

## **FOREIGN PORTFOLIO INVESTMENT, CAPITAL FLIGHT AND CAPITAL MARKET PERFORMANCE IN NIGERIA**

**Ohiaeri, Nnenna Victoria**

University of Lagos, Akoka, Nigeria

[nohiaeri@unilag.edu.ng](mailto:nohiaeri@unilag.edu.ng), [nnenna\\_ohiaeri1960@yahoo.com](mailto:nnenna_ohiaeri1960@yahoo.com)

### **Abstract**

*Capital market participation imbalance between foreign and local portfolio investors caused by the influx of foreign portfolio investments into Nigerian capital market has generating contentious debates among stakeholders in Nigerian capital market. This study investigates the nature and direction of causality existing among foreign portfolio investments, capital flight and capital market performance in Nigeria using ex-post-facto and descriptive research designs. Literature review of fundamental theories and empirical works are done as annual time series data sourced and sampled from various issues of National Bureau of statistics, International Monetary fund, world bank direction of trade websites, Security Exchange Commission reports and Nigerian Stock Exchange reports between 1970 and 2014. Data generated are analyzed using Vector Error Correction models and co-integration test subject to the outcome of the preliminary tests for conformity with econometric assumptions. Study findings disclosed a unidirectional causality between capital market performance in one hand and also between foreign portfolio investment and capital flight on the other hand at 5% and 10% levels of significance respectively. The study hereby concludes that there is significant symbiotic connectivity among the examined variables in Nigeria and consequently, recommends an urgent review of capital importation policy, a robust regulatory framework and a re-investment incentive to discourage indiscriminate repatriation of investment proceeds outside Nigeria.*

**Keywords:** *Capital market, Investments, Capital flight, Foreign investors, Nigeria*

## INTRODUCTION

Global perception of the evolving financial market investment complexities and its potentials has created opportunities for various classes of investors aiming at optimizing wealth and productivity through various investment channels existing in the market. Keynes (1936) described investment as a conscious behavior of an entity which involve the deployment of funds for assets acquisition with a view of obtaining targeted returns over specified periods of time through an organized capital market. .

According to Owualah, (2009), the role of capital markets in achieving resource mobilization, liquidity transformation and security marketability through international financial intermediation process therefore cannot be over emphasized. This is affirmed by its growing awareness on local and international policy discussions in the recent times. Consequently, its performance becomes imperative for effective transmission of either domestic investment, foreign direct or portfolio investments as well as strategic mergers among individuals or nations. Okereke-Onyiuke, (2000) remarked that economic liberalization, deregulation, commercialization and privatization which commenced for many decades ago, have greatly expanded the financing options existing in the Nigerian economy through the capital market, by creating room for international investment and capital flows to supplement to domestic savings. Ngowi , (2001) and Obiechina, (2010) explained that the roles of capital markets in Africa have been boosted by globalization and market integration although most of these achievements are significantly constrained by the interplay of factors including low level of domestic savings, restrictive financing policies and regulations against foreign portfolio investments, remittances of capital gains, investment incomes as well as foreign exchange control dilemma. However, various governments over the years have tried to address the challenges through various government investment friendly policies to encourage inflows of foreign capital through the borders .

Never the less, despite the perceived positive tradeoffs of globalization in Nigeria, Adegbite, (2016) observed that some adverse consequences of the policy in Nigerian economy as it tends to has promote a casino based economic environment, characterized by financial market repression which further renders the national governments' monetary policies ineffective. She notes that the evolution of different investment channels to facilitate foreign capital flows through via this investments window are not unconnected with the recent emerging markets economic crisis as witnessed in China, Mexico, Singapore, India, Brazil and South Africa . This is because foreign capital flows through foreign portfolio investments presented ready - made conduit for faster transmission of funds that could worsen capital flight problems.

## Statement of the Problem

The enthusiasm for capital market recovery shown in order to recoup losses suffered during the 2008 market depression presented a big opportunity for foreign portfolio investors increased presence in Nigerian capital market. This is as a result of the low equity prices advantage as well as huge return potential offered by post market crisis period. Consequently, foreign portfolio investors' surge created price and return instability which eroded market confidence level and creating market apathy as the foreign investors dominance of the market continued to widen the participation ratio between the foreign and domestic investors which rose from 14.8% in 2007 to 67.8% in 2013. At the local level, this participation imbalance between foreign and local portfolio investors has generated controversies and mixed reactions among stakeholders with some calling for increased foreign portfolio investment influx as a foreign capital sourcing option to the economy (Okereke-Onyiuke, 2000 and Ozurumba, 2009) and others linking foreign portfolio investment dominance of the capital market to capital flight problems, increasing market illiquidity, bearish market and protracted price volatility problems (Adegbite, 2009; Nagwa et al 2009 and Onyema, 2013). Investigations into the nature and direction of causality among foreign portfolio investment and capital market performance contributes to the existing debate in a bid to resolve this puzzle. Furthermore, the need to bridge a perceived negligence and low awareness level of capital market activities by Nigerian public explains the authors focus in this research area.

## Aim and Objectives of the Study

The study broadly aims at investigating the nature and direction of causation existing among foreign portfolio investments, capital market performance and capital flight in Nigeria. To realize this major objective, the study attempts specifically to;

- (i) examine the pairwise granger causality between foreign portfolio investment and capital market performance in Nigeria.
- (ii) examine the nature and direction of causality existing between foreign portfolio and capital flight in Nigeria.
- (iii) evaluate the direction of causation between capital market performance and capital flight in Nigeria.

## Research Questions

- (i) What is the direction of causality between foreign portfolio investment, capital market performance in Nigeria?

- (ii) What is the direction of causality between foreign portfolio investments and capital flight in Nigeria?
- (iii) What is the direction of causality existing between capital flight and capital market performance in Nigeria?

### **Research Hypotheses**

- (i) H01 : There is no direction of causality existing foreign portfolio investment and capital market performance in Nigeria.
- (ii) H02 : There is no direction of causality existing between foreign portfolio investment and capital flight in Nigeria
- (iii) H03 : Capital market performance does not granger cause capital flight in Nigeria.

### **Significance of the Study**

This study aptly captures the mood of Nigerian capital market in particular and that of Nigerian public as a whole as it addresses this economic issue at a period when equity market investment is becoming a taboo due to waning investors' confidence level in the market.. While bridging the perceived awareness gap in the financial and investment sector of the economy as most recent studies focused on foreign direct investment, capital market development and economic growth ignoring the foreign portfolio segment of foreign capital flow flows as well as their capital flight tendencies. Findings from this study could aid policy formulation by the relevant government agencies, capital market authorities and also create capital market awareness for stake holders, market researchers as well as to the Nigerian public in appreciating the inter relationship that exist among capital market, capital flight and foreign portfolio investment in Nigeria.

### **Scope and Delimitation of the Study**

The study covers period between 1970 and 2014 during the pre and post -oil boom era when Nigeria's economic potential gained popularity to the global financial market. This scope allows bridging of the perceived information gap in previous studies in Nigeria and to achieve a more robust e-view output which performs better with larger volume of data. Major limitations of this study include the bureaucratic bottlenecks encountered at various data collection venues, inflation and foreign exchange rate fluctuation as well as poor database management and accessibility which is prevalent with government agencies in Nigeria.

## LITERATURE REVIEW

### Theoretical Framework

Theoretically, this study is anchored on the 'The Push and Pull factors theory' which as proposed by Lee(1966) synthesizes conditions that affect capital flow among nations into two 'worlds' of the poor and the rich nations. The theory is used to explain why foreign portfolio investors migrate one investment environment to another in search of favourable investment climate that would meet their investment objectives. Further more the capital flow oriented theory as postulated and validated by Fisher , (1980) also provides relevant base for this work as it captures exchange rate depreciation as pull and push factor that determines international competitiveness, balance of trade, real output of countries, which in turn affects the current and future expected cash flows of the firms and their stock prices as incremental savings flow from capital rich country (capital exporter) to replace other foreign sources of capital in capital deficient nations (capital importer).

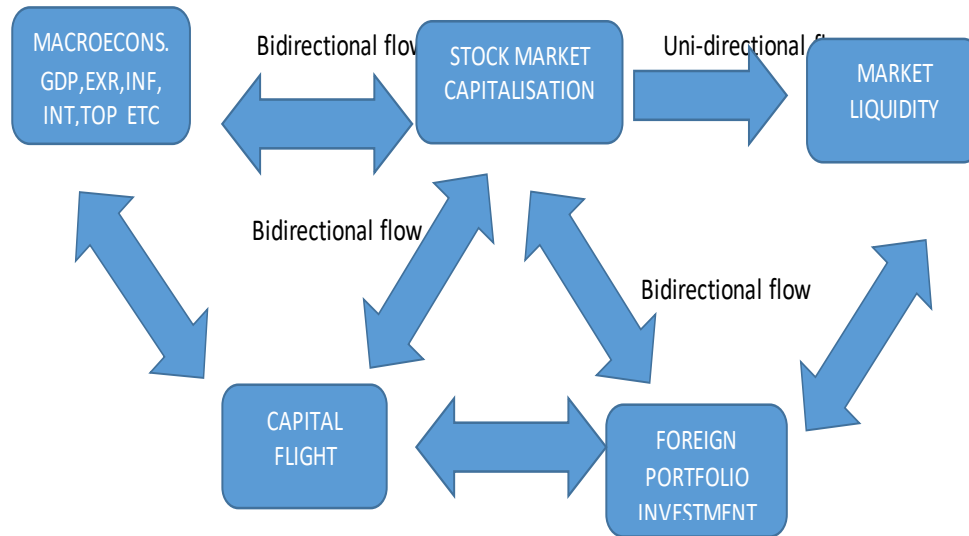
The liquidity preference theory as postulated by Keynes (1936)and popularized by Tobin (1967) is also applied here to draw attention to interest rate movement as a push or pull factor that drive geographical portfolio diversification. Accordingly, the theory aligns with Keynesian Transmission mechanism which is used to explain different motives for which individuals would opt to hold or invest cash locally or at international levels respectively .

### Conceptual Framework

Interactive impacts existing among capital market performance, capital flight and foreign portfolio investment which is normally driven by state of economy is presented diagrammatically in a symbiotic fashion as depicted in this figure. A two way flow of impact can be triggered by the state of the macroeconomic indicators; like the gross domestic product (GDP), inflation rate and interest rate and exchange rate exert on capital market performance in terms of market returns, market liquidity and capital market market performance. The capital market performance responds to the macroeconomic influence in a bilateral pattern which could positively or negatively impact on the economy in terms of expected markets' return, market liquidity and market capitalization. This in turn could opportunity for portfolio investors to shift their portfolio in order so as enjoy expected market return.

Figure 1. Flow of Interrelationship existing among capital market, capital flight and foreign portfolio investment in Nigeria

DIRECTION OF IMPACTS AMONG THE POLICY VARIABLES:



### Empirical Framework

The connectivity existing among foreign portfolio investment, capital flight and capital market performance has received meager attention by Nigerian authors contrary to what is tenable in other developed countries. This explains the perceived gap existing in this study area.

### Foreign portfolio investments, capital markets performance and capital flight in the Sub-Saharan African states

The clamor for foreign portfolio investment diversification in the Sub Sahara Africa that are receiving boost in the recent times, stem from the findings that has been linked to foreign portfolio investment as a key drivers of economic growth and development which could translates to rapid industrialization of the economy.

Data from African Security Exchange Fact Book, (2013), revealed a staggering level of foreign participation in the sub-Saharan African emerging markets. Out of fourteen (14) countries sampled only six countries (6) had foreign investors participation ratio of above 40% and out of 23 sampled nations in Africa, twelve of them had neither foreign nor local investors' presence in equity trading as at December, 2012 implying the total absence of developed capital market facilities. ASEA also revealed that Lusaka Stock Exchange recorded the highest

foreign investors' participation as at 2012 with a ratio of 78.9%: 21.1% while Bourse de Tunis had the least rate of 6.3% (foreign) against 93.7% (local) investors.

Fiador and Asere, (2012) noted that Ghana's Financial Market Landscape had witnessed the emergence of various collective investment schemes mainly dominated by overseas stocks which have significantly aided in mobilization of savings. The trend recorded indicating overseas investors dominance of Ghana's Databank Epack investment fund was due to illiquidity of the Ghanaian stock market coupled with limited stocks in the market.

Egyptian, equity markets have become significantly more globalized with significant dominance by foreign investors since the early 1990 due to government policies to encourage foreign participation.

According to the Egyptian Capital Market Authority (CMA) published data (1996), the highest share of foreign investors in market capitalization of Egyptian's stock market was about 8% only in 1996/97, their share in the number of deals and the value traded has however increased over the years.

In Kenya, participation of foreign investors in the Nairobi Securities Exchange (NSE) can be traced back to 1954 when trade in shares was confined to the resident European community. The presence and dominance of foreign investors in the market declined after independence when the country adopted the Kenyanization policy.

### **Trend in Foreign Portfolio Investment and Capital flight and capital market performance in Nigeria**

Ekineh, (2003) observed the volatility of investment climate in Nigeria within the period of 1987 to 1998 which was highly unfriendly, leading to a spate of divestment even by the nation's traditional and long standing investors, who perhaps have moved to more favourable environment. She noted that in the past, foreign portfolio investors' participation in Nigeria markets was sluggish, largely due to non-internationalization of the money and capital markets as well as non-disclosure of information on investments in foreign capital money markets. Although the Nigerian capital market was completely deregulated in 1993, foreign portfolio inflow displayed adverse net flow up to 1998 with a reversal in 1999. A review of Capital market authorities reports as well as CBN reports (2014) revealed that as at 2014 average % change in foreign portfolio investment grew to 60, 4798% from 110% in 1980., Capital flight grew to 17, 37% in 2014 from 429% in 1980 while capital market performance measured by market capitalization rose to 14,933% to in 2014 from 28.5 . % in 1980. Capital flight movement peaked between 2005 and 2010 with average percentage increase of 1, 938%, dropping to 1, 7 37 % between 2010 and 2014. Over the period between 1970 and 2014

capital flight averagely increased by 1,837%. For capital market performance, the highest percentage increase of 14,900% was recorded between the year 2010 and 2014 while the least increment was 6% between 1985 and 1990. Over the period between 1970 and 2014 the ratio of market capitalization gross domestic product changed by 896%. Foreign portfolio investment between 2010 and 2014 was remarkably explosive with highest average percentage increase of 604, 798%. The lowest average percentage change of 110% occurred between 1975 and 1980. Over the period between 1970 and 2014 the ratio of market capitalization gross domestic product changed by 604797%.

Table 1. Trend in Flow of Foreign Portfolio Investment, Market Capitalisation and Capital Flight In Nigeria 1970-2014

YEARS	1970- 1975	1975- 1980	1980- 1985	1985- 1990	1990- 1995	1995- 2000	2000- 2005	2005- 2010	2010- 2014
CF(%)	100%	439%	325%	402%	402%	47.7%	396%	1938%	1737%
MCY(%)	100%	28.5%	6356%	6%	203%	138.4	356%	8828%	14,933%
FPI(%)	100%	110%	178%	2008%	12,570%	-6116	53147	129703	604, 798

Ajayi, (1997) evaluated capital flight magnitude of 18 highly indebted low income countries in Sub-Saharan African States between 1980 -1991 using comparative analysis method and found that cumulative capital flight to external debt of Nigeria was the highest at 94% compared to other African nations in the samples.

Ozurumba, (2009), evaluated the impact of stock market returns on foreign portfolio using the Ordinary Least Square estimation method and found that a robust, positive and significant relationship exist among these variables. The study further revealed a unidirectional causality running from stock market returns to foreign portfolio investment but study failed to capture the nature of causality between the foreign portfolio investment and capital flight in Nigeria .

Adenuga, (2010 ) investigated the role of macroeconomic policies in determining the flow of Foreign Portfolio Investment (FPI) in developing market economies and found that a highly volatile macroeconomic environment has forced foreign investors to be skeptical about increasing their investment outlays. This study provides measures of real capital flight from Nigeria based on the portfolio choice approach and was subsequently subjected to econometric tests .

Ayadi, (2008) investigated the determinants of capital flight in Nigeria and its attendant impacts and found that capital flight is driven by the interest rates differential both in the short and in the



long run and that, exchange rate depreciation significantly increases capital flight in Nigeria but the study ignored the nature or direction causality among foreign portfolio investment, capital flight and capital market in Nigeria.

Ojo, (1992) investigated evidence of capital flight in Sub-Saharan State using a comparative analysis approach to capital flight level and found that the cumulative capital flight from 1975 to 1991 in Nigeria was valued at US\$35.9 billion, which is more than double the total capital flight of the other two African countries (Cote d'Ivoire and Morocco) in the sample.

Jimoh, (1991) investigated geometric analysis of the magnitude of capital flight in Nigeria using World Bank and Morgan Trust Capital flight Estimation methods. The study found that between 1960 and 1988 total capital flight in Nigeria stood at 53.8 billion dollars averaging 1.9 billion dollar per annum. The study also found that exchange rate valuation, foreign-domestic inflation rate differentials and primitive capital accumulation are key determinants of capital flight in Nigeria aside from foreign portfolio investment.

Onuoha, (2013) examined the impact of macroeconomic indicators on foreign portfolio investment in Nigeria between the period 1980 and 2010 using Ordinary Least Square Estimation methods and found that there is inverse relationship between GDP, Money Supply and foreign portfolio investment only while disclosing a direct relationship among other variables. It was also reveal that macro-economic variables do not granger cause foreign portfolio investment in Nigeria .

## **RESEARCH METHODOLOGY**

### **Research Design**

The study employs descriptive, exploratory and ex-post-facto research designs that comprise basically of the parametric estimations to validate the nature, magnitude and direction of causality among the focused variables.

### **Population, Scope and Sample Size**

The study relied on annual macroeconomic time series data on foreign portfolio investment capital flight and stock market performance indicators between the periods 1970 to 2014. The choice of this study scope is informed by the need to capture data both in pre and post oil boom era and to bridge a perceived information gap in previous literature .

Stratified and Judgmental sampling methods are used to select Two hundred and fifty seven (257) securities consisting of One Hundred and Ninety Seven consisting of (197) equities of companies (52) federal, state and local government bonds, (3) preference shares and four

(4) mutual fund investments from (12) different industrial sectors and Ninety –Nine (99) sub-sectors all listed with the Nigerian stock exchange between 1970 and 2014 (stock market outlook reports, 2014).

### Data Sources and Data Collection Methods

The data engaged for the study are basically from secondary sources from various issues of Nigerian stock market reports, Central Bank of Nigeria Statistical Bulletins, National Bureau for Statistics, Security and Exchange Commission, IMF, World Bank Direction of Trade, Newspapers and some local and international Journals and textbooks.

### Data Analysis Techniques

Vector Error Correction Model is used for the data analysis subject to the outcome of the various preliminary tests conducted. The justification for the use of the method is based on the realization that inter relationships among time series data are so complex that traditional time-series models have failed to fully capture their dynamic interaction impacts and direction of influences (Engle and Granger, 1987, Macdonald, Power and Granger, 1981). According to Sims, (1980) the model provides empirical evidence on the responses of macroeconomic variables to various exogenous impulses in order to discriminate between alternative theoretical models of the economy (Sims 1980).

### Model Specification

Models 1, 2 and 3 below estimate the interaction and direction of causality among the focus variables using the vector auto-regression structures. This is adopted to examine the interaction and connectivity among the variables. The VECM is as specified;

$$\Delta 1mcy_t = \beta_0 + \sum_{i=1}^k \beta_1 \Delta 1mcy_{t-i} + \sum_{i=1}^k \beta_2 \Delta 1fpi_{t-i} + \sum_{i=1}^k \beta_3 \Delta 1cpf_{t-i} + \beta_4 ECM_{2t-1} \quad 1$$

$$\Delta 1fpi_t = \alpha_0 + \sum_{i=1}^k \alpha_1 \Delta 1fpi_{t-i} + \sum_{i=1}^k \alpha_2 \Delta 1mcy_{t-i} + \sum_{i=1}^k \alpha_3 \Delta 1cpf_{t-i} + \alpha_4 ECM_{1t-1} \quad 2$$

$$\Delta 1cpi_t = \delta_0 + \sum_{i=1}^k \delta_1 \Delta 1cpf_{t-i} + \sum_{i=1}^k \delta_2 \Delta 1fpi_{t-i} + \sum_{i=1}^k \delta_3 \Delta 1mcy_{t-i} + \delta_4 ECM_{3t-1} \quad 3$$

Where:

Imcy is the log of market capitalization to the ratio of GDP, Ifpi is the log of foreign portfolio investment lcpf is the log of capital flight.

ECM is the Error Correction Model,  $I = (1, \dots, n)$ ,  $\alpha, \beta$  and  $\delta$  are the coefficient of the parameters, the change symbol is the first difference of the endogenous variables.

Application of VECM for this study is subject to the outcome of the co-integration Tests. The VECM enables us to estimate the interactive response to impacts among series using the Granger Causality test, Impulse Response Functions (IRFs) and Forecast Error Variance Decomposition (FEVD) if our series are integrated of order zero i.e.  $I(1)$  and since the study objective of this centered on measuring the direction of causation, the granger causality test is applied to establish the nature and direction of causality among our focus variables

## ANALYSIS

### Descriptive Statistics

The descriptive statistics of the data series provides information about the sample series such as the mean, median values; and the distribution of the sample measured by the skewness, kurtosis and the Jarque-Bera statistics. Table 2 suggests, that all annual time data series generated are normally distributed going by the result of the descriptive statistics and hereby rejects the null hypothesis of no normality distribution.

Table 2. A Descriptive Analysis of Annual Time Series Data for (1970-2014)

	LogMCY	LogFPI	LogCF	LogXR	LogINT	LogINF	LogTOP	LogML	Loggdp
Mean	3.708	7.731	8.80	2.433	2.6888	2.5789	0.4880	8.791	13.309
Median	2.638s	7.085	8.94	2.979	2.827	2.4849	0.26648	6.204	13.185
Skewness	-0.099	0.305	-0.212	-0.152	-0.248	-0.3488	0.10880	0.7638	0.0555
Jarque-Bera	1.426	4.1191	1.32001	4.776	1.722	0.10728	3.7874	4.8645	3.596
Probability	0.489	0.127	0.516	0.0917	0.422	0.0009	0.150513	0.08783	0.0003
Observations	45	45	45	45	45	45	45	45	45

### Stationarity Test (Unit root Test)

Table 3 below present the results of unit root tests using Augmented Dickey Fuller test and Philips and Perron test applied on annual data series.

Table 3. The Result of Unit root Test (Augmented Dickey Fuller Test)

Series	Level	First Diff	Remark
<i>Log(mcp)</i>	-0.20	-5.02	I(1)
<i>Fpi</i>	0.16	-3.11	I(1)
<i>Cf</i>	-0.26	-9.83	I(1)

				Table 3...
<i>Int</i>	-1.69	-10.51	I(1)	
<i>Inf</i>	-3.59	-	I(0)	
<i>Exr</i>	0.57	-5.97	I(1)	
<i>Top</i>	0.95	-11.26	I(1)	
<i>Log(sml)</i>	-0.84	-4.77	I(1)	
<i>Log(gdp)</i>	0.16	-5.088	1(1)	

Using Ordinary Least Square OLS, the macroeconomic variables (interest rate (*int*), exchange rate (*exr*), stock market liquidity (*sml*) and trade openness (*top*) and gross domestic product (*fpi*) will not be subjected to further testing. However, since our policy series (market capitalisation (*mcp*), foreign portfolio investment (*fpi*), capital flight (*cf*)) are integrated of order one i.e. I (1) indicating that the presence of significant co-integration relationship among the variables could be determined. The adoption of VECM analysis becomes necessary .

### Co-integration Test

The co-integration test was conducted by using the maximum likelihood approach by Johansen and Julius (1990) under the assumption of linear deterministic trend in the data. This is a more superior test that relies on asymptotic properties because of its sensitivity to error in small samples. Table 4 (a) and 4 (b) reports result obtained when the linear combination of variables as reflected in the VAR model was subjected to co-integration test.

Table 4(a). Co- integration Test (Trace Value)

Hypothesized	Eigen value	Trace Statistic	Critical Value	Prob.**
None *	0.540061	35.0272	29.79707	0.0114
At most 1	0.318846	12.504	15.49471	0.1343
At most 2	0.046109	1.368967	3.841466	0.242

Table 4(b). Co- integration Test (Max –Eigenvalue)

Hypothesized		Max-Eigen	0.05	
No. of CE(s)	Eigenvalue	Statistic	Critical Value	Prob.**
None *	0.540061	22.5232	21.13162	0.0317
At most 1	0.318846	11.13503	14.2646	0.1476
At most 2	0.046109	1.368967	3.841466	0.24 2

Trace and Max –Eigenvalue indicates 1 co-integrating eqn(s) at the 0.05 level

The results of the co-integration in Table 1.3(a) and 1.3 (b) confirm that there is at least one co-integration equation among the variables included in the models suggesting that capital market performance has equilibrium condition with foreign portfolio investment and capital flight at 5% level of significance, which keeps them in proportion to each other in the long run. This evidence of co-integration among the variables rules out spurious correlations and implies that a direction of influence can be established.

### The granger causality tests for direction of response among foreign portfolio investment capital flight and market capitalization performance

Table 5 (a and b) shows short and long run Wald statistics tests which follows  $\chi^2$  respectively.

Table 5(a). Short Run Multivariate Granger Causality Test Result

$\alpha_1 = \alpha_2 = \alpha_3 = 0$	$\chi^2$	<i>p</i> – value	Remark
<i>mcy</i>	0.868	0.352	No Causality
<i>fpi</i>	28.2	0.020*	Causality
<i>cf</i>	2.450	0.117	No Causality

Table 5(b). Long Run Multivariate Granger Causality Test Result

$\alpha_1 = \alpha_2 = 0$	$\chi^2$	<i>p</i> – value	Remark
<i>mcy</i> → <i>fpi</i>	16.86	0.016*	Causality
<i>fpi</i> → <i>mcy</i>	2.090	0.148	No causality
<i>mcy</i> → <i>cf</i>	2.283	0.130	No Causality
<i>cf</i> → <i>mcy</i>	0.133	0.715	No Causality
<i>fpi</i> → <i>cf</i>	3.057	0.080**	Causality
<i>cf</i> → <i>fpi</i>	1.216	0.270	No causality

Notes: \*and \*\* indicates statistical significance at 1%, 5% and 10% level of significance, while  $\chi^2$  is the Chi-Square of the Wald statistics and the hypothesis is that each of the coefficients of lagged explanatory variables is zero.

This section estimates the nature and direction of causality relationship existing among capital market performance, foreign portfolio investment and capital flight pairwise granger causality

test. This approach is used because regression analysis alone only captures the dependence of one variable on the other variable, but dependency does not necessarily imply causality.

Decision Rule: The decision rule here is to reject the null hypotheses of no direction of causality if  $\chi^2$  calculated is less than critical  $\chi^2$ -value and P-value less than  $\alpha$  critical -value at the level of significant of 1%, 5% or 10% respectively, otherwise we conclude that there is defined direction of causality as indicated by the arrows. Note that the direction of the arrow heads indicates the direction of flow of causations as : (i) One arrow head flow between the series indicates a unidirectional causation (ii) Two arrow heads between series indicate a bidirectional causation.

### **Hypotheses test for direction of causality among the focus variables using VECM**

#### **Restatement of Hypothesis**

H0 1: Foreign portfolio investment does not granger cause capital flight in Nigeria

H02: Foreign portfolio investment does not granger cause capital market performance in Nigeria

H03: Capital market performance does not granger cause foreign portfolio investment in Nigeria

#### **DISCUSSION OF FINDINGS**

In the short run, the wald -  $\chi^2$  statistic value of 28.2 and P-value of 0.020 is significant at 5% level of significant, thus rejecting the null hypothesis of no direction of causality and reactions among the variables .

Similarly, in the long run, the pairwise granger causality test reveals that with P-values of 0.016 and 0.08 which are respectively significant at 10% level of significance, implies that the hypotheses of no direction of causality are rejected. The study therefore concludes that there is a uni-direction of causality between foreign portfolio investment and capital market performance in one hand and also between capital flight and foreign portfolio investment in another hand in Nigeria.

Similarly the result also indicates that capital market performance granger cause foreign portfolio investment with unidirectional causation running from market performance to foreign portfolio investment and also foreign portfolio investment granger cause capital flight in the long run with the unidirectional reactions running from foreign portfolio investment to capital flight . This is further validated by the direction of the causality arrows.

## IMPLICATIONS OF FINDINGS

These results has serious implications for Nigerian economy in terms of financial market performance and economic development in Nigeria. This result further implies that decisions relating to capital market activities and foreign portfolio investment flow should be long term tenured in order to capture both immediate and long run economic impacts of such decisions. This is because the presence of causation existing among these investigated series indicates that immediate impacts of the variables due to past reactions to economic policies by each of the variables in the system should not be used as bench mark performance indicators. There is need to focus on the long run future predictive responses of capital flight to either increased or decreased inflows of foreign portfolio investment into the capital market based on in the previous years' market performance

## CONCLUSION

The study investigates the nature and direction of causality existing among foreign portfolio investment, capital flight and capital market in Nigeria between the period 1970 and 2014 sourced from various relevant government agencies. Literature review of relevant theoretical , conceptual and empirical frame works were carried out and with stratified and judgmental sampled method, annual time series data were sampled and analyzed using descriptive and inferential statistical method as well as co integration and vector error correction model approaches (VECM ) respectively.

The study findings disclosed strong interactions of influences among the series investigated with a uni-directional causality flow from capital market performance to foreign portfolio investment in one hand and also a unidirectional causality flowing from foreign portfolio investment to capital flight both in the long run and short run respectively .

Conclusively, the study revealed existence of significant symbiotic connectivity among the Investigated variables. Hence contributing to existing Knowledge it has developed and validated three (3) econometric models for investigating the interrelationship and direction of causality among foreign portfolio investment , capital flight and capital market performance in Nigeria .

The study has designed a conceptual model for investigating the flow of interactive influences among the foreign portfolio investment, capital flight and capital market along with macroeconomic variables which seem to be lacking in most of the reviewed literature works in Nigeria .

By incorporating pre and post -oil boom periods for this study scope, the study has widened study scope that could bridge the perceived information gap in this area of study in Nigeria as observed in past literature.

The study has provided a policy guide for the capital market authorities, regulators, and other related government agencies by throwing insight into this neglected area of study in Nigeria. The need to closely monitor, control and manage inflows and outflow of foreign capital in the system through various investment windows becomes highly imperative since these variables exhibit both short run and long run interactive causation among themselves in the system.

## RECOMMENDATIONS

Findings of this study confirm a unidirectional flow of influences among the foreign portfolio investment, capital flight and capital market performance, implying strong long run and short run flow of impacts among these variables in particular and on the economy as a whole.

(1) Consequently, an urgent review of the existing capital importation policy is hereby recommended to ensure strict implementation and compliance with documentations to tract down all foreign portfolio investment transactions in Nigeria. It has been observed that large quantity of these investments are never accounted for by the CBN records .

(1) A comprehensive review regulatory and corporate governance frameworks is key to in order to address revealed infractions in this sector. There is need for further strengthening of supervisory and regulatory frameworks in the financial system to ensure strict compliance with various policies targeted at tracking and controlling indiscriminate capital transmission via foreign portfolio investments transactions. Some of the insights from this study revealed inbuilt loopholes which encouraged corruptive moves by capital market players that secretly execute security procurement mandates from any source without proper documentation. Some of the insights from this study revealed inbuilt loopholes which encouraged corruptive moves by capital market players that secretly execute security procurement mandates from any source over the counter without proper documentation by the relevant authorities.

(2) A robust re-investment incentive policy or roll- over window package need to be established to encourage retention of foreign portfolio investment proceeds within the system. This is required in order to minimize the rate of flight capital through illegal and indiscriminate repatriation of investment proceeds through foreign portfolio investment channel. This is in line with the study findings which revealed great surge in foreign portfolio investment and capital flight flows during the post 2008/2009 financial



meltdown with their attendant influences on capital market performance in particular and on the economy in general.

## REFERENCES

- Adegbite, E.O. & Eke, O.P. (2016). Participatory finance, interest rate structure and economic growth: Lessons from Nigeria. Department of Finance University of Lagos, Yaba, Nigeria.
- Adenuga, A.O. (2010). Stock Market Development Indicators and Economic Growth in Nigeria (1990-2009): Empirical Investigations. Central Bank of Nigeria Economic and Financial Africa. Institute of developing economics V.R.F series (382).
- Ajayi, I. S. (1997). An analysis of external debt and capital flight in the severely indebted low income countries in Sub-Saharan Africa. International Monetary Fund, Working Paper 7/68.
- Akaike, H. (1974). New look at the statistical model identification. Institute of Statistical Mathematics, Minato-ku, Japan
- Ayadi, F. S (2008). Econometric Analysis of capital flight in developing country. 8Th Global Conference on Economics 978-09742114-5-9
- Fiador , V. O. & Asare, F. J. (2012). Cross-border investments, currency risks and portfolio returns: The case of Epack – Ghana international business research. Canadian Center of Science and Education. 6(1 )
- Jimoh, A.(1989). The Role of exchange rate policies in the management of the Nigerian external trade balance. Nigerian Financial Review, 2 (1), 35-48
- Johansen, S. & Jelusius, K.(1990).The full information maximum likelihood procedure for inference on co-integration with application to the demand .Oxford Bulletin of Economics and Statistic 52, 168-210
- Keynes, J. M. (1936).The general theory of employment, interest rate and money. London Macmillan
- Nagwa, A. S. & Helmy , O. A. (2009). Foreign portfolio equity investment in Egypt : An Analytical Overview economic policy initiative consortium. National Bureau of Economic Research.
- Obiechina, M.E. ( 2010). Capital flows and financial crises : Policy issues and challenges for Nigeria . Economic and Financial Review 48(1)
- Ngowi, H.P. (2001). Can Africa increase its global share of foreign direct investment (FDI): West African Review 2(2).
- Ojo, O.O. (1992). An empirical investigation of capital flight in selected African countries. African Development Bank , Research Paper Abidjan.
- Okereke –Onyiuke N. (2000). Stock market financing options for public projects in Nigeria. The Nigerian Stock Exchange Fact Book .
- Onuorah, A. C. (2013). Impact of macroeconomic indicators on the performance of foreign Portfolio Investment in Nigeria. European Journal of Business and Management.
- Onyema , S. (2013). Capital market future outlook: Nigerian stock exchange market annual report
- Owualah, S. I. (2000). .Principles of Financial Management. 1st Edition, G-Mag Investments Ltd.Ikeja Lagos.
- Ozurumba, A .B. (2012). The impact of stock market returns on foreign portfolio investment in Nigeria. Journal of Business and Management, 2 (4) 10-19.
- Perron, P . (1997). The great crash, the oil price shock, and unit root hypothesis .Econometrica (57): 1361-140.
- Sims C.A. (1980 ). Macroeconomics and reality of stock prices in Nigeria. Econometrica, 48, 1-48:

World Bank , (1997d). Private capital flows to developing countries: The road to financial integration: World Bank Policy and Research Report. New York: Oxford University Press.

Tobin, J (1967). Liquidity preference as a behaviour towards risk. R.E.S. 25(1) adopted from Mankiw G.N (1997) and Jhingan (2000) c Development in Africa: