

PORTFOLIO ANALYSIS OF PENSION FUNDS INVESTMENT IN NIGERIA

Ezugwu, C.I. Ph.D

Alex Abiremi, Itodo

DEPARTMENT OF ACCOUNTING, FACULTY OF MANAGEMENT SCIENCES
KOGI STATE UNIVERSITY, ANYIGBA

Abstract

The study is aimed at analyzing the portfolio of pension funds investment by Pension Funds Administrators in Nigeria. Therefore, this study employed Ex-post facto research designs. The study utilized data from secondary source. Data were obtained from the annual reports and accounts of the National Pension Commission (PenCom) that made up the sample for the study for the period 2007 to Third Quarter 2012. The population of the study is the thirty – five (35) licensed Pension Fund operators and the Approved Existing Scheme. The sample was drawn randomly, thus thirty- five (35) pension fund operators were selected for the study. In this direction, a sample time frame of six years was used for the study covering the period 2007 to third quarter 2012. In this study, data generated through the secondary source were subjected to empirical test and statistical analysis using multiple Regression and Covariance\Correlation Matrix. The result showed that equity which had the highest percent in the portfolio also returned the highest value of N2.8528bn. The consistent increase in return over an increase in the weight of the asset classes in the portfolio suggests a direct relationship between size of asset in a portfolio and its return. We therefore recommend that Capital Market Operators are enjoined to continuously scan the macro-economic environment and liaise with institutional investors, in order to develop investible products that will satisfy the risk-reward profile of institutional investors. We also call for increased Investors' confidence; there is need for high corporate governance practices, market discipline and strict enforcement of rules in the capital market. The National Pension Commission will continue to partner with relevant stakeholders, make its Investment Regulation more flexible and encourage increased pension fund investments in order to further develop and deepen the Nigerian capital market.

Keywords: Portfolio Analysis, Pension Fund Investment, Pension Fund Operators, Nigeria and National Pension Commission

INTRODUCTION

1.1 Background of the Study

The privilege of receiving gratuity and pension appears the greatest manifestation of the victory of labour in his fight with the employer over his exploitation after several years of productive services. Hence, pension reform became necessary as a result of the malady which ravaged Pension Schemes through the activities of the old Pension Board. With the bad

administration of Pension Schemes in Nigeria, the hope of the pensioner became bleak, as many verification exercises were embarked by old Pension Board to mock the pathetic pensioners. This eventually escalated their agony as their labour became in vain. Many of these pensioners lost their lives as a result of these exercises which do not yield any good dividend. Indeed, today people have resorted to self-help to secure their life in retirement. Thus fueling corruption and other vices (Fanimio et al, 2007).

Pension Scheme which was meant to provide for old age when one has retired from service has turned out to become a burden on the people and the government. These Nigerian workers who have worked tirelessly for the growth and development of the country will end up passing through many hurdles to get their retirement benefits. It should be noted that the Federal Government still owes pension obligation areas in excess of N2 trillion national pension deficits as at 2004 and 216,000 retirees from the Federal public service being owed a whopping N56 billion retirement benefit (Moddibo 2007).

From the foregoing, in order to reposition and refocus the Nigeria Pension Scheme to be alive to its responsibility and to address some of the problems associated with Pension Schemes in Nigeria. The Federal Government signed into law the Pension Reform Act 2004 which introduced the New Contributory Pension Scheme and it covers employees in the public sector, the Federal Capital Territory and the private sector. The Contributory Pension Scheme (CPS) was established under Section 1 (1) of the Pension Reform Act 2004 (PRA 2004) for employees in both the public and private sectors. Under the scheme, each employee and employer contribute a minimum of 7.5% of the employee's monthly emoluments but in the Military, an officer contributes 2.5% while the employer contributes 12.5%. An employer may elect to contribute on behalf of the employees provided that the total contribution shall not be less than 15% of the monthly emoluments of the employees. The scheme allows for voluntary contributions to be made by employees (including those exempted by the Act) that could only be taxed at the point of withdrawal where the withdrawal was made before five years from the date the first voluntary contribution was made. The scheme is fully funded, meaning that the contribution of an employee is deducted monthly from the employee's salary while the employer will provide the counter-part contribution for the employee, which will both be transferred to the relevant retirement savings account. By so doing, the pension assets are set aside from the onset to meet future pension liabilities. Each employee is required by law to open a „Retirement Savings Account“ (RSA) in his name with a Pension Fund Administrator (PFA) of his choice. This individual account belongs to the employee and will remain with him for life even if he/she changes employers or PFA.

An employee could withdraw a lump sum of 25% of the balance standing to the credit of his/her RSA provided that he/she is less than 50 years at the time of retirement and he could not secure a new employment six months after leaving the last employment. Similarly, he/she can withdraw a lump sum amount if he is 50 years or above at the time of retirement and the amount remaining after the lump sum withdrawal shall be sufficient to procure an annuity for life or fund programmed withdrawals that will produce an amount not less than 50% of his monthly remuneration as at the date of his retirement.

However, the success of the pension reform is hinged on the availability of pension fund assets to contributors when they retire. There are a number of strict provisions contained in the Pension Reform Act 2004 and in the guidelines and regulations issued by PenCom with the main objective of protecting the pension fund assets. The first safeguard is the separation of the functions of the PFA and PFC such that it is difficult for either to misuse the pension fund assets to the detriment of the contributor. Contributions are remitted directly by the employer to the PFC. On the other hand, the PFC would not invest the pension assets except to the instruction of the PFA. In addition, shareholders of a PFC must issue guarantee to the full sum and value of the pension assets held by it or to be held by it. Also, pension assets held by a

PFC shall not be used to meet the claim of any of the PFC's creditors in the event of its liquidation. Similarly, such assets shall not be seized or subject to execution of judgment debt or stopped from being transferred to another PFC. Furthermore, the PFC shall not sell, grant loan or use the pension fund assets as collateral. PenCom regulations require that investment of pension fund can only be made on the floor of a recognized Stock Exchange or a money market platform approved by the CBN or Money Market Association of Nigeria. All instruments should have rating grades stipulated in the Investment Regulations issued by PenCom before pension fund is invested in them (Sule and Ezugwu, 2009).

Thus, the actual licensing of pension fund operators, registration of contributors and investment activities commenced in 2006. There are currently 24 Pension Fund Administrators (PFAs), 7 Closed Pension Fund Administrators (CPFAs) and 4 Pension Fund Custodians (PFCs). Approximately 5million registered contributors under the Contributory Pension Scheme (CPS), with 64% below 40 years. There are 51,000 retirees under the CPS, already receiving their monthly pensions as and when due. Pension contributions are invested as a pool of funds by the PFAs / CPFAs, in line with Regulations & Guidelines issued by the Commission. Value of Pension Fund Assets under Management was N2.7trillion as at 30 June 2012, with current average monthly pension contributions of N25billion. Pension funds investment could provide long term funds for economic and social development of the country (Henshaw, 2012).

It is against this background that this study seeks to analyze the portfolio of pension funds investment by Pension Funds Administrators in Nigeria. To this end, the paper is structured into four major parts. Section one is the Introduction, section two which follows this introduction present, the literature review, section three discusses the methodology, while section four presents the conclusion and some recommendations.

1.2 Statement of Problem

Managing and administering pension funds have continued to pose a major challenge to government in Nigeria. Yet, pension which guarantees an employee certain comfort in his or her inactive year is critical to the sustenance of the life of the individual and the society (Nkanga, 2005). In our society today, most workers are not covered by any reasonable form of retirement benefit arrangement while the few schemes suffer from poor management.

Pension reform in Nigeria was necessitated by many problems confronting both the public and private sectors pension schemes. The public sector operated largely the Pay-As-You-Go scheme, which depended on budgetary provisions from various tiers of government for funding. Under the PAYG, which was also a Defined Benefit (DB) scheme, contributions were not generally made, and projections were required to be made of the pension entitlements of each employee by the employer, with such projections being determined by the employee's years of service and earnings. Thus, the pension obligations were effectively the debt obligation of the employer. The scheme became unsustainable due to lack of adequate and timely budgetary provisions and increases in salaries and pensions. Even where adequate budget provision was made the scheme was not generally funded. There was also demographic shift due to rising life expectancy, which was a phenomenon that elongated the pension obligations of various tiers of government in the country. Most of the private sector schemes were akin to Provident Fund Schemes, which did not provide for periodic benefits. Even at that, many private sector employees were not covered by any form of pension scheme. The schemes had been characterized by diversified arrangements that were largely unregulated. The number of pension schemes became unwieldy as there were almost as many schemes as the number of employers that managed them. In addition, prior to the commencement of the Contributory Pension Scheme in 2004, there was very low compliance ratio due to absence of regulation and supervision of the system. At best, pension administration in both public and

private sectors had been grossly underfunded, weak, inefficient, less transparent and cumbersome. In that abysmal state, it became logical to contemplate a scheme that would meet the yearnings of workers and pensioners.

One of the major challenges confronting the managers of the PFAs in investment decisions is the dearth of investment outlets. According to Pencom (2008), this situation is further complicated by the recapitalization program of the financial sector (banks, insurance companies and stock broking companies). The Nigerian capital market is still under developed. The top twenty companies in the capital market have more than 70% of the total market capitalization, thus, there will be a pool of pension funds chasing few quality investments (Tsado and Gunu, 2011). Regulatory restrictions of asset allocation and investing limits have also continued to inhibit the performances of the PFA managers in their investment decision making (BGL, 2010).

REVIEW OF RELATED LITERATURE

2.1 Pension Funds Investment Regulatory Environment

The major objectives of pension fund investments are to ensure safety of pension fund assets and maintenance of fair (above-inflation) returns on investment. The Investment Regulation under a Mandatory Defined Contributory Scheme is prudent, conservative and generally stringent (with qualitative and quantitative restrictions), as PFAs have a fiduciary responsibility to Contributors since the ultimate investment risks are borne by the Contributors. The current Investment Regulatory Framework consists of the: Regulation on Investment of Pension Fund Assets, Regulation on Valuation of Pension Fund Assets, Regulation on Fees Structure; and Guidelines on Direct Real Estate Investment by CPFA and AES Funds.

Therefore, Pension Fund Investments are mostly in regulated instruments; while transactions are carried out on transparent platforms (registered Securities Exchanges/ Trading Platforms). Pension Fund Assets are valued on a Marked – to – Market basis, except bonds. Daily valuation reports are rendered electronically to the Commission on the RSA Funds; while monthly valuation reports are rendered on the CPFA Funds and Approved Existing Schemes. The RSA Funds are priced on a daily basis, due to daily entry and exit by Contributors. Pension Fund Custodians (PFCs) shall only take instructions from licensed Pension Fund Administrators (PFAs) on the investment and management of pension fund assets held in their custody, on behalf of the Contributors. The PFCs in discharging their contractual functions to PFAs, shall not contract out the custody of pension fund assets to third parties, except for allowable investments made outside Nigeria, The PFC shall obtain prior approval from the Commission before engaging a global Custodian for such allowable foreign investments (PenCom, 2012). Similarly, the on-going amendment to the PRA 2004 is to address some implementation challenges. Specific Amendments to the Investment Regulation: Introduction of a Multi-fund Structure to address the varied risk appetites of contributors. This measure would address the current short term investment perspective of some PFAs as well as increase their investments in growth/alternative assets, particularly in Fund1 (which is for the young contributors). Inclusion of Exchange Traded Funds (ETFs) as allowable securities. Reduction in the retention level of Fund Managers in their PE and Infrastructure Funds, in order to encourage local Fund Managers with requisite experience and knowledge. Inclusion of a new provision to mitigate to an extent, conflicts of interest in transactions under taken by PFAs with related parties. Finalized Guidelines on Pension Investments in Global Depository Receipts / Note and Euro bonds.

Table 2.1 MAXIMUM ASSETS ALLOCATION (RSA Funds)

ASSET CLASSES	Pre-Dec 2010	Post-Dec 2010 (Current)
	Maximum Limit	Maximum Limit
Quoted Ordinary Shares	25%	25%
FGN Securities	100%	80%
State Government Securities	30%	20%
Corporate Debt Securities (including Infrastructure Bonds, REITs, ABS, MBS, Global Depository Notes & Eurobonds)	30%	35%
Money Market Securities	35%	35%
Open/Close-end Funds	5%	20%
Private Equity Funds	NIL	5%
Infrastructure Funds	NIL	5%
Supranational bonds	NIL	20%

Source: PenCom, 2010 & Henshaw, 2012

2.1 Investment of Pension Assets under the New Contributory Pension scheme

Part IX of the Pension Reform Act 2004 provides that all contributions by members shall be invested by the Pension Fund Administrators with the objectives of safety and maintenance of fair returns on amount invested. The authorized trading markets under the Act and the investments guidelines issued by PenCom states that pension assets shall be invested in any of the following:

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 made taxable profits in the preceding five years and have paid dividends of those taxable profits one of the preceding five years.

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% on pension assets under management

Infrastructure Funds

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

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

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 5% of pension assets under management

Global Depository Receipts/Notes and Eurobonds

Pension Fund Assets may be invested in Global Depositary Receipts/Notes and Eurobonds issued by listed Nigerian companies for their operations within Nigeria as certified and approved by SEC

Bankers Acceptances (BAs) and Commercial Papers (CPs)

Pension Fund Assets may be invested in commercial papers of corporate entities provided it is in compliance with the CBN's guidelines on BAs and CPs

Bonds

Pension Fund Assets can be invested in FGN or CBN Bond and Securities to a maximum of 80% of pension assets under management. Pension Fund Assets may be invested in bonds issued by State and Local government or State Government Agencies or wholly owned companies, provided that such securities are fully guaranteed by Irrevocable Standing Payment Orders (ISPOs) or external guarantees by eligible banks or development finance institution or MDFOs. Also included are bonds, debentures, redeemable/convertible preference shares and other debt instruments issued by corporate entities, including asset backed securities and infrastructure bonds and supranational bonds issued by eligible MDFOs. A PFA may invest assets in units of any investment fund; provided that such an investment fund may only be invested in the categories listed above and in real estate (74). Subject to Central Bank of Nigeria exchange rules, the PenCom may recommend to the President that approval be granted for the investment of assets outside the Federal Republic of Nigeria (74). Egbe, et.al, 2013.

A PFA shall not invest assets in the shares or any other securities issued by the PFA and shareholder of the PFA (75). The PFA shall not sell assets to itself, any shareholder, director or affiliate of the PFA, any employee of the PFA, the spouse of any of the aforementioned or those related to the said persons, affiliates or any the said persons, affiliates or any shareholder of the PFC or the PAC nor the PAC holding assets to the order of the PFA (76). The PFA shall not purchase any pension fund assets and apply assets under its management by way of loans and credits or as collateral for any loan (76).

The PenCom may impose additional restrictions on investments by PFA's where such restrictions are imposed with the object of protecting the interest of the holders of RSA's (77). Every PFA shall have due regard to the risk rating of instruments that has been undertaken by a registered risk rating company (77).

The Investment Strategy Committee shall formulate strategies for complying with investment guidelines issued by the PenCom; determine an optimal investment mix with risk profile agreed by the board of the PFA; evaluate the value of the portfolios and make proposals to the board of the PFA; review the performance of the major securities of the portfolios of the PFA; carry out other functions related to investment strategy as the board of the PFA may determine (66) (Pension Reform Act, 2004 and Peterside, 2006)

2.2.1 The Investment Guidelines

National Pension Commission, as one of its primary roles and responsibilities under "the Act", has developed Investment Guidelines after due consultation with the key operators of the Scheme (PFAs and PFCs) to guide investment activities of the Pension Fund Administrators in order to ensure that the pension funds are invested safely and securely in accordance with international best practices in investment management, and also to ensure the growth and protection of retirement benefits under the Act.

The underlying principles behind the guidelines are to ensure a broad asset allocation, diversification within asset classes, risk management, liquidity, opportunities and competitive returns on investment (Pension Reform Act, 2004).

2.2.2 The Asset Allocation Structure by National Pension Commission (PenCom)

We want to imagine that insurance companies, stockbrokers or commercial banks would be technically proficient enough to manage huge private pension contributions in Nigeria. That role had fallen on the lap of insurance companies before now due to the underdeveloped nature of asset management industry. With the advent of modern portfolio management tools, the

task could be handled more efficiently, albeit not a walk in the park' for any manager. A collaborative effort by the various institutions that are entrusted with any amount of fund could help deliver reasonable long-term reward as well as engender checks and balances in the fund management process. It would be totally absurd for any manager to simply acquire real estate, or dump these assets in stocks or treasury bills and then sit back to "watch it grow".

Executing suitable asset allocation strategies in consonance with underlying investment objectives could ensure that performance benchmarks are ultimately attained. Based on experience and industry standard, diversification is a proven technique for achieving optimum returns on investment portfolio.

Fund managers and pension administrators in Nigeria must realize that, a "one-model-fits-all" approach is wrong. When implementing a strategy, managers should take cognizance of market conditions, investment time-line and clients' risk profile.

PenCom requires every licensed operator to strictly adhere to the asset allocation module below that has a minimum three-prong investment posture;

Strategic asset allocation means that these investments will have long-term horizons. These include real estate investments, and stocks and bonds which can be held for upwards of three years. Tactical asset allocation means that these will have short-term horizons, Rapid asset growth, especially in the first five years. This is primarily a time-honored technique for spreading investment risk over many competing classes of investment and also an important method of safeguarding pension assets. Final selection depends on the employee, but a pension portfolio must have a balanced array of financial instruments in its arsenal to choose from. In the Nigerian situation, the investment guidelines produce typical long range pension fund portfolios that consist of the following asset categories in the following ratios in table 2.1below:

Table 2.2: Pension Investment Guidelines

OVERALL MAXIMUM INVESTMENT LIMITS

	ASSETS CLASS	GLOBAL PORTFOLIO	PER ISSUER LIMIT	PER ISSUE LIMIT
1	Government	FGN & CBN Securities:80% State & Local Goverts: 1. 20% if issue is backed by ISPO/ Guarantee ii. 3% for issue not backed by ISPO/Guarantee	Max:80% of Total Issue Max: 5% of pension assets under mgt in total issues of any one or Local Government	80% of the issue Based on credit rating of bond/debt instrument i. BBB Rating = 16% of issue ii. A Rating = 18% of issue iii. AA Rating & Above= 20% of issue
2	Corporate Bonds/Debt Securities (including ABS, MBS & Infrastructure Bonds	35% subject to max of 15% in Infrastructure Bonds	Max of pension assets under mgt in total issues of any one corporate entity	Based on credit rating of bond/debt instrument: i. BBB Rating = 16% of issue ii. A Rating & Above = 18% of issue iii. AA Rating & Above = 20% of issue
3	Supra-national bonds	20%	Max of pension funds under mgt in total issues of any one multilateral development finance organization	Based on credit rating of bond/debt instrument i.BBB Rating = 16% ii. A Rating = 18% of issue iii. AA Rating & Above = 20% of issue
4	Money Market Instrument (including Certificate of Deposits ;Bankers Acceptances of corporate	35%	I. Max investment of pension under mgt in all money market instruments issued by any one bank shall be subject to the issuer's credit rating: i. BBB Rating = 3% of assets under mgt	Applicable to Commercial Paper issues only: Based on credit rating of the corporate entity of the corporate entity issuing the commercial paper : i. A Rating = 18% of issue ii. AA Rating & Above = 20% of issue

	entities		ii. A Rating = 4% of assets under mgt iii. AA Rating & Above = 5% of assets under mgt II. Max of 3% of assets under mgt in money mgt instrument issued by any one discount house with a minimum rating of A III. Max of 5% of assets under mgt in corporate papers of any one corporate entity with a minimum rating of 'A'	
5	Ordinary Shares	25%	Max of 5% assets in any one corporate entity	Max of 4.5 of the issued capital of any one corporate entity
6	Infrastructure Funds	5%	Max of 5% of assets in any on issuer	Max of 20% of the value of any one Fund
7	Private Enquiry Funds	5%	Max of 5% of assets in any one issuer	Max of 20% of the value of any one Fund
8	Open, Close-end & Hybrid Funds(including REITS)	20%	Max of assets in any one issuer	Max of 10% of the value of any one Fund

Source: PenCom, 2010 & Sogunle, 2011

Table 2.2 shows the investment guideline on pension funded portfolios. Placing some of the funds in international capital markets will help diversify the portfolio and counter-balance market volatility at home but for the exposure to exchange risk and restrictions.

True, the array of financial products currently available in Nigeria is very limited, except Federal Government of Nigeria (FGN) bonds/securities, equities, treasury bills and commercial papers; you can hardly find other good quality instruments in which to invest these assets. This is changing real fast, thanks to the rapid pace of transformation occurring in the economy. It is also being expected that investment avenues would probably expand to fill the yearning gaps eventually (Peterside, 2006 and Dalang, 2006).

Establishment of the National Pension Commission

Section 14 (1) of the PRA 2004 provides for the establishment of PenCom to regulate, supervise and ensure the effective administration of pension matters in Nigeria. PenCom ensures that pension fund assets are safe through effective licensing, approving and regulating the pension fund operators and the pension industry. Similarly, PenCom issues Guidelines and Regulations for regulating and supervising the investment and other activities of pension fund operators and the pension industry. Under the CPS, PenCom as the apex regulator of pension matters shall receive and investigate any complaint of impropriety levelled against any pension fund operator or employer or any of their staff or agents. PenCom stands as a watchdog, with the overriding objective of ensuring that all pension matters are administered with minimum exposure to fraud and risk.

Pension Fund Operators

There are basically three types of pension fund operators, namely: Pension Fund Administrators (PFAs), Pension Fund Custodians (PFCs) and Closed Pension Fund Administrators (CPFAs). Also, there are Approved Existing Schemes (AES) which are basically pension schemes established by private sector and self funding public organisations prior to the commencement of the CPS and which have been approved by PenCom to continue. AES are managed by licensed PFAs and thus, their assets are transferred to licensed PFCs for custody.

Functions of the Pension Fund Administrators

Functions of PFAs are stipulated in Section 45 of the PRA 2004 and they are as follows:

- (i) Open Retirement Savings Account (RSA) for all employees with a Personal Identity Number (PIN) attached;
- (ii) Invest and manage pension fund assets in accordance with the provisions of the PRA 2004;
- (iii) Maintain books of account on all transactions relating to pension fund assets under its management;
- (iv) Provide regular information on investment strategy, market returns and other performance indicators to PenCom and employees or beneficiaries of the RSA;
- (v) Provide customer service support to employees, including access to employees' account balances and statements on demand;
- (vi) Cause to be paid retirement benefits to employees, including access to employees' account balances and statements on demand;
- (vii) Be responsible for all calculations in relation to retirement benefits; and
- (viii) Carry out other functions as may be directed, from time to time, by PenCom.

As provided under Section 40 (3) of the PRA 2004, a CPFA will perform the same functions as stipulated for PFAs under Section 45 of the Act. In addition, the pension fund assets managed by the CPFA must be transferred to a PFC. AES on the other hand are viable pension schemes in the private sector and self-funding public institutions existing before the commencement of the CPS who may continue to exist provided they satisfy the conditions as provided in Section 39 of the PRA 2004. AES pension funds are managed by PFAs (Adeoti, et. Al., 2012 and Sule, et. Al, 2011).

Functions of the Pension Fund Custodians

Functions of PFC are stipulated in Section 47 of the PRA 2004 and are itemised hereunder:

- (i) Receive the total contributions remitted within seven (7) days of pay day by the employer under Section 11 of the PRA 2004 on behalf of the PFA;
- (ii) Notify the PFA within 24 hours of the receipt of contributions from any employer;
- (iii) Hold pension fund assets in safe custody on trust for the employee and beneficiaries of the RSA;
- (iv) On behalf of the PFA, settle transactions and undertake activities relating to the administration of pension fund investments, including the collection of dividends and related activities;
- (v) Report to PenCom on matters relating to the assets held by it on behalf of any PFA at such intervals as may be determined from time to time by PenCom;
- (vi) Undertake statistical analysis on the investments and returns on investments with respect to pension fund assets in its custody and provide data and information to the PFA and PenCom; and
- (vii) Execute in favour of the PFA relevant proxy for the purpose of voting in relation to the investments.

2.3 Pension Contributions

The total pension contribution by employees of both the public & private sectors was ₦1, 469.37 billion as at the end of the third quarter. This marked an increase of ₦92.03 billion; representing 6.02% over the total contributions recorded at the end of second quarter as shown in Table 3.7. The increase in total pension contributions could be explained by the increased level of compliance with the Pension Reform Act 2004 by the State Government, & the private sector.

A review of total contributions in the quarter shows that public sector had ₦879.44 billion, representing a 59.85% of the total contributions as against the private sector contributions 40.15%.

Table 2.3: Pension Contributions

Year/ Quarter	Public Sector		Private Sector		Total	
	Amount (₦ billion)	% of Total	Amount (₦ billion)	% of Total	Amount (₦ billion)	% of Total
2004	15.60	1.77	-	-	15.60	1.60
2005	34.68	3.94	-	-	34.68	2.36
2006	37.38	4.25	23.03	3.90	60.41	4.11
2007	70.25	7.99	68.34	11.58	138.59	9.43
2008	99.28	11.29	80.81	13.70	180.09	9.43
2009	98.43	11.19	91.21	15.46	189.64	12.26
2010	162.45	18.47	102.86	17.44	265.31	18.06
Q1:2012	33.84	3.85	32.84	5.57	66.68	4.54

Q2:2012	46.36	5.27	31.54	5.35	77.90	5.30
Q3:2012	52.26	5.94	39.77	6.74	92.03	6.26
Total	879.44	100.00	589.93	100.00	1,469.37	100.00

3.0 METHODOLOGY

The study is aimed at analyzing the portfolio of pension funds investment by Pension Funds Administrators in Nigeria. Therefore, this study employed Ex-post facto research designs. The study utilized data from secondary source. Data were obtained from the annual reports and accounts of the National Pension Commission (PenCom) that made up the sample for the study for the period 2006 to Third Quarter 2012. The population of the study is the thirty – five (35) licensed Pension Fund operators and the Approved Existing Scheme. The sample was drawn randomly, thus thirty- five (35) pension fund operators were selected for the study (Asika, 1991; Awokwoni, 2004 and Onwumere, 2009). They are twenty – four (24) Pension Fund Administrators which include Aiico Pension Managers Limited, Amana Capital Pension Limited, Apt Pension Funds Managers Limited, ARM Pension Managers (PFA) Limited, Citi Trust Pension Managers Limited, Crib Pension Fund Managers Limited, Crusader Sterling Pensions Limited, Evergreen Pensions Limited, Fidelity Pension Managers Limited, First Guarantee Pension Limited, Future Unity Glanvills Pensions Limited, IEI-Anchor Pension Managers Limited, IGI Pension Fund Managers Limited, Leadway Pensure PFA Limited, Legacy Pension Managers Limited (PFA), NLPC Pension Fund Administrators Limited, Oak Pensions Limited, Penman Pensions Limited, Pensions Alliance Limited, Premium Pension Limited, Royal Trust Pension Fund Administrator Ltd, Sigma Pensions Limited, Stanbic IBTC Pension Managers Limited and Trust fund Pensions Plc. While it consist of seven (7) Closed PFAs which include Chevron Nigeria Pension Plan Limited, Nestle Nigeria Trust (CPFA) Limited, Nigerian Agip CPFA Limited, Progress Trust CPFA Limited, Shell Nig. Closed Pension Fund Administrator Ltd, Total (E and P) Nigeria CPFA Limited and Unico CPFA Limited. And four (4) Pension Fund Custodians which include Diamond Pension Fund Custodian Limited, First Pension Custodian Nigeria Limited, UBA Pensions Custodian Limited and Zenith Pensions Custodian Limited (Pension Annual Reports, 2010)

In this direction, a sample time frame of six years was used for the study covering the period 2007 to third quarter 2012. In this study, data generated through the secondary source were subjected to empirical test and statistical analysis. Similarly, this study borrowed from the works of Egbe, Awogbemi and Osu, (2013) and Tsado and Gunu, (2011) to test the hypothesis of the study which states that there was no significant relationship between size of asset in a portfolio and its return.

Table 3.1: Portfolio of Pension Funds as at Third Quarter 2012

ASSET CLASSES	3 rd Quarter 30/6/12		YEAR ENDED 31/12/11		YEAR ENDED 31/12/10		YEAR ENDED 31/12/09		YEAR ENDED 31/12/08		YEAR ENDED 31/12/07	
	₦ BILLION	%	₦ BILLION	%	₦ BILLION	%	₦ BILLION	%	₦ BILLION	%	₦ BILLION	%
Domestic Ordinary Shares	380	10%	320	13%	358	18%	221	15%	221	20%	240	30%
Foreign Ordinary Share	36	1%	33	1%	24	1%	3	0%	2	0%	3	0%
FGN Securities	1,729	64%	1,361	56%	829	41%	499	33%	351	32%	280	34%

State Government Securities	114		110	5%	70	3%	34	2%	0	0%	0	0%
		4%										
Corporate Debt Securities	83		75	3%	51	2%	31	2%	15	1%	0	0%
		3%										
Local Money Market Secs	418		319	13%	489	24%	542	35%	332	30%	160	20%
		10%										
Foreign Money Market Secs	5		1	0%	7	0%	18	1%	17	2%	26	3%
		0%										
Open/Close-end Funds	11		11	0%	9	0%	6	0%	9	1%	5	1%
		0%										
Real estate property	182		188	8%	171	8%	143	10%	125	11%	79	10%
		7%										
Supranational bonds	NIL		NIL	0%	NIL	0%	NIL	0%	NIL	0%	NIL	0%
		0%										
Private Equity Funds	13		10	0%	8	0%	6	0%	7	1%	4	0%
		0%										
Infrastructure Funds	NIL		NIL	0%	NIL	0%	NIL	0%	NIL	0%	NIL	0%
		0%										
Cash & Other Assets	34		23	1%	14	1%	28	2%	19	2%	18	2%
		1%										
Total Pension Fund Assetshh	2,739		2,450	100%	2,030	100%	1,530	100%	1,099	100%	815	100%
		100%										

Source: Pension Annual Report 2007 - 3rd Quarter 2012

3.1 RESEARCH HYPOTHESES AND TEST STATISTIC

The rates of return of the selected portfolio classes are tested against the rates of return of PENCOM guided portfolios of PFAs.

H0: $PRA_{OPT} \mu \leq \mu$

- PRA = Pension Reform Act Portfolio
- OPT = Optimized Portfolio

Using $\alpha = 0.05$ significance level and knowing fully well that a large positive value of $d = X_{PRA} - X_{OPT}$

CROSS DOS TPFA

Cross Correlations of Series DOS and TPFA

Annual Data from 2007:01 to 2012:01

-1	0	1
0.437885	0.852162	0.581525

CROSS FOS TPFA

Cross Correlations of Series FOS and TPFA

Annual Data From 2007:01 To 2012:01

-1	0	1
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0.491545 0.951381 0.638472

CROSS FGNS TPFA

Cross Correlations of Series FGNS and TPFA

Annual Data From 2007:01 To 2012:01

-1 0 1

0.405499 0.964921 0.642127

CROSS SGS TPFA

Cross Correlations of Series SGS and TPFA

Annual Data From 2008:01 To 2012:01

-1 0 1

0.482946 0.992091 0.393589

CROSS CDS TPFA

Cross Correlations of Series CDS and TPFA

Annual Data From 2008:01 To 2012:01

-1 0 1

0.432212 0.996604 0.447252

CROSS LMMS TPFA

Cross Correlations of Series LMMS and TPFA

Annual Data From 2007:01 To 2012:01

-1 0 1

0.42216 0.43629 -0.16066

CROSS FMMS TPFA

Cross Correlations of Series FMMS and TPFA

Annual Data From 2007:01 To 2012:01

-1 0 1

-0.65025 -0.93452 -0.41030

CROSS OCF TPFA

Cross Correlations of Series OCF and TPFA

Annual Data From 2007:01 To 2012:01

-1 0 1

0.456968 0.823952 0.356955

CROSS PEF TPFA

Cross Correlations of Series PEF and TPFA

Annual Data From 2007:01 To 2012:01

-1 0 1

0.545174 0.930201 0.413899

CROSS COA TPFA

Cross Correlations of Series COA and TPFA

Annual Data From 2007:01 To 2012:01

-1 0 1

-0.09691 0.62358 0.53147

STATS DOS

Statistics on Series DOS

Annual Data From 2007:01 To 2012:01

Observations 6

Sample Mean 286.666667 Variance 4475.866667

Standard Error 66.901918 SE of Sample Mean 27.312594

t-Statistic (Mean=0) 10.495769 Signif Level (Mean=0) 0.000135

Skewness	0.126664	Signif Level (Sk=0)	0.924783
Kurtosis (excess)	-2.826462	Signif Level (Ku=0)	0.490455
Jarque-Bera	2.013265	Signif Level (JB=0)	0.365448

STATS FOS

Statistics on Series FOS

Annual Data From 2007:01 To 2012:01

Observations	6		
Sample Mean	16.833333	Variance	256.566667
Standard Error	16.017699	SE of Sample Mean	6.539198
t-Statistic (Mean=0)	2.574220	Signif Level (Mean=0)	0.049780
Skewness	0.224579	Signif Level (Sk=0)	0.867062
Kurtosis (excess)	-2.766803	Signif Level (Ku=0)	0.499656
Jarque-Bera	1.964236	Signif Level (JB=0)	0.374517

STATS FGNS

Statistics on Series FGNS

Annual Data From 2007:01 To 2012:01

Observations	6		
Sample Mean	841.500000	Variance	346174.300000
Standard Error	588.365788	SE of Sample Mean	240.199327
t-Statistic (Mean=0)	3.503340	Signif Level (Mean=0)	0.017223
Skewness	0.742392	Signif Level (Sk=0)	0.580026
Kurtosis (excess)	-1.201465	Signif Level (Ku=0)	0.769425
Jarque-Bera	0.912026	Signif Level (JB=0)	0.633806

STATS SGS

Statistics on Series SGS

Annual Data From 2008:01 To 2012:01

Observations	5		
Sample Mean	65.600000	Variance	2408.800000
Standard Error	49.079527	SE of Sample Mean	21.949032
t-Statistic (Mean=0)	2.988742	Signif Level (Mean=0)	0.040388
Skewness	-0.397771	Signif Level (Sk=0)	0.801371
Kurtosis (excess)	-1.776139	Signif Level (Ku=0)	0.745728
Jarque-Bera	0.789075	Signif Level (JB=0)	0.673992

STATS CDS

Statistics on Series CDS

Annual Data From 2008:01 To 2012:01

Observations	5		
Sample Mean	51.000000	Variance	824.000000
Standard Error	28.705400	SE of Sample Mean	12.837445
t-Statistic (Mean=0)	3.972753	Signif Level (Mean=0)	0.016501
Skewness	-0.142052	Signif Level (Sk=0)	0.928413
Kurtosis (excess)	-2.072014	Signif Level (Ku=0)	0.705210
Jarque-Bera	0.911241	Signif Level (JB=0)	0.634054

STATS LMMS

Statistics on Series LMMS

Annual Data From 2007:01 To 2012:01

Observations	6		
Sample Mean	376.666667	Variance	18785.466667
Standard Error	137.060084	SE of Sample Mean	55.954545

t-Statistic (Mean=0)	6.731655	Signif Level (Mean=0)	0.001097
Skewness	-0.517876	Signif Level (Sk=0)	0.699495
Kurtosis (excess)	-0.044942	Signif Level (Ku=0)	0.991252
Jarque-Bera	0.268700	Signif Level (JB=0)	0.874284

STATS FMMS

Statistics on Series FMMS

Annual Data From 2007:01 To 2012:01

Observations	6		
Sample Mean	12.333333	Variance	90.266667
Standard Error	9.500877	SE of Sample Mean	3.878717
t-Statistic (Mean=0)	3.179746	Signif Level (Mean=0)	0.024545
Skewness	0.291896	Signif Level (Sk=0)	0.827767
Kurtosis (excess)	-1.388320	Signif Level (Ku=0)	0.734824
Jarque-Bera	0.567061	Signif Level (JB=0)	0.753120

STATS OCF

Statistics on Series OCF

Annual Data From 2007:01 To 2012:01

Observations	6		
Sample Mean	8.500000	Variance	6.300000
Standard Error	2.509980	SE of Sample Mean	1.024695
t-Statistic (Mean=0)	8.295151	Signif Level (Mean=0)	0.000416
Skewness	-0.512241	Signif Level (Sk=0)	0.702608
Kurtosis (excess)	-1.534392	Signif Level (Ku=0)	0.708142
Jarque-Bera	0.850980	Signif Level (JB=0)	0.653450

STATS PEF

Statistics on Series PEF

Annual Data From 2007:01 To 2012:01

Observations	6		
Sample Mean	7.500000	Variance	5.500000
Standard Error	2.345208	SE of Sample Mean	0.957427
t-Statistic (Mean=0)	7.833495	Signif Level (Mean=0)	0.000544
Skewness	-0.348874	Signif Level (Sk=0)	0.794837
Kurtosis (excess)	-0.849587	Signif Level (Ku=0)	0.835793
Jarque-Bera	0.302162	Signif Level (JB=0)	0.859778

STATS COA

Statistics on Series COA

Annual Data From 2007:01 To 2012:01

Observations	6		
Sample Mean	56.000000	Variance	7626.800000
Standard Error	87.331552	SE of Sample Mean	35.652957
t-Statistic (Mean=0)	1.570697	Signif Level (Mean=0)	0.177052
Skewness	2.433226	Signif Level (Sk=0)	0.069736
Kurtosis (excess)	5.937496	Signif Level (Ku=0)	0.147449
Jarque-Bera	14.734051	Signif Level (JB=0)	0.000632

STATS TPFA

Statistics on Series TPFA

Annual Data From 2007:01 To 2012:01

Observations	6		
Sample Mean	1777.166667	Variance	577703.766667

-Standard Error	760.068264	SE of Sample Mean	310.296570
t-Statistic (Mean=0)	5.727317	Signif Level (Mean=0)	0.002271
Skewness	-0.004894	Signif Level (Sk=0)	0.997089
Kurtosis (excess)	-1.767432	Signif Level (Ku=0)	0.666316
Jarque-Bera	0.780978	Signif Level (JB=0)	0.676726

Table 3.2 Results**DOS FOS FGNS SGS CDS LMMS FMMS OCF PEF COA TPFA****Covariance\Correlation Matrix**

	DOS OCF	FOS PEF	FGNS	SGS	CDS	LMMS	FMMS
DOS	S91569.200 0.98757	0.90018 0.99179	0.93847	0.91113	0.95270	0.95670	0.69647
FOS	6643.400 0.88380	594.800 0.89715	0.97566	0.98865	0.97807	0.75725	0.32787
FGNS	308518.400 0.48272	2585 0.93421	0.4001180 0.94714	241.000	0.98380	0.99497	0.83676
SGS	21762.800 0.89080	1903.200 0.91105	84362.400	6230.400	0.99119	0.79998	0.38492
CDS	16460.800 0.94020	1362.000 0.95549	61719.000	4467.200	3260.200	0.86038	0.49569
LMMS	124155.200 0.93203	7920.200 0.94101	389850.400	27080.000	21068.000	183918.800	0.84411
FMMS	2472.200 0.70883	93.800 0.69998	6151.600	356.400	332.000	4246.400	137.600
OCF	2803.400 88.000	202.200 0.99779	9520.800	659.600	503.600	3749.600	78.000
PEF	2507.400 78.200	182.800 69.800	8596.600	600.800	455.800	3371.600	68.600
COA	21399.800 658.400	1928.200 596.600	93627.200	6227.600	4602.800	26695.800	423.600
TPFA	615557.800 15315.60018884.000	46992.400 17000.600	2180454.000	155173.200	115706.40	822650.000	

4.1 DISCUSSION OF DATA AND RESULTS

From the data table in appendix A, equity has a weight of 23.36% of the total asset value of N4,124,547,984 as its opening balance. Its closing balance stands at N1,541,711,872 with a total return of N578,141,952.01 which provides a return rate of 60%. The closing balance is an aggregate of dividend, bonuses and the equity value in total market capitalization. From the same table, government security opening balance is N1, 966,113,403.68 carrying asset weight of 47.66% in a total net asset value of N4, 124,547,984. This security with a closing balance of N2, 182,385,877 contributes a return of N216, 272,474.30 which is a return rate of 11%. Money market instrument opened with a balance of N1, 194,864,661.94 which is a weight of 28.96% of the total net asset value. With a closing balance of N1, 672,810,525, money market instrument made a return of N477, 945.864.40 within the period under review. This return contributes 40% return rate. The aggregate return from the three security classes, is N1, 272,360,291 which translates to 30.8% return rate.

From the data used for optimizing return of different portfolio classes, the net asset value used is N11.32bn, rate of return from equity investment is 60%, rate of return from government securities is 11% and rate of return from money market instrument is 40%. Furthermore, the objective value contributions, money market instrument contributed the highest value of N1.2282bn. The ratio of the money market instrument is lower than the government securities, but higher than equity in the conservative portfolio class. We therefore establish that the money market returned higher than equity because it has higher ratio in the portfolio class and returned higher than government securities because it has higher rate of return in the objective function. The result of the objective value of N2.7451bn also reveals a portfolio return rate of 24.25%. This is lower than the return rate of the portfolio class in appendix A. The result of conservative portfolio class also shows that a unit increase in the Net Asset value increases the objective value by N0.2425b. A one percent increase in equity value increases the objective

value by N0.05bn. A one percent increase in government securities increases the objective value by N0.2bn. There is also no economic advantage in increasing the ratio of money market instrument in the conservative portfolio since the dual price of money market is zero.

The result above shows that equity which had the highest percent in the portfolio also returned the highest value of N2.8528bn. The consistent increase in return over an increase in the weight of the asset classes in the portfolio suggests a direct relationship between size of asset in a portfolio and its return.

5.1 CONCLUSION

The Pension Reform in Nigeria has created a huge pool of stable and longterm funds for the socio economic and infrastructural development of Nigeria. Contributed to the development of the Nigerian financial system, as PFA s are now major institutional investors. However, the impact pension funds would play is determined by the size and stage of development of the capital market and availability of investible products that satisfy the investment criteria as well as meet the long term risk-reward profile of the pension funds.

The Contributory Pension Scheme is still at its accumulation stage and would remain so for a long while (in view of the relatively young age of registered contributors). Hence, with controlled inflation and reduced interest rates, pension fund managers would change their investment strategies and further diversify their portfolios into growth and alternative assets, in order to enhance their investment returns in the longterm.

Capital Market Operators are enjoined to continuously scan the macro-economic environment and liaise with institutional investors, in order to develop investible products that will satisfy the risk-reward profile of institutional investors.

For increased Investors' confidence, there is need for high corporate governance practices, market discipline and strict enforcement of rules in the capital market.

The National Pension Commission will continue to partner with relevant stakeholders, make its Investment Regulation more flexible and encourage increased pension fund investments in order to further develop and deepen the Nigerian capital market.

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