THE IMPACT OF FOREIGN PORTFOLIO INVESTMENT ON THE NIGERIA STOCK MARKET: (1980 – 2016)

1Omozuawo, Musah Buhari & 2Momoh, Abdulraheem
1, 2Department of Humanities and Social Sciences,
School of General Studies, Auchi Polytechnic, Auchi.

Abstract
This study examines the impact of foreign portfolio Investment (FPI) on the Nigerian Stock market for the period of 36 years (1980 – 2016). The major objective of the study is to establish empirically whether foreign portfolio investment contributes to the growth of the Nigerian stock market capitalization and thus the growth of the Nigerian economy. The ordinary least square (OLS) method and the parsimonious error correction model specification were used in the study. The Augmented Dickey Fuller unit root test was used to test the stationary status of the variables before carrying out co-integration regression which shows non-stationarity of the variables. The co-integration test finds that the variables co-integrate. The Parsimonious error correction mechanism was used to estimate the variables and that all the variables were found to be significant in explaining 84% of the variation in the dependent variable (Market capitalization). The result shows that foreign portfolio investment 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 34% in absolute terms and there is a strong relationship between FPI and stock market growth and domestic savings are complementary and not substitute to the growth of the Nigerian stock market in both the short run and the long run. The study concluded that the presence of foreign portfolio investment has increased the market capitalization of the Nigeria stock market. FPI has grown recently in proportion to other types of capital flow in Nigeria because it complements domestic savings to get the desired level of investment. It recommended that authorities and policy makers should come up with policies that are more investment friendly, furthermore, the policy of internationalization of stock market operations should be sustained as these would boost domestic investment.

Keywords: Foreign Portfolio Investment, OLS, Market capitalization, Stock Market.

Introduction
The slow pace of development in the third world countries is usually traceable to inadequate resources to speed up economic growth and development. Saving, in this part of the world, is usually low for the investment needed. In order to bridge this gap, most economies have resorted to foreign borrowings while others gear efforts toward attracting foreign contributions and grants to stimulate development. Thus, the importance of foreign portfolio investment either by private or public agencies in promoting growth and development in developing countries cannot be overemphasized. Foreign portfolio investment (FPI) is an aspect of international capital flows comprising of transfer of financial assets such as: cash, stock or bonds across international
borders in want of profit. It occurs when investors purchase controlling interest of 10% and above in foreign companies or buy securities or notes. Just as trade flows result from individuals and countries by exploiting their own comparative advantage, so also capital flows from individuals and countries seeking to make themselves better off, moving accumulated assets to wherever they are likely to be most productive (Baghebo and Apere, 2014). This type of investment as a result of economic globalisation has become an increasing significant part of the world economy over the past three decades and an important source of fund to support investment not only in developing countries but also developed ones.

Foreign portfolio investment, though a recent phenomenon in Nigeria compared to foreign direct investment, (Oversea Development Assistance (ODA) and bank loans), has been on the increase since the mid-80s. The importance of portfolio investment to emerging market economies like Nigeria’s has been attributed to the significant role played by the Nigerian capital market in the recent years. The deregulation of the capital market in 1993 made the federal government to internationalize the market in 1995, with the abrogation of laws that constrained foreign participation in the Nigeria capital market. Following the abrogation of the exchange control Act 1962, foreigners can now participate in the Nigerian stock exchange market as part of the financial liberalization policy of Nigeria in the mid-2000s, and there had been increased inflows of foreign capital flow into the Nigerian economy through the capital market (CBN, 2006). Over the years, successive Nigerian governments have viewed foreign investment as a vehicle for political and economic transformation of Nigeria. Hence, the thrust of government policy has been to reduce the hindrance of indigenization policy promoted by the Nigeria Enterprise Promotion Decree (NEPD) to regulate foreign investment, to a maximum of 40% foreign participation. This had resulted in a decline in both foreign private direct and portfolio investment. This trend is what is being reversed now to allow greater participation of foreign investors in the economy.

Stock market is a vehicle of savings fund mobilization for investment to facilitate economic growth and development. Theoretical evidence shows a positive effect of stock market development on economic growth (Yartey 2008; Filler, Hanousek and Campos, 1999; Singh, 1997; and Levine and Zervos, 1998). The development of stock market is the outcome of many factors like exchange rate, political stability, (Gay, 2008), foreign direct investment, and economic liberalization (Adam and Anokye et al, 2008). One of the key motives for FPI is to globalize production and competition. A second reason is to move some production to more profitable locations. Firms in advanced countries have moved much of their labor-intensive production to developing nations where wages are lower.

It is doubtful that many (or any) of today’s poor countries could achieve sustained, rapid growth paths without a substantial amount of FPI brought in by foreign owned transnational. Without such FPI, both the transfer of technology and foreign networking would be difficult to achieve. Financial markets, and especially stock markets, have grown considerably in developed and developing countries over the last two decades as a result of rapid financial and political transformation. To increase their share of FPI flows, most of the countries ease restrictions on
FPI, strengthened macro stability, privatization of state-owned enterprises, domestic financial reforms, capital account liberalization, tax incentives and subsidies have been instituted. The role of FPI in the development of stock markets of developing economies is considered very strong. It is observed that there is triangular causal relationship between these two; (1) FPI stimulates economic growth (2) Economic growth exerts positive impact on stock market development and (3) implication is that FPI promotes stock market development (Adam and Anokye et al, 2008).

Although, the drive towards the establishment of stock markets in African countries during the last few decades may be linked to other important developments in the global economy. The financial markets of many advanced countries have undergone tremendous changes and become increasingly integrated. These changes have resulted from the operation of a number of interrelated factors (Cosh, Hughes, and Singh, 1992). Such factors include the progressive deregulation of financial markets both internally and externally in leading economies; the internationalization of these markets; the introduction of a number of financial products allowing riskier and bigger financial investments; and the emergence and the increasing role of new actors in the financial markets particularly, institutional investors. These developments in the financial systems of advanced countries have led them to seek liberalization in the international trade and exchange of services in world trade negotiations. The establishment of stock markets in African countries and the liberalization of capital accounts can be seen as parts of this global liberalization trend. Thus, it is expected to boost domestic savings and increase the quantity and quality of investment. More generally, stock markets are seen as enhancing the operations of the domestic financial system in general and the capital market in particular (Kenny and Moss, 1998).

Critics, however, argue that the stock market might not perform efficiently in developing countries and that it may not be feasible for all African markets to promote stock markets, given the huge costs and the poor financial structures (Singh, 1999). Also, there has been considerable research on the relationship between financial market development and macroeconomic variables, financial reform, and other country–specific factors, and the relationships among the development of the various parts of a financial system. It is clear from the previous studies that financial markets tend to develop as the economy grows and financial reform progresses. Stock market development is embodied in the general financial sector development. In other words, stock market complements the development of other parts of the financial system. For instance, Singh (1997) finds positive relationship between economic growth and stock market development and a large number of empirical studies on the role of FPI in host countries suggest that FPI is an important source of capital, complements domestic private investment, is usually associated with new job opportunities and enhancement of technology transfer, and boosts overall economic growth in host countries. However, not much attention has been centered on joint effect of stock market development and foreign portfolio investment on growth in Nigeria. Thus, this study intends to fill this gap.

Given this background, the broad objective of the study is to establish empirically whether foreign portfolio investment contributes to the growth of the Nigerian stock market and, thus,
growth of the Nigerian economy. While the specific objectives of the study are to: examine the trend of foreign portfolio investment and stock market development in Nigeria; establish the relationship that exists among foreign portfolio investment, stock market development and economic growth in Nigeria. The study is organized in sections. Following this introductory section is section two which discusses the reviews of the available literature on the subject matter, the trend of foreign direct investment and stock market development; the model, data sources and estimation techniques are contained in section three. Section four presents model estimation results and interpretations. The summary of findings and policy recommendations are contained in section five.

**Literature review**

**Conceptual definition**

Oyarenti (2003) asserts that Foreign Portfolio investment refers to the acquisition of asset by a foreign national or company in a domestic stock market or money market through holding of transferable securities, issued or guaranteed by the government of the host country. Such securities are held in the form of equity shares, debentures, bonds, promissory notes and money instruments. Unlike Foreign Direct Investment (FDI), Foreign Portfolio investments are usually motivated by short term profit consideration (particularly dividends and capital gains) which do not involve management control over the companies in which securities are acquired and are more volatile, thereby having the tendency of causing more disruption to the national economic policy. Obadan (1999) opines that portfolio investment is mostly used for diversifying risks, the availability of advance information technology makes this form of foreign investment to be the fastest means of transferring capital across countries. Private international investment flows became dominant in the 1980s and 1990s particularly when the official foreign investment started to wave.

Foreign Portfolio Investment (FPI) is an aspect of international capital flows comprising of transfer of financial assets such as: cash, stock or bonds across international borders in want of profit. 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 result from individuals and countries seeking to maximize their wellbeing by exploiting their own comparative advantage, so too, are capital flows as individuals and countries seeking to make themselves better off, moving accumulated assets to wherever they are likely to be most productive (Ololade and Ekperiware 2015).

According to Economic Times (2018), capital market is a market where buyers and sellers engage in trade of financial securities like bonds, stocks, etc. The buying/selling is undertaken by participants such as individuals and institutions. It consists of primary markets and secondary markets. Primary markets deal with trade of new issues of stocks and other securities, whereas secondary market deals with the exchange of existing or previously-issued securities. Another important division in the capital market is made on the basis of the nature of security traded, i.e. stock market and bond market.
A security, in a financial context, is a certificate or other financial instrument that has monetary value and can be traded. Securities are generally classified as either equity securities, such as stocks or debt securities, such as bonds and debentures. The sale of securities to investors is one of the primary ways that publicly-traded companies drive new capital for operations. Capital markets help channelise surplus funds from savers to institutions which then invest them into productive use. Generally, this market trades mostly in long-term securities.

**Theoretical Literature**

In the neo-classical production function, output is generated by using capital and labour in the production process. With this framework in mind, foreign investment inflows can have influence on each variable on the production function. Foreign investment increases capital, and may effectively improve the labour factor by transferring new technologies. It also has the ability to raise the total factor productivity. So, apart from having direct capital augmenting effects, foreign investment has added indirect effect and thus, promotes output growth rate. Goldstein and Razin (2010) show that the information-based trade-off between the two forms of investment may lead to a multiplicity of equilibria. The equilibrium outcomes depend on various assumptions about the setup costs of an investment project, the probability of being hit by a liquidity shock faced by a foreign investor and the degree of (capital market and corporate governance) transparency.

**Empirical Literature**

In the midst of various economic and financial crises in the 1990s and 2000s, there has been renewed research interest in examining the effect of FPI on economic growth of the recipient countries. Ezeoha et al. (2009) conducted a study on nature of relationship between stock market development and levels of domestic or foreign private investment flows in Nigeria. It revealed a positive link between capital market development and domestic private investment while a negative relationship is found between stock market development and foreign private investment in Nigeria. Afeeze and Kazeem (2010) concluded that there exist a unidirectional relationship between market capitalization and economic growth, and an absence of causal linkage between economic growth and total value traded and bidirectional causality between economic growth and turnover ratio. Ultimately, the result of the granger causality test shows that capital promotes economic development.

Olawoye (2011), conducts a study on the impact of capital market on economic growth of Nigeria. He used GDP as a proxy for economic growth and market capitalization, new issues, value of transaction and total listing as capital market variables. Multiple regression techniques were used for analysis and the results revealed a positive relationship between capital market and economic development. Eniekezimene (2013), examines the impact of foreign portfolio investment on capital market growth: evidence from Nigeria. Ordinary Least Square method was used to analyze the data collected. It was revealed that foreign portfolio investment has a positive
impact on capital market growth. Edame and Okoro (2013), discuss on The Impact of Capital Market on Economic Growth in Nigeria. The scientific method of Ordinary Least Square (OLS) regression technique was used in the study. From the findings it was obtained that capital market has positive and significant impact on economic growth in Nigeria.

Okwu and Obiakor (2011), employ Ordinary Least Square to analyze the impact of capital market development on Nigerian Economy Growth from 1981 to 2008. They found that market capitalization, gross capital formations of foreign private investment are significant determinant of Nigerian economic growth while the volume of share traded relate positively but insignificantly. Baghebo and Edoumiekumo (2012) used group unit root and Johansen co-integration test to examine the relationship between Foreign Private Capital Accumulation and Economic Development in Nigeria from 1970 to 2010. It was discovered that current and lagged FPI have positive impact on economic development. However, while the latter is statistically significant, the former is not. Thus formulating policies that encourage such investment would be a way forward. Uremadu (2010) examined the impact of Foreign Private Investment on Capital Formation in Nigeria from 1980 to 2004 using Ordinary Least Square method. The result showed a negative influence of foreign exchange rate, gross national savings, inflation rate, debt service ratio, lending rate, exchange rate all discourage gross capital formation in Nigeria. However cumulative foreign private investment, index of energy consumption and banking system credit to domestic economy showed a positive influence.

Ololade and Ekperiware (2015) reveal that there exist a positive relationship between Foreign Portfolio Investment and Capital Market Development in Nigeria. The coefficient of multiple determination shows that the model has a good fit while the degree of determination shows that FPI accounts for 84.86% of the variation in Market capitalization. Co-integration test however shows a lack of long run relationship between market capitalization and foreign direct investment and hence the reliance on regression results. Durbin Watson shows that data are free from serial autocorrelation. The relationship between stock market development and economic growth in Pakistan was investigated in the empirical study by Shabaz et al, (2008). They found long-run bi-directional causality between stock market development and economic growth. However, for short-run, their results showed one-way causality i.e., from stock market development to economic growth. Naceur et al (2007), investigated the role of stock markets in economic growth and identified the macroeconomic determinants of stock market development in the Middle Eastern and North African region. They found saving rate, financial intermediary, stock market liquidity and the stabilization variables as important determinants of stock market development.

Fritz and Mihir et al (2005), made an effort to explore the relationship between outbound FDI and levels of domestic capital formation through regression analyses for a much broader sample of countries for the 1980s and 1990s and concluded that it had been natural to assume that foreign investment came at the expense of domestic investment. Claessens, Daniela et al (2002), studied the determinants of Stock market development across the globe, the causes of internationalization and the effects on local exchanges by examining the data of 77 countries.
from January, 1975, to November, 2000. They concluded that the global migration of funds was beneficial for the stock market development due to more funds for corporations and more flexibility for investors. Krkoska (2001), explored the relationship between FDI and gross fixed capital formation in transition countries and showed that capital formation is positively associated with FDI. Garcia and Liu (1999) estimated the macroeconomic determinants of stock market development particularly stock market capitalization by using pooled data on fifteen industrialized and developing countries for the period of 1980-1995. The results showed that real income, saving rate, financial intermediary development, and stock market liquidity are the important determinants of stock market development. Macroeconomic volatility did not prove significant. Errunza (1983) found long term impact of foreign capital inflows on stock market development. Conversely, Idowu and Babatunde (2012), investigated the effect of financial reforms on capital market development in Nigeria over the period 1986 to 2010. Ordinary Least Square (OLS) technique was also used. The findings, however, revealed that the variables that represented the development of the banking sector interacted negatively with market capitalization which implies that the activities of those institutions deterred the development of the capital market. Akinlo (2004) found that foreign capital has a small and not statistically significant effect on economic growth in Nigeria. Jerome and Ogunkola (2004) assessed the magnitude, direction and prospects of FDI in Nigeria. They noted that while the FDI regime in Nigeria was generally improving, some serious deficiencies remain. These deficiencies are mainly in the area of the corporate environment (such as corporate law, bankruptcy, labor law, etc.) and institutional uncertainty, as well as the rule of law. The puzzle in the literature over whether FDI has an impact on capital market development in Nigeria is the motivation behind this work.

Summary of Literature Review and the gap to be filled
Much literature review has been done in this study. It is discovered that there has not been a consensus on the findings which depend on the data and econometric tool used. However, not much attention has been centered on joint effect of stock market development and foreign portfolio investment on growth in Nigeria. Thus, this study intends to fill this gap.

Method of Study
Data and Data Sources
This study covers a period of 36 years (1980-2016). For the purpose of this work, data are gathered from published or secondary sources such as publication by the Central Bank of Nigeria, Economic and Financial bulletin, Nigerian Stock Exchange fact books. The ordinary least square regression technique is used to measure the impact of foreign private investment and capital market development in Nigeria. The dependent variable which is the capital market development is proxy by all market share index, while the explanatory variables includes: foreign direct investment, Gross National Product, inflation rate and domestic saving.
**Model Specification**

This study is going to adopt the model of Rukhsana Kalim (2009). The log-linear modeling specification has been used. Bowers and Pierce (1975) suggest that Ehrlich’s (1975) findings with a log linear specification are sensitive to functional form. However, Ehrlich (1977) and Layson (1983) argue on theoretical and empirical grounds that not only log linear form is superior to the linear form but also makes results more favorable and reduce data size to manageable size. To check the impact of foreign portfolio investment on stock market development, following equation for empirical estimation is being modeled in a linear form as thus:

\[ MC = \alpha_0 + \alpha_1 \text{FPI} + \alpha_2 \text{GNP} + \alpha_3 \text{INF} + \alpha_4 \text{SAV} + \mu \]

Taking log of the variables, we have:

\[ LMC = \alpha_0 + \alpha_1 \text{LFPI} + \alpha_2 \text{LGNP} + \alpha_3 \text{INF} + \alpha_4 \text{LSAV} + \mu_t \]

a-prori expectation \( \alpha_1 > 0; \alpha_2; \alpha_3 > 0; \alpha_4 < 0; \alpha_4 > 0 \)

Where:

- \( \alpha_0 \) = Intercept, \( a_{1-4} \) = coefficient of variables
- \( MC \) = Market capitalization as share of GDP proxy stock market development
- \( FPI \) = Foreign portfolio investment as share of GDP,
- \( GNP \) = GNP per capita proxied for economic growth,
- \( INF \) = Inflation rate\(^1\), \( SAV \) = Domestic savings as share of GDP and
- \( \mu \) is error term. All variables are taken into log form except inflation.

Justification of variables taken in the model is discussed below:

**Data analysis technique**

The Ordinary Least Square (OLS) method and the parsimonious error correction model specification were used in the study. The Augmented Dickey Fuller unit root test was used to test the stationary status of the variables before carrying out co-integration regression. Hence the multiple regressions technique is used to estimate the parameters, the objective being to minimize the error term with a view of finding the regression equation that explains the data. This is preferred for its unbiasseness, consistency, efficiency and simplicity.

**Presentation and analysis of results**

In this study, the Augmented Dickey Fuller (ADF) unit roots test was employed to test for the time series properties of the model variables. The importance of this derives from the fact that estimation in the presence of non-stationarity in variables usually leads to biased and inconsistent estimate of the standard errors of the coefficients and this could lead to misleading inference if appropriate technique is not applied to overcome the problem. The test was designed to examine the order of integration of the variables.

The decision rule is that the variable under investigation has a unit root if the ADF statistic value exceeds the critical value at a chosen level of significance (in absolute term).

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\(^1\) All variables are in log-form except inflation.
These results are presented in table I below.

**Table 1: Augmented Dickey Fuller Unit root**

<table>
<thead>
<tr>
<th>Variable</th>
<th>ADF statistics</th>
<th>ADF statistics</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level</td>
<td>Critical values</td>
</tr>
<tr>
<td></td>
<td></td>
<td>1% = 3.8575</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5% = 3.040</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% = 2.6608</td>
</tr>
<tr>
<td>LMC</td>
<td>-1.8013</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>1% = -3.8575</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5% = -3.040</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% = -2.6608</td>
</tr>
<tr>
<td>LFPI</td>
<td>-1.44187</td>
<td>1% = -3.8575</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5% = -3.040</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% = -2.6608</td>
</tr>
<tr>
<td>LGNP</td>
<td>-1.44959</td>
<td>1% = 3.8575</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5% = 3.040</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% = 2.6608</td>
</tr>
<tr>
<td>LINF</td>
<td>2.26714</td>
<td>1% = 3.6572</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5% = 3.040</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% = 2.1608</td>
</tr>
<tr>
<td>LSAV</td>
<td>3.1266</td>
<td>1% = 3.8575</td>
</tr>
<tr>
<td></td>
<td></td>
<td>5% = 3.1040</td>
</tr>
<tr>
<td></td>
<td></td>
<td>10% = 2.6608</td>
</tr>
</tbody>
</table>

Source: Author’s computation with the use of E-view6

The results show that all values are statistically significant at 1% and 5% level of significance, since the ADF values are lower than the critical values at levels. This implies that there is a unit root in the series. In other words, there is non-stationarity in the variables, hence they can co-integrate.

**Johansen Co-integration test**

The next step after finding out the order of integration is to establish whether the non-stationary variables could be co-integrated.

The Johansen Co-integration Test was adopted in this study to check for long-term relationship among the variables. All the I(1) and I(2) variables are used in this test. The results obtained from the Johansen multivariate co-integration are presented below.
Table 2: Co integration
Sample: 1980 2014
Included observations: 34
Test assumption: Linear deterministic trend in the data
Series: LMC LFPI LGNP LINFR LSAV
Lags interval: 1 to 1

<table>
<thead>
<tr>
<th>Eigen value</th>
<th>Likelihood Ratio</th>
<th>5 Percent Critical Value</th>
<th>1 Percent Critical Value</th>
<th>Hypothesized No. of CE(s)</th>
</tr>
</thead>
<tbody>
<tr>
<td>0.949987</td>
<td>103.5977</td>
<td>47.21</td>
<td>54.46</td>
<td>None *</td>
</tr>
<tr>
<td>0.532051</td>
<td>31.70650</td>
<td>29.68</td>
<td>35.65</td>
<td>At most 1 *</td>
</tr>
<tr>
<td>0.410271</td>
<td>13.48100</td>
<td>15.41</td>
<td>20.04</td>
<td>At most 2</td>
</tr>
<tr>
<td>0.033058</td>
<td>0.806798</td>
<td>3.76</td>
<td>6.65</td>
<td>At most 3</td>
</tr>
</tbody>
</table>

* denotes rejection of the hypothesis at 5% significance level
L.R. test indicates 2 cointegrating equation(s) at 5% significance level

Source: Author’s computation with the use of E-view

From the table 2, the co-integration result using the Johansen co-integration test, indicated two co-integrating equation at 5% significance level, hence there is a long run relationship existing among the variables used in the model.

The possibility of co-integration makes it possible to use the error correction mechanism (ECM) model, to align short run dynamics with long run situation. The ECM is a solution to the problem of spurious results associated with estimating equations involving time series variables, and to capture dynamic adjustment in the long run. Adopting the general to specific framework, an attempt was made to estimate the over-parameterized error correction model from where a parsimonious (Preferred) error correction model would be obtained. The relevance of the ECM is that it provides a framework for establishing the links between the short run and long run approaches to economic modeling. Thus, with the ECM, no information associated with the variable’s differencing is lost because the modeling technique incorporates both the short run dynamics and long run information through the error correction term. The equation included the ECM term lagged one period, representing the past value of the error correction factor whose coefficient should be negative and statistically significant to support the existence of co-integration. This result is however substantiated by the over parameterized error correction result and the parsimonious error correction model result is presented below:
Table 3
Dependent Variable: LMC
Method: Least Squares
Sample(adjusted): 1980 2014
Included observations: 34 after adjusting endpoints

<table>
<thead>
<tr>
<th>Variable</th>
<th>Coefficient</th>
<th>Std. Error</th>
<th>t-Statistic</th>
<th>Prob.</th>
</tr>
</thead>
<tbody>
<tr>
<td>C</td>
<td>5.146291</td>
<td>1.032114</td>
<td>4.986166</td>
<td>0.0002</td>
</tr>
<tr>
<td>LOG(MC)</td>
<td>0.338860</td>
<td>0.112747</td>
<td>3.005501</td>
<td>0.0101</td>
</tr>
<tr>
<td>LOG(FPI)</td>
<td>0.237388</td>
<td>0.063797</td>
<td>3.721024</td>
<td>0.0026</td>
</tr>
<tr>
<td>LOG(GNP)</td>
<td>0.040812</td>
<td>0.052619</td>
<td>0.775614</td>
<td>0.4519</td>
</tr>
<tr>
<td>LOG(INFR)</td>
<td>-0.120885</td>
<td>0.037539</td>
<td>-3.220250</td>
<td>0.0067</td>
</tr>
<tr>
<td>LOG(SAV)</td>
<td>0.063897</td>
<td>5.348996</td>
<td>0.000617</td>
<td>0.0314</td>
</tr>
<tr>
<td>ECM(-)</td>
<td>-0.341784</td>
<td>0.2615784</td>
<td>-2.515073</td>
<td>0.00453</td>
</tr>
</tbody>
</table>

R-squared     | 0.843485    | Mean dependent var | 15.64664|
Adjusted R-squared | 0.836131  | S.D. dependent var  | 1.332589|
S.E. of regression | 0.088564  | Akaike info criterion | -1.838621|
Sum squared resid | 0.101967  | Schwarz criterion   | -1.428874|
Log likelihood | 256.1367   | F-statistic         | 677.4320|
Durbin-Watson stat | 1.939786  | Prob(F-statistic)   | 0.000000|

Source: Author's computation with the use of E-view

**LMC** = 0.5146291 + 0.237388FPI + 0.040812GNP + 0.132845INF + 0.341784SAV + µ_t

From the table 3 above, FPI is positive with a coefficient of 0.237388 which indicate a one percent change in foreign portfolio investment is associated with 23.74 percent increase in market capitalization and it significantly influenced market capitalation and hence development of the Nigeria stock market. This shows that the relationship between foreign portfolio investment and stock market development is complementary and not substitute. Economic growth (GNP), though not statistically significant positively influences market capitalation and the development of stock markets in the country with a coefficient of 0.040812. This indicates that a one percent growth in GNP will lead to four percent increase in market capitalization. The impact of inflation on stock market development is positive and significant. The positive association between inflation and stock market development supports the earlier study's proposition that Nigeria stock markets are hedging against inflation (Osinubi and Amaghioneodiwe 2010). It may be claimed that the stock market is safe place for investors to invest in Nigeria. Domestic savings seem to improve the efficiency of stock market in the country. It is concluded that one percent increase in domestic savings increases growth of stock markets by 6.38 percent. Spontaneous impact of foreign direct investment is also complementary. The R-squared (R^2 = 0.843485), adjusted R-squared (0.8361631) confirms that the model is a preferred one for economic forecast. 84% variation change in the dependent variable (MC) is explained by the independent variables. The F-statistics (677.4320) which is greater than the F- table value of (4.37) at 5% level of
significance affirms the fact that the entire model is statistically significant as well as the Durbin Watson statistics (1.939786) which indicate the complete absence of first order serial correlation or auto correlation, given the traditional yard stick of 2.0.

The existence of an error-correction term among a number of co-integrated variables implies that changes in dependant variable are a function of both the levels of disequilibrium in the co-integration relationship (represented by the ECM) and the changes in the other explanatory variables. This tells us that any deviation from the long run equilibrium will feed back on the changes in the dependant variable in order to force the movement towards the long run equilibrium (Eniekzimene, 2013).

The error term tells us the speed with which our model returns to equilibrium following an exogenous shock. A negative sign shows a move back towards equilibrium whereas a positive sign indicates a movement away from equilibrium. The coefficient should lie between 0 and 1. 0 suggests no adjustment whereas 1 indicates full adjustment. The error correction term shows the speed of adjustment to restore equilibrium in the dynamic model. In particular, the ECM coefficients show how quickly or slowly the variables converge to equilibrium. As observed by Baghebo and Edoumiekumo, (2012) a highly significant error correction term is a strong confirmation of the existence of a stable long run relationship. The result of the error correction model indicates that the error correction term ECM (-1) is well specified and the diagnostic statistics are good. The ECM (-1) variable has the correct sign and is statistically significant. The speed of adjustment of 0.341748 shows a low level of convergence. In particular, about 34 percent of disequilibrium or deviation from long run of MC in the previous period is corrected in the current year. This indicates that there is a short run and long run relationship between the market capitalization and foreign portfolio investment in Nigeria.

Conclusion and recommendations
This study appraised the impact of foreign Portfolio Investment on the Nigerian stock market and analyzed the effect of foreign portfolio investment on the Nigerian stock market and hence the growth of the Nigerian economy. 36 years data were collected. Log linear form model for regression was formulated. The macroeconomic variables included in the model were Market capitalization, FPI, GNP per capita, domestic investment and inflation rate, and this was a time series analysis.

Consequently, the study employed the Augmented Dickey Fuller (ADF) unit root on the model which show non-stationarity of the variable, then the co-integration test which shows that the variables have a long run relationship. This made it possible to use the error correction mechanism (ECM) on the model. The OLS result with a parsimonious error correction component reveals that the coefficient of determination explains 84.73% of the systematic variation in market capitalization which proxies capital market growth in the reference period. The model shows that FPI is positively signed and statistically significant, confirming our a priori economic expectation. Specifically, it implies that a 100% change in FPI will lead to 0.237388 or approximately 23% increase in market capitalization. The results reveal that there is
a strong relationship between FPI and stock market capitalization. This further show that FPI and domestic savings are complementary and not substitute to the growth of stock market development and hence, growth of the Nigerian economy

**Recommendations**

However, the findings from this study raise some policy issues which will reinforce the link between foreign portfolio investment and capital market growth in Nigeria. The government can encourage FDI especially FPI in Nigeria by taking various steps. First and foremost measure may be the assurance of political stability in the country.

To further sustain foreign portfolio investment and to achieve other macroeconomic objectives of the government such as economic growth, government should ensure that:

(i) The policy of internationalization of stock market operations should be sustained;

(ii) The on-going liberalization of financial markets as well as privatization programs be sustained

(iii). Efforts should be made to reduce inflation to a single digit as shown from the study the relationship between inflation and economic growth is negative.

(iv). There is the need for greater foreign participation in the stock market which could be achieved by greater openness.

(v). Authorities should look for ways of strengthening the working mechanisms of the capital market especially against fraudulence to ensure the effectiveness of the policy tools in achieving the desired macroeconomic goals in the country.

(vii). Authorities and policy makers should come up with policies that are more investment friendly.

(viii). Adequate provision of infrastructure can enhance the FPI. Volatility of foreign exchange and the rate of interest should be minimized through appropriate monetary policy.

All these development might affect the observed relationship among stock market development and economic growth.

**References**


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