EFFECT OF PENSION FUND ON CAPITAL MARKET DEVELOPMENT IN NIGERIA

BY

LABARAN, Ibrahim

NSU/ADM/MSC/BUS/0029/16/17

BEING A DISSERTATION SUBMITTED TO THE SCHOOL OF POSTGRADUATE STUDIES, NASARAWA STATE UNIVERSITY, KEFFI, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER OF SCIENCE DEGREE (Msc) IN BUSINESS ADMINISTRATION

DEPARTMENT OF BUSINESS ADMINISTRATION
FACULTY OF ADMINISTRATION
NASARAWA STATE UNIVERSITY, KEFFI

MAY 2018

DECLARATION

I hereby declare that this work has been written by me and it is a report of my research work. It has not been presented in any previous application for a postgraduate or degree. All quotations are indicated and sources of information specifically acknowledged by means of references.

……..

LABARAN, Ibrahim

NSU/ADM/MSC/BUS/0029/16/17

CERTIFICATION

This dissertation "Effect of Pension Fund on Capital Market Development in Nigeria" meets the regulations governing the award of Master's degree of the School of Postgraduate Studies, Nasarawa State University, Keffi, and is approved for its contribution to knowledge and literary presentation.

_____	_____
Dr. Abdul Adamu	Date
Chairman, Supervisory Committee	
_____	_____
Member, Supervisory Committee	Date
_____	_____
Dr. J.E.I Abbah	Date
Head of Department	
_____	_____
Prof. T.A. Udenwa	Date
Internal Examiner	
_____	_____
Dean of Faculty	Date
_____	_____
External Examiner	Date
_____	_____
Prof. S.A.S Aruwa	Date
Dean, School of Postgraduate Studies	

DEDICATION

This dissertation is dedicated to my parents Alh. Mohammed and Hajiya Aisha Labaran for laying the foundation for me to build on and be the man that I am today. I wish my father is around to see me fulfil the dreams he had for me but I believe that his smiling down. May Allah grant him Aljanah.

Also to my daughter, Zahira-Aisha O. Labaran. She is my why, she inspires me to be more, to do more and to reach higher because I believe more in showing than teaching. I hope I am able to inspire her to reach for her dreams, believe in herself and always have a “can do” attitude, and to my wife, Nafisat Oladunni Labaran, for being my secretary, researcher, sounding board and so much more.

ACKNOWLEDGEMENTS

I thank Almighty Allah who has made it possible for me to conclude this programme.

Alhamdulilah!!! After an intensive period of learning, today is the day; writing this note of thanks is the finishing touch on my dissertation. It has been a period of intense learning for me, not only in the management science arena, but also on a personal level. Writing this dissertation has had a big impact on me. I would like to reflect on the people who have supported and helped me so much throughout this period.

I will first like to thank my supervisor, Dr. Abdul Adamu for the knowledge impacted in me and whose offices was always open and ever ready to assist. He consistently allowed this paper to be my own work, but steered me in the right direction. I thank you!

I will also like to acknowledge the Head of Department, Dr. Barr. J.E.I. Abbah for his contributions to the development of the work. My lecturers Dr. (Mrs) Ruth Anda, Prof. B.E. Barde, Prof. S.B.A. Tende, Dr. Ibrahim G. Umaru, Prof. Uche Uwealeke, and Dr. Cephas P. Gbande as well as Dr. M. Khalifa and Mal. Ahmed Ibrahim for their support. I am greatly indebted to you all for the knowledge and guidance during the programme.

My acknowledgment will not be complete without appreciating the support and continuous encouragement of Mr. Christopher Bajowa (Executive Director, Legacy Pension Managers Ltd), Mr. Umar S. Mairami (MD, Premium Pension Ltd), Mr. Mai Moustpha Mohammad (ED, Legacy Pension Managers Ltd, Mr. Kunle Jinadu (MD, First Pension Custodian Ltd), Mr. Funso Sobande (Executive Director, First Pension Custodian Ltd) as well as Mr. Wole Fanimokun (Head, Contribution Management – First Pension Custodian Ltd). Thank you all.

My family, the support, patience and encouragement were valuable; I thank you.

I say big thanks to my friends and colleagues: Saheed Kolade, Kalu Michael Nnamdi, David Ovey, Osamade Lawrence, Taiwo Akinosho, Usman Yusuf, Abubakar Aliyu, Chioma Cynthia, Qwam, Yahaya Abdullahi, Muhammed Buhari, Zainab Kareem and Kingsley Onana, Christy Yusuf and Nene Igwe. I acknowledge and appreciate the companionship and contribution throughout the programme.

This accomplishment would not have been possible without you all. Thank you very much, everyone!

TABLE OF CONTENTS

CHAPTER ONE: GENERAL INTRODUCTION

CHAPTER TWO: LITERATURE REVIEW

CHAPTER THREE: METHODOLOGY

CHAPTER FOUR: DATA PRESENTATION AND ANALYSIS

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

LIST OF TABLES

LIST OF FIGURES

ABSTRACT

This study assessed the effect of pension fund on capital market development using a multivariate approach. The capital market development was assessed using a market capitalisation and volume of transactions traded, the study went further to determine the long run and causal relationship between pension fund, market capitalisation and volume of transactions traded. These are achieved using annual data for over a period of eleven years (2007- 2017). To arrive at a statistically based position, the data were analysed using the arrays of descriptive statistics, correlation analysis, regression analysis, Johannsen cointegration analysis and granger causality analysis. These were selected based on the nature of the data, the nature of the relationship, causal based links of the variables and the design of the study. The study found that pension fund had significant effect on market capitalisation and volume of transactions traded in the Nigerian capital market. It was established that there was uni-directional relationship between pension fund, market capitalisation and volume of transactions traded in the Nigerian capital market. Finally, the study found evidence of long-run relationship between pension fund, market capitalisation and volume of transactions traded in the Nigerian capital market. The study suggests that it may be better for National Pension Commission to ensure that there is effective liberalisation of the pension fund investment to encourage more investment in both the stock and bond market subsection of the Nigerian Capital Market since there is a positive relationship between Pension Fund Asset and Capital Market in Nigeria.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

Labour is core to the smooth working of every economy. Hence, as labourers retire from active duty, they look forward to a means of survival which must have been garnered during their days of active service, and this is made possible through contributory pension. According to Edogbanya (2013), pension is a sum of money paid regularly to a person who no longer works because of old age, disability, and retirement or to widows or dependent children by the state, former employers or from a provident fund to which he/she and his/her employer both contributed. Therefore, the idea behind pension is to cater for retirees of both the public and private sectors. Rabelo (2002) holds that governments and organisations need to identify a way of accommodating and adequately rewarding employees' past efforts through organized pension plans so that it can achieve the goals of their existence.

In order to adequately enhance the essence of pension in Nigeria, series of reforms have been embarked upon prior to the Pension Reform Act of 2004 (PRA), such as the first ever Legislative Ordinance of 1946, the Pensions Decree 102 and 103 (for all military) of 1974, the Pension Rights of Judges Act No 5. of 1985, the Pension Acts No. 75 of 1987, the Police and other Government Agencies Pension Scheme, the Local Government Pension, the National Provident Fund (NPF) of 1961 and the National Social Insurance Trust Fund (NSITF) of 1993. Odia and Okoye (2012) hold that before 2004, Nigeria had operated particularly in the public sector a Defined Benefit (DB) pension scheme that was largely unfunded, non-contributory, and pension and gratuity were salary related and financed totally by government budgeting. However, problems of pension scheme prior to 2004 as pointed out by Dostal (2010) include: massive debt accumulation of over 2 (two) trillion naira; large-

scale arrears of unfunded entitlement of retirees; inadequate budgetary provisions with rising life expectancy and inadequate supervision and regulation of pension system. It is then obvious that these shortcomings adversely affected payments of retirees' retirement benefits in Nigeria, hence, the need for the PRA 2004 to address the vices associated with pension prior to 2004.

With the 2004 Pension Reform Act (PRA), National Pension Commission (PenCom) took over the supervisory and regulatory role as regards issues of pension in Nigeria. The PRA holds that employees contribute a minimum of 8% of their basic salary, housing and transport allowances and 2.5% for the military while the employers in the private and public sectors shall contribute 10% and 12.5% in the case of the military, individual employees shall open Retirement Savings Account (RSA) where their contributions will be credited to by the PFAs, and will be theirs for life, Pension Fund Administrators (PFAs) will manage the RSAs by way of investment while the Pension Fund Custodian (PFCs) will keep custody of the pension assets. The PRA of 2014 has also enhanced the coverage of the Contributory Pension Scheme (CPS) to the informal sector, reduced the benefit withdrawal period of workers who retire voluntarily from 6 (six) months to 4 (four) months.

According to PenCom (2010) report, the Contributory Pension Scheme (CPS) has recorded a lot of successes with the pension asset growing from N47 billion in 2004 to N814 billion in 2007 and by 2010 the assets had hit N2.029 trillion, and the trend is still looking positively upward. These funds, according to the Pension Reform Act, are expected to be invested in Local Ordinary Shares, Federal Government Bonds, State Government Securities, Corporate Bonds, Financial Institution Deposits, Open and Closed-End Funds, Foreign Money Market Securities, Real Estate Properties, Unquoted Securities and Cash /Other Assets.

The investment of funds from pension scheme has been argued to help bolster the Nigerian financial sector by boosting the capital market and in the long-run fostering economic growth in Nigeria. Hence, Madukwe (2015) holds that through the accumulation of large private savings, pension funds have overnight become a vital player in the capital market; hence, the Contributory Pension Scheme (CPS) is of immense relevance to Nigerian capital market development.

There is need therefore for the development of the capital market because it is the market where long-term funds are sourced, either through debt or stock and either by public corporations or government. Through this, economic activities are enhanced and economic growth is achieved. Beck and Levine (2000) hold that a well-functioning stock market fosters growth and profit incentives and helps in risk management more efficiently than the bank-based system. Theories and empirical findings have come up with the need for capital market development. For instance, a more developed capital market, according to Bencivenga, Smith, and Starr (1996), may provide liquidity that lowers the cost of the foreign capital essentials for development purposes, especially when it involves low-income countries that cannot generate sufficient domestic savings. Adikwe and Nwanna (2015) also argue that the volatility of general stock market index expresses the level of economic growth, the degree of trade openness and the financial depth in a developing or developed country.

The Contributory Pension Scheme (CPS), which is now being practiced in Nigeria, has its relationship with capital market development (Mesike and Ibiwoye, 2012). Therefore, pension scheme in Nigeria since the reform has formed part of the activities in the capital market where retirement benefits are not only generated for workers after retirement but also a source for raising long-term capital for projects for both the governments and corporate organisations.

1.2 Statement of the Problem

In Nigeria, the activities of the capital market all takes place on the floor of the Nigerian Stock Exchange (NSE) which was established in 1960, although the Nigerian Stock Exchange started as Lagos Stock Exchange 1959 and changed to NSE in 1977. The purpose of the establishment is to facilitate long-term fund for investors and this is aimed at stirring economic growth. The existence of the NSE brought about the awareness and institutional involvement of investors to engage in buying and selling of shares and at the same time to encourage private firms to go public. Hence, there is a need for further development of the NSE.

It is necessary for an effective information system in the NSE to keep the public aware of what is taking place in the capital market. Since the main attraction of investing in securities is liquidity, investors want to be able to buy and sell as soon as possible without necessarily waiting too long, given that price is volatile. The question therefore is, does trading indices such as: the value of shares traded per annum, the volume of shares traded per annum, deals concluded per annum and market capitalisation depict the development of the NSE? This is observed by McKinnon (2001) that stock exchanges in Africa are still undergoing development, modernization, or streamlining of operational procedures and as a result, the trading and pricing mechanisms, clearing and settlement, and share registration and custody practices are obsolete.

An overview of the pension sector in Nigeria with its fast-growing Asset Under Management (AUM) of over Seven (7) trillion naira presently has shown that the sector is fast becoming

one of the largest investors in the Nigerian capital market. It is therefore expected that the pension fund plays a significant role in the development of the Nigerian capital market with its huge asset available for investment. By so doing, cost of capital will be reduced and long-term investment will increase (since pensioners save for long) thereby stimulating economic growth in Nigeria.

Since pension fund is required on a regulatory ground to invest proportions of its fund domestically across a range of assets so as to diversify risk as much as possible, they are expected to contribute the most to the development of the Nigerian capital market. Given this ground, the big question is:- Have pension funds contributed significantly to the development of the Nigerian capital market?

It is therefore against this background that this study examines the effect of pension fund on the development of the Nigerian capital market.

1.3 Research Questions

Following the objectives of this study, this research tends to answer the questions:

i. To what extent does pension fund affect market capitalisation in the Nigerian capital market?
ii. What is the effect of pension fund on the volume of transactions in the Nigerian capital market?
iii. Is there any long-run relationship between pension fund, market capitalisation and volume of transaction in Nigerian capital market?
iv. What is the causal relationship between pension fund, market capitalisation and volume of transaction in the Nigerian capital market?

1.4 Objectives of the Study

The broad objective of this study is to determine the effect of pension fund on capital market development in Nigeria. The study seeks to:

i. Determine the effect of pension fund on market capitalisation in the Nigerian capital market;
ii. Determine the effect of pension fund on the volume of transactions in the Nigerian capital market;
iii. Examine the long-run relationship between pension fund, market capitalisation and volume of transaction in the Nigerian capital market;
iv. Examine the causal relationship between pension fund, market capitalisation and volume of transaction in the Nigerian capital market.

1.5 Statements of the Hypothesis

H_{o1}: Pension fund has no significant effect on market capitalisation in Nigeria.

H_{o2}: Pension fund has no significant effect on the volume of transactions (stocks and bonds) in the Nigerian capital market.

H_{o3} There is no long-run relationship between pension fund, market capitalisation and volume of transaction in the Nigerian capital market.

H_{o4} There is no causal relationship between pension fund, market capitalisation and volume of transaction in the Nigerian capital market.

1.6 Significance of the Study

This study is very significant considering the importance of pension fund not only in the lives of pensioners and potential pensioners but also towards the development of the capital market. This study will therefore be of immense importance in the following ways:

First, this study will help the Commission and other parties involved in the new administration of Pension Scheme to keep to their responsibilities by ensuring efficiency and effectiveness in its operations.

Secondly, this study will go a long way in restoring hope to the Nigerian workers, give an insight on the New Contributory Pension Scheme and encourage the Nigerian workers on the need to embrace it.

Thirdly, this study will serve as a working tool in the hands of monetary and regulatory administrators on the importance of developing the capital market through the pension fund.

Also, this study will serve as useful information for further research work and as a useful literature on Nigerian Pension Scheme and its reform.

Besides, this study will be of great use in managing pension and pension-related problems more effectively and efficiently, because the information provided will serve as the good basis for realistic decisions.

Lastly, the recommendations offered in this study will be useful to the government in policy making and good governance.

1.7 Scope of the Study

This study examines the effect of pension fund on the development of the Nigerian capital market. It therefore covers the activities of pension schemes in Nigeria and development of the Nigerian capital market. Empirically, the study is set up to cover the period from 2007 to 2017. This is because the investment of pension fund started in 2006 (in the last quarter) while enrolment of workers in both the private and public sectors commenced in 2005. The scope is suitable for analysis, as it captures the period within which major reforms were carried out as regards pension administration.

CHAPTER TWO

LITERATURE REVIEW

2.1 Conceptual Review

This chapter reviews relevant literature as regards pension fund and how it affects capital market development. The review runs through the concept of pension, capital market, pension fund, stock market development, and bond market development in Nigeria with empirical studies already carried out in related studies as well as theoretical backings.

This conceptual review, aside clarifying how pension fund affects capital market development, establishes the importance of pension fund on capital market development.

2.1.1 Concept of Pension Scheme

In conceptualising pension scheme, researchers have given their views on it. Ejiegbu (2011) views pension as money paid at regular basis by the government or any establishment to someone who is officially considered retired from active service after serving for a stipulated time, usually a minimum of ten years and maximum of thirty-five years. Thomas and Lemke (2010) define pension as a fund into which a sum of money is added during an employee's employment years, and from which payments are drawn to support the person's retirement from work in the form of periodic payments. It is the amount paid by government or company to an employee after working for some specific period of time, considered too old or ill to work or have reached the statutory age of retirement (Adam, 2005).

On the other hand, pension scheme, according to Ilesanmi (2006), is a social security maintenance plan for workers after their disengagement as employees through retirement. Onifade (2001) views pension scheme as a structured method of providing economic security to an individual when he can no longer support himself. It gives the beneficiaries the

confidence that the benefits promised are being properly arranged and will be paid at the appropriate time. It is, therefore, a point to note that while pension is the amount put aside by employees in anticipation of their retirement era, or the amount paid to a pension administrator by the employers for their employees, pension scheme is the network plan of the payment. That is, pension scheme is the structure of pension payment.

2.1.1.1 Evolution of Pension Scheme in Nigeria

Many authors and researchers have traced the emergence of the pension scheme in Nigeria to the colonial period. According to Barrow (2008); Madukwe (2015); and Odia and Okoye (2012), the assembling of the workforce during the colonial administration in the 20th century led to the introduction of the pension scheme in Nigeria. The first ever legislative ordinance of pension in Nigeria took place effectively in 1959 but had already started in 1946 (Oloniyi and Olofunlola, 2004). According to Ojiya, Ajie and Isiwu (2017), the ordinance allowed the Governor- General to grant pensions and gratuities to retirees in accordance with the approval of the secretary of state colonial affairs in the British Government but this was fixed for a period of 10 years of service. It should be noted that pensions and gratuities were provided for in the legislation, they were not a right, as they could be reduced or withheld altogether if it was established to the satisfaction of the Governor-General that the officer was found guilty of negligence, irregularity, misconduct (Demakin, 2006). According to Madukwe (2015), the 1951 pension ordinance was designed primarily for colonial officers that were deployed from one post to another in the vast British Empire with the aim of facilitating continuity of service wherever they were deployed to serve. Thus, the pension scheme covered only a few and only Nigerians who worked with the British Empire benefited from it.

Following the attainment of Nigerian independence in 1960, the National Provident Fund (NPF) was established in 1961. The NPF is a scheme provided for only one-off lump sum benefit (Ahmad, 2006). That is, it was mainly a saving scheme where both employee and employer contributed a given sum each on a monthly basis which made it a social protection scheme for Nigerian workers in the private sector who were non-pensionable. The NPF remained until the establishment of the Pension Decree 102 of 1979.

According to Ahmed (2007), Pensions Decrees 102 and 103 (for the military) of 1979 were enacted with retroactive effect from April 1974 and these Decrees repealed all pension laws from 1st January 1946 to 31st March 1974. Under this Decree, all enactments on pension incorporated pensions and gratuity scales of all public officers recommended by the Udoji public services Review Commission Report 1974 was consolidated and it formed the basic pension law by which all recent pension laws are built (Bassey, Etim and Asinya 2012). Following the 1974 pension Decree is the Pension Rights of Judges Act No 5 of 1985 and the Pension Acts No.75 of 1987. These brought about the enactment of the Police and other Government Agencies Pension Scheme, and the Local Government Pension edict which culminated in the setting of the Local Government Staff Pension Board of 1987 (Odia and Okoye 2012).

A major reform in the evolution of the Nigerian pension system took place in 1993. This is the establishment of the National Social Insurance Trust Fund (NSITF) to replace the National Provident Fund which had been in operation since 1961. Sule and Ezugwu (2009) hold that the NSITF, which took effect from July 1, 1994, catered for employees in the private sector of the economy against loss of employment income in old age, invalidity or death. This scheme mandated all private employers of five or more employees to remit 10% of their monthly emolument in the ratio of 3.5% employee and 6.5% by employers. The initial monthly contribution prior to 2001 was 7.5% in the ratio of 2.5% employee and 5%

employer (Bassey, Etim and Asinya (2008). Odia and Okoye (2012) opine that by 1997 organisations were allowed to have individual pension arrangements for their staff and appoint Boards of Trustees (BOT) to administer their pension plans as specified in the Standard Trust Deed and Rules prepared by the Office of Head of Service of the Federation but each BOT was free to decide on whether to mention an insured scheme or self-administered arrangement.

2.1.1.2 Contributory Pension Reform Act

The Contributory Pension Reform Act (PRA) which was promulgated on the 25th June, 2004 brought a complete change in Pension Administration in Nigeria. The idea behind the Pension Reform Act of 2004 was to allow Nigeria follow the Chilean pension model of providing long-term capital that could aid the development of the financial markets and also improve economic growth. By so doing, the problem of growing pension arrears and unfunded entitlements would be solved alongside enhancing the credibility of general economic reform effort of the government (IMF, 2005).

In the words of Ahmed (2006), the Pension Reform Act is premised on the following objectives: (a) to ensure that every worker receives his retirement benefits as and at when due; (b) to empower the workers and assist workers to save in order to cater for their livelihood during old age; (c) to stem the growth of pension liabilities; (d) to establish uniform rules, regulation and standards for the administration of pension matters; (e) to secure compliance and promote wider coverage**.**

The Act holds that the contributory pension scheme is compulsory and fully funded for both the private and public sectors, employees and employers are to contribute monthly a minimum of 7.5% (15%) of their basic, housing and transport emolument into a Retirement Savings Account (RSA) but for the military, they are to contribute 2.5% while the employer

contributes 12.5%. Consequently, with the enactment of the enabling legislation exempting all military and operatives of the Directorate of State Security Services (SSS) as well as the Nigeria Intelligence Agency (NIA) personnel from the CPS, the National Pension Commission (PenCom) directed the payment of the employee portion of contribution remitted for military, SSS and NIA to their retirement savings account to be transferred to the military pension board. Accordingly, retirement savings accounts (RSAs) are opened for individuals and are privately managed by Pension Fund Administrators (PFAs) while the pension fund assets are held by Pension Fund Custodians. Also, an employer is mandated to deduct and remit contributions to a custodian within 7 days from the day the employee is paid his/her salary while the custodian would notify the PFA within 24 hours of the receipt of contribution. This contribution and retirement benefits go with tax exemption.

Comparing the CPS to the old scheme shows clearly the difference between them, as presented in the table below.

Table 2.1: The Old Pension Scheme and Contributory Pension Scheme

FEATURES	OLD SCHEME	CONTRIBUTORY PENSION SCHEME
Scheme	Largely Defined Benefit	Defined Contribution
Funding	Unfunded	Contributory and Fully Funded
Membership/ Coverage	Voluntary in private sector	Mandatory for all employees (private and public sectors)
Pension Portability	Not Portable	Personalised by RSA and Portable
Management	Government and Union	Private Sector - PFA/ PFC
Retirement Benefits	Discriminatory	Uniform Application
Supervision	Fragmented and Unregulated	Regulated and supervised by PenCom
Pension Liabilities	Implicit and not transparent	Explicit through Retirement Bond and transparent
Tax exemption	Limited	All RSAs
Life Insurance Policy	Voluntary and mostly in private sector	Mandatory for all employers

Source: www.pension.gov.ng - National Pension Commission

2.1.1.3 Pension Reform Act, 2014

On 1st July, 2014, President Goodluck Jonathan signed into law the new Pension Reform Act, 2014 which repealed the Pension Reform Act No. 2 of 2004 (repealed Act). Like the repealed Act, the Pension Reform Act, 2014 governs and regulates the administration of the contributory pension scheme for both the public and private sectors in Nigeria. The commencement date is 1st July, 2014.

The Pension Reform Act, 2014 brought about a total pattern shift in the pension administration in Nigeria, these amendments include the following:

i. **Scope of the Act:** The crux of the Act is to encourage participation in the Contributory Pension Scheme (CPS). The Scheme applies to two categories of employees. These include all employees in the public sector and employees of private organisations in which there are 3 or more employees.

ii. **Contribution to the Scheme:** There are changes in the rates of contribution to be made to the Scheme. Under the Act, both employer and employee are required to make a minimum of 10% and 8% respectively of the employee's monthly emoluments (7.5% of the employee's monthly basic, housing and transport allowances by both parties under the repealed Act). The employees contribute a minimum of 8% of their Basic Salary, Housing, and Transport Allowance while the employers contribute 10%, however, employers may elect to contribute on behalf of the employees such that the total contribution shall not be less than 20% of the basic salary, housing and transport allowance of the employees.

iii. **Investments:** The Act expands the scope in which the pension funds can be invested and this includes specialist investment funds and other financial instruments the Commission may approve.

iv. **Offences and Penalties:** The Act includes a few novel provisions with respect to offences and penalties. The Act criminalises an attempt to commit an offence and

imposes the same penalty as the offence. The penalties for misappropriation have also been increased. In addition to a prison term of 10 years and a fine of three times the amount misappropriated, a convicted person would refund the amount misappropriated as well as forfeit to the federal government any property, asset or fund with accrued interest or the proceeds of any unlawful activity under the Act in his/her possession, custody or control.

v. **Pension Protection Fund:** A pension protection fund is created under the Act to include an annual subvention of 1% of the total monthly wage bill payable to employees in the public sector, an annual pension protection levy (the percentage of which is to be determined by PenCom) and income from investments of the Pension Protection Fund. The objective of the Fund is to serve as a hedge or guarantee for the benefit of contributors. Money from the fund is paid to the contributors in the form of minimum guaranteed pension, as compensation for shortfalls in investment of pension funds and any other use PenCom may determine from time to time.

vi. **Withdrawal from the Retirement Savings Account:** The Act creates another condition in which a contributor may be allowed to withdraw from his retirement account. An employee who disengages from employment or is disengaged before the age of 50 and is unable to secure employment within 4 months of disengagement is allowed to make withdrawals from the account although not exceeding 25% of the total amount credited to the retirement savings account.

vii. **Exemption from tax:** In line with the spirit of the repealed Act, the Act clearly mentions that any interests, profits, dividends, investments and other income accruable to pension funds or assets are not taxable.

viii. **Dispute Resolution:** Any employee aggrieved with his employer of PFA is obligated to approach the Commission for a redress before exploring arbitration or commencing an action at the National Industrial Court. Previously under the repealed Act, the avenues for dispute resolution were arbitral panels and the Investment and Securities Tribunal.

ix. **Inclusion of Informal Sector:** The PRA, 2014 has also enhanced the coverage of the CPS to the informal sector.

x. **Pension Transition Arrangement Directorate (PTAD):** The management and the restructuring of the administration of old pension would fall under the Pension Transition Arrangement Directorate (TPAD).

xi. **Inclusion of Life Insurance:** Every employer in the public (Federal and State Governments) and private sectors must provide life insurance for its workers.

According to Gunu and Tsado (2012), a single authority for the first time in the history of the country is the National Pension Commission (PenCom) that has been established to regulate all pension matters in the country.

2.1.1.4 Pension Fund Asset Investment Regulation

In accordance with the provision of the Investment Regulation of 2012 issued by the PenCom, pension fund assets would be invested in instruments such as binds, treasury bills, debentures, redeemable and convertible preference shares, ordinary shares of public limited liability companies listed on the security exchanges registered by SEC, money market instruments of banks and discount houses as well as commercial papers issued by corporate entities, open/close-ended/ hybrid investments funds amongst others.

Conversely, the updated Investment Regulation (2017) approved by PenCom for investment operations for PFAs further introduced mainly the multi-fund structure that aims to align the

age and risk profile of RSA holders by dividing the RSA Fund into four distinct Funds, the mortgage-backed securities and new variants of financial instruments, such as the interest-free 'SUKUK' (Islamic Bond) to allow for financial inclusion.

The authorised trading markets under the Act and the investments guidelines issued by PenCom states that pension assets shall be invested in any of the following:

i. **Equities:** Pension Fund Assets may be invested in ordinary shares of public limited liability companies subject to a maximum portfolio limit of 25% of pension assets under management provided that such companies have existed for five years, made taxable profits in the three years within the five years and paid dividends of two years of those taxable profits.

ii. **Money Market:** Pension Fund Assets may be invested in money market instruments of banks/discount houses as well as the commercial papers of corporate entities subject to a maximum portfolio limit of 35% of pension assets under management.

iii. **Infrastructure Funds:** Pension Fund Assets may be invested in Infrastructure Funds subject to a maximum portfolio limit of 5% of pension assets under management.

iv. **Private Equity Funds:** Pension Fund Assets may be invested in Private Equity Funds subject to a maximum portfolio limit of 5% of pension assets under management.

v. **Open/Close-End and Hybrid Funds including REITs:** Pension Fund Assets may be invested in Open/Close-Ended Hybrid Funds registered with SEC subject to a maximum portfolio limit of 20% of pension assets under management.

vi. **Bonds:** Pension Fund Assets can be invested in FGN or CBN Bond and Securities to a maximum of 80% of pension assets under management.

In the words of Adegbayi (2005), there is a relationship between pension contributions and payment of benefits. He adds that "pension funds can be invested in many different types of financial securities and can own assets directly. However, the type of investments undertaken by a pension fund administrator depends on its "investment policy statement". The nature of the investments allowed in policy statement depends in a large part on the financial situation of the firm.

2.1.2 Capital Market

Capital is generally known as the fund needed or used to start up and run a business. Hence, the capital market is a market where business funds are sourced. According to Udenwa and Uwaleke (2015), capital market is the segment of the financial markets in which medium and long-term financial instruments with maturity in excess of one year are transacted with a network of participants, instruments and facilities which function in a synergy to facilitate efficiently, the flow of savings into long-term investments for socio-economic development. They also see the capital market as a market of intangible goods (e.g. stocks and bonds). Al-Faki (2006) with a more comprehensive view of the capital market, sees it as "network of specialised financial institutions, series of mechanisms, processes, and infrastructure that, in various ways, facilitate the bringing together of suppliers and users of medium to long-term capital for investment in socio-economic developmental projects". This entails that only long-term businesses or developmental businesses source their funds from the capital market since the capital market is meant for a long-term fund.

The capital market is divided into primary; where new securities are traded and secondary; where existing securities are traded. The secondary market activities, according to Sule and Momoh (2009), have impacted more on Nigeria's per capita income by tending to grow stock market earnings through wealth than the primary market. However, both markets (primary

and secondary) complement each other. While transactions in the primary market bring about the creation of new loans as a result of transfer from the lender (surplus unit) to the borrower (deficit unit), the secondary market on the other hand deals on transactions of old assets. According to Imobighe (2015), the economic function of the secondary market is to support the operations of the primary market by providing liquidity to lenders as, without this market, an individual saver might be unwilling to lend money profitable for investment for a long period of time.

The activities of the capital market are necessary for economic development. Levine (1991) opines that capital market activities spur economic growth based on the fact that the capital market makes property changes possible in the companies, whilst not affecting their production process and also offers higher possibilities of portfolio diversification to the agents. This is made possible via some vital roles played by capital market such as channelling resources, promoting reforms to modernise the financial sectors, financial intermediation capacity to link deficit to surplus sector of the economy, and a veritable tool in the mobilisation and allocation of savings among competitive uses which are critical to the growth and efficiency of the economy (Donwa and Odia, 2010).

2.1.2.1 Concept of Capital Market Development

The need to develop the capital market follows the important role the capital market plays in facilitating economic activities which would bring about economic growth. As a result, series of reforms have been carried out it the various units of the Nigerian capital market. The Nigerian capital market is built upon the institutional framework of: the Securities and Exchange Commission (SEC), the Nigerian Stock Exchange (NSE), Stockbrokers, Issuing houses and Investors (Adeusi, Suliaman and Azeez, 2013). It should be noted that the main objectives behind the establishment of the Nigerian capital market are to mobilise savings

from various economic units for economic growth and development and to provide adequate liquidity to investors, to widen the ownership base of assets as well as to create a buoyant private sector and provide alternative source of funds for government.

When it comes to the issue of the capital market in Nigeria, the Nigerian Stock Exchange quickly comes to mind. The Nigerian Stock Exchange (NSE) is divided into two: First is the primary market, also referred to as the new issue market, which is a market where new issues of financial securities are raised by government and corporate bodies. These securities are referred to as bond and shares and they form the basis of the operations in the secondary market. The major operators in this market are the issuing houses, government and corporate bodies (Adeusi et al, 2013). Second is the secondary market which is a market that provides an avenue for the purchase and sale of existing securities. That is, it is a market that guarantees the transfer of ownership of securities. Following the report of the Barback Committee, the Nigerian Stock Exchange (NSE) was set up in 1959 as the Lagos Stock Exchange, although it commenced operations in June 1961 after the enactment of the Lagos Stock Exchange Act 1961 and by 1977, it became the Nigerian Stock Exchange. The Exchange started operations in 1961 initially with two Federal Government Development Stocks, one preference share and three domestic equities and at the end of 1966, equities increased to six. Government stocks comprised the bulk of the listing with nineteen of such securities quoted on the Exchange in 1966 compared with six at the end of 1961 (Nnanna, Englama, and Odoko, 2004).

By 1985, the NSE established the Second-Tier Securities Market (SSM) with the aim of providing the framework for the listing of small and medium-sized Nigerian companies on the Exchange in order to allow them to raise capital. The SSM started operation with one equity in 1985 and grew to twenty-three in 1993 and later dropped to sixteen in 2005 (Adeusi et al, 2013). Following the introduction of Structural Adjustment Programme (SAP) in 1986

and subsequent deregulation of the capital market in January 1993, the determination of prices of new issue of securities that was earlier vested on the Securities and Exchange Commission of Nigeria was now transferred as one of the roles of issuing houses (Olowe, 2004). Data from the CBN statistical bulletin show that transactions in the market recorded increase in the number of listed securities, market capitalisation and all-share index, and this improvement has continued over the years. The improved performance was traceable largely to the establishment of the second-tier securities market (SSM) in 1985 and liberalisation policy in 1986 which led to the deregulation of interest rates in 1987, coupled with the privatisation of some government-owned companies in 1991 (Babalola and Adegbite, 1999).

2.2 Review of Empirical Literature

Series of empirical studies have been carried out on pension scheme and the development of the Nigerian capital market. It should be noted that the development of capital market would entail adequate development of both the stock and bond markets, forming the key segments of the capital market.

Mesike and Ibiwoye (2012) used Error Correction Model (ECM) and Ordinary Least Square in their study on Pension Reform and Financial Market Development Nexus: Evidence from Nigeria. The Error Correction Model (ECM) approach was used to examine if pension reform advanced the development of the financial market in Nigeria. Time series data were compiled and a functional relationship was established using the OLS technique. Statistical significance of the Error Correction Model confirmed the existence of an equilibrium relationship among the variables. The performance analysis of all their variables indicates that the reform period generated long-term contractual savings and stimulated the development of the stock market.

Also, Abdul (2016) examined the effects of pension funds' investments on capital market performance in Nigeria. The study adopted a time series analysis covering the period from

2009 (Q3) to 2016 (Q1) using the Autoregressive Integrated Moving Average (ARIMA) regression technique. The study concludes that there is a significant positive relationship between pension funds' investments and the performance of capital market in Nigeria after the 2004 major industry reform. Specifically, the study concludes that total pension investments in Nigeria improved the performance of the Nigerian capital market significantly in terms of depth and liquidity. Also, the study concludes that the interaction of macroeconomic indicators such as interest rate, inflation rate and GDP per capita with pension investments affected the capital market performance significantly. The study recommends that governments should ensure good and stable monetary policy in Nigeria so as to achieve the desired goal of the pension industry reforms.

Patrick and Akinwunmi (2015) examined empirically the causal relationship between interest rate, capital market, and pension assets in Nigeria from 1981-2013. According to the study, the 2014 Pension Act widened the scope of pension fund investments into real estate and infrastructure markets, which hitherto are interest rate sensitive. Nigeria's high short-term interest rate regime attracts long-term funds and can make the capital market volatile, which might pose systemic risks to pension assets. Using ordinary least square (OLS) regression technique, the study reveals that pension asset is directly sensitive to stock market index while the index is inversely sensitive to short term interest rate, implying that the high short-term interest rate regime might be inimical to building "wholesome" pension assets of the capital market. The study suggests that monetary and fiscal authorities should manage short-term interest rate to optimal lower rate to attract pension assets to the capital market, making the capital market to operate at lower volatility conducive for bi-directional growth.

Meng and Pfau (2010) examined the role of pension fund in capital markets development among OECD countries using least square dummy variable (LSDVC) estimation in a panel data study. All-together the study found that the impact of pension fund on capital market

differs significantly depending on the depth of financial development. Countries with well-developed financial market (i.e. well managed investment strategies in the stock and bond markets) enjoy significant growth in their pension funds than those with thin financial development.

Godson and Ade (2012) examined the nexus between pension reform and financial market development with evidence from Nigeria. They employed the Error Correction Model (ECM) approach to examine if pension reform advanced the development of the financial market in Nigeria and the time series data were compiled and a functional relationship was established using the Ordinary Least Square (OLS) technique. Statistical significance of the error correction term confirms the existence of an equilibrium relationship among the variables. The performance analysis of all the variables indicates that the reform period generates long-term contractual savings and stimulated the development of the bond market.

Akabom-Ita, Aniefiok, and Arzizeh (2012) investigated the Nigerian Pension reforms and management as veritable strategies for rewarding past intellectuals towards sustainable development in the third world. Their main objective was to determine the influence of pension reforms on the welfare of the retired civil servants in Nigeria with particular reference to Cross Rivers State. Data for the study were collected with the use of structured questionnaire. Data obtained were analysed using simple percentage and Pearson Product Moment Correlation Coefficient. Results and findings reveal that there exists a significant relationship between the pension fund and capital market development but particularly on a government bond. Also, Njuguna (2010) found that pension fund increases market capitalisation particularly the bond market.

Ime and Mfon (2014) examined pension administration with the primary objective of ensuring the retiree's standard of living is smoothened after retirement to have a normal

living. Their empirical analysis was limited to information published in the 2011 Retirement Savings Account (RSA) funds in Nigeria. The top pension managers in Nigeria include Stanbic IBTC Pensions Ltd, Premium Pension Ltd, ARM Pension Managers Ltd, Crusader Sterling Pensions Ltd, Sigma Pensions Ltd and Leadway Pensure Ltd. Based on their analysis, they conclude that pension administration and capital formation in Nigeria, if channelled into productive ventures, is capable of transforming the economy into an industrialised economy. Farayibi (2016) examined the Funded Pension Scheme and Economic Growth in Nigeria with the aim of providing evidence on the effect of the operation of the funded pension scheme since its inception in 2004 on economic growth in Nigeria using error correction mechanism (ECM) and Ordinary Least Square (OLS) methodologies. Findings from the study reveal that the pension fund contributions from both private and public sectors in Nigeria increased greatly and constituted a huge investment fund in the capital and money markets. The study thus concludes that with good risk and portfolio management by pension fund administrators and custodians, the contributory pension has the capacity to boost the Gross Domestic Product (GDP) in Nigeria and very convenient to retirees compared to the previously defined benefit scheme.

On a wider scope, Walker and Lefort (2002) did a panel study using a Generalised Least Squares (GLS) estimator for 33 emerging markets and found a positive relationship between pension reform and capital markets. They found that pension fund assets reduced dividend yields and increase price-to-book ratios, thereby implying a decrease in the cost of capital. However, they also admit that some of their estimation results may suffer severely from measurement error problems, and drew a conclusion that their study was preliminary and needed to be verified again when a longer period of observations became available. Also, Catalan, Impavido, and Musalem (2000) in their study found that pension funds increased equity market capitalisation. Furthermore, the pooling of pension fund assets boosts the stock

market and increases the stock market's liquidity (Catalan 2004). As holders of a large number of bank deposits, government paper, and short-term assets, pension funds are important institutions that control the flow of funds in the financial markets (Raddatz and Schmukler, 2008).

Salihu (2013) in his investigation on the impact of Nigeria's pension reform on its capital market development from 2004-2008, employed the use of secondary data and it was found out that pension reform has contributed to the development of the Nigeria's capital market through revamping of the moribund bonds sector and increased market capitalisation.

Walker and Lefort (2002) opine that there are many paths through which pension reform may heighten the development of financial markets. For instance, there are many concomitant conditions to the process of pension reform that may support or limit the positive effect on financial market development. In an attempt to clarify the rationale behind the link from pension reform to financial market development, Walker and Lefort (2002) argue these links through three sets of economic phenomena, namely: processes that are induced by the accumulation of pension funds, concurrent conditions to the process of pension reform and the consequences on economic growth.

Equally, Owo (2008) analysed the implication of the pension fund on financial market development, especially the capital market. His study concludes that the new pension scheme is an improvement on what existed before (the old pension scheme). Pension funds exert both quantitative and qualitative effects on financial markets (Davis 2006 and Yermo 2005).

On the contrary to all the reviewed empirical studies, Madukwe (2015) investigated the Effect of Contributory Pension Fund on Capital Market in Nigeria using a time series data of seven years (2006-2012). The Pairwise Correlation model was used to determine the significance of the relationship between the Pension Asset Under Management (AUM) and

Market Capitalisation (MC), and Local Ordinary Share (LOS) of the Contributory Pension fund and Market Capitalisation (MC) in Nigeria. The Coefficient of Determination (r2) was used to determine the actual effect of Pension Asset Under Management (AUM) on Market Capitalisation (MC). The econometric results indicate that AUM had no significant effect on MC in Nigeria. The econometric result also evidences that LOS of the Contributory Pension fund had no significant effect on MC, as the majority of the pension fund asset is held by Federal Government as bond. The insignificant effect of Pension AUM on MC could also be as a result of the global economic meltdown that occurred between the periods of 2008 to 2010. From the result of the analysis, the researcher discovers that Contributory Pension fund had no significant impact on Capital Market in Nigeria. The findings of Madukwe (2015) negate that of the previous findings. This therefore makes the argument on the impact of pension fund (specifically the contributory pension) inconclusive.

There still exists a gap in literature, as most studies, for instance Madukwe (2015) capture up to 2012. This also applies to other studies. Hence, this study extends to 2017.

2.3 Theoretical Framework

The following theories are reviewed as underpinning backings for this study.

2.3.1 Deferred Wage Theory

The deferred wage theory is a theory that views some benefits of an employee as a futuristic stance. This is where pension comes to play. Pension plan is a method to defer some employees' compensation until they are retired (Malaski, Firend and Capelli, 1981). That is, employer guarantees the provision of pension payment which is in exchange for present services rendered by employees. According to Ojiya et al (2017), the deferral of wages often results in individual tax savings, however, the advantages to the employer for providing a pension plan are less obvious. Under the deferred wage theory, firms offer pension plans

because of economies of scale in administrative cost, portfolio management and other costs (Fosu, 1983 and Freeman, 1981).

Therefore, the deferred wage theory generally incorporates a long-term or lifetime implicit labour contract between the employer and employee that has various implications for the employer (Logue, 1979). Blinder (1982) suggests that the delayed vesting of pension plans may decrease employee turnover costs because those firms have an incentive to expand training costs since it causes "average" employees to work longer for the company, resulting in a greater payback of these training costs (Becker, 1964).

2.3.2 Theory of Financial Intermediation

a. The Traditional Theory of Financial Intermediation

The traditional theory of financial intermediation, according to Iris and Arthur (2003) rests on the ***Wicksell's theory*** which focuses on bank lending and supply of money expansion during periods of boom and strong demand for loanable funds. The credit process of a financial institution is the process, according to Bernanke (1992), whereby, in exchange for paper claims, the savings of specific individuals or firms are made available for the use of other individuals or firms. Wicksell introduces the concept of the "***natural rate of interest***" to explain the need of credit expansions during booms. According to Wicksell (1906), the natural rate of interest rate is the interest rate that agrees with demand for loan capital and the supply of savings. This can be regarded as the equilibrium interest rate that is determined by the demand for loans, which depends on the expected profitability of investment.

A major problem of this theory is that the market rate of interest would, according to Wicksell (1906), be sticky, responding only slowly to and with a delay to changes in the demand for funds. Because of this stickiness, if the natural rate rises due to changes in domestic or foreign demand, the market interest rate would be below the natural rate for some

time, increasing the demand for loans and at the same time lowering the supply of savings. It can thus be deduced that the increase in borrowing and investment would raise spending and prices, which would further lead to the higher expected profitability of investment. According to the Wicksell's theory, the interest rate is a determinant of economic growth since interest rate has a determining link on investment which is core to economic growth.

Fisher (1933) notes that the fall of the interest rate as posited in Wicksell's theory was one of the causes of the Great Depression of the 1930s. Thus, he argues that economic crisis results from over-indebtedness and can be exacerbated by falling prices due to the high-interest rate. The over-indebtedness, as argued by Iris and Arthur (2003), leads to over-production (or excess supply), and prices fail to restore equilibrium and as a result, a period of over-production (excess supply) would be followed by a period of underproduction (excess demand), causing large cyclical fluctuations in output.

b. The Asymmetry Theory of Financial Intermediation

This theory is a more current theory of financial intermediation which tries to emphasise the economic role of financial intermediaries on the economics of imperfect information that began to emerge during the 1970s. Scholars such as Akerlof (1970), Spence (1973) and Rothschild and Stiglitz (1976) have contributed greatly to this theory. Rothschild and Stiglitz (1976) establish two strands that formally explain the existence of financial intermediaries. The first strand emphasises financial intermediaries' provision of liquidity. The second strand focuses on financial intermediaries' ability to transform the risk characteristics of assets. In both cases, Iris and Arthur (2003) argue that financial intermediation can reduce the cost of channeling funds between borrowers and lenders, leading to a more efficient allocation of resources.

c. The Neo-Classical Theory of Financial Intermediation

The neoclassical growth model has been extended by incorporating an intermediation sector in such a way that it matches both the amount of borrowing and lending between households and the resources used in intermediation. According to Rajnish, Facundo and Edward (2011), the model provides a suitable framework to evaluate not only efficiency gains from innovations in the financial sector but also the impact of demographic changes on intermediation and saving behaviour.

Since in equilibrium the total amount borrowed by households is equal to the total amount of intermediated lending by households, a natural question that arises by incorporating financial intermediation into the neo-classical model is: who are the borrowers and lenders? The neoclassical see the only reason for households to save is to finance retirement over an uncertain lifetime, one set of households choose to save by accumulating capital and a second set by purchasing annuities. Since capital accumulation is partially financed by owners' equity and the remainder by borrowing, capital owners are the borrowers (Rajnish, Facundo and Edward 2011). In essence, in equilibrium, those with even a modest preference for bequests accumulate capital assets and borrow during their working lives, and upon retirement, use the capital income for consumption and interest payment on the debt. Upon their death, they bequeath all their net worth.

The general growth model of the neoclassical is given as output from a country's production to be a function of Capital, Labour, and Technology. Technology is assumed to augment Labour. This is given as;

$$Y = f(K, AL)$$

Where Y is output, K is the capital, L is labour and A is the technological know-how.

The intermediation technology, according to Rajnish et al (2011), displays constant returns to scale, with the intermediation cost in units of the composite output good being proportional to

the amount of borrowing and lending intermediated. The intermediary also intermediates between households lending to the government and the intermediary receives interest rate (r_e) on its lending to households and effectively pays an interest rate (r) on its borrowing from households. Therefore, given the technology, equilibrium interest rates satisfy $r_e - r = \emptyset$

The intermediation activity of the financial institution is likened to the technological know-how (A) in the neoclassical growth model.

2.3.3 The Lewis Growth Theory

Professor Arthur Lewis is the first to systematically analyse the surplus labour economy in his article "Development with Unlimited Supplies of Labour". Lewis model shows how a dual economy can attain economic growth in a surplus economy, hence, how labour can contribute to economic growth.

Lewis Framework

In Lewis framework, the economy is first divided into two sectors which are: the industrial or capital sector and the subsistence sector which consists both the agriculture and service sector. For the capitalist sector, capital is used and labour hired. Production is for profit making. On the other hand, in the subsistence sector, output per head alongside marginal productivity of labour is low while labour is surplus.

A core assumption of the model is that profit made in the industry is saved and as a result, growth is "profit-push" as expansion in the capitalist sector would take place to mop-up surplus labour in the subsistence sector. Therefore, going by the assumption of the existence of redundant labour in the agricultural sector, the curve showing the supply of labour is expected to be horizontal at the market determined wage rate. As a result, the industrial sector would be able to expand for a long time due to the abundant unskilled labour.

The unskilled labour receives wage determined by implicit wage in the subsistence sector which can be taken as the average product of labour in the subsistence sector. Given capital wage as C_w and Subsistence earning as S_w, then

$$C_w = S_w + \delta, \delta > 0$$

Where δ is the urban-rural wage differential, which is the amount added to subsistence earning to make people or labourers leave the subsistence for the industrial sector. Lewis presumed δ to be at least 30% and the capitalist wage rate, C_w is assumed to be perfectly elastic.

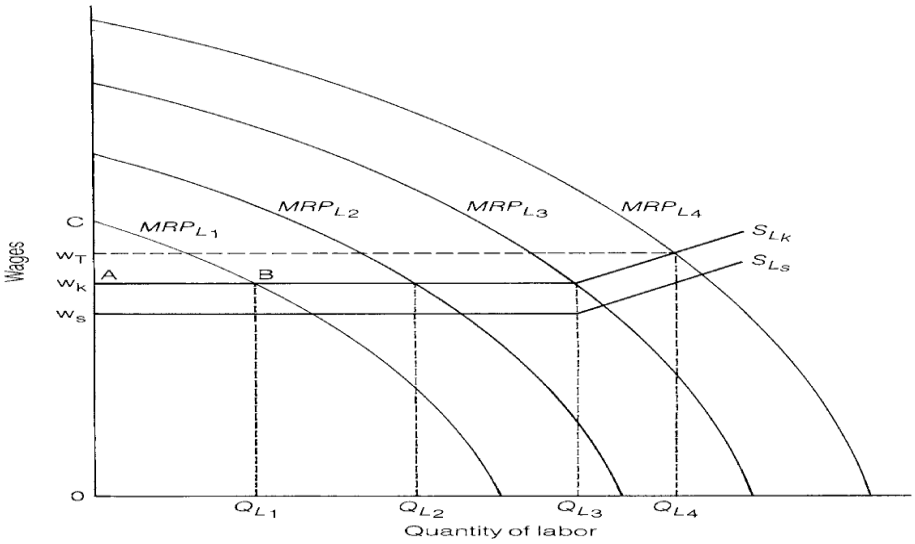
Role of Saving

According to Lewis, the basis for development is that income distribution is altered in favour of savings. By this, Lewis holds the classical view that all savings are done by people who receive rent or profit. Hence, Lewis model holds profit as a driver of growth or the re-investment of the capitalist profit.

The Model

The Lewis model of growth is shown in the figure below:

Figure 2.1: Lewis Model



From the above figure, the total wages of the workers are equal to OQ_{L1}, the quantity of labour, multiplied by w_k, the wage (that is, rectangle OQ_{L1}BA). The capitalist earns the surplus (*ABC*), the amount between the wage and that part of the marginal product curve above the wage.

Lewis assumes that the capitalist saves the entire surplus (profits, interest, and rent) and the worker saves nothing. Furthermore, he suggests that all the surplus is reinvested, increasing the amount of capital per worker and thus the marginal product of labour to MRP_{L2}, so that more labourQ_{L2} can be hired at wage rate *wk*. This process enlarges the surplus, adds to capital formation, raises labour's marginal productivity, increases the labour hired, enlarges the surplus, and so on, through the cycle until all surplus labour is absorbed into the industrial sector. Beyond this point Q_{L3}, the labour supply curve (S_{Lk}) is upward-sloping and additional labourers can be attracted only with a higher wage. As productivity increases beyond MRP_{L3} to MRP_{L4}, the MRP_L (or demand for labour) curve intersects the labour supply curve at a wage and at a quantity of labourQ_{L4} in excess of surplus rural labour (Lewis 1954).

In the Lewis model, capital is created by using surplus labour (with little social cost). Capital goods are created without giving up the production of consumer goods. However, to finance surplus labour, additional credit may sometimes be needed. The significance of Lewis's

model is that growth takes place as a result of structural change. An economy consisting primarily of a subsistence agricultural sector (which does not save) is transformed into one predominantly in the modern capitalist sector (which does save). As the relative size of the capitalist sector grows, the ratio of profits and another surplus to national income grows.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

This study examines the effect of pension fund on capital market development in Nigeria. Hence, the descriptive case study research design is adopted in carrying out the study. This is because it enables the researcher to generate data based on a structured research instrument and well defined study concepts and related variables.

3.2 Population, Sample and Sampling Technique

This study focuses on pension fund effect on capital market development in Nigeria. It placed emphasis on the Pension Fund Administrators (PFA) and the Pension Fund Asset collected by the 21 PFAs for the period 2007 to 2017. Also, the Nigerian Stock Exchange, and Security and Exchange Commission are included.

3.3 Method of Data Collection

This study employed a secondary data source. Therefore, the methods of data collection were based on already prepared data by recognised authorities. The data for this study were sourced from the National Pension Commission (PenCom) and the Central Bank of Nigeria (CBN) statistical bulletin. While that of the pension fund asset which is a proxy for the pension scheme was sourced from the PenCom, the capital market capitalisation which are proxies for the capital market development were sourced from the Central Bank of Nigeria (CBN) statistical bulletin.

3.4 Technique of Data Analysis

The technique of data analysis for this study is based on econometric analysis. This is first assisted by stationarity test and co-integration test to determine if the variables for analysis are stationary and at the same time, have a long-run relationship.

3.4.1 Unit Root Test

The ADF approach is used to perform unit root tests of variables in levels and first difference, with both intercept and trend. The tests are undertaken to examine whether the difference between non-stationary series becomes stationary when the same variables move together in the long-run, even though they may drift apart in the short run.

The ADF tests are applied on the rationale that they perform satisfactorily even for small samples. The tests are performed following the equation:

$$\Delta \boldsymbol{y_i} = \boldsymbol{\beta_1} + \boldsymbol{\delta y_{i-1}} + \sum_{\boldsymbol{j=i}}^{\boldsymbol{p-1}} \boldsymbol{a_j}\, \Delta \boldsymbol{y_{i-j}} + \boldsymbol{\mu_i} \qquad (3.1)$$

Where: μ_i represents a pure white noise error term, $\Delta y_{i-j} = y_{i-1} - y_{i-2}$ and p denotes the class of auto-regression; the null hypothesis being 0 = δ. The ADF tests with trend variable were performed based on the regression below:

$$\Delta \boldsymbol{y_i} = \boldsymbol{\beta_1} + \boldsymbol{\delta t y_{i-1}} + \sum_{\boldsymbol{j=i}}^{\boldsymbol{p-1}} \boldsymbol{a_j}\, \Delta \boldsymbol{y_{i-j}} + \boldsymbol{\mu_i} \qquad (3.2)$$

Where: t represents the time or trend variable; with the null hypothesis being 0 = δ

3.4.2 Co-integration Test

Following analysis of the order of integration, the study further procees to test for the presence of co-integration among variables using the Johansen (1988) maximum likelihood co-integration approach. The maximum eigenvalue (λ_max) method is applied to detect the

existence of co-integrating vectors based on the premise that the technique is more reliable in small samples (Hamilton, 1994).

$\lambda\_max = -T \log (1-\lambda\_(r+1))$ (3.3)

Where: the null hypothesis $r \leq g$ co-integrating vectors, with ($g = 0, 1, 2, 3, ---$) is tested against the alternative hypothesis $r = g + 1$.

3.4.3 Regression Analysis

The time series property of pension fund and capital market indicators are examined concentrating on stationary tests using the Augmented Dickey-Fuller Tests, and co-integration test using the Johansen Co-integration Test. The Simple Regression technique is hence employed in estimating the parameters of the model and testing the hypotheses of the study. The Simple Regression model of this study is given as:

$$LOGMKT\ CAP = \alpha + \beta_1 LOGPEN\ FUND + \epsilon \quad (3.4)$$

$$LOGTRANS\ VOL = \alpha + \beta_1 LOGPEN\ FUND + \epsilon \quad (3.5)$$

Where β_1 = coefficient of independent variable

α = Intercept

ϵ = Error term

PEN FUND = Pension Fund

MKT CAP = Market Capitalisation

TRANS VOL = Transaction Volumes

L is the lag operator.

3.5 Justification of Methods

The methods employed for this study are justified based on the fact that they can be theoretically and empirically verified. Secondary data and the estimation method employed makes it easy to ascertain the relationship between pension fund and capital market development, i.e. the extent to which pension fund affects capital market development and to show if the outcome is significant.

CHAPTER FOUR

PRESENTATION AND ANALYSIS OF RESULTS

4.1 Data Presentation

The data used for analysis in this study and the results are presented and analysed in this section. The data present the trend of pension fund assets and the capitalisation of the Nigerian capital market, taking note of the total volume of transactions in the market and the value of the deals. The data are also broken down to show the contribution of pension asset in the development of the Nigerian capital market as well as to focus on the subsections (stocks and bonds) of the Nigerian capital market. The data are further broken down quarterly for further analysis.

Table 4.1: Pension Fund Asset and Market Capitalisation (Value and Volume)

Year	Total Pension Fund Asset (Nb)	Total Value of Market Capitalisation (Nb)	Transaction Volume of Capital Market
2007	815.18	13173.9	2615020
2008	1099.01	9532.9	3535631
2009	1529.63	7030.3	1739365
2010	2029.77	9909.5	1925314
2011	2442.84	10274.4	1235467
2012	3151.61	14799.8	1147174
2013	4058.09	19076.9	3224639
2014	4610.97	16870.7	1211269
2015	5302.82	16999.4	955650
2016	6164.76	16180.9	978243
2017	7515.35	16422.1	947978

Source: * Total Pension Fund Asset – Total Pension Fund Asset – National Pension Commission (PenCom)

*** Total Value of Capital Market - CBN Statistical Bulletin**

The table 4.1 above shows the trend of pension fund asset and the market capitalisation of the capital market (transaction volume and value traded) from 2007 to 2017. The table shows that the pension fund asset continued to grow significantly from N815.18 billion in 2007 to N4.610 trillion in 2014 and N5.302 trillion, N6.164 trillion and N7.515 trillion respectively in 2015, 2016 and 2017 while the transaction volume and value of the capital market which represents market capitalisation increased from 2007 to 2008 but crashed in 2009 due to the effect of the global economic meltdown on the Nigerian capital market.

Table 4.2: Market Capitalisation and Pension Fund Asset in Capital Market

Year	Total Value of Market Capitalisation (Nb)	Total Pension Fund Asset (Nb)	Pension Fund Asset in Market Capitalisation	% of Pension Asset in Market capitalisation
2007	13173.9	815.18	523.42 (64.2%)	3.973159049
2008	9532.9	1099.01	588.73 (53.5%)	6.175770227
2009	7030.3	1529.63	787.28 (51.4%)	11.19838414
2010	9909.5	2029.77	1331.66 (65.6%)	13.43821585
2011	10274.4	2442.84	2076.41 (85.0%)	20.20954995
2012	14799.8	3151.61	2678.86 (85.0%)	18.10065001
2013	19076.9	4058.09	3449.38 (85.0%)	18.08144929
2014	16870.7	4610.97	3919.32 (85.0%)	23.23151974
2015	16999.4	5302.82	4507.39 (85.0%)	26.51499465
2016	16180.9	6164.76	5476.98 (88.8%)	33.84842623
2017	16422.1	7515.35	5168.60 (68.8%)	31.47344127

Source: * Total Pension Fund Asset – National Pension Commission (PenCom)

*** Total Value of Capital Market - CBN Statistical Bulletin**

Table 4.2 above highlights the proportion of pension fund asset in the Nigerian capital market. The table shows that the contribution of the pension fund asset into the Nigerian

capital market has continued to grow significantly annually from 3% or N532 billion in 2007 to 6.1% or N588 billion in 2008 and 20.2% or N2.07 trillion in 2011. It declined to 18% in 2012 and 2013; by 2016, pension asset investment in the Nigerian capital market grew to 33.8% or N5.47 trillion and further declined to 31.4% or N5.16 trillion by the end of 2017. However, table 4.2 also shows that over 60% of the total pension fund asset is invested in the Nigerian capital market.

A further breakdown of the investment of pension fund into the capital market considering the two subsections (stock market and bond market) reveals there exists a significant contribution although, one-sided. This is shown in the table below:

Table 4.3: Pension Fund Asset Investment into the Capital Market (Stock and Bond)

Year	Total Value of Stocks (Nb) in CM	Total Pension Assets in Stock (Nb)	% of Pension Assets in Stock Mkt.	Total Value of Bonds (Nb) in CM	Pension Assets in Bond (Nb)	% of Pension Assets in Bonds Mkt.
2007	10180.3	243.44	2.391285129	2993.6	279.98	9.35261892
2008	6957.5	222.77	3.201868487	2575.4	365.96	14.20983148
2009	4989.4	223.51	4.479696958	2040.9	563.77	27.62359743
2010	7913.8	382.13	4.828653744	1995.7	949.53	47.57879441
2011	6532.6	732.85	11.21835104	3741.8	1343.56	35.90678283
2012	8974.4	945.48	10.53530041	5825.4	1733.38	29.75555327
2013	13226	1217.43	9.204823832	5850.9	2231.95	38.14712266
2014	11477.7	1383.29	12.05197906	5393	2536.03	47.02447617
2015	9850.6	1590.84	16.14967616	7148.8	2916.55	40.79775627
2016	9246.9	603.62	6.52780932	6934	4873.36	70.28208826
2017	9437.5	776.8	8.230993377	6984.6	4391.8	62.87833233

Source: * Total Pension Fund Asset – National Pension Commission (PenCom)

*** Total Value of Capital Market - CBN Statistical Bulletin**

Table 4.3 above represents the proportion of pension fund investments into the bond and stock markets within the period of study. From the table above, pension investment into the stock market section of the Nigerian capital market contributed 2.3% or N243.4 billion of the stock market in 2007 and increased to N732.8 billion or 11.2% in 2011. By 2013, it declined to 9.2% before increasing again to 12.05% and 16.1% respectively in 2014 and 2015. However, by 2016, the proportion of pension investment into the stock market further declined to 6.25% or N603.6 billion and increased slightly to 8.23% or N776.8 billion in 2017.

On the other hand, pension asset invested into the bond market contributed 9.2% or N279.9 billion in 2007 which increased to 47.5% or N949.5 billion in 2010 before a decline in 2011 to 35.9% and a further decline to 29.7% in 2012. However, by 2013, the proportion of pension investment in the bond market increased to 38.14% or N2.23 trillion and 47.02% or N2.53 trillion in 2014. From 2015 to 2017, pension asset invested into the bond market contributed 40.7%, 70.28%, and 62.8% respectively.

4.1.1 Descriptive Analysis

The descriptive analysis is used to show the highest, lowest and average values a variable can assume within the period of study. The descriptive analysis of this study is shown in the table below:

Table 4.4: Descriptive Statistics for MKT_CAP, PEN FUND and TRAN VOL.

	PEN_FUND	MKT_CAP	TRANS_VOL
Mean	3520.003	13660.98	1774159
Median	3151.61	14799.8	1235467
Maximum	7515.35	19076.9	3535631
Minimum	815.18	7030.3	947978
Std. Dev.	2197.075	3909.437	944666.1
Skewness	0.424487	-0.326418	0.860608
Kurtosis	2.00732	1.763038	2.23894
Jarque-Bera	0.781995	0.896625	1.623323
Probability	0.676382	0.638705	0.444119

Sum	38720.03	150270.8	19515750
Sum Sq. Dev.	48271367	1.53E+08	8.92E+12
Observations	11	11	11

Source: Computation using Eviews 9.0

The descriptive statistics table above shows a mean of 3520.00, 13660.98 and 1774159.00 PEN FUND, MKT CAP and TRANS VOL respectively. The maximum values of 7515.35, 19076.9 and 3535631 are in the year 2017 for PEN FUND, 2008 for MKT CAP and 2013 for TRAN VOL, and. The probability value shows that all the variables are significant. It is concluded that all the variables exhibit the same pattern in their growth.

4.1.2 Correlation Matrix

The correlation analysis emphasises the relationship existing amongst the variables of this study. The relation can tend to be positive or negative. The rule in ascertaining the relationship and extent of the relationship follows that a value below 5.0 indicates a weak relationship while a value over 5.0 indicates a strong relationship. Also, the negative sign (-) means an inverse or negative relationship while without the negative sign indicates a proportional or positive relationship.

Table 4.5: Correlation Matrix

Covariance Analysis: Ordinary
Date: 07/27/18 Time: 19:29
Sample: 2007 2017
Included observations: 11

Correlation Probability	PENSION_FUND	MKT_CAP	TRANS_VOLUME
PENSION_FUND	1.000000 -----		
MKT_CAP	0.738032 0.0095	1.000000 -----	
TRANS_VOLUME	-0.606234 0.0480	-0.213303 0.5289	1.000000 -----

Source: Author's Computation 2018

The correlation analysis of the variables depicts the relationship between Pension Fund, Market Capitalisation and Transaction Volume. There is positive, strong and significant relationship between Pension Fund and Market Capitalisation. This means that as pension fund increases so also market capitalisation. However, Pension Fund has a negative, moderate but significant relationship with Transaction Volume. This implies that, as pension fund increases, transaction volume deceases. The relationship between transaction volume and market capitalisation is also negative and insignificant.

4.2 Data Analysis

This section analyses the data for this study based on the results produced by the data. It focuses on the unit root test used to determine the stationarity of the variables, followed by the co-integration test used to show if there is long-run relationship between the variables in the model. Then the Regression is employed to estimate the parameters and test for the hypotheses of the study as stated in chapter one of this study.

4.2.1 Unit Root Test

The Unit Root Analysis helps to determine the stationarity of variables used for the analysis or to check for their order of integration. The stationarity state of the data for the analysis of this study would prove if data is consistent and suitable for analysis. Going by rule-of-thumb, a variable would be stationary if the calculated value is greater than the critical value irrespective of the sign.

Table 4.6: ADF Unit Root

Variables	**Levels**		**First Difference**		**Decision**
	Intercept	Intercept & Trend	Intercept	Intercept & Trend	
PENS_ FUND	-2.162512	-1.540086	-6.184455	-5.503200	I(1)
TRAN_ VOLUME	-1.566074	-2.135537	-5.802999	-5.750758	I(1)
MKT_CAP	-1.483248	-3.197565	-9.050685	-8.949953	I(1)
	Critical Dickey-Fuller t-Values				
1%	-3.75	-4.38	-3.75	-4.38	
5%	-3.00	-3.60	-3.00	-3.60	

Author's Computation

The Augmented Dickey-Fuller (ADF) test in table 1 shows that PENSION FUND, TRANSACTION VOLUME, MARKET CAPITALISATION all attain stationarity at first difference. They, therefore, integrated at order one [I(1)]. This indicates that the variables are consistent and suitable for analysis.

4.2.2 Co-integration Test

The co-integration test is used to show the long-run relationship between the variables in the model of this study. The Johansen Co-integration test is employed in this study as shown in table 4.7 below:

Table 4.7: Conintigration Test

Date: 07/27/18 Time: 15:51
Sample (adjusted): 2009-2017
Included observations: 9 after adjustments
Trend assumption: No deterministic trend
Series: MKT_CAP PENSION_FUND TRANS_VOLUME
Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistics	0.05 Critical Value	Prob.**
None *	0.965780	40.33125	24.27596	0.0002
At most 1	0.660440	9.956636	12.32090	0.1206
At most 2	0.025849	0.235699	4.129906	0.6856

Trace test indicates 1 cointegrating eqn(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 *	0.965780	30.37461	17.79730	0.0004
At most 1	0.660440	9.720937	11.22480	0.0908
At most 2	0.025849	0.235699	4.129906	0.6856

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level
* denotes rejection of the hypothesis at the 0.05 level
**MacKinnon-Haug-Michelis (1999) p-values

The result of the Co-integration rank test under none shows a p-value of 0.0002. This implies that there is a Co-integration between the variables. The test can also be carried out by comparing the trace statistics with the critical value. The value of trace statistics is 40.33 while the critical value is 24.28. Since the value of trace statistic is greater than that of the critical value, we reject the null hypothesis and accept the alternative that there is a long-run relationship between the variables. All the two co-integrating equations are significant at 5%. Again the test can also be carried out using the Maximum Eigen value. It shows two co-integrating equations which are significant at 5%. The p-value is 0.0004 and the value of Max-Eigen Statistics is also higher than the critical value.

4.2.3 Pension Fund and Market Capitalisation in Nigeria.

Table 4.8: Pension Fund effect on Market Capitalisation in the Capital Market

Coefficient	t-Statistics	Probability	r-square
1.313241	3.281277	0.0095	0.544691

The model tests the relevance of Pension Fund on Market Capitalisation. The relevance is seen on the power of the independent variables in explaining the market capitalisation, thus a higher R- square suggests the power of the model. The value of r-square in the table is 0.54, indicating that 54% of the variation in the Pension Fund and Transaction Volume is explained by the independent variables. The F value is 10.8 and F-statistics is 0.01 which means that the explanation of the model is significant. The probability value of 0.0095 is significant at 5%, as such the study rejects the null hypothesis and accepts the alternative that there is a significant positive effect of Pension Fund on Market Capitalisation.

4.2.4 Pension Fund and Transaction Volume

Table 4.9: Pension Fund Effect on Volume of Transaction in the Capital Market

Coefficient	t-Statistics	Probability	r-squared
-260.6598	-2.286854	0.0480	0.367520

The model tests the relevance of Pension Fund on Market Capitalisation. The relevance is seen on the power of the independent variables in explaining the market capitalisation, thus a higher R- square suggests the power of the model. The value of r-square in the table is 0.36 indicating that 36% of the variation in the Pension Fund and Transaction Volume is explained by the independent variables. The F value is 5.22 and F-statistics is 0.048 which means that the explanation of the model is significant. The probability value (0.0480) is significant at 5%, as such the study rejects the null hypothesis and accepts the alternative that there is a significant positive effect of Pension Fund on Transaction Volume in the Nigerian Capital Market.

4.2.5 Causal Relationship between Pension Fund, Market Capitalisation and Transaction Volume.

After establishing the long-run relationship using co-integration test, we determined the direction of causality of the variables using Granger Causality test. The result of the test is presented in the table below:

Table 4.10: Causality Test of Pension Fund, Transaction Volume and Market Capitalisation

Pairwise Granger Causality Tests
Date: 07/27/18 Time: 16:14
Sample: 2007 2017
Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
PENSION_FUND does not Granger Cause MKT_CAP	11	0.68263	0.5558
MKT_CAP does not Granger Cause PENSION_FUND		1.02374	0.4375
TRANS_VOLUME does not Granger Cause MKT_CAP	11	4.54709	0.0933
MKT_CAP does not Granger Cause TRANS_VOLUME		0.76735	0.5223
TRANS_VOLUME does not Granger Cause PENSION_FUND	11	0.98713	0.4483
PENSION_FUND does not Granger Cause TRANS_VOLUME		1.95165	0.2562

From the table above, the hypothesis that Pension Fund does not granger-cause the Market Capitalisation is accepted since the p-value is greater than 5%. Also the null hypothesis that Market Capitalisation does not Granger Cause Pension Fund is also accepted because the value of probability is greater than 5% leading us to rejection of the alternate hypothesis that causality flows from the two. From the forgoing, it shows also that causality is uni-directional between Market Capitalisation and Pension Fund.

Also, the test of causality between Market Capitalisation and Transaction Volume led us to accept the null hypothesis of the both and rejecting their respective alternate hypothesis because their respective p-values are 0.09 and 0.52. Again, causality is uni-directional.

4.3 Discussion of Findings

The results of this study are centred on the effect of pension fund on the development of the Nigerian capital market where market capitalisation and the total volume of transactions are used as proxies to show the development of the capital market in Nigeria. From the findings of the results, it is evident that pension fund has continued to grow in asset annually and same invested into the Nigerian capital market for its development leading to economic growth.

The study found from the first hypothesis that pension fund had positive and significant effect on market capitalisation. This result shows that an increase in the overall investment of pension fund asset into the Nigerian capital market would result in a significant increase in the capitalisation of capital market. This is in line with the findings of Catalan, Impavido, and Musalem (2000), who also found that pension funds increased equity market capitalisation and also the study of Salihu (2013), who found that pension reform had contributed to the development of the Nigeria's capital market through revamping of the moribund bonds sector and increased market capitalisation. However, this finding is in contrast to the findings of Madukwe (2015), who found that pension asset under management had no significant effect on market capitalisation.

On the other hand, there is a negative and significant effect of more investments of pension asset into the capital market and the total transaction volume of the capital market as revealed by the second hypothesis. That is, an increase in investment of pension fund asset into the capital market will decrease total volume of transaction. The result of this study is in line with the findings of Akabom-Ita, Aniefiok, and Arzizeh (2012); Mesike and Ibiwoye (2012); and Godson and Ade (2012) that found that pension fund only developed the capital market through the bond market but on the overall has not significantly developed the Nigerian capital market. However, there is a good prospect that the pension fund will in the long-run significantly affect the development of the capital market (stocks and bonds)

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Summary

This study is centred on the effect of pension fund on capital market development in Nigeria. In order to adequately ascertain fully the effect of pension on capital market development, market capitalisation and the transaction volume in the capital market were taken into consideration as proxies for the development of the capital market. As a result, the objectives of the study followed to determine the effect of pension fund on market capitalisation in Nigeria, the effect of pension fund on the volume of transactions traded in the Nigerian capital market, and to ascertain how pension fund had deepened activities of the Nigerian capital market with narrowed attention on the contributory pension scheme specifically from 2007 to 2017.

Literature was reviewed in order to first clarify the concept on the subject matter and issues surrounding pension scheme in Nigeria. Second, previous studies relating to pension scheme were also reviewed in order to ascertain the existing gap in the literature which this study aimed at bridging. Lastly, theories were also reviewed so as to gain a theoretical backing of the study.

Sequel to the review of the literature, the methodology for this study was set based on the descriptive and econometric analysis. Time series quarterly data were further collected from the PenCom's annual reports and the Central Bank of Nigeria statistical bulletin. The data collected for this study were first analysed by determining the correlational relationship between the variables. Data were further subjected to unit root test in order to determine the stationarity of the variables. The data shows that pension fund assets had continued to increase significantly, especially since the emergence of the contributory pension scheme

while the capitalisation of the capital market and transaction volume of the capital market had experienced fluctuations, especially during the period of the global recession. A look at the data as presented shows that over 50% of pension fund asset was invested into the capital market with the bond market taking the greatest proportion of this investment, unlike the stock market where a minor proportion of the pension fund asset was invested. Also, the pension fund controlled over 60% of investment in the bond market with almost all pension fund invested into the bond market going to the government bonds. On the other hand, pension fund controlled less than an average of 11.07% investment in the stock market.

In line with the objectives of this study, it was found that pension fund had a strong, positive and significant effect on market capitalisation in the Nigerian capital market and also a negative but significant effect on the volume of transaction in the Nigerian capital market.

5.2 Conclusion

The results of this study have shown that pension fund in Nigeria has significantly affected the development of the Nigerian capital market. However, there is a good prospect that the pension fund will in the long-run significantly affect the development of the capital market (stocks and bonds) and this is because pension fund positively and strongly correlates with the capital market development considering the capitalisation of the capital market while the pension fund correlates negatively with the volume of transaction in the capital market. With the emergence of the PRA, 2004 which was later repealed by the PRA, 2014, pension asset grew tremendously ever since providing more options and platform for the more investable fund at the Nigerian capital market.

It is evident from the results that an increase in pension asset would bring about the development of the Nigerian capital market since the pension asset correlates positively with all the indicators of the capital market development except for the volume of transaction. But

these results are not statistically significant, except for the effect of pension fund on market capitalisation. The reason for this is not far-fetched. It should be first noted that the stock market sub-section of the Nigerian capital market controls over 60% of the value of the capital market as shown in table 4.3. Second, most of the pension fund invested into the Nigerian capital market goes to the bond market which does not contribute significantly to the capital market. For instance, 68.8% of the pension fund was invested into the capital market in 2017 and the proportion into the stock market accounted for just 8.2% of the value of the stock market while proportion invested into the bond market accounted for 62.8% of the value of the bond market. Also, the limit of the pension fund to be invested into the stock market through ordinary shares as stipulated by the Pension Asset Investment Regulation is 25%. This has not been met over the years. On the overall, the total pension fund invested by the Pension Fund Administrators (PFAs) into the capital market accounts for just 31.5% capitalisation of the Nigerian capital market. Aside from 2016 where the total pension fund invested by the Pension Fund Administrators (PFAs) into the capital market account for 33.8%, that of 2017 is the highest recorded. Although pensioners fund must be invested into portfolios where it is most safe and would yield the best return possible, yet, the need to develop the capital market is by putting more focus on the stock market which will bring about the financial deepening of the financial sector and thus make investable fund available to investor which will further result in economic growth. Also, it should be noted that PFAs are likely discouraged from investing into the stock of corporate firm because not all these firms have the requirements for the pension fund to go into them which is the reason for the level of volatility in the capital market.

5.3 Policy Recommendations

It is clear that investment of pension fund is mainly determined by the Pension Fund Administrators (PFAs) with the core interest of pensioners at heart. This is the reason why

more attention is focused on the bond market because of its attractiveness and safety. However, it must be noted that the development of the capital market through developing the stock market will further deepen the financial sector and make the investible fund available to the investor, which will grow the economy. Hence, based on the findings of this study, the following recommendations are proffered:

In order for the pension fund to play a critical role in deepening the market and maintaining its relative stability, the PFAs must take advantage of the robust platform put in place by the PenCom as regards securities lending. This suggests lending out the securities owned by the PFAs through the capital market and taking advantage of the spread and fee paid by the borrower on the securities.

National Pension Commission should ensure that there is effective liberalisation of the pension fund investment to encourage more investment in both the stock and bond market subsection of the Nigerian Capital Market since there is a positive relationship between Pension Fund Asset and Capital Market in Nigeria.

Pension Fund Administrators (PFA) should increase the investment of pension fund into the stock market in order to address the lopsidedness existing between pension fund invested into the bond and stock market, which will further enhance financial deepening of the capital market.

Corporate organisations quoted on the NSE that want to benefit from pension fund investment should meet the requirements (provided by the PRA/ Investment Regulation Guidelines) to enable them attract the investment of pension fund assets while the Security and Exchange Commission develops a robust market capable of meeting the needs of PFAs by allowing for greater participation by pension funds in enhancing the liquidity of the

domestic capital market. This will encourage the withdrawal of pension fund invested in foreign assets back into the domestic capital market.

References

Adams, R.A. (2005). *Public Sector Accounting & Finance*. Lagos: Corporate Publisher Ventures.

Adeusi, S.O., Sulaiman, L.A. & Azeez, B. A. (2013). Impact of capital market development on the Nigerian economy: A post-SAP analysis. *Journal of Economics and Behavioral Studies, Vol. 5, No. 1, pp. 1-7.*

Ahmad MK (2006). The Contributory Pension Scheme: Institutional and Legal Frameworks. *CBN Bullion*, 30(2), 1-18.

Ahmed, M.K. (2007). Outlook of the Nigerian pension sector. PenCom, Abuja.

Akabom-Ita, A., Aniefiok, U. A. & Arzizeh, T. T. (2012). Nigerian Pension Reforms and Management: New Strategies for Rewarding Past Intellectuals Towards Sustainable Development in the Third World. *Global Journal of Management and Business Research*, Volume 12 Issue 13 Version 1.0

Akerlof, G. (1970). The market for lemons: quality uncertainty and the market mechanism. *Quarterly Journal of Economics* 48, 488-500.

Anyanwu, J. C. (1999). Stock Market Development and Nigerian Economic Growth. *Nigerian Financial Review*, 2, 6-13.

Babalola, J. A. & Adegbite, M. A. (1999). The Performance of the Nigerian Capital Market since Deregulation in 1986. *CBN Economic & Financial Review*, 39(1), 1-19.

Balogun, A. (2006). Understanding the New Pension Reforms act (PRA) 2004. CBN Bullion, 3(2).

Bassey, N. E., Etim O. U. & Asinya, F. A. (2008). An Overview of the Nigerian Pension Scheme from 1951-2004. *Global Journal of Humanities* Vol. 7, No. 1&2, 2008: 61-70. Bachudo Science Co. Ltd, Printed Nigeria.

Barrow, G. (2008). Pension Fund Administration in Nigeria. Abuja, Nigeria: pen and pages Ltd.

Beck, Y., R. Levine & N Loayza (2000). Finance and the sources of growth. *Journal of financial economics* 58: 261-300.

Bencivenga, V.R., Smith, D. & Starr, M. (1996). Equity Markets, Transaction Costs, and Capital Accumulations: An Illustration. *The World Bank Review*, Vol. 10 No. 2, pp. 241-265.

Bernanke, B. S. (1992-93). Credit in the macro economy, *FRBNY Quarterly Review Spring*, 50-70.

Catalan, M., Impavido, G. & Musalem, A. R. (2000). Contractual savings or stock market development: which leads? *Journal of Applied Social Science Studies*, 120(3), 445-487.

Davis, E. P. (2006). How will Ageing Affect the Structure of Financial Markets? Sydney. *G20 Workshop on Demography and Financial Markets*.

Dostal, M. J. (2010). Pension Reform in Nigeria Five Years on: Great Leap or inappropriate Pol-icy Design? *Paper presented at 60th conference of Political Studies Association (PSA)*, University of Edinburgh, Scotland.

Donwa, P. & Odia, J. (2010). An Empirical Analysis of the Impact of the Capital Market on her Socio-Economic Development, *Journal of Social Sciences*, Vol. 24, No. 2, pp. 135-142.

Edogbanya, A. (2013). An Assessment of the Impact of Contributory Pension Scheme to Nigerian Economic Development, *Global Journal of Management and Business Research*; Vol. 13 Issue 2, Version 1.0.

Godson, M. & Ade, I. (2012). Pension Reform and Financial Market Development Nexus: Evidence from Nigeria. *International Journal of Academic Research in Business and Social Sciences*, Vol. 2, No. 6.

Haruna, M., Makama, L. L. & Daniel, D. (2015). Effects of Contributory Pension Scheme on Economic Development of Nigeria. *International Journal of Innovative Research and Creative Technology*, Volume 2; Issue 2.

Ime, T. A. & Mfon. S. U. (2014). Pension Administration and Capital Formation in Nigeria: The Challenges. *European Journal of Business and Management,* Vol.6, No.6.

Imobighe, M.D. (2015). The Role of Capital Markets in the Development of Nigerian Economy. *Journal of Economics and Sustainable Development*, Vol.6, No.22.

Jhingan, M. L. (2004). The Economic of Development and Planning. New Delhi, Vrinda Publications Limited

Kalu, C. U. & Nicholas A. (2015). Impact of Contributory Pension Scheme on Workers' Savings and Investment in Nigeria: Anambra State Case Study. *IOSR Journal of Economics and Finance (IOSR-JEF),* Volume 6, Issue 2. Ver. II, PP 09-20.

Komolafe, F. (2004). Reform Only Public Sector Pension. Vanguard Books, London, UK, PP. 15.

Levine, R. (1991). Stock Markets, Growth and Tax Policy. *Journal of Finance,* Vol.46, No. 4, pp1445-1465.

Logue, D.E. & Rogalski, R.J. (1984). Managing Corporate Pension Plans: The Impacts of Inflation. *American Institute for Public Policy Research*. Washington DC, pp.4.

Madukwe, O. D. (2015). Effects of Contributory Pension Scheme on Capital Market in Nigeria. *International Journal of Management and Commerce Innovations* Vol. 2, Issue 2.

Mesike, G. & Ibiwoye, A. (2012). Pension Reform and Financial Market Development Nexus: Evidence from Nigeria. *International Journal of Academic Research in Business and Social Sciences,* Vol. 2, No. 6 ISSN: 2222-6990.

Njuguna, A. G. (2010). Strategies to Improve Pension Fund Efficiency in Kenya. www.dspace.nmmu.ac.za:8080/jspui/.../1/Amos%20Gitau%20Njuguna.pdf.

Nnanna, O. J., Englama, A. & Odoko, F. O. (2004). Financial Markets in Nigeria. *Central Bank of Nigeria Economic and Financial Review,* 47(7), 11-23.

Nwanne, T. F. I. (2015). Impact of contributory pension scheme on economic growth in Nigeria. *Global Advanced Research Journal of Management and Business Studies* (ISSN: 2315-5086) Vol. 4(8) pp. 333-337,

Odia, O. & Okoye, A. E. (2012). Pensions Reform in Nigeria: A Comparison between the Old and New Scheme. *Afro Asian Journal of Social Sciences,* Volume3, No. 3.1 Quarter I 2012 ISSN: 2229 – 5313.

Ojiya, E. A., Ajie, H. A. & Isiwu, G. D. (2017). Impact of Contributory Pension Scheme on Economic Growth in Nigeria: An Empirical Analysis. *International Journal of Research in Humanities and Social Studies* Volume 4, Issue 6, PP 24-35.

Olowe, R. A. (2004). The Impact of Deregulation on the Behaviour of Industry Returns on the Nigerian Stock Exchange. *Proceedings of the Annual Conference of the Nigeria Society for Financial Research (NSFR),* Department of Business Administration, University of Lagos, November 10th-12th.

Onifade, P. (2010). Worldwide Pension Crisis: What Crisis in Nigeria? *Business Day,* Thursday, 14 January.

Owo, B. I. (2008). An Appraisal of the New Pension Reform in Nigeria. *Journal of Research in National Development* Volume 6 NO 1, June, 2008**.** http://www.transcampus.org/JORINDV6Jun2008/JournalsV6NO1June200825.html.

PenCom (2014). National Pension Commission Data. www.pencom.org.ng. Accessed on 12th May, 2014.

Pension Reform Act (2004). Sections. *Federal Government Press*, Lagos, 11 (8), 69-70.

Pension Reform Act (2004). *National Pension Commission.* *www.pencom.gov.ng*.

Rabelo, M.F. (2002). *Comparative Regulation of Private Pension plans*. Retrieved March 20, 2008 from http://www.oecd.org/dataoecd.pdf

Rajnish, M., Facundo, P. & Edward, C. P. (2011). Costly Financial Intermediation in Neoclassical Growth Theory. *Federal Reserve Bank of Minneapolis Research Department, Working Paper* 685.

Roldos, J. E. (2004). Pension Reform, Investment Restrictions, and Capital Markets. *IMF Policy Discussion Paper* PDP/04/4.

Rothschild, M. & Stiglitz, J. E. (1976). Equilibrium in competitive insurance markets: an essay on the economics of imperfect information. *Quarterly Journal of Economics* 95, 629-649.

Spence, M. (1973). Job market signalling. *Quarterly Journal of Economics* 87, 355-374.

Sule, K. O. & Ezugwu, C. I. (2009). Evaluation of the Application of the Contributory Pension Scheme on Employee Retirement Benefits of Quoted Firms in Nigeria. *African Journal of Accounting, Economics, Finance and Banking Research* Vol. 4. No. 4. 2009.

Sule, O. & Momoh, O. (2009) Pension Systems in Nigeria: Past and Present. *African Journal of Accounting, Economics, Finance and Banking Research*. 5(5): 77 – 89.

Thomas P.& Lemke, G. T. L. (2010). ERISA for Money Managers. Thomson Reuters. Retrieved from http//; ISBN 9780314627056. On 16 November, 2015.

Vittas, D. (2000). Pension Reform and Capital Market Development: Feasibility and impact Preconditions. World Bank Development Research Group. *Policy Research Working Paper* 2414.

Walker, E. & Lefort, F. (2002). Pension Reform and Capital Markets: Are There Any (Hard) Links? *Social Protection Discussion Paper 0201*. Washington, DC: World Bank.

Wicksell, K. (1906). Lectures on political economy, in Reprints of Economic Classics 1 976, Vol. 2, Augustus M. Kelly, pp. 127-208.

Yermo, J. (2005). The Contribution of Pension Funds to Capital market Development in Chile. OECD Publishing.

Yola, M. (2013). Only Six States have Fully Adopted New Pension Scheme. Logbaby.com/news/-only-six-stateshave-fully-adopted-new-pension-scheme. Accessed on 20th June, 2014.

APPENDIX I

QUARTERLY PENSION FUND ASSET IN THE NIGERIA CAPITAL MARKET STOCK AND BOND

TIME	**PENSION (Nb)**	**STOCK (Nb)**	**BOND (Nb)**
2007 Q1	489.8	7232.2	2523.8
2007 Q2	521.2	9232.2	2831.1
2007 Q3	617.6	10021	2716.2
2007 Q4	815.18	10180.3	2993.6
2008 Q1	803.21	9124.2	2765.7
2008 Q2	762.5	8345	2643.4
2008 Q3	899.9	7426.2	2500.5
2008 Q4	1099.01	6957.5	2575.4
2009 Q1	1102.3	6237.6	2217.4
2009 Q2	1199.9	5434.2	2201.3
2009 Q3	1323.5	5005.43	2116.8
2009 Q4	1529.63	4989.4	2040.9
2010 Q1	1723.2	5264.74	2102.3
2010 Q2	1799.98	6534.5	2098.3
2010 Q3	1923.4	7102.3	1989.2
2010 Q4	2029.77	7913.8	1995.7
2011 Q1	2134.3	7432.4	2109.3
2011 Q2	2381.3	7135.4	2948.3
2011 Q3	2402.3	6936.2	3321.2
2011 Q4	2442.84	6532.6	3741.8
2012 Q1	2598.98	6827.2	3964.5
2012 Q2	2876.11	7537.3	4327.3
2012 Q3	2979.01	8432.2	5527.3
2012 Q4	3151.61	8974.4	5825.4
2013 Q1	3273	9785.6	5743.2
2013 Q2	3416	10082.3	5543.8
2013 Q3	3598	12087.2	5637.2
2013 Q4	4058.09	13226	5850.9
2014 Q1	4091	13002.8	5801.2
2014 Q2	4248	12115.3	5549.2
2014 Q3	4454	12135.8	5449.8
2014 Q4	4610.97	11477.7	5393
2015 Q1	4549	10234.1	6342.1
2015 Q2	4863	9989.2	6776.2
2015 Q3	4981	9800.2	6923.7
2015 Q4	5302.82	98500.6	7148.8
2016 Q1	5254	9534.3	7023.2
2016 Q2	5359	9434.3	7234.2
2016 Q3	5820	9343.2	6901.01
2016 Q4	6164.76	9246.9	6934
2017Q1	6724	10645.4	7036.5
2017Q2	6989	10978.3	7118
2017Q3	7164	11954.8	7217.4
2017Q4	7515	13609.5	7515.7

Source: * Total Pension Fund Asset – National Pension Commission (PenCom)

*** Total Value of Capital Market - CBN Statistical Bulletin**

APPENDIX II

YEAR ON YEAR PENSION FUND ASSET IN THE NIGERIA CAPITAL MARKET (STOCKS AND BONDS)

Proportion of Pension Fund Investment in Bond Market

Year	Bond	Pen Invest		% Pen Invest in Bond
2007	2993.6	279.98	0.093526189	9.35261892
2008	2575.4	365.96	0.142098315	14.20983148
2009	2040.9	563.77	0.276235974	27.62359743
2010	1995.7	949.53	0.475787944	47.57879441
2011	3741.8	1343.56	0.359067828	35.90678283
2012	5825.4	1733.38	0.297555533	29.75555327
2013	5850.9	2231.95	0.381471227	38.14712266
2014	5393	2536.03	0.470244762	47.02447617
2015	7148.8	2916.55	0.407977563	40.79775627
2016	6934	4873.36	0.702820883	70.28208826
2017	6984.6	4391.8	0.628783323	62.87833233

Proportion of Pension Fund Investment in Stock Market

Year	Stock	Pen Invest		% Pen Invest in Stock
2007	10180.3	243.44	0.023913	2.391285
2008	6957.5	222.77	0.032019	3.201868
2009	4989.4	223.51	0.044797	4.479697
2010	7913.8	382.13	0.048287	4.828654
2011	6532.6	732.85	0.112184	11.21835
2012	8974.4	945.48	0.105353	10.5353
2013	13226	1217.43	0.092048	9.204824
2014	11477.7	1383.29	0.12052	12.05198
2015	9850.6	1590.84	0.161497	16.14968
2016	9246.9	603.62	0.065278	6.527809
2017	9437.5	776.8	0.08231	8.230993

Source: * Total Pension Fund Asset – National Pension Commission (PenCom)

*** Total Value of Capital Market - CBN Statistical Bulletin**