

**DETERMINANTS OF FOREIGN PORTFOLIO INVESTMENT AND ECONOMIC
DEVELOPMENT OF NIGERIA**

Professor S.O. Akinmulegun and Ayoola Abayomi AREMO

Department of Banking and Finance Adekunle Ajasin University,

Akungba-Akoko, Ondo State.

Abstract

The ability of a country to attract foreign portfolio investment to enhance economic development is determined by internal and external macroeconomic factors. Over the years, the Nigerian economy has been experiencing inability to attract foreign portfolio investment. Hence, this research examined the effect of internal and external factors on foreign portfolio investment in Nigeria. Furthermore, the study also investigated the effect of foreign portfolio investment and its determinant on the economic development.

Data covering the period of 1986 to 2021 were sourced from Central Bank of Nigeria Statistical Bulletin (2020), National Bureau of Statistics and World Development Indicators. Analyses of data collected was conducted using Augmented Dickey-Fuller unit root test, Bound Co-integration, Autoregressive Distributed Lag and Pairwise Granger Causality techniques.

The ARDL bound test revealed that there was long run relationship between determinants variables (exchange rate, log of market size, log of financial development, international interest rate and growth rate of USA) and foreign portfolio investment in Nigeria. In addition, foreign portfolio investment and its measure as exchange rate, log of market size, log of financial development, international interest rate and growth rate of USA had co-integrating relationship with per capita income. As regarding internal factors, the study revealed that exchange rate had negative and significant effect on foreign portfolio investment and economic development in Nigeria respectively (-1.885368 and -0.338942). In addition, market size had negative and significant effect on foreign portfolio investment (-18.294294) but positive and significant effect on economic development (0.465861). Also, financial development had positive and significant effect on foreign portfolio investment and economic development (16.665681 and 0.116873). Based on the result of external factors, international interest rate had negative and significant effect on foreign portfolio investment and economic development in Nigeria (-5.352136 and -0.070502). Furthermore, growth rate of USA is found to have negative and significant effect on foreign portfolio investment but had positive and insignificant effect on economic development (-1.746600 and 0.009116).

The study concluded that Based on findings from this research, it was concluded that internal and external factors play significant role in determining the inflow of foreign portfolio investment in Nigeria. In addition, it was concluded that foreign portfolio investment and its determinant have significant effect on the economic development. It was recommended that government and policymakers should developed comprehensive economic framework to ensure stability in internal factories like interest rate, exchange rate, growth rate and inflation rate amongst others to attract foreign portfolio investment.

Keywords: External factors, internal factors, foreign portfolio investment, economic performance

Introduction

Liberalization policies since the start of the 21st century have encouraged foreign investors to invest around the globe in search of higher returns and diversification of assets. Over the past decades, the world has witnessed a surge in these magnitude of international capital flows, especially in developing countries (Onyeisi, et al, 2016). United Nations Conference on Trade and Development UNCTAD (2018) described Foreign Portfolio investment as an investment by a resident entity in one country in the equity and debt securities of an enterprise in another country for capital gains and does not necessarily reflect a significant and lasting interest in the enterprise. These include investment in bonds, notes, money market instruments, and financial derivatives other than those included under direct investment.

Foreign Portfolio investment is becoming one of the most common form of investments Globally as compared to foreign direct investment because it is an investment for a short-term period and their purpose is to anticipate market boom (Fayyaz & Muhammad, 2015). A number of countries across the globe have taken necessary measure to promote cross border investment flows, based on the notion that increased capital flows bring benefits in the form of increased efficiency in the allocation of global resources (Kose, et al, 2005). Generally, global capital flows are often divided into two: Foreign Direct investment (FDI), associated with Multinational Enterprises, and Foreign Portfolio investment, associated with institutional investors such as mutual funds (Khayat, 2020).

However, Soyoung et al, (2013) stated that there are two diverse factors that determine the flow of foreign portfolio investment into the domestic economy, which are internal and external factors. External factors such as international interest rate and growth rate of industrialized countries determines the flow of foreign portfolio investment and are linked to the rate of return on international investment (Calvo, et al, 1993). For, high growth rate and low international interest rate would encourage the flow of FPI to countries with high interest rate. This is because, investors will be interested in moving their excess wealth to countries with interest rate for the purpose of reaping high return on investment. Also, internal factors are variables like market size, financial development level, country conditions, openness variables, liquidity variables, government finance indicators, and vulnerability indicators that determine the inflows and outflows of FPI into the host country (Guluzar, et al, 2013).

Foreign investors are interested in internal factors because they reflect the prevailing economic Foreign Portfolio investment is required by all African countries and other developing countries to fill the saving-investment gaps due to low rate of capital accumulation and poverty in order to promote growth and development (Otapo & Adekunle 2020). African Development Bank (2017) reported that the Africa continent recorded a total portfolio investment of \$20.15 billion (N3.204 trillion) in 2012, \$21.2 billion in 2013, and gradually increased to USD41 billion in 2017. Although Africa escaped the global decline in foreign capital flow, as flows to the continent rose to \$46 billion in 2018, \$52.9 billion in 2019 which is an increase of 15% on the previous year and dropped to \$48.8 billion in 2020, according to *World investment Report (2020)*.

Given the economic and theoretical benefits of Foreign Portfolio investment, Nigeria government has initiated diverse policies over the years to attract the inflows of Foreign

Portfolio investment (Onyeisi et al. 2016). Following series of policies such as tax incentive, seven-point agenda, budget tightening, needs agenda macroeconomic policy, capital market and financial reform policies to attract foreign portfolio investment. Foreign Portfolio investment has been fluctuating over time from N792.3 billion in 2011 to N2687.2 billion in 2012 and later fell to N2130.1 billion in 2013, N832.3 billion in 2014, N498.1 billion in 2015 and N476.9 billion in 2016 before rising to N3604.3 billion in 2017, N11,802.3 billion in 2018 and N16,365.37 billion in 2019 and suffered the largest decline of 34 per cent, falling to \$3.39 billion in 2021 from \$5.14 billion in 2020 (Central Bank of Nigeria Statistical Bulletin, 2021).

Over the years, the Nigerian economy has been experiencing poor performance in terms of economic development. Despite increase in the level of economic growth, economic development indices like per capita income, employee rate and infrastructural facilities have shown low level of performance (Ikpesu, 2015). Efforts and policies among others have been implemented which include, liberalization policy of 1986 and other capital market reforms have been initiated by the Nigerian government to attract the inflow of foreign portfolio investment. Despite all these, the economy is yet to realize higher capital inflow (Baghebo & Apere, 2014). According to them this may result from weak business environment especially since the return to democracy era with the progress of the economy negatively affected by epileptic power supply and other infrastructural facilities. Coupled with the fact that Nigeria is faced with diverse challenges such as high insecurity, rising social vices, inconsistencies in government policies and volatile macroeconomic variables like exchange rate and inflation rate.

Baghebo and Apere (2014); Okonkwo (2016); Akinmulegun (2018) stated that inability of the domestic capital market to attract the inflow of foreign portfolio investment may be due to underdevelopment nature of the market and inconsistency in the display of foreign investment profiles in the market which has implication on the ability of the economy to achieve its macroeconomic objective of employment generation, domestic investment enhancement and economic growth stimulation.

However, following the review of literature in the subject area, very few studies were conducted on determinants of foreign portfolio investment in developing countries like in Nigeria. Studies like Gumus, et al (2013); Okonkwo (2016); Akinmulegun (2018); Makoni and Marozva (2018); Onuoha, et al (2018); Aisien (2018); Khayat(2020) examined the relationship between foreign portfolio investment and some variables like capital market, industrial sector, exchange rate and macroeconomic variables. However, none of these studies consider external factors that influence foreign portfolio investment. According to Soyoung, et al (2013): Bilal and Sunday (2015) movement in foreign portfolio investment may also be affected by external factors such as international interest rate.

Few works that were done on the effect of foreign portfolio investment on economic growth include the studies of Baghebo and Apere (2014); Bada (2016); Tsaurai (2017); Akinbobola, Ibrahim and Ibrahim (2017); Ezeanyej and Maureen (2019). However, studies were not done on the effect of foreign portfolio investment on economic development.

Finally, very few studies among the reviewed literature established the direction of causality between foreign portfolio investment and economic growth (Akinbobola, et al., 2017). The

estimation of the direction of causality between foreign portfolio investment and economic development will facilitate the findings on whether it is foreign portfolio investment that promotes economic development or economic development is a determinant of foreign portfolio investment in Nigeria.

Literature Review

Foreign Portfolio investment is an aspect of international capital flows comprising transfer of financial assets: such as cash; stock or bonds across international borders in search of profit (Ikpesu, 2019). It occurs when investors purchase non-controlling interests in foreign companies or buy foreign corporate or government bonds, short-term securities, or notes. Accordingly, just as trade flows from individuals and countries seeking to maximize their well-being by exploiting their relative advantage, so too, are capital flows the result of individuals and countries seeking to make themselves better off, moving accumulated assets to a more productive territory (Ndong, 2015). Moreover, Muhammad and Bilal (2019) suggested that foreign capital has many benefits such as; contribution to the host countries' capital accumulation and production capacity, new technology and knowledge, sharpest contribution to the improvement of the country's balance of payments, new sales, and marketing techniques, new business opportunities, high tax revenue, employment, income, the balance of payments, and economic development.

Economic development is a continuous, progressive change to attain individual and group interests through expanding, intensifying, and adjusting the use of resources; identifying new or expanding markets, altering rules of economic activities to facilitate adjustments to changing conditions or altering the distribution of rewards; and improving insights into the choices available. Speeding up the process of development, or the maintenance of a high rate of economic progress, calls for encouragement of the flow of resources to development uses and their utilization in the most productive directions. These resources can come only from that part of total domestic output which is not consumed, or from foreign flows abroad (IMF, 2002).

Fetahi-Vehapi et al, (2015) investigated the impact of trade openness on economic growth in 10 South-Eastern European countries during the period 1996-2012. Using additional regressors as control variables, the study found that trade openness, the initial level of GDP per capita, human capital development, gross fixed capital formation, and foreign direct investment were positively and significantly associated with economic growth; while population was negatively and significantly associated with economic growth when a fixed effects panel regression estimation method was used.

Tsaurai (2017) investigated the impact of foreign portfolio equity investments on economic growth in Asian and European country. The study employed panel data from 2001 to 2014. The study employed Panel unit root and Generalised Methods of Moments Estimation techniques to examine the effect of the independent variables on the dependent variables. It was found that foreign portfolio equity investments positively influenced economic growth.

Al-Smadi (2018) investigated the determinants of foreign portfolio investment in Jordan using series of data covering the period from 2000 to 2016. The regression results showed that good and stable macroeconomic environment attracts foreign investors. Muhammad and Bilal

(2019) looked at the impact of capital inflow on the economic growth of South Asian economies (Bangladesh, India, Pakistan and Sri Lanka from 1981 to 2016). Panel ARDL (PMG) model was applied to analyze the data. The results related to gross domestic saving showed that there is positive and significant long-run relationship present in between gross domestic saving and gross domestic product growth on the other hand the results related to short-run shows that there is a negative and non-significant relationship present in between gross domestic saving and gross domestic product growth.

Kibet and Tobias (2019) explored the causative agents influencing foreign equity investors to invest in Kenya. Autoregressive Distributed Lag model, and Vector Error correction model were used for analysis and it was found that net portfolio inflows to the Kenyan economy were influenced by exchange rate, inflation, and interest rate differential, inflation being the only endogenous factor with a negative impact. Sakuragawa and Watanabe (2020) investigated the determinants of foreign direct and equity portfolio investments in emerging market. Data were extracted from the secondary sources using panel data on 75 countries, covering OECD and emerging market countries. The result showed that financial development affects capital flows. Credit market development had positive effect on attracting FDI in emerging market countries, while it has a positive effect on attracting equity portfolio investment in OECD countries. Adekunle and Sulaimon (2018) re-examined the relationship between foreign capital flows and economic growth in Nigeria from 1986 to 2015 from various sources. The study employed a combination of stationary and nonstationary series. Net FDI inflows exerted positive short-run influence on growth, while net portfolio flows and net foreign remittance had significant negative short-run effects on growth.

Akinmulegun (2018) examined the effect of capital market development on foreign portfolio investment in Nigeria over the period 1985 to 2016. Vector Error Correction Mechanism (VECM) was used to analyse the short run and long run dynamism of the variables. Result from the vector error correction model indicated that market capitalization had negative and significant effect on foreign portfolio investment in Nigeria while all share index (ASI) had positive relationship with foreign portfolio investment. Osemene et al, (2018) explored the effects of volatility of exchange rate on foreign portfolio investment based on monthly time series data from 2007-2016. General Autoregressive Conditional Heteroskedasticity GARCH (1, 1) model was employed to test for volatility in both official and BDC rate. A two-stage least square (TSLS) method were used to test the relationship between the volatility and foreign portfolio investment in Nigeria. The analysis showed that volatility in the official rate exerted positive significant impact on foreign portfolio investment inflow into Nigeria, while the BDC volatility showed a negative significant impact on foreign portfolio investment inflow into Nigeria.

Onyinye et al, (2018) estimated the impact of Foreign Capital inflows on economic growth in Nigeria from 1986Q - 2014Q. For empirical analysis, the paper adopted the Auto-Regressive Distributed Lag- Unrestricted Error Correction Model (ARDL-UECM). The results also showed that apart from remittances, other components of foreign capital inflows had significant impact on economic growth in Nigeria. Agu et al, (2019) examined the impact of foreign portfolio investment on stock market returns in Nigeria for the period 1986 to 2017. The study made use of Ordinary Least Square and Auto-Regressive Distributed Lag (ARDL) model approach based on unrestricted error correction model (UECM) to measure the impact of foreign portfolio investment on

stock market returns in Nigeria. The coefficients of exchange rate and FPI were positive which implies that any change in the variables will change the stock market returns in Nigeria. interest rate had negative and insignificant influence on the stock market return.

Hooi and Kizito (2019), this paper examined the impact of foreign capital inflows on economic growth in Nigeria for 1980–2015 period. It employed Autoregressive Distributed Lagged (ARDL)-bounds test, and found a co-integration relationship between foreign capital inflows and growth. The result showed that foreign portfolio investment had positive impact on growth, while the impact of foreign loans is negative. Ikpesu (2019) seeks to ascertain the growth effects of capital inflows using investment as a transmission channel between the periods 1981 to 2016 in Nigeria. The study employed the least square regression method to analyse the data. The outcome of the research indicated that capital inflows had positive and significant effect on the growth of the Nigeria economy. Furthermore, the research output also showed that domestic investment had positive and significant effect on Nigerian economic growth. Otapo and Adekunle (2020) examined the dynamic nature of the development of the relationship between foreign portfolio investment and economic growth in Nigeria from 1980 to 2018. They used the Augmented-Dickey Fuller test to confirm the precondition for adopting dynamic techniques to test the significant role of foreign portfolio investment on economic growth. The results of empirical estimations in the short term showed that foreign portfolio investment had significant and positive impact on gross domestic product.

Methodology

This study made use of secondary data which was obtained from the secondary sources. The data for the study were annual time series data covering the period of 1986 to 2021. Annual data was extracted from Central Bank of Nigerian Statistical Bulletin (2021), World Development indicators (2021) and international Monetary Fund Data set (2021). The direction of foreign capital flows is built on two major theories, namely; push factor and pull factor theories. These theories were propounded by Everett (1966) concerning labour migration across the globe. Push factors (external variables) are the economic situation of capital exporting countries and these includes, international interest rate and growth rate of the world GDP. First, international interest rates, in particular the U.S. interest rate, have significantly effect on capital flows into developing countries. Low returns from the developed countries is the major factor responsible for the rush of capital inflows in most middle-income countries (Fernandez-Arias, 1996). Pull factors (internal variables) are domestic macroeconomic factors or variable including credit rating, domestic interest rate and financial strength, inflation, exchange rate volatility, domestic GDP growth rate and policies on financial account liberalization. (Fernandez-Aria, 1996).

Model One

Model one was formulated to examine the effect of exchange rate, market size, financial development, international interest rate and growth rate of U.S.A on foreign portfolio investment. This model is a re-modified version of Ekeocha, et al.(2012) in which foreign portfolio investment was modeled as a function of real gross domestic product, real interest rate, real exchange rate, market capitalization and trade degree of openness. However, the model of Ekeocha, et al.(2012) was modified to include external factors like international interest rate and growth rate of U.S.A. Growth rate of U.S.A was selected because the country's

external macroeconomic indices like FPI, external reserves and exchange rate are expressed in dollars and U.S.A is among the major trading partner of Nigeria. The model was functionally given as:

$$FPI = f(LEXR, LMKTS, FD, IITR, GRUSA) \dots \dots \dots (3.1)$$

This is linearly given as:

$$FPI_t = \beta_0 + \beta_1 LEXR_t + \beta_2 LMKTS_t + \beta_3 FD_t + \beta_4 IITR_t + \beta_5 GRUSA_t + e_t \dots \dots \dots (3.2)$$

Where:

- FPI = Foreign Portfolio investment
- LEXR = Log of Exchange Rate
- LMAKTS = Log of Market Size
- FD = Financial Development
- IITR = international Rate
- GRUSA = Growth Rate of USA.

A priori Expectation

in model one, stable exchange rate is expected to have positive effect on foreign portfolio investment. Also, increased market size and financial development is expected to attract the inflow of foreign portfolio investment. However, increase international interest rate will lead to fall in foreign portfolio investment as investors would prefer to invest in countries where interest rate is high. Finally, the growth rate of USA is expected to have positive effect on foreign portfolio investment because, increase in international growth will lead to investment of foreign investors in other countries. Thus, $\beta_1, \beta_2, \beta_3$ and $\beta_5 > 0, \beta_4 < 0$.

Model Two

The model two for this study is adapted from the empirical model of Otapo and Oludayo (2020) who model gross domestic product as a function of foreign portfolio investment, domestic savings, government capital expenditure and market capitalization. As a re-modification, the study employs per capital income as the dependent variable to capture economic development because it provides a more accurate picture of how the Nigeria economy is doing for typical citizen while market size, financial development, exchange rate, international rate and growth rate of USA are employed as independent variables because they give a perfect pictures of internal and external factors .

This given as:

$$LPCI = f(FPI, LEXR, LMKTS, FD, IITR, GRUSA) \dots \dots \dots (3.3)$$

$$LPCI_t = \beta_0 + \beta_1 FPI_t + \beta_2 LEXR_t + \beta_3 LEKTS_t + \beta_4 FD_t + \beta_5 IITR_t + \beta_6 GRUSA_t + e_t \dots \dots \dots (3.4)$$

Where:

- LPCI = Log of Per Capita income
- LEXR = Log of Exchange Rate
- FPI = Foreign Portfolio investment
- LMAKTS = Log of Market Size

FD = Financial Development

IITR = international Rate

GRUSA = Growth Rate of USA.

A priori Expectation

in model two, the inflow of foreign portfolio investment is expected to have positive effect on per capita income through the complementation of domestic resources. Also, stable exchange rate is expected to have positive effect on per capita income. Also, increased market size and financial development is anticipated enhancing per capita income. However, increase international interest rate will lead to fall in per capita income due to fall in foreign portfolio investment. Finally, the growth rate of USA is expected to have positive effect on per capita income. Thus, $\beta_1, \beta_2, \beta_3$ and $\beta_6 > 0$, $\beta_5 < 0$.

Methods of Data Analysis

The study employed diverse econometric techniques. Preliminary tests was conducted using descriptive statistics to describe the characteristics of the data while correlation matrix was used to determine the direction and strength of association among the variables. However, the following tests were carried out.

Stationarity test is preliminary to the analyses of time series data as well as being imperative for proper modeling in addition to having important economic interpretations. The characteristic of time series data as non-stationary has been generally seen as a problem in empirical analysis (Nelson & Plosser, 1982). It is also generally agreed that using data series that are non-stationary may lead to results that are unreliable which, may in addition give worthless inferences.

With a successful determination of levels of integration of the variables, then the likelihood of long run association among the variables is important. in this study, ARDL bounds test suggested by Pesaran and Shin (1999) and extended by Pesaran et al. (2001) was employed. The ARDL bound test is appropriate irrespective of whether the series are $I(1)$ or combination $I(1)$ and $I(0)$ of mixture of both. The ARDL bound test has some advantages over other cointegration techniques in that it uses a reduce form of single equation which is easy to understood and interpret. In this study, the effect of the independent variables on the dependent variable was determined using the long and short run ARDL coefficients. The long run ARDL generates the coefficients on the effect of exchange rate, market size, financial development, international interest rate and growth rate of U.S.A on foreign portfolio investment in equation and the effect of foreign portfolio investment on exchange rate, market size, financial development, international interest rate and growth rate of U.S.A on per capita income in equation

Result and Discussion

Unit Root Test

The unit root properties of the variables were established using Augmented Dickey-Fuller (ADF) unit root test. The results of the ADF statistics summary is presented in table 1:

Table 1: Summary of the Unit Root Test

| Series | ADF Test @ Level | Critical Value at 5% (P-Value) | ADF Test @ First Difference | Critical Value at 5% (P-Value) | Remarks |
|--------|------------------|--------------------------------|-----------------------------|--------------------------------|---------|
| FPI | -2.192398 | -2.991878 (0.2138) | -6.063593 | -3.004861 (0.0001) | 1(1) |
| LPCI | -3.983326 | -2.948404 (0.0041) | - | - | 1(O) |
| LEXR | -2.611764 | -2.948404 (0.1002) | -5.950658 | -2.951125 (0.0000) | 1(1) |
| LMKTS | -3.992296 | -2.948404 (0.0040) | - | - | 1(O) |
| LFD | -1.639811 | -2.948404 (0.4522) | -4.594485 | -2.951125 (0.0008) | 1(1) |
| IITR | -4.743858 | -2.948404 (0.00005) | - | - | 1(O) |
| GRUSA | -1.411194 | -2.951125 (0.5653) | -3.212485 | -2.951125 (0.0279) | 1(1) |

Source: Author's computation, 2023

From the result in table 1, foreign portfolio investment, exchange rate, financial development and growth rate of USA are not stationary when tested at level as revealed by the probability of the individual variables which are insignificant at 5% while log of per capita income, market size and international interest rate are stationary at level since the probability of the data series is significant at 5%.

Thus, the series of foreign portfolio investment, exchange rate, financial development and growth rate of USA are tested at first difference and it is discovered that the variables are stationary at first difference since their respective probability values are significant at 5%. It is evident that the data employed in the study are all integrated at level and first difference which is a necessary condition for the adoption of Autoregressive Distributed Lag Technique. Thus, this study employed Autoregressive Distributed Lag Technique.

ARDL Result for Model One

Table 2: Co-integration Test for Model One

| | | |
|-----------------------|-----------|----------|
| Test Statistic | Value | K |
| F-statistic | 10.247962 | 5 |
| Critical Value Bounds | | |
| Significance | I0 Bound | I1 Bound |
| 5% | 2.62 | 3.79 |

Source: Author's Computation, 2023

The result in Table 2 presents the co-integration test between foreign portfolio investment and its determinants variables measure as exchange rate, market size, financial development, international interest rate and growth rate of USA. The result shows that the Bound F-statistics 10.247962 is greater than the higher and lower critical bound values of 2.62 and 3.79 at 5% significant level. Thus, the null hypothesis of no co-integration is rejected and concluded that

there is long run relationship between determinants variables exchange rate, market size, log of financial development, international interest rate and growth rate of USA and foreign portfolio investment in Nigeria.

Table 3: Co-integrating Form for Model One

| Variable | Coefficient | Std. Error | t-Statistic | Prob.* |
|--------------|-------------|------------|-------------|--------|
| D(LEXR) | -12.579005 | 2.219932 | -5.666392 | 0.0008 |
| D(LEXR(-1)) | 2.554001 | 0.863657 | 2.957194 | 0.0212 |
| D(LMKTS) | 11.323390 | 3.283010 | 3.449088 | 0.0107 |
| D(LMKTS(-1)) | 8.085210 | 2.813644 | 2.873572 | 0.0239 |
| D(LFD) | 3.411422 | 0.488240 | 6.987183 | 0.0002 |
| D(LFD(-1)) | -8.949092 | 1.453033 | -6.158903 | 0.0005 |
| D(IITR) | 0.111685 | 0.131945 | 0.846451 | 0.4253 |
| D(IITR(-1)) | -0.312753 | 0.101280 | -3.088013 | 0.0176 |
| D(GRUSA) | -1.831308 | 0.250525 | -7.309881 | 0.0002 |
| CointEq(-1) | -0.308202 | 0.064593 | -4.771429 | 0.0020 |

Source: Author's computation, 2023

Table 3 shows the short run co-integrating form on the effect of exchange rate, market size, financial development, international interest rate and growth rate of USA on foreign portfolio investment in Nigeria. in the short run, it is established that exchange rate has negative and significant relationship with foreign portfolio investment in current period but positive and significant at lag one. However, in the short run, the result shows that market size has positive and significant effect on foreign portfolio investment both at current period and first period lag.

in addition, it is discover based on the short run result that financial development has positive and significant effect on foreign portfolio investment in the current period but negative and significant effect on foreign portfolio investment. Based on external factors, international interest rate has positive and insignificant effect on foreign portfolio investment in the current period but negative and significant linkage with foreign portfolio investment in the short run. Growth rate of USA has negative and significant effect on foreign portfolio investment in the short run as displayed in Table 3.

Table 4: Long Run Coefficients for Model One

| Variable | Coefficient | Std. Error | t-Statistic | Prob.* |
|--------------------|-------------|------------|-------------|--------|
| LEXR | -1.885368 | 0.630229 | -2.999156 | 0.0350 |
| LMKTS | -18.294294 | 4.958001 | -3.689853 | 0.0078 |
| LFD | 16.665681 | 3.698206 | 4.506423 | 0.0028 |
| IITR | -5.352136 | 1.308698 | -4.089663 | 0.0046 |
| GRUSA | -1.746600 | 0.471848 | -3.701613 | 0.0076 |
| C | 51.790806 | 18.391996 | 2.815943 | 0.0259 |
| R-squared | 0.926894 | | | |
| Adjusted R-squared | 0.770237 | | | |
| F-statistic | 5.916719 | | | |
| Prob(F-statistic) | 0.012080 | | | |

Source: Author's Computation, 2023

Table 4 shows result of long run coefficients on the effect of exchange rate, market size, financial development, international interest rate and growth rate of USA on foreign portfolio investment in Nigeria. The long run coefficient indicates that exchange rate has negative and significant effect on foreign portfolio investment with a coefficient of -1.885368 which suggests 1% increase in exchange rate will lead to 1.89% fall in foreign portfolio investment in Nigeria.

The result further reveals that market size has negative and significant relationship with foreign portfolio investment given a coefficient of -18.294294. The result implies that increase the market size of Nigeria proxy as gross domestic product is not sufficient to attract the inflow of foreign portfolio investment. Furthermore, it is revealed that log of financial development has positive and significant effect on foreign portfolio investment with a coefficient of 16.665681 which implies 1% increase financial development will to 16.7% increase in foreign portfolio investment.

Looking at the effect of external factors, international interest rate is found to have coefficient of -5.352136 which implies that 1% increase in international interest rate will lead to 5.35% fall in the flow of foreign portfolio investment into Nigerian economy. Finally, it is found that growth rate of USA has negative effect on foreign profit investment with a coefficient of -1.746600 which suggests 1% increase in growth rate of USA will lead to 1.75% fall in foreign portfolio investment in Nigeria

ARDL Result for Model Two

Table 5: Co-integration Test for Model Two

| | | |
|-----------------------|----------|----------|
| Test Statistic | Value | K |
| F-statistic | 11.21554 | 6 |
| Critical Value Bounds | | |
| Significance | I0 Bound | I1 Bound |
| 5% | 2.45 | 3.61 |

Source: Author’s computation, 2023

The result in Table 5 presents the co-integration test between per capita income, foreign portfolio investment and its measure as exchange rate, market size, financial development, international interest rate and growth rate of USA. The result shows that the Bound F-statistics 11.21554 is greater than the higher and lower critical bound values of 2.45 and 3.61 at 5% significant level. Thus, the null hypothesis of no co-integration is rejected and concluded that foreign portfolio investment and its measure as exchange rate, log of market size, log of financial development, international interest rate and growth rate of USA have long run relationship with per capita income.

Table 6: Co-integrating Form for Model Two

| Variable | Coefficient | Std. Error | t-Statistic | Prob.* |
|--------------|-------------|------------|-------------|--------|
| D(FPI) | -0.001669 | 0.000274 | -6.103299 | 0.0036 |
| D(FPI(-1)) | 0.000776 | 0.000164 | 4.732174 | 0.0091 |
| D(LEXR) | -0.011752 | 0.003312 | -3.548359 | 0.0238 |
| D(LMKTS) | 1.035282 | 0.245939 | 4.209512 | 0.0000 |
| D(LMKTS(-1)) | 0.028528 | 0.004150 | 6.874065 | 0.0023 |
| D(LFD) | 0.004580 | 0.000935 | 4.900839 | 0.0080 |

| | | | | |
|--------------|-----------|----------|-----------|--------|
| D(IITR) | 0.000093 | 0.000112 | 0.831254 | 0.4526 |
| D(IITR(-1)) | -0.002195 | 0.000591 | -3.703112 | 0.0004 |
| D(GRUSA) | -0.004119 | 0.001422 | -2.895971 | 0.0004 |
| D(GRUSA(-1)) | -0.003332 | 0.001201 | -2.754717 | 0.0004 |
| CointEq(-1) | 0.067212 | 0.016622 | 4.043627 | 0.0156 |

Source: Author’s computation, 2023

Table 6 shows the short run co-integrating form on the effect of foreign portfolio investment, log of market size, log of financial development, international interest rate and growth rate of USA on log of per capita income. The result shows that foreign portfolio investment has negative and significant effect on log per capita income in the current period but negative and significant relationship with log of per capita income at lag one.

in the current period, log of exchange rate has negative and significant relationship with log of per capita income in the short run. The result indicates further that log of market size has positive and significant effect on log of per capita both at current and first period lag in the short run. Also, log of financial development has positive and significant effect on log of per capita income in the short run. From the angle of external factors, the result reveals that international interest rate has positive and insignificant effect on log of per capita income at current period but negative and significant linkage with log of per capita income at lag one. The result shows further that growth rate of has negative and significant effect on log of per capita income both at current and first period lag.

Table 47: Long Run Coefficients for Model Two

| Variable | Coefficient | Std. Error | t-Statistic | Prob.* |
|--------------------|-------------|------------|-------------|--------|
| FPI | 0.030383 | 0.009867 | 3.079190 | 0.0002 |
| LEXR | -0.338942 | 0.081260 | -4.171044 | 0.0020 |
| LMKTS | 0.465861 | 0.048194 | 9.666444 | 0.0006 |
| LFD | 0.116873 | 0.013140 | 8.894503 | 0.0009 |
| IITR | -0.070502 | 0.013925 | -5.063145 | 0.0072 |
| GRUSA | 0.009116 | 0.004364 | 2.088813 | 0.1050 |
| C | 5.314404 | 1.124868 | 4.724469 | 0.0001 |
| R-squared | 0.852971 | | | |
| Adjusted R-squared | 0.809999 | | | |
| F-statistic | 13.22103 | | | |
| Prob(F-statistic) | 0.000000 | | | |

Source: Author’s computation, 2023

Table 7 shows result of long run coefficients on the effect of foreign portfolio investment, log of market size, log of financial development, international interest rate and growth rate of USA on log of per capita income. The long run coefficient indicates that foreign portfolio investment has positive and significant effect on log of per capita income with a coefficient of 0.030383 which suggests that foreign portfolio investment has little effect on per capital income in Nigeria. in addition, log of exchange rate is found to have negative and significant effect on log of per capita income with a coefficient of -0.338942 which implies that 1% increase in exchange will lead 0.34% fall in per capita income. in addition, it is established that log of

market size has a coefficient of 0.465861 which implies that 1% increase in market size will significantly improve per capita income by 0.47% in the long run.

in addition, the result shows that external variable, international interest rate has negative and significant relationship with log of per capita income with a coefficient of -0.070502 which implies that 1% increase in international interest rate will lead to 0.07% fall in per capita income. Finally, the long run result revealed that growth rate of USA has positive and insignificant relationship with log of per capita income.

Conclusion

Foreign portfolio investment has been viewed as important macroeconomic tool in a modern economy. Foreign portfolio investment serves to complement the insufficient domestic financial resources to provide adequate finance needed for the purpose of promoting economic growth and development. However, the ability of a country to attract foreign portfolio investment to enhance economic development is determined by internal and external macroeconomic factors. Based on findings from this research, it was concluded that internal factors has a significant effect on foreign portfolio investment flow in Nigeria, external factors has significant effect on foreign portfolio investment flow in Nigeria and both internal and external factors play significant role in determining the inflow of foreign portfolio investment in Nigeria. in addition, it was concluded that foreign portfolio investment and its determinant have significant effect on the economic development.

As a result of the negative effect of exchange rate on foreign portfolio investment and economic development, there is need for the effective management of exchange rate of Nigeria in order to control continuous fall in the value of naira. The policy framework of exchange rate management should be based on flexible policy regime. This will put the continuous fall of naira value into check. Given the negative effect of market size on foreign portfolio investment, government should make efforts to create suitable and sustainable business environment that will support economic activities through promotion of domestic and foreign direct investment that will enhance market size. This is because increased market size through improving overall economic productivity will serve as a positive signal to foreign investors. In addition, following the significance effect of financial development on foreign portfolio investment, there is need for further advancement and expansion of the Nigerian financial sector. For instance, more advanced technologies should be employed in the capital market to make trading easy and also more financial instruments should be introduced in the financial market to attract foreign investors.

The negative effect of external factors like international interest rate and growth rate of USA on foreign portfolio investment implies that improvement in external factors would make investors consider investing into industrialize nations' economy rather than Nigeria. Hence, it was recommended that government and policymakers should developed comprehensive economic framework to ensure stability in internal factories like interest rate, exchange rate, growth rate and inflation rate among others to attract foreign portfolio investment.

References

- Akinmulegun, S.O. (2018). Capital market development and foreign portfolio investment inflow in Nigeria. *Advance in Economics and Business*, 6(5), 299-307
- Fayyaz, A. & Muhammad, U.D. (2015). Determinants of foreign portfolio inflows: Analysis and implications for China. *Asian Journal of Finance & Accounting*. 1(7), 23-32
- Khayat, S.H. (2020). Determinants of international foreign portfolio investment flows to GCC countries: An empirical evidence. *International Journal of Business and Management*, 15 (10), 51-59.
- Kibet, E.N. & Tobias, O. (2019). Effects Of Macroeconomic Determinants On Foreign Equity Flows Among The Listed Firms in Kenya. *international Journal Of Economics, Commerce and Management*. 7(6) 263-302
- Kose, M., Ayhan, E.P., Kenneth, R. & Shang-Jin, W. (2005). Financial globalization beyond the blame game. *Journal Of Finance and Development* , 4(4), 9-13
- Onyeisi, O.S., Odo, I.S. & Anoke, C.I. (2016). Foreign Portfolio investment and Stock Market Growth in Nigeria. *international Knowledge Sharing Platform*, 6(11), 64-76
- Otapo, T.W. & Oludayo, A. (2020). Dynamic Effects of Foreign Portfolio investment on Economic Growth in Nigeria. *Financial Markets, institutions and Risks*, 4(3), 5-12
- Pesaran, M. H., & Shin, Y. (1998) An Autoregressive Distributed-Lag Modelling Approach to Cointegration Analysis. *Econometrics and Economic Theory in the 20th Century: The Ragnar Frisch Centennial Symposium*, 31, 371-413.
- Pesaran, M.H., Shin, Y. and Smith, R. (2001) Bounds Testing Approaches to the Analysis of Level Relationships. *Journal of Applied Econometrics*, 16, 289-326.