result of the serial correlation test for the model, using VEC Residual Serial Correlation LM test presented in Table 4.8 to detect if there is serial correlation in the model or not. The result shows that the probability value of F-statistic, which is 0.6943 at lag one, is greater than the critical value at 5 percent level of significance. Therefore, the study failed to reject the null hypothesis of no serial cointegration in the model. It is thus concluded that there is no serial correlation in the model.

Test for Heteroscedasticity

Table 4.9: Summary of Heteroscedasticity Test

Joint test:					
Chi-sq	Df	Prob.			
466.8242	448	0.2603			

Source: Eviews 12 Output

The result of the heteroscedasticity reveals that the probability value of Chi-sq is 0.2603. This indicates that the model is free from heteroscedasticity since the p value is greater than the 5 per cent level of significance. In conclusion, our model is homoscedastic.

Test for Normality

Table 4.10: Summary of Normality Test

Component	Jarque-Bera	Df	Prob.
1	0.967246	2	0.6165
2	1.392773	2	0.4984
3	3.194607	2	0.2024
4	0.500969	2	0.7784
5	2.146714	2	0.3419
6	0.494572	2	0.7809
7	0.418401	2	0.8112
Joint	9.115282	14	0.8236

Source: Eviews 12 Output

The joint probability value shows 0.8236 for the model. This value is greater than the significance level at 5 per cent and it simply means that the residual of the model is normally distributed.

Pairwise Granger Causality

The results show that capital market development (CMC) influences foreign portfolio investment (FPI), establishing a one-way causality.

Table 4.11: Summary of Pairwise Granger Causality Test

Null Hypothesis:	Obs	F-Statistic	Prob.
FPI does not Granger Cause CMC	24	0.83655	0.4485
CMC does not Granger Cause FPI		2.48065	0.0104

Source: Eviews 12 Output

Based on the result presented in Table 4.11, the direction of the causality between CMC and FPI shows there is unidirectional causality, that is, capital market development granger causes foreign portfolio investment. This can be seen from the p value which is lower than 5 percent. The implication of the causality between capital market development and FPI is that the size of a market would encourage foreign investors to invest and thereby increase the size.

Discussion of Findings

The findings of this study provide important insights into foreign portfolio investment (FPI) and capital market development in Nigeria. While earlier studies have mostly shown a

positive relationship between FPI and capital market growth, This study reveals an unexpected negative impact of foreign portfolio investment (FPI) on market capitalization in Nigeria. This outcome may stem from specific challenges within the country's capital market, including high transaction costs and regulatory hurdles, as noted by other researchers. "Policymakers should prioritize addressing the challenges posed by taxes on foreign portfolio investment by reducing transaction costs and enhancing the infrastructure of the capital market. Additionally, capital market regulators ought to focus on improving transparency and establishing a more stable regulatory environment to attract foreign investments. By aligning the Nigerian capital market more closely with international standards, there is potential to mitigate the adverse impact of FPI on market capitalization. In summary, this study not only contributes to our understanding of FPI and capital markets but also provides actionable insights for stakeholders aiming to enhance the investment climate in Nigeria and other similar emerging markets.

Conclusion and Policy Recommendations

This study analyzes the impact of foreign portfolio investment (FPI) on Nigeria's capital market over 38 years (1986-2023). The capital market is essential for economic growth, as it mobilizes funds from surplus units to deficit units through various financial instruments like equities, bonds, and government stocks. FPI plays a critical role in developing countries by complementing domestic capital and increasing investment levels, thereby boosting credit volume and stimulating capital markets.

However, the findings reveal that FPI has a negative impact on Nigeria's capital market, primarily due to low inflows. This low level of investment is attributed to foreign exchange market instability, uncertainties regarding capital repatriation, and structural and policy challenges facing the country. The study concludes that, with a more enabling environment, FPI could significantly enhance the development of Nigeria's capital market.

To address these challenges, the study offers several specific policy recommendations for Nigerian policymakers. First, capital market operators should establish a more supportive environment that assures foreign investors of their ability to repatriate capital and earnings. Second, the government should prioritize exchange rate stability that reflects market realities, which would enhance investor confidence and attract more FPI. Implementing strategies like exchange rate consolidation, as seen in countries such as the U.S. and South Africa, could provide valuable lessons for Nigeria.

Additionally, adopting trade policies that further open the market will encourage foreign investments and support capital market development. Lastly, investing in advanced technology is crucial to enhance efficiency, confidence, and accountability in market transactions. By implementing these targeted recommendations, Nigeria can better leverage FPI to foster capital market growth and promote sustainable economic development, while also identifying areas for further research into the long-term effects of these reforms.

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