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Foreign Portfolio Investments and Stock Market Returns in Nigeria

Ismail Tijjani Idris, PhD[1]
Department of Finance,
Faculty of Management Sciences
Ahmadu Bello University Zaria-Nigeria

Gambo Zakari Babale[2]
Department of Finance,
Faculty of Management Sciences
Ahmadu Bello University Zaria-Nigeria

Yusuf Ibrahim Kofarmata, PhD[3]
Department of Economics,
Faculty of Social and Management Sciences
Northwest University Kano-Nigeria

Abstract

Stock market returns tend to react differently to foreign portfolio investment (FPI) inflows, particularly in emerging markets where capital flows are often volatile. This study examines the effect of foreign portfolio investment inflows on stock market returns in Nigeria using monthly data from January 2014 to March 2021. The Autoregressive Distributed Lag (ARDL) modelling framework is employed to distinguish between short-run and long-run dynamics. The empirical findings indicate that foreign portfolio investment does not exert a statistically significant effect on stock market returns in the short run, reflecting the transitory and volatile nature of portfolio flows. However, in the long run, FPI inflows exhibit a positive and statistically significant relationship with stock market returns, suggesting that sustained foreign participation enhances market performance over time. In addition, periods of economic crisis are found to have a significant negative effect on stock market returns, underscoring the vulnerability of the Nigerian stock market to macroeconomic shocks. Based on these findings, the study recommends that policy authorities prioritize macroeconomic stability and deepen domestic capital market development to reduce excessive dependence on volatile foreign portfolio flows, particularly during periods of economic uncertainty. Strengthening domestic investment capacity would help cushion the adverse effects of external shocks on stock market performance.

Keywords: Foreign portfolio investment; stock market returns; economic crisis; ARDL; Nigeria.

1. Introduction

Despite the increasing integration of emerging stock markets into global financial systems, the effect of foreign portfolio investment (FPI) inflows on stock market returns remains empirically inconclusive, particularly in developing economies such as Nigeria. Existing studies report mixed evidence ranging from positive, negative, to insignificant effects suggesting that the relationship between FPI and stock market returns may be sensitive to market conditions, macroeconomic stability, and business cycle fluctuations. Notably, limited attention has been given to how economic crisis periods alter the transmission mechanism between foreign portfolio investment and stock market performance, especially using high-

frequency data capable of capturing short-run dynamics.

In Nigeria, episodes of economic recession and heightened macroeconomic uncertainty most notably during the 2016 recession and the COVID-19–induced downturn were accompanied by sharp reversals in foreign portfolio flows. However, empirical evidence on whether these reversals weaken or alter the impact of FPI on stock market returns remains sparse. This study addresses this gap by examining both short-run and long-run effects of foreign portfolio investment on stock market returns in Nigeria, while explicitly controlling for economic crisis periods and key macroeconomic factors within an Autoregressive Distributed Lag (ARDL) framework. To compliment domestic capital, foreign capital has been noted to play significant role in countries developmental process, through provision of additional finances in the economy (He, Gokmenoglu, Kirikkaleli & Rizvi, 2023).

Foreign capital inflows into economies come in two broad forms Foreign Direct Investment (FDI) and Foreign Portfolio Investment (FPI). The two channels of capital inflows FDI and FPI are often misconstrued as same, rather they are similar as they both originate from foreign investors to host economies, but fundamental difference exists which is the degree of control. FDI investors exercise controlling position in domestic firms and actively getting involved in management, while FPI investors are passive investors not actively involved in day-to-day operations and strategic plans of domestic companies (Singhania & Saini, 2017).
Financial theories have shown that rational investors channel their funds to markets they expect to earn high return on investment with lower risk. Bah & Giritli (2020) noted that investors seek for higher yields and low risk investment to maximize portfolios profit, which consequently leads to an appetite for international diversification.

It has been noted that high volatility in portfolio investment signifies large reversal of foreign capital flows, which increases the risk of liquidity runs by borrowers (Nwosa & Adeleke, 2017), which may affect stock returns negatively. Furthermore, it has been noted that foreign portfolio investments do have adverse effects on a host country. The potential causal factors of these adverse aspects of foreign portfolio investments lies in its short-term nature and also in its volatility (Knill & Lee, 2014; Yaha, *et al.,* 2017). Conversely, Gathenya (2015) holds that foreign portfolio investments confers on the investors advantage of holding wide range of assets with varying degree of risk, return and liquidity. In addition, foreign investors' entry increases the liquidity of local market, and makes the base of investors broader, thus increasing risk sharing. Foreign investments also confer on the market transparency advantage that leads to better resources allocation and financial markets stability. Kim and Yi (2015) opined that increased foreign access to domestic equity markets stimulates more research and information production by local and foreign analysts, brokerages and other market participants. It also spurs local firms to disclose more and better information.

In Nigeria context, between April and June 2016, Nigeria economy experience economic recession that led to decrease of GDP by of 0.36 in first quarter and 2.06 per cent in the second quarters. This led to significant change in portfolio investment structure in Nigeria stock exchange, as domestic portfolio investments dropped to approximately ₦634 billion in 2016 from ₦881 billion in 2015 and ₦1.137 trillion in

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2014 respectively, while foreign portfolio investment component dropped to ₦518 billion in 2016 from ₦1.025 trillion in 2015 and ₦ 1.539 trillion in 2014 respectively (NSE, 2019). It is also worthy of note that prior (specifically 2011 to 2015) to economic recession in 2016 foreign portfolio investments was higher than domestic investment. But during the period of economic recession 2016/2017 portfolio investment was in favour of domestic investment even though FPI recovered in 2018-2019 (NSE,2019). Additionally, when Nigeria economy fell into recession in 2020 domestic investment rose from ₦ 165.14 billion in January 2020 to ₦ 199.32 billion in December 2020, while foreign portfolio investment dropped from ₦70.32 billion in January 2020 to ₦ 69.92 billion in December 2020. Pursuant to foregoing statistics, this study seeks to ascertain whether foreign portfolio investment flow affects stock returns in Nigeria.

Empirical literatures that assess the effect of portfolio investment on stock returns reports mixed outcomes, which could be categorised into varying strands. That is, stock returns tend to react differently to varying stock market portfolio investment.

Therefore, this study seeks to advance the frontier of knowledge on portfolio investment and stock market returns taking into consideration varying economic conditions. Thus, the study seeks to empirically determine the extent to which foreign portfolio investment affect stock market returns in Nigeria. To empirically examine the effect of foreign portfolio investment on stock market returns in Nigeria, the study tests the following null hypotheses:

H_{01}: Foreign portfolio investment inflows do not have a significant effect on stock market returns in Nigeria.

H_{02}: Interest rate does not have a significant effect on stock market returns in Nigeria.

H_{03}: Real effective exchange rate does not have a significant effect on stock market returns in Nigeria.

H_{04}: Global crude oil price does not have a significant effect on stock market returns in Nigeria.

H_{05}: Foreign exchange reserves do not have a significant effect on stock market returns in Nigeria.

H_{06}: Economic crisis does not have a significant effect on stock market returns in Nigeria.

2.0 Literature Review

2.1 Conceptual Background

Foreign portfolio investment refers to cross-border investments in equity and debt securities that do not confer managerial control on the investor. Unlike foreign direct investment, portfolio flows are typically short-term, highly liquid, and sensitive to changes in macroeconomic fundamentals and investor sentiment. Financial theory suggests that rational investors allocate capital to markets offering higher risk-adjusted returns, leading to increased portfolio diversification across international markets. Consequently, FPI inflows can enhance stock market liquidity, improve price discovery, and stimulate market efficiency.

However, the inherently volatile nature of foreign portfolio flows exposes host economies to sudden capital reversals, particularly during periods of heightened uncertainty. Such volatility can amplify stock market fluctuations and undermine financial stability, especially in emerging markets with relatively shallow domestic investor bases. Thus, the theoretical impact of FPI on stock market returns remains ambiguous and is likely contingent on prevailing macroeconomic and institutional conditions.

Empirical studies examining the relationship between foreign portfolio investment (FPI) and

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stock market returns reveal **divergent outcomes,** reflecting differences in market structure, econometric methodology, data frequency, and macroeconomic conditions. Broadly, existing studies can be classified into three strands: (i) studies reporting a positive effect of FPI on stock market returns, (ii) studies finding a negative or destabilizing effect, and (iii) studies reporting weak or insignificant relationships.

A substantial body of literature documents a **positive relationship between FPI inflows and stock market performance,** arguing that foreign portfolio participation enhances market liquidity, improves price discovery, and strengthens informational efficiency. For instance, Prabheesh et al. (2023) find that FPI inflows significantly improve stock market performance in India, particularly during periods of heightened uncertainty. Similarly, Gachanja (2018) and Iriobe et al. (2018) report that foreign equity inflows positively influence stock market returns in Kenya and Nigeria, respectively. These findings support the liquidity and information channel hypothesis, which posits that foreign investors contribute to deeper and more efficient capital markets.

Conversely, another strand of literature emphasizes the **destabilizing role of foreign portfolio investment,** particularly in emerging markets characterized by weak institutional frameworks. Benson et al. (2022) show that FPI inflows exert a negative impact on Nigeria's financial market performance due to their high volatility and susceptibility to sudden reversals. Chhimwal and Bapat (2020) further demonstrate that unexpected FPI flows increase stock market volatility, suggesting that the short-term nature of portfolio flows may amplify market fluctuations rather than stabilize returns. These studies align with the volatility transmission hypothesis, which argues that foreign portfolio flows can heighten financial fragility during periods of uncertainty.

A third group of studies reports **insignificant or context-dependent effects** of FPI on stock market returns. Agu et al. (2019) and Adebisi and Arikpo (2017) find no long-run relationship between FPI and stock market returns in Nigeria, suggesting that the impact of foreign portfolio flows may be contingent on macroeconomic stability and policy credibility. Meurer (2022), using Brazilian data, similarly observes that while foreign portfolio flows affect stock market returns in the short term, these effects dissipate over time and are mediated by interest rate dynamics. This strand highlights the importance of controlling for macroeconomic fundamentals and business cycle conditions when assessing the FPI–returns nexus.

Critically, the **contradictory findings in the literature** may be attributed to differences in data frequency, sample periods, and econometric techniques. Studies relying on annual data may fail to capture short-run dynamics and capital flow reversals, while those that ignore structural breaks or crisis periods may overestimate the stabilizing role of foreign portfolio investment. Moreover, many studies do not explicitly distinguish between short-run and long-run effects, leading to inconsistent conclusions regarding the true impact of FPI on stock market returns.

In the Nigerian context, existing studies provide valuable insights but remain limited in several respects. Most studies either focus on aggregate market indicators without accounting for economic crisis periods or employ econometric techniques that impose restrictive assumptions on variable integration orders. Consequently, there is limited empirical evidence on how foreign portfolio investment affects stock market returns across different economic regimes. This study extends the literature by employing high-

frequency monthly data and an ARDL framework that explicitly captures short-run dynamics, long-run relationships, and the moderating role of economic crises.

2.1 Theoretical Framework

This study is anchored on the **Portfolio Balance Theory** and the **Efficient Market Hypothesis (EMH).** Portfolio Balance Theory posits that international investors allocate capital across markets to optimize risk-adjusted returns, implying that increased foreign portfolio inflows can influence asset prices and returns through demand and liquidity effects. According to this theory, sustained foreign investment inflows raise equity demand, leading to higher stock prices and improved returns in the long run.

The Efficient Market Hypothesis further suggests that stock prices reflect all available information. In this context, foreign investors often considered more sophisticated and information-driven can enhance market efficiency by accelerating information dissemination and improving price discovery. However, during periods of economic instability, heightened uncertainty may lead to rapid capital withdrawal, thereby weakening these positive effects.

Together, these theories imply that the impact of foreign portfolio investment on stock market returns **is time-varying and regime-dependent,** providing a strong theoretical justification for distinguishing between short-run and long-run effects as well as incorporating economic crisis periods into the empirical model.

2.2 Empirical Literature Review

Prabheesh *et al.* (2023) evaluated the relationship between FPI inflows and stock market returns in India. The study found that foreign portfolio investment significantly affected stock market performance. The study found a bi-directional causality run from stock returns to FPI. Meurer (2022) assess the effect of foreign portfolio investment flows on stock market returns in Brazil, using monthly data from 2003 to 2018. The results show that the effect of foreign flows to the Brazilian market have temporary effects on stock market index returns in a VAR model, but these effects are not detected through a Granger causality test. This means that the relation between flows and stock market returns is not direct and may be mediated by other variables. The result indicate that interest rate explains the returns of the stock market index. Benson *et al.* (2022) examined the effects of foreign portfolio investment on financial markets performance in Nigeria. The study found that foreign portfolio investment has over the years, significantly destabilized Nigeria's economy; the results showed a negative impact of FPI on Nigeria's economic performance in both the short and long-run. The study concluded that FPI poses threat to Nigeria economy, partly because of the high negative volatility associated with it.

Chhimwal and Bapat (2020) assessed the effect of unexpected FPI flows on the volatility of large-cap, mid-cap and, small-cap stocks in Indian markets. The study found that unexpected flow of FPIs has a positive impact on market volatility but this impact is reduced by unexpected flow of DIIs. Further, results show that unexpected selling of FPIs increase volatility more than unexpected purchase.

3.0 Methodology

3.1 Type and Sources of Data

Monthly time series data for foreign portfolio investment were collected from Nigeria Stock Exchange (NSE) monthly portfolio investment reports, while daily data for market returns aggregated into monthly data was collected from cash craft website for the period January 2014 to March 2021. Data for control variables were also collected from Central Bank of Nigeria database

website for the same period. Monthly data according to Alagidede, (2008) and Wong, Penm and Terrell, (2004) is preferred to higher frequency data (intraday or daily) as it solves the problem of no synchronized trading.

3.1 Model Specification and Justification

This study employs the Autoregressive Distributed Lag (ARDL) modelling approach developed by Pesaran, Shin, and Smith (2001) to examine the relationship between foreign portfolio investment and stock market returns in Nigeria. The ARDL framework is particularly suitable for this study for several reasons. First, the unit root tests indicate that the variables are integrated of mixed orders, that is, a combination of I(0) and I(1) processes. Unlike traditional cointegration techniques such as the Johansen approach, which require all variables to be integrated of the same order, the ARDL model accommodates such mixed integration properties.

Second, the ARDL approach allows for the simultaneous estimation of short-run dynamics and long-run relationships, which is central to the objectives of this study given the volatile and transitory nature of foreign portfolio investment flows. Third, the ARDL framework performs well in small and moderate sample sizes, making it appropriate for the monthly data spanning January 2014 to March 2021. Consequently, the ARDL model provides a flexible and robust econometric framework for capturing the dynamic effects of foreign portfolio investment on stock market returns in Nigeria.

To perform bound test for cointegration, the conditional ARDL (p, q_1,q_2) models as adapted from Iyke and Ho (2017) is specified in the following logarithmic form:

$$LNSMR_t = \propto_0 + \propto_1 FPI_t + \propto_2 MLR_t + \propto_3 REER_t + \propto_4 lnFXRV_t + \propto_5 OILP + \propto_6 ECRIS + \mu_t \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

The result of bound test as shown in next chapter indicates the f-statistics value is greater than I(1) value. Therefore, cointegration is established for the model that was employed, thus the ECM is estimated. The dynamic stock market returns function is re-specified to include error correction term (ECM). The ARDL specification of Equation (3) will be of the following form:

$$\begin{aligned} LNSMR_t = \propto_0 + & \sum_{i=1}^{p} \beta_1 LNSMR_{t-i} + \sum_{i=1}^{p} \beta_2 FPI_{t-i} \\ & + \sum_{i=1}^{p} \beta_3 MLR_{t-i} + \sum_{i=1}^{p} \beta_4 REER_{t-i} \\ & + \sum_{i=1}^{p} \beta_5 OILP_{t-i} + + \sum_{i=1}^{p} \beta_6 lnFXRV_{t-i} \\ & + \sum_{i=1}^{p} \beta_7 ECRIS_{t-i}\, \delta lnASI_{t-i} + \delta FPI_{t-i} \\ & + \delta MLR_{t-i} + \delta REER_{t-i} + \delta OILP_{t-i} \\ & + + \delta lnFXRV_{t-i} \\ & + \delta lnECRIS_{t-i} + ECM_{t-1} + \mu_t \ldots\ldots (2) \end{aligned}$$

Where:
SMR: Stock Market Returns
FPI: Foreign Portfolio Investment Inflows
REER: Real Exchange Rate
MLR: Maximum Lending Rate (Interest Rate)
ECRIS: Economic Recession (Dummy)
FXRV: Foreign Exchange Reserve
OILP: Global Crude Oil Price
Ln: Natural logarithm operator;
α, β *and* δ: *are coefficients of the model*
μ is the white-noise error term;
t denotes the time subscript.
$p, q = optimal\ lag\ orders$
$\varepsilon_{it} = Vector\ of\ the\ error\ term$

The daily stock prices was converted into continuously compounded stock returns, which was aggregated into ASI index compounded monthly returns by taking the percentage change in their logarithmic form as employed by Naik and Padhi (2014) using the formula stated below:

$$LNSMR_t = ln\left(\frac{ASI_t}{ASI_{t-1}}\right) \ldots\ldots\ldots\ldots\ldots\ldots\ldots (3)$$

Where:
ln is the natural logarithm operator;
$LNSMR_t$ is the compounded Stock Market Return at time *t*
P_t and $P_{t-1}$are the daily stock index at the two successive days *t* and *t-1* respectively.

3.3 Method of Data Analysis

Descriptive statistics test was conducted to examine the distributional properties of data; correlation analysis was conducted to ensure the explanatory variables are not highly correlated. In addition, Augmented Dickey-Fuller Test (ADF) and Phillip-Perron (PP) tests were conducted to establish whether unit root level is appropriate for using ARDL model.

3.4 Robustness Checks

To ensure the robustness of the estimated results, several diagnostic and stability tests are conducted. Serial correlation is examined using the Breusch–Godfrey LM test, while heteroskedasticity is tested using the Breusch–Pagan–Godfrey and Harvey tests. Model stability is assessed using the Cumulative Sum (CUSUM) and Cumulative Sum of Squares (CUSUMSQ) tests. In addition, alternative lag structures within the ARDL framework are estimated to confirm the consistency of the long-run coefficients.
The robustness results indicate that the estimated model is stable and free from major econometric violations, thereby supporting the reliability of the empirical findings.

4.0 Data Presentation, Analysis and Interpretation

Descriptive statistics test was conducted to examine the distributional properties of data; correlation analysis was conducted to ensure the explanatory variables are not highly correlated.

4.1 Descriptive Statistics

Table 4.1: Descriptive Statistics

	FPI	MLR	REER	OILP	LN FXRV	ECRI	LN SMR
Mean	39.46	3.35	81.18	61.47	10.46	0.24	10.36
SD.	29.39	0.07	11.72	20.82	0.18	0.43	0.18
Skew.	2.48	-0.12	0.45	0.87	-0.17	1.19	0.15
Kurt.	10.95	1.54	2.12	3.73	2.05	2.42	1.94

Source: Extract from E-views 10 Output

Table 4.1 above, shows that stock market return (LNSMR) for the period of study has standard deviation of 0.18, while the average value is 10.36. It also depicts that Foreign Portfolio Investment (FPI) has a standard deviation of 29.39, while the mean stood at 39.46.
Furthermore, the descriptive statistics indicate that foreign portfolio investment (FPI) exhibits high positive skewness and excess kurtosis, suggesting a departure from normality. This distributional pattern reflects the episodic surges and sharp reversals that characterize portfolio capital flows in emerging markets. Given that the ARDL framework does not require strict normality assumptions for consistency of parameter estimates, the presence of non-normality does not invalidate the estimation results. Nonetheless, the inclusion of lagged terms and the error correction mechanism helps to mitigate the influence of extreme observations on the estimated coefficients.

4.1.2 Correlation Analysis

Table 4.1.2: Correlation Matrix

	FPI	MLR	REER	OILP	LN FXRV	ECRIS
MLR	0.14	1				
REER	0.31	0.75	1			
OILP	0.35	-0.17	-0.08	1		
LNFXRV	0.24	0.51	0.15	0.49	1	
ECRIS	-0.37	-0.19	-0.06	-0.52	-0.56	1

Source: Extract from E-views Output
The result of correlation analysis as depicted in table 4.1.2. The highest level of correlation

between explanatory variables exist between Maximum Lending Rate (MLR) and Real Effective Exchange Rate (REER) with a value of 0.75, which is below the acceptable threshold value of 0.8 as suggested by Rumsey (2007) or 90 percent (Tabachnick & Fidell, 2013). Also, correlation coefficient that is greater than 0.80 are believed to have high collinearity (Babu, Pantaleo & Ndanshau, 2020). Thus, variables employed in the study are statistically appropriate for inclusion in the model used for estimation.

To further assess the possibility of multicollinearity among the explanatory variables, a Variance Inflation Factor (VIF) test was conducted.

The VIF results indicate that all variables record VIF values below the conventional threshold of 10, confirming the absence of severe multicollinearity. Although the correlation between real effective exchange rate and maximum lending rate is relatively high, it remains within acceptable limits and does not distort the reliability of the estimated coefficients.

4.1.3 Stationarity Test

Table 4.1.3: Augmented Dickey-Fuller (ADF) and Phillips-Perron (PP) Unit Root Tests

Variables	Unit Root Tests		
	ADF	PP	
FPI	-5.5049	-5.6011	0
LNSMR	--7.4961	-7.5371	1
ECRIS	-9.1104	-9.1104	1
MLR	-10.4680	-10.4052	1
REER	-8.7624	-8.7624	1
OILP	-6.5166	-6.2636	1
LNFXRV	-7.3080	-7.5908	1

Source: Extract from E-views Output.

The results of the ADF tests as shown in Table 4.1.3 indicates LNSMR, ECRIS, MLR, REER, OILP and LNFXRV are integrated at first difference I(1), while FPI is stationary at level I(0). Consequently it could be discerned that it is appropriate to use ARDL model for estimation. Phillip-Perron test was also conducted to establish if data employed for the study are stationary. Therefore, it could be concluded that data used in the model are stationarity at levels I(0) and first difference I(1), which is appropriate for ARDL model estimation. The result of ARDL bounds test for cointegration shows that no long-run co-integration relationship exist between the FPI and LNSMR in Nigeria. The result of null hypothesis H_{01}: Foreign Portfolio Investment does not significantly affect stock market returns are presented in table 4.3.2.1 below:

Table 4.2.1: VAR Lag Order Selection Criteria (H_{02})

Lag	LogL	LR	FPE	AIC	SC	HQ
0	72.02824	NA	0.012223	-1.5669	-1.36295	-1.48499
1	110.5883	69.68677	0.004945	-2.4720	-2.23887	-2.37834
2	113.1792	4.620047*	0.004761*	-2.510343*	-2.248059*	-2.404972*
3	113.8438	1.168978	0.004801	-2.50226	-2.21083	-2.38518

Source: Extract from E-views 10 Output

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4.2 Test of Hypothesis

Lag length criteria was determine using Akaike Information Criterian (AIC) to ascertain appropriate lag length to be used for estimation. The result of lag length criteria test using AIC as shown in table 4.2.1 indicates a lag of 2 is appropriate for estimation.

Table 4.2.2: ARDL bounds test for Co-integration

Test Statistic	Value	Signif.	I(0) Bound	I(1) Bound
F-statistic	4.94	10%	1.99	2.94
		5%	2.27	3.28
		2.5%	2.55	3.61
		1%	2.88	3.99

Source: Extract from E-views 10 Output

The results for the ARDL bounds test for co-integration as illustrated in table 4.2.2 shows the F statistics of 4.943469 is higher than the I(1) upper bound value of 3.28 and lower bound I(0) of 2.27 at 0.05 level of significance. Thus, there is co-integration relationship between the variables estimated. Thus, the Error Correction Model (ECM) was specified.

Table 4.2.3: Short-run estimation results

Variable	Coeff.	Std. Error	t-Statistic	Prob.
C	-0.0018	0.0076	-0.2383	0.8124
D(LNSMR(-1))	-0.0013	0.1411	-0.0091	0.9928
D(LNSMR(-2))	0.7078	0.3379	2.0948	0.0400
D(FPI(-1))	0.0004	0.0003	1.4821	0.1431
D(FPI(-2))	0.0003	0.0003	1.0955	0.2773
D(MLR(-1))	0.1774	0.5948	0.2982	0.7665
D(MLR(-2))	0.7550	0.6404	1.1788	0.2427
D(REER(-1))	0.0006	0.0018	0.3373	0.7369
D(REER(-2))	0.0013	0.0019	0.6794	0.4993
D(OILP(-1))	-0.0002	0.0014	-0.1519	0.8798
D(OILP(-2))	-0.0008	0.0014	-0.5914	0.5563
D(LNFXRV(-1))	0.0504	0.2251	0.2239	0.8235
D(LNFXRV(-2))	0.1594	0.2106	0.7571	0.4517
D(ECRIS(-1))	-0.0274	0.0395	-0.6931	0.4907
D(ECRIS(-2))	-0.0521	0.0385	-1.3533	0.1806
ECM2(-2)	-0.8328	0.3564	-2.3370	0.0225
R-squared	0.2112			
Adjusted R-squared	0.0319			
F-statistic	1.1779			
Prob (F-statistic)	0.3108			

Source: Extract from E-views 10 Output

The result of short run estimation is depicted in table 4.2.3. The result shows a P value of 0.0225 and a negative coefficient of the ECM model suggesting a statistically negative significant effect at 1 per cent. The coefficient estimate of the ECM of -0.8328 indicates that the model corrects its short run disequilibrium by 83.28 percent speed of adjustment return to the long run equilibrium. That is, the negative sign of the error correction term indicates a move back towards equilibrium.

The short-run estimation results indicate that changes in foreign portfolio investment do not exert a statistically significant effect on stock market returns in Nigeria. This finding suggests that short-term fluctuations in foreign portfolio flows are largely speculative and do not

immediately translate into stock market performance. The insignificance of short-run coefficients underscores the transitory nature of portfolio capital and supports the argument that foreign portfolio investment influences stock market returns primarily through sustained, long-term engagement rather than short-lived inflows.

The adjusted R-squared of the short-run model is relatively low, indicating that short-term variations in stock market returns are weakly explained by the included macroeconomic variables. This outcome is not unexpected, as short-run stock market movements are often driven by speculative behavior, investor sentiment, and unobservable factors that are difficult to capture within a macroeconomic framework. Consequently, the low explanatory power reinforces the importance of the long-run analysis, where macroeconomic fundamentals exert a stronger and more stable influence on stock market returns.

The error correction term is negative and statistically significant, confirming the existence of a long-run equilibrium relationship among the variables. The coefficient of −0.8328 suggests a relatively rapid speed of adjustment, implying that approximately 83 percent of short-run disequilibrium is corrected within one month. While this adjustment speed appears high, it reflects the responsiveness of the Nigerian stock market to deviations from long-run equilibrium, particularly during periods of market correction following external shocks. Nevertheless, this estimate should be interpreted with caution, as the speed of adjustment may be influenced by market volatility, crisis episodes, and the relatively short sample period.

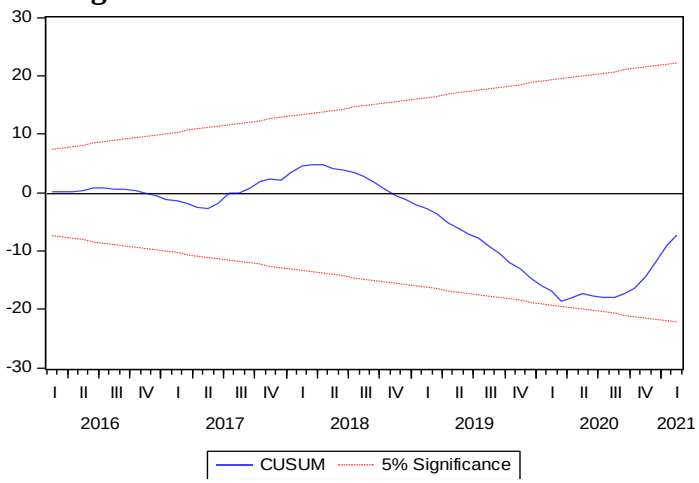
Table 4.2.4: Long-Run Estimation Results

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	11.3390	0.8564	13.2399	0.0000
FPI	0.0010	0.0005	2.2739	0.0257
MLR	-1.4938	0.4184	-3.5700	0.0006
REER	0.0076	0.0020	3.9166	0.0002
OILP	0.0023	0.0009	2.4755	0.0154
LNFXRV	0.3115	0.1271	2.4516	0.0164
ECRIS	-0.1331	0.0349	-3.8139	0.0003
R-squared	0.6933			
Adjusted R-squared	0.6700			
F-statistic	29.7652			
Prob. (F-statistic)	0.0000			

Source: Extract from E-views 10 Output

The result of long run estimation is illustrated in table 4.2.4. The table indicates that long run positive significant relationship exists between FPI and LNSMR with a coefficient of 0.0010 and a P value of 0.0257 at 5 percent level of significance.

Figure 2: Result of the CUSUM test



The result of post estimation stability test for long-run coefficient and the short-run movements using Cumulative Sum (CUSUM) as illustrated in figure 2 indicates it lies within the

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5 percent significance level. The result of the CUSUM test shows the model is stable, as it is within the 5% critical bounds. Thus, the model in the study is stable and could be applied for estimation.

4.0 Discussion of Findings

Based on result derived from test of hypothesis the study found that foreign portfolio investment has positive significant effect on stock market return. These result is consistent with the conclusions drawn by Chhimwal and Bapat (2020) that flow of FPIs has a positive impact on market volatility. The empirical findings of this study provide important insights into the relationship between foreign portfolio investment and stock market returns in Nigeria. The results indicate that foreign portfolio investment does not exert a statistically significant effect on stock market returns in the short run, but has a positive and significant influence in the long run. This divergence highlights the speculative and volatile nature of short-term portfolio flows in Nigeria, where rapid inflows and outflows are often driven by global risk sentiment rather than domestic market fundamentals.

In the Nigerian context, short-run insignificance may be attributed to structural market characteristics, including shallow market depth, information asymmetry, and heightened sensitivity to external shocks. These factors limit the immediate transmission of foreign portfolio inflows into stock price adjustments. However, sustained foreign portfolio investment over time contributes to improved liquidity, enhanced market participation, and stronger price discovery mechanisms, which collectively translate into higher stock market returns in the long run.

The significant negative effect of economic crisis on stock market returns underscores the vulnerability of Nigeria's stock market to macroeconomic instability. Periods of economic recession are typically accompanied by capital flight, exchange rate volatility, and declining investor confidence, which weaken the positive contribution of foreign portfolio investment. This finding suggests that macroeconomic stability plays a crucial role in sustaining the long-run benefits of foreign portfolio inflows.

Furthermore, the significant long-run effects of interest rate, exchange rate, oil price, and foreign exchange reserves reflect Nigeria's structural dependence on monetary conditions and external sector dynamics. High interest rates discourage equity investment, while exchange rate movements and oil price fluctuations shape foreign investors' risk-return expectations. Adequate foreign exchange reserves, on the other hand, signal macroeconomic resilience and help attract stable capital inflows.

The apparent contradiction between short-run insignificance and long-run significance of foreign portfolio investment can be reconciled by considering the time horizon of investor behavior. In the short run, foreign portfolio flows are largely speculative and responsive to global financial conditions, resulting in weak and statistically insignificant effects on stock market returns. In contrast, long-run inflows reflect sustained investor confidence and deeper market integration, which enhance liquidity and market efficiency, leading to improved stock market performance. This distinction underscores the importance of policy consistency and macroeconomic stability in converting foreign portfolio inflows into long-term market gains.

5. Summary and Conclusion

This study examined the effect of foreign portfolio investment inflows on stock market returns in Nigeria using monthly data from January 2014 to March 2021 within an Autoregressive Distributed Lag (ARDL) framework. The findings reveal that foreign portfolio investment does not have a statistically significant effect on stock market returns in the short run, but exerts a positive and significant

influence in the long run. These results suggest that while foreign portfolio flows are volatile and transitory in the short term, sustained inflows contribute meaningfully to stock market performance over time.

The study also finds that economic crisis periods exert a significant negative effect on stock market returns, highlighting the sensitivity of Nigeria's stock market to macroeconomic instability. Collectively, the results emphasize that the benefits of foreign portfolio investment are conditional on a stable macroeconomic environment and consistent policy frameworks.

5.1 Policy Implications

Based on the empirical findings, the following policy recommendations are proposed. First, policymakers should prioritize macroeconomic stability by maintaining prudent monetary and fiscal policies, as economic crises significantly undermine stock market performance and deter foreign portfolio investment. Second, efforts should be directed toward deepening the domestic investor base to reduce excessive reliance on volatile foreign portfolio flows, particularly during periods of global financial uncertainty. Third, stable exchange rate management and adequate foreign exchange reserve accumulation should be pursued to enhance investor confidence and sustain long-term capital inflows. These measures would help maximize the long-run benefits of foreign portfolio investment while minimizing its destabilizing short-run effects.

6. Limitations and Directions for Future Research

Despite its contributions, this study has some limitations. The analysis is restricted to aggregate stock market returns and does not account for sectoral differences that may influence the response to foreign portfolio investment. In addition, the study focuses on a single emerging market, which may limit the generalizability of the findings. Future research could extend the analysis by employing firm-level or sectoral data, incorporating measures of investor sentiment, or conducting cross-country comparisons to provide deeper insights into the dynamics of foreign portfolio investment and stock market returns.

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