UNIVERSITY OF LAGOS
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FOREIGN PORTFOLIO INVESTMENT, CAPITAL FLIGHT AND CAPITAL MARKET PERFORMANCE IN NIGEERIA.

A THESIS SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, UNIVERSITY OF LAGOS, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF DEGREE OF DOCTOR OF PHILOSOPHY (Ph.D.) IN FINANCE .

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CERTIFICATION

This is to certify that the Thesis

Foreign Portfolio Investment, Capital Flight and Capital Market Performance in Nigeria

Submitted to the School of Post graduate Studies, University of Lagos, for the award of Degree of Philosophy (Ph.D.) is the original research work carried out

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DEDICATION

This Thesis is dedicated to the God Almighty my divine source of inspiration and knowledge.

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TABLE OF CONTENTS

TITLE PAGE i

CERTIFICATION ii

DEDICATION iii

ACKNOWLEDGEMENTS iv

TABLE OF CONTENT vi

LIST OF TABLES x

LIST OF FIGURES xi

ABSTRACT xii

CHAPTER ONE: INTRODUCTION

1.1 Background to the Study…… 1

1.2 Statement of the Research Problem …… 6

1.3 Aim and Objectives of the Study …… 10

1.4 Research Questions…… 10

1.5 Research Hypotheses …… 11

1.6 Significance of the Study…… 11

1.7 Scope and Delimitation of the Study …….. 12

1.8 Operational definition of the Terms …… 14

1.9 List of Abbreviation …… 15

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction …… 17

2.2 Theoretical Framework …… 17

2.2.1 Push and Pull Factors Theory ……. 18

2.2.2 Foreign Capital Flow Theory ……. 18

2.2.3 Portfolio Diversification Theory ……... 19

2.2.4 The "Hot Money" Theory…….. 20

2.2.5 Optimal Currency Area /Macroeconomic Theory …… 21

2.2.6 Liquidity Preference Theory …….. 22

2.3 Conceptual Framework…… 23
2.4 Empirical Framework …… 27
2.4.1 Capital Market Performance, Foreign Portfolio Investment & Economic Growth and Development in Nigeria …… 28
2.4.2 Foreign Portfolio Investments, Capital Markets Performance and Capital Flight in The Sub-Saharan African States …… 29
2.4.3 Capital Flight and Foreign Portfolio Investment in Nigeria …… 35
2.4.4 Capital Flight and Capital Market Performance in Nigeria …… 38
2.4.5 Foreign Portfolio Investment Driver …… 38
2.4.6 Foreign Portfolio Investments and Capital Market Development …… 42
2.4.7 Foreign Portfolio Investors and Capital Market Investment Instruments In Developing Countries …… 47
2.4.8 Foreign Portfolio Investment Instruments …… 48
2.4.8.1 International equity investment funds …… 48
2.4.8.2 American depositary receipts (ADRs) and Global depositary receipts (GDRs)… 49
2.4.8.3 Global Depositary Receipts …… 50
2.4.8.4 Convertible Bonds …… 52
2.4.8.5 Bonds with Equity Warrants …… 52
2.4.9 Benefits of Foreign Portfolio Investments …… 53
2.4.10 Foreign Portfolio Investment Prospects and Challenges in Nigeria …… 56
2.4.11 Mitigating Foreign Portfolio Investment and Capital Flight Challenges…… 60
2.4.12 Summary of The Empirical Reviews …… 64
CHAPTER THREE:RESEARCH METHODOLOGY
3.1 Research Design …… 70
3.2 Population of the Study …… 70
3.3 Sources of Data and Sampling Methods …… 70
3.4 Data Sources and Data Collection Methods …… 71
3.5 Data Analysis Techniques …… 72
3.6 Model Specifications …… 73

3.7 Dependent and Independent Variables…….. 76

3.8 Models 7, 8 And 9 Estimate The Interaction And Direction of Causality Among The Focus Variables Using The Vector Auto-Regression Method ……... 76

3.9 Model Estimation Techniques …… 78

3.10 Estimation Techniques…… 78

3.10.1Unit Root Test……. 78

3.10.2 Lag Length Selection Tests …….. 79

3.10.3 Co-Integration Tests …….. 80

CHAPTER FOUR: DATA PRESENTATION, ANALYSIS & INTERPRETATION

4.1 Introduction …… 81

4.2 Summary of the Trend Analysis Test …… 86

4.3 Analysis of Interactive Responses and Direction of Causality ….…… 87

4.4 Descriptive Analysis …… 87

4 .4.1 Descriptive Statistics of Data Series …… 88

4.5 Preliminary Test Data Analysis……. 89

4.5.1 Unit root Test for Time Series Data …… 89

4.5.2 Determination of Optimal Lag Length …… 95

4.5. 3 Co-integration Test …… 92

4.6 Ordinary Least Square Interpretation Result report …… 94

4.6.1 Coefficients Signs and Size ……. 94

4.6 .2 Connectivity Test Result(R-Square) ……. 95

4.6.3. VECM The Impulse Response And Forecast Error Variance Decomposition Result …….. 96

4.6.4 The Granger Causality Tests to Ascertain the Nature and Directions Of Causality among Foreign Portfolio Investment Capital Flight And Market Capitalization performance …….. 102

CHAPTER FIVE: DISCUSSION AND SUMMARY OF FINDINGS

5.1 Discussion of Findings …….. 105

5. 1.1Trend Analysis Discussion ……. 105

5. 1 .2 (VECM) Forecast Error Variance Decomposition Discussion …….. 106

5.1.2.1 Panels b& c Show Response of Foreign Portfolio Investment and Capital Flight to Innovations in Market Capitalization ……. 106

5.1.2.2 Panels d &f Show the Response to Innovation Shocks of Foreign Portfolio Investment on Capital Market Performance and Capital Flight …….. 107

5.1.3.3 Panels g& h show the response to innovation shocks of capital flight on Capital market performance and foreign portfolio investment …….. 107

5.1.4 .1 The Granger Causality Test Discussion …….. 108

5.1.4.2Ordinary Least Square Test Discussion ……. 108

5.1.5 Granger Causality and VECM Results …….. 114

5.2 .1 Policy Implications of the Findings …….. 117

5.2.2 Policy Implications of Capital Flight Trend ……. 117

5.2.3 Policy Implications on Foreign Portfolio Investment …….. 118

5.2.4 Policy Implication on Capital Market Performance ……. 119

CHAPTER SIX- SUMMARY CONCLUSION CONTRIBUTION TO KNOWLEDGE AND RECOMMENDATIONS

6.1 Summary of Findings …….. 121

6.2 Conclusion ……. 122

6.3 Contributions to Knowledge ……. 123

6.4 Recommendations ……. 124

6.5 Areas for Further Studies …….. 126

BIBLIOGRAPHY …… 128
APPENDICES…….. 138

LIST OF TABLES

		PAGES
2.4	Summaries of empirical reviews	64
3.4	Summary or sources of data	72
4.1	Trends of Foreign Portfolio, Investment of Capital flight and capital market performance in Nigeria	81
4.2	Percentage Trend Analysis of The Flow of Capital Flight, Foreign Portfolio Investment and Capital Market Performance in Nigeria	83
4.3	Descriptive statistic of variables (1970-2014)	89
4.4	Unit root test at levels and first difference	90
4.5(a)	Cointegration test (Trace Value)	92
4.5(b)	Cointegration test (Max –Eigen Value)	93
4.6	Ordinary least square test summary	94
4.7	Impulse Response interpretation /Result	98
4.8	Forecast Error variance decomposition test result	99
4.9	Granger Causality Test	102
4.10	Summary of study findings	122

LIST OF FIGURES

		PAGES
Figure 2.1	Conceptual Framework Diagram	26
Figure 4.1	Graphical Trend Analyses for Capital Flight in Nigeria	86
Figure 4.2	Graphical Trend Analysis for Capital Market Performance in Nigeria	84
Figure 4.3	Graphical Trend Analysis for Foreign Portfolio Investments in Nigeria.	85
Figure 4.4	Impulse Response Function Graphs	101

ABSTRACT

The need for nations and individuals and firms to achieve efficient resources allocation , optimize wealth and productivity explains the rationale for investment diversification which gives rise to various investment windows like foreign portfolio investments. The rising trend of foreign portfolio investments in Nigeria raises concerns among stakeholders due to the growing imbalance in the market participation ratio between foreign and local portfolio investors in the Nigerian capital market This study therefore examines the interrelationship among foreign portfolio investments, capital flight and capital market performance in Nigeria using expost-facto and descriptive research designs of annual time series data between 1970 and 2014 . Data for the study were sourced from various issues of Central Bank of Nigeria , Security Exchange Commission reports, Nigerian Stock Exchange reports, National Bureau of Statistics and International Monetary Fund. The study adopts Multi-regression Analysis, Vector Error Correction Models, Ratio and percentages for the data analysis after some preliminary tests. Study findings reveal that significant volumes of foreign portfolio investments, capital market performance and capital flight have been generated within the review periods in Nigeria. The Ordinary Least Square (OLS), Forecast Error Variance Decomposition (FEVD) and Impulse Response Function (IRF) results show strong and positive relationship , short and long run interactive responses and a unidirectional causality among the capital flight , market capitalization and foreign portfolio investment at 5% and 10% levels of significance respectively. The study 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: Foreign portfolio investments, Capital flight, Capital market performance, Nigeria

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND OF THE STUDY

Global perception of the evolving financial market investment complexities and potentials has created opportunities for different classes of investors to optimize wealth and productivity through various investment channels existing in the market Keynes (1936) described investment as a conscious behavior or action of an entity involving the deployment of funds for assets acquisition with a view of obtaining targeted returns over specified periods of time. In his own view, investment is a flow of capital which is measurable over time based on the optimal speed of investment adjustment to equilibrium process.

Reilly and Brown(2000) also defines investment as a commitment of funds and deferment of consumption today to a future date by an investor so as to derive future flow of benefits that will compensate him for the time value of money and expected risk premium . They explained that savings occur when an individual's current income exceeds his current consumption. The savings so accumulated can be employed in several ways including being stocked away right under his pillow better still, or investing it for a more productive assets. Such decision however entails individuals or firms sacrificing their current naira consumptions in lieu of future naira benefits accruing from acquisitions of investments within or outside their jurisdictions. The willingness to save which is influenced by the compensation for waiting as the price of time is further driven by the interaction of forces of demand and supply in the security markets.

Shapiro (1999) opines that investment plans generally might translate to exchange of assets with economic value which are transacted through various investment market such as the capital market. He notes that the capital markets investments class could create investment windows like domestic investment , private investment, foreign direct investment and foreign indirect investment otherwise known as foreign portfolio investment or even mergers and acquisitions requiring strong and efficient financial market to actualize . Thus the performance of financial market becomes an imperative for effective transmission of investments assets among individuals or nations as private, foreign direct or portfolio investments.

Ezike(2003) notes that the capital market as segment of the financial system, performs vital roles of mobilizing savings, facilitating investments, averaging and transforming risks and liquidity through the mechanism of financial intermediation processes. According to him, various government , institutional and retail investors are afforded the chance of bridging financing gaps through this intermediary thereby enhancing the overall global economic performance.

Anyanwu (1978) observes that the performance of the capital market affect liquidity of the capital market and information about firms, risk diversification, resource mobilization and corporate control. This therefore implies that the altering of the quality of services provided in the market and the functioning of the capital market can accelerate the rate of economic growth. The role of capital markets in achieving resource mobilization, liquidity and security marketability through international financial intermediation process therefore cannot be over emphasized . This could be affirmed in view of the growing awareness it is consistently receiving on local and international levels respectively in the recent times.

Okereke-Onyiuke(2000) remarked that economic liberalization, deregulation, commercialization and privatization which commenced over many decades ago, have greatly expanded the financing options existing in the Nigerian capital market, creating room for international investment capital flows to supplement to domestic savings. According to her, the nation's need for an improved foreign capital inflow for sustainable development and growth is attainable through the various financing mix offered by the capital market for raising long term capital locally and internationally. The financing options she explains are the aftermath of years of evolution and transformation of the investment market which have popularized foreign portfolio investment windows and their products . Among these products are the American Depository Receipts (ADRS), Global Depository Receipts (GDRS), Export Notes, Collaterised Mortgage , Security, International bond issues , Country Funds , Cross-border listings, Merger s and Acquisitions among others. Foreign investors are therefore privileged to access global capital markets by acquiring any of these globalized investment instruments in order to achieve their various investment objectives .She therefore emphasize that foreign portfolio investment diversification presents a viable international investment diversification strategy to achieve the investors objectives through Nigerian capital market.

Obadan (1999) and Caolaco (1985) in their respective works note that actualization of geographical portfolio investment diversification is highly driven by financial sector globalization and liberalisation. This is because of the economies scale it affords countries to participate in international money game which facilitates trade and investment financing as well as easy mobility of factors of production among nations.

Ezike (2016) stresses on the need for appropriate macroeconomic policy response measures among nations to allow them to reap the benefits from globalization. He equally infers that the

evolving financial sector liberalization and globalization have adversely aggravated foreign exchange crisis leading to the establishment of a number of institutional regulatory frameworks to control the scourge with a number of policies in support of Structural Adjustment Programme (SAP) that commenced in 1986. These policies were all aimed at deregulation of the economy , managing the foreign exchange challenges and reinvigorate the economies as a whole . Critical among some of these include the Foreign Currency (Domiciliary Account) Act, Second Tier Foreign Exchange Market Act governing capital flows management and the Foreign Exchange (monitoring and Miscellaneous Provision) Act 1995 (FEM) which repealed all previous restrictive legislations in this sector. This was further complemented by the enactment of the Nigeria Investment Promotion Commission (NIPC) Act of 1995, meant to encourage, promote and attract foreign investments into the Nigerian.

Ngowi (2001); Obiechina (2010) ; Olowe (2009) and Owualah (2010) have all identified the liquidity roles of the capital markets as they positively impacts on the size of new asset investments through equity stock financing . These roles they argue are significantly constrained by the interplay of mirage 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.

Similarly Adegbite (2009) and Chukwu (2012), further note that , capital market challenges are greatly compounded by incessant market crashes which are sometimes linked to foreign portfolio investors influx into the market. The features of foreign portfolio investment in the view of Shapiro (1996) describe foreign portfolio investment as an investment window which

entails an acquisition of less than 10% equity ownership of a company by a non-resident investor through a foreign capital market for a targeted returns and capital gain differentiates it from other investment windows. Unlike foreign portfolio investment foreign direct investment channels could guarantee the investors up to 10%- 50% ownership rights , direct control, participation and management of the investees assets as well as a greater share of the corporation profit .Such . He observed that while foreign direct investors could create room for subsidiaries in form of multinational firms across- borders, foreign portfolio investors particularly aim at enjoying the best of two worlds of investment environment outside their geographical location specifically through active strategic geographical portfolio investment diversification.

Geographical diversification of investment allows investors all over the world to participate in the sharing of economic windfalls of other nations through their hedged investment baskets against various market risks as well as exchange rate volatility consequently promoting global economic efficiency and market segmentation advantage.

In addressing the interconnectivity network existing among foreign portfolio investment capital market performance facilitated by globalization and privatization in Nigeria, Ezike (2003) remarks that this relationship has helped shape and transform the capital markets to a capital formation terrain for business development and expansions.

However, it is important to note that despite the perceived positive impacts of globalization and trade liberalization to developed economies, these benefits are still far from being realized by most developing economies like Nigeria. Adegbite (2016) observed that some of the globalization policies constitute adverse consequences in most economies because they 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 foreign investments are not unconnected with emerging markets economic woes and crisis as witnessed in China, Mexico, Singapore, India, Brazil and South Africa . The foreign capital flows through foreign investments presented ready -made conduit for faster transmission of funds that could worsen capital flight problems.

According to Grubel (1998), policies that guaranty free flow foreign capital and portfolio investments among countries could be relatively safe and efficient means of transferring funds from capital rich economies to countries where funds are needed most with foreign capital flow theory. These sometimes occur with serious economic challenges like capital flight that could frustrate the performance of capital markets in most developing countries like Nigeria.

Advocates of foreign capital flows through the capital market have noted that, for emerging markets to attain desirable level of development there is need for increased attention to foreign capital inflow to bridge the savings - investment gaps that could guarantee sustainable developments in their various regions. Adegbite (2009) however in disagreement, posit that the incessant bearish trends prevalent in Nigerian capital market recently might be traceable to foreign investors' divestments and their hurried exit during the past global financial meltdown have all brought with it serious capital flight problems to Nigerian economy. She argued that the exit of the exit of these foreign portfolio investors from the market in reaction to adverse economic conditions occasioned by the global market trend seem to have triggered the dumping of shares beyond the ability of the domestic investors to contain thereby creating a

"Casino/Herd Mentality" scenario in Nigerian capital which cumulated to market false economic outlook for the country.

1.2 STATEMENT OF THE PROBLEM:

Shortly after the end of the global financial meltdown in 2009 there was greater enthusiasm for capital market recovery , given the huge losses suffered by investors due to the negative impact of the financial meltdown on portfolio investments in the Nigerian capital market. It was evident that investors' enthusiastic to recoup losses suffered due to the prevalence of depressed security market. This market scenario situation therefore presented a big opportunity for foreign portfolio investors to flood Nigerian capital market to take advantage of the low equity prices as well as potential huge returns offered by post global financial market crisis which was comparably higher than most G-7 countries and other Sub Saharan stock exchanges as at 2013 trading period. Table 1.0 speaks for itself.

Table 1.0 shows some of G-7 countries and Sub- Saharan states capital market index yield for 2013

SUB-SAHARAN COUNTRIES	6-M Av R%	G-7 COUNTRIES	6 –M Av-R%
NIG. ASI	30	FRANCE CAC40	9.5
S.A JSEASI	12	USA NASDAQ	16
KENYA ASI	1.11	UKFTSE 100	13
EGYPT EGX20	15	ITALY S&P	-5
TUNISIA BVMT	13	CANADA	-2.7

Source : Pro-shares Research/Analyst Nigeria.

The scenario presented by the market performance table above clearly reveal Nigeria as an investment heaven for global portfolio investors and this later translated to a surge of the foreign portfolio investors to Nigerian capital market . The surge threw in confidence issue as well as market apathy as the foreign investors continue to dominate the market consequently forcing domestic investors due to fear of increasing unsustainable market performance trends occasioned by the speculative activities of foreign portfolio investors within the period.

However, the trend in Nigerian capital market continued to generate controversies and mixed reactions among stakeholders as market participation ratio continue to fluctuate thereby creating market imbalance between local and foreign portfolio investors in Nigeria.

Most importantly during the 2013 trading period, the market participation imbalance between local and foreign portfolio investors got to a significant level of 33% versus 67% of total portfolio transactions in the Nigerian stock exchange (Onyema 2014). Report from African stock exchange market outlook (2014)also reveal that foreign portfolio investors participation in Nigeria has been overwhelmingly higher than what obtains in other Sub Saharan African stock exchanges like Ghana stock exchange with 44%, Kenya stock exchange with 49% and Egypt stock exchange with 26% in the same activity years.

Finance experts and market regulators therefore tend to link 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). They have argued that increased of presence of foreign portfolio investors in a market could frustrate government's efforts in financing industrial developments through the capital market due to its speculative nature and capital flight implications. On the contrary, some

authors have lent their support for foreign portfolio investment inflows, stressing that it could assists nations in bridging development funding gaps while foreign investors enjoy the best of two worlds through geographical diversification, efficient asset allocation and risk–return trade -offs. (Grubel, 1999; Okereke-Onyiuke, 2000; Shapiro, 2000 and Zask, 2004).

Increasing trend of capital flight since the post global financial crisis as revealed by Central Bank of Nigeria report (2015) is also worrisome consequently calls for critical government intervention. This is important because between 2005 when the banking sector recapitalization took place and 2010 the post global crisis period Nigeria generated an average of about N25.3 billion annually . Similarly as at July 2014, the country generated a (5) five weeks total capital flight of $22.1billion amounting to an average of $4.5 billion per week that flew out of the Nigerian economy CBN quarterly report (2015) . Capital flight poses serious danger to external reserve position, foreign exchange control and economic growth as a result of uncontrolled fund repatriation and speculative activities of foreign portfolio investors. Stakeholders therefore suspect that such scenario could elevates risk concerns with serious negative implications for Nigerian capital market performance , external debt position and balance of payment disequilibrium in Nigerian economy.

According to Dooley (1994) the longer capital flights remain in a system, the worse are the consequences for economic activities particularly for heavily indebted countries like Nigeria that is majorly dependent on external financing. Financial experts however are of the opinion that the challenge of huge presence of foreign portfolio investors in the country‘s capital market signify heightened risk of market reversal and possible market crash, when these

portfolio investors have to exit the market a situation that could lead to a sharp depletion of the country's foreign reserve and possibly exchange rate depreciation with its attendant inflationary impact.

Chukwu (2012) collaborating with this ideology notes that due to the transient nature of foreign portfolio investments all over the world, there are growing anxiety that the current confidence on the Nigeria's foreign reserves could be short-lived should the investors decide to take their luck elsewhere. Krugman (1998)also argued that allowing free flows of capital across the country could be replete with deleterious side effects on both recipient and originating economies as it could misalign the financial system as well as generate beneficial impacts. In view of the perceived economic consequences the interrelationship among foreign portfolio investment capital flight and capital market performance could pose in the economy and coupled with these perceived challenges already confronting the capital market there is the urgent need to reinvigorate Nigerian capital market to attain international benchmark as a key driver of the country's gross domestic product growth.

It is significant to note that Nigerian capital market performance over the years has remained dismal based on gross domestic product (GDP)contribution, compared with other emerging markets despite its globally rated investment destination of Africa in 2013 .Information from stock market outlook report , 2014disclosed a meager contribution to the gross domestic product of 16% by Nigerian stock market far below Malaysia with 247%, South Africa with 207% and Brazil with 112% respectively.

This study aptly captures the mood of Nigerian capital market as it draws attention to portfolio investors' venerability to prevalent bearish seasons being experienced in Nigerian capital market in the recent times occasioned by rising influx of foreign portfolio investment. The need to resolve the puzzle about foreign portfolio investment with its attendant implications for the capital market performance and capital flight management in Nigeria necessitates urgent researcher's attention.

Furtherance to the importance of this study is the need to bridge an observed lacuna in this area of study. Revealed information from previous works in this area of study in Nigeria indicates a outright neglect of this sector and lack of awareness of capital market connection with capital flight in Nigeria . While research studies in other jurisdictions have focused on linked between capital flight and foreign portfolio investment transactions linking it to a number of stock market crisis in Latin America in 1994, East Asia and Russia crisis between 1997-98, including the last global economic meltdown that occur in 2008, very few studies in Nigeria like Ozurumba (2012), Eniekeziemene, (2013) Ezeoha (2009), Temitope (2010) and Adesoye et al (2012) have addressed this contentious issue thus making this investigation an imperative.

1.3 AIM AND OBJECTIVES OF THE STUDY

Broadly the study aims at examining the interrelationship among foreign portfolio investments, capital market performance and capital flight in Nigeria and in an effort to realize this objective the study attempts to;

(i) examine the trend in the flow of foreign portfolio investments in Nigeria .

(ii) appraise the performance trends of Nigerian capital market.

(iii) evaluate the transmission trend of capital flight in Nigeria.

(iv) examine the level of connection existing among foreign portfolio investments, capital market performance and capital flight in Nigeria.

(v) examine the nature and direction of causality existing among foreign portfolio investment, capital market performance and capital flight in Nigeria.

(vi) evaluate the reactions generated by the changes in foreign portfolio investment, Capital market performance and capital flight in Nigeria.

1.4 RESEARCH QUESTIONS:

(i) What is the pattern in the flow of Foreign Portfolio Investment in Nigeria like?

(ii) What is the performance trend of the Nigerian capital market?

(iii) What is the transmission trend of capital flight in Nigeria?

(iv) What is the extent of connection existing among foreign portfolio investment, capital market performance and capital flight in Nigeria?

(v) What is the direction of causality among foreign portfolio investments, capital market? performance, and capital flight in Nigeria?

(vi) What is the level of reactions generated by the changes in foreign portfolio investments? capital market performance, and capital flight in Nigeria?

1.5 RESEARCH HYPOTHESES

In line with the objectives and research questions the research Hypotheses are hereby stated;

(i) There is no discernable pattern of flow in foreign portfolio investment in Nigeria.

(ii) There is no significant performance trend in Nigerian capital market performance

(iii) There is no significant movement in capital flight in Nigeria.

(iv) There is no connection existing among foreign portfolio investment, capital flight, capital market performance and some macroeconomic indicators in Nigeria.

(v) There is no direction of causality existing among foreign portfolio investment and capital market performance and capital flight in Nigeria.

(vi) There is no significant reaction due to changes in foreign portfolio, capital flight and market capitalization in Nigeria.

1.6 SIGNIFICANCE OF THE STUDY

This study aptly captures the mood of Nigerian capital market in particular and that of Nigerian investors. 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 prows as well as their capital flight tendencies. This investigation therefore addresses the issues relating to waning confidence of equity investor's in Nigerian capital market throwing insight into hot money controversies created by the presence of foreign portfolio investors in the Nigerian Stock Exchange market over the years. The study is expected to generate findings that would assist policy makers, capital market authorities, market regulators, stake holders in the industry, investors as well as the general public to appreciate the interconnectivity that exist among the selected focus variables. Particularly the findings of this study would guide relevant federal government agencies in policy formulations that could move the economy forward. The result of the study would further form theoretical ground work for researchers, academics, consultants, lecturers as well as policy designers in this fields of study.

1.7 SCOPE AND DELIMITATION OF THE STUDY

This study focuses on the interaction influences among capital market performance, capital flight and foreign portfolio investment in Nigeria between 1970 and 2014. The reason for the selection of this scope for study is to capture information during he pre-oil boom and post -oil boom periods when Nigeria's economic potential gained popularity to the global financial market. Secondly this scope also allows for bridging of the perceived gap in coverage to achieve a more robust e-view software output which performs better with larger and longer volume of data. Major limitations of this study include the bureaucratic bottlenecks encountered at various data collection venues like Central bank of Nigeria, Security and Exchange Commission as well as Nigerian Stock Exchange markets respectively. Rising costs of data processing due to inflation and falling value of local currency posed a greater challenges to accessibility to some vital information needed for the study particularly the early oil boom periods were high. Other key challenges include poor database management culture of the various relevant agencies and virtually absence of up to date data from the quoted companies on the Nigerian Stock Exchange which tend to have constrained the study to adopt only annual data on a wider scope.

ORGANIZATION OF THE STUDY

The study is arranged in five chapters. The study begins with background of the study in chapter one under introduction which is further subdivided as to capture: the statement of problem, objectives of the study, research questions, research hypothesis and significance of the study and concluded with the scope and delimitation of the study the operational definition of terms as well as definition of terms. Following after this chapter (chapter one) is the review of extant literature in chapter two on the main concepts which captures conceptual theoretical and empirical

frameworks. Definitions of capital markets, foreign portfolio investment and capital flight and its various dimensions, including macroeconomics variables connections with the subject matter were all dealt with including financial market liberalisation and globalisation as they relate to Nigeria with available empirical studies.

Chapter three presents the research methodology adopted and the justification for each method. The chapter also covers the research design adopted, population, sampling method and data sources, model specification and estimation. Chapter four presents all the descriptive and econometric analysis of the study, starting with the preliminary and diagnostic tests followed by Ordinary Least Square method (OLS), Vector Auto Regressive (VAR)models and Vector Error Correction models (VECM) applied including the interpretation of their results and the discussions of findings that are of interest in the study are also capture in this chapter. Finally, chapter five discusses and summarises the study findings with policy implication while chapter six addresses the conclusion, recommendations and suggestions for further studies. The study is rounded up with references of various literature used.

1.8 OPERATIONAL DEFINITION OF TERMS:

Commercialization: This has to do with reorganization of business venture, partly or wholly owned by the federal government to allow such company to operate as a profit making commercial Ventures without the subvention from the government.

Privatization : This refers to a process that allows the transfer of state ,local or federal government ownership and management of a government enterprises to private individuals

so as to allow competition in that sector. For this study, therefore both commercialization and privatization are considered relevant in attracting foreign capital into Nigerian economy.

Capital flight: The term is used to describe unauthorized movement of capital from one country to another in effort to escape some unfavourable business risks. It is sometimes referred to "Hot Money "the leakage of financial resources out of an economy through unauthorized channels.

Foreign portfolio investment: This is an investment made by an entity or individual resident in another country for ownership of less than 10% of the resources of the investee. It usually involves transfer of investment funds from the non-resident investor' country to another country for the purpose of benefiting from the host countries favourable economy.

Globalization: A process that is ongoing that allows country to open up to the outside world that allows ideas, resources, goods and services to flow into it. It connotes the idea of interdependency of countries on one another.

Liberalization: This is the removal of restrictions from a process or a system in order to allow free and unfettered transactions. The usage is in connection with the current and capital account of the Balance of Payments.

1.9 LIST OF ABREVIATIONS

AC	Akaike Criteria
ADR	American Depository Receipt
AFDB	African Development Bank
CBN	Central Bank of Nigeria
CDS	Central Depository Receipts
CF	Capital Flight
EFCC	Economic and Financial Crime Commission
FDI	Foreign Direct Investments
FECM	Forecast Error Correction Model
FEM M	Foreign Exchange Monitoring and Miscellaneous act
FEVD	Forecast Error Variance Decomposition
FPI	Foreign Portfolio Investments
GDP	Gross Domestic Product
GDR	Global Depository Receipt
HQC	Hannan –Quinn Criteria
HMI	Hot Money Incidence
IFC	International Finance Corporation
IMF	International Monetary Fund

IMFDOT	International Monetary Fund Direction of Trade.
INFR	Inflation Rate
INTR	Interest Rate
IRF	Impulse Response Function
MCY	Market Capitalization
NBS	National Bureau of Statistics
NIPC	Nigerian Investments Promotion Commission
NSE	Nigerian Stock Exchange
OLS	Ordinary Least Square
SAP	Structural Adjustment Program
SBC	Schwarz Bayesian Criterion
SEC	Security and Exchange Commission
SML	Stock Market Liquidity
TOP	Trade Openness
UNCTAD	United Nations Conference on Trade and Development.
VAR	Vector Auto-Regression

CHAPTER TWO

LITERATURE REVIEW

2.1 INTRODUCTION

The end of the global financial meltdown in 2009 come with greater enthusiasm for the market recovery given the huge losses suffered by investors due to the devaluation of equity portfolio value as a result of the negative impact of the financial meltdown warehoused in the Nigerian capital market. This therefore called for an urgent need for investors to recoup losses even with depressed market prices. The situation therefore presented a big opportunity for foreign portfolio investors to flood the market to take advantage of the low equity prices and potential huge returns offered by this market before the market crash in 2008 which was comparably higher among the Sub-Saharan stock exchange market .

This section presents the literature review under theoretical, empirical and conceptual frameworks respectively.

2.2 THEORETICAL FRAMEWORK

Theoretically, this study is anchored on a number of theories which have been applied to explain the interrelationship existing among foreign portfolio investment, capital flight and capital market performance in Nigeria. The theories were used to describe situations that create opportunity for foreign capital flow in form of foreign portfolio investment. The flow of foreign capital is usually driven by the strength, weaknesses, opportunities and threats that exist in a given economy system which may necessitate investment diversification strategies beyond the investors shores. The theories also addressed the problem of capital flight emanating from such

diversification strategies which could consequently hurt the economy by creating fake economic outlook in the country. The theories are;

2.2.1 PUSH AND PULL FACTORS THEORY

The Push and Pull factors theory, 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 here to explain why foreign portfolio investors would sometimes prefer to migrate from their home investment environment in search favourable investment climate that would meet their investment objectives. The urge to migrate to a new investment location is sometimes driven by push or pull elements like macroeconomic performance, political situations, robust financial market, friendly investment policies of other nations e.t.c. This factors may instigate investors movement from their current investment location to other investment destinations as a result of advise investment conditions existing in their various countries over time.

2.2.2 FOREIGN CAPITAL FLOW THEORY

The capital flow oriented theory was postulated and validated by Fisher and Dornbusch(1980) and postulated that depreciation of exchange rate will affect international competitiveness and balance of trade positions, and consequently, the flow of real output of countries, which in turn affects their current and future expected cash flows of the firms and their stock prices.

It states that " if capital is perfectly mobile among countries, most of the incremental savings will leave the home country (of capital exporter) to replace other foreign sources of capital in other countries that would have otherwise been invested in the home country of capital importer.

In this case, the yield to the home country on the additional saving is only the net-of-tax return received by the investor and not the pre-tax marginal product of capital. If the additional saving is invested abroad, the foreign governments will collect the additional tax revenue.

This theory has been applied here to describe capital flow process which is believed to originate from the capital-rich countries with competitive advantages to capital-deficit economies. The countries competitive advantages can be explained by their level of factor endowment which remains a key driving force behind foreign capital flow. In line with push and pull theory, this theory assumes that nations with abundant financial and material resources are the original source of funds for capital deficit countries. This explains why the bulk of foreign portfolio investments flowing into Nigeria usually emanate from the advanced western economies that have robust external reserve and balance of payment position like United Kingdom, China and United States of America.

2 .2.3 PORTFOLIO DIVERSIFICATION THEORY

In line with the Push and Pull factor theory which is used to explain investors tendency to migrate when the investment climate becomes risky and hostile. Tobin (1958)and Markowitz (1959)used the portfolio diversification theory to explain investors' attitude to investment risks. It is the attitude to risks that motivate them to migrate from home countries to other regions through portfolio diversification strategy. The theory is used to guide risk averse investors to achieve greater returns while hedging their portfolio investment through regional or geographical diversification.

Buttressing the importance of this foreign portfolio diversification channel, Markowitz (1959) and Tobin (1958) explained that portfolio investment diversification is a risk management measure that emphasizes on Risk-Return profile of portfolio of assets acquired across the borders of an investors community. They recommended foreign portfolio diversification as a potent means for reducing investments risks by isolating portfolio risks under systematic and unsystematic risks. Under this theory, an investor can migrate from one investment destination to another, as a result of push or pull factors affecting him in his current investment environment which could be managed by adopting tactful portfolio diversification to a global market portfolio. Levy (1970), Bekaert (2002), Grubel (1968) and Solnik (2003) findings affirmed Markowitz theory.

Gibson (1998) reexamining the link between high return and investment diversification, noted that modern portfolio theorists have reemphasized and supported the need for international portfolio investment diversification based on the assumptions that emerging markets equities are the most sought after portfolio investment due to their high economic growth rate investment returns potentials.

2.2.4 THE "HOT MONEY" THEORY

This theory was popularized by Cuddington(1986) was used to explaining the movements of capital across the borders of a countries in an effort to explore or escape alternative investment heaven which could present an opportunity to benefit from systemic pull and push factors existing in a given economy. The theory further stresses on the reason for cases of capital flights which normally occur as a speculative response to fundamental mis-match among

domestic and foreign macroeconomic variables and social conditions as revealed in (Jimoh 1991, Khan and Hague 1987). Hot money is a an impatient money which is be generated through illegal foreign capital transfers through various channels such as foreign portfolio investment diversification when conditions are no longer favorable to investors.

Zhao (2015) investigated hot money drivers in China using Autoregressive Distributed Lag (ARDL) models to identify drivers of hot money. Their findings suggest that hot money flows to China are related to the expected appreciation of China's mortgage prices and price volatility prevalent in their capital market.

Ajayi and Ojo (1992) investigated econometric analysis of capital flight from the portfolio choice perspective in Nigeria by developing a portfolio variable series for private wealth holders. The study estimated the magnitude of capital flight in Nigeria and found that trade-faking and primitive capital accumulation as important means through which capital flight is transmitted in Nigeria.

2.2.5 OPTIMAL CURRENCY AREA /MACROECONOMIC THEORY

The Optimal Currency Area (OCA) theory, developed by Mundell (1961) and McKinnon (1963) focuses on trade and stabilization of the business cycle based on concepts of the symmetry of shocks, the degree of openness, and labor market mobility. According to the theory, a fixed exchange rate regime can increase trade and output growth by reducing exchange rate uncertainty and thus the cost of hedging, and also encourage investment by lowering currency premium from interest rates (Calvo, 2004). On the other hand it could reduce trade and output

growth by stopping or delaying the necessary relative price adjustment process which often lead to speculative attacks. The optimum currency theory throws insight to exchange rate fluctuation as a risk factor (Push and Pull Factor) that needed to be monitor in every international transactions. Based on the theory both fixed and floating exchange rates have tendencies of generating market imperfections that could affect investment values. This explains why many developing and emerging economies suffer from the fear of floating rates, while fixed rate regimes sometimes end in market crashes when there is sudden stop of foreign investment and capital flight flows as evident in the East Asian and Latin American crisis as well as in some sub-Saharan African countries.

2.2.6 LIQUIDITY PREFERENCE THEORY

This theory was postulated by Keynes (1936)and popularized by Tobin (1967).The liquidity preference theory is applied here to explain the investors reactions to movement in interest rate which is viewed as a major driving factor for geographical foreign portfolio diversification. Under this theory investors' expectations for future interest rate could motivate them to invest cash now or hold it for future consumptions. Accordingly, the theory aligns with Keynesian Transmission mechanism which explains different motives for which individuals hold cash. The theory confirms the fact that the motivation for funds movement in and out of the system is usually driven by many macroeconomic factors including push and push elements as postulated by Lee (1966). Keynes transmission Mechanism describes how policy induced changes in the nominal money stock or shot run interest rate impact on real variables.

Under the Liquidity preference theory, the moves for savings and investment or preference for holding cash instead of investing it for future expected returns on investment supports foreign portfolio investment diversification theory and also the push and pull theory respectively. According to this theory when interest rates are high the propensity to hold money declines as investors tend to move their funds to more viable investment assets that would maximize their wealth and expected returns offered by the alternative investment market. Accordingly, the theory aligns with Keynesian Transmission Mechanism model and is used to explain the different speculative motive for demanding money that drives investor's savings–investment decision making. Demiurge, Kunze and Levine (1996) however have contradicted this assumption pointing out that increased liquidity inclination can deter growth through three channels as greater stock market liquidity may reduce savings rate through income substitution effects. They held that if savings fall, and externally attached capital accumulation rises, greater market liquidity may slow down economic growth. Secondly, by reducing uncertainty associated with investment, rate of savings could be reduced due to ambiguous effect of uncertainty on savings. Thirdly stock market liquidity encourages investor's myopia, and adversely affects corporate governance and economic growth.

2.3 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 dragmatically in a symbiotic and bilateral fashion as depicted in the figure 2.1. 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 market capitalisation.

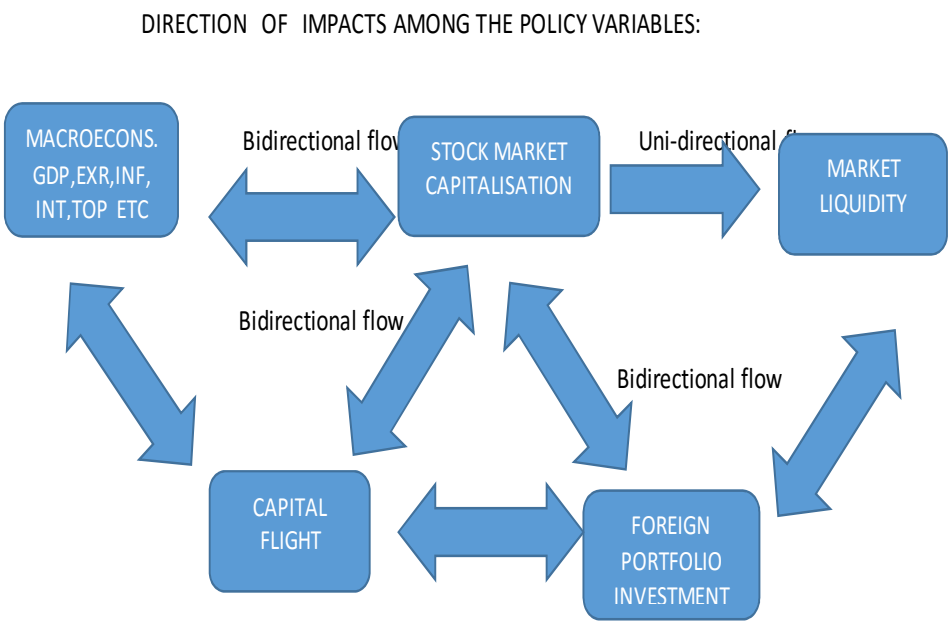
The capital market performance responds to the macroeconomic influence which also impacts on the economy in terms of expected markets' return, market liquidity and market capitalization. This in turn tends to create opportunity for portfolio investors to patronize the capital market in a bid to reap from the enhanced expected market return. Capital market response can also negatively drive investors to exist their current market to other markets that promise them higher expected market returns.

The reactions of foreign portfolio investors to the market performance dynamics sometimes generate adverse movement in form of capital flight especially during bearish seasons. The reverse is the casa for bullish scenarios in the capital market. The magnitude of capital flight induced by the reactions of foreign portfolio investors' to capital market could also led to withdrawal or diversification outside the domestic market which may further depress the capital market thereby resulting to crowding out funds from the local markets. This situation create unfavourable market scenario in the form of capital market illiquidity. The liquidity problems created by capital flight may translates to adverse macroeconomic conditions which may also lead to weak and inefficient capital market situation. Finance experts perceive this interaction as bilateral cyclical movement that keep revolving to achieve equilibrium market condition in the economy.

The works of Mcknon and Shaw (1973) and Erunza (1974) on market mechanism as a driving factor for economic growth through the capital market becomes relevant here and could be adopted to explain these interactive movements among the focus variables . The push and pull factor theory, portfolio diversification theory and foreign capital flow theory have all provided a relevant anchor for this conceptual model. Under these theories, flow of resources among nations is usually driven by the cyclical or bilateral reactions to innovations triggered by adverse or favorable conditions (push or pull factors)in terms of exchange rate, interest rate, inflation rate and economic growth rate as well as the foreign capital flow theory (resources endowment factors) within a given period of time.

Thus the connection of capital flight connection with foreign portfolio investment and capital market performance is conceptually modeled to demonstrate the flow of reactions due to innovations among the focused variables in a typical economic system like Nigeria.

Figure 2.1: Interrelationship existing among the target variables.



Every variable in this system is endogenous which interacts within the system to produce a reactionary flow process that could positively or adversely affect the macroeconomic conditions represented by exchange rate, inflation rate interest rate and economic growth rate respectively. Macroeconomic changes may exert positive or negative pressures on the capital market performance proxy by stock market capitalization and stock market liquidity respectively. This in turn could drive foreign portfolio investments flow in different directions that might spark off fund movement that could translate to hot money.

Furthermore investment flow process is motivated by the risks / return potentials inherent in the capital market which is also driven by the state of the economy which could translate to investment income normally legally or illegally repatriated to the foreign investors economy at the expense of the their host country's economy . This situation might also transform to capital

flight problem when funds are excessively transmitted through illegal channels without due process to avoid taxation and beat regulatory bottlenecks.

In line with the theory of push and pull factors which drive movement of resources among nations, the theory plays significant impact here in generating strong or weak connection among the variables under focus .The framework depicted here is consistent with past studies on capital market impact on economic growth, capital flight and economic development and growth and capital market performance and Foreign Portfolio Investment (Ozurumba, 2012;Onuoha, 2013;Eniekeziemene, 2012;Maku and Atanda, 2009;Dauda, 2007; Fiador and Asare, 2012).

2.4 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 in this study area. However a number empirical literature in related area has been examine as indicated in the following areas:

- Capital market performance, foreign portfolio investment and economic development in Nigeria.
- Foreign portfolio investments, capital markets performance and capital flight in the Sub-Saharan Africa.
- Capital flight and foreign portfolio investment in Nigeria.
- Foreign portfolio investment drivers.

- Benefits and challenges of foreign portfolio investment, capital flight and capital market performance in Nigeria.
- Foreign portfolio investors and capital market instruments.
- Foreign portfolio investors and investment instruments in the developing countries.

2.4.1 CAPITAL MARKET PERFORMANCE, FOREIGN PORTFOLIO INVESTMENT & ECONOMIC GROWTH AND DEVELOPMENT IN NIGERIA.

Maku and Atanda (2009) examined the long-run and short-run effects of macroeconomic variables on the Nigerian capital market between 1984 and 2007 using Ordinary Least Square Estimators. They found that the NSE All Share Index is more responsive to changes in exchange rate, money supply and real output. All the variables simultaneously have significant impact on the Nigerian stock market both in the short and long-run. Levine and Servos (1998) investigated whether stock markets are merely casinos or a determinant of economic growth in Africa and found that a positive and significant correlation exist between stock market development and long run economic growth.

Ozurumba (2009), Ezeoha (2009), Adenuga, (2010) and Onuoha, (2013) on their parts respectively evaluated the impact of stock market returns on Foreign Portfolio Investment , the nexus between economic growth and foreign portfolio investment and the impacts of macroeconomic indicators on foreign portfolio in Nigeria respectively using the Ordinary Least Square estimation method and found that a robust, positive and significant relationship exist among the investigated variables. In their studies, they also found a unidirectional causality running from stock market returns to foreign portfolio investment without actually

capturing the nature of causality between the foreign portfolio investment and capital flight in Nigeria thus affirming existence of knowledge gap in this area of study.

2.4.2 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. Adenuga (2010)investigated the role of macroeconomic policies in determining the flow of Foreign Portfolio Investment (FPI) in developin gmarket economies and found that a highly volatile macroeconomic environment means that investors may not be able to predict correctly what the future holds for their investments and so become skeptical about increasing their investment outlays. This study provides measures of real capital flight from Nigeria based on the residual method adjusted for exchange rate fluctuations and trade miss-invoicing. The portfolio choice approach is explored, in which the flow of capital is accumulated into stock and expressed as ratios of private stock of real wealth. Econometric analysis of capital flight, based on a portfolio choice framework, was conducted using the ordinary least squares (OLS) method of analysis. The study results revealed that a number of factors systematically explain the portfolio behavior of portfolio wealth holders in Nigeria. This result aligns with earlier studies that focused on macroeconomic indicators.

International Monetary Fund (2000) ranked emerging Africa markets growth in foreign capital flows lower between 1970 and 1980 compared with developed economies. Their Net portfolio inflows was found to be volatile in the peak of the financial crisis in 2008 with significant net outflows short of what it used to be in the last three decades when their net portfolio inflows to Sub-Saharan Africa was on the rise again. Besides, World Bank details on the developed countries impact on world economy reveal about 80% dominance of international trade in 1972, 100% dominance of international direct investment, about 90% dominance of international equity and foreign bond issues and 80% contribution to the world Gross National Product, while the developed countries dominated the world economies in the 1980s.Latest world economic data however has revealed a wider reversal in economic performances gap between the developing countries and industrialized nations.

Appraising this paradigm shift in the investment preference for Sub Sahara Africa, Aron et al. (2009) opined that since 1990 capital account liberalization and broader economic reforms coupled with increasing openness to both trade and capital flows have all helped to alleviate the key structural constraints of low domestic saving in South Africa, consequently making the country vulnerable to new sources of external shocks in form of surges and reversals in international capital flow. It is significant to note that emerging stock markets' witnessed a boost between 1986 and 1997 as their market capitalization grew, from $171 Billion to $2.2 trillion, with the world stock market capitalization increasing from 4% as at the end of 1986, to nearly 9 per cent by the end of 1997. Number of listed companies equally increased within the same period due to improved regulatory frame work.

However, International Finance Corporation (IFC) (1996) found that, out of the total foreign portfolio flows (FPFs) into the developing countries, Latin America, East Asia and Pacific countries got the largest share while Middle East and North African regions share covered only 1.21% as at 1996.Information gathered from African Security Exchange Fact Book (2013), revealed a staggering level of foreign participation in the sub-Saharan African emerging markets. Out of fourteen countries sampled only six countries 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. Since 1990sEgyptian, equity markets have become significantly more globalized. Egyptian government, have been relaxing restrictions on domestic stock markets to attract foreign investors and issuers consequently , institutional investors have taken advantage of this window to rapidly increase their holdings of foreign equities. According to the Egyptian Capital Market Authority (CMA) published data, direct foreign trading was not registered before 1996. Although the highest share of foreign investors in the capitalization of Egypt's stock market was about 8% only in 1996/97, their share in the number of transactions, in traded shares, and the value traded was very large, and

increasing. In other emerging markets, foreigners' shares in market capitalization and in trading are relatively proportionate. For example, in 1995, these shares in Korea were 13%, and 6%, respectively, and in Thailand they were 21% and 26%. (World Bank, 1997).

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 however, protection of foreign investor interest was still given prominence and thus given birth to the Foreign Investment Protection Act in (1964). The Act focused on foreign direct investors and allowed for repatriation of earnings and capital by foreign firms with less restriction.

By the CMA 1990 and the need for the amendments of the Act in 1995, thus making it possible for foreign portfolio investors to buy government securities; the repealing of the Exchange Control Act in December 1995 which ensured the removal of all exchange controls; introduction of Central Depository System (CDS) in November 2004; and automation of trading system in September 2006, all have helped in facilitating he enhancement of FPI in Kenya.

In the recent past, several institutional changes have been implemented to strengthen the market and to improve its efficiency among other factors. For foreign investors, the drive has been to diversify investments, hedge against risk and to get higher returns in emerging markets given the low correlation of emerging markets with developed ones (Conover, 2002 and Allen, 2011). The change in investors' composition, however, affects equity prices and risk pricing in developing

countries. This is more so because foreign portfolio is easily reversible and thus may affect the share prices and market stability. Chinzara and Aziakpono (2009) focused on the long-run relationship between South Africa and seven major world stock markets. They also controlled for the effect of financial crises on this possible relationship. Using the maximum likelihood-based co-integration approach and daily data for the period 1995-2008, they found evidence that the South African stock market tended to commove with the US, UK and Germany.

Onour (2009) studied the long term relationship among the stock prices of three major North African stock markets, namely; Egypt, Morocco and Tunisia without imposing linearity in the relationship. The study applied both Johansen and Juseilus (1990) test for linear cointegration and the Breitung (2001) rank test. Using daily data between 2002 and 2006, he revealed that there was strong evidence of multivariate and bi-variate nonlinear long-term co-integration amongst the markets. The author noted that ignoring the nonlinear relation in these markets could lead to a misleading conclusion that no long-run relationship existed in the markets, when in actual fact it did exist (Onour,2009). Alternatively, Yu and Hassan (2006) focused on the long-run relationship between the Middle East and North African (MENA) region and three global markets (the US, the UK and France). Using the Johansen co-integration approach, the found some evidence of co-integration among daily data for the period 1999-2005.

Ekineh (2003) observed , that the investment climate in Nigeria within the period of 1987 to 1998 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 as it recorded of ₦1,815.7 billion (SEC, 2008). By the year 2000, foreign portfolio inflow into Nigeria market stood at ₦51.1 billion compared to ₦1.82 billion in 1999 an increase of about 2700%. However, the deregulation of the securities pricing by Security and Exchange commission in 1993 and the abolition of the obnoxious exchange rate control decree of 1962, as well as promulgation of Nigerian Enterprises Promotion Decree (NEPD) in 1989 all helped in shaping the direction of the capital market in Nigeria. These policies demanded that Nigerian Stock Exchange should be more dynamic in terms of provision of adequate infrastructure and regulation wise in order to generate the needed liquidity and vibrancy to attract foreign portfolio investors.

A review of foreign portfolio investment composition transacted through the Nigerian Stock Exchange (NSE) reveal remarkable hikes in the sectors transactions ratio between local and foreign investors rising from 14.8 % in 2007 to 66.8 % in 2011 and settling at 61.4% 2012. Accordingly, domestic investors' stake has been dropping from 85.2% in 2007 to 33 % in 2012, 53% and 41% in 2013/2014 respectively. This perceive increased trend is suspected to have trigger off capital flight scenarios. Capital flight is the movements of capital in and out of a country which occurs in response to perceived changes in risk and return tradeoffs investment influenced by uncertainties not captured by portfolio analysis. It is this component of the outflow that is termed as capital flight. Thus Capital flight is a sub-set of international asset deployments or portfolio adjustments undertaken in response to an unusual perceived

deterioration in risk/return profile associated with assets located in a particular country that occur in the presence of conflict between the interests of asset holders and governments. Two-way flows of capital occur because of the differential impact on domestic and foreign investors arising from asymmetries in information, risk, return and the impact of political risk.

Onuoha (2013), examined the impact of macro-economic variables on foreign portfolio investments in Nigeria between the periods of 1980-2010. The study revealed that among the identified macroeconomic variables, Gross Domestic Product and Money Supply had inverse relationship with FPI while other macroeconomic variables were positively related to FPI. These variables are inversely related to FPI but Interest Rate, Exchange Rate and inflation rate were directly related to FPI. Granger causality results revealed that macroeconomic variables do not granger caused FPI. Macroeconomic variables were found to be statistically insignificant to FPI based on F statistic computed value. Finally, the study found out that there was no long run relationship existing between GDP, inflation rate, exchange rate, MS, interest rate and foreign portfolio investment.

2.4.3 CAPITAL FLIGHT AND FOREIGN PORTFOLIO INVESTMENT IN NIGERIA:

Desirability of foreign portfolio investment and its connection with capital flight transmission through the capital market have continued to generate arguments in most developed and developing countries in view of its perceived impacts on an economy. For Nigeria, attention has been on capital flight in connection with foreign direct investment or real sector investments with few studies on capital flight linking foreign portfolio investment and stock market performance until recently.

Different studies however have confirmed the existence of substantially larger capital flight from Nigeria in absolute and relative terms than that from other sub-Saharan African countries. Using a modified version of the residual method Morgan Trust (1986) was the first study on capital flight to include Nigeria, along with other developing countries from Asia, Latin America and Africa. The study established the incidence of capital flight from Nigeria in the second half of the 1970s and first half of the 1980s. Using the narrower non-bank, definition proposed by Morgan Trust (1986), and the asset method, Hermes and Lensink (1992) measured capital flight from Nigeria along with five Sub- Saharan African countries over the period 1976 to 1989. Their findings indicate that Nigeria experienced the largest capital flight of US$21 billion, representing 60% of the combined total capital flight for the six countries in the sample.

Ali and Walters (2011) investigated the causes of capital flight from Sub-Saharan Africa. The study drawing insights from portfolio theory, presents empirical evidence that links capital flight to the domestic investment climate. Using a panel data set for (37) African countries over the 1980-2005 periods, the study discovered that once account is taken of the region's structural and institutional features, private capital outflows from Africa are explained by policy distortions along with the relative riskiness and poor portability of investments. In addition, the study discovered evidence that the type and composition of resource flows to the region are important for capital flight foreign aid generally discourages capital flight while short term borrowing and FDI contribute to it.

In another study Ojo, (1992), found that the cumulative capital flight in Nigeria from 1975 to 1991 was determined to be in excess of US$35.9 billion, being more than double the total of the

other two African countries (Cote d'lvoire and Morocco) in the sample. Similarly, a cross-country study by Chang and Cumby (1991) on capital flight from (36) sub-Saharan African countries from 1976 to 1987 found Nigeria to be the only country in the group with an absolute level of capital flight greater than those from Latin America countries. Boyce and Ndikumana (2001) findings presented capital flight evidence which confirms that in Nigeria capital flight is transacted through several other channels such as cash movements or smuggling of goods, antiques, precious gems, gold, silver and other precious metals. Bribery may be another conduit for capital flight and has a special feature as the capital involved need neither originate in the country concerned nor enter the country at all. The corruption of government officials and politicians in various arms deals, bank transfers and swap arrangement are all tunnels for capital flight in Nigeria. The use of FPI as a tunnels was however no mentioned.

A study on econometric analysis of capital flight in Nigeria by Ayadi (2008) investigated the determinants of huge capital flight (with its constraints on economic growth) in Nigeria and its attendant impacts. His study adopted the linear determinants of capital flight in Nigeria utilizing the ordinary least squares (OLS) and the error correction method (ECM). The study found among other things, the validity of the portfolio theory which postulates how risk-averse investors can build portfolios in order to optimize or maximize expected returns given a level of market risk. This is confirmed in the international realm as private sector engaged in international arbitrage. Capital flight is caused by the interest rates deferential both in the short and in the long run. In addition, exchange rate depreciation significantly increases capital flight in Nigeria.

2.4.4 CAPITAL FLIGHT AND CAPITAL MARKET PERFORMANCE IN NIGERIA

Studies on capital flight and capital market performance in Nigeria is quite scanty with very few works concentrating particularly on the real sectors connection while ignoring the capital market linkage. Krugman (1998),Chukwu (2013), Onyema (2013) and Ozurumba (2009) however examined the influence of capital market in generating foreign capital flows and found that foreign portfolio investment which is normally transacted through the capital market tunnel has the tendency to generate capital flight issues in the system due to its transient nature that leaves the capital market more vulnerable to series of depressed capital market episodes in Nigeria.

2.4.5. FOREIGN PORTFOLIO INVESTMENT DRIVER

The growth in the global capital market in the recent times in the emerging markets has been rapid with the cross-border banking activities rising. Information from the bank for International Settlement reveals that cross-border loans and transactions have increased significantly between 1997 and 2010**.** The increasing trend has continued even during the last global financial crash 2007 and 2008 with its devastating effect on equity portfolio value worldwide. Empirical studies have also confirmed that reforms of local markets and relaxation of controls to attract foreign investment has become an integral part of development strategies of emerging economies. Lending his support Erunza (2005) in his study found that there exist strong relationship between foreign portfolio investment and market performance , economic growth, degree of market integration, cost of capital, cross market correlation and market volatility among other drivers.

Temitope et al (2002), Tokumbo et al (2004) and Rose et al (1998) all examined the trend towards promoting stock market and economic growth but failed to consider the fact that foreign portfolio investment is believed to spur up economic growth and development. A further study of six developing countries of Asia, regression results show that inflation rate, exchange rate, GDP and share of domestic capital in the world stock markets were all significant factors affecting FPI. Inflation rate had negative correlation while others are positive. Foreign Direct Investment, Total trade and current account deficit variables were all statistically insignificant.

Agarwal (2006) examined investment allocation choices of actively managed USA mutual funds in the emerging markets after the Asian financial crisis investigating level of firms governance and disclosure policies that influence these allocation decisions and found that U.S investors invest more in open emerging markets with stronger corporate governance structures such as transparency, investors' protection, shareholders right, standardize accounting policies and greater disclosure requirements.

As indicated, the growth in the global capital market in the recent times has been rapid with the cross-border banking activities rising. Data from Bank for International Settlement (BIS) disclosed that cross-border loan transaction rose from $3,600billion in 1990 to $9, 466billion in 2002 , International bond market was $8,780 billion in 2002 up from $3,515billion in 1997 while international equity stood at $314billion by year 2000. This trend has continued until the recent global financial crash between 2006 and 2008 which led to huge depreciation of portfolio value worldwide. The questions agitating most professionals thought has been the justification for this rising trend in international portfolio investment appetite.

The work of Ezeoha, Ogamba and Onyiuke (2009) examine the nature of relationship existing between stock market development and the level of investment flows in a country with a high degree of macroeconomic instability; and whether the stock market plays a uniform role in attracting both domestic and foreign investments in such economic situation. The study shows that infrastructural developments in the Nigerian stock market over the years could be able to spur growth in domestic private investment flows, but unable to do so in the case of foreign private investment; and that development in the country‘s banking system rather had some destabilizing effects on the flows of private investments. Maku and Atanda (2009) investigated further these variables by posing a big research question if macroeconomic indicators exert shock on the Nigerian capital market. This question aided them to examine the long-run and short-run effect of macroeconomic variables on the Nigerian capital market between 1984 and 2007. The Augmented Engle-Granger co-integration test they conducted revealed that macroeconomic variables exert significant long-run effect on stock market performance in Nigeria. Also, the employed Error Correction Model showed that macroeconomic variable exert significant short-run shock on stock prices as a result of the stochastic error term mechanism. However, the empirical analysis showed that the NSE All Share Index is more responsive to changes in exchange rate, money supply and real output. In a nutshell, the study believed that macroeconomic indicators have simultaneous significant impact on the Nigerian capital market both in the short and long-run.

Adam and Tweneboah (2009) however disagree with Ezeoha, Ogamba and Onyiuke (2009) on the impact of Foreign Direct Investment (or Private Foreign Investment) on stock market performance. They found that there is a long-run relationship between FDI, nominal exchange

rate and stock market development in Ghana economy. Feldstein(1995) identified the major driving factors for international portfolio diversification in emerging economies to include the following:

1. Deregulation of the financial market as a major driving factor of global investment, Governments around the world have traditionally restricted movement in capital flow over the years thereby limiting the foreign investors ability to purchase investment beyond the investor's territory consequently hindering foreign investment flow especially to the financial sector of the emerging economies.

2. International Market Segmentation: under a segmented market model , firms can invest globally by simultaneously listing in more than one or two markets thereby enhancing arbitrage opportunities since the share values would differ according to counties operating economies (different expected returns for different economies) Feldstein (1995).

3. Information Technology: Feldstein (1995) argued that since the financial services as well as portfolio investment are information driven they draws large volumes of information globally about world capital market tendencies such as risks, exchange risks interest rate and credit worthiness of countries with their companies operating performance through the internet for decision making. This resulted to highly revolutionalised financial industry with its attendant global emphasis since 1970. International communication has facilitated faster information dissemination among various economies. Empirical research reports has shown that real recording costs,

transmission and processing cost between 1964 and 1990 has dropped by 95% with rapid increase in the use of internet and computer facilities global.

4. Integrated international market has also been recognized as key driver of recent upsurge in global investment. It is now technologically possible for financial services companies to engage in 24-hour trading in stock, bond or currency markets.

5. Global market risk is also a factor that is pushing investors from one country capital market to another in an effort to minimize imported portfolio risk. According to Feldstein, most of the capital movements are pursuing temporary gains as they shift in and out as quickly as economic conditions change. He pointed out that series of global and regional economic crisis that have occurred such as 1973 energy crisis, 1983-debt default , 1987-stock market collapse -1992- European currency devaluation, 1997-the Asian crisis of 1997, the 1994/95 -Mexico financial crisis and the last 2007- global financial meltdown of all have contributed to the increased cases of "Hot Money" wealth creation syndrome of the global capital market.

2.4.6 FOREIGN PORTFOLIO INVESTMENTSAND CAPITAL MARKET DEVELOPMENT

As postulated in previous studies, foreign portfolio investment can make significant contribution to the development of domestic market by expanding investors' opportunities for portfolio diversification and providing a potential for achieving higher risk-adjusted rates of return for foreign investors. Foreign portfolio investment impact on markets correlations as reported by previous works indicated positive correlation between emerging market returns and major

markets though smaller in absolute terms compared with returns in the developed market. Bekaert and Harvey (1998) applied powerful statistical method and control to examine impact of liberalization on market correlation and found that although correlation of markets increased after market liberalization but unlikely to affect global investors searching for diversification.

Foreign capital movement impacts on especially short term flows. Hence it has been suggested that countries should adopt policies that encourage longer term flows to minimize speculative short term flows . This is because short term capital flows response quickly to changes in short term returns like exchange rate adjustment to interest rate differentials unlike long term capital flows that react to expected return-risk trade -offs as they relate to the investors' portfolio holdings.

However, Claessens, Dooley and Warner (1993) suggest that long term flows are often as volatile as unpredictable as the short term flows as volatility is more likely to be generated by institutional structural changes. They did not find any evidence to support the notion that foreign portfolio investments are more volatile than other external sources of finance. Bekaert and Harvey (1998) examined the impact of market liberalization on stock returns volatility after controlling other market development indicators and found that the effect is economically and statistically insignificant concluding that destabilization belief about the influence of foreign portfolio investment on the local market seem unwarranted.

From the perspective of the recipient country, foreign portfolio equity investment (FPEI) contributes to the financing of domestic enterprises and it allows risk sharing between foreign and domestic investors, as repayments depend mainly on the performance of the firms concerned

United Nations (1997). Increased foreign investment activity may also improve the depth and increase the liquidity of the local stock exchange, bringing benefits to other segments of the capital market, such as the bond market. Foreign participation in the domestic capital market may induce improvements in accounting, information, and reporting systems, as well as increase the analytical sophistication of the domestic securities industry. Also, as foreign practices are adopted by domestic shareholders, domestic companies may improve corporate governance. Nangwa (2009),evaluated the recent history of foreign portfolio equity investment in Egypt, its advantages and disadvantages, and the required institutional changes to take full advantage of its potential positive contribution to the Egyptian economy. The paper suggests ways of maximizing the benefits and minimizing the costs of the foreign equity portfolio investments through policies and market friendly regulations which (i) provide macroeconomic stability, (ii) generate incentives to use the least volatile of the existing portfolio investment instruments, (iii) promote the use of institutional investors instead of individual investors and (iv) strengthen the existing market infrastructure.

Chen and Ang (2001) observed that international portfolio diversification while giving investors exposure to stocks and bond markets outside their territory of origin and providing asset diversification and possibility for yield or gains significantly greater than that obtainable from domestic market. Nyang'oro (2013) , emphasized on the need for stock market liberalization and advocated for ways of improving their performance and financing investment through foreign capital. He evaluated the effect of foreign portfolio flows on the performance of Nairobi Security Exchange (NSE) using multifactor model while proxing for stock market performance with the market return. He modeled foreign portfolio flows into expected and unexpected components as determinants of market returns. The results showed that participation of foreign investors has an

impact on domestic stock market returns and that stock market return is affected by lagged unexpected flows and not by its contemporaneous value, implying that despite the role of portfolio flows in lowering the cost of capital, financing growth, promoting local investment and macroeconomic stability it also leads to in improved stock market performance.

The dynamics of cross-border investments have also recently received some significant research attention in Ghana because globalization has blurred the lines between countries, causing investors to easily cross borders in search of high investment returns. Agenor (2003),Ghose (2003), Knill(2005), Vita and Kyaw (2008) all argued that African countries and other developing economies have need for substantial inflows of foreign capital to fill their foreign exchange and savings gap occasioned by widespread poverty that require rapid capital accumulation and growth rate. They however stressed that besides poverty alleviation, emerging jurisdictions markets are preferred to developed countries by foreign investors because of higher rate of return on investment of these infant economics. Ghose (2004) noted that foreign capital investment contributes to economic growth in developing countries through two channels, one of which includes external productive spill over to domestic enterprises.

Dauda (2007) also found that foreign capital investment increases the gross domestic products and generates streams of real income in the host country, which consequently expands employment, raises wages and salaries, lower commodity prices, increase tax revenue accruable to the government among other benefits.Fiador and Asare (2012) investigated the impact of currency risk as a major determinant of foreign portfolio diversification and performance of cross border investment using monthly data from Ghana and some selected African countries

between the period 2005 and 2010. They adopted Henry Type Error Correction Model and the result indicated that currency risks are important in explaining the returns on cross border investments albeit with lag and upon aggregation. The findings revealed a significant effect flowing from macroeconomic variable like interest rate as big factors to consider when compiling portfolio diversification and a significant policy implication as regards international investments. Ozurumba (2012) investigated the impact of stock market returns on foreign portfolio investment in Nigeria, using data collected from Central Bank of Nigeria statistical bulletin, adopting multi linear regression analysis and Granger Causality tests to determine direction of causality between the variables inflation rate, stock market return and foreign portfolio investment. The result revealed that Granger causality test between foreign portfolio investment and stock market returns are robust positive unidirectional causality from stock market returns to foreign portfolio investment in Nigeria. The implication is that an increase in stock market return will attract foreign portfolio investment since hot money will always move to where returns on investment are relatively high. These findings however support the endogenous growth theory on perfect capital mobility by corroborating the findings of Odionye (2011).

Gazioglu (2008), in a study of the effects of capital inflows and outflows on real exchange rates and the real stock market returns before and after the financial crisis in Turkey, found an asymmetric impact of capital on exchange rate and stock market returns. In a study on the relationship between aggregate stock market returns and cash flows (net purchase of equity) from an array of investor groups. Boyer and Zheng(2009) found quarterly flows to be auto-correlated for each of the different investors' groups, and a significant and positive contemporaneous relation between stock market returns and flows of Mutual Funds and Foreign

Investors in U.S. They find that investors are driven by unexpected flows component rather than expected flows; however, they find little evidence that investor flows follow past stock market returns.

Kim and Yang (2009) investigate the effect of capital inflows on domestic asset prices in Korea from January 1999 to September 2007. Capital inflows might result in increased asset prices either by directly affecting the demand for assets, through money supply and liquidity which in turn might boost asset prices and by generating economic booms in capital receiving economies leading to increase in asset prices (Kim et al, 2009). However, other factors such as improved economic performance, monetary expansion and low interest rates could also affect asset prices in emerging markets. In investigate the effect of capital inflows on domestic asset prices in Korea, Kim and Yang (2009) find the influence of capital inflow shocks to be more significant on the stock market but limited in other parts of the economy.

2.4.7 FOREIGN PORTFOLIO INVESTORS AND CAPITAL MARKETINVESTMENT INSTRUMENTS IN DEVELOPING COUNTRIES

Foreign portfolio equity investors in emerging markets, may be classified under institutional and retail investors respectively.Institutional investors, such as mutual funds, pension funds, and insurance companies manage money for individuals and firms. These investors are particularly important for emerging markets, and offer fundamental advantages. They are often prepared to accept less liquidity than retail investors, and demand high standards of management**.** They provide a potential source of large and more stable funds. Their investments are mostly in longer-term assets. Institutional investors provide individual investors with a low-cost method of realizing higher returns from a more diversified international portfolio than they could get by

individual basis. Private foreign investors or retail investors, tend to invest directly and morespeculatively than institutional investors, in emerging stock markets. They usually chasehigh short-term returns arising from market anomalies, such as delays in price adjustment.However, they may also invest in international or domestic mutual funds that buy tradedsecurities (Chuhan, 1994).

2.4.8FOREIGN PORTFOLIO INVESTMENT INSTRUMENTS

Foreign portfolio equity investment instruments in developing countries, take two mainforms:-
Equity instruments, such as: direct equity purchases in domestic stock markets, country funds, American depositary receipts and Global depositary receipts.

Quasi-equity instruments, including: convertible bonds, and bonds with equity.

The acquisition of securities by foreigners, directly in the local equity market has both its advantages and disadvantages. This type of flow contributes directly to the finance of domestic firms, in the market of primary issues and indirectly when shares are traded in the local secondary market, by pushing up equity prices and thus lowering the cost of raising capital.

This encourages new equity issues and increase the liquidity of the local stock exchange, and enhance its efficiency, by providing high standards of regulations and information, required by foreigners, especially institutional investors. In addition to high quality services such as brokerage, custody and settlement.(United Nations, 1997).

2.4.8.i International Equity Investment Funds

International equity investment funds are financial structures for pooling and managing the money of multiple investors. These funds can invest on a global, regional, sub-regional or

individual country basis. (IFC,1996; United Nations, 1997).The featuresof country funds vary according to the structure of the fund, and theinvestor placement.

The structure of the fund: country funds usually fall into two types: closed-end funds and open-end funds .A closed-end fund is an investment fund, which issues a finite number of shares at the time of its initial public offering, and is not required to meet redemption requests. Thus, they take a longer-term view, are able to invest in less liquid instruments and in less developed equity markets. Closed-end funds, are less likely to contribute to market volatility. (IFC, 1996 and1998).

2.4.8.ii American Depositary Receipts (ADRs) And Global Depositary Receipts (GDRs)

According to International Finance Corporation (1998) , American Depositary Receipts [ADRs] are shares of a non-United States company that are listed and traded in the United States as well as on their own country's stock exchange. When the securities of this foreign corporation, have been deposited with a custodian bankin the country of incorporation of the issuing company, this custodian bank informs acommercial bank in the United States known as a depositary, that the ADRs can be issued.

ADRs are United States dollar denominated and are traded in the same way as are thesecurities of United States companies. The holder of ADRs is entitled to the same rightsand advantages as owners of the underlying securities in the home country. (IFC, 1998).ADRs may be unsponsored or sponsored;Unsponsored ADRs are issued without any formal agreement between the issuing company and the depositary. They provide the issuing company a relatively inexpensive method of accessing the United States capital markets. The investor bears certain costs, including those

associated with the disbursement of dividends. Sponsored ADRs are created by a single depositary, which is appointed by the issuing company under rules provided in a deposit agreement. Sponsored ADRs, may be restricted or unrestricted: Restricted ADRs are privately placed, are not registered with the Securities and Exchange Commission, and are exempt from its reporting requirements. Rule 144A, passed by the Securities and Exchange Commission in 1990, eased restrictions on the resale by qualified institutional buyers of private ADR issues amongst themselves once these issues were made under this rule.

Unrestricted ADRs are publicly placed and traded and they are in three classes of unrestricted ADRs, each increasingly demanding in terms of reporting requirements to the Securities and Exchange Commission, but also allowing higher visibility and making the facility more attractive to potential investors. It is difficult for small capitalization companies of emerging markets to issueunrestricted ADRs, because they must meet partial or full reporting requirements of the Securities and Exchange Commission and other specific minimum requirements with respect to the size of total assets, earnings and /or shareholders equity. Thus, emerging market ADR issuers tend to be large domestic companies with considerable financial resources and high international visibility(IFC, 1998).

2.4.8.iii Global Depositary Receipts [GDRs]

Global Depositary Receipts are shares of a corporation that are publicly traded in London, Luxembourg, or other international stock exchanges as well as the home country. The only difference between GDRs and ADRs is that the former can be traded in more than one currency and within as well as outside the United States. (IFC, 1998).Depository receipts provide benefits

to the issuing company and to foreign investors, and have become the most popular portfolio equity instruments among emerging markets'firms, in the recent times. Depository receipts, facilitate the issuing company's access to international investors in foreign markets, and enable it to attract the capital of investors who are unwilling to go directly to the inefficient domestic markets, or are prevented from doing so by legal restrictions (World Bank, 1997). Depositary receipts lower the future cost of raising equity capital, by raising the company's visibility and international familiarity with it. The decision to issue a depositary receipt is not necessarily equivalent to raising new equity capital. Firms can choose to list existing shares in the foreign market, to gain access to a larger shareholder base, which may increase the value of their equity. At a predetermined, they may be able to raise new equity in the foreign markets. However, in countries like Chile, the firms are allowed to go to the international markets only with new issues of equity while the trading of existing shares is prohibited. For foreign investors, depositary receipts lower the cost of trading in foreign companies' securities and lower information search cost. The depositary provides both settlement and clearance services, thus lowering the settlement time and risk. The depositary provides periodic financial reports on the issuing company to the investor, who bears certain costs. (Glen and Brian, 1994).

Over the period 1990-1996, the issuance of ADRs and GDRs in international markets, increased by an average growth rate of 30 per cent. By the end of 1995, ADRs and GDRs represented 6% of the market capitalization of the IFC Emerging Market Investable Index. (World Bank, 1997). By 1996, a total number of 10.7 billion depositary receipts with an overall value equivalent to US$337 billion were traded on United States securities exchanges, and an estimated 1.5 billion depositary receipts with a value between $20 and $25 billion were traded on European

exchanges, or on the "over-the-counter" market. Nearly sixty three countries issued depositary receipts.

2.4.8.iv Convertible Bonds

These are bonds that its holder may convert into a specified number of shares of the issuer's stock, usually at predicted prices and at any time up to and including the maturity date of the bond. The holder of a convertible bond will exercise the right to convert the bond into stock if the value of the shares for which the bond could beexchanged exceeds the value of the bond.Many convertible bonds include a call option, which gives the issuing company the right to redeem the bond before its maturity date. Once the call is exercised, the bond holder chooses either to convert the bond into shares or surrender it and receive in return the call price in cash. (Julian, 1997).

2.4.8.v Bonds with Equity Warrants

An Equity warrant**,** is a security that offers the owner the right to subscribe for theordinary shares of a company for a given period of time [the exercise period], and at a fixed price (French, 1986). A warrant may sometimes be issued, bought and sold on the stock exchange, asa separate security.The holder of a bond with equity warrant, will exercise the warrant if the price of theshares exceeds the exercise price of the warrant, to realize a net gain. (French, 1989).Generally, the holder's rights attached to convertible bonds and bonds with equitywarrants will be exercised in the event that the company is successful and its market value and share price rises. If growth is not very high, the investor can retain the bond, and receive a stable relatively safe income flow. The interest payments on convertible bonds and bonds with equity warrants are lower than on straight bonds (because of the value of the right to convert and the value of the

warrant, respectively). Thus, the issuing company will be able to apply a larger amount offinancing towards expansion of the company or towards general operating expenses.

2.4.9 BENEFITS OF FOREIGN PORTFOLIO INVESTMENTS

Foreign portfolio investments geographically expand investors' opportunities for portfolio diversification as it possesses the potential for achieving higher risk-adjusted rates of return for foreign investors. From the recipient country's perspectives, foreign portfolio investment (FPI) contributes to the financing of domestic enterprises and allows risk sharing between foreign and domestic investors, as repayments depend mainly on the performance of the firms concerned (United Nations, 1997). Increased foreign portfolio investment activity may also improve the depth and increase the liquidity of the local stock exchange, bringing benefits to other segments of the capital market, such as the bond market. Foreign participation in the domestic capital market may induce improvements in accounting, information, and reporting systems, as well as increase the analytical sophistication of the domestic securities industry.

Reviewing the benefits of foreign portfolio investment Jackson (2009), Chen and Ang (2001) and Nangwa (2009) evaluated Foreign Portfolio Investment in China, Egypt and other African countries respectively from the investors' angle and discovered that among other benefits, a significant level of systematic risks could be diversified away through FPI and that international investments through global capital market offers lower cost of capital, greater liquidity and larger pool of investors.

The dynamics of cross-border investments have recently beenreceiving some significant research attention in many other African countries. Agenor, (2003), and Nyang'oro, (2013), all argued that African countries and other developing economies have need for substantial inflows of foreign capital to fill their foreign exchange and savings gap caused by widespread poverty which require rapid capital accumulation and growth rate.

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Jackson (2000) looked at the benefits of international portfolio diversification from two different angles, the investors and the borrowers respectively. From the investors 'angle, there is a wider range of investment opportunities than in a purely domestic market and consequently, significant level of risks can be diversified away. Corroborating this investment advantage , Jackson (2000) in a case study of Deutsche Telekom a telephone company that was based in Germany which was able to raise the sum of $13.3 billion through international diversification thereby converting a 100% privately owned Germany company before 1996 to part – ownership structure through German stock market. Thus domestic equity market investors could maximize their wealth by exploring international investment opportunities and securities.

From the borrower's perspective, the pool of investors to provide the needed funds is limited to the capacity of the country's residents in a domestically based financial intermediation process. This places an upper limit on the funds available to borrowers, consequently exposing them to huge liquidity problems and increased borrowing cost than it would have been in a global capital market (Jackson 2000). He buttressed his argument with another case study of China Mobile a company based in China that took advantage of global market at the time they needed to raise large funds which Chinese market could not afford to offer them due to

higher interest rate in their home market. Their findings wasthat international investments through global capital market offerslower cost of capital, greater liquidity and larger pool of investors.

Shapiro (2000) summarized the benefits of international equity investment as follows:

- . Offers more opportunities than domestic portfolio only
- Larger firms are more of overseas companies.
- Greater risk – return trade off
- Weighting options are flexible
- Optimal international asset allocation is possible.
- A systematic risk within a domestic economy which could be unavoidable can be unsystematic and diversifiable outside the home country thus international diversification pushes out the efficient frontier.

2.4.10 FOREIGN PORTFOLIO INVESTMENT PROSPECTS AND CHALLENGES IN NIGERIA

The role of international investors in capital markets development can be over emphasized. This is evidenced from the contagious effect of most global financial and economic depression which tends to have grave devastation impact on offshore economies such as Nigeria. It is however pertinent to remark that, despite the numerous benefits from foreign portfolio investments to the host countries, studies and literature findings have revealed a number challenges and impediments to the realization of its huge potentials.

International Finance Cooperation report (2013), has recently projected a significant fall in Private capital inflows to emerging market‘s economies due to market volatility amid concerns about the end to Ultra-Easy U.S. monetary policy which is likely to continue to weaken GDP growth in emerging economies resulting to the worsening economic outlook. The report conclude that some emerging market’s economies seem more vulnerable to retrenchment of foreign capital while others have become important sources of external financing in the global economy, with Emerging Market’s private outflows projected to rise to $1 trillion in 2013.

UNTAD (2005) pointed out that “ foreign portfolio investment in Africa has advanced much further and faster than internal integration especially in structural, and institutional policy trends at the expense of the continent. UNCTAD (2005) however observed that African economics have advanced further and faster in terms of attracting foreign investment in spite of structural institutional and policy defects. Foreign portfolio investment return is highly speculative such that the risk of its sudden reversal, in response to the economic mood of the recipient nation is quite high Busse et al (2005), Adam (2002) notes that some FPI which exhibit market seeking motivations might create distortions in the host countries economy through monopolies and entry barriers. Lending their support for portfolio value fluctuation, Alfaro et al (2003) argued that the potentials of foreign capital investment could severely be impeded if there is absence of well-developed financial market which is widely the case in African countries.

Zask (2004) found that Modern Portfolio Theories assumptions support international portfolio diversification. Stressing on the benefits of off-shore investment he noted that since non-US equities which consist of about Two-Thirds of the worlds' market capitalization with a higher GDP growth rate of about 6.5%-7% than that of United States with 2% it therefore makes no sense to ignore non US large and viable investment market .Concluding, Zask (2004) advised that international investment should provide diversification benefits of risk reduction without lowering returns for United States investors, since the forces driving the international markets are from the United States markets.

Global investment paradigm critiques which emerged before the crisis of 1997-1998 have generally stressed that the so called promised return held out by international portfolio diversification proves to be difficult to find. Comparing returns of S&P500 to that of Emerging Market Free Index and Europe, Australia, Far East, EAFE, J.P. Morgan Europe, Australia and Far East Index of industrial country stock markets between 1988 and 1997 it was discovered, that (S&P500) USA stock market outperformed other markets over the period, secondly the findings revealed that emerging markets experienced considerable greater volatility than those of the industrialized world. Under bond markets, US dollar return was higher than emerging markets or industrial worlds excluding US as proxied by Merrill Lynch Global Government Bond Index.

A cursory review of the performance of these markets indicates an average ten years' return rate of 6.56% (other markets) against 18.05 (S&P 500). Henry (2000) in his investigation of stock market liberalization effect on Nigerian economy noted that its impact tend to be gradual with favourable unanticipated macroeconomic effect as well as reversal effect on Net Present Value

of Investment, FPI further allows for risk sharing among foreign and domestic investors resulting to reduction in equity risk premium. By increasing stock market liquidity, Henry (2000) concludes that stock market liberalization could also increase cost of capital by raising risk

While there are possibilities that benefits derived from integrated market might vary depending on policies embraced in each market, and the level of capital market development. Senbet and Otchere (2010) found that although market integration of Africa with rest of the world has increased, following the various reforms by the countries , emerging markets in Africa still remain thin and illiquid; thereby creating barriers to financial globalization despite high return they offer. They identified the major challenges affecting capital markets in Africa to include scarcity of products traded in their market, inadequate supervision by the regulatory authorities' market illiquidity, poor information disclosure by companies etc.

Stulz (1999) noted that a key obstacle to foreign portfolio flow is the instability in equity prices when the foreign investors enter the market as well as when they exit. He observed that, prices volatility and information asymmetry that exists between foreign and domestic investors seriously impact on capital inflow valuation. Brennan and Cao, (1997) found that , inherent risks such as macroeconomic political instability, Assets devaluation, worldwide fluctuation in currency values, crisis of international investors' confidence, war, famine and corruption have all been posed great challenge to international portfolio diversification (Senbet and Otchere, 2010).

Positive Feedback Hypothesis (PFH) indicates significant correlation between inflows and return as well as positive price response to capital market liberalization and this tend to exhibit price

momentum as prices will keep falling when foreign investors sell and rise when they buy, as a result of the herding effect.

2.4.11 MITIGATING FOREIGN PORTFOLIO INVESTMENTAND CAPITAL FLIGHT CHALLENGES:

One major outcome of deregulation and unrestricted capital asset movements across borders is the vulnerability of investors to speculative capital flow. Fieldstein (1995), noted that among the drawbacks Euro market as a foreign portfolio platform for transaction, , is its lack of liquidity which exposes dealers to unexpected losses in times of bank failure and these losses could be minimized where markets are subjected to regulation and international investments fundamental evaluation of its exchange rate risk.

In recent years, all currencies have been widely fluctuating and large profit obtained in a foreign country can be nullified by adverse currency volatility. Consequently, an international investor is confronted by relative cost and risk arising in fund raising in the international capital market which he strives to reduce to lowest level below the market rate of return. This most often proves difficult to achieve except when there with government subsidy or tax asymmetric he can to reap international investment benefit, but he must endeavor to mitigate risks by adopting a number of strategies.

Petzel (1999) recommends the following procedure to ascertain risk return relationship as risk management strategies for international portfolio by adopting correlational and covariance analysis to determine which country's assets to be included in the portfolio. Countries with

negative correlation coefficient should form a large number of portfolio component while countries that are positively correlated are excluded. Petzel (1999) explains that highly correlated countries have tendencies of sharing similar risks which will negatively impact on the over portfolio. This strategy therefore affords the investor the opportunity to strategically allocate and combine countries asset with local assets to achieve the desired portfolio diversification goal. Gibson, (1998) however opined that the most important decision an investor makes in achieving a balance in his portfolio investments is to simultaneously determine the growth path. The portfolio should follow time and general volatility in return such that diversification effect should ensure that portfolio volatility is less than weighted volatility levels of all the assets in the portfolio.

According toSkousen(2008), sticking only to U.S. equities is a risky strategy for investors. In a surveyreport of stock markets of 16 countries they found that foreign stocks have equaled the long-term return of the U.S. market despite wartime dislocation, hyperinflation, and depression.He then concluded that investing abroad is essential and that stock returns in the United Statesalone , although quite good, were not exceptional. He also advocated theuse Exchange Traded Funds (ETFs) to increase and protect your profits. Siegel (2008) refersto Exchange Traded Funds (ETFs) as the most innovative and successful new financial instruments since stock options and commodity futures were created in the 1970s.

A number of hypotheses have been advanced to explain the correlation between foreignportfolio investment and stock returns depending on how foreign portfolio flows affect domestic stock prices. The base-broadening hypothesis suggests that foreign inflows cause emerging equity market prices to rise. By broadening the investor base, diversification and risk sharing is

increased thereby lowering the required risk premium. Besides, the resultant influx of new investors can lower the perceived liquidity risk of stocks (Clark and Berko, 1997). The implication is that, investors invest only in stocks of which they are informed (Merton, 1987). Stocks with narrow investors bases exhibit higher expected returns because for the holders of perspective of the market as a whole. Net purchases of foreigners creates substantial shocks to net investor demand as foreign inflows may be based on foreign investors' perception that the shares are undervalued or that there are other portfolio benefits that may be derived by investing in emerging markets (Richards, 2004). Positive feedback trading may lead to prices exhibiting momentum such that prices will keep on falling as foreign investors sell but rising as they buy.

Positive feedback trading may, however, not be destabilizing as trading may be due to information about fundamentals (Choe et al., 1999). However, Bohl and Sikolos (2008) hold the opposing view that feedback traders do not base their asset decisions on fundamental values but react to stock price changes. If this is the case, then trading by positive feedback traders will be destabilizing. Evidence on positive feedback hypothesis has been found to hold in Korea (Choe et al., 1999), by foreign institutional investors in India (Batra, 2003), and in six Asian emerging markets which is argued to be due to behavioural factors or foreigners extracting information from returns rather than portfolio-rebalancing effects (Richards, 2004). Positive feedback trading has also been found to hold by Sikolos (2008) in a sample of developed and emerging markets.

The price pressure hypothesissuggests that rise in prices associated with inflow surges are due to temporary illiquidity meant to absorb demand from foreign entry. Thus inflow induced price increases would be reversed subsequently. Hence, prices initially increase based on expectations

and information asymmetry, and due to learning process, the prices revert to their original level. Here, entry of foreign investors in the market gives an indication of good performance and new information. According to Warther (1995), flows may move security prices due to information revelation and price pressure, and market response to information revelation will make prices move in the same direction as flows, hence flows will be positively correlated with security returns. Bekaert et al. (2002) find equity flows to increase after liberalization and argue that this is due to portfolio rebalancing. Their study supports price pressure hypothesis with equity flow shocks initially increasing returns. Pavabutr and Yan (2003) show that exposure to foreign flows is associated with a reduction in risk premium, which diminishes among stocks favoured by foreign investors and decreases over time as the market becomes more liberalized.

RESEARCH GAP

It has been observed that despite the increasing trend in the inflow of foreign portfolio investment to Nigeria since after the global financial meltdown in 2008 , the subject matter on the interrelationship among foreign portfolio investment and capital flight has not been received the deserved attention by researchers in Nigeria as it is tenable in other developed and developing countries all over the world . Relevant studies in this field attempted to measure macroeconomic consequences nexus with capital market performance and foreign portfolio investment ignoring the capital flight implication of the capital market activities .

Available studies in Nigeria have failed to throw adequate light on hot money tendencies of foreign portfolio investment in an economy. Even in their derivation of capital flight index figures, capital market performance and foreign portfolio investment figures are sometimesignored by some researchers.

It is against this backdrop that this study seeks to empirically evaluate the interrelationship existing among foreign portfolio investment , capital flight and capital market performance in Nigeria using econometrical approach.

2.4.12 SUMMARY OF SOME OF THE EMPIRICAL LITERATURE REVIEWS

The study empirically reviewed past literature under the following areas: (i) Foreign Portfolio investment and capital market performance in Nigeria , ii Economic growth and development and capital market performance in Nigeria iii Capital flight and economic growth and development of Nigeria (iv) Sub-Sahara regions, capital market and foreign portfolio investment (v) Drivers of capital flight and foreign portfolio investment in Nigeria, (vi) Benefits and Challenges to foreign portfolio investment diversification and capital market performance in Nigeria.

The Table 2.1 Summarizes the empirical review of previous works on Foreign Portfolio Investment, Capital market Performance and Capital Flight in Nigeria and some other countries

AUTHOR/DATE	STUDY TITLE&METHODOLOGY	STUDY FINDINGS
Nyang'oro (2013)	Effect of Foreign Portfolio Investment on the performance of Nairobi Stock Exchange using Multifactor Model.	Found that Foreign portfolio investorsparticipation inNairobi markethas impact on domestic stock market returns.
Fiador and Asare (2012)	Impact of currency risk as a major determinant of foreign portfolio diversification and performance of cross border investment using Error correction model on data from African states between 2005-2010	Interest rate and currency risks are big factors to consider when compiling portfolio diversification and a significant policy implication international investment.

African Security Exchange Fact Book (2013),	Foreign Portfolio Investors presence in 23 Sub-Saharan African States .using comparative ratio approach .	Found that Six States had above 40% foreign portfolio investors participation while 12 states had none at all . Only Lusaka Stock Exchange had foreign investor's participation ratio of 78.9 against domestic investors ratio of 21.1%. Only Bourse de Tunis had the least rate of 6.3% (foreign) against 93.7% (local) investors.
Ozurumba (2009)	Evaluated the impact of Stock Market Returns on Foreign PortfolioInvestment inNigeria using Multi-regression model.	Positive and significant relationship impact A Robust and unidirectional causality running from stock market returns to foreign portfolio investment
Ezeoha et al (2009)	Examined the nexus between economic growth and development and foreign Portfolio Investment using Multi-regression Model,	A significant and positive relationship between foreign Portfolio Investment and economic growth indicators
IMF (2000)	Examined the growth process of foreign portfolio flow in African markets between 1970-1980 using data from African States.	The study found that foreign capital flow in Africa was minimal during 1970-1980 compared with that of developed countries.
Ali and Walters (2011)	Investigation of the causes of capital flight from Sub-Saharan Africa presents empirical evidence that links	Discovered that private capital outflows from Africa are explained by policy distortions along with the relative riskiness

	capital flight to the domestic investment climate using multi regression analysis approach.	and poor portability of investments.
Maku and Atanda (2009)	Examine the long-run and short-run effects of macroeconomic variables on the Nigerian capital market between 1984 and 2007 using Ordinary Least Square Estimators.	Found that the NSE All Share Index is moreresponsive by changes in exchange rate, money supply and real output simultaneous significant impact on the Nigerian capital market both in the short and long-run.
Zhao et al (2015)	Examined Hot Money Drivers in China using Auto-Regression Distributed Lag (ARDL) models	Found that mortgagedprice and stock market index return changes expectation were linked to series of capital flights between (2000 and 2012).
Chang & Cumby (1991)	Cross-country study on capital flight from 36 sub-Saharan African countries from 1976 to 1987	Found Nigeria to be the only country in the group with an absolute level of capital flight greater than those from Latin America countries.
Claessens&Naude (1993)	Estimated Capital flight of 84 countries including Nigeria between (1971 and 1990) using comparative ratio analysis.	Found that Nigeria placed 6th position in Capital flight to GDP ratio ranking
Ajayi (1997)	Evaluated Capital flight level of 18 highly indebted low income countries in Sub-Saharan African States between 1980 -1991	Found thatcumulative capital flight to external debt of Nigeria was the highest at 94%.

Boyce &Ndikmana (2001)	Examined evidence of capital flight in Nigeria	Found that capital flight is transacted through cash movements, smuggling of goods , mineral resources and bribery
Jimoh (,1991)	Investigated geometric analysis of the magnitude of capital flight in Nigeria using World Bank and Morgan Trust Capital flight Estimation methods	(I) Between 1960 and 1988 total capital flight in Nigeria Stoodat 53.8 billion dollars averaging 1.9 billion dollar per annum. (ii)Found that exchange rate valuation, foreign-domestic inflation rate differentials pace of primitive capital accumulation are key determinants of capital flight in Nigeria.
Ayadi (2008)	Investigated the determinants of capital flight in Nigeria and its attendant impacts.	Found that capital flight is driven by the interest rates deferential both in the short and in the long run and that, exchange rate depreciation significantly increases capital flight in Nigeria.
Ojo, (1992)	Evidence of capital flight in Sub-Saharan State using a comparative capital flight flow analysis	Found that the cumulative capital flight from 1975 to 1991 was determined to be in excess of US$35.9 billion, being more than double the total of the other two African countries (Cote d'lvoire and Morocco) in the sample.
Levine & Servos (	Investigated whether stock market are	Found positive and significant correlation

1998)	merely casinos or a determinant of economic growth in Africa using Product Moment Estimation approach.	between stock market development and long run economic growth.
Adenuga (2010)	Examined the role of macroeconomic policy on determining Foreign Portfolio investment flow in developing countries using multi-regression analysis methods	Found that highly volatile environment prevents investors from making meaningful predictions concerning their portfolios in the market
Onuoha (2013)	Examined impact of macroeconomic indicatorson Foreign Portfolio investment in Nigeria between 1980 and 2010 using Ordinary Least Square Estimation methods.	Found inverse relationship between GDP, Money Supply and FPI and direct relationship with other variables. It also found that macro-economic variables do not granger cause FPI in Nigeria while other relationship
Erunza(2005)	Examined Foreign Portfolio Investment relationshipwith stockmarket performance in Nigeria using Ordinary Least Square Estimation procedure.	Found strong and significant relationship between stock market performance and FPI.
Jackson (2009)	Evaluated the benefits of Foreign Portfolio Investment in China from the investor point of view	Found that among other benefits, a significant level of systematic risks could be diversified away through FPI and that international investments through global capital market offers lower cost of capital, greater liquidity and larger pool of

		investors.
Fieldstein (1995)	Examined Foreign Portfolio determinants in emerging economies. Analytical review of the financial market.	Found that financial market deregulation, international, market segmentation and information technologies as well as integrated global markets are key drivers of FPI.
Nangwa (2009)	Examined the History of Foreign Portfolio Investment in Egypt. A general market review.	Found that macroeconomic stability, use of institutional investor incentives to be more benefit maximizing regulation approaches in Egypt.
Ali and Walters (2011)	Investigated the causes of capital flight from Sub-Saharan Africa drawing insights from portfolio theory. Multi regression analysis method.	Discovered that private capital outflows from Africa are explained by policy distortions along with the relative riskiness and poor portability of investments.
Uguru et al (2014)	Examined capital flight and exchange rate volatility in Nigeria between 1970 -2007 using simple regression analysis	Found that capital flight is positively linked with exchange rate at 1% level of significance

Source: Author's work

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This section focuses on the various methods adopted for estimating and validating the stated objectives as each specific objective under goes various estimation techniques which is in line with existing literature as well as relevant methodologies.

3.2 RESEARCH DESIGN The study is designed to empirically investigate the levelof interactive relationship existing between Foreign Portfolio Investments, capital market performance and capital flight. The study employs descriptive, exploratory and expost-facto researchdesigns that comprise basicallyof the parametric estimations to validate the nature, magnitude and possible direction of relationship among the target variables.

3.3 POPULATION, SCOPE AND SAMPLE SIZE

The study relied on annual macroeconomic timeseries data on foreign portfolio investment capital flight and stock market performanceindicators between the periods 1970 to 2014. The choice of this study scope is informed by the perceived period gap observed in previous literature which lacked wider study coverage and also to cover the years that Nigerians economic potential became popular to the global community as a result oil boom.The variables investigated for capital market performance and foreign portfolio investment have strategically drawn from the population of over one million incorporated companies with the Corporate Affairs Commission (CAC) in Nigeria. They also include the proprietorship

businesses, private limitedcompanies, public limited liability companies, unlimited liability companies, co-operative Societies and government companies that are quoted in the Nigeria stock exchange market.Stratified and Judgmental sampling methods were used to select Two hundred and fifty seven (257) securities consisting of One Hundred and Ninety Seven (197) equities of companies with more 25 % of their shares in the hands of the general public as at 2014, fifty two (52) federal, state and local government bonds ,Three (3) preference shares and four (4) mutual fund investments . The sample data alsocover transactions on these equities of the quoted companies from (12)different industrial sectors and Ninety –Nine (99) sub-sectors all registered with the Nigerian stock exchangebetween 1970 and 2014 (stock market outlook reports, 2014).

3.4 DATA SOURCES AND DATA COLLECTION METHODS

The data engaged for the study for Foreign Portfolio investment, capital flight, capital market performance variables are basically from secondary sourcesfrom 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, Business Day Newspapers and some local and international Journals covering the periods between 1970 and 2014. A proportion of Foreign Direct Investment (FDI)figures between 1970 to 1985 when both foreign direct investment (FDI) and foreign portfolio investment (FPI) were lumpedtogetherwas extracted for (FPI) values while the remaining years were sourced as presented by the central bank statistical bullet as instructed by the (BOP) balance of payment office of central bank of Nigeria. Data for capital flight between 1970 and 2014 was adopted from World Bank &Erbee, 1985; Jimoh, (1991), Boyce and Ndikumana 2001and Dooly ,1994).

TABLE 3.1 SUMMARY OF SOURCES OF DATA

S/N	Data Definition	Data Acronym	Data Source
1.	Market Capitalization	MCAP	Nigerian Stock Exchange Market (NSEM) UNDP
2.	Stock Market Liquidity	LQM	Nigerian Stock Exchange Market (NSEM)& UNDP
3.	Foreign Portfolio Investments	FPI	Central Bank of Nigerian, Nigerian Stock Exchange, &Securities & Exchange Commission. SEC.
3.	Exchange Rate	EXR	Central Bank of Nigeria (CBN) Statistical Bulletin
4.	Interest Rate	INTR	Central Bank of Nigeria (CBN) Statistical Bulletin
5.	Inflation Rate	INFR	National Bureau of Statistics (NBS)
6	Hot Money Index	HMI	NBS, IMF DOT. and World Bank
7	Degree of Trade Openness	TOP	NBS

Source : Author's work

3.5 DATA ANALYSIS TECHNIQUES

Vector Error CorrectionModels, Multi-regression methods, Ratiosand percentagesare used for this study depending on the outcome of the various preliminary tests to be conducted.Thejustificationfor the use of these techniques has been associated with the realization that relationships among financial variables and 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). Most importantly,

VAR models have become more robust approach to synthesizing the dynamic interactions among macroeconomic data and is increasingly popular in recent times because they provides a coherent and credible approach to data description, forecasting and structural inferences for policy analysis. It also 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).

3.6 MODEL SPECIFICATIONS

Three Multi regression models are specified here in order to investigate the relationship among the policy variables and some selected macroeconomic variables as well as foreign portfolio investment in Nigeria as used in extant literature such as Ozurumba, (2012), Onuoha, (2013), (Eniekeziemene(2012,) Maku and Atanda (2009), (Fiadorand Asare, 2012). Blocks of models are built subject to the number of the endogenous variables to be estimated.

MODEL (1) shows relationship between foreign portfolio investment and capital market performance.

In order to model the relationship between foreign portfolio investment and stock market performance, the stock market capitalization is adopted as a proxy for stock market performance and also as a dependent variable while foreign portfolio investment and macroeconomic variables are the explanatory and control variables respectively as specified below.

$$MCP=f(fpi\ ,exr\ ,int,\ inf,\ top,gdp) \qquad 1$$

$$mcp_t = \propto 0_t + \alpha 1 logexr_t + \alpha 2\, loginf_t + \alpha 3 logint_t + \alpha 4 logtop_t + \alpha 5 loggdp_t + \alpha 6 logfpI_t + e_t \quad 2$$

MODEL 2shows therelationship between Foreign Portfolio Investment and stock market liquidity.

The effect of foreign portfolio investment and some selected macroeconomics variables on Stock Market Liquidity is modeled with stock market liquidity representing capital market resilience as the dependent variable while foreign portfolio investment and macroeconomic variables are the explanatory variables as specified below.

$$SML = f(fpi,\ exr,\ inf,\ int,\ top,\ gdp) \quad 3$$

Transforming equation into its intensive form, we have

$$sml_t = \beta 0_t + \beta 1 logexr_t + \beta 2 loginf_t + \beta 3 logint_t + \beta 4 logtop_t + \beta 5 loggdp_t + \beta 6 logfpl + e_t \quad 4$$

Model 3 shows relationship between foreign portfolio investment and capital flight in Nigeria.

The effect of foreign portfolio investment and some macroeconomics variables on capital flight capital flight is modeled with capital flight as dependent variable while foreign portfolioinvestment and macroeconomic factors are the explanatory variables as specified below.

$$Cf = f(fpi,\ exr,\ inf,\ int,\ top,\ gdp) \quad 5$$

Transforming equation five into its intensive form, we have

$$cf_t = \delta_{0t} + \delta 1exr_t + \delta 2loginf_t + \delta 3logint_t + \delta 4logtop_t + \delta 5loggdp_t + \delta 6logfpI + e_t \quad 6$$

Where:

mcp_t = The stock market capitalization forall the200 listed equities on the Nigerian stock market as at 2014.

fpi_t = foreign Portfolio Investment is a measure of value of foreign portfolio investments flow into the country between the period 1970 and 2014

cf_t = Capital Flight at time t;

sml_t = Stock Market Liquidity at time t used measure market resilience and level of market activity

exr_t = Foreign Exchange rate between Naira and other currencies at time t.i.e. Dollar within the period under review;

$\inf_t$ = Inflation Rate represents inflation rate at time t; it is used to capture magnitude of price changes.

$i\mathrm{nt}_t$ = Real Rate of Interest is a measure of lending interest rate at time t; used to measure the price of money

top_t = Degree of trade openness is a proxy variable to capture the level of economic development andtrade restrictions in Nigeria with other countries

gdp_t = Gross Domestic Product at time t measures the aggregate of the value of goods and servicesproduce by the citizens of a country for the given period;

e_t = is the random error term which captures all the other explanatory variables not included in this regression model;

For allthe three models a priori expectations in line with extant literature are as specified.

A priori expectation $= \alpha 1 \quad \alpha 6 > 0 \quad , \delta 1 - \delta 6 > 0$ and $\beta 1 - \beta 6 > 0$ 7

3.7 DEPENDENT AND INDEPENDENT VARIABLES

Stock market capitalization, capital flight and stock market liquidity are the dependent variables for this study which is impacted by the inflow of foreign portfolio investment, and other macroeconomic variables performance as control and independent variables such as inflation rate, interest rate exchange rate degree of openness and gross domestic product.

3.8 MODELS 7, 8 AND 9 ESTIMATETHE INTERACTION ANDDIRECTION OF CAUSALITY AMONG THE FOCUS VARIABLES USING THE VECTOR AUTO-REGRESSION METHOD

This is adopted to examine the interaction and connectivity among the variables.The Vector Autoregressive model is employed hereif the series are stationary at levels i.e. I(0). However, if series are integrated of order one i.e. I(1), Johansen's procedure will be used to determine whether any co-integration vector among variables exists or not. Having applied co-integration test, if the variables are stationary at first difference and also co-integrated, the Vector Error Correction Model is considered appropriate here for investigating the interrelationship and interactive reactions among the endogenous time series.

The VECM is as specified ;

$$1mcy_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta 1mcy_{t-i} + \sum_{i=1}^{k} \beta_2 \Delta 1fpi_{t-i} + \sum_{i=1}^{k} \beta_3 \Delta 1cpf_{t-i} + \beta_4 ECM_{21} \qquad 8$$

$$\Delta 1fpi_t = \alpha_0 + \sum_{i=1}^{k} \alpha_1 \Delta 1fpi_{t-i} + \sum_{i=1}^{k} \alpha_2 \Delta 1mcy_{t-i} + \sum_{i=1}^{k} \alpha_3 \Delta 1cpf_{t-i} + \alpha_4 ECM_{1t-1} \qquad 9$$

$$\Delta 1cpi_t = \delta_0 + \sum_{i=1}^{k} \alpha\delta_1 \Delta 1cpf_{t-i} + \sum_{i=1}^{k} \delta_2 \Delta 1fpi_{t-i} + \sum_{i=1}^{k} \beta_3 \Delta 1mcy_{t-i} + \delta_4 ECM_{3t-1} \qquad 10$$

Where lmcyis the log of market capitalization to the ratio of GDP, lfpi is the log of foreign portfolio investment lcpf is the log of capital flight.

ECM is the Error Correction Model, I = (1……n), α, β and δ are the coefficient of the parameters, the change symbol is the first difference of the endogenous variables.

The application ofVECM for this study is subject to the outcome of the co -integration Tests. The VECM enables us to estimate the interactive effects among capital market performance, foreign portfolio investment and capital flight using the impulse response functions (IRFs) and Forecast Error Variance Decomposition (FEVD) if our series are integrated of order zero i.e. I(1).

The Impulse Responses Function traces out the responses of current and future values of each of the variables to a one-unit increase in the current value of one of the VAR errors, assuming that this error returns to zero in subsequent periods and that all other errors are equal to zero.

3.9 MODEL ESTIMATION TECHNIQUES

The estimation techniques for the first three objectives to address the trend analysis in the flow foreign portfolio investments, stock market performance and capital flight in Nigeria between 1970 and 2014using graphical approach.

For the fourth and fifth objectives on the inter relationship, nature and direction of causality among the variables are investigated by employing statistical descriptive analysis , Ordinary Least Square (OLS) and Vector Error Correction models respectively. These tests are preceded by preliminary tests for stationary assumption conformity test, using Augmented Dickey-Fuller (ADF) (1979) and Phillips-Perron (PP) (1988), Serial correlation Test using Durbin Watson Test tool, heteroscadacity and multicollinearity test made use of Breusch-Pagan-Godfrey test and Variance Inflation factor tests (VIF) respectively.

3.10 ESTIMATION TECHNIQUES

The estimation technique begins with determining the time series properties of the data and followed by co-integration tests.

Given the fact that substantial volume data for this study are macroeconomic time series data, theestimation technique begins with determining the time series properties of the data to ensure their validity for further econometric application. Prior to the estimations, unit root tests will be performed on the series to determine their levels of stationarity.

3.10.1 UNIT ROOT TEST In this context, Augmented Dickey-Fuller and Phillips- Perron tests are adopted in order to determine the presence of unit root and integrated level of each series. The ADF test will be performed giventhe equation below

$$X_t = \alpha + \varphi T + (1 \quad \beta)X_{t-1} + \sum_{j=1}^{n} {}_i \; X_{t-1} + \varepsilon_1 \qquad 11$$

$X_t$is the variables that will be tested for unit root; Δ is the first difference operator; α is the constant term; *t* is a time trend; and *n* is the lag number.

The null hypothesis is H0: (1-β) = 0, β=1, implying the non-stationary of *Xt*. Rejecting the null hypothesis points that *Xt* has no unit root.

3.10.2 LAG LENGTH SELECTION TESTS:

In line with VAR model the level of lag used defines the quality of result we get hence the use of Akaike Information Criteria AIC, Schwarz Information Criterion (SIC) and Hannan-Quinn Information Criterion (HIQ) tests are considered. The appropriate lag length is the one supported by more of the three criteria.

The existence of co-integration between the regressand and regressors will be assessed. This required running a Johansen co-integration test based on VAR model of the equations. The Johansen Maximum Likelihood procedure as specified using Johansen (1988) (Johansen &Juselius, 1990), which considers two test statistics namely, the trace statistics and the maximum eigenvalue statistics, is preceded by an estimation of a vector autoregressive (VAR) model at its optimal lag length since the procedure is very sensitive to the appropriate lag length.

This is to determine the long run relationship existing among capital market performance indicators, foreign portfolio investment and capital flight.

The null hypothesis of r co-integrating vectors is tested here against the alternative hypothesis of $r+1$ co-integrating vectors.

The application of Vector Autoregressive model will be employed if series are stationary at levels i.e. I(0). However, if series are integrated of order one i.e. I(1), Johansen's procedure will be used to determine whether any co-integration vector among variables exists or not. After applying co -integration test, if the variables are stationary at first difference and also co-integrated, the Vector Error Correction Model will be appropriate to investigate the existing relationship.

In line with VAR model, the level of lag used defines the quality of result we get hence the use of Akaike Information Criteria AIC, Schwarz Information Criterion (SIC) and Hannan-Quinn Information Criterion (HIQ) tests have been adopted here in selecting the lag length. The appropriate lag length is the one supported by more of the three criteria.

3.10.3 CO-INTEGRATION TESTS

The existence of co-integration between the regressands and regressorsare assessed by running a Johansen co-integration test based on VAR model of the equations. The Johansen Maximum Likelihood procedure as specified using Johansen (1988); Johansen and Juselius, (1990). Two tests statistics namely, the trace statistics and the maximum eigenvalue statistics are considered as and is preceded by an estimation of a vector autoregressive (VAR) model at the optimal lag length.

CHAPTER FOUR

4.0 DATA PRESENTATION, ANALYSISAND INTERPRETATIONS

4.1 Introduction

This chapter synthesizes the data collected in order to investigate the validity of the various statements of hypothesis. The section particularly focuses on the data presentation, analysis and interpretation of the various test results obtained in order to achieve the four specified objectives. The data analysis begins with the trend analysis followed by the Multi-Regression Analysis andVectorAuto-Regression Analysis or Vector Error Correction Model.

4.2 TREND ANALYSIS FOR FOREIGN PORTFOLIO INVESTMENT , CAPITAL FLIGHT, CAPITAL MARKET PERFORMANCE IN NIGERIA (1970 AND 2014) :

Table 4.1 : Showing five yearly average flow of capital fight, foreign portfolio investment and stock market capitalization to the ratio of GDP in Nigeria between 1970 and 2014.

YEAR	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000	2000-2005	2005-2010	2010-2014
CF(NM)	1435	6304.4	4659	5772	5722	685	5684	27808	27799
MC(NB)	0.0667	0.019	4.24	0.0040	0.1354	0.087	0.238	5.88	9.96
FPI(NM)	56.05	61.9	98.4	1124.3	7044	-3425	29856	726342	3386847

Table 4.2 ShowingPERCENTAGE TREND ANALYSIS FOREIGN PORTFOLIO INVESTMENT CAPITAL FLIGHT, MARKET CAPITALISATION IN NIGERIA (1970- 2014.).

YEARS	1970-1975	1975-1980	1980-1985	1985-1990	1990-1995	1995-2000	2000-2005	2005-2010	2010-2014
CF(NM)	100%	439%	325%	402%	402%	47.7%	396%	1938%	1737%
MCY(NB)	100%	28.5%	6356%	6%	203%	138.4%	356%	8828%	14,933%
FPI(NM)	100%	110%	178%	2008%	12,570	-6116	53147	129703	604798

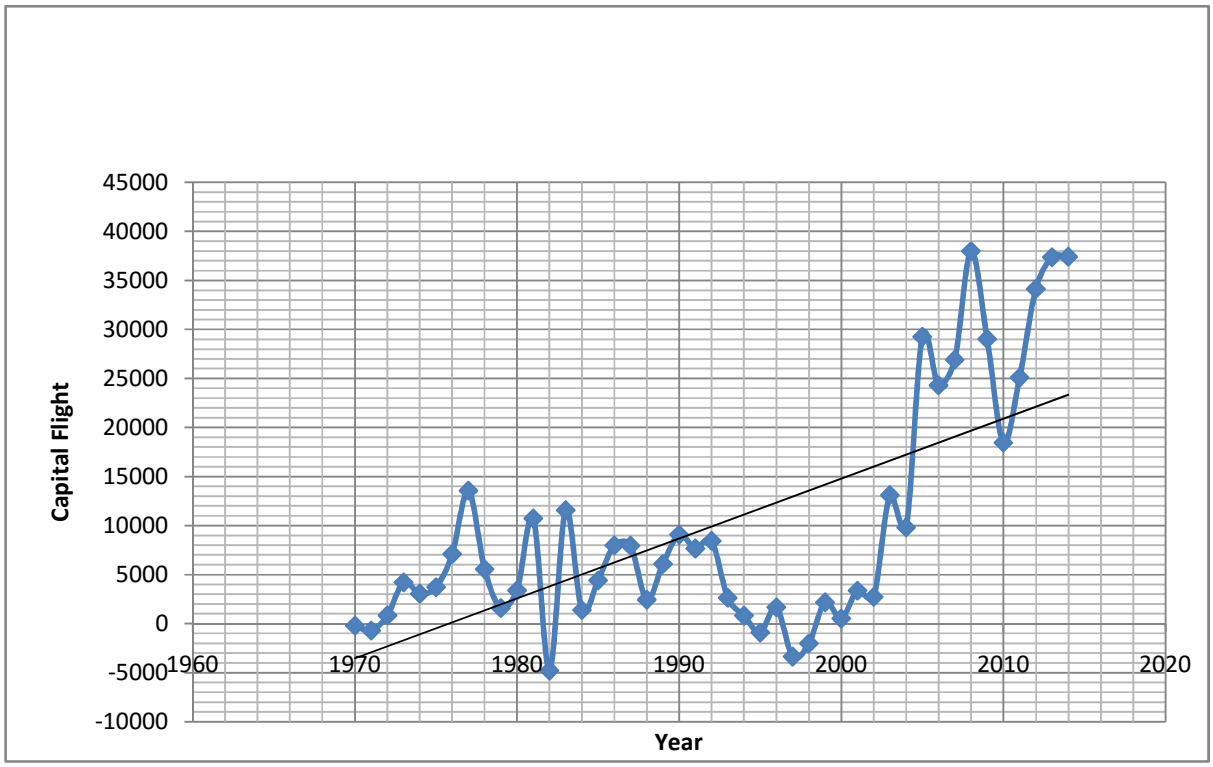


FIGURE 4.1 Showing the flow of capital flight in Nigeria for the period (1970-2014)

Source: Author's Computation

Figure 4.1 shows the graph depicting the flow of capital flight in Nigeria over the period between 1970 and 2014. A trend line is imposed based on five yearly average percentagechange which gives a general outlook ofthe trend all along capital flight from 1970 to 2014 in Nigeria as indicated on table 4.1.

Movement in the flow of capital flight in Nigeria was unstable but progressive over the period between 1970 and 2014 as depicted on the graph Using 1970 and 1975 as a base trend year with 100% average percentage movement. Capital flight movement was atits peak between 2005 and 2010 withaverage percentage increase of 1, 938%, dropping to 1, 7 37 % between 2010 and 2014. Over the period between 1970 and 2014 capital flight rose by observed that capital flight flow in Nigeria, market capitalisation to the ratio of GDP on average shows a steady and progressive movement over the years with lowest average change of 28% and 6% between (1975 – 1980) and (1985 -1990) respectively. The highest percentage increase of 14, 900% occurred between the year 2010 and 2014 while the least increment was 6% between 1985 and 1990 . Over the period between 1970 and 2014 capital flight increased by 1,837%

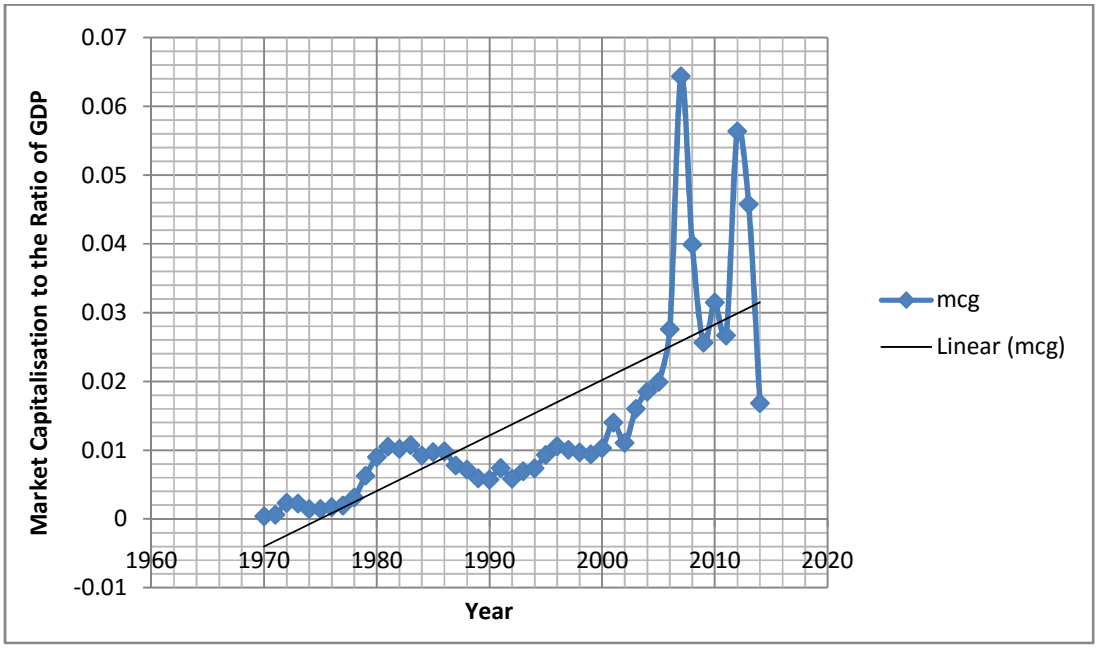


Figure 4.2 Showing the flow of Ratio of stock market capitalization to (GDP) gross domestic product in Nigeria 1970 - 2014.

Source : Authors Computation..

Figure 4.2 showing thetrend in capital market performance over time in Nigeria.A trend line is imposed which gives a general outlook that there is a positive trend all along market capitalization line from1970 to 2014 in Nigerian.

Movement in the flow of ratio of stock market capitalization to gross domestic product has been progressive as depicted on table 4.1 figure 4.2. Using 1970 and 1975 as a base trend year , market capitalisation to the ratio of GDP on average shows a steady and progressive movement over the years lowest average change of 28% and 6% between (1975 – 1980) and between (1985 -1990) respectively. The highest percentage increase of 14, 900% was witnessed between the year 2010 and 2014 while the least increment was 6% between 1985 and1990. Over

the period between 1970 and 2014 the ratio of market capitalization gross domestic product changed by 896%.

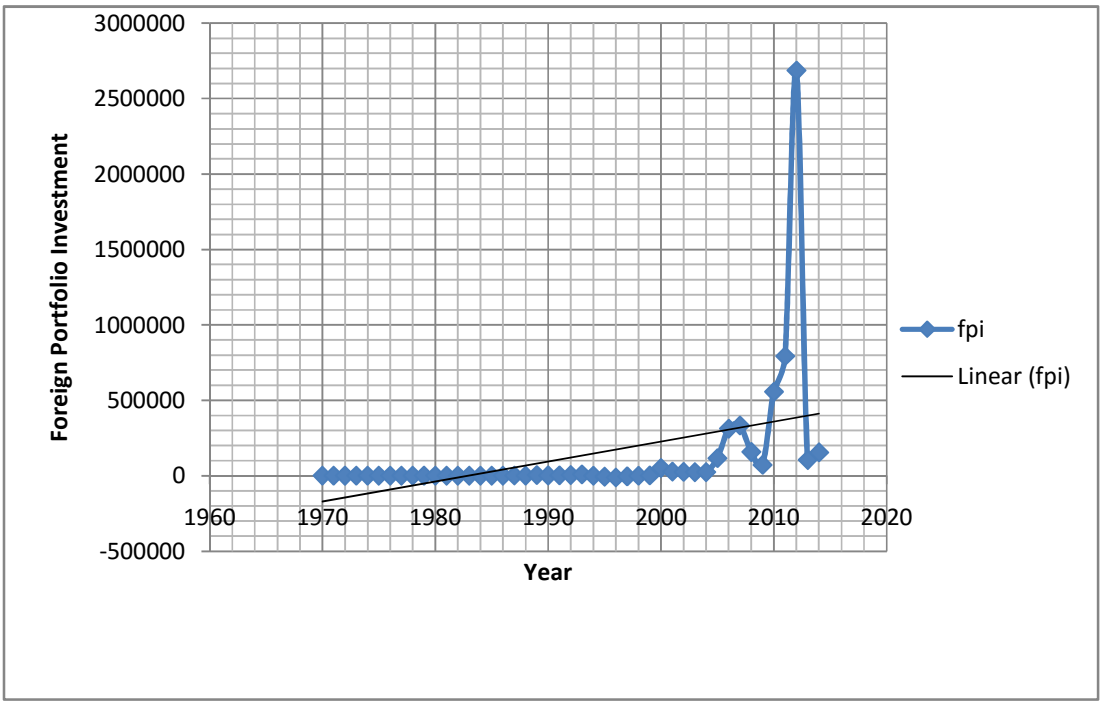


FIGURE 4.3 Showing the flow of foreign portfolio investment in Nigeria between 1970 and 2014.

Source : Authors computation

Figure 4.3 shows the trend in capital market performance over time in Nigeria. A trend line is imposed which gives a general outlook that there is a positive trend all along market capitalization from 1970 to 2014 in Nigerian.

Movement in the flow of ratio of foreign portfolio investment was slow and sluggish as depicted on table 4.3 figure 4.3. Using 1970 and 1975 as a base trend year 100%, foreign portfolio investment flow shows a slow and steady movement over the years. FPI flows between 2010 and 2014 was remarkably explosive with highest average percentage increase of

604, 798%. The lowest average percentagechange of 110% occurredbetween 1975 and 1980. Over the period between 1970 and 2014 the ratio of market capitalization gross domestic product changed by.

4.2 SUMMARY OF THE TREND ANALYSIS TEST

Using 1970 year as the base year the flow of capital flight indicates amixed trends all through the period. Significantly, between 1970 and 2014 a positive movement of 1737% occurred thusaffirming an increasing outward surge of capital through unapproved channels from the system within the period. Similarly, a more aggressive increasing trend was also observed in the case of marketcapitalization ratio to gross domestic product. From 1970, the movement in the flow was progressive except for 1980 and 1990 when the trend slowed with an increase of 28.5% and 6%. A reverse in the movement was also observed between 1990 and 2015 with thegreater change of 8,828% between 1970 and 2010.

However the flow in foreign portfolio investment increased gradually during the years between 1970and 2014. A greater change occurred between 2000 and 2014 indicating millions of percentage increase overthe period.

Given the observed changes as graphically depicted , the null hypothesis of no significant movement pattern is rejected for the flow of capital flight, capital market performance and foreign portfolio investment respectively in Nigeria . We can safely conclude that there has been progressive upward trends for the all the series investigated within the period 1970 and 2014. A key likely driving factor for the performance of these variables include banking sector recapitalization in 2005 and large scale government privatization exercise still ongoing.

4.3 ANALYSIS OF INTERACTIVE RESPONSES, NATURE AND DIRECTION OF CAUSALITY

Data analysis for five and six objectives adopts Impulse response function, Forecast Error Correction Model and Granger Causality test approaches after subjecting the series to preliminary tests for conformity with econometric assumptions. The section begins with the descriptive statistical analysis of the data employed in this study to check for normality properties of the series followed by the preliminary.

Testing for the time-series properties of variables is of particular importance in the light of the recent observation that most economic time series are non-stationary and could adequately be represented by unit root. This section also tests for co-integration among variables so as to observe the long run relationship, and also to be guided in the estimation of the VECM model specified for this study as well as testing for causality among variables. Innovation analysis and interpretation of results are carried out with both the impulse response function and variance decomposition generated to investigate the existence or otherwise of the interactive effects, and the causal relationship among capital market development, foreign portfolio investment and capital flight in the Nigerian economy, Section 4 .5 comprises captures the robustness test of the residuals, while section 4.6, being the last section, presents the main findings of this chapter.

4 .4 DESCRIPTIVE ANALYSIS

The descriptive statistics test of the data series provides information about the sample series such as the mean, median, minimum, maximum value and the distribution of the sample measured by the skewness, kurtosis and the Jaque-Bera statistics.

4.4.1 DESCRIPTIVE STATISTICS OF DATA SERIES:

In an attempt to carry out this study, the various descriptive statistics of the data used are examined. The descriptive statistics of the data series provide information about the sample series such as the mean, median, minimum and maximum values; and the distribution of the sample measured by the skewness, kurtosis and the Jaque-Bera statistics.

Table 4.3 presents the descriptive statistics of the annual data series used in the analysis for virtually all the data series; it is observed that the values of mean and median are very close. This is in line with the position of Karmel and Polasek (1980) that when a distribution is perfectly symmetrical, the mean, median and mode must converge; and in cases of near symmetry, the three measures are necessarily very close. It could rightly be deduced that the distributions of the series in table 5.1 is in the main, nearly symmetrical. Skewness and Kurtosis provide useful information about the symmetrical nature of the probability distribution of various data series as well as the thickness of the tails of these distributions respectively. These two statistics are particularly important as they are used in computing Jarque-Bera statistic, and also for testing the normality or asymptotic properties of a particular series.

Econometric analyses are often based on the assumptions of normality and asymptotic properties of data series. There is therefore the need to test for the existence or otherwise of these two properties because most probability distributions and test statistics like t, F, and χ^2 are based on them. As Table 4.2 suggests, all annual time data series, except the seasonally generated ones, are normally distributed going by the null hypothesis that variables are normally distributed. The problem of normality becomes obvious here owing to the seasonal pattern of almost all the data

series. In testing for the skewness of data series, we are guided by the fact that the skewness of a normal distribution is zero.

Table 4.3A Descriptive Analysis ofAnnual 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	2.638	7.085	8.94	2.979	2.827	2.4849	0.26648	6.204	13.185
Maximum	9.856	13.582	10.590	5.13	3.3945	4.2877	3.2280	18.1914	18.374
Minimum	-6.1658	3.2280	6.249	-0.59	1.7917	0.5007	-2.6255	2.8094	8.571
Std. Dev.	4.288	3.4456	1.1752	2.347	0.3709	0.8409	1.9885	4.8215	2.9317
Skewness	-0.099	0.305	-0.212	-0.152	-0.248	-0.3488	0.10880	0.7638	0.0555
Kurtosis	2.0963	1.5515	2.205	1.3126	2.1828		1.5083	2.2351	1.6195
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

Source: Authors computation

4.5 PRELIMINARY TEST DATA ANALYSIS

4.5.1 Unit root Test for Time Series Data

Table 4.3(a) below present the results of unit root tests using Augmented Dickey Fuller test and Philips and Perron test applied on annual data series.

Table 4.4 The Result of Unit root Test Using Augmented Dickey Fuller Test

Series	Level	First Diff	Remark
Log(mcp)	-0.20	-5.02	I(1)
Fpi	0.16	-3.11	I(1)
Cf	-0.26	-9.83	I(1)
Int	-1.69	-10.51	I(1)
Inf	-3.59	-	I(0)
Exr	0.57	-5.97	I(1)
Top	0.95	-11.26	I(1)
Log(sml)	-0.84	-4.77	I(1)
Log(gdp)	0.16	-5.088	1(1)

Source: Author's Computation

Note: at 5 per cent critical value = -2.96.

Evidence from the results shown on Table 4.3 confirms that apart from inflation rate (inf) that is stationary at levels, all other variables (market capitalisation (mcp), foreign portfolio investment (fpi), capital flight (cf), interest rate (int), exchange rate (exr), stock market liquidity (sml) and trade openness (top) and gross domestic product (gdp) are not stationary at level. However they became stationary after first difference. However , since the second objective is interested in capturing the effect of foreign portfolio investment (fpi) and some selected macroeconomic variables effect on the policy variables i.e. (market capitalisation (mcp), market liquidity and capital flight (cf)), 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.

Although, the results of the unit root test for policy variables show that they were random walk processes. It does not however imply that in the long-run, the variables could not exhibit long-run convergence i.e. long run equilibrium. The stationarity of the residuals is potent evidence that there is evidence of convergence to long-run equilibrium among the integrated variables. To be able to ascertain whether there is co-integration among these variables, it necessary to determine the optimal lag length of variables before proceeding..

4.5.2 DETERMINATION OF OPTIMAL LAG LENGTH:

For the purpose of testing for co-integration among variables as well as the estimation of the structural VAR model specified for this study, the determination of the appropriate and optimal lag length is important. Consequently , the Akaike Criterion (AC), Schwarz Bayesian Criterion (SBC) and Hannan-Quinn Criterion (HQC) are used to determine the optimal lag structure for the VAR upon which the cointegration analysis is based on.

If the lag length is too large, the VAR is more likely to pick-up within sample random variation as well as any systematic relationship, because there is the need to estimate great number of parameters. If there are n variables with lag length k, it is necessary to estimate n(nk + 1) coefficient. The lag length also influences the power of rejecting hypothesis. For instance, if k is

too large, the degree of freedom may be wasted. Moreover, if the lag length is too small, important lag dependences may be omitted from the VAR and if serial correlation is present the estimated coefficients will be inconsistent. The test statistics adopted in testing for appropriate lag length are the Akaike Criterion, Schwarz Bayesian Criterion and Hannan-Quinn Criterion.

4.5. 3 Co-integration Test

The co-integration test was conducted by adopting the maximum likelihood approach by Johansen and Julius (1990) was adopted 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 4.4 (a) and (b) reports result obtained when the linear combination of variables as reflected in the VAR model that was subjected to co-integration test.

Table 4.5(a) Co- integration Test (Trace Value)

Hypothesized	Eigen value	Trace Statistic	0.05 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 4.5(b) Co- integration Test (Max –Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 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

Source : Authors computation

The results of the co-integration in Table 4.4(a) and (b) confirm that there is at least one co-integration relationship among the variables included in the model. Specifically, the result of the co-integration test suggests 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 one direction of influence can be established among the variables.

Table 4.6 shows theOrdinary Least Square Test for the relationship among Foreign Portfolio Investment , MarketCapitalization (MCY), Capital Flight (CF) and Stock Market Liquidity (SML)

SERIES	Logexr	Loginf	Logint	Logtop	Loggdp	LogFPI	RSq	AR-Sq	F-STA	D
LogMCY	-4.788 (0.327)	2.523 (0.122)	-95.43 (-1.40)	0.258 (2.19)	0.0001 (-4.78)	0.0028 (3.399)	0.85	0.83	536.81	1.99
LogSML	0.016 (1.85)	0.0097 (0.576)	-0.118 (-2.10)	0.152 (1.85)	0.535 (1.70)	0.379 (3.47)	0.80	0.76	79.97	1.96
LogCF	-22.90 (-0.56)	4.88 (0.085)	38.79 (0.19)	-0.064 (-1.5)	0.0018 (5.198)	0.006 (2.26)	0.94	0.93	8.94	1.54

Source: Author's Computation

4.6 ORDINARY LEAST SQUARE INTERPRETATION RESULTREPORT:

4.6.1 COEFFICIENTS SIGNS AND SIZE

Theordinary least square test result on table 4.6 indicates that the coefficients of inflation rate, degree of openness foreign portfolio investment and gross domestic products respectively have the expected signs while interest rate and exchange rate have wrong signs which is inconsistent with the apriori expectation. Themagnitude of theeffects of the independent variables on the dependent variables also showed mixed outcomes, contrary to thestudy expectation.It was observed that a 1% change inexchange rate decreases market capitalization by₦4.7888 billion, increases stock market liquidity by₦0.016180billion and decreases capital

flight by ₦22.906billion respectively . None of these effectsis significant .Similarly, holding all the other factors constant, 1% change in the inflation rate will increase stock market capitalization by₦ 2.52 billionincrease stock market liquidity marginally by ₦0.0096billion and capital flight by ₦4.88 billion respectively. The influence of exchange rate, inflation rate, degree of openness and gross domestic product indicates that 1% change in interest rate, decreases stock market liquidity by ₦0.118 billion, increases capital flight by ₦38.79 billion and decreases market capitalization by ₦95.43 billion respectively. The effects of interest rate are not significant at 5 per cent level of significance.The effect of gross domestic product on our policy variables shows that a 1% change in GDP will have a neutral effect in market capitalization of 0.00146%, neutral effect on the capital flight of 0.00186% but will raise stock market liquidity by 0.5396 per cent.The preliminary tests results for serial correlation and multicollinearityrespectively shows absence of these serial correlation with the Durbin Watsons standing at 1.99, 1.96 and 1.55 respectively for each of the three regression models and the Variance Inflation factors (VIF) for all the variables less than 10 confirming the absence of multicollinearity.

4.6 .2 ORDINARY LEAST SQUARE TEST RESULT(R-SQUARE)

Models 1, 2 and 3 are used toachieve research objective four on the existence of connection among the focus variables. The models particularly tested thenull hypothesesof the nonexistence of relationship among the focus variables in this study.The result shows that the R-square which is the coefficient of determination used measures the explanatory power of the exogenous variables used in the models are all high and positive. This therefore imply that the independent variables are powerful in explaining variations in the dependent variables given by the high R-

square of 85%, 80% and 94 % respectively formodels 1,2 and 3. The R^2which measures the explanatory power of the exogenous variables here further validated the existence considerable level of connectivity between foreign portfolio investment and capital market performance in one hand and also between capital flight and foreign portfolio investment in other hand.

HYPTHESES TEST FOR RELATIONSHIP :

RESTATEMENT OF HYPOTHESES:

1. Null = H0: There is no significant connection among foreign portfolio investment ,capital flight and capital market performance in Nigeria. This is investigated using the Ordinary Least Square method of estimation to establish relationship only and not for forecasting .

OLS Model Re-Specification : The Multi-regression model is hereby specified for the the three time series data examined.

Equation 1 : MCY= (fpi, exr, int, inf, top, gdp);econometrically transformed to

$$mcy_t = \propto 0_t + \alpha 1 logexr_t + \alpha 2\, loginf_t + \alpha 3 logint_t + \alpha 4 logtop_t + \alpha 5 loggdp_t + \alpha 6 logfpI_t + e_t \ldots . i$$

Equation 2 : SML= (fpi, exr, int, inf, top, gdp) ; econometrically transformed to:

SMLt= $\beta 0_t + \beta 1 logexr_t + \beta 2 loginf_t + \beta 3 logint_t + \beta 4 logtop_t + \beta 5 loggdp_t + \beta 6 logfplt + e_t \ldots \ldots ii$

Equation 3 : CF= (fpi, exr, int, inf, top, gdp) ; econometrically transformed to:

$$cf_t = \delta_{0t} + \delta 1exr_t + \delta 2loginf_t + \delta 3logint_t + \delta 4logtop_t + \delta 5loggdp_t + \delta 6logfpIt + e_t \ldots\ldots iii$$

DECISION RULE : The decision rule here states that we should reject the null hypotheses of no relationship among the focused variables if F-stat calculated is greater than critical F-stat.

value with a P-value of less than the selected level of significance α of 1%,5% or coefficient of determination 10 % otherwise we conclude that there exist a defined level of connection among the investigated variables.

ANALYSIS DECISION : Based on the -view result as presented on table 4.6 indicating calculated F-stat- of 536.81, 79.97 and 8.94 for equations one two and three all being respectively greater than critical F-stat–value 3.14 for the series investigated. The study therefore reject the null hypothesis of no significant connection among the focus variables and conclude that there is relationship among foreign portfolio investment capital flight and capital market performance in Nigeria.

HYPOTHESES TEST FOR CAUSALITY AND FLOW REACTINS AMONG THE VOCUS VARIABLES USING VECM:

RESTATEMENTT OF HYPOTHESIS :

NULL = H0: There is no significant reactions among foreign portfolio investment , capital flight and capital market performance in Nigeria. This is investigated using the VECM to ascertain reactions among the variables due to external shocks , establish nature and direction of causality and also predict the impact of response among the examined series.

Re-Specification of the models :The Vector Error Correction Model (VECM) is as specified ;

$$1mcp_t = \beta_0 + \sum_{i=1}^{k} \beta_1 \Delta 1mcy_{t-i} + \sum_{i=1}^{k} \beta_2 \Delta 1fpi_{t-i} + \sum_{i=1}^{k} \beta_3 \Delta 1cpf_{t-i} + \beta_4 ECM_{1t-1} \qquad 4$$

$$\Delta 1fpi_t = \alpha_0 + \sum_{i=1}^{k} \alpha_1 \Delta 1fpi_{t-i} + \sum_{i=1}^{k} \alpha_2 \Delta 1mcy_{t-i} + \sum_{i=1}^{k} \alpha_3 \Delta 1cpf_{t-i} + \alpha_4 ECM_{2t-1} \qquad 5$$

$$\Delta 1cpi_t = \delta_0 + \sum_{i=1}^{k} \alpha\delta_1 \Delta 1cpf_{t-i} + \sum_{i=1}^{k} \delta_2 \Delta 1fpi_{t-i} + \sum_{i=1}^{k} \beta_3 \Delta 1mcy_{t-i} + \delta_4 ECM_{3t-1} \qquad 6$$

Where lmcyis the log of market capitalization to the ratio of GDP, lfpi is the log of foreign portfolio investment lcpf is the log of capital flight.

ECM is the Error Correction Model, I = (1……n), α, β and δ are the coefficient of the parameters, the change symbol is the first difference of the endogenous variables.

The application ofVECM for this study is subject to the outcome of the co -integration tests. The VECM enables us to estimate the interactive reactions among capital market performance, foreign portfolio investment and capital flight using the impulse response functions (IRFs) Forecast Error Variance Decomposition (FEVD) and Granger Causality approach for

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 $\chi 2$-vale and P- value less than α –value 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 causationsis going or response but the p value criteria is also applied here. hypotheses testing if our series are integrated of order zero i.e. I(1).

ANALYSIS DECISION : Based on the -view result as presented on table 4.6 is applied to determine the responses and direction of causality among the investigated series and e-view output as indicated shows significant reactions and direction of causation flows from market capitalization to foreign portfolio in one hand and also from foreign portfolio investment to capital flight on the other hand in the long run . In the short run only foreign portfolio investment exhibited some level of responses and causality going by the wald - $\chi 2$ statistic value of 28.2 less than critical value and P-value of 0.020 which is less than level of significance of 5% consequently the null hypothesis of no reactions among the variables are rejected and the study therefore concludes that reactions are generated among the variable as a result of external shocks on these variables.

Similarly , in the long run with respective P-values of 0.016 and 0.08 at 10% levels of significance and with Wald $\chi 2$ $values$ statistics of 16.86 and 3.06 respectively , the study rejects the null hypothesis of no direction of causality existing among the focus variables and therefore concludes that there is direction of causality among foreign portfolio investment capital flight and capital market performance in Nigeria. This is further validated by the the flow of the causality arrows as shown on table 4.6 .

4.6.3. VECM:THE IMPULSE RESPONSE AND FORECAST ERROR VARIANCE DECOMPOSITION RESULT

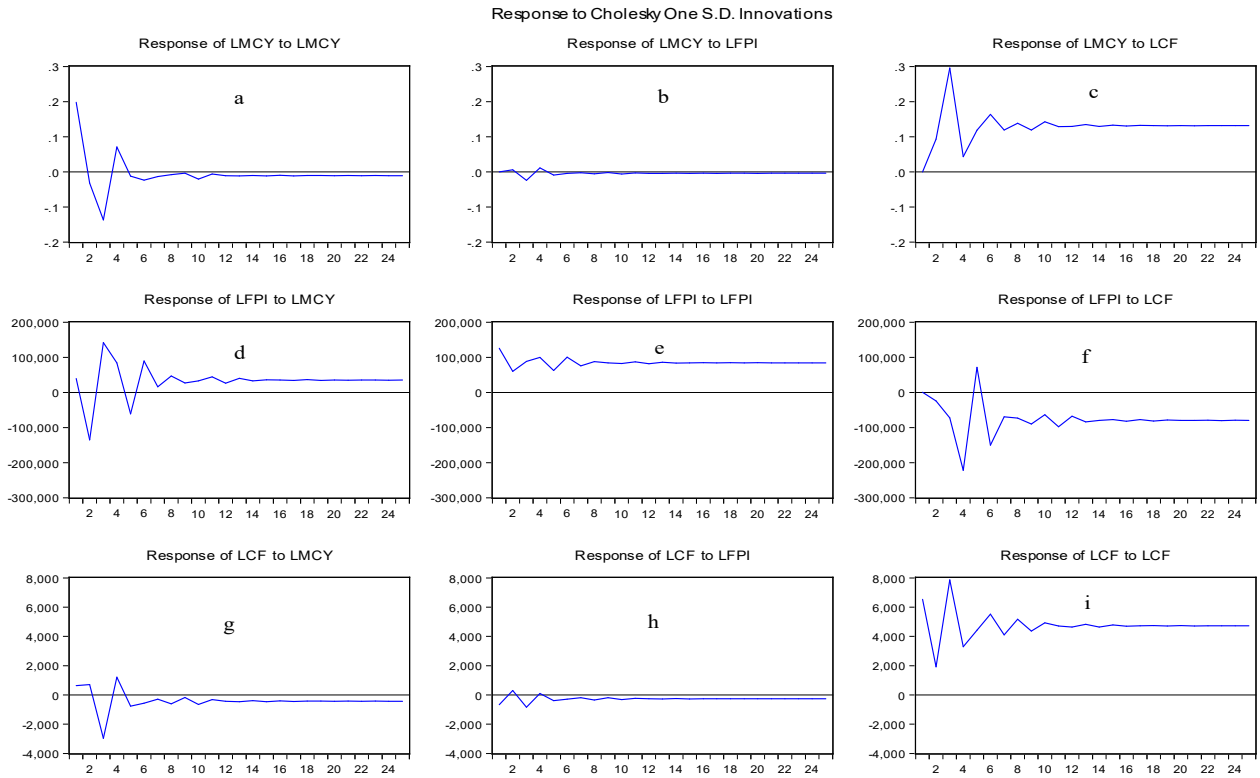
The Impulse Response Functions (IRF) result indicates the size of the effects of one standard deviation shock of one variable on the other variables in the VAR system over time while the Forecast Error Variance Decomposition (FEVD) shows the percentage of the forecast error variance for each variable that might be attributed to its own innovations and the innovations of

the other variables in the system. Both tests give an idea of the determination and transmission mechanism of the policy shocks in the VAR system.

Figure 4.4 shows the impulse responses generated from the Vector Error Correction Model estimated in this study. The IRF measures the dynamic response of variables; the ratio of market capitalization to GDP, foreign portfolio investment and capital flight to an unanticipated shock measured as innovation in the model. It is measured as a standard deviation shock which is calculated in percentages for each of the variables in the system. The horizontal axis of the IRF shows the number of periods that have passed after the impulse has been produced, while the vertical axis measures the responses of the variables. More generally, an impulse response refers to the reaction of any dynamic system in response to some external changes.

In this study, the impulse response function IRF measures the dynamic response of the variables;ratio of market capitalization to the GDP, foreign portfolio investment and capital flight to an unanticipated shock or innovations to the series in the model as depicted by the graphs in figure 4.4 under panels A,B, C, D, E, F, G, H, and respectively.

Figure 5 . Showing VECM: Impulse Response Functions (VECM Ordering = lmcylfpi lcf)



Source: Author's Computation.

For this study, our interest is on the response of a variable to shocks from other variables not to the shocks from itself and these are reported in panels (b, c, d, f, g and h).

Table 4.7IMPULSE RESPONSE FUNCTION TEST RESULTS

Response to Cholesky's unit standard deviation innovation or shock on MCY, FPI and CF	Findings based on (short and long run responses to shocks) Where short run ≤ 5yrs Long run ≥5yrs and ≤ 25yrs	Decision Rule : Reject the null hypothesis of no significant response if cholesky STD shock is neutral and falls on the cholesky's IRF lines.
Response to MCY shocks by FPI and CF	MCY=Positive in the short and long run. FPI =Marginally positive in the short run and neutral in the long run and positive and negative responses.	Reject the null hypothesis of no interactions.

Response to FPI shock by MCY and CF	MCY= positive and negative both in the short and long run. FPI =Highly positive both in the short and long runs CF=Highly negative both in the short and long runs.	Reject the null hypotheses of no interactions
Response to CF shocks by MCY and FPI	MCY=slightly positive in the short run and highly negative in long run. FPI = Highly positive and negative in both short and long runs. CF= Positive both in the short and long runs.	Reject the null hypotheses of no interactions

Table 4.8 (a) FORECAST ERROR VARIANCE DECOMPOSITION (FEVD) - (PANEL A)

Period	S.E.	MCY	FPI	CF
1	0.319738	100	0	0
5	0.609449	99.35557	0.274725	0.369709
10	0.846086	99.39561	0.273192	0.331202
15	1.049886	99.42519	0.280603	0.294206
20	1.241267	99.45291	0.291116	0.255973
25	1.431871	99.47817	0.304443	0.217388

4.8(b) Variance Decomposition of FPI shock on MCY and Capital Flight (PANEL B)

Period	S.E.	MCY	FPI	CF
1	101056.5	18.88853	81.11147	0
5	479165.9	83.12078	14.89293	1.986293
10	1780515	95.15501	3.829181	1.015813

15	3894362	97.06141	2.147042	0.791544
20	6908185	97.73075	1.569422	0.699829
25	10999031	98.05545	1.293251	0.651304

4.8(c) **Variance Decomposition of CF shock on MCY and FPI (PANEL C)**

Period	S.E.	MCY	FPI	CF
1	6062.354	27.76566	0.062821	72.17152
5	9866.028	30.56513	0.732957	68.70191
10	12572.92	23.45411	0.693892	75.85200
15	14477.8	18.04422	0.612909	81.34287
20	16232.55	16.70156	0.501907	82.79653
25	18538.25	23.30444	0.393580	76.30198

The Vector Error Correction Model (VECM) Test is carried to further examine the interaction effects among capital market performance, foreign portfolio investment and capital flight. This is achieved using the Forecast Error Variance Decomposition (FEVD) analysis .

Akinlo, (2003) notes that while impulse response functions are very useful in ascertaining the direction of the effect of a shocks to innovations in a variable, the magnitude of the impact of the shocks to the innovation can only be deciphered by Forecast Error Variance Decompositions; in other words, they show the explanatory contributions of the shocks to the innovations in the variablesexamined. Thus, the (FEVD) indicate the proportion of the forecast error in a given variable that is accounted for by innovations in each endogenous variable.

Table 4.8, (Panel A) results show that the innovations impacts in the ratio of stock market capitalization to the GDP (MCY) on foreign portfolio investment and capital flight respectively contributed to the fluctuation of 99.3% in itself , 0.27 % fluctuation in foreign portfolio investment and .36% of the fluctuations in the capital flight in the short run . But in the long run, the magnitude of the fluctuation due the same shock slightly changed to 99.5% , 0.30% and 0.22% showing an increase and decrease respectively.

Table 4.8, Panel B result shows a unit standard deviation shock of foreign portfolio investment on capital market performance and capital flight initially generated a fluctuation in capital market performance, foreign portfolio investment and capital flight of 83.1% , 14.8% and 1.98% respectively in the short run and in the long run generated a fluctuation of 98.1%, 1.3% and 0.65% signifying a positive and negative changes over the period.

Table 4.8,Panel C shows a standard deviation unit of shock of capital flight on capital market performance and foreign portfolio investment. A standard deviation of innovation in capital flight initially generated a fluctuation in capital flight , capital market performance and foreign portfolio investment of 68%,30.5% and .73% respectively in the short run and in the long run generated a fluctuation of 76%, 23.3% and .39% signifying an increase and decrease in fluctuations over the period. Given the result of the Forecast Error Variance Decomposition, we can therefore reject the null hypotheses of no significant reactions among the endogenous

variables and conclude that both in the short run and long run the variables individually contributed significantly to the fluctuationsthat occurred among the variables investigated.

4.6.3. THE GRANGER CAUSALITY TESTS FOR CAUSALITY RESPONSE AMONG FOREIGN PORTFOLIO INVESTMENT CAPITAL FLIGHT AND MARKET CAPITALIZATIONPERFORMANCE

Table 4.6 (a, and b) shows short and long run Wald statistics tests which follows X^2respectively.

Table 4.9 (a) Short Run Multivariate Granger Causality Test Result

$\alpha_1 = \alpha_2 = \alpha_3 = 0$	χ^2	$p-value$	Remark
mcy	0.868	0.352	No Causality
fpi	*28.2*	*0.020**	Causality
cf	*2.450*	*0.117*	No Causality

Table 4.9 (b)Long Run Multivariate Granger Causality Test Result:

$\alpha_1 = \alpha_2 = 0$	χ^2	$p-value$	Remark
$mcy \rightarrow fpi$	16.86	0.016*	Causality
$fpi \rightarrow mcy$	2.090	0.148	No causality

mcy → *cf*	2.283	0.130	No Causality
cf → *mcy*	0.133	*0.715*	No Causality
fpi → *cf*	3.057	0.080**	Causality
cf → *fpi*	*1.216*	*0.270*	No causality

Source: Author's Analysis

*Notes: *and ** indicates statistical significance at 1%, 5% and 10% level of significance, while* χ^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 investigates the direction and causality relationship existing among capital market performance, foreign portfolio investment and capital flight. Although regression analysis deals with the dependence of one variable on the other variable, it does not necessarily imply causality. In other words, the existence of relationship between variables does not prove causality or direction of influence.

The decision rule here is to reject the null hypotheses of no direction of causality if $\chi 2$ calculated is less than critical $\chi 2$-vale and P- value less than α –value the level of significant of 1%, 5% or 10% respectively, otherwise we conclude that there is defined direction of causalityas indicated by the arrows. Note that the direction of the arrows indicates the direction of flow of causations or response but the p value criteria is also applied here. The result is as reportedin Table 4.6 (a, and b) disclosing the p-value of the Wald statistics which follows the Chi-Square distribution, both in the short-run and long-run respectively.

Table 4.6 panels (a & b) shows the Granger Causality Test results for the investigated variables The result confirms a unidirectional causal relationship existing among some the variables examined both in the short run and in the long run.

Given the p- value of 0.020 is less than 5% level of significant , the null hypotheses is hereby rejected. We then conclude that there is a direction of causality existing among foreign portfolio investment, capital market performance and capital flight. The result further indicates that a unidirectional causality relationship exist running from capital market performance to foreign portfolio investment at 5% level of significance in one hand and also from foreign portfolio investment to capital flight on the hand at 10% significant level respectively.

This result further implies that a decrease or increase in the ratio of market capitalization to GDP and capital flight respectively, can granger-cause foreign portfolio investment in the short run

It further imply that in the short and long run, policy changes concerning to foreign portfolio investment could trigger surge in capital flight almost immediately and even in the later year.The result to some extent aligns with the works of Ozurumba, (2012), Eniekezene , (2013) and Maku and Atanda (2010)except in the area of capital flight reaction to foreign portfolio investment changes which stands as a major contribution of this study.

CHAPTER FIVE

5.1 DISCUSSION OF FINDINGS

This study sought to investigate thedynamics interaction among capital market performance foreign portfolio investments and capital flight in Nigeria between 1970 and 2014 using vector error correction model approach. The discussion of the study a findings and their policy implications are as presented.

5. 1.1 TREND ANALYSIS DISCUSSION

In a bid to examine the trend inthe flowof capital flight, foreign portfolio investment and stock marketcapitalization within the period from 1970 to 2014 graphical approach was adopted. Thefindings revealed thatcapital flight, stock market capitalization and foreign portfolio investment in Nigeria have risen over time. The trendanalysis report shows that capital flight between 1970 and 1990 capital flight rose by about 402 % over theperiod and peaked at between 2000 and 2014 rising by about 1938 % after trending lowest between 1990 and 2000 respectively.

This is possibly due to some measures introduced by the federal government at reducing corruption and entrenching transparency and accountability through the establishment of due Process budgetary control office and Economic and Financial Crime Commission (EFCC). Thisresult aligns with the priori that "Hot Money issues in Nigeria are as old as the country herself and creates a worrisome economic problem in Nigeria.

Similarly, foreign portfolio Investments flow and stock market capitalization in Nigeria have also risen over the years. Between 1970 and 2014 foreign portfolio investment increased by about 600000 % over the period thusconfirming the fact that this investment channels result domination of the Nigerian capital market.

Among the critical policies that drove these trends, were the financial sector deregulation Policy of 1993, Investment Promotion policy in 1995 that replaced the Indigenization Decree of 1986 and financial sector Liberalization Policy on Exchange Rate Control of 1970 -1978 as well as the Nigeria Capital Market Internationalization and capital market infrastructures upgrading like the Automated Trading System and the recent Ex-Gen trading platform are measures all aimed at strengthening the capital market to meet global standards in the industry.

5. 1 .2(VECM) FORECAST ERROR VARIANCE DECOMPOSITION DISCUSSION:

Consistent with the outcome of the co-integration test, the Forecast Error Variance Decomposition analysis confirmed the predictive explanatory contributions of the policy shocks to the innovations in the each of the examined variables over time.

5.1.2.1 Panels b& c show response of foreign portfolioinvestment and capital flight to innovations in market capitalization.

Shocks from innovations in capital market performance generated mixed responses from foreign and capital flight respectively of a decrease and increase in the short and long run respectively. While shocks on FPI produced neutral response in the short run and negative impact in the long run capital flight shocks generated short term neutral response and longer term positive response.

Thus changes in capital market performance can ignite either positive or negative impacts on foreign investors participation and capital flight movements in the short and long run respectively

5.1.2.2 Panels d&f show the response to innovation shocks of foreign portfolio investment on capital market performance and capital flight

Shocks from innovations in foreign portfolio investment generated mixed responses from marketcapitalization and capital flight respectively. While shocks on marketcapitalization producedpositive response in the short run and negative response in the long run, shocks on capital flight generated short run neutral response and longer term positive response.

This implies that policy changes in foreign portfolio investments in Nigeria can trigger off either positive capital market performance in the short run and longer term negative impacts influence capital flight movement positively both in the short and long run.

5.1.3 .3 Panels g& h showsthe response to innovation shocks of capital flight on capital market performance and foreign portfolio investment

Shocks from innovations in capital flight management generatednegative responsesfrom foreign portfolio investment and capital market performance respectively in the long run but producedpositive response in the short run from market performance negative impacts over the period.

Consequently, the implications are that policy innovations relating to capital flight management can induce negative reactions from foreign portfolio investors affecting their participation in the capital market which could also significantly impact on capital market performances both in the short run and long run.

5.1.4.1 THE GRANGER CAUSALITY TESTDISCUSSION

This test measured the direction of flow of responses among the variable investigated. The results confirm theexistence flow of causationamong the examinedvariables. Particularly, the result confirmsunidirectional causal relationshipexisting amongthe variables both in the short run and in the long run which runs from the ratio of market capitalization to gross domestic product to foreign portfolio investment at 5% significant levels and also from foreign portfolio investment to capital flight only at 10 per cent level of significance in the long run respectively. This means that policy changes relating to foreign portfolio investment could trigger a run in capitalflight almost immediately and even in the later year.

5.1.4.2 (a) ORDINARY LEAST SQUARE TEST DISCUSSION

The Ordinary Least Square results reveal positive coefficient of determination ($r2$) for all the OLS models of 85%, 80%, and 94% respectively for stock market capitalization

(MCP), Capital Flight (CF) and Stock Market Liquidity (SML) which implies that the independent variables strongly and robustly explained the variation in the policy variables thus indicating strong relationship among them. The overall result therefore aligns with findings of previous studies with minor deviations. (Ozurumba2012; Eniekezene2013; Onuoha 2013 and Temitope 2010).

The testfor the connectivity existing among the policy variables and macroeconomic factor was investigated using the ordinary least square technique and the findings show the parameter coefficients disclosed a mixed results in view of a priori expectations about their magnitude and signs . However the results show strongand robustimplications for our policy decisions in the financial market. The coefficient of determination ($r2$) for the models 1, 2 and 3 were all strong in explaining the relationship among all the variables examined which measures the extent variables with macroeconomic variables was 85%, 80%, and 94% respectively for stock market capitalization (MCP), Capital Flight (CF) and Stock Market Liquidity (SML).

This result implies that 85% of the changes in stock market capitalization in Nigeria can rightly be explained by the movements in the foreign portfolio investment and some selected macroeconomic variables like GDP, Exchange Rate, trade openness inflation and interest rate collectively while the remaining 15% of the variations could be attributed to other factors not included in the model. A further implication of the findings indicate that 80%, and 94% of the variations in Capital flight and market liquidity are explained by the selected macroeconomic

variables included in the model while the unexplained variations with 20%, and 6% respectively can linked with other exogenous factors.

Particularly the findings revealed a very small but positive connection between capital flight and macroeconomic performance indicators such as GDP and Exchange Rate which contradicts the our coefficient size and signs expectations with respect to gdp connection with capital flight The implication of all these findings is that to some extent, a significant level of capital flight value in Nigeria may not have occurred as a result of gross domestic product performance alone but rather could also be linked to some illegal fund transfers, illicit trades and money laundry and other corrupt practices that capitalize on the loopholes in the system to subvert government resources to the detriment of the economy.

The results however attest to the fact that the reasons sometimes adduced for illegal money transfers outside the shores of this country may not in any way be connected with the economic buoyancy, growth and development of the country.

(b) EXCHANGE RATE EFFECT

We observed from the ordinary least square test in chapter four , that holding the macroeconomic factors influences including that of foreign portfolio investment constant, a 1% increase in exchange rate, that is a depreciation in the value of naira, will on averagely decline market capitalization by 4.78%, capital flight by 22.91% and increase stock market liquidity 0.016%. This result follows the priori expectation as per signs and the magnitude of the coefficient of the parameter explaining the importance attached to currency valuation in every economy. The implication of this finding is that the performance of the financial market

and indeed the economy as a whole could rely heavily on the appropriatepricing of the currency in foreign exchange market. It further means that a unit change in the value of naira will simultaneously change the stock market capitalisation, stock market liquidity and even the level of capital flight in Nigeria.

(c) INTEREST RATE EFFECT

We also observed that holding all the exogenous variables constant, a 1 unit change in the interest in the economy will reduce stock market capalisation by about 95%, increase capital flight by 38. 7%and stock market liquidity by 0.118%. This resultpartly comply with our expectation. However the signs aligns with empirical literature as the magnitude of the change on the market capitalisation seems larger than expected. The implication is that for one to benefit from the capital market, there is need to monitor the interest rate trends since this result confirms an inverse relationship existing between the two in line with interest rate theory and previous literature supporting an inverse connection between stock market returns and liquidity with interest rate.

Again this result aligns with arguments in support of capital flight from one country to another as a strategy effort to avoid or escape adverse macroeconomic changes and undesirable systematic risks such as rising interest rate exchange etc.

(d) INFLATION RATE EFFECT

All things being equal a 1% change inflation rate will increase capital flight by 4.88% raise stock market capitalisation by 2.52% and also improve market liquidity marginally by.01% respectively. The result aligns with a priori expectation that given our economic realities of today, inflation problems remain a major constraint to capital flow even within the economy as

its effect erodes the purchasing power of the local currency. Therefore the outcome of this study indicates that when there is a rising inflation trend citizens including foreign investor will becompelled to go elsewhere to protect the wealth from devaluation triggered by effect inflation. This will ultimatelylead to huge capital flight as revealed by this result from the system as a whole. In addition, capital market transactions could adverselybe affected in the short run due to reduction impact in the disposable income andsavings as a result of fallen purchasing power but in the long run, capital market activities will bounce back when listed companies begin to post good operating result which will eventually translate to larger dividend for investor in the capital market.

(e) GROSS DOMESTIC PRODUCTS (GDP)

The result also shows the effect of a 1% change in GDP on the policy variables was positive but marginal in the among the policy variable as measured by the coefficients values and signs. The implication is that for the capital market to performance creditably as well as sustainable in Nigeria there should be policies to forestalladverse growth in the GDP growth. This is because given its positive relationship with the policy variables, any adverse change in the gross domestic product value will instantly lead to negative reactions.

(f) TRADEOPENNESS

The effect of 1% change in Trade openness (TOP) will increase market capitalization by 0.2508% and this result is significant at 5% level of significance, stock market liquidity will rise by 0.15% while capital flight willdrop by 0.64%. The Implications of these findings are very strong for policy decisions since the signs and size aligned with the a priori expectation and

given the positive effect on market liquidity and capital flight due to the changes in trade openness. This calls for establishment of adequate marketstructures to support and empower the existing deregulation and trade liberalization policies being adopted tostrengthen the financial sector. Based on this result there is need to encourage trade openness boost the export sector in Nigeria.

(g) FOREIGN PORTFOLIO INVESTMENT

The study result revealed that the effect of a unit change in foreign portfolio investment value was positive as stock market capitalization will increase by only 0.0028% and this is statistically significant at 5% level of significance. Stock market liquidity will also go up by 0.30% as capital flight in Nigeria rises by 0.0055% which is statistically significant at 5% level of significance.

The Implications of these findings are very strong for policy decision in view of resultsalignment with a priori expectation. The positive effecton market liquidityand capital flightarising from the change in foreign portfolio investment implies that movement in foreign portfolio investment has the power to alter capital market performanceat a very slightest innovation or change in policy, market infrastructure.

In addition,the coefficient of determination R –square shows that the variables in the regression model could explain: 85% of the variation in the capital market performance, 80% of the variation in the capital flight and 94% of the variations in the stock market liquidity respectively implying that the remaining 15%, 20% and 6% respectively are explained by

other factors not included in the model. These other factors are also very relevant and should form part of the decision variables to be consideredfor ameaningful economicpolicy formulations in Nigeria.

The result of the investigation clearly showsthat there is need for Nigerian capital market to be moderately regulated and monitored for it to meet the expectations of the private and foreign investors in Nigeria. The performance of this market is relevant when addressing the prevalent cases of capital flight as well as achieving an acceptable level of liquidity in Nigerian capital market. The macroeconomic variables and capital market performance indicators apart exhibiting positive and significant relationship in this study havepresented arobust outcome foreconomic policy implementation.

The results have serious implication the capital market stakeholders and regulators as it calls for urgent need to monitor theinflux of foreign portfolio investors into Nigerian stock market.This is important to curtail, control and manage capitalflight throughthe stock market activities. Such arrangements could boostthe confidence level in the market which might resolve the participation ration imbalance the local investors and foreign portfolio investors.

5.1.6 GRANGER CUASALITY ANDVECM RESULTS

In an effort to validate the five and six objective, the granger causality tests and error Correction model VECM tests were used to examine the multivariate Granger causality relationship among the variables. The result confirmed that there is interactive responses among the variables in the short run with unidirectional causality only running from market capitalization to foreign

portfolio investment at 5% level of significance and also from foreign portfolio investment to capital flight.

The implication of these results are that given any positive or negative change in the inflow of foreign portfolio investment both in the short run and long run in Nigeria capital market performance must react to it depending on the magnitude of the shock. This study finding further signify the call for urgent implementation of all relevant laws and regulations to check mate uncontrolledinflow of the foreign investments into Nigerian capital market. The unidirectional of causality running from capital market performance implies a strong interactive responses from the capital market and this suggests that more emphasis should be placed on transparency and disclosure of the capital market insiders deals to forestall the incessant market crashes as a result of speculative transactions.

The outcome of the investigations to address the interactive responses which focused on or reactions to changes among the policy variables reveal the impulse response functions (IRFs) and forecast error variance decomposition (FEVD) results respectively. From these results, shocks by the variables are meant to produce reactions or response from other variables over time.

The study found that shocks from foreign portfolio investment, capital flight and capital market performance induced mixed responses from each of these variables. But while some produced positive responses or reactions others induced negative response among the variable except themselves.

This implies that responses of foreign portfolio investment induced by innovations produce bythe capital market performance as innovations. While innovations in the capital market produced negative response on capital flight. This means that most of the reforms in the capital market aimed at restructuring the operation in the market also resulted to improved foreign Portfolio investors participation in Nigeria performances which in turn generated and outflow of capital outside the economy.

The result also revealed a unidirectional causal relationship between foreign portfolio investment and capital flight running from foreign portfolio investment to capital flight as shown by causality test this findings therefore attest to the debate in the financial market about the possibility of excessive outflow of fund thoroughly the market as constituting a greater challenges to capital market liquidity position which is mostly linked to scarcity of investable funds to drive the market. This result shows that when the Nigerian stock market is at its peak the tendency for excessive outflow of capital is triggered off by imposed selling pressure from foreign investors who would want to take the profit created by the bullishmarket. This situation could trigger excessive transfer of proceeds from the share sales outside the country which otherwise would have been reinvested back into the market toboost marketliquidity. The policy implications of these results call for an urgent intervention and regulatory framework to address the magnitude of foreign capital flow and capital flight problem Nigeria.

The results portraymixed responses to innovation shocks in the policy variables and the magnitude of the impacts in the economy for each of the policy variables spreading over time. An insignificant or neutral influence on the economy is noticed immediately after the innovation shocks which thereafter spreads to future periods. The findings further implythat there is need

to monitor the direction of reactions to changesamong the endogenousvariables investigated to check mate long run and their short run impacts on the economy as a whole.This is neededto adequatelyprovide a guide fordecision making in relation tocapital flight, stock market performance and foreign portfolio investment in Nigeria.

5.2 .1 POLICY IMPLICATIONS OF THE FINDINGS

This study investigates the dynamic interrelationship among capital market performance, foreign portfolio investments and capital flight in Nigeria. The policy variables include capital market performance, capital flight and foreign portfolio investment while some selected macroeconomic performance indicators wereadopted as control variables for the study periodof 1970 to 2014.Each of the six specific objectives is examined basedon the hypothesis statements to validate or nullify the arguments raised in this study and the implications of the findings are as discussed below. For the first three objectiveswhich focused on the policyvariable, graphical approach was used to examine the pattern of flowof capital flight, foreign portfolio investment and capital market performance for select periods.

5.2.2 POLICY IMPLICATIONS OFCAPITALFLIGHTTREND

The findings revealed that capital flight in Nigeria had remained in upward beat even since independence in 1960 positively fluctuating over the period as disclosed by the trend lines in figure 4.2. Between 2004 and 2007 capital flight in Nigeria was at its highest peak but later nosedived during the financial crisis in 2008. A significant move occurred in the post

global financialmeltdown but it dropped again by 2014. Investigations however revealed that economic challenges , including unstable oil prices, exchange rate fluctuation , debt burdens and even the 2008 global financial meltdown may have driven the trend the flow of capital outside the country.

This result affirms to wide perception of people that " Hot Money" issues in Nigeria is as old as the nation itself and will still remain with it as long as the country survives. This is because the trend of capital flight in Nigeria seem to adopt the country growth pattern such that, the bigger and older the country gets, with more complicated economic challenges, the more the capital flight is magnifying in different dimensions. These findings however supports the claim that due to absence of clearly defined method of estimating capital flight and inadequate structures to monitor the flow, various governments in this country tend to have given up with the fight to stop the menace since there are no accurate data to guide the implementation of a workable policy to stop capital flight.

However, apart from the various economic reforms and policies executed over the years by the federal government, our investigations revealed that within the period under review, a number of economic challenges had also contributed in shaping the trend analysis lines for capital flight and other policy variables. For instance as a mono-product export nation, that is heavily dependent on oil as her major revenue earner, the country faces serious macroeconomic challenges with the activities investors in the oil sector and capital market because of their heavy impacts on foreign capital flows.

Furthermore it is transactions in the oil sector is view as very critical for the economic performance of Nigeria as it is believed that when the oil industry sneezes , every other sector of the economy catches cold with contagious effect on the foreign trading partners.

5.2.3POLICY IMPLICATIONS ON FOREIGN PORTFOLIO INVEST1MENT

Foreign portfolio investments flow in Nigeria has gradually positively moved since the early 1970 up till 1990 and peaking between 2000 and 2007 up till 2013. A drop in the flow was however observed in 2008 and 2010 respectively due to the global financial meltdown effects as revealed by the figure in 4.3 but between 2010 and 2014 a very explosive the movement was experience. The study findings confirm the fact that over the period under review , various governments in Nigeria have adopted a number of economic reforms and policies that have either heightened capital flight, capital market performance and foreign portfolio investment in one hand or frustrated foreign capital flows across its borders on the other hand.

Critical among these reforms are the financial sector deregulation policy of 1993 , investment promotion policy in 1995 which replaced the indigenization decree of 1986 and financial sector liberalization and deregulation policies as well as foreign exchange rate management and control policies of 1970 -1978. Other key policy developments like globalization of capital market and upgrading of infrastructures to bench mark international standard have all helped to shape the trend of foreign portfolio investment in Nigeria

However, apart from the various sound economic reforms and policies executed over the years by the federal government our investigations revealed that within the period under review,

a number of economic challenges had also contributed in shaping the trend analysis lines for the foreign portfolio investment and other policy variables.

5.2.5 POLICIY IMPLICATION ON CAPITAL MARKET PERFORMANCE

Capital Market Performance indicator was proxy by stockmarket capitalizationand market liquidity respectively. The findings from the trends analysis revealed thedirection of capital market liquidity and stock market capitalization in Nigeria. The perceived trend is suspected to have been driven by severalfactors including exchange rate volatility which left the domestic currency Naira depreciating as against other currencies. Other factors include policy inconsistency, unstable political climate and poor regulatory framework as well as the global financial market meltdown among others.

These factors have in one way or the other impacted on capitalmarket liquidity, stock returns and market capitalization resultingto inflow and outflows of funds within the system. This is because while a depreciating exchange rate encourages more foreign investors patronage of the market, expected market liquidity and expected returns as the equity share prices drop due to depressed local currency will translate to increased market activities . But the reverse is the case local currency appreciates in terms of dollar, foreign investors will have to pay more dollar to buy stock in Nigeria and this might push the to relocate to other cheaper market for same investment purpose. Furthermore, a number of economic challenges and policies by the various governments have also contributed to the current trends being experienced over the years particularly the investment promotion policy, exchange rate control and management policies, financial market deregulation, interest rate and privatization of some government institutions all have driving the level flow of foreign capital in the economy hence

the current trend. A number of economic challenges had alsocontributed in shaping the trend analysis lines for capital flight and other policy variables.

6.0 SUMMARY, CONCLUSION AND CONTRIBUTION TO KNOWLEDGE

6.1 Summary of Findings

This study addressed the dynamics influence of capital market performance; foreign portfolio investment and capital flight on each other,for the purpose of unveiling the trend, interrelationship and direction of causality among these variables. The results are as summarized below on table 6.1In an effort to validate the already stated objectives of this study, ordinary least method, trend analyses techniques and vector Auto regressive approaches have been adopted to address each of the stated objectives by subjecting them to hypothesis testing.

6.1 Summary of Findings

This study addressed the dynamics interrelationship among capital market performance, foreign portfolio investment and capital flight in Nigeria .The objectives are to unveil the trend, interactive impacts among the variables as well as appraise the nature and direction of causality relationship among these variables.

Efforts were made to validate the already the objectives of this study adopting Ordinary Least Estimation , Trend analyses techniques and Vector Auto Regressive approaches to address each of the stated objectives by subjecting them to hypothesistest decision criteria . The results are as summarized on table 6.1I .

Table:6.1**Summary of study findings**

OBJECTIVES	**FINDINGS**
To examine pattern of flow of foreign portfolio investment in Nigeria between 1970 and 2014.	A gradual and increasing upward trend 604,000% change between 1970 and 2014 Null hypotheses of no significant movement

	is thereby rejected .
To identify trend in the flow of capital flight in Nigeria between 1970 and 2014.	A progressiveincreasing upward rend with 1839% change between 1970 and 2014 Null hypotheses of no significant movement is thereby rejected .
To identify the performance trend of the capital market in Nigeria between 1970 and 2014	An increasing upward trend indicating 14,879% over the same period. Null hypotheses of no significant movement is thereby rejected .
To appraise the level of relationship existing among capital market performance, capital flight and foreign portfolio investment in Nigeria	A highly significant relationship at 5% level of significance with P-value of 0.0005 - 0.0000and R-square of 84%, 80% and 94% respectively indicating high explanatory power of the exogenous variable used in the models.
To examine the nature and the direction of causation among capital market performance, capital flight and foreign portfolio investment in Nigeria	A 0.016 % and 0.080% level of significant at 5% and 10% respectively confirming a unidirectional causal relationship running from FPI to capital flight in one hand and also from market capitalisation to foreign portfolio investment on the other hand respectively . Thus rejecting the null hypothesis of no causality direction among the critical variables.
To appraise the reactions generated among capital market performance , capital flight and foreign portfolio investment due to shocks from each of the critical	The IRF and FEVD results confirm mixed responses of negative and positive were generated among the investigated variables due to innovations from each of the variables

variables in Nigeria.	both in the short run and in the long run. (See Table 4.5a,b,andc) . Consequently, the null hypotheses of no significant reactions among the variables were rejected .

6.2 CONCLUSION

This study addressed the dynamics interactions of capital market performance, foreign portfolio investment and capital flight for the purpose of unveiling the trend , nature and direction of causality among the critical variables. There have been concerns about the tendency for "Hot money" flow out of Nigerian borders through the activities of foreign portfolio investors in the capital market whenever there is market failure. The study revealed that there is positive relationship among capital flight, foreign portfolio investment and capital market performance with R^2 of 85%, 80% and 95% respectively. It also confirmed existence of a unidirectional causal relationship between foreign portfolio investment and capital flight in one hand and a strong unidirectional causality between foreign portfolio investment, capital market performance and capital flight in Nigeria.

The result confirmed existence of shorthand long term interactions effects among the foreign portfolio investment capital flight and capital market performance in Nigeria. It also shows the direction of causality running from market capitalization and to foreign portfolio investment and from foreign portfolio to capital flight which is significance at 95% level of confidence. This therefore confirms a strong linkage between capital flight and foreign portfolio in one hand and also between foreign portfolio and capital market performance on the other hand.

6.3 CONTRIBUTIONS TO KNOWLEDGE

This study investigated the level of interactions among foreign portfolio investment, capital flight and capital market performance in Nigeria. It particularly addressed the issues of hot money tendencies of foreign portfolio investment through the capital market and their interactive impacts among themselves . The study hither to contributed to knowledge in the following ways:

(1) The study developed and validated three (3) econometric models for investigating the interrelationship among foreign portfolio investment , capital flight and capital market performance in Nigeria .

(2) The study 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 missing in previous studies in Nigeria .

(3) The study has graphically demonstrated that considerable volumes of capital flight and foreign portfolio investments have been transmitted in Nigerian over time thereby providing the missing link in previous studies in Nigeria .

(3) Byincorporating pre and post -oil boom periods for this study scope , the study has widened provided needed scope that filled the perceived knowledge gap in this area of study in Nigeria which was missing in previous studies.

(4) The study has provided a working policy kit for the capital market regulators government policy designers in the industry by throwing insight into this neglected area of study in Nigeria. There is need to closely monitor, control and manage inflows and

outflow of capital from the system since they exhibit both short run and long run interactions in the system.

6.4 RECOMMENDATIONS

In line with the findings of this study, the following recommendations are hereby suggested:

(1) Given the outcome of this study which reveal increased flow of foreign portfolio investments and capital flights being transmitted and a unidirectional flow of influences among the foreign portfolio investment , capital flight and capital market performance, implying strong connections among these variables, it is hereby recommended that an urgent review of the existing capital importation policy be carried out by the relevant agencies 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 .

(2) A robust re-investment incentive packages be designed as a roll –over window to encourage retention of foreign portfolio investment proceeds within the system and the return of flight capital on permanent basis which would minimize illegal and indiscriminate repatriation of funds through FPI channel .

This is in line with our study findings which revealed aggressive movements in foreign portfolio investment and capital flight flows with their interactive influences on capital market performance in particular and on the economy in general when these foreign portfolio investors exit or repatriate investment proceeds through this channel .

(3) Adequate information disclosure requirement policies for all cross- border investment transactions need to critically established to protect all investors from unnecessary exposure to imported systematic risks arising from deficiency of information to market participants. It has been also discovered in the course of this investigations, that lack of transparency and insiders information abuse are major challenges facing the capital market operation in Nigeria which need to be addressed to boost investors' confidence in this market.

(4) Review of corporate governance policies and strengthening of supervisory and regulatory frameworks in the financial system are recommended to ensure strict compliance with various policies targeted at reducing 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 .This tend created problems for the relevant agencies in terms of generating adequate information on the volumes of transactions being executed through this channel.

(5) It is evident from the findings of this study that important preconditions necessary for well-functioning are not properly in place in Nigeria and these are hereby recommended. Preconditions in terms of market infrastructure, investor's sophistication, information flows,quality accounting standards and good legal system, credible contract enforcement laws andtrustworthy personnel are still lacking in the market to market Measures to address market. There need for quality and orderly information asymmetries that prevents undue advantages to insiders dealings and result

manipulations which instigates loss of investors' confidence are very key for the market recovery.However, it is believed that the more viable measures are the ones that ensure consistency and creditability of reform programs as well as sustainability of competitive economic growth as positive changes would work better than special incentives, rules regulations or control on capitalflows across regions. It is thereafter therefore to institutionalizestakeholders behavoural changes to reduce uncertainties in the market rather than controls.

(6) Fiscal controls as well as domestic financial sector liberalization is also recommended and more preferred to external capital liberalization. This is because since capital flight responds more to real interest rate differentials local financial market liberalization would rather make more impact on the economy in terms of industrialization and inclusiveness.

6.5 AREAS FOR FURTHER STUDIES

Given the scope and area of coverage of this study, the following proposed study areas are suggested and recommended for future studies by interested researchers in foreign capital flows and capital market investment in Nigeria.

(a) The role of exchange rates volatility as a driver of foreign portfolio investment (FPI) in Nigeria.

(b) Mitigating portfolio risk through an alternative market.

(c) The Connection between external reserves and foreign portfolio investment in Nigeria as an emerging economy.

(d) The components of the Errors and omissions and the resolution problems of capital flight.

(e) Political activities , foreign portfolio flow and capital market performance in Nigeria .

REFERENCES

Adam, A.& Tweneboah, G. (2008). Foreign direct investment (FDI) and stock market development: Evidence from Ghana. *International Research Journal of Finance and Economics.* MPRA Paper11261, 26(1) , 178-184

Adegbite, E.O. (2015). Financial development and real growth : Deciding the chicken and determining the Egg . Inaugural Lecture series University of Lagos, Akoka, Lagos. ISSN 1119-4456 , 34-38

Adegbite, E.O. & Eke, O.P. (2016). Participatory finance, interest rate structure andeconomic 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).

Agarwal,R.N.(2001). Stock market development and economic growth: Preliminary evidence from African countries. http://www.research gate.net publication

Aiygheyisi, O. S. (2013) . Foreign financial resources inflow and stock market development: empirical evidence from Nigeria and Ghana .*Research Journal of Finance and Accounting* ISSN 2222-1697 4 (9) 43-49

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

Akinde , M. A. (2015) . The dynamics of Stock Market Performance fundamentals and Economic Growth in Nigeria .*Research Journal of Finance and Accounting* 6 (3) , 13-21

Akinlo, A.E.(2003). Globalization, international investment and stock market growth in Sub-Saharan

AndEconomic Development, Bank of Mexico. 33 –58

Anyanwu J. C. (1997). Stock market development and Nigeria's economic development. *Nigeria Financial Review, 6-13.*

Asaolu, T.O. &Ogumakinwa, M. S. (2011). An econometric analysis of impact of macroeconomic policies on stock market movement in Nigeria . *Asian Journal of Business Management* (3) 72-78

Ayadi, F. S (2008). Econometric Analysis of capital flight in developing country. 8Th Global Conference on Economics 978-09742114-5-9

Bekaert, G. & Harvey, C.R. (2000). Foreign Speculators and emerging Equity Markets *Journal of Finance* . 55, 565-613.

Bencivenga, V.R. & B.D. Smith, (1991). Financial intermediation and endogenous growth . Review of Economic Studies, 58, 195-209

Biekpe, N. & Collins, D. (2003). Contagion and interdependence in African stock markets. *The South African Journal of economics.* 71, 181-194

Biometrika 75Review of Applied Economics 25(2): 149–170. *National*

Boyer, Brian & Lu, Z. (2009), Investor flows and stock market returns. *Journal of Empirical Finance, 16:87–100.*

Brennan, M. T. & Cao, H. (1997). International portfolio investment flows. *Journal of Finance, 52(5), 1851-1880. Bureau of Economic ResearchWorking Paper Working Paper* .

Calvo, G. & Talvi (E.) (2005). Sudden stops, financial factors and economic collapses in Latin America : Lessons from Argentina and Chile . NBER Working Paper Series, 11153.

Central Bank of Nigeria (1999) CBN statistical bulletin Abuja

Central Bank of Nigeria (2006) CBN statistical bulletin Abuja .

Central Bank of Nigeria (2013) CBN statistical bulletin Abuja .

Chen, Y. (2002). Domestic investors herding behavior in reaction to foreign trading . National Taiwan University International Conference in finance.

Chen, Y. (2002). Domestic investors herding behavior in reaction to foreign trading. National Taiwan University International Conference in finance.

Chukwu, J. (2013). Investors Loss N960 in three months as market value drops by 7%. Vanguard Business Finance .

Claessens, S., Dooley, M . & Warner, A. (1993). Portfolio capital flows: hot or cool? World Bank Economic Review, 9(1), 153-174..

Colaco , F. X. (1985). International capital movement and economic development. *Journal of Finance 22 (3) 377-424.*

Conover, C. Mitchell, G. R., Jensen & Robert R. J. (2002). Emerging markets: When are they worth

It? *Financial Analysts Journal, 58(2):86-95.*

Corbo, V. & L. Hernandez, (1994a). Macroeconomic adjustment to capital inflows: Latin American style versus east Asian style. World Bank Research Working Paper, 1377.

Dauda R.O. (unpublished) . The impact of foreign direct investment on Nigerian Economic

Growth , Trade policy Matters.

Demirguc-Kunt, A. & Levine, R. (1996). Stock Market, Corporate Finance and Economic Growth: An Overview. *The World Bank Review, 10(2):* 223 –240

Dickey, D .& Fuller, W. (1979). Distribution of the estimators for autoregressive time series with unit root .*Journal of the American Association*. 74 , issue 366 427 -431

Discussion Paper, No.27, Nairobi: Kenya Institute for Public Policy Research and Analysis.

Economic Outlook , (2011). Paris and Tunis: OECD and AfDB, UNECA, AU, and UNDP Assessing Progress in Africa toward the Millennium

Economic Outlook , (2012). Paris and Tunis: OECD and AfDB, UNECA, AU, and UNDP (2011) Assessing Progress in Africa toward the Millennium *Economic Review, 88 (3)*

Economics (39), 209-235. Economics, 40(11):1363-1372.

Engel, C. & Kenneth, D.W. (2005). Exchange rate and fundamentals.*Journal of Political Economy*

113, 485-517.

Engle, R. F. & Granger, C. W. (1987). Co-integration and error correction: representation, estimation, and testing, Econometrica, 55 (6) ,391-407.

Eniekezim, F.A . (2012) . The impact of foreign portfolio investment capital market growth: evidence from Nigeria . *Global Business and Economic Research Journal , 2 (8) , 13 l .*

Erbe, S. (1985). The flight capital from developing countries. Inter-economies review paper Nov-Dec , 268-275 .

Errunza, V. R. & Miller, D. P. (2000). Market segmentation and the cost of capital in international equity markets. *Journal of Financial and Quantitative Analysis 35, 577-600.*

Erunza, V. (1999). Capital market, foreign portfolio investment and economic development. UNTAD Discussion Paper 93-5449, Geneva.

Ezeoha, A., Ogamba, E. & Okereke -Onyiuke, N. O . (2009). Stock market development and private investment growth in Nigeria .*Journal of Sustainable Development in Africa, 11 (2) , 20-35*

Ezike , J. E . (2003). Economics of banking and finance.Concept Publication, Lagos, Nigeria.

Ezike, J. E. (2009). International business finance and management. Concepts Publications Ltd Lagos, Nigeria.

Feldstein, M. (1995).Global capital flow too little, not too much. The Economist.72-73.

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)

Fisher, I. (1930). The theory of interest rate and large capital inflows to developing countries.

World Bank Policy Research .New York.floating, and original Sin‖, in: G. Ortiz, ed. Macroeconomic Stability, Financial Markets,

French, D. (1989). Security and portfolio analysis concept and management.Merrill Publications New York .

Gazioglu, S.(200). Stock market returns in an emerging financial market: Turkish Case Study AppliedEconomics, 40(11):1363-1372.

Goldsmith, R.W. (1969). Financial structure and development. new haven: Yale University Press

Group 1 delivered at the Friends of Earth's International Forum on Globalization.

Grubel, A .H. (1968). A Review of international portfolio diversification. *American Economic Review, 58 (5)* .

Gujarati, D.N. (2004). Basic economics.fourth edition: Tata McGraw-Hill Publishing Company Ltd, New Delhi.

Handbooks in operations Research and Management science and Finance .

Helmes , C.H. & Lensink , (1992) . The open economy : Tools for policy makers in developing countries ed1series World bank economic development . Oxford University Press.

Henry P.B. (2000) . Stock market liberalization economics reform and emerging market equity prices . *Journal of Finances 55, 529-564.*

Hutchison , M . (2006).Sudden stops and Mexican wave: currency crisis, capital Flow reversal and output loss in emerging markets. *Journal of Economic Development, 79 (1) 225-248* IFC.

International Finance Corporation (1996) IFC Fact book, New York .

International Finance Corporation, (1996). IFC's Experience in promoting emerging market

International Finance Corporation, (1998) Lessons of Experience, Financial Institutions, (.6)

International Finance Corporation Emerging Market Fact Book (1996)Washington:Investment Fund

Asian emerging equity markets.Research Discussion Paper - 5 (2) ISSN 2222-2839

Jackson, J . .K . (2003) . Foreign Direct Investment: An econometric analysis: Washington DC. Congressional Research Services.

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

Julian, W. (1997). New financial instruments.John Wiley and Sons; New York.

Keynes, J. M. (1936).The general theory of employment, interest rate and money. London Macmillan

Khan, M.S. & Hague, N.U. (1987). Capital flight from countries , finance and development (IMF) International Financial Statistics Washington , DC. 24 (1) , 2-5.

Khan, M.& Carmen R. (1995). Capital flows in the APEC Region, IMF Occasional publications

Kim, S. & Doo Y. Y. (2009). Do capital inflows matter for asset prices?: The Case of Korea *Asian Economic Journal, 23(3):323-348.*

Krugman, P. (1977). The efficiency of the forward exchange market : Evidence from the

Twenties and Seventies : Unpublished Manuscript , Yale University

Lee, E.S. (1966). A theory of migration . Demography , 3(1), 47-57.

Levine, R. &Zevors , S. (1998). Stock markets , banks and economic growth. *America*

Marc Quintyn and Genevieve Verdier (eds.), *African Finance in the 21st Century*

McKinnon, R. (1963). Optimal Currency Areas.*American Economic Review*, 53, 717- 745

McKinnon, R. (1973). Money and capital in economic development. Brooking Institution, Merrill Publications , New York .

Merton, R. C. (1987). A simple model of capital market equilibrium with incomplete information . *Journal of Finance, (42) 483-510.*

Mobulurin, O.O . (2003). Capital market as an engine of economic development. *Journal of Money and finance, 18(4), 619-635*

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.*

Narag, R. (2000). Implications of foreign portfolio flows for an emerging economy: The case of India and Mexico. Delhi School of Economics, Mimeo.

Ndikumana, L. & Boyce, J.K. (2010) . Measurement of capital flight: methodology and results for sub-Saharan African countries. African Development Review 22 (4), 471–81.

Ndikumana, L. (2000). Financial determinants of domestic investment in sub- Sahara Africa: Evidence from Panel Data World Development, 28 (.2) , 381-2000.

Ngowi, H.P. (2001). Can Africa increase its global share of foreign direct investment (FDI): West African Review 2(2).

Ngugi, Rose W. (2003). Development of the Nairobi stock exchange: A Historical Perspective,

Ngugi, R. W., Daniel, A. and Isaya , M. (2010). The capital market and economic growth in Kenya, Kenya Policies for Prosperity, Oxford University Press, New York.

Obiechina , M.E. (2010). Capital flows and financial crises : Policy issues and challenges for Nigeria . Economic and Financial Review 48(1)

Odionye , J.C.(2001). An empirical analysis of the relationship between exchange rate and stock prices in Nigeria .Unpublished Thesis, University of Nigeria, Nsuka.

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 .

Okororie, U. (2005). Principles of International Business Finance, Lagos, Nigeria.

Olowe , R. A. (2007) . The relationship between stock market prices and macroeconomic factors in Nigeria . African Review of Money , Finance and Banking . 2 (10)

Olowe, R. A. (2009) . Financial management: concepts, financial system and business finance.

Omisakin, O. (2009). Foreign Direct Investment, trade openness and economic growth in Nigeria.*Journal of Economics Theory,* 3(2) : 13-18

Onuorah, A. C. (2013). Impact of macroeconomic indicators on the performance of foreign Portfolio Investment in Nigeria *European Journal of Business and Management*
ISSN 2222-1905 ISSN 2222-2839

Onyema , S. (2012) . Sustainable market development; Nigerian mutuation. 21st Delegates Annual Conference , Financial Market Dealers Association of Nigeria.

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.*

Parthapratim , P. (2006). Foreign portfolio investment stock market and economic development: A case study of India: Draft paper submitted for the Annual conference ofdevelopment and change mission promoting development and change missionpromoting development in a globalized world

Pavabutr, P. & Hong, Y. (2003). Foreign portfolio flows and emerging market returns: Evidencefrom Thailand. University of Texas at Austin, Mimeo.

Perron, P . (1997) . The great crash, the oil price shock, and unit root hypothesis .*Econometrica (57) : 1361-140.*

Petzel, T. E. (1999). Institutional uses and control of the investment process. Common Fund West Port Connecticut U.S.ASecurities and Exchange Commission, Various Annual Reports

Phillips, P.C.B &Perron, P, (1988). Testing for a unit root in time series regression .

portfolio Investment in Nigeria. *European Journal of Business and Managem*ent

Reilly , F.K., & Brown , K.C.(2000). Investment analysis and portfolio management. South Western Learning ,United States (ed) Bank of Australia. Review, 48(1), 33 – 70

Richards, Anthony (2004). Big fish in small ponds: The trading behavior and price impact of foreigninvestors in Asian emerging equity markets. Research Discussion Paper No. 2004-05,

Reserve Bank of Australia.

Senbet, L. W. & Otchere , I. (2010). African stock markets – opportunities and issues .

African Finance in the 21st Century, Palgrave Macmillan, International

Monetary Fund.

Shapiro, A .& Wiley, J. (1996). Multinational financial management. California State University, Fullerton, U.S.A. 7th edition.

Siegel, J. (1998). Control of international capital: A survey of policy options . Discussion Paper for

Sims C.A. (1980). Macroeconomics and reality of stock prices in Nigeria. *Econometrica,* 48, 1-48:

Stulz, R.M. (1995). International portfolio choice and assets pricing: An integrative survey

. Handbooks in Operations Research and Management Science: Finance

(North-Holland)

Sula, O. (2010). Surges and sudden stops of capital flows to emerging markets.

Open Economic Review 21, 589-605.

Tobin, J (1967). Liquidity preference as a behaviour towards risk. R.E.S. 25(1) adopted from

Mankiw G.N (1997) and Jhingan (2000)

UNCTAD, (1997).Trade and development report. International business technical Consultants,Inc., (IBTCI), USAID Privatization Project Evaluation Services Contract, Cairo,Egypt, various issues.

United Nations, (1997). World investment report: transnational corporations: Market Structure and Competition.

Vita, G.& Kyaw, K.S.(2008).Determinants of FDI and portfolio flows to developing countriesA panel co-integration analysis : Journal of Economics Finance and Administrative Science Washington D.C.

World Bank (1999b) .Global economic prospects,and the developing countries, beyond the financial crisis. Washington D.C.: World Bank.

World Bank, (1999a)**.** World bankglobal development finance. Washington D.C.

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.

Zhao, Y. (2011.). Analysis of responses of short-term international capital flows to changesof China's market . *The Journal of Quantitative & Technical Economics 3, 104-117.*

Warther, V. A. (1995). Aggregate mutual fund flows and security returns.*Journal of Financial*Economics (39), 209-235.

APPENDIX

LOG CAPITAL FLIGHT
Null Hypothesis: D(LOGCPF) has a unit root
Exogenous: Constant
Lag Length: 0 (Automatic - based on SIC, maxlag=9)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-9.699136	0.0000

Test critical values:	1% level	-3.596616
	5% level	-2.933158
	10% level	-2.604867

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGCPF,2)
Method: Least Squares
Date: 09/05/15 Time: 01:10
Sample (adjusted): 1970 – 2014
Included observations: 42 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(LOGCPF(-1))	-1.404288	0.144785	-9.699136	0.0000
C	1237.323	990.9573	1.248614	0.2191

R-squared	0.701656	Mean dependent var	88.99286
Adjusted R-squared	0.694197	S.D. dependent var	11530.20
S.E. of regression	6376.136	Akaike info criterion	20.40496
Sum squared resid	1.63E+09	Schwarz criterion	20.48771
Log likelihood	-426.5042	Hannan-Quinn criter.	20.43529
F-statistic	94.07323	Durbin-Watson stat	2.096876
Prob(F-statistic)	0.000 000		

MCAP

Null Hypothesis: MCAP has a unit root
Exogenous: Constant
Lag Length: 9 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		4.962315	1.0000
Test critical values:	1% level	-3.632900	
	5% level	-2.948404	
	10% level	-2.612874	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(MCAP)
Method: Least Squares
Date: 09/05/15 Time: 01:13
Sample (adjusted): 1980 2014
Included observations: 35 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
MCAP(-1)	26.58677	5.357734	4.962315	0.0000

D(MCAP(-1))	-27.26863	5.484634	-4.971823	0.0000
D(MCAP(-2))	-27.47956	5.516357	-4.981469	0.0000
D(MCAP(-3))	-26.71378	5.364499	-4.979734	0.0000
D(MCAP(-4))	-28.44892	5.745123	-4.951838	0.0000
D(MCAP(-5))	-27.33696	5.825644	-4.692522	0.0001
D(MCAP(-6))	-27.79787	5.986887	-4.643126	0.0001
D(MCAP(-7))	-34.03725	8.421934	-4.041500	0.0005
D(MCAP(-8))	-13.85728	9.586282	-1.445532	0.1612
D(MCAP(-9))	-52.18607	12.85747	-4.058814	0.0005
C	67.23494	254.8698	0.263801	0.7942

R-squared	0.759383	Mean dependent var	459.5819
Adjusted R-squared	0.659126	S.D. dependent var	2089.001
S.E. of regression	1219.651	Akaike info criterion	17.30179
Sum squared resid	35701177	Schwarz criterion	17.79062
Log likelihood	-291.7814	Hannan-Quinn criter.	17.47054
F-statistic	7.574360	Durbin-Watson stat	3.163739
Prob(F-statistic)	0.000025		

LOG GDP

Null Hypothesis: LOGGDP has a unit root
Exogenous: Constant
Lag Length: 8 (Automatic - based on SIC, maxlag=9)

		t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic		3.615619	1.0000
Test critical values:	1% level	-3.626784	
	5% level	-2.945842	
	10% level	-2.611531	

*MacKinnon (1996) one-sided p-values.

Augmented Dickey-Fuller Test Equation
Dependent Variable: D(LOGGDP)
Method: Least Squares
Date: 09/05/15 Time: 01:15
Sample (adjusted): 1979 2014
Included observations: 36 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
LOGGDP(-1)	2.740780	0.758039	3.615619	0.0013
D(LOGGDP(-1))	-3.051915	0.741568	-4.115492	0.0003
D(LOGGDP(-2))	-4.948626	0.612780	-8.075694	0.0000
D(LOGGDP(-3))	-2.655933	1.667367	-1.592890	0.1233
D(LOGGDP(-4))	-1.128208	1.375346	-0.820309	0.4195
D(LOGGDP(-5))	-0.745162	1.402234	-0.531411	0.5996
D(LOGGDP(-6))	-5.348451	1.626210	-3.288905	0.0029
D(LOGGDP(-7))	-6.373293	1.821162	-3.499575	0.0017
D(LOGGDP(-8))	-3.718700	2.091006	-1.778427	0.0870
C	758672.4	626936.2	1.210127	0.2371

R-squared	0.926014	Mean dependent var	2652414.
Adjusted R-squared	0.900403	S.D. dependent var	9402396.
S.E. of regression	2967294.	Akaike info criterion	32.87433
Sum squared resid	2.29E+14	Schwarz criterion	33.31420
Log likelihood	-581.7380	Hannan-Quinn criter.	33.02786
F-statistic	36.15755	Durbin-Watson stat	2.024916
Prob(F-statistic)	0.000000		

STATISTICAL TESTS

	LOGGDP	MCAP	LOGCPF	LOGINF	LOGINT	LOGTOP	LOGLQT
Mean	6682313.	2233.446	9273.348	18.83114	15.53182	6.522911	7955185.
Median	422376.8	27.15000	4983.050	12.05000	16.70000	1.312150	707.3500
Maximum	41700026	19077.40	37990.80	72.80000	29.80000	25.23000	79755000
Minimum	5281.100	0.021000	-4796.000	1.650000	6.000000	0.072400	16.60000
Std. Dev.	11215024	4612.202	11330.53	17.20516	5.724926	8.009360	22279697
Skewness	1.722801	2.200398	1.226706	1.602512	0.380597	1.012151	2.477434
Kurtosis	4.781358	6.892838	3.417435	4.574217	2.385452	2.642197	7.235614
Jarque-Bera	27.58324	63.28885	11.35472	23.37563	1.754656	7.747333	77.90044
Probability	0.000001	0.000000	0.003423	0.000008	0.415893	0.020782	0.000000
Sum	2.94E+08	98271.62	408027.3	828.5700	683.4000	287.0081	3.50E+08
Sum Sq. Dev.	5.41E+15	9.15E+08	5.52E+09	12728.75	1409.315	2758.443	2.13E+16
Observations	44	44	44	44	44	44	44

CO-INTEGRATIONN TESTS

Date: 09/05/15 Time: 01:30
Sample (adjusted): 1972- 2014
Included observations: 44after adjustments
Trend assumption: Linear deterministic trend
Series: LOGGDP MCAP LOGCPF LOGINF LOGINT LOGTOP LOGLQT
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.998295	444.4064	125.6154	0.0001
At most 1 *	0.865824	176.6817	95.75366	0.0000
At most 2 *	0.612169	92.32045	69.81889	0.0003
At most 3 *	0.476580	52.53862	47.85613	0.0170
At most 4	0.349302	25.34902	29.79707	0.1493
At most 5	0.114111	7.301192	15.49471	0.5429
At most 6	0.051311	2.212321	3.841466	0.1369

Trace test indicates 4 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.998295	267.7247	46.23142	0.0000
At most 1 *	0.865824	84.36129	40.07757	0.0000
At most 2 *	0.612169	39.78183	33.87687	0.0088
At most 3	0.476580	27.18960	27.58434	0.0561
At most 4	0.349302	18.04783	21.13162	0.1281
At most 5	0.114111	5.088871	14.26460	0.7306
At most 6	0.051311	2.212321	3.841466	0.1369

Max-eigenvalue test indicates 3 cointegratingeqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by b'*S11*b=I):

LOGGDP	MCAP	LOGCPF	LOGINF	LOGINT	LOGTOP	LOGLQT
1.11E-07	-0.000714	8.32E-06	0.000888	-0.002519	-0.003363	4.22E-08
5.13E-07	-0.001091	8.60E-05	0.014200	-0.038040	0.016875	-6.42E-08
-1.40E-06	0.000601	0.000273	-0.033018	-0.043371	0.811760	2.26E-07
5.94E-07	-0.000150	-0.000126	-0.066247	0.109054	-0.458432	-6.78E-08
4.45E-07	5.87E-05	-0.000195	0.025239	-0.089213	-0.246013	-2.75E-08
4.50E-07	-0.000344	9.43E-05	0.014557	-0.021976	-0.461046	-3.31E-08
1.40E-07	-0.000400	-8.29E-07	0.001874	-0.211016	0.130433	-5.39E-08

Unrestricted Adjustment Coefficients (alpha):

D(LOGGDP)	-727415.1	1061210.	127421.0	-42661.29	-404046.9	-396132.8	54682.33
D(MCAP)	412.4031	1369.685	125.5421	92.08151	156.1364	166.9733	-38.20650
D(LOGCPF)	-187.8364	543.2303	-1703.877	1761.406	1484.594	-828.1055	23.05054
D(LOGINF)	-0.301539	-2.391885	3.171299	9.229655	-3.753025	1.228775	-0.394489
D(LOGINT)	0.387058	-0.625217	0.016845	0.480823	-0.102651	0.207129	0.730066
D(LOGTOP)	0.287505	-0.033572	-0.834281	0.050756	-0.726106	-0.115602	0.029993
D(LOGLQT)	-9104505.	859332.6	67083.92	-134907.1	-392259.0	-261714.6	36764.43

1 Cointegrating Equation(s): Log likelihood -2403.220

Normalized cointegrating coefficients (standard error in parentheses)

LOGGDP	MCAP	LOGCPF	LOGINF	LOGINT	LOGTOP	LOGLQT
1.000000	-6439.365	75.06267	8011.982	-22730.51	-30344.15	0.380501
	(75.1991)	(17.8324)	(5105.19)	(16918.8)	(29001.1)	(0.00573)

Adjustment coefficients (standard error in parentheses)

D(LOGGDP)	-0.080625
	(0.03469)
D(MCAP)	4.57E-05
	(3.1E-05)
D(LOGCPF)	-2.08E-05
	(9.4E-05)
D(LOGINF)	-3.34E-08
	(3.1E-07)
D(LOGINT)	4.29E-08
	(6.6E-08)

D(LOGTOP)	3.19E-08
	(3.2E-08)
D(LOGLQT)	-1.009125
	(0.02801)

2 Cointegrating Equation(s): Log likelihood -2361.040

Normalized cointegrating coefficients (standard error in parentheses)

LOGGDP	MCAP	LOGCPF	LOGINF	LOGINT	LOGTOP	LOGLQT
1.000000	0.000000	213.6025	37415.42	-99607.13	64142.98	-0.374820
		(39.0706)	(15778.6)	(49545.9)	(65268.0)	(0.01720)
0.000000	1.000000	0.021515	4.566202	-11.93854	14.67336	-0.000117
		(0.00666)	(2.68947)	(8.44511)	(11.1250)	(2.9E-06)

Adjustment coefficients (standard error in parentheses)

D(LOGGDP)	0.463407	-638.5478
	(0.13252)	(329.383)
D(MCAP)	0.000748	-1.788596
	(7.5E-05)	(0.18674)
D(LOGCPF)	0.000258	-0.458571
	(0.00044)	(1.10313)
D(LOGINF)	-1.26E-06	0.002825
	(1.5E-06)	(0.00361)
D(LOGINT)	-2.78E-07	0.000406
	(3.1E-07)	(0.00076)
D(LOGTOP)	1.47E-08	-0.000169
	(1.5E-07)	(0.00038)
D(LOGLQT)	-0.568586	5560.641
	(0.10681)	(265.492)

3 Cointegrating Equation(s): Log likelihood -2341.149

Normalized cointegrating coefficients (standard error in parentheses)

LOGGDP	MCAP	LOGCPF	LOGINF	LOGINT	LOGTOP	LOGLQT
1.000000	0.000000	0.000000	31079.07	-32523.93	-276990.4	-0.287570
			(8947.59)	(27681.3)	(31379.2)	(0.00974)
0.000000	1.000000	0.000000	3.927990	-5.181772	-19.68635	-0.000109
			(1.99751)	(6.17975)	(7.00527)	(2.2E-06)
0.000000	0.000000	1.000000	29.66423	-314.0562	1597.047	-0.000408
			(41.5135)	(128.431)	(145.588)	(4.5E-05)

Adjustment coefficients (standard error in parentheses)

D(LOGGDP)	0.285148	-561.9609	120.0404
	(0.37603)	(361.304)	(72.0851)
D(MCAP)	0.000572	-1.713139	0.155549
	(0.00021)	(0.20323)	(0.04055)
D(LOGCPF)	0.002641	-1.482694	-0.420089
	(0.00118)	(1.13765)	(0.22698)
D(LOGINF)	-5.70E-06	0.004731	0.000658
	(4.1E-06)	(0.00389)	(0.00078)
D(LOGINT)	-3.01E-07	0.000416	-4.60E-05

	(8.8E-07)	(0.00084)	(0.00017)
D(LOGTOP)	1.18E-06	-0.000670	-0.000228
	(3.8E-07)	(0.00036)	(7.2E-05)
D(LOGLQT)	-0.662435	5600.962	16.50100
	(0.30376)	(291.869)	(58.2319)

4 Cointegrating Equation(s): Log likelihood -2327.554

Normalized cointegrating coefficients (standard error in parentheses)

LOGGDP	MCAP	LOGCPF	LOGINF	LOGINT	LOGTOP	LOGLQT
1.000000	0.000000	0.000000	0.000000	1557.372	-314194.3	-0.273848
				(27368.7)	(33452.0)	(0.01077)
0.000000	1.000000	0.000000	0.000000	-0.874337	-24.38845	-0.000107
				(5.72826)	(7.00150)	(2.3E-06)
0.000000	0.000000	1.000000	0.000000	-281.5264	1561.537	-0.000395
				(117.346)	(143.429)	(4.6E-05)
0.000000	0.000000	0.000000	1.000000	-1.096600	1.197075	-4.42E-07
				(0.51318)	(0.62724)	(2.0E-07)

Adjustment coefficients (standard error in parentheses)

D(LOGGDP)	0.259797	-555.5709	125.3973	13041.86
	(0.40450)	(363.107)	(78.6740)	(18962.1)
D(MCAP)	0.000627	-1.726931	0.143987	9.569993
	(0.00023)	(0.20302)	(0.04399)	(10.6019)
D(LOGCPF)	0.003688	-1.746526	-0.641263	-52.88320
	(0.00117)	(1.05474)	(0.22853)	(55.0804)
D(LOGINF)	-2.12E-07	0.003348	-0.000501	-0.750379
	(3.5E-06)	(0.00315)	(0.00068)	(0.16462)
D(LOGINT)	-1.55E-08	0.000344	-0.000106	-0.040943
	(9.3E-07)	(0.00084)	(0.00018)	(0.04373)
D(LOGTOP)	1.21E-06	-0.000678	-0.000235	0.023962
	(4.0E-07)	(0.00036)	(7.9E-05)	(0.01896)
D(LOGLQT)	-0.742601	5621.169	33.44088	10839.37
	(0.32472)	(291.490)	(63.1567)	(15222.1)

5 Cointegrating Equation(s): Log likelihood -2318.530

Normalized cointegrating coefficients (standard error in parentheses)

LOGGDP	MCAP	LOGCPF	LOGINF	LOGINT	LOGTOP	LOGLQT
1.000000	0.000000	0.000000	0.000000	0.000000	-311939.4	-0.273386
					(30732.5)	(0.01047)
0.000000	1.000000	0.000000	0.000000	0.000000	-25.65439	-0.000107
					(6.34372)	(2.2E-06)
0.000000	0.000000	1.000000	0.000000	0.000000	1153.917	-0.000479
					(162.794)	(5.5E-05)
0.000000	0.000000	0.000000	1.000000	0.000000	-0.390683	-7.66E-07
					(0.91288)	(3.1E-07)
0.000000	0.000000	0.000000	0.000000	1.000000	-1.447892	-2.96E-07
					(0.53062)	(1.8E-07)

Adjustment coefficients (standard error in parentheses)

D(LOGGDP)	0.080057	-579.2743	204.1997	2844.164	-12667.90
	(0.40296)	(348.915)	(89.0222)	(19199.4)	(36779.1)
D(MCAP)	0.000696	-1.717771	0.113535	13.51070	-62.47357
	(0.00023)	(0.19936)	(0.05086)	(10.9697)	(21.0140)

D(LOGCPF)	0.004348	-1.659432	-0.930808	-15.41371	113.3504
	(0.00114)	(0.98740)	(0.25192)	(54.3325)	(104.081)
D(LOGINF)	-1.88E-06	0.003128	0.000231	-0.845102	1.295548
	(3.5E-06)	(0.00301)	(0.00077)	(0.16565)	(0.31733)
D(LOGINT)	-6.11E-08	0.000338	-8.63E-05	-0.043534	0.083670
	(9.7E-07)	(0.00084)	(0.00021)	(0.04610)	(0.08830)
D(LOGTOP)	8.89E-07	-0.000720	-9.31E-05	0.005636	0.107049
	(3.6E-07)	(0.00031)	(8.0E-05)	(0.01729)	(0.03312)
D(LOGLQT)	-0.917098	5598.157	109.9442	939.1856	7622.212
	(0.31708)	(274.549)	(70.0484)	(15107.3)	(28940.1)

6 Cointegrating Equation(s): Log likelihood -2315.986

Normalized cointegrating coefficients (standard error in parentheses)

LOGGDP	MCAP	LOGCPF	LOGINF	LOGINT	LOGTOP	LOGLQT
1.000000	0.000000	0.000000	0.000000	0.000000	0.000000	-0.342466
						(0.02147)
0.000000	1.000000	0.000000	0.000000	0.000000	0.000000	-0.000113
						(2.4E-06)
0.000000	0.000000	1.000000	0.000000	0.000000	0.000000	-0.000223
						(7.6E-05)
0.000000	0.000000	0.000000	1.000000	0.000000	0.000000	-8.53E-07
						(2.2E-07)
0.000000	0.000000	0.000000	0.000000	1.000000	0.000000	-6.17E-07
						(1.6E-07)
0.000000	0.000000	0.000000	0.000000	0.000000	1.000000	-2.21E-07
						(6.2E-08)

Adjustment coefficients (standard error in parentheses)

D(LOGGDP)	-0.098064	-443.1593	166.8616	-2922.200	-3962.454	425383.5
	(0.39997)	(343.723)	(88.0630)	(18706.3)	(35613.6)	(247431.)
D(MCAP)	0.000772	-1.775145	0.129274	15.94127	-66.14300	-33.97042
	(0.00023)	(0.20032)	(0.05132)	(10.9020)	(20.7555)	(144.202)
D(LOGCPF)	0.003976	-1.374887	-1.008862	-27.46815	131.5489	-2164.261
	(0.00115)	(0.99212)	(0.25418)	(53.9937)	(102.794)	(714.181)
D(LOGINF)	-1.33E-06	0.002706	0.000347	-0.827215	1.268544	-1.339418
	(3.6E-06)	(0.00308)	(0.00079)	(0.16752)	(0.31892)	(2.21577)
D(LOGINT)	3.20E-08	0.000267	-6.68E-05	-0.040519	0.079119	-0.288845
	(1.0E-06)	(0.00086)	(0.00022)	(0.04677)	(0.08905)	(0.61866)
D(LOGTOP)	8.37E-07	-0.000680	-0.000104	0.003953	0.109590	-0.470108
	(3.7E-07)	(0.00032)	(8.2E-05)	(0.01750)	(0.03332)	(0.23147)
D(LOGLQT)	-1.034778	5688.084	85.27595	-2870.501	13373.68	378587.6
	(0.31882)	(273.981)	(70.1948)	(14910.8)	(28387.5)	(197227.)

OLS ESTIMATION

Dependent Variable: MCAP
Method: Least Squares
Date: 09/05/15 Time: 01:36
Sample (adjusted): 1970 2014
Included observations: 44 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	71.43891	900.5612	0.079327	0.9372

LOGFPI	0.001346	0.000865	1.555239	0.1286
LOGCPF	0.165277	0.042955	3.847688	0.0005
LOGEXR	-2.357783	13.81667	-0.170648	0.8655
LOGINF	1.485378	19.57273	0.075890	0.9399
LOGINT	-71.76439	65.00863	-1.103921	0.2770
LOGTOP	192.7909	111.2740	1.732578	0.0917
LOGLQT	5.19E-05	2.00E-05	2.597525	0.0135

R-squared	0.857309	Mean dependent var	2233.446
Adjusted R-squared	0.829564	S.D. dependent var	4612.202
S.E. of regression	1904.097	Akaike info criterion	18.10437
Sum squared resid	1.31E+08	Schwarz criterion	18.42877
Log likelihood	-390.2961	Hannan-Quinn criter.	18.22467
F-statistic	30.89915	Durbin-Watson stat	1.605684
Prob(F-statistic)	0.000000		

Dependent Variable: LOGFPI
Method: Least Squares
Date: 09/05/15 Time: 01:39
Sample (adjusted): 1970 2013
Included observations: 44 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-50899.62	170883.1	-0.297862	0.7675
LOGCPF	9.494443	8.009858	1.185345	0.2434
LOGEXR	1902.271	2606.184	0.729906	0.4700
LOGINF	342.3703	3717.985	0.092085	0.9271
LOGINT	581.6693	12349.92	0.047099	0.9627
LOGTOP	-13968.65	21014.64	-0.664710	0.5104
LOGLQT	0.008158	0.003552	2.296713	0.0274

R-squared	0.378710	Mean dependent var	119960.1
Adjusted R-squared	0.277960	S.D. dependent var	425710.6
S.E. of regression	361738.8	Akaike info criterion	28.58014
Sum squared resid	4.84E+12	Schwarz criterion	28.86399
Log likelihood	-621.7631	Hannan-Quinn criter.	28.68541
F-statistic	3.758915	Durbin-Watson stat	2.288221
Prob(F-statistic)	0.005080		

FOREIGN PORTFOLIO INVESTMENTS

Dependent Variable: LOGFPI
Method: Least Squares
Date: 09/05/15 Time: 01:39
Sample (adjusted): 1970 2014
Included observations: 44 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-50899.62	170883.1	-0.297862	0.7675
LOGCPF	9.494443	8.009858	1.185345	0.2434

LOGEXR	1902.271	2606.184	0.729906	0.4700
LOGINF	342.3703	3717.985	0.092085	0.9271
LOGINT	581.6693	12349.92	0.047099	0.9627
LOGTOP	-13968.65	21014.64	-0.664710	0.5104
LOGLQT	0.008158	0.003552	2.296713	0.0274

R-squared	0.378710	Mean dependent var	119960.1
Adjusted R-squared	0.277960	S.D. dependent var	425710.6
S.E. of regression	361738.8	Akaike info criterion	28.58014
Sum squared resid	4.84E+12	Schwarz criterion	28.86399
Log likelihood	-621.7631	Hannan-Quinn criter.	28.68541
F-statistic	3.758915	Durbin-Watson stat	2.288221
Prob(F-statistic)	0.005080		

Dependent Variable: LOGFPI
Method: Least Squares
Date: 09/05/15 Time: 01:52
Sample (adjusted): 1970 -2014
Included observations: 44 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	-49404.05	163992.6	-0.301258	0.7650
LOGGDP	-0.055433	0.027128	-2.043384	0.0484
LOGEXR	2599.774	2524.256	1.029917	0.3099
LOGTOP	23003.91	27094.20	0.849035	0.4015
LOGINT	-5335.295	12200.42	-0.437304	0.6645
LOGINF	153.3198	3569.228	0.042956	0.9660
LOGLQT	0.017755	0.005803	3.059447	0.0042
LOGCPF	21.63320	9.714762	2.226838	0.0323

R-squared	0.443280	Mean dependent var	119960.1
Adjusted R-squared	0.335029	S.D. dependent var	425710.6
S.E. of regression	347148.9	Akaike info criterion	28.51586
Sum squared resid	4.34E+12	Schwarz criterion	28.84026
Log likelihood	-619.3489	Hannan-Quinn criter.	28.63616
F-statistic	4.094929	Durbin-Watson stat	1.946315
Prob(F-statistic)	0.002124		

CAPITAL FLIGHT

Dependent Variable: LOGCPF
Method: Least Squares
Date: 09/05/15 Time: 01:55
Sample (adjusted): 1970 2013
Included observations: 44 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	3834.588	2702.632	1.418835	0.1643
LOGGDP	0.001708	0.000363	4.700885	0.0000
LOGEXR	-9.508804	42.68834	-0.222749	0.8250
LOGINF	6.538251	60.39103	0.108265	0.9144
LOGINT	10.16342	206.4561	0.049228	0.9610

LOGTOP	-578.9810	448.5154	-1.290883	0.2048
LOGLQT	-0.000252	8.90E-05	-2.836671	0.0074

R-squared	0.768688	Mean dependent var	9273.348
Adjusted R-squared	0.731178	S.D. dependent var	11330.53
S.E. of regression	5874.660	Akaike info criterion	20.33959
Sum squared resid	1.28E+09	Schwarz criterion	20.62344
Log likelihood	-440.4711	Hannan-Quinn criter.	20.44486
F-statistic	20.49285	Durbin-Watson stat	2.136452
Prob(F-statistic)	0.000000		

VAR ESTIMATION FPI CPF AND MCAP

Vector Auto regression Estimates
Date: 09/05/15 Time: 01:57
Sample (adjusted): 1972 2013
Included observations: 42 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	LOGCPF	LOGFPI	MCAP
LOGCPF(-1)	0.314759	-8.860131	0.059340
	(0.16586)	(10.6238)	(0.04425)
	[1.89770]	[-0.83399]	[1.34106]
LOGCPF(-2)	0.246336	4.739094	0.128985
	(0.17646)	(11.3022)	(0.04707)
	[1.39602]	[0.41931]	[2.74004]
LOGFPI(-1)	-0.005759	-0.611250	0.002282
	(0.00496)	(0.31767)	(0.00132)
	[-1.16119]	[-1.92419]	[1.72471]
LOGFPI(-2)	0.023925	2.756810	0.005799
	(0.01971)	(1.26255)	(0.00526)
	[1.21376]	[2.18352]	[1.10274]
MCAP(-1)	1.983923	-9.892180	0.387775
	(0.71305)	(45.6720)	(0.19023)
	[2.78229]	[-0.21659]	[2.03850]
MCAP(-2)	-1.376214	37.28690	-0.086860
	(0.78261)	(50.1274)	(0.20878)
	[-1.75849]	[0.74384]	[-0.41603]
C	2645.808	39490.19	-440.1493
	(1290.74)	(82673.5)	(344.338)
	[2.04984]	[0.47766]	[-1.27825]
R-squared	0.794891	0.423138	0.914093
Adj. R-squared	0.759729	0.324247	0.899366
Sum sq. resids	1.09E+09	4.48E+12	77682759
S.E. equation	5584.469	357692.2	1489.801
F-statistic	22.60682	4.278844	62.06928
Log likelihood	-418.1319	-592.8387	-362.6354

Akaike AIC	20.24438	28.56375	17.60168
Schwarz SC	20.53399	28.85336	17.89130
Mean dependent	9736.957	125670.5	2339.799
S.D. dependent	11392.83	435126.5	4696.294

Determinant resid covariance (dof adj.)	5.16E+24
Determinant resid covariance	2.99E+24
Log likelihood	-1362.273
Akaike information criterion	65.87015
Schwarz criterion	66.73899

LAG SELECTION FOR VAR

VAR Lag Order Selection Criteria
Endogenous variables: LOGCPF LOGFPI MCAP
Exogenous variables: C
Date: 09/05/15 Time: 01:58
Sample: 1970 2014
Included observations: 41

Lag	LogL	LR	FPE	AIC	SC	HQ
0	-1400.338	NA	1.08e+26	68.45553	68.58091	68.50119
1	-1344.419	100.9280	1.09e+25	66.16677	66.66830	66.34940
2	-1331.067	22.14483	8.93e+24	65.95448	66.83216	66.27408
3	-1250.420	121.9544*	2.76e+23*	62.45949*	63.71332*	62.91607*

* indicates lag order selected by the criterion
LR: sequential modified LR test statistic (each test at 5% level)
FPE: Final prediction error
AIC: Akaike information criterion
SC: Schwarz information criterion
HQ: Hannan-Quinn information criterion

VECM
Vector Autoregression Estimates
Date: 09/05/15 Time: 02:02
Sample (adjusted): 1970 2014
Included observations: 42 after adjustments
Standard errors in ( ) & t-statistics in [ ]

	LOGFPI	MCAP	LOGCPF
LOGFPI(-1)	-0.611250	0.002282	-0.005759
	(0.31767)	(0.00132)	(0.00496)
	[-1.92419]	[1.72471]	[-1.16119]
LOGFPI(-2)	2.756810	0.005799	0.023925
	(1.26255)	(0.00526)	(0.01971)
	[2.18352]	[1.10274]	[1.21376]
MCAP(-1)	-9.892180	0.387775	1.983923

	(45.6720)	(0.19023)	(0.71305)
	[-0.21659]	[2.03850]	[2.78229]
MCAP(-2)	37.28690	-0.086860	-1.376214
	(50.1274)	(0.20878)	(0.78261)
	[0.74384]	[-0.41603]	[-1.75849]
LOGCPF(-1)	-8.860131	0.059340	0.314759
	(10.6238)	(0.04425)	(0.16586)
	[-0.83399]	[1.34106]	[1.89770]
LOGCPF(-2)	4.739094	0.128985	0.246336
	(11.3022)	(0.04707)	(0.17646)
	[0.41931]	[2.74004]	[1.39602]
C	39490.19	-440.1493	2645.808
	(82673.5)	(344.338)	(1290.74)
	[0.47766]	[-1.27825]	[2.04984]
R-squared	0.423138	0.914093	0.794891
Adj. R-squared	0.324247	0.899366	0.759729
Sum sq. resids	4.48E+12	77682759	1.09E+09
S.E. equation	357692.2	1489.801	5584.469
F-statistic	4.278844	62.06928	22.60682
Log likelihood	-592.8387	-362.6354	-418.1319
Akaike AIC	28.56375	17.60168	20.24438
Schwarz SC	28.85336	17.89130	20.53399
Mean dependent	125670.5	2339.799	9736.957
S.D. dependent	435126.5	4696.294	11392.83

Determinant resid covariance (dof adj.)	5.16E+24
Determinant resid covariance	2.99E+24
Log likelihood	-1362.273
Akaike information criterion	65.87015
Schwarz criterion	66.73899

IMPULSE RESPONSE FPI CPF AND MCAP

Response of LOGFPI: Period	LOGFPI	MCAP	LOGCPF
1	357692.2	0.000000	0.000000
	(39027.4)	(0.00000)	(0.00000)
2	-237685.3	-17422.72	-48120.37
	(117668.)	(53109.9)	(57937.3)
3	1157725.	30115.39	36817.72
	(566674.)	(60078.1)	(71544.2)
4	-1437986.	-42684.98	-167870.1
	(1365490)	(173664.)	(232892.)
5	4231994.	117455.5	233190.3
	(4279712)	(249702.)	(388044.)
6	-6882520.	-190337.6	-609869.4

	(9807246)	(664470.)	(1088765)
7	16576852	465981.7	1079509.
	(2.6E+07)	(1165235)	(2172226)
8	-30488863	-847068.5	-2432039.
	(5.8E+07)	(2791212)	(5394127)
9	67257496	1885371.	4682514.
	(1.4E+08)	(5466149)	(1.2E+07)
10	-1.31E+08	-3650416.	-9998027.
	(3.2E+08)	(1.2E+07)	(2.7E+07)

Response of MCAP: Period	LOGFPI	MCAP	LOGCPF
1	922.7936	1169.598	0.000000
	(206.659)	(127.614)	(0.00000)
2	1240.494	492.7392	322.2811
	(503.998)	(230.815)	(242.877)
3	2084.383	284.9578	817.1397
	(1714.63)	(308.197)	(342.529)
4	2658.359	386.8332	480.0499
	(1924.90)	(451.186)	(547.429)
5	5382.787	260.7457	371.9168
	(6914.51)	(531.293)	(653.555)
6	4689.967	181.8533	-34.01351
	(8995.32)	(1096.43)	(1614.48)
7	12814.35	409.9421	18.67650
	(27897.7)	(1083.71)	(1760.20)
8	5476.010	173.1813	-1131.472
	(42871.4)	(2777.69)	(5175.54)
9	33260.53	959.3526	141.8685
	(115003.)	(2757.49)	(6818.71)
10	-5923.419	-108.4256	-3765.758
	(200194.)	(8458.41)	(19085.2)

Response of LOGCPF: Period	LOGFPI	MCAP	LOGCPF
1	1119.349	660.5819	5431.112
	(853.003)	(841.133)	(592.583)
2	123.1217	2528.317	1709.494
	(1848.71)	(904.929)	(919.931)
3	11432.27	426.8142	2792.465
	(7113.53)	(961.495)	(1090.55)
4	-6297.218	54.10222	1114.356
	(10781.0)	(1934.46)	(2413.16)
5	39219.71	1463.794	2714.101
	(36128.6)	(1883.14)	(2684.35)
6	-40962.13	-1238.671	-4153.278
	(67942.1)	(6171.88)	(9391.68)
7	139552.6	3878.949	7873.357
	(192383.)	(8018.81)	(14500.2)
8	-207328.8	-5758.633	-19269.19
	(402148.)	(22919.1)	(41380.7)

9	534537.4	14949.34	33437.51
	(1014031)	(38410.8)	(79065.3)
10	-941161.3	-26172.34	-77537.04
	(2200409)	(95050.5)	(196163.)

Cholesky Ordering: LOGFPI MCAP LOGCPF
Standard Errors: Analytic

VARIANCE DECOMPOSITION TABLE

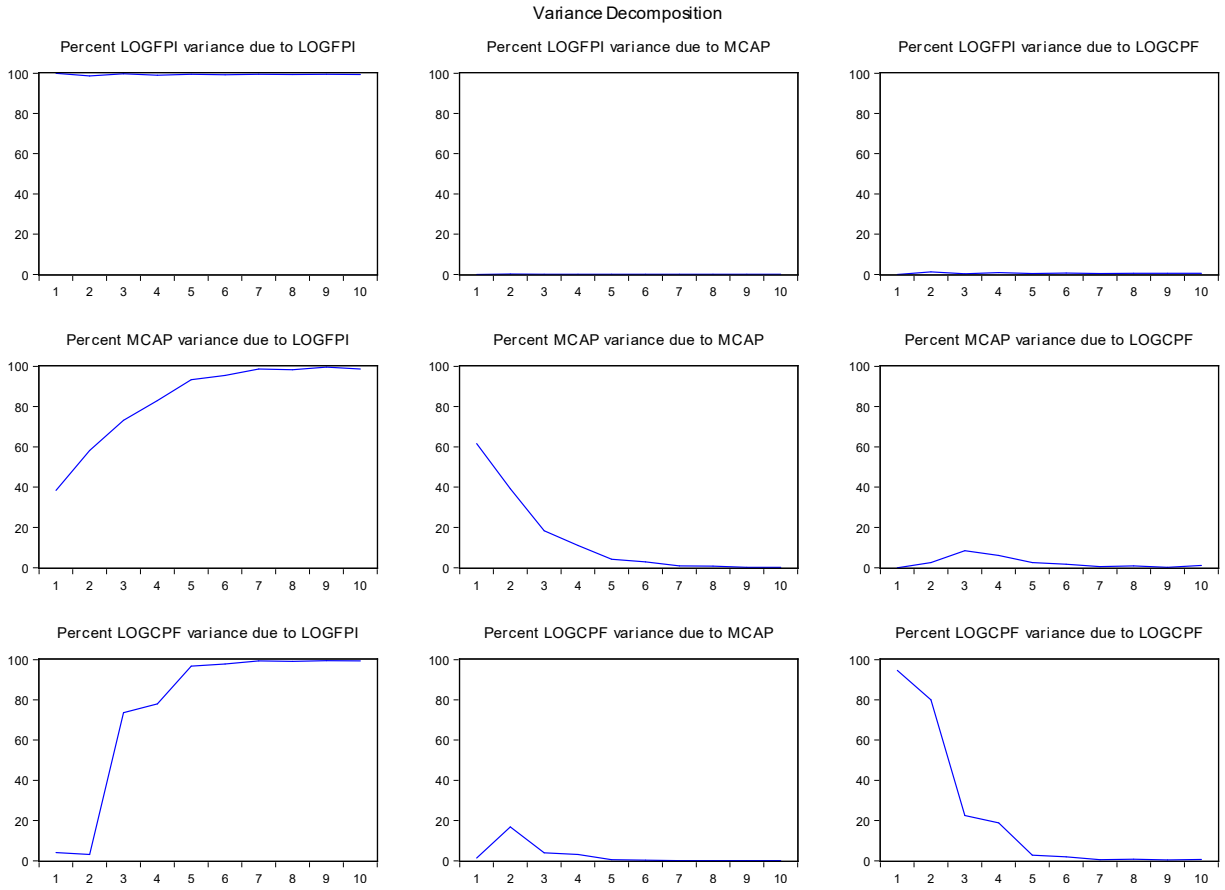
Variance Decomposition of LOGFPI: Period	S.E.	LOGFPI	MCAP	LOGCPF
1	357692.2	100.0000	0.000000	0.000000
2	432501.1	98.59983	0.162277	1.237894
3	1236789.	99.68087	0.079135	0.239997
4	1904587.	99.03833	0.083598	0.878068
5	4648161.	99.52300	0.077889	0.399110
6	8329625.	99.26318	0.076470	0.660352
7	18589167	99.45198	0.078191	0.469824
8	35801679	99.33482	0.077060	0.588123
9	76359751	99.41678	0.077902	0.505320
10	1.52E+08	99.36256	0.077327	0.560115

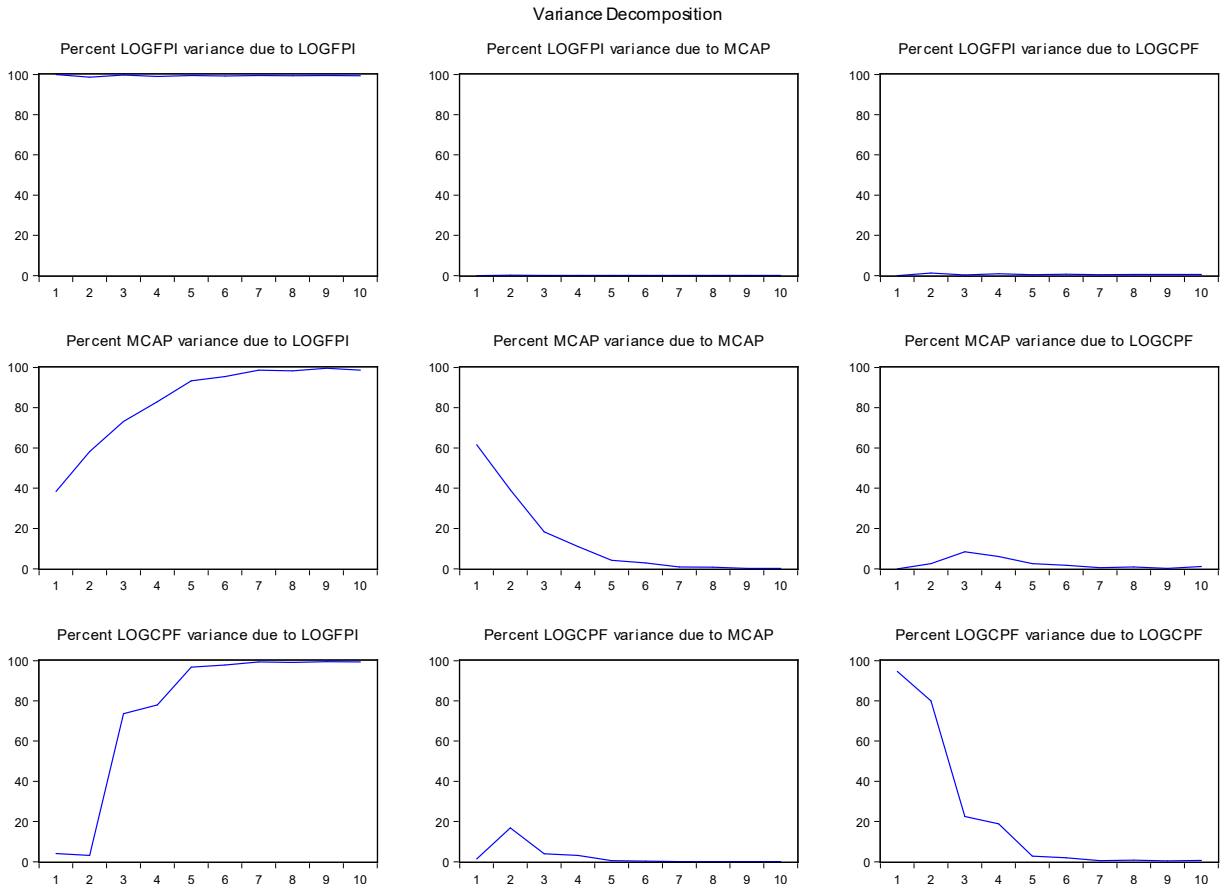
Variance Decomposition of MCAP: Period	S.E.	LOGFPI	MCAP	LOGCPF
1	1489.801	38.36654	61.63346	0.000000
2	2026.077	58.23091	39.23887	2.530217
3	3032.913	73.21826	18.39366	8.388078
4	4079.892	82.91659	11.06359	6.019820
5	6769.507	93.34457	4.167003	2.488428
6	8237.490	95.45486	2.862892	1.682247
7	15239.16	98.59944	0.908877	0.491688
8	16233.58	98.26858	0.812319	0.919096
9	37023.40	99.59852	0.223315	0.178168

10	37683.05	98.61297	0.216393	1.170634

Variance Decomposition of LOGCPF: Period	S.E.	LOGFPI	MCAP	LOGCPF
1	5584.469	4.017607	1.399232	94.58316
2	6365.234	3.129863	16.85438	80.01576
3	13386.30	73.64398	3.912500	22.44352
4	14835.52	77.97616	3.186773	18.83706
5	42045.06	96.72009	0.517967	2.761947
6	58859.73	97.78419	0.308586	1.907221
7	151711.7	99.33177	0.111821	0.556406
8	257693.9	99.15932	0.088695	0.751989
9	594540.1	99.46254	0.079887	0.457577
10	1116226.	99.31003	0.077641	0.612333

Cholesky Ordering: LOGFPI MCAP LOGCPF


Variance Decomposition
Percent LOGFPI variance due to LOGFPI
Percent LOGFPI variance due to MCAP
Percent LOGFPI variance due to LOGCPF
Percent MCAP variance due to LOGFPI
Percent MCAP variance due to MCAP
Percent MCAP variance due to LOGCPF
Percent LOGCPF variance due to LOGFPI
Percent LOGCPF variance due to MCAP
Percent LOGCPF variance due to LOGCPF
0
20
40
60
80
100
1 2 3 4 5 6 7 8 9 10



Vector Error Correction Estimates
Date: 07/31/15 Time: 10:36
Sample (adjusted): 1970-2014
Included observations: 45 after adjustments
Standard errors in ( ) & t-statistics in [ ]

CointegratingEq:	CointEq1		
MCY(-1)	1.000000		
CF(-1)	9.99E-06		
	(4.0E-06)		
	[2.52418]		
FPI(-1)	1.18E-07		
	(6.3E-08)		
	[1.89077]		
C	-0.540700		
Error Correction:	**D(MCY)**	**D(CF)**	**D(FPI)**
CointEq1	-0.101003	-3218.491	539944.2
	(0.10844)	(2056.01)	(34272.7)

	[-0.93145]	[-1.56540]	[15.7543]
D(MCY(-1))	0.023611	7718.235	-1099964.
	(0.26942)	(5108.27)	(85152.5)
	[0.08764]	[1.51093]	[-12.9176]
D(CF(-1))	-4.30E-06	-0.498953	-4.106193
	(1.2E-05)	(0.22339)	(3.72380)
	[-0.36503]	[-2.23355]	[-1.10269]
D(FPI(-1))	2.82E-07	0.006460	-0.371704
	(1.9E-07)	(0.00370)	(0.06160)
	[1.44577]	[1.74833]	[-6.03448]
C	0.028968	-9.046190	259477.8
	(0.06970)	(1321.60)	(22030.5)
	[0.41559]	[-0.00684]	[11.7781]
R-squared	0.116029	0.325246	0.947884
Adj. R-squared	-0.052347	0.196722	0.937957
Sum sq. resids	2.146879	7.72E+08	2.14E+11
S.E. equation	0.319738	6062.354	101056.5
F-statistic	0.689107	2.530617	95.48735
Log likelihood	-4.469345	-260.5721	-333.7253
Akaike AIC	0.728411	20.42863	26.05579
Schwarz SC	0.970353	20.67057	26.29773
Mean dependent	0.063142	751.0692	154579.7
S.D. dependent	0.311684	6764.073	405713.6

Determinant resid covariance (dof adj.)	2.25E+16
Determinant resid covariance	1.18E+16
Log likelihood	-591.8056
Akaike information criterion	46.90812
Schwarz criterion	47.77911

Response of MCY: Period	MCY	FPI	CF
1	0.319738	0.000000	0.000000
2	0.289881	0.023748	-0.027346
3	0.205253	0.010655	-0.014114
4	0.266087	0.010434	-0.011161
5	0.264273	0.015298	-0.017369
6	0.248931	0.012987	-0.014378
7	0.262602	0.013051	-0.013732
8	0.264533	0.014193	-0.014735
9	0.263639	0.013950	-0.014039
10	0.268498	0.014150	-0.013720
11	0.271298	0.014585	-0.013744
12	0.273591	0.014762	-0.013427
13	0.277130	0.015030	-0.013168
14	0.280416	0.015358	-0.012970
15	0.283725	0.015648	-0.012695
16	0.287417	0.015967	-0.012421

17	0.291211	0.016312	-0.012147
18	0.295161	0.016662	-0.011848
19	0.299348	0.017033	-0.011536
20	0.303725	0.017424	-0.011212
21	0.308310	0.017832	-0.010869
22	0.313128	0.018260	-0.010510
23	0.318179	0.018710	-0.010134
24	0.323476	0.019181	-0.009739
25	0.329034	0.019676	-0.009325
26	0.334864	0.020194	-0.008891
27	0.340979	0.020738	-0.008436
28	0.347393	0.021309	-0.007958
29	0.354122	0.021908	-0.007457
30	0.361180	0.022536	-0.006931

Response of FPI: Period	MCY	FPI	CF
1	43920.11	91013.43	0.000000
2	-144544.4	63202.01	6626.829
3	122860.8	65711.28	44156.68
4	249384.5	92052.04	25429.90
5	301223.9	95523.17	43819.19
6	457798.6	104945.3	54893.64
7	589365.1	119627.6	60879.54
8	712407.9	130386.7	72112.40
9	860571.3	142687.7	83371.16
10	1010322.	156572.8	93661.65
11	1164164.	170241.7	105553.6
12	1329288.	184758.0	117890.7
13	1501452.	200184.1	130551.7
14	1681383.	216193.2	144032.9
15	1870845.	233016.7	158156.1
16	2069396.	250704.2	172913.3
17	2277531.	269224.6	188431.7
18	2495996.	288656.9	204707.0
19	2725123.	309048.7	221767.8
20	2965439.	330432.4	239671.2
21	3217548.	352863.9	258450.8
22	3481993.	376395.3	278147.5
23	3759379.	401077.4	298809.8
24	4050351.	426968.1	320483.8
25	4355566.	454126.6	343218.3
26	4675723.	482614.5	367066.2
27	5011555.	512497.1	392081.6
28	5363829.	543842.8	418321.6
29	5733348.	576723.0	445846.3
30	6120959.	611213.0	474718.5

Response of CF: Period	MCY	FPI	CF
1	3194.444	151.9473	5150.201
2	3203.605	624.5175	2414.932

3	770.2053	271.7372	3619.311
4	2326.495	294.8236	3275.203
5	1810.604	373.6004	3269.645
6	1365.265	296.5877	3277.388
7	1460.923	286.6897	3288.136
8	1251.763	290.1351	3241.713
9	1002.598	262.0035	3245.416
10	868.2611	245.8948	3230.737
11	662.8487	232.0198	3211.586
12	442.3666	211.2797	3198.521
13	235.1104	192.0066	3182.626
14	5.965157	172.4592	3164.630
15	-235.8670	150.7441	3147.319
16	-484.7488	128.4270	3128.684
17	-748.0434	105.1618	3108.895
18	-1024.568	80.52145	3088.428
19	-1313.693	54.75994	3066.877
20	-1617.389	27.76814	3044.220
21	-1936.032	-0.591121	3020.510
22	-2270.091	-30.32310	2995.624
23	-2620.583	-61.50414	2969.510
24	-2988.251	-94.22068	2942.128
25	-3373.883	-128.5361	2913.403
26	-3778.409	-164.5300	2883.269
27	-4202.744	-202.2880	2851.662
28	-4647.846	-241.8939	2818.508
29	-5114.741	-283.4385	2783.729
30	-5604.496	-327.0174	2747.249

Cholesky Ordering: MCY FPI CF

Period	S.E.	MCY	FPI	CF
1	6062.354	27.76566	0.062821	72.17152
5	9866.028	30.56513	0.732957	68.70191
10	12572.92	23.45411	0.693892	75.852
15	14477.8	18.04422	0.612909	81.34287
20	16232.55	16.70156	0.501907	82.79653
25	18538.25	23.30444	0.39358	76.30198
30	22243.63	38.644	0.336794	61.01921

Response of LMCY: Period	LMCY	LFPI	LCF
1	0.197722	0.000000	0.000000
2	-0.032354	0.005426	0.092799
3	-0.136932	-0.024567	0.295527
4	0.070825	0.011142	0.043278
5	-0.012606	-0.009317	0.118089
6	-0.023662	-0.004299	0.163692
7	-0.013403	-0.002939	0.119107
8	-0.008152	-0.005924	0.138231
9	-0.003679	-0.001875	0.119171
10	-0.020524	-0.006212	0.142343
11	-0.006315	-0.003070	0.128443
12	-0.011138	-0.004409	0.129069
13	-0.011526	-0.004363	0.134504
14	-0.010368	-0.003848	0.129345
15	-0.011666	-0.004508	0.133066
16	-0.009864	-0.003889	0.130232
17	-0.011615	-0.004345	0.132013
18	-0.010618	-0.004111	0.131560
19	-0.010840	-0.004155	0.131062
20	-0.011005	-0.004220	0.131845
21	-0.010738	-0.004119	0.131180
22	-0.011012	-0.004214	0.131633
23	-0.010776	-0.004144	0.131379
24	-0.010928	-0.004182	0.131458
25	-0.010872	-0.004172	0.131506

Response of LFPI: Period	LMCY	LFPI	LCF
1	39482.03	125301.7	0.000000
2	-135071.9	60053.41	-24569.24
3	142148.8	88153.56	-72654.80
4	83739.24	99863.10	-221962.0
5	-61263.75	62590.34	71526.90
6	89627.58	100373.9	-150299.8
7	16203.56	75703.00	-69693.59
8	46583.53	87628.41	-73421.22
9	27086.38	84048.34	-89806.23
10	32905.73	82294.46	-63647.63
11	44411.72	87055.46	-97639.09
12	25987.01	81770.29	-67626.30
13	40107.58	85757.85	-84158.11
14	32854.48	83598.09	-80100.64
15	35651.26	84283.17	-77650.56
16	35379.27	84511.75	-82311.71
17	33914.94	83839.43	-77321.56
18	36224.99	84598.97	-81520.45
19	34124.52	83990.02	-78905.05
20	35438.99	84351.21	-79852.68

21	34886.55	84217.79	-80043.17
22	34939.49	84198.22	-79349.62
23	35156.62	84293.23	-80121.15
24	34833.08	84181.36	-79487.53
25	35137.85	84274.06	-79892.08

Response of LCF: Period	LMCY	LFPI	LCF
1	638.2249	-672.2484	6535.248
2	710.3021	301.0568	1918.607
3	-2959.256	-834.8423	7868.854
4	1205.027	101.7531	3300.379
5	-766.5616	-386.9853	4425.625
6	-570.3007	-287.6570	5525.273
7	-293.2312	-187.2416	4103.367
8	-607.8390	-352.3400	5174.381
9	-175.1181	-185.0681	4368.949
10	-652.7506	-318.7319	4926.018
11	-326.6254	-239.9846	4704.128
12	-439.5434	-265.1073	4636.859
13	-459.1467	-275.0483	4829.163
14	-394.7982	-250.4693	4642.963
15	-466.4038	-276.2566	4777.821
16	-401.1006	-255.9361	4696.119
17	-447.8466	-268.2902	4730.064
18	-426.0858	-263.5747	4733.741
19	-427.5588	-262.8588	4709.485
20	-436.4169	-266.2509	4737.463
21	-425.0168	-262.3626	4715.495
22	-435.0439	-265.5160	4728.806
23	-428.0277	-263.5479	4723.222
24	-431.5956	-264.3748	4723.200
25	-430.9273	-264.3817	4726.361

Cholesky Ordering: LMCY LFPI LCF

Figure 4.3 belowshows VECM: Impulse Response Functions (VECM Ordering = lmcylfpi lcf)

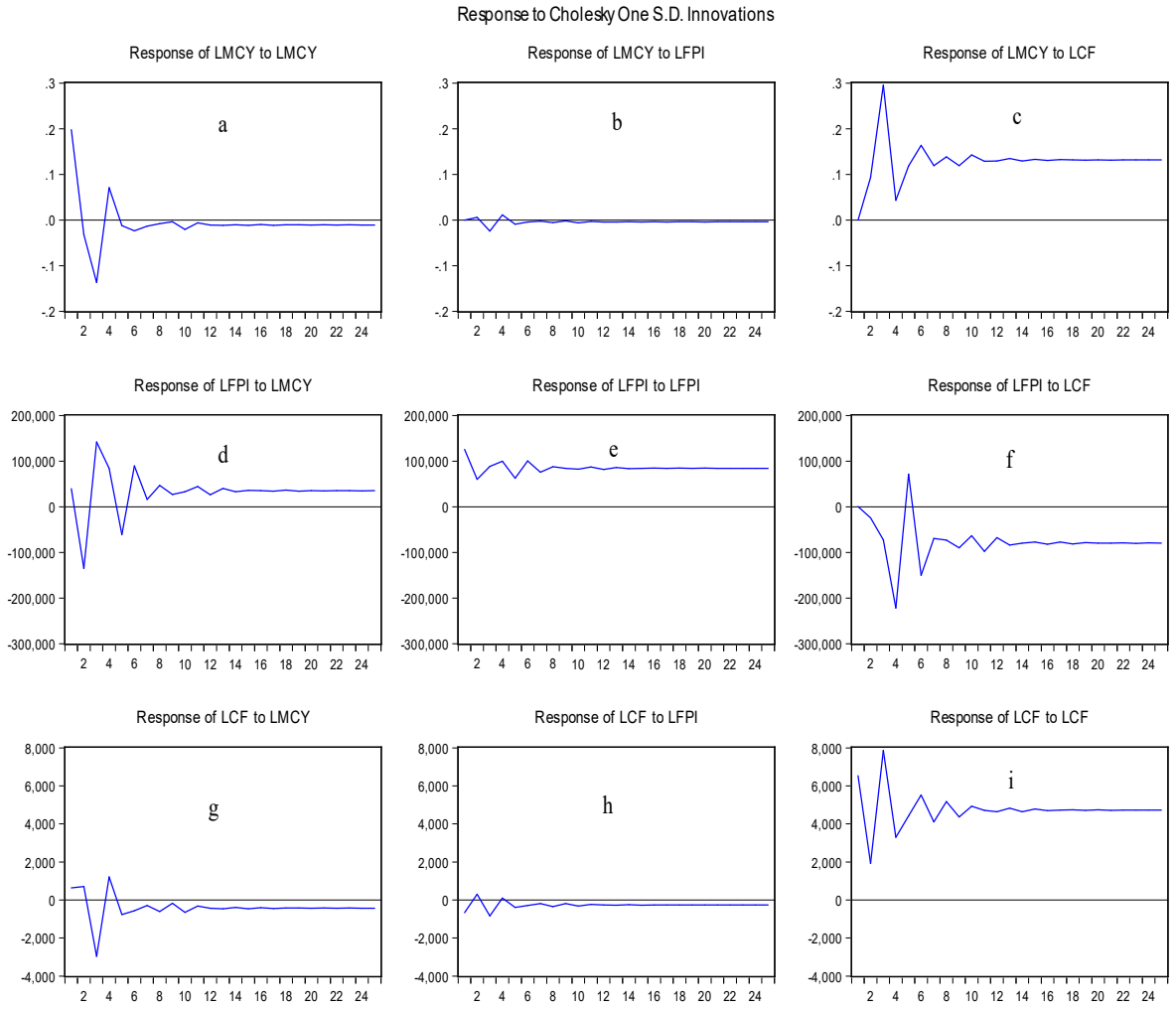


Figure5.1. VECM: Impulse Response Functions (VECM Ordering = lmcy lfpi lcf)

Source: Author's Computation .