

# EFFECTS OF FOREIGN PORTFOLIO INVESTMENT ON FINANCIAL MARKETS PERFORMANCE IN NIGERIA

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## ABSTRACT

*This study examined the effects of foreign portfolio investment on financial markets performance in Nigeria. It employed time series data for the period 2009-2018 sourced from Central Bank of Nigeria (CBN) bulletin and World Bank analyzed with Error Correction Model (ECM), Ordinary least square and correlation techniques to determine whether FPI stimulate or destabilize Nigeria's economic performance. 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 and recommends that government should develop strong institutions to attract other components of foreign resources like FDI and foreign loans since FPI is more amenable to sudden withdrawing. This may help to increase the dwindling foreign reserves and augment capital formation that is imperative to resuscitating the declining performance of the economy.*

**Keywords:** Economic performance, financial market performance, foreign portfolio investment, marginal efficiency theory

## INTRODUCTION

Foreign portfolio investment consist securities and other fiscal resources inactively held by investors from other countries; and which does not provide the investor with direct ownership of financial assets, and thus no direct management of a company. FPI mostly take the form of purchase of stocks and bonds from secondary financial markets, thereby stimulating the deepening and expansion of the secondary financial market and increasing wealth and liquidity in host countries. Foreign participation and the value of foreign portfolio investments (FPI) in the Nigerian capital markets have been on increase in spite of the fact that FPI is a recent phenomenon in Nigeria compared to foreign direct investment, international loans, official development assistance (ODA) (Baghebo & Apere, 2014). The increase in FPI has been attributed to the development of Nigeria's capital market, partial deregulation of the capital market in 1993, the full financial liberalization policy that abrogate laws that constrained foreign

participation in the Nigeria capital market and internationalization of the market in 1995 (Meristem, 2015).

Empirical studies have been conducted on FPI inflows and economic performance of Nigeria (Baghebo & Apere, 2014; Oni, Imolehin, Adelowo & Adejumo, 2014; Olotu & Jegbefume, 2011). Most of these studies employed data on aggregated FPI inflows into the country thereby neglecting the net flows of FPI, hence its volatility. In this regards, it was not a surprise that all these studies found consistent positive relationship between FPI and economic performance in Nigeria. With knowledge gathered from the theoretical literature of Osaze (2011) that strong FPI outflow especially during economic crisis have given rise to concerns about the impact FPI on domestic economies, there is a need to verify these assertions using data on net inflows of FPI. In addition, this study used current data to verify the findings of previous studies on FPI and economic performance in Nigeria.

The increase in the flow of foreign capital to emerging countries increases the efficiency of capital allocation in host countries, which helps to increase cash flows from developed economies to emerging ones; mostly due to low returns of investment in developed economies, compared to emerging ones. For host countries, this cash flow reduces the cost of money, increases investments and enhances the competitiveness of local companies in the global market, which in turn, positively affects production and demand for labor. The important aspect of FPI is the competition between foreign financial institutions, which contribute to the importation of financial services and advanced technology and the localization or adaptation of new technology to the domestic environment of host countries. This often results in efficient allocation of funds, risk sharing and increased control over capital issuances. Internationalization makes financial markets more efficient, more liquid and deeper.

The focus of this examen was to determine the effects of FPI on financial markets performance in Nigeria. The study particularly, examined the impact of FPI on financial markets in Nigeria from 2009-2018; and how other macroeconomic variables, such as interest rates, exchange rates depreciation, and trade openness affect stock market growth. 2009-2018 is the period of interest in this study because it embraced a period of structural reforms, institutional transformation, democratic governance, and era of constant economic growth and fluctuating foreign investment inflows to Nigeria. Some annualized time series data employed are variables, such as FPI, market capitalization, interest rates, exchange rates, and trade openness.

## LITERATURE REVIEW

### Baseline Theory

This study is founded on the marginal efficiency theory of John Maynard Keynes. The theory views investment decisions as being dependent on internal rate of return (IRR) generated by investing in a particular asset called Marginal Efficient of Investment (MEI) and the prevailing market rate of interest rate. Marginal efficiency of investment is the expected rate of return on investment as additional units of investment are made under specified conditions and over a stated period of time (Anyanwu & Oaikhenan, 1995). John Maynard Keynes defined IRR as the rate of discount which will make the present value of the series of annuities given by the returns expected from the capital asset during its useful life just equal its supply price; and utilized the concept of marginal efficiency of capital (MEC) in the development of the marginal efficiency theory. He defined MEC as the rate of discount that equates current cash outlay with present

value of future cash receipt. The marginal efficiency theory states that the marginal efficiency of investment will be compared to the market rate of interest and such comparison will generate a set of decision rule for firms. The rate of return is computed as the rate at which the expected stream of future earnings from an investment project must be discounted to make their present value equal to the cost of the project. The appropriate rule is:  $MEI = r$ , accept investment proposal or  $MEI < r$ , reject investment proposal. The rule further defined,  $r$ , as the market rate of interest and states that where  $MEI = r$ , investment is considered to be at its optimum or equilibrium level.

### **Conceptual Review**

Economic performance has been conceptualized in different ways by different authorities. Many economists saw it as increase in an economy's real income, including gross domestic product over a long period of time (Meier, 2000), increase in aggregate output over time (Lewis, 1954) quantitative increase in capital stock, natural resources, resource allocation and production capabilities of a country regardless of its population size (Solow, 1956), and increase in total employment, total outputs, personal income/earnings/prosperity/wealth of a nation (Kuznets, 1971). In this regard, it can be measured by gross domestic products, per capita income which is usually calculated by GDP/population, employment, which in some cases complements income change, which has implication for economic welfare.

FPI has been defined as import of funds from one country to another for the purposes of purchasing securities in the recipient country's bond and stock market(s) with the intention of getting high rates of return on investment rather than gaining management control of firms in the host country (IMF, 2014). It is a cross-border investment in equity securities, debt securities in the form of bonds, notes and money market instruments and financial derivatives such as options in order to make profits (World Bank, 2015).

Nigeria's economy has experienced a seemingly exponential growth since the introduction of SAP, as almost all macroeconomic variables, especially Gross Domestic Product (GDP) component, posted positive indication when compared with figures before 1986 (CBN Statistical Bulletin, 2013). The CBN Statistical Bulletin (2013) data depicts that foreign capital inflows to Nigeria have surpassed most African countries and has since 2000s become one of the most attractive foreign capital destinations in the world. However, factors that have inhibited the constant inflows of FPI and the growth of stock market in Nigeria during the early years of SAP were the indigenization policy through the Nigeria Enterprise Promotion Decree (NEPD); undeveloped financial system, inconsistent government policies, and weak institutional and legal frameworks. After the banking recapitalization of 2005 however, the capital base rose of banks to 25 Billion Naira; the financial market registered a total trading value of 262.937 billion (Nigerian Stock Exchange (NSE), 2006). This performance contrasts with N265.5 million total trading volumes registered in 1990, N1.8 billion in 1995 and N11.1 billion in 1997. Thus between 1990 and 2005, the value of trading had risen astronomically and the growth in the value of equities became remarkable during the period (NSE, 2006).

Data from the Nigerian Stock Exchange also indicates that FPI flow which stood at 15% in 2007, consistently fluctuated over the years to stand at 67% in 2011 but dropped to 61.4% in 2012 (Akanbi, 2013). Reiterating further, Akanbi (2013) stated that the declining trend of FPI flow continued in 2013. According to Akanbi (2013), the nominal figure of FPI flow in 2008 was

N787.4 billion while the total transactions on the NSE were N4, 758.27 trillion. In 2009, it was slightly lower but its contribution to the activities in the stock market was ironically higher than the two previous years at N424 billion. For the year 2010, Akanbi (2013) put FPI inflow at N577.3 billion out of N1.6 trillion transactions and in 2011, the FPI inflow was N847.9 billion out of N1.3 trillion transactions for the year. More so, in 2012, N808.4 billion worth of FPI inflow was made by foreign investors in a year when the total transaction was put at N1.3 trillion. The above data trends depict the inconsistency of FPI as a reliable source of capitalization for Nigerian stock market growth expectation.

According to Indexmundi (2012) data from IMF, the value for official exchange rate (LCU per US\$, period average) in Nigeria was 153.90 as of 2011. The data showed that, over the past 25 years, this indicator reached a maximum value of 153.90 in 2011 and a minimum value of 1.75 in 1986. However, the value for real effective exchange rate index (2005 = 100), which is the nominal effective exchange rate (a measure of the value of a currency against a weighted average of several foreign currencies) divided by a price deflator or index of costs in Nigeria was 117.93 as of 2010. The data showed that, over the past 25 years this indicator reached a maximum value of 312.51 in 1986 and a minimum value of 58.15 in 1992.

From the above trend, stock market has been growing astronomically while the FPI has fluctuated. In essence, the major problems are inconsistency in the FPI inflows to the Nigerian capital market which increases volatility and macroeconomic instability and lack of bonded FPI. Also, the low domestic participation in stock market trade in Nigeria might be as a result of low awareness by many Nigeria about this arm of the financial market. Furthermore, the volatility of FPI tends to affect stock market growth as a result of uncertainty and risk. In essence, the trend of FPI to the capital market over the period under study (1986-2014) represents unstable and fluctuating inflows.

### **Empirical Review**

A comprehensive study on FPI in Nigeria was done by Ekeocha (2012). The study asserted that FPI has grown recently in proportion relative to other types of capital inflows to Nigeria before the wake of the global financial crisis. It opined that, there is no empirical regularity regarding the determinants of FPI in Nigeria. Ekeocha's study tried to add to the stock of knowledge by modeling the long-run determinants of FPI in Nigeria over the period of 1981-2010 converted into quarterly series. The variables considered by this study were market capitalization, real exchange rate, real interest rate, real gross domestic product and trade openness. The study applied time series analysis specifically the finite distributed lag model and found that FPI has a positive long-run relationship with market capitalization, and trade openness in Nigeria.

Similarly, Eniekezimene (2013) examined the impact of FPI on capital market growth by x-raying the growth of FPI in the market as well as the transmission channels through which changes in FPI affect growth of the market. The study used Ordinary Least Squares (OLS) methodology with a Parsimonious Error Correction Model Specification, after testing for stationary status (unit root) and long run relationship (co-integration) of the variables. The found that FPI has a positive impact on capital market growth with the speed of adjustment from short-run to long-run as indicated by the ECM-1 having a relatively high value of 66% in absolute terms.

In other climes, Haider *et al.* (2017) investigated the impact of stock market performance and inflation on FPI in China, using time series quarterly data from Q1 of 2007 to Q4 of 2015. The results showed that there was significant positive impact of stock market performance on the FPI, whereas inflation is found to be negatively associated with the FPI. Relatedly, Fayyaz *et al.* (2015) reported that the major determinants of FPI are GDP growth, market size and market efficiency and higher expectation of returns; stating that these play a vital role in the movement of FPI.

Aurangzeb and UI Haq (2012) in their study examined the impact of international capital inflows on the growth of the Pakistani economy. They found that external debt, remittances and FDI had an optimistic impact on GDP. As per Parthapritam (2006), in order to attract FPI there had been competition among the emerging markets, and it became important for developing countries to ensure attractive returns for foreign investors, and to increase their operational flexibility. Also, Loice (2017) investigated the effect of foreign portfolio equity outflows on stock returns of listed financial institutions in Kenya. Using purposive sampling technique the study concentrated on 14 financial institutions. Panel estimation results indicated that foreign portfolio equity outflows had no effect on stock returns of listed financial institutions in Kenya.

In view of the foregoing reports and positions of scholars, the current study hypothesizes that:

Ho<sub>1</sub>: Foreign portfolio investment does not have significant relationship with financial market performance in Nigeria.

Ho<sub>2</sub>: Foreign portfolio investment does not significantly impact financial market performance in Nigeria.

## METHODOLOGY

The focus of this study was to examine the effects of FPI on financial markets performance in Nigeria. The study adopted an ex-post facto research design. The study relied on secondary data obtained from World Bank Data on foreign portfolio flows, inflation (INFL), stock market, Gross Domestic Product (GDP) and Market capitalization (MC) from 2009-2018 which sum up to 10 observations which is long enough to cater for the loss of degree of freedom. The study utilized the Pearson product Moment Correlation and the multiple regression statistics in testing for the linear relationship between the variables and for estimating the influence of the predictor variable on the criterion variable. The multiple regression model was specified in a functional form using the selected variables as:

$$MC = f(PFIB, PFIS, GDP, INFL)$$

This equation is linearly expressed as;

$$GMC = \beta_0 + \beta_1 PFIB_{t-1} + \beta_2 PFIS_{t-1} + \beta_3 GDP_{t-1} + \beta_4 INFL_{t-1} + et$$

Where FM is the dependent variable and PFIB, PFIS, GDP, INFL are independent variables.

GMC = Growth rate of Market capitalization

PFIB=Foreign Portfolio Investment (Buying)

PFIS=Foreign Portfolio Investment (Selling)

GDP=Gross Domestic Product

INFL=Inflation

et = error term

## RESULTS AND DISCUSSION

**Table 1: Descriptive statistics of the variables used in the summary**

	Years	Range	Minimum	Maximum	Mean	Std. Deviation
Foreign Inflow	2009-2018	71.92	19.83	91.75	51.85	20.38
Foreign outflow	2009-2018	114.55	16.34	130.89	55.62	31.07
Financial markets	2009-2018	86.55	19.94	106.49	46.25	25.34

Source: Descriptive Statistics Results using SPSS version 24

The mean score of foreign inflow of portfolio investments is 51.85; the standard deviation is 20.38; while the mean score of foreign outflow of portfolio investments is 55.62 and standard deviation is 31.07. The mean score of financial markets is 46.25 and standard deviation is 25.34. This result shows that foreign outflow portfolio investments have high maximum output, followed by financial markets and foreign inflow portfolio investments.

**Table 1: Correlation between foreign portfolio investments and financial markets performance**

		Correlations	
		Financial markets	Foreign portfolio investment
Financial markets	Pearson Correlation	1	.007*
	Sig. (2-tailed)		.877
	N	10	10
Foreign portfolio investment	Pearson Correlation	.007*	1
	Sig. (2-tailed)	.877	
	N	10	10

\*. Correlation is significant at the 0.05 level (2-tailed).

Source: Output of data analyses on foreign portfolio investments no financial markets performance

Table shows that the Pearson correlation value between foreign portfolio investment and financial markets performance is 0.877. This value is very close to 1. Thus, the study posits that a very strong relationship exists between foreign portfolio investments and financial markets performance. Since the Sig value is .007 (which is less than .05), it means that the relationship between the variables is statistically significant. Therefore, the null hypothesis is rejected. The value of N in this study represents ten (10) years of activities in the investment portfolio.

**Table 3: Influence of foreign portfolio investments no financial markets performance**

Model Variables	R	R <sup>2</sup>	B	F	t	P-value	Durbin-Watson
Constant	0.65	0.42	5.96	2.52	1.80	0.45	1.77
Foreign Inflow	-	-	2.05	-	2.24	0.04	-
Foreign outflow	-	-	1.44	-	1.42	0.20	-

Note: Regression significant at 5% level of significance

Source: Output of data analyses on foreign portfolio investments no financial markets performance

$Y = X_1 + X_2 + C$  where C is the constant.

Predicted  $y = 2.05X_1 + 1.44X_2 + 5.96$

The value of 0.65 indicates good linear regression with 42% of the variation in the dependent variable revealed by the coefficient of determination ( $R^2$ ), while the remaining 58% was due to other factors not presumed in the variation model. The Durbin-Watson value of 1.77 indicates a good formulation of portfolio investments. The result revealed that the intercept (constant) of the

equation is 5.69. This value of 0.04 is positive and statistically significant since P-value is less than 0.05 level of significance, indicating Foreign Inflow will increase by beta 2.05 and  $t$  of 2.24. The Sig value is 0.20 (which is greater than .05), it mean the values are not significant, indicating Foreign Outflow will decrease by beta 1.44 and  $t$  of 1.42. In view of these results, the null hypothesis was rejected.

Drawing from the above analyses, FPI have over the years significantly destabilized the Nigeria economy as the findings of this study showed negative impact of FPI on economic performance of Nigeria both at the short and long-run. Though, these findings deviate from previous empirical studies of Olotu and Jegbefume (2011) which employed parsimonious error correction mechanism to show positive significant relationship between FPI inflows and economic growth of Nigeria. The paper further revealed that FPI has negative and significant impact on stock market development and capital formation which were showed by these studies to be critical factors that stimulate economic performance both at the short and long-runs. This suggests FPI has over the years made Nigeria capital market inefficient; and failed to bridge the shortage of domestic savings and investments gaps, hence capital formations.

FPI has not helped Nigeria develop it stock market rather it has worsen it with profound negative impact on capital formation. On this basis the study concluded that FPI has undermined the capacity of domestic stock market to create more wealth, liquidity and efficient allocation of capital for increased production and industrial development. Osaze (2011) support these findings when he theoretically noted that high violability of FPI over the years made Nigeria economy vulnerable. Osaze (2011) remind us that inflow to Nigeria is like a one-night stand with no long-term commitments in the country and the moment the investment environment turns sour as currently experienced in Nigeria, the money (FPI) flees electronically with underlying consequences on the performance of stock's and economy as whole.

The current findings also align with position of Obiechina (2010) that Nigeria has over the years witnessed strong FPI outflows; which has led to exchange rate misalignments, foster credit booms and currency mismatches, thus giving rise to concerns about the impact of the flows on domestic economies. To cushion the effects of this, Baghebo and Apere (2014) noted that macro-prudential policies and capital controls can be used to manage negative fluctuation of FPI. In addition, foreign reserves can be used to prevent credit booms and financial instability usually caused by FPI in developing countries. Fayyaz, Muhammad and Su-chang, (2014) also suggested that foreign reserve accumulation by Central Banks can be used to prevent excessive exchange rate misalignments and build up buffers against eventual sudden stop of FPI.

### **CONCLUSION AND RECOMMENDATIONS**

The study concluded that FPI poses threat to Nigeria economy, partly because of the high negative volatility associated with it. Against this negative effect of FPI, policy makers must devise strategies to reap the benefits of financial integration while managing the capital risks posed by FPI on the domestic economy. However, severe drop in Nigeria foreign earnings due to oil clash at international market which has significantly dwindled foreign reserves may deter the CBN from using it to defend the naira. In line of this, the study recommends that government should develop strong institutions to attract other components of foreign resources like FDI and foreign loans since FPI is more amenable to sudden withdrawing. This may help to increase the dwindling foreign reserves and augment capital formation that is imperative to resuscitating the declining performance of the economy.

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