FOREIGN CAPITAL OUTFLOW AND STOCK MARKET PERFORMANCE IN NIGERIA

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Abstract

The study investigated the relationship and hence impact of foreign capital outflows on stock market performance in Nigeria for the period 1986 to 2021. Specifically, we examined how foreign direct investments outflow (FDIO), foreign portfolio investments outflow (FPIO), foreign remittances outflow (FRO), official development assistance outflow (ODAO), interest rate (INTR) and inflation rate (INFR) affected stock market performances (STMP) in Nigeria.
The study employed the autoregressive distributed lags (ARDL) for the analysis of data. The Augmented Dickey fuller (ADF) Unit root tests were used to ascertain the series properties of the variables while the Correlation analysis was conducted to ascertain the degree of relationship between the dependent and independent variables.
The results showed that, foreign direct investments outflow (FDIO) and other development assistance outflow (ODAO) have significant negative relationship with stock market performance in Nigeria while foreign portfolio investments outflow (FPIO) and interest rate (INTR) has a weak positive relationship with stock market performance in Nigeria. However, inflation rate (INFR) does not have any significant impact on stock market performance in Nigeria. The study therefore recommends that there is need to improve the investment climate in Nigeria because, one of the major factors that promotes foreign capital outflow is the risky investment climate. This can be done by formulating deliberate investment policies to strengthen the productivity of the monetary system especially the financial market which main goal is to move funds from the surplus unit of the economy to its deficit unit. Also, policies that will discourage capital outflow in the form of remittances outflow, such as capping the repatriation of a proportion of domestic earnings to reduce financial constraints, strengthen investment domestically as well as increase tax revenue, should be vigorously pursued by policy makers and the government.

Keywords: Foreign Capital Flows, Stock Market Performance, Autoregressive Distributed Lags

JEL Classification: E22, F21, G14.

1. INTRODUCTION

Capital resources provide the required sources for the production process and economic growth of any nation because it provides the impetus for effective and efficient combination of the factors of production to ensure sustainable economic growth in Nigeria. Therefore, in 1986, the Federal Government of Nigeria introduced the policy of deregulation or liberalization of the economy. This policy, as part of the government Structural Adjustment Program (SAP) led to the deregulation of interest and exchange rates thus enabling the enterprises and private investors to source for funds from the stock market as banking lending became relatively more expensive and the stock market provided opportunity for seamless intermediation between fund providers and fund users. The stock market also served a unique source for providing cheap long term financing and liquidity in the markets (Babalola & Adegbite, 2001; Omorokunwa, 2018).

However, it should be noted that the Nigerian economy is part of the global capitalist economy and therefore open to the global economy via capital flows, international labor movements, export and import of goods and services as well as income transfers. Hence, the issue of foreign capital outflow has received wide range of discussion by scholars and researchers (Sarwar, 2015; Sawalha, Elian & Suliman, 2016). Foreign capital outflow, in general, is a wide term referring to the massive transfer of financial resources from a country to another to prevent risks like inflation, currency volatility among others (Ndikumana, 2014). Theoretically, it comprises a broad variety of activities ranging from outflow of financial resources and investments, which may include foreign direct investment, foreign portfolio investment, foreign remittances and other official development aids. At times, such capital outflow may be as a result of volatile exchange rate, hyperinflation, political upheaval and fear of expropriation. This implies that in a period of unpalatable economic atmosphere in a country, investors will seek for countries with safe economy to channel their resources. Invariably, foreign capital outflows refer to the transfer of assets through foreign direct investment, foreign portfolio investment, foreign remittances, and other development aids in order to mitigate capital loss, loss of profit, or loss of control over financial assets as a result of government sanctioned activities.

The outflow of foreign funds poses serious concern for developing economies like that of Nigeria. This is because it contributes to the paucity of financial resources and this limits her capacity and ability to deploy domestic resource and to access international investment inflow required to provide funding for development and growth. Foreign capital outflow is one of the conditions that severely constrain domestic investment financing including stock market performance in Nigeria (Fentaw, 2022). It may be induced by political uncertainty, high interest and exchange rates, low rates of return on investment while capital inflow could be stimulated by positive exchange rate, government capital investment in infrastructure and credit to domestic economy (Salako & Adebasuyi, 1999).

In Nigeria, foreign capital outflow has been identified as a major factor affecting domestic investments and it diminishes the meager resources that would have been invested to generate employment and accelerate economic growth and development (Fentaw, 2022). As a result, authorities have been compelled to seek foreign financing to compensate for the gap in domestic finances in order to attain economic development and alleviate the burden of debt servicing and poverty to which Nigeria is continually subjected (Adedayo & Ayodele, 2016; Onyele & Nwokocha, 2016).

From the forgoing, it has become obvious that the major factor that promotes foreign capital outflow is the risky investment climate in Nigeria. Consequently, improvement of the investment climate implies strengthening the productivity of the monetary system especially the financial market which main goal is to move funds from the economy's surplus to its deficit unit (Osuala et al., 2013). Therefore, it is hoped that as the stock market expands and deepens, efficient allocation of financial resources for investments will be facilitated, while investors' confidence will be boosted (Ariwa et al, 2017). Invariably, a well-functioning stock market would attract foreign investment inflows instead of foreign capital outflow. Consequently, the erosion of domestic investments will be mitigated, and capital resources would be safe in Nigeria instead of channeling such fund abroad for safety. This study therefore set to evaluate foreign capital outflow and stock market performance in Nigeria.

2. LITERATURE REVIEW/THEORETICAL FRAMEWORK

2.1. CONCEPTUAL REVIEW

CONCEPT OF STOCK MARKET PERFORMANCE

Numerous variables affect stock market performances and they include company-specific variables, financial variables, political variables, international variables, and social variables.

Stock market performance is a measure of the overall or a specific aspect of the stock market that serves as a guide to investor about the market, making deal and investment decisions, and a means of communicating information to investors who are concerned about the future of stock prices (Economy Watch, 2010). In the view of Fernando (2018), a healthy stock market is critical for domestic and international capital inflows, but a depressed stock market hinders foreign capital inflows for monetary development. Hence, comprehensive stock market knowledge and the efficiency stock returns continue to be critical and necessary for both domestic and foreign investors. Positive performance of stock market enhances economic development and is measured by price fluctuations. The inefficiency of the stock market, as manifested by market instability, has either a part or general economic effect (Demir, 2009). A variety of factors are used to determine the stock market's success, including the stock market index, the bond, stocks volatility, and market capitalization rate.

CONCEPT OF FOREIGN CAPITAL OUTFLOW

It is interesting to know that different scholars have made attempts to define foreign capital outflow. Even at that, foreign capital outflow had remained a particular difficult phenomenon conceptually. The conceptual problem persists due to the fact that it is unclear what differentiates "normal" capital outflows and capital flight. Therefore, foreign capital outflow has numerous definitions because different authors use different concepts when measuring or discussing the concept. Generally, the phenomena referred to as foreign capital outflow means the massive financial resources exodus from a country's investments to other in order to avoid dangers associated with some particular macroeconomic variables (such as; inflation, political turmoil and exchange rate volatility) or in search of higher returns (Ndikumana, 2014). Theoretically, foreign capital outflow comprises a broad variety of activities ranging from legal to those that are illegal and harmful to the economy. Based on its illegality, Adebayo & Ayodele (2016) defined foreign capital outflow as the illicit mobility of capital across countries through money laundering, child trafficking, drug trafficking, poor governance and bad institutional quality where Corrupt public officials use their positions to drain public monies. On the other hand, the legal aspect of the phenomenon entails the outflow of financial resources and investments due to investor's perception that capital could lose its value due to volatile exchange rate, hyper-inflation, political upheaval and fear of expropriation. This implies that in a period of unpalatable economic atmosphere in a country, investors will seek for countries with safe economy to channel their resources.

2.2. COMPONENTS OF FOREIGN CAPITAL OUTFLOW

There are several components of foreign capital outflow. In this study, we limit it to include foreign portfolio investments outflow, foreign direct investments outflow, foreign remittances outflow and other development assistance outflow. These variables of foreign capital outflow are explained below;

FOREIGN PORTFOLIO INVESTMENTS (FPI) OUTFLOW

Portfolio investments outflows are no new occurrence in emerging nations such as Africa. Financial markets increased internationalization has increased their economic relevance, affecting both developed and developing countries (Herkenrath, 2014). Each year, enormous sums of money are transferred from developing countries to global financial markets in the form of financial asset investments. In exchange, investors gain a higher rate of return, which is reinvested in the country in the form of foreign currency. Foreign portfolio investment outflows, when properly controlled and managed, generate foreign exchange and tax revenue for a country. If left unregulated, this drain of financial money wreaks havoc on developing countries' financial and economic systems (OECD, 2013). Economic consequences would be his/her due to the limited resource base and markets (Boyce & Ndikumana, 2011).

FOREIGN DIRECT INVESTMENTS (FDI) OUTFLOW

Foreign direct investment (FDI) is a contentious issue and a central issue of development economics that retains a strong position in the finance literature. FDI in a developing economy closes revenue generation gaps because majority of developing nations do not appear to be able to create enough money to cover their expenditure demands. Additionally, externalities and the adoption of foreign technologies provide benefits (Adegbite & Ayadi, 2010). There are a variety of factors, including core theories of FDI and other various macroeconomic variables that affect FDI, (Lim, 2000). FDI is a critical component of economic integration on a global scale. Direct, solid, and long-lasting ties between economies are established by FDI. It fosters the exchange of technological know-how between countries. It also enables the host economy to expand its reach in international markets.

FOREIGN REMITTANCES OUTFLOW

Payment made by international immigrants to family members in the home country is called foreign workers remittance. It is a main form of the emerging countries financial assistance. Due to the continual nature of remittance, it is distinct from other flows of foreign capital such as FDI, loans from the other countries and aids (Kapur, 2006; Shahbaz, 2008). Through micro and macroeconomic actions, remittances can influence economic growth and development. They can help develop economic growth and diversify by reducing domestic financial constraints, increasing domestic investment, employment and wages, and improving human capital and technical advancement.

OTHER DEVELOPMENT ASSISTANCE (ODA)

Other developmental assistance (ODA) outflows are described as government assistance intended to aid developing nations' economic development and welfare. In grants form or technical assistance, ODA is essential for eradicating poverty and building the foundation for long-term economic growth. Other Development Assistance (ODA) and the conditions that accompany it are critical components of the international community's development strategy. As described by Riddell (2007), the moral case for additional development assistance is founded on a number of issues. Among these are considerations of solidarity of humanitarian necessity. They also come from individuals in the developing world's acute poverty and inequality.

2.3. REVIEW OF EMPIRICAL STUDIES

Olugbenga and Alamu (2013) studied the effects of capital flight on the Nigerian economy for 30 years (1981 - 2010) using the Johansen Co-integration test to examine the dynamic relationship between capital flight and economic growth. The analysis shows that while foreign capital outflows harm economic growth in the short run, they benefit it in the long run. Because inefficient borrowing leads to political office holders misappropriating funds and transferring

them to foreign private accounts, the research recommends tightening control of public project execution, accountability, and transparency.

Koskei (2017) evaluated the impact of foreign portfolio equity outflows on African listed financial institution stock performance from 2008 to 2014. The study included 21 NSE-listed financial institutions. She employed a causal study design and the OLS method to undertake panel data regression. She discovered that foreign portfolio investment outflows have little impact on financial institution stock returns, and consequently on economic growth in Nigeria. The study advocated limiting foreign portfolio outflows and reducing portfolio reversals. The inflows and outflows in the Jamaican portfolio were investigated by Sarwar (2015). The study employed a Structural Vector Auto Regression (SVAR) model on quarterly data from 2003 to 2016. Aspects of portfolio investment outflows were also studied using impulse response functions and variance decompositions.

Al-Sadiq (2017) evaluated the effects of outward FDI on local investment in 121 emerging home countries from 1990 to 2010, including Kenya. He made use of the Panel Data model. The empirical evidence indicates a strong negative link between outbound FDI and local investment rates. A one-point rise in outward foreign direct investment results in a roughly 29 percent decrease in domestic investment. Additionally, FPI outflow has a strong explanatory power for reported levels of foreign direct investment outflow.

Shanken and Weinstenn (2006) used the dividend exemption model and the hurdle rate concept to examine the effect of earnings repatriation in Japan following the adoption of a new tax system in 2009, the so-called dividend exemption system. Their results indicated that, while the share exemption model does not create long-term incentives for foreign subsidiaries to repatriate revenues, the policy change has an effect on but does not determine whether profits are distributed or retained. Uguru (2016) investigated the fiscal consequences of capital outflow in Nigeria. He employed the OLS model's parametric statistical approaches to measure capital outflows using the hot money or balance of payment methodology over the period 1970–2009. He discovered that 2% drops in tax income by every unit increase in capital outflow. As a result, policies that discourage capital outflow, such as capping the repatriation of a proportion of domestic earnings, will increase tax revenue and encourage economic development in Nigeria.

Khan and Ahmed (2017) used the ARDL technique to examine if other foreign growth assistance is a good thing or a nuisance for Pakistan. They discovered that foreign assistance and other forms of development assistance have a detrimental influence on economic development. Furthermore, comparable empirical studies, such as those conducted by Ang (2010), strongly suggested that overseas growth assistance has a detrimental influence on economic growth. However, we discover studies demonstrating the beneficial impacts of aid on development (Arndt, Jones & Tarp, 2020).

2.4. THEORETICAL FRAMEWORK

INVESTMENT DIVERSION THEORY

Kindleberger (1966) propounded this theory. With less risk in advanced economies, investors from less developed nations may choose to invest in more risk-averse advanced economies (Otene, 2010). Repatriation of profits makes perfect sense when considered as a benchmark portfolio balance with both domestic and overseas assets (Pinheiro, 1997). This group seeks to optimize returns, minimize market risk, diversify holdings, and safeguard privacy (Dim & Ezenekwe, 2014). Investment diversion advocates identify one of the most well-known negative effects of capital flight in the impacted countries (Henry, 2013). The high cost of capital and limited access to financial markets in the country motivate entrepreneurs to invest their personal assets in less risky foreign firms (Makin, 2015). Disparities in financial market development cause global imbalances as depositors in less developed nations seek refuge in international financial assets (Ahnert, 2014). This promotes safe investing in a controlled financial market (Makin, 2015). Generally, repatriated profits are not allowed for investment in the host country (Dim & Ezenekwe, 2014). This widens the savings gap, slows aggregate investment, and slows economic development. However, capital flight has the opposite effect (Skare & Sinkovic, 2013), needing foreign borrowing to revitalize the economy. This is a common cause of external dependency and debt. It may devalue the home currency, and attempts to maintain it frequently result in the loss of international reserves (Jude, 2014). According to this idea, when a country's growth rate rises, aggregate savings rise quickly but investment takes longer, resulting in capital flight. Difficulty raising capital and investment funds hurts both the exchange rate and economic growth. The capital flow theory is therefore the framework on which this study is based.

From a review of the theoretical and empirical literature, it appears that most studies on foreign capital outflow and stock market performance have been undertaken in developed nations, (Sarwar, 2015; Sawalha, Elian & Suliman 2016; Dutta, 2011; Cummins & Rubio-Misas, 2006; Yao & Sumiter, 2007) only a few have been conducted in Nigeria (Umoru, 2020; Al-Sadiq, 2017; Uguru, 2016). Also, those few studies employed only two variables of capital flight (foreign direct investments outflow and foreign portfolio investments outflow) leaving other pertinent variables like foreign remittance outflow and other developmental assistance outflow unexplored in relation to performance of the stock market. This study adds to the current pool of existing knowledge by analyzing the relationship and the impact of foreign capital outflow on stock market performance in Nigeria using the four fold variable of foreign capital outflow which include FDI outflow, FPI outflow, foreign remittances outflow and official developmental assistance outflow within the period of 1986 and 2021.

3. METHODOLOGY

3.1. RESEARCH DESIGN, POPULATION, SAMPLE, SCOPE AND SOURCE OF DATA

In this study, we adopted the longitudinal research design. This is due to the fact that the dependent and independent variables have already manifested and therefore inherently unmanipulable by the researcher. We also collected data for a period of time when the variables exhibited different characteristics in the Nigerian context. The study adopted the census sampling technique where the population and sample of the study is the entire Nigerian economy. The Nigeria economy is chosen due to the high outflow of foreign capital occasioned by volatile and unstable investment environment. Overtime, Nigeria has had series of multilateral trade agreement with other countries in the international scene thus resulting in massive capital outflow. Besides, the Nigeria stock market has been adjudged to be the largest and the most vibrant stock exchange in West Africa and this also makes it the focus of this study. Hence, we are therefore motivated to carry out an empirical investigation on the impact of foreign capital outflow on stock market performances in Nigeria. The scope was chosen based on data availability and to strengthen validity. Data on stock market performance were obtained from the Nigerian Exchange limited Fact book and World Bank Financial Structure Database. Data on all other variables were referenced from the World Bank Development Index (WBDI) and the IMF's World Economic Outlook from 1986 to 2021.

3.2. PRELIMINARY TEST AND ESTIMATION PROCEDURE

The various preliminary test carried out are descriptive statistic, correlation analysis and unit root test. We used descriptive statistic to summarize the statistical properties of data in a bid to presenting them in a convenient form. The technique of Augmented Dickey-Fuller (ADF) was used to ascertain how stationary the variables considered in the model are. Correlation analysis was used to ascertain the magnitude and direction of relationship that exists between the dependent and independent variables.

This study also employed the Autoregressive Distributed Lags (ARDL) technique to modelling integration relationships. The (ARDL) approach to cointegration is based on Pesaran and Shin's technique (1999). The primary advantage of this approach is that it may be used regardless of the stationary qualities of the variables in the sample and permits inferences about long run estimates that are not achievable with alternative cointegration procedures. Pesaran and Shin (1999) developed the ARDL/Bounds Testing methodology, which provides a number of advantages over standard cointegrating testing. The approach, in particular, flourishes when the datasets have a limited degree of freedom.

3.3. MODEL SPECIFICATION

This study adapted the Kindleberger (1966) model in equation (1). This has been adjusted to fit the study's aims by substituting the vector of "P" in the model with this study's exogenous variables. The model's functional form is expressed as;

$\mathbf{Z_t = f(\mathit{P}, \mathit{F})}$ ………………………………………………………………………….(1)

P = exogenous variables of Foreign Direct Investments Outflow (FDIO), Foreign Portfolio Investments Outflow (FPIO), Foreign Remittances Outflow (FRO), Other Development Assistance Outflow (ODAO). Z_t = Endogenous variable of stock market performance (STMP) and F = other external factors of interest rate (INTR) and inflation rate (INFR) that significantly influence stock market performance.

The stock market's performance is analyzed in terms of trade expansion and stability in this study. Thus, the model aims to demonstrate the pattern of capital outflow's effect on the development and stability of the stock market. Therefore, capital market performance was captured in this study using Market Capitalization (MP)

As a result, the functional expression of equation (1) is as follows:

$\mathbf{STMP_t = \mathit{f}\ (FDIO, FPIO, FRO, ODAO, INTR, INFR)}$ ……………………… (2)

The estimated type of the model homoscedasticity means and variance assumption which is the long run effect equation is given as:

$\mathbf{STMP_t = \delta_0 + \delta_1 FDIO_t + \delta_2 FPIO_t + \delta_3 FRO_t + \delta_4 ODAO_t + \delta_5 INTR_t + \delta_6 INFR + \epsilon_t}$……… (3)

The short run effect equation (Autoregressive Distributed Lag model) is given as:

$$\Delta STMP_t = \delta_0 + \sum_{i=0}^{n} \delta_{1i}\,\Delta STMP_{t-1} + \sum_{i=0}^{n} \delta_{2i}\,\Delta FDIO_{t-1} + \sum_{i=0}^{n} \delta_{3i}\,\Delta FPIO_{t-1} + \sum_{i=0}^{n} \delta_{4i}\,\Delta FRO_{t-1} + \sum_{i=0}^{n} \delta_{5i}\,\Delta ODAO_{t-1} + \sum_{i=0}^{n} \delta_{6i}\,\Delta INTR_{t-1} + + \sum_{i=0}^{n} \delta_{7i}\,\Delta INFR_{t-1} + \delta_{8i}\,ECM(-1)_{t-1} + \epsilon t \ldots\ldots (6)$$

Where:
STMP = Stock market performances (Market capitalization)
FDIO = Foreign direct investments outflow (Net FDI outflows (% of GDP))
FPIO = Foreign portfolio investments outflow (Net FPI outflows (% of GDP))
FRO = Foreign remittances outflow (Migrant remittance (% of GDP))
ODAO = Other development assistance outflow (Financial Aids)
$INTR_t$ = Interest Rate (Annual Inflation Rate)
$INFR_t$ = Inflation Rate (Prime lending rate)
Δ = The differenced operator

δ_0 = Autonomous term

$\delta_1, \delta_2, \delta_3, \delta_4, \delta_5, \delta_6, \delta_7$ = Coefficients

$\mathcal{E}_t$ = Error term

$Ecm(-1)$ = error correction term

ϵt = Stochastic term

t = respective variables at current time t

Equation (3) and (4) are estimated for Nigeria to reveal the effect of foreign capital outflow on stock market performance.

4. ANALYSIS OF RESULTS AND DISCUSSION OF FINDINGS

4.1. UNIT ROOT TESTING

The Augmented Decay Fuller test (ADF) is employed to test the stationarity properties of the data set in levels and the outcome of the result is presented in Table 1, panel 1. The result obtained revealed that three of the variables FPIO, ODAO and INTR have ADF test values that are more than the 95 percent critical ADF value (in absolute values). The implication of this is that these time series are non-stationary in their levels. However, the result of the unit root test on these variables in first differences is presented in panel 2. From the result, it is seen that the ADF test statistic for each of the variables is greater than the 95 percent critical ADF values (in absolute values). With these result, these variables are adjudged to be stationary. This implies that the variables attained stationarity after the first differences of the variables and are integrated of order one (i.e. I[1]).

Table 1: *Unit Root Test for Variables in Levels*

**(Panel 1)	In Levels			**(Panel 2)	At First Difference	
Variable	**ADF Test Statistic**	**95% Critical ADF Value**	**Remark**	**ADF Test Statistic**	**95% Critical ADF Value**	**Remark**
MCAP	2.516507	-2.948404	Non-Stationary	-4.667902	-2.951125	Stationary
FDIO	-2.028912	-2.948404	Non-Stationary	-6.621312	-2.951125	Stationary
FPIO	-3.951085	-2.948404	Stationary	-7.718196	-2.951125	Stationary
ODAO	-3.022973	-2.948404	Stationary	-6.230476	-2.954021	Stationary
FRO	-0.795872	-2.948404	Non-Stationary	-4.999110	-2.951125	Stationary
INTR	-4.058943	-2.948404	Stationary	-9.371405	-2.951125	Stationary
INFLR	-2.485376	-2.948404	Non-Stationary	-5.965364	-2.951125	Stationary

Source: *Author's Computations (2023).*

4.2. CORRELATION ANALYSIS

The result of the correlation tests is presented in Table 2. In the result, stock market performances (STMP) proxied with market capitalization (MCAP) is

seen to have a strong positive correlation values of 0.67020 and 0.73566 with foreign direct investments outflow (FDIO), foreign remittances outflow (FRO), and a strong negative correlation value of -0.51069 with interest rate (INTR), a moderate correlation value of 0.41069 with official development assistance outflow (ODAO), and a weak negative correlation value of -0.33054 with inflation rate (INFR) respectively. Also, foreign direct investments outflow (FDIO) has a strong positive correlation value of 0.60270 with foreign remittances outflow (FRO). On the other hand, official development assistance (ODAO) has a strong positive correlation with foreign remittances outflow (FRO). Those of foreign remittances outflow (FRO), interest rate (INTR) and inflation rate (INFR) are negative and moderately correlated with values of -0.42483 and -0.49678. Thus, a cursory glance at the results above indicates that there is actually no indication of the problem of multicollinearity amongst the variables used in the model.

Table 2: *The Pairwise Correlation Matrix*

	MCAP	FDIO	FPIO	ODAO	FRO	INTR	INFLR
MCAP	1						
FDIO	0.67020	1					
FPIO	-0.34768	-0.30303	1				
ODAO	0.41069	0.16833	-0.13645	1			
FRO	0.73566	0.60270	-0.38413	0.63408	1		
INTR	-0.51069	-0.28322	0.13319	-0.24774	-0.42483	1	
INFLR	-0.33054	-0.22545	0.17537	-0.32298	-0.49678	0.39983	1

Source: *Author's computations (2023)*

4.3. BOUND TEST FOR COINTEGRATION

The bounds test result (for cointegration) is carried out in order to test for existence of a long run relationship among the variables. Accordingly, the null hypothesis under this bounds test is that no levels relationship exists. Therefore, if the calculated *F*-statistic is greater than the critical value for the upper bound *I(1)*, then we can conclude that there is cointegration (i.e. there is long-run relationship); but if it falls below the lower bound I(0), no cointegration exist. Thus, the results from Table 3 shows that the *F*-statistic value of 6.330673 is greater than the upper bound *I(1)*value of 3.62 at the 5% significance level. Thus, we conclude that a long run relationship exists among the hypothesized variables in the model.

Table 3: *Bounds Test for Cointegration Result*

Test Statistic	Value	Significant	I(0)	I(1)
F-statistic	6.330673	10%	2.33	3.25
K	6	5%	2.63	3.62
		2.5%	2.9	3.94
		1%	3.27	4.39

Source: *Author's Computations (2023).*

4.4. THE ARDL ERROR CORRECTION REGRESSION RESULT (SHORT RUN RESULT)

The short-run dynamics of the behavior of stock market performance in the context of short term movements in foreign capital outflows variables in Nigeria is captured within an error correction model (ECM). The Autoregressive Distributed Lags (ARDL) approach is used for the ECM. The R-Bar squared criterion was used for the selection of the parsimonious equation. The result of the estimated error correction representation is presented in Table 4. The results show a strong diagnostic outcome; the R-squared value of 0.88 is very high and it indicates that over 88 percent of the systematic variation in stock market performance over the short term is explained by short term movements in the explanatory variables including the ECM. Even the R-Bar squared value of 0.79 is also very high. The overall goodness of fit for the model is observed through the F-statistic. The F-values of 10.78061 is high and easily passes the significance test at the 1 percent levels. Thus, we accept the hypothesis of a significant linear relationship between stock market performance and all the explanatory variables combined.

A close examination of the coefficients of the variables in terms of their significance and impact reveals that, the coefficient of foreign portfolio investments outflow (FPIO), foreign remittances outflow (FRO) and official development assistance outflow (ODAO) have weak negative and positive relationship with stock market performance. This implies that, in the short run, FPIO, FRO and ODAO are not relevant factors in determining the performance of the Nigerian stock market. However, it was observed that their lag values actually impact stock market performance in Nigeria. More specifically, while the previous values of FPIO and ODAO has significant negative impact on stock market performance, as they were significant at the 1 percent levels, that of FRO was positively signed and also passed the significance test at the 1 percent level. The implication of this result is that, in Nigeria, previous values of FPIO, ODAO and FRO significantly impact stock market performance than their current values.

On the other hand, the coefficient of interest rate (INTR) and the lag value has significant negative impact on stock market performance. The variable was significant at the 1 percent level. This means that INTR plays significant role in stock market performance in Nigeria. However, the negative sign is an indication that as INTR rise, overall performance of the stock market falls by approximately -0.873004 percent in the short run. The coefficient of inflation rate (INFR) is weak and does not have any significant effect on stock market performance.

The coefficient of the error correction (ECM) term (represented by CointEq(-1)*) in Table 4.4 below has the correct negative sign and is also significant at the 1 percent level. This goes to show that any short-term deviation of the hypothesized capital market performance variables from equilibrium in the short-run can be restored in the long run. The high value of -0.656670 of the error correction term, means that adjustment to equilibrium in the long run is moderate. The ECM term shows that about 65 percent of long run adjustment to equilibrium

is made during the first year. The DW statistic value of 2.20 shows the absence of autocorrelation problem in the model.

Table 4: *ARDL Short Run Foreign Capital Outflows and Stock Market Performance in Nigeria*

ECM Regression			
Case 4: Unrestricted Constant and Restricted Trend			
Variables	Coefficient	T-Ratio	Prob.
Constant	6.406171	8.250516	0.0000
D(FPIO)	-0.088821	-1.342769	0.2042
D(FPIO(-1))	-0.321113	-4.604241	0.0006**
D(ODAO)	0.071632	0.808628	0.4345
D(ODAO(-1))	-0.639726	-7.642894	0.0000**
D(FRO)	-1.168198	-1.528486	0.1523
D(FRO(-1))	3.274351	4.314712	0.0010**
D(INTR)	-0.873004	-5.288773	0.0002**
D(INTR(-1))	-1.424900	-7.586285	0.0000**
D(INTR(-2))	-0.856353	-5.704688	0.0001
D(INFLR)	0.019223	0.496733	0.6284
D(INFLR(-1))	0.039231	1.292094	0.2207
D(INFLR(-2))	0.102894	2.982899	0.0114
CointEq(-1)*	-0.656670	-8.954805	0.0000**
$R^2 = 0.88$	$\bar{R}^2 = 0.79$	F = 10.78061	D.W.= 2.20

Source: *Author's computations (2023). Note: ** sig at 1% level; * sig at 5% level.*

4.5. ARDL LONG RUN RESULT

Since the bounds test result for cointegration earlier conducted in Table 3 indicted the existence of a long run relationship among the variables, we therefore conducted the ARDL long run test. The result is presented in Table 5 below. A close examination of the table reveals that the coefficient of foreign direct investments outflow (FDIO) has significant positive relationship with stock market performance in Nigeria; the variable passes the 1 percent significance level. This suggests that in the long run, the aggregate amount of foreign direct investments outflow (FDIO) plays very potent role in the determination of stock market performance. Indeed, it is seen that a unit increase in total FDIO leads to about 2.848101 percent increase in the overall performance of the Nigerian stock exchange limited within the period of investigation.

The coefficient of foreign portfolio investments outflow (FPIO) though positively signed failed the 5 percent significance level. The impact was weak, and it further suggests that this variable (FPIO) does not play any significant role in the determination of stock market performance in Nigeria. Given the crucial role of FPI in domestic stock market, there is the need for market operators and regulators to review current policy for PFI inflows that will at the same time discourage outflows in form of capital flight though not significant.

On the other hand, the coefficient of foreign remittances outflow (FRO) has significant negative relationship with stock market performance. The variable was significant at the 1 percent level. This means that in the long run, FRO plays

significant role in stock market performance in Nigeria. However, the negative sign suggests that as FRO rises, it reduces the level of stock market performance in Nigeria by -9.119061 percent approximately. The implication of this result is that, in the long run, FRO has a rather detrimental effect on the overall performance of stock market.

Other development assistance outflow (ODAO) has significant negative relationship with stock market performance, and the variable was significant at the 5 percent level. This means that in the determination of stock market performance in the long run in Nigeria, other development assistance outflows (ODAO) are crucial factors that cannot be ignored by policy makers and the government. Indeed, the result indicates that as the total amount of ODAO rises, the overall level of stock market performance reduces by 0.960289 percent approximately.

The coefficients of interest rate (INTR), inflation rate (INFR) has weak positive and negative relationship with stock market performance. This implies that these variables do not play any relevant role in stock market performance in Nigeria within the period of investigation. Therefore, based on the above findings of this study, we conclude that in Nigeria and within the investigating period, foreign capital outflow such as FDIO, ODAO and FRO are the major determinants of stock market performance in the long run.

Table 5: *ARDL Long Run Result*

Levels Equation			
Case 4: Unrestricted Constant and Restricted Trend			
Variables	Coefficient	T-Ratio	Prob.
FDIO	2.848101	3.318080	0.0061**
FPIO	0.166040	0.702220	0.4959
ODAO	-0.960289	-2.238894	0.0449*
FRO	-9.119061	-4.296656	0.0010**
INTR	0.968579	1.051904	0.3136
INFLR	-0.233780	-1.316403	0.2126
@TREND	3.135641	7.250257	0.0000

Source: *Author's computations (2023). Note: ** sig at 1% level; * sig at 5% level.*

4.6. BREUSCH-GODFREY SERIAL CORRELATION LM TEST

To test whether the residuals from the model are serially correlated in the estimation, we used the Breusch-Godfrey Serial Correlation LM Test as indicated in Table 6 below. Indeed, from the result, since the null hypothesis is that the residual is serially uncorrelated, and the F-Statistic p-value of 0.1125 indicates that we will fail to reject the null. Therefore, the residuals are serially uncorrelated.

Table 6: *Breusch-Godfrey Serial Correlation LM Test*

F-statistic	3.271580	Prob. F(2,10)	0.0807
Obs*R-squared	13.05218	Prob. Chi-Square(2)	0.0015

Source: *Author's Computation (2023).*

4.7. STABILITY TEST

The Cusum of squares test was conducted to test for stability of the hypothesized model. The standard requirement is that, for the model to be stable, the green line must lie within the two red lines otherwise, the model is unstable. Thus, from the result in Figure 1, it is seen that the green line is actually lying within the two red lines hence we conclude that the model for stock market performance for the study is stable.

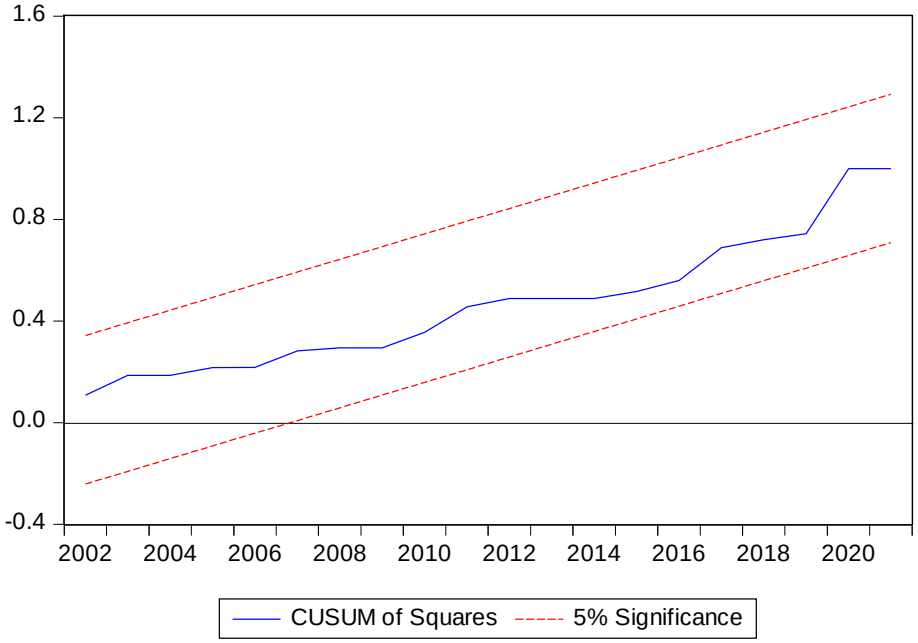

***Figure 1**: Cusum of Squares Test (For Stability Test)*

4.8. DISCUSSION OF FINDINGS

One of the outcomes of this study was that foreign direct investment outflow (FDIO) has significant positive effect on stock market performance in Nigeria. By implication, outward movement of capital from a country ought to have detrimental effect on the domestic stock market and by extension the economy. But in this case it was not so, probably the amount FDIO involved was not significant enough to warrant negative effect. This finding is seen to corroborate the findings of Saheed and Ayodeji (2010), Ameer and Xu (2017), Reichert and Weinhold (2019), Noman (2019) and Sarwar (2015), who observed that FDIO significantly and positively affect stock market performance in their respective studies. It however disagreed with those of Busari (2010), Al-Sadiq (2017) and Umoru (2020) who submitted a significant negative relationship between FDIO and performance and growth. It also disagreed with the findings of Obwona (2017) who concluded a weak impact of FDIO on performance.

Foreign portfolio investments outflow (FPIO) has a weak positive impact on stock market performance, suggesting that it does not play any significant role in the determination of stock market performance in Nigeria. However, this weak impact of FPIO on stock market performance in this study is probably due to the fact that the amount of FPIO involved is either not huge enough to cause detrimental effect on the market or is simply a confirmation of the underdeveloped nature of the Nigerian stock market. Therefore, given the crucial role of FPI to domestic stock market, there is the need for market operators and regulators to review current policy to improve the quantum of PFI inflows that will at the same time discourage outflows in form of capital flight. The finding is seen to effectively align with those of Dutta (2011), Koskei (2017) who find that FPIO has a weak impact on stock market performance and the economic growth in general. However, the finding disagreed with the findings of Noman (2019) who finds significant positive relationship between FPIO and performance, and those of Atobrahh (2015) and Sarwar (2015) who submitted significant negative relationship between FPIO and stock market performance.

Foreign remittances outflow (FRO) has significant negative relationship with stock market performance. This means that in the long run, FRO plays significant role in stock market performance in Nigeria. However, the negative sign suggests that as FRO rises, the level of stock market performance in Nigeria is reduced. The implication of this result is that, in the long run, FRO has a rather detrimental effect on the overall performance of stock market. This finding agrees with those of Uguru (2016), Khan, Nallareddy and Rouen (2018) who found that FRO has significant negative relationship with growth and stock market performance. On the other hands, the finding disagreed with the submission of Shanken and Weinstein (2006) who could not find any significant impact of FRO on stock market performance.

With respect to other developmental assistance outflow (ODAO), it represents government assistance intended to aid developing nations' economic development and welfare. In grants form or technical assistance. In this study, other development assistance outflow (ODAO) has significant negative relationship with stock market performance, and the variable was significant at the 5 percent level. This means that in the determination of stock market performance in the long run in Nigeria, other development assistance outflows (ODAO) are crucial factors that cannot be ignored by policy makers and the government. Indeed, the result indicates that as the total amount of ODAO rises, the overall level of stock market performance reduces by 0.960289 percent approximately. This finding therefore corroborates the findings of Addison, Asiedu and Anyanwu (2015), Moolio and Kong (2016), Arndt, Jones and Tarp (2020), who found that foreign development assistance outflows reduces stock market performance and GDP. On the other hands, the finding is strongly opposed by those of Mallic (2008), Khan and Ahmed (2017), Rajan and Subramanian (2018) who find significant positive relationship between ODAO and stock market performance.

5. SUMMARY OF FINDINGS

The findings of the study are summarized below:

a) Foreign direct investment outflow (FDIO) has a positive and significant relationship with stock market performance in Nigeria.
b) Foreign portfolio investment outflow (FPIO) is positive but not significantly related to stock market performance in Nigeria.
c) Other development assistance outflow (ODAO) has a negative and significant relationship with stock market performance in Nigeria.
d) Foreign remittances outflow (FRO) has a negative and significant relationship with stock market performance.
e) Interest rate (INTR) is positive but not significantly related to stock market performance in Nigeria.
f) Inflation rate (INFR) is negative but does not significantly impact stock market performance in Nigeria.

6. CONCLUSION AND RECOMMENDATIONS

This study has empirically examined the relationship between foreign capital outflows and stock market performance in Nigeria for the period 1986 to 2021. The rationale for the study was based on the realization that foreign capital outflows play significant role in stock market performance. To this end, foreign capital outflows variables such as foreign direct investments outflow (FDIO), foreign portfolio investments outflow (FPIO), foreign remittances outflow (FRO), official development assistance outflow (ODAO), interest rate (INTR) and inflation rate (INFR) were used as explanatory variable while stock market performances (STMP) was proxied by market capitalization. The Autoregressive Distributed Lags (ARDL) was employed for the analysis of data, and the results generally indicate that foreign capital outflows are relevant factor in the determination of the performance of the Nigerian stock market.

In consonance with the findings of the study, the following recommendations were made:

1. There is the need to improve the investment climate in Nigeria because, one of the major factors that promotes foreign capital outflow is the risky investment climate. This can be done by formulating deliberate investment policy to strengthening the productivity of the monetary system especially the financial market which main goal is to move funds from the surplus unit of the economy to its deficit unit. This will definitely go a long way to discourage huge capital flight in the country.
2. The current financial assets traded in the Nigerian stock market need to be expanded and deepened in order to continue to attract more foreign portfolio investors. This will enable the market to efficiently allocate and facilitate financial resources for domestic investment purposes, this will in turn boost investors' confidence on the ability of the market; because, a

well-functioning stock market would attract foreign investment inflows instead of foreign capital outflow.

3. Policies that will discourage capital outflow in the form of remittances outflow, such as capping the repatriation of a proportion of domestic earnings to reduce financial constraints, strengthen investment domestically as well as increase tax revenue, should be vigorously pursued by policy makers and the government. This way, FRO will have the much needed positive impact on stock market performance in the country.
4. All government assistance in the form of ODA inflows intended to aid developing nations' economic development and welfare by way of grants or technical assistance should be vigorously pursued and sustained in this direction because of its critical role in eradicating poverty and building foundation for long-term economic growth as against other development assistance outflow.

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