ANNUITY MARKET AND PAYOUT PHASE OF ACCUMULATED PENSION FUNDS IN NIGERIA

By

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M.Sc/ADMIN/13617/2007-2008

BEING A THESIS SUBMITTED TO THE POST GRADUATE SCHOOL, AHMADU BELLO UNIVERSITY, ZARIA, IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER OF SCIENCE (M.Sc) IN BUSINESS ADMINISTRATION.

Department of Business Administration
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OCTOBER, 2012

Declaration

I declare that the work in this thesis titled "Annuity Market and Payout Phase of Accumulated Pension Funds in Nigeria" has been written by me under the supervision of Dr. Bello Sabo and Dr. A.B.Akpan. The information derived from the literature has been dully acknowledged in the text and a list of references provided. To the best of my knowledge, no part of this thesis was previously presented for another degree or diploma at any university.

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Certification

This is to certify that this thesis titled "Annuity Market and Payout Phase of Accumulated Pension Funds in Nigeria" meets the requirement governing the award of the degree of Masters of Science (M.Sc) in Business Administration of Ahmadu Bello University, Zaria and is approved for its contribution to knowledge and literary presentation.

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Acknowledgement

I wish to thank Almighty Allah for giving me the strength and good health to complete this thesis.

I also wish to express my profound gratitude to the Chairman of my supervisory committee in the person of Dr. Bello Sabo for his untiring attention and scholarly guidance throughout the period of this work. May Allah reward him abundantly and continue to guide and protect him in all his endeavors. I am also highly indebted to my second supervisor in the person of Dr. A. B. Akpan for his constructive criticism and enormous academic contribution to make this study a reality against all odds.

I sincerely wish to thank all the staff of PenCom, PFAs, and PFCs for their contribution towards this research. Special thanks go to the management staff that despite their tight schedule assisted me with the necessary data and information to undertake this research.

I wish to also thank all the members of my family, especially my parents, late Ambassador Sani Sambo and Hajiya Rahma (Lanti) Sani Sambo who nurtured me and showed me that learning can empower a person. To my uncles, aunties, brothers, sisters, nieces, nephews, I say a very big thank you for your concern, encouragement and constant prayers.

The period of this study changed my life as it did not only actualize my academic pursuit but gave me a friend, colleague, and a life time companion, Mal. Mohammed Ibrahim. For him I pray that Allah continues to give him the strength, courage and wisdom to guide us in the conduct of all our affairs. Amin.

Lastly, I wish to sincerely extend my gratitude to my colleagues and the members of my M.Sc. class who have in one way or the other assisted the course of this study. I pray that the Almighty reward you all in countless folds. Amin.

Dedication

This thesis is dedicated to my children, Hamzah, Maryam and Rahmah. May it be a source of inspiration to them. Amin.

ABSTRACT

Researchers and policy makers throughout the developed and emerging economies in the world have devoted substantial effort to exploring what motivates individual asset accumulation patterns. It is during the accumulation phases that a society seeks to build up resources adequate to finance retirement. The overall intention of these reforms has been to ensure financial stability so as to influence retirement security. This inherent risk was what brought about the change in the pension system of most countries and to sustain it the proper regulations has to be adopted in the form of shift to the Newly contributory scheme in 2004. The objective of this study is to find out the extent to which stakeholders in the pension industry perceive the impact of annuities in financing retirement in Nigeria. The study adopted historical and survey research design to gather both primary and secondary data. Data for this study were analyzed using both descriptive (mean, percentages and ranking).The scope of the study is 2004 to 2010. The study employed the Cochran sample size formula on the two categories of the study population (stakeholders and retirees) and chi-square was used to test the hypothesis. A total of 713 copies of the questionnaire were administered but only 155 for the stakeholders and 136 from the retirees were returned. Our findings show that annuities have significant impact on financing retirement in Nigeria, those that are familiar believe in annuity due to awareness. Thus, the stakeholders are aware of annuities and they perceive it to be important. This implies that there is significant relationship between publicity for annuity market and its impact on financing retirement. The study also established that, the more publicity given on annuity market, the more will be its possible impact on financing retirement in Nigeria. This implies that, an improvement in the legal and regulatory framework for the payout phase of pension scheme is required. The study found out that these categories of respondents, stakeholder's who perceive the impact of annuities on retirement financing to be significant had 56.8% while the retirees don't know annuities had 61.8% who say they disagreed or are undecided with the establishment of annuity market. The study therefore, concluded that annuity markets are important in financing retirement, specifically in the payout phase of the defined contributory scheme. The study recommends the development of annuity market for retirees to purchase a means of receiving retirement income until they die.

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CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The role of pension funds in employee retirement life cannot be overstressed. Studies have shown that pension liabilities the world over constitute a large chunk of expenditure by governments of many economies in the past one and half decades (Doyle, 2006; Ambachtsheer, 2007). The reasons for this development are not farfetched. The increasing pressure resulting from the growing number of individuals attaining the age of retirement resulted in the accumulation of huge pension liabilities against such economies. Furthermore, the World Bank (1994) and Kalish (2008) posited that most countries have improved health care facilities that increases the longevity of people living in developing nations. However, it gave rise to an increasing proportion of older people. As a consequence, governments of developed countries are looking for reforms that reduce both their legal and economic responsibility of providing financial support to the retired generations. Specifically, this has resulted in the search by governments of most developed and developing countries for an alternative to their current pension arrangements, which largely rely on contributions from today's workers via the tax system to provide income payments to the retired generations. Another theme driving the renewed interest in retirement economics is the desire of developing countries to establish some form of retirement income support for their ever growing population (Vittas & Iglesisas 1992; Blake & Hudson 2000; Milevsky, 2006; Antolin, 2008).

In response to these issues, both developed and developing countries are investigating the policy options available to them. The economic research transformed into the migration from the Defined Benefit (DB) to the Defined Contributory (DC) system of pension, with Chilean reform being the most successful (Poterba, 2001). Many countries have reformed their pension systems in a similar way to Chile's reform of 1981. This reform was intended to provide reasonable self-financed pensions upon retirement, freeing the state from onerous future liabilities caused in part by insufficient individual voluntary saving for retirement. The Chilean reform implied the privatization of social security and the creation of a fully funded, privately managed pension system with individual (fully portable) savings accounts that can be used exclusively for retirement purposes (Walker, 2006; Antolin & Blommestein, 2007).

Nigeria as a developing country was not left out in the battle to achieve a sound pension system to maintain her workers at retirement. Although the country has witnessed a number of financial reforms in the last two and half decades, the pension sector reform became inevitable because of the astronomical growth in retirees' pension libilities against the government over the years. Thus, the reform in the pension system was as a result of the short coming of the old system, where government was unable to off set its pension liabilities to retired pensioners as they fall due. The need for pension reforms in Nigeria became apparent following decades of anguish experienced by pensioners and the drop back of an estimated two trillion Naira deficit arising from arbitral increases in salaries and pensions and poor administrative structures (Kantudu, 2005). The government clearly recognized these problems and met it head-on. A committee after an extensive study of pension schemes in operation worldwide selected the Chilean model of

private contributory retirement account as the base model for the new DC scheme in Nigeria (Ahmed, 2007; Sambo, 2007). Thus, Nigeria was successfully able to reform her pension system in 2004, where the DB system (pay as you go) was replaced by the DC. As an aftermath of the reform, the Nigerian government had to convert the two trillion Naira accumulated pension libilities standing against it pre-2004 to longterm redeemable bonds (National Pension Commission [PenCom], 2005).

The aftermath of the transition to the DC scheme in 2004 led to the establishment of a privately managed pension industry. The stakeholders of this new pension system included the PenCom, Pension Fund Administrators (PFAs), the Pension Fund Custodians (PFCs), employers and employees. The guidelines on the management of the new DC system and operations of the stakeholders are all contained in the Pension Reform Act [PRA] (2004). The key feature of the DC scheme is that money saved is contributed to an account in the name of the participating individuals, much the same as a bank account.This account provides individuals with certain property rights over their retirement savings. Other features include contributions linked to employement, the prívate sector management and or investment management and prescribing the precentage of contribution by the employer and employee (Doyle, 2006).

Six years after the take off of the new pension scheme, significant progress have been made in the accumulation and management of pension funds in Nigeria. As at the end of 2010, a total of N289.91 billion was contributed as pension funds in Nigeria, while the total pension funds asset during the same period stood at N2.029 trillion (PenCom, 2010). However, emphasis is gradually shifting to the payout phase as individuals have started

attaining the age of retirement under the new scheme. The PRA 2004 recognizes three ways by which accumulated pension funds may be paid out: lumpsum payment, programmed withdrawals and annuities. Being a privately funded and managed pension system, the DC system relies to a large extent on annuities as a means of diversifying longevity risk – a situation where a retiree outlives the amount available in his retirement savings account. Studies by Bodie (1990), James and Vittas (1999), Doyle Mitchell and Piggot (2001), Walker (2006) and Antolin (2008) have shown that, for annuity markets to flourish, there must be in existence life insurance companies offering a variety of annuity products to meet the varying tastes of retirees at any point in time.

It has been argued that in the absence of a social security system in Nigeria, there is the need for individual retirees to purchase annuities with a portion of their retirement funds as this would provide a shield against the risk of longevity. It is against this back drop that the study was conducted to establish the extent to which the regulator and stakeholders in the pension industry understand the essence of annuity markets in Nigeria.

1.2 Statement of the Problem

Like in most countries the world over, Nigeria embraced the DC system as a result of the woeful failure of the DB system. Prior to the year 2004, Nigeria was operating the DB system of pension. This system was characterized by a number of shortcomings which included the accumulation and untimely payment of pension arrears, resulting in a backlog of N2 trillion which had to be converted into bonds for retirees (PenCom, 2005). Thus, in order to address this anomaly, the PRA 2004 replaced the DB system with the DC system, which is believed to be more robust, highly regulated and diverse in nature

(Doyle, 2006). Since its introduction in 2004, the DC system has successfully accumulated pension funds worth N289.91 billion as at December 2010 (PenCom, 2010).

Although the accumulation phase of the new scheme has recorded some degree of success, people have started expressing fears about the future sustainability of the system. It is a known fact that Nigeria, like most developing economies in Africa, has no social security system in place. This implies that retirees are left at the mercy of their accumulated funds which in rare cases are complemented by personal savings. The cause for concern among many pension experts and prospective retirees is the fact that a retiree who lives longer than the drawings on his retirement savings account may end up wretched. In a country where life expectancy is improving, the risk of longevity becomes highly inevitable. In such situations, what would have substantially diminished this risk is the purchase of an annuity by retirees at the early stage of their retirement. A holder or purchaser of an annuity enjoys the guarantee by an insurance company of the payment of a stream of income at stipulated periods for the rest of his/her life.

In Nigeria, what would have been ideal is the purchase of annuities by retirees immediately they receive their lumpsum payments at the early stage of retirement. Unfortunately, there is complete absence of annuity products and markets in the Nigerian financial system. The fact that little or no effort has been made by the regulatory authorities and other stakeholders in the Nigerian pension industry to put in place the requisite structures for the establishment and development of annuity products and markets, despite the ever growing number of retirees under this new scheme raises doubt about the extent to which these stakeholders perceive the essence and relevance of establishing the annuity market with the hope of overcoming the potential problems that

are likely to emerge when it comes to decumulation stage. In the same vein, there are alot of arguments among industry players as to the adequacy of the existing legal and regulatory framework in terms of guaranteeing a hitch-free retirement process for employees.

Furthermore, despite the importance of annuity products and markets to the growth and development of the new DC scheme, no research attention has to the best of our knowledge been devoted to this area in Nigeria. In spite of a number of studies conducted on pension in Nigeria, none of these studies specifically dwelt on the challenges that lie ahead of the industry in terms of decumulating the retirement accounts of retirees when they retire.Considering the significant implications of the decumulation of the retirement accounts, this study is out to bridge this gap in research.

1.3 Research Questions

In line, with the statement of the problem above, the research aims at providing answers to the following questions:

(i) To what extent do stakeholders in the pension industry and retirees perceive the impact of annuities in financing retirement in Nigeria?

(ii) To what extent do stakeholders in the pension industry publicise the need for annuity market in financing retirement in Nigeria?

(iii) To what extent is the existing legal and regulatory framework for the pay out phase of employee retirement in Nigeria is perceived as adequate for management of pension funds?

1.4 Objectives of the Study

The objectives of this study include the following:

(i) To examine the extent to which stakeholders in the pension industry and retirees perceive the impact of annuities in financing retirement in Nigeria.

(ii) To analyse the extent to which stakeholders in the pension industry publicise the need for annuity market in financing retirement in Nigeria.

(iii) To find out the extent to which the existing legal and regulatory framework for the pay out phase and management of employee pension funds at retirement in Nigeria is perceived as adequate.

1.5 Statement of Research Hypotheses

The following research hypotheses have been formulated for testing in the course of this study:

H_{01}: Annuities are not perceived to have significant impact on financing retirement

H_{02}: There is no significant relationship between publicity for annuity market and its impact on financing retirement in Nigeria.

H_{03}: The existing legal/regulatory framework for the payout phase of pension funds is not perceived to have significant impact on management of pension funds for retirement in Nigeria.

1.6 Significance of the Study

The major utility of this study lies in the fact that it would add to the stock of knowledge about the payout phase associated with a fully funded, mandatory DC retirement

arrangement. Being a relatively new area of research in Nigeria and Sub-Sahara Africa, a study on the payout or decumulation options under the new pension arrangement in Nigeria would provide a starter for further indepth researches on the Nigerian pension system. The study hopes to analyse the financial and welfare benefits associated with the mandatory purchase of an annuity from the private market at the point of retirement, the economic issues of the payout phase where a DC arrangement is adopted, and the role of annuities in providing retirement income; and by so doing add to the existing body of knowledge on retirement income security.

Furthermore, a study of this nature is a policy issue that would highlight areas of concern for the pension industry policy makers. It is hoped that the government, represented by PenCom; would find the outcome of this study very useful in coming up with strategies that would help create a balance between the accumulation and decumulation (pay out) phases of the new DC scheme and ensure optimal retirement security for retirees' pension at the end of their working life. The dynamics of retirement income is indeed a policy issue that government must focus on to ensure the safety of the funds and its successful return back to individual retirees. Since to the best of the researcher's knowledge this study is a pioneer effort in the Nigerian pension industry, it is expected that the study would assist government in bringing out other adequate and efficient guidelines for the conduct of the pension affairs especially that of the funds. It would also aid in understanding the international environment of countries that transited from the DB to the DC.

The study would enlighten key industry players such as the PFAs and PFCs on the challenges that lie ahead beyond the accumulation phase in Nigeria. By so doing, the

areas of lapses in the existing PRA 2004 as they pertain to the management, administration and custodianship of these funds would be made obvious and improvement measures would become inevitable.

The findings of this study would also be of importance to both current and prospective retirees. The DC scheme which is a plan meant to cater for the older generation at retirement would benefit them by making a provision during their working life so as to maintain themselves with their funds at the time of their retirement. Hence, a study of the Nigerian pension system during this period would avail us the opportunity to review developments under the new DC scheme since its inception in Nigeria.

Finally, a number of investment institutions and corporate bodies in Nigeria would benefit from this study. Among the investment institutions where accumulated pension funds can be invested is the Nigerian stock market. Thus, the findings of this study would edúcate companies listed on the Nigerian stock market on the role the pension industry can play in reviving the market. Similarly, insurance companies listed on the market would also be exposed to the importance of annuity products and markets in Nigeria. This would go a long way in providing the foundation necessary for putting an efficient decumulation system in place.

1.7 Scope of the Study

This study restricts itself to the accumulation and pay out phases of the new DC pension system in Nigeria. While the issue of pension funds meltdown in the Nigerian stock market may be important considerations under the accumulation phase, it does not fall within the purview of this study because the focus of the study is on the decumulation phase. Similarly, the study does not also concern itself with issues relating to the two

other modes of payment; lumpsum payment and programmed withdrawals. However, reference may from time to time be made to these issues where the need for such arises.

The study concentrated on the pension industry and the period covered is from 2004 to 2010. The choice of this period is of essence to the study because it coincides with the period during which the DC scheme was introduced and at the same time the industry experienced much of its growth (PenCom, 2010).

1.8 Structure of the Study

This study is presented in five chapters. Chapter one, which is what we already have above. The second chapter of the work, labelled literature review and theoretical framework concentrates on the review of related literature on the subject matter such as relevant concepts. Basically, a critical review of empirical works on retirement payout options of the DC scheme, financing retirement and annuity market, including developments in the international arena was presented in this chapter. Furthermore, the theoretical framework upon which the study is premised was also presented in this chapter.

Chapter three consists of the methodology employed by the study. Thus, the chapter discussed the design employed by the study and its justification, the population of the study; sample size, the technique of sampling employed and its justification; sources of data for the study; and the method/technique of data analysis utilized by the study.

The fourth chapter presents and discusses the analysis of the data, results from the test of hypotheses as well as the responses from the stakeholders in the industry. The findings

revealed by the test of hypotheses was presented and thoroughly discussed under this chapter.

Finally, chapter five, which is the last chapter of the work, presents a summary of the study with specific emphasis on findings; conclusions and the accompanying policy implications. The recommendations based on the findings of the study was also presented in this chapter.

1.9 Limitation of the Study

A study of this nature that utilized nominal data can not be free from limitation such as restriction in the questionaire inputs which affect the extent of sourcing precise information. The research was also limited by the fact that the Nigerian pension industry is just emerging and thus, there is absence of sufficient secondary data on annuity payment since the retirees are still yet to explore the alternative. This notwithstanding however, a study based on the perception of stakeholders regarding annuity markets and the longevity risk associated with the depletion of accumulated benefits will provide useful insights into future events surrounding annuity as a payout option when the Nigerian pension eventually develops.

1.10 Definition of key terms

Accumulation: This is the process of collecting individual monthly deductions in the form of contributions into their retirement savings account to form part of the pension fund

Accumulation Phase: A period of time when an annuity investor is in the early stages of building up the cash value of the annuity. This is followed by the annuitization phase where payments are paid out to the annuitant

Annuitant: This is a person who receives the benefits of an annuity or pension. In other words, the annuitant is the beneficiary of an annuity or pension. He is also a person upon whom a life-insurance contract is based.

Annuity: Payment of a stream of income to an individual retiree by an annuity or insurance company. These are usually paid on a monthly basis and last for the lifetime of the annuitant. The income received from an annuity by a retired investor is considered taxable income.

Annuitization Phase: This is the period when the annuitant starts to receive payments from the annuity. This period is after the accumulation phase where money is invested into the annuity.

Current retirees: Employees who retired during the year 2010.

Decumulation: This is the process of paying back to the individual retirees their contribution called pension after retirement from active service. Decumulation is the use of accumulated assets to fund retirement income or other income requirements.

Longevity risk: This is the risk of the individual retirees outliving their retirement income.

Payout Phase: This is the period where contributions made into the retirement savings account are designed to be paid back to the beneficiary of the pension fund earlier accumulated. In an annuity, payments are made to the annuitant.

Stakeholders: These constitute the pension industry players which include PenCom, Pension Fund Administrators (PFAs), the Pension Fund Custodians (PFCs), and employees (prospective retirees).

CHAPTER TWO

LITERATURE REVIEW AND THEORETICAL FRAMEWORK

2.1 Introduction

This chapter reviews relevant literature on annuity market, the payout phase and pension funds accumulation. Specifically, it covers the review of previous studies on the concept and evolution of annuity markets, types of annuity product and their providers, annuity market and retirement benefit. It also presents a review of related works on pension funds decumulation, retirement benefit, forms of benefit payment at retirement, and pension regulation in Nigeria. Lastly, the section also provides a review of empirical studies on the subject matter; and finally, the theoretical considerations upon which this research work rests.

2.2 Concept and Historical Evolution of Annuity Markets

According to Porteba (2001), annuities are contracts that provide periodic payments for an agreed upon span of time. They include annuities certain, which provide periodic payments for a fixed number of years, and life annuities, which provide such payouts for the duration of one or more persons' (the annuitant) lives. The principal insurance role of annuities is to indemnify individuals against the risk of outliving their resources.

Annuities solve the problem of planning consumption in a world with uncertain life times in return for an initial capital payment. An annuitant is assured of receiving a constant income stream for the remainder of his life. The annuity provider can pool mortality risk across similar individuals and by so doing can use the principal left behind by those who died sooner than expected to insure those who live unexpectedly long (Dellinger, 2006).

As a result, the annuitant's payout from the annuity contract can, in theory, exceed the income he could earn if he invested his annuity premium in a financial asset such as a bond.

According to Brown and Poterba (2000), the annuity payout rate depends on both the annuitant's perspective mortality risk and on the return that the annuity provider can earn on invested assets. For instance, younger individuals, because they are expected to receive payments for a longer time period; receive lower annuity payout than older annuitants for a given amount of capital invested. Higher rate of return generate greater income per dollar of capital for the insurance company and therefore permits higher payout rates for the annuitants. Poterba, Mark and Warshawsky, (1999) and Walker (2006) argued that annuities are sometimes referred to as "reserve life insurance." With life insurance; the policy holder pays the insurer each year until he/she dies after which the insurance company pays a lump sum to the insured's beneficiaries. With annuities, the lump sum payment is from the annuities to the insurance company before the annuity payment begins and the annuitant receives regular payouts from the insurance until death.

Most annuity contracts have an accumulation phase and a liquidation phase. During the accumulation phase, capital builds up; and this capital is dispersed during the liquidation phase. In the case of the single premium immediate annuity, there is no accumulation phase. Annuitants make lump sum payments that they wish to draw down to the annuity provider (Brown, 2001).

During the liquidation phase, the annuitants receive payouts contingent upon their survival or in accord with other terms specified as a guaranteed minimum, with the

opportunity for dividing if mortality experience or rate of return on insurance companies' investments prove better than expected. Many annuity products exhibit long accumulation phases, so they operate in part as saving vehicles. Although annuities are unique in their provisions of income streams contingent on remaining alive, they compete with other financial products as a means for asset accumulation (Bodie, 1990).

Annuities have historically been offered by insurance companies which pool the mortality risk across many individuals and thereby achieve a more predictable cash flow than if they offered an annuity to only one person. The same principles that underpin risk reduction in life insurance sales apply to the provisions of annuity payouts. The annuity supplier must have sufficiently lived long to ensure that annuity payout will still be paid if the annuitant lives for many years.

The history of annuities dates back to the 15th Century in Rome. Since uncertainty about length of life is an ubiquitous source of risk, financial contract similar to annuities have a long history. Poterba (1997) reported that ancient Roman contracts known as *annua* promised an individual a stream of payment for a fixed term, or possibly for life, in return for an up front payment. Speculators who dealt in marine and other lines of insurance offered such contracts. A Roman, *Domitius Ulpianus*, compiled the first recorded life tables for the purpose of computing the estate values of annuities that a decedent might have purchased on the life of his survivors (Dellinger, 2006).

According to Poterba (1997), single premium life annuities were available in the middle ages, and detailed records exist of special annuity pools known as "tontines" that operated in France during the 17th Century. In return for an initial lump sum payment,

purchasers of tontines received life annuities. The amount of the annuity was increased each year for the survivors, as they claimed the payout that would otherwise have gone to those who died.

2.3 Annuity Products and Annuity Providers

In any annuity market, two things are of utmost importance; annuity products and annuity providers. The availability of various annuity products that would pool investment risk, mortality risk and inflation in order to satisfy the market needs of retirees is of immense importance to the growth and survival of the annuity market. Hence, varieties of annuity products in the market would offer retiring individuals different options on how best to hedge against longevity risk (Doyle, 2006). Since products are designed to suit the expectations of retiring individuals, annuity products vary from country to country. Doyle et al. (2001), Wadsworth, Findlater and Boardman (2001), Mitchell (2001), and Dellinger (2006) argued that annuity products should be adequate in the annuity market to provide varitey in the products and create competition in the annuities rates.

The portfolio of annuity product vary depending on the countries in which the annuitant seeks to purchase the annuity and the motive of the annuitant. The literature is very rich with arguments as to what constitute the basic types of annuity products (Poterba, 2001; Scott, 2007). Generally speaking, annuities can be classified based on the nature of interest payable or the expeccted return on investment. Under this classification, we have fixed, variable and indexed annuities (Soares &Warshawsky, 2004; Walker, 2006). Annuity products can also be classified by the length of time that it takes the annuitant to

start receiving regular payments from the annuity (Blake & Hudson, 2000; Rusconi, 2008). This classification gives rise to immediate and deferred annuities.

According to Poterba (2001) and Steward (2007), an annuity is said to be fixed if it pays the annuitant a guaranteed rate of interest or return on investment. Under this type of annuity, the payment to be made is fixed and guaranteed so that the annuitant knows exactly what he/she will be paid periodically. The fact that fixed annuities guarantee a fixed rate of return means that even when interest rate and return on investment drop dramatically, the insurance company promises to pay atleast that amount. Similarly, the principal in this type of annuity is also not at risk. Instead, the insurance company offering the product bears the investment risk. The aim of investing in fixed annuities by most people is to create a regular stream of income either over an agreed period or over their lifespan (Warshawsky, 1998).

Variable annuities are products that offer an interest or rate of return that is flexible and fluctuates with economic and market conditions (Walker, 2006; Scott, 2007). Under this type of annuities, the principal of the investment is at risk and may even lose value. This type of annuity often contain mutual funds from several companies from which the holder selects the funds and amount he/she wishes to invest in. For those that feel uncomfortable selecting funds, companies offer group of funds and target them by the amount of risk. In practice, many variable annuities sell *guaranteed income riders*, which guarantee the holder a minimum income after a period of time, for an additional fee (Rusconi, 2008).

As the name suggests, indexed annuities use a specific stock market index as the key to their payment of interest or return on investment to their holders. Usually, this category of annuities are tied to popular stock market indexes like the S&P 500 and Ruddell 2000. According to Warshawsky (1998) and Rocha and Thorburn (2008), the holder of this type of annuity receives a percentage of the growth in the stock market if the index increases. If the index drops however, holders do not get a percentage of the loss. Instead, they receive the guaranteed interest rate offered by the policy.

Immediate annuities are those type of annuities that once the annuitant makes the investment (which in most cases is lumpsum), payment of interest or return begins almost immediately. The aim here is to create a stream of income that begins almost immediately (Blake & Hudson, 2000; Rusconi, 2008). Immediate annuities may be fixed, variable or indexed in nature; implying that they may or may not guarantee the principal. Steward (2007) argued that since this type of annuity allows the holder to start receiving an income shortly after they are purchased, they are regarded by many as the ideal product for those close to retirement. They are sometimes referred to as Single Premium Immediate Annuities (SPIAs).

According to Soares and Warshawsky (2004), deferred annuities are products typically purchased at an earlier life stage, and this can be done with a lump sum payment or in some cases via regular/periodic investments. The most important feature of a deferred annuity is that the income or investment is allowed to grow for a period of time before the annuitant starts drawing. The deferred payment of income also affords the holder the

opportunity to defer taxes (Poterba, 2001). Like immediate annuities, they may also be fixed, variable or indexed.

An important consideration for policy makers when attempting to develop or promote annuity market is the entities that should provide these products. The providers of annuities are principally insurance companies and alternative providers such as pension funds, separate financial institutions and state annuity funds. Insurance companies are the primary participants in annuity markets. Indeed the number of insurance companies selling annuities has fallen dramatically in recent years, notably in mature and developed annuity markets (Doyle, 2006). The reasons for this are not farfetched. The business of life annuities can be unprofitable as a result of low investment sections, increasing longevity risk, and high reserve requirements. Life insurance companies face high solvency requirements and are required to use mortality tables that may be too conservative and do not account for future improvement in life expectancy. This not withstandfing however, the business of annuities have become very important and essential to economies in promoting savings and managing sustainable pension plans (Brown, 2003; Villeneuve, 2003; Antolin, 2007).

Competition problems stem from the reduced number of insurance companies participating in annuity markets. Countries may consider alternative providers to life insurance. Such alternative providers include pension funds, separate financial institution and state annuity funds. Pension funds could restrain the life annuity obligation providing an opportunity to earn profit by generating investment returns higher than those assumed by insurance companies in their pricing structure. However, this approach is fraught with complications. Since Pension funds are not subject to the same capital adequacy

requirements as insurance companies, they may not have the skills and experience needed, and are exposed to the same investment and longevity risks that have weighed down DB pension plans. According to Mitchell, Poterba and Warshawsky (2002) and Antolin, Pugh and Steward (2008), evidence on pension fund retaining the life annuity obligation is mostly limited to DB plans.

Separate financial institutions such as life insurance companies exclusively focusing on underwriting retirement life annuities are another solution. However, these entities would lack the broad based business of a traditional insurance company and the advantage of working on both sides of the market, thereby offsetting the impact of mortality and life expectancy. Consequently, an alternative that is attracting a lot of interest is a single entity or state annuity fund that would serve as a central provider. A central provider would reduce cost through economies of scale and pooling of risk (Bodie, 1990; Brown, 2001; Antolin & Blommestein, 2007).

According to Giacinto, Federico, Gozzi and Vigna (2008), annuitization protects individuals from longevity risk, but longevity risk does not go away; instead, annuity providers bear the risk. They argued further that the accumulated asset during an individual's working years and how the retiree attains optimal financial security or retirement income and good standard of living during retirement years is in the ability to hedge future uncertainty regarding the adequacy of one's accumulated assets to sustain him or her for the whole life. This retirement security improves as one's knowledge of the tools and options available to help cope with this risk grows.

2.4 Annuity Market and Retirement Financing

According to Soares & Warshawsky (2004), annuity is an insurance contract sold by the annuity issuer to a policy holder. They are plans that are preferred by the investors because of their tax deferred nature, earning against investments and relatively safe low yielding investments that guarantee payments of specific amounts in the future. The "annuity" is so defined for its feature of providing annual payment against allowances or incomes. Every annuity is beneficial if it is chosen properly by understanding the defined key factors of annuity selection like investment premium, the annual payments an individual receives, age factor, interest rate, and the company selected for the investment (Milevsky & Promislow, 2001; Dellinger, 2006). Annuities are primarily provided by insurance companies but the availability of annuity market the world over has created another means through which series of fixed-amount payments paid at regular intervals over the period can be sold as the annuity.

Brown, Mitchell, Poterba, and Warshawsky (1999) opined that annuties protect retirees from runnng out of income at retirement. For instance, in Austria the state subsidises the premium and, in addition, guarantees tax exemption of the payoffs. A similar regulation was introduced in Germany, the so-called Riester-Rente. In the Organisation for Economic Cooperation and Development (OECD) countries, the prevailing system seems to be that contributions to a pension fund are tax exempt, up to some limit, and pension payments are taxed in the United Kingdom (UK). Disney (2000) found some evidence, especially for low-wage earners, that the savings rate is too low in order to transfer sufficient income to the period of retirement. A similar argument rests on the suspicion

that individuals might deliberately save too little, because they expect to receive some social assistance anyway (Leechor, 1996; Brunne & Pech, 2006).

If the company an individual buys annuity from fails, the law requires insurance companies to set aside reserves for the money they guarantee, which makes them less vulnerable than the banks that have had trouble recently, (Soares & Warshawsky, 2004) . If an insurance company were to go bankrupt, then the state gets involved, either by selling the struggling company to a different one or by calling on the state's own insurance program (Milevsky, 2006).

Many investors prefer allocated annuities which are perceived to offer considerable advantages in flexibility and higher potential returns despite the absence of longevity insurance. There is a tendency among governments to grant some way of preferential taxation to individuals who purchase private life annuities.The arguments for such a preferential treatment are rarely formulated explicitly; in the public discussion. There seems to prevail a good view, saying that individuals are myopic and therefore save too little in their active period of life. In particular, they might not have a sufficient perception of the likely reduction of the replacement rate offered by the public pension. In accordance with this view, several studies have investigated the incentive effect of taxes on the demand for private life annuities and on savings in general (Bernheim and Scholz, 1993).

Insurance specialists recognize that well-functioning insurance markets in the form of both life insurance products and annuities are necessary to ensure effective funded retirement systems and efficient national savings. This is because annuities play an

essential role in converting asset accumulations into a regular flow of retirement income guaranteed for life, and classical life insurance protects individuals and their dependants from the risk of early death. But as actuaries know, it takes a great deal of statistical information on mortality patterns by age and sex to develop the necessary survival forecasts needed for valuing annuity and insurance products. Brown (2003), Babbel and Merrill (2006) contended that in practice, many countries lack a vital statistics collection mechanism, especially for insured lives and annuitants, causing analysts to rely on mortality data from other countries in order to value insurance products of all types.

In the same vein, Blake and Hudson (2000), Rocha and Thorburn (2008) and Rusconi (2008) argued that the design of the payout phase and the different retirement options are taking priority in many pension discussions accross the globe since many countries that introduced an accumulation phase on DC pension arrangements will shortly have to start decumulating these funds by paying out pensions. In addition, countries like Nigeria have shifted to DC pension plans and may need to promote or encourage certain retirement payout options in order to guarantee appropriate retirement income and longevity protection.

2.5 Concept of Pension Funds Decumulation

James and Vittas (1999) simply defined decumulation as the act of using one's asset to finance one's retirement. Retirement wealth decumulation includes the spending down of asset owned during retirement. Kalish (2008) on the otherhand defined decumulation as "the conversion of pension assets accumulated during an employee's working life into pension income to be spent during retired life" (p. 4). Babbel and Merrill (2006) considered decumulation as a rational means of achieving annutization. The concept of

decumulation is hinged on the distribution or asset allocation of the accumulated funds in the retirement savings account of the pensioners. In practical terms however, decumulation embodies a significant new risk for the record number of future retirees moving from the accumulation phase of their lives to the distribution phase.

In many countries around the world, such as Central and Eastern Europe and Latin America, the DC pension system has successfully launched the capital accumulation phase. Yet, they need to focus on the regulation of the payout phase. In agreement with this, James and Vittas (1999), Blake and Hudson (2000) and Mitchell (2001) Antolin et al (2008), Kalish (2008), further argued that issues such as the choices that should be available to retiring individuals (lump sum, programmed withdrawals and annuity) and which entities (insurance companies, pension funds and state annuity funds) should be allowed to be providers, and how should they be regulated; are coming to the fore.

2.6 Concept of Retirement Benefit

Mitchell, Hammond & Rapport (2000) defined retirement benefit as a monthly payment made to someone who is retired from work. Milevsky (2006) on the other hand considered retirement as an arrangement to provide people with an income-targeted annual retirement benefit. Nhadinbe and schoeman (2008) viewed retirement benefit as the period of a person's life during which he/she is receiving social security

Before the advent of the Dc plan, almost all formal retirement arrangements were DB in nature. The World Bank (1994) argued that only the DC plan, which is privately managed; is capable of entrenching a sustainable retirement plan for countries the world over. This advocacy by the World Bank generated considerable debate in the economic

literature about the benefits of a mandatory, privately managed retirement arrangement. Subsequent studies that supported and further elaborated the World Bank's position include Diamond (2000), Porteba (2001), Doyle, (2006), and Antolin (2008); while Orszag and Stiglitz (2001) and Barr (2002) argued in the contrary.

Neil (1989), Mitchell (2001), Nhabinde and Schoeman (2008) Dolye (2006), and Milevsky (2006), discussed the concept of retirement benefit arrangement with respect to the DB and DC plans. They opined that the key feature of a DB system is that the level of retirement benefit is pre-determined. In otherwords, the DB arrangement will usually determine its benefit at retirement. The contributions required to meet the retirement obligation are determined year by year on an actuarial basis. While the key feature in the DC arrangement on the other hand is that the money saved is contributed to an account in the name of the participating individuals, much the same as a bank account. This account provides individuals with certain property rights over their retirement savings.

According to Mitchell, Hammond and Rapport (2000) the total package that comes to the retiree at the time he/she wishes to utilize the asset earlier contributed can be referred to as 'retirement benefit'. Nhabinde and Schoeman (2008) viewed retirement benefit as synonymous to social security, thereby creating room for unemployment to be considered and not only income for the old age. McCarthy, (2003) considered it as future pension benefit determined by the amount of the contributions paid into the fund and the size of the investment return each year .The issue of the benefit at retirement would usually include the total contributions made in the plan plus return on investment. A DC plan will provide a payout at retirement that is dependent upon the amount of money contributed and the performance of the investment vehicles utilized. The 'cost' of a DC plan is

readily calculated, but the benefit from it depends upon the account balance at the time an employee is looking to use the assets. So, for this arrangement, the contribution is known but the benefit is unknown until calculated. (Nhadinbe, 2005; Doyle, 2006).

Driven by the prospect of a global aging boom, researchers and policy makers throughout the developed and emerging economies in the world have devoted substantial efforts to exploring what motivates individual asset accumulation patterns (James & vittas, 1990; Feldstein & Rounguelova, 2000; Mitchell, 2001). According to Blake (1999), Brown (2001), and Doyle et al. (2001); it is during the accumulation phases that a society seeks to build up resources adequate to finance retirement. More remains to be learned about this process, but even less is known about what happens to people later in life, during which they are conformed with the need to decumulate their resource in an orderly manner in retirement.

Giacinto et al., (2008) have argued that longer life spans are generally seen as a positive outcome of economic growth. Yet life extension also means that more people face the risk of living too long, that is, outliving their asset and means of support. A range of financial products exist currently or can be envisioned for the future that would be useful in helping to protect people against having to dramatically curtail consumption in old age.

At retirement, most individuals typically have two choices: to withdraw the accumulated funds over time following a certain rule (programmed withdrawal) or to buy an annuity usually sold by closely regulated life insurance companies. Each choice carries different type of risk: a longevity risk, which only an annuity covers and an investment risk which

either the pensioner or the insurance company assumes in full (McGill & Grubbs, 1984; James & Vittas, 1999; Blake, 1999; Mitchell, 2001).

2.6.1 Forms of Benefit Payment at Retirement

According to Mitchell (2001) and Antolin (2008), there are different benefit payments at retirement and they include lump sum, programmed withdrawals and life annuity. In the lump sum payment arrangement, the entire value of the accumulated retirement capital is paid at once. They revealed further that a lump sum payment is the only retirement benefit form/option in Hong Kong, India, Philippines and Thailand (provident funds). Countries where full lump sum payments from occupational pension plans are allowed at retirement, but where other options are also available include Australia, Belgium, China, Indonesia, Japan, Malaysia, New Zealand, and South Africa, among others.

Antolin (2008) argued that lump sums are easy to administer and do not require complex calculation. Once payment is issued at retirement, the individual is discharged and subsequently no any obligation to individual/retiree. Retirees can still annuitize by taking the lump sum cash and then use all or part of the money to buy a conventional annuity from an insurance company. Alternatively, retirees can "self-annuitize" but this option may lead to problems of moral hazards where spending culture is not cultivated and may spend the retirement income inordinately. Another disadvantage of the lump sum is the lack of financial skills of retirees to self-annuitize. In the case of Nigeria, lump sums are allowed with other options subject to some conditions spelt out in the PRA 2004.

According to Bodie (2003), programmed withdrawals are a series of fixed or variable payments whereby the retirees draw down a part of the retirement capital and continued investment earnings there on. Any amount remaining in the retiree's account at his/her subsequent death belongs to the estate and is paid to the retiree's family and other beneficiaries. If the retiree lives to an advanced age, there is a clear possibility (under some programmed withdrawal arrangements) of the payments becoming very small in the later years. Under other arrangements, there is the risk of the capital being completely exhausted before death.

Programmed withdrawals are also called "phased withdrawals" or "allocated pension" in countries like Australia. The key word here is 'programmed", thus implying considerably more discipline than the less structured erosion of a lump sum payment. Programmed withdrawals do not involve longevity guarantee that would require complex actuarial reserving and solvency margins. They are financially uncomplicated, and there is no cross-subsidy from those who live for only a short time in retirement to those who live longer than the expected average.

Programmed withdrawals attempt to produce relatively stable annual income for the lifetime of the retiree. There are still many variations within this theme. Under the totally prescriptive approach, the amount to be withdrawn each year is calculated in accordance with a prescribed formula and the annual withdrawal is exactly equal to this amount. While countries like Chile set a minimum limit on the amount that can be withdrawn, others like the UK set a maximum. Finally, countries such as Australia and Canada set both a minimum and a maximum limit on each annual withdrawal such that the amount withdrawn must fall within a prescribed range or "band" (Blake & Hudson, 2000).

In some countries, programmed withdrawals are allowed or are even mandatory when the individual's retirement capital is too small to purchase a prescribed minimum amount of life annuity. Those countries where programmed withdrawals are mandatory for small amounts (in lieu of life annuities) include Chile and Mexico. It can easily be argued that this is a better approach than just allowing or mandating *lump sum* when the retirement capital is too small to buy a meaningful amount of life time pension. The amount due to an individual retiree under this option can be determined as follows:

$$\text{Programmed Withdrawals} = \frac{\text{Retirement capital}}{\text{Denominators}} \quad \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots (1)$$

Source: Antolin, et al. (2008). Forms of benefit payments at retirement p. 8

Where the denominators can either be Constant re-spreading, Life expectancy or Annuity certain. The advantage of programmed withdrawals from the retiree's perspective is that it is often much less constraining than purchasing a life annuity or lump sum payments, since programmed withdrawals satisfy the "bequest motive", where any balance remaining at the retiree's death is payable to the individual's estate and distributed accordingly. It is even possible in some countries to change the programmed withdrawal providers when investment performance is unsatisfactory. The disadvantage of programmed withdrawal is in the amount of each payment which can fluctuate as a result of the volatility of pension fund rations.

Dellinger (2006) defines an annuity as "a sum of money payable yearly or at other regular intervals" (p. 3). A life Annuity is a stream of income paid at some regular interval for as long as the individual lives. A fixed annuity can provide guaranteed life

time income for an individual. Scott (2007) posits that life annuity has been over four decades since economic theory first concluded that individuals looking to maximize guaranteed spending in retirement should convert all available assets to an immediate annuity. However, in stark contrast to the predictions of economic theory, very few retirees allocate any dollar to an immediate annuity, much less fully annuitize. Under the traditional and most commonly found annuity approach, the retirees' DC accumulation is transferred at retirement to a life insurance company. In turn, the insurance company provides an annuity that, in its simplest annuity form will make payments to the retiree for the rest of his/her life. These payments will be made on a regular basis, for example weekly, monthly or quarterly.

2.6.2 Main Retirement Payout Options and Features

The literature is rich with argument as to which option best offers the retiree retirement security. Broadly speaking, there are three options available to a retiring individual. The table below presents a simple comparison of the three forms of benefit payment at retirement according to Antolin (2008) and Brown (2008):

Table 2.1 Retirement Pay Out Options and their Features

	Flexibility liquidity	Provide Protection Against Longevity risk	Bequest
Lump sum	Yes	No	Yes
Programmed withdrawal	Yes	No	Yes
Life annuities	No	Yes	No

Source: Antolin P. (2008) Policy Options for the Payout Phase p. 4

From table 2.1, it can be seen that the main factors that differentiate between the various retirement options are the degree of flexibility versus the degree of protection from longevity risk. Lump sum payments are fully flexible and provide complete liquidity, allowing people to dispose of and allocate their funds as they wish to, and it permits individuals to leave bequest. In this regard, programmed withdrawals provide more financial discipline than lump sum while maintaining some flexibility, access to liquidity and the possibility of leaving bequests. Unfortunately, they also fail to provide any protection from longevity risk.

Life annuities by contrast fully protect individuals from longevity risk, but in their plain forms are inflexible and illiquid and do not allow for bequest. Nevertheless, more complex annuity products are available which are designed to satisfy the need for flexibility and, in particular, the bequest motive. Combining arrangement of these options may achieve both goals of flexibility and protection from longevity risk (Jousten, (2001). According to Poterba (2001), annuities are a form of reversed life insurance. A life insurance policy holder pays the insurer each year until he or she dies. When the insured individual dies, the insurance company pays a lump sum to the beneficiaries of the life insurance policy. With annuities, the annuitant makes a lump-sum payment to the insurance company before the annuity payout begins. In return, the insurance company makes payment to the annuitant until the annuitant's death.

Globally, the decisions as to which of these retirement payout options policy makers should allow may be country specific. For instance, the type of pension arrangement in place, the availability of other sources of wealth available to tap into in retirement, and government priorities may determine the possible choices (Poterba, 2001; Antolin, 2007).

Given the absence of a government-financed social security system in Nigeria, purchasing an annuity is the best option to a retiree as it will guarantee him/her a continuous stream of income.

2.7 Overview of International Pension Practices

The International Pension environment is shifting from DB arrangement -either Pay As You Go (PAYG) Financed or Funded - in which the amount of retirement benefit is determined largely by years of service- to DC arrangement, whereby retirement wealth depends on how much workers save and how successfully they allocate their assets accumulated in DC plans. The efficient allocation of these assets requires the managing of risks, such as the timing of annuitization and longevity risk and the type of options and products available, and crucially, on the regulatory environment (Antolin, 2008).

Many of the newly created DC Pension systems (notably in Central and Eastern China, the UK, Chile, Brazil, Canada, and Australia; among others) have successfully launched the capital accumulation phase, which is primarily concerned with contributions (in the form of deductions) by both the employer and the employee from which the employee (also known as the beneficiary) will draw upon retirement (Nhadinbe, 2005; Doyle, 2006). Some of these countries have even gone far beyond the mere accumulation of pension funds. According to Vittas and Iglesias (1992), policy makers in countries like Chile have put in place effective mechanisms for investing and efficiently managing their accumulated funds, thereby providing a hedge against longevity risk.

In North America and Western Europe, the traditional forms of benefit payment from DC pension plans have been either a lump sum payment or life annuity. In several of these countries, especially in Western Europe, the only permitted form has been a life annuity,

with a minority allowing the commutation of a relatively small part of the annuity for cash. This focus may simply reflect a strong belief in these countries that the life role of a pension plan is to replace pre-retirement employment income with post-retirement life time pension income (Kantudu, 2005; Milevsky, 2006; Ambachtsheer, 2007).

Pension systems in various countries differ, depending on what each country seeks to achieve for its pensioners. In Australia, private occupational pension known as superannuation is offered. In Canada, it is called either registered retirement savings plan or pension plan.while in China and Hong Kong; it is referred to as Mandatory Provident Fund. In India and Malaysia, pension funds bear the name Employees' Provident Fund and in Singapore, it is called Central Provident Fund. Furthermore, Sweden and the UK operate a Social Security system while in Chile and Nigeria; the defined contributory is adopted. Notwithstanding the differences in nomenclature, pension systems all over the world aim at providing retirement security to employees.

2.8 Pension Regulation in Nigeria

In Nigeria, Section 4 Subsection (1) of the Pension Reform Act (2004) states that "a holder of a retirement savings account upon retirement or attaining the age of 50 years, whichever is later, shall utilize the balance standing to the credit of his retirement savings account for the following benefits:

a. Programmed monthly or quarterly withdrawals calculated on the basis of an expected life span.
b. Annuity for life purchased from a life insurance company licensed by the National Insurance Commission with monthly or quarterly payments; and

c. A lump sum at the balance standing to the credit of his retirement savings account; provided that the amount left after that lump sum withdrawals shall be sufficient to procure an *annuity or programmed withdrawals* that will produce an amount not less than 50 percent of his annual remuneration as at the date of his retirement.

This then would redefine the future of not only the insurance industry as providers of annuities but would create competition in annuities provision from the pension industry. From the provisions of Section 4 Subsection 1 (a) above, there is every possibility that the retiring individual may deplete or exhaust his programmed withdrawals if he exceeds his expected lifespan. When this happens, the pensioner stands the chance of becoming destitute before his death.

Section 4 Subsection 1 (b) implies that insurance companies are the sole providers of annuity in Nigeria. Experiences of other economies such as Chile have shown that unless carefully planned and well coordinated, the business of life annuities can be unprofitable as a result of low investment sections, increasing longevity risk, high reserving and solvency requirements for insurance companies.

For Section 4 Subsection 1 (c), the implication is that an individual retiree may only receive a lump sum provided that the balance standing to his credit would provide 50 percent of his salary during his active years. In most cases, the individual retiree may not receive any lump sum due to this proviso. From the provisions of the Act, it is obvious that some of these sections would have to be amended so as to do away with all sorts of ambiguities that may arise at the payout phase.

2.9 Review of Previous Studies

There are a number of studies on annuities and the pay out phase. However, most of these studies appear to concentrate more on the management of annuities, which is an advanced area and also not within the purview of this study. Due to the relatively new nature of the DC pension, there are no many studies in this area, especially from Africa to the best of our knowledge.

James and Vittas (1999) using Chilean data analysed the policy issues relating to the decumulation (pay out) phase of DC pension plans. They argued that for a pension system to be successful, the decumulation phase must be well organized and efficient; and that the underdevelopment of annuity markets is explained by factors such as adverse selection, the bequest and precautionary motive for savings, ignorance and myopia by individuals, and mistrust of insurance companies. They further contended that despite the central role insurance companies play in the provision of old age survivor and disability benefits, most developing countries have very weak and underdeveloped insurance sectors.

The conclusions of this study have far reaching implications. While it is true that insurance sectors of most developing countries are weak; the study fails to recognize the fact that insurance companies are not necessarily the only providers of annuity products. Infact, development of the insurance sector in most cases is triggered by the development of the pension system first. State annuity funds are usually the primary institutions that offer annuity products alongside insurance companies in most countries.

Furthermore, Mitchell (2001) carried out a comparative study using United States (USA) and United Kingdom (UK) data of these countries to value annuity products. He reviewed

the role of annuity products in financing retirement. He concluded that annuity products have an important role to play in helping people manage their assets at retirement; and there is a wide range of annuity products that can enhance retirement security. He foresaw that many developed and developing economies will face the need to restructure their retirement systems in the next two decades, and recommended that it will be critical for countries to devote special attention to the role of annuity markets during this reform process.

Poterba (2001) conducted an international comparison of developed annuity markets using USA and UK data. He analysed the importance of annuity markets in providing retirement security. He argued that the growing relevance of DC pension arrangements has drawn increased attention to the means by which retirees draw down their assets. However, voluntary annuity markets are characterized by adverse selection. He advocated for the introduction of compulsory annuitisation, which will compel individuals to annuitize a portion of their retirement income as a means of reducing adverse selection.

The need for compulsory annuitization as canvassed by the study is increasingly becoming apparent, especially considering the tendency for the value invested pension funds being eroded by market risk. Mandatory annuitization will provide the retiree a safe haven for his/her funds when retirement comes.

Time has vindicated the findings of this study because many countries around the world have aggressively reformed their pension systems in order to shift the ever growing pension burden on their governments. Similarly, countries like Nigeria who adopted the DC system are realising that pension funds are exposed to a myriad of risks as they are

invested. The sum of N30 billion pension assets lost to the recent Nigerian stock market meltdown is a case in point. As revealed by the findings of this study, the fact that annuities are an indispensable part of an efficient pension system is gradually coming to the fore.

In the same vein, Babbel and Merrill (2006) using US data developed a continuous-time model to study the asset allocation choices that face an individual at retirement with a view to seek a rational set of choices for an individual who receives a lumpsum settlement from retirement savings program. Similarly, the study for the first time, modeled individual behaviour under the possibility of default by the insurer issuing annuities. The findings have revealed that high levels of annuitization are rational under a wide range of risk aversion levels, even when stock market returns and annuity price loadings are assumed to be much greater than is generally the case. Similarly, the study also found that even a little default risk can have a very large impact on annuity purchase decisions.

The findings of this study have far reaching policy implications for individuals entering the 9retirement age as they imply that it is more rational for prospective retirees to invest in annuities rather than stock markets. This is necessary because unlike stock markets, annuities offer a guaranteed limit that makes them relatively less risky. Although the model accommodates the principal feature and structure of actual annuities that are available, the mere presence of actuarial values in a continous-time model would continue to change over time.

Doyle (2006) conducted a study using Australian data and examined the payout phase of a defined contributory retirement income arrangement. The study used the life-cycle

hypothesis of consumption and savings to explore the rationale for a retirement income arrangement that requires mandatory savings over the working life. The study found out that an annuity allows the retiree to behave as predicted by the life cycle hypothesis of consumption and savings. She also estimated the money worth of Australian life annuities offered in the Australian markets. The study concluded that Australian annuities provide reasonable value compared to those available in the international market.

An apparent weakness of the study is, in the DC arrangement, the individual is responsible for managing these risks, which is difficult for the average retiree. Thus, the draw down or payout phase raises a number of economic issues for individuals and governments. Furthermore, unlike previous studies, the analysis is extended to inflation indexed annuities.

Similarly, Antolin et al (2008) examined the various forms of retirement benefit payment allowed in countries all over the world with specific emphasis on Brazil, Canada, Chile, Hungary and the United Kingdom. Their analysis suggests significant variance among different countries. While some countries allow only one form of retirement benefit payment, others allow several forms or even a combination of them. They also found that lumpsums and programmed withdrawals are generally provided by pension funds, while for annuities; providers varied from insurance companies to pension funds, financial intermediaries and a centralized annuity fund.

The revelations of this study are very essential to the development of the Nigerian pension system as they provide a framework for the design and management of an efficient benefit system that is sustainable. Specifically, the finding that annuities may be

provided by a number of instituitions (both private and public) other than insurance companies should guide countries like Nigeria in the formulation of annuity markets.

Antolin (2008) assessed how countries' pension arrangements and regulation shape the appropriate structure and flexibility of retirement pay out options with a view to providing a guide to policy makers on how to address the diverse questions posed when designing the pay out phase under the DC arrangement, as well as encouraging a market for annuities. His analysis was concentrated on Chile, the United States and the United Kingdom. The study addressed questions concerning the types of retirement pay out options for accumulated assets under the DC plan a country should allow, which entities should provide annuities, and the type of annuity products that could be allowed. He concluded that three options are basically available in the pay out phase but how and when to buy it depends on countries' legislation and availability of annuity market that would serve this need for retirees.

The findings of this study further stress the importance of annuity markets in the provision of retirement security. Revelations from this study are of utmost importance for countries like Nigeria that are just beginning to realize the weaknesses of other pay out options and the need to develop annuity markets. However, the study lacks any concrete solution on the regulation process of the payout phase, holding that the decumulative phase would only be achieved through trial and error or on the phase experiences. These may later be turned into policies depending on what works for a particular country.

Nhabinde and Schoeman (2008) empirically analysed the impact of retirement benefits on consumption and savings in South Africa using the extended Ando-Modigliani life cycle model as developed by Feldstein (1974). Using time series data on consumption per

capita, disposable labour-income per capita, and pension and benefits payments from provident funds with the South African data (both privately and publicly managed); they employed the OLS to test the impact of retirement on consumption and savings. They concluded that the introduction of retirement programs in South Africa crowds out discretionary household saving and consumption of contributors to such programs. Consequently, benefits paid by these programs contribute positively to consumption with a concomitant decline in the national pool of savings.

An apparent weakness of this study is its inability to establish the stationarity and long run relationship (cointegration) in the time series data used. According to Brooks (2008), unit roots are present in most time series data and as aresult; there is the need to subject them to stationarity and cointegration tests. Furthermore, the study failed to capture the impact of retirement benefits on government revenue and expenditure. This is necessary considering the role played by pension funds in the provision of funds that finance government developmental projects at a cheaper cost in recent times.

In Nigeria, Ezugwu and Sule (2009) employed the student's t-test for paired observations to evaluate the application of the contributory pension scheme on employee retirement benefits in Nigeria. They utilized secondary data from a sample of 10 out of the 182 firms listed on the first-tier market of the Nigerian stock exchange from 1996 to 2005 to test for significant difference in employee retirement benefits before and after the introduction of the DC system. They concluded that the application of the contributory pension scheme has positive impact on employee retirement benefit of listed firms in Nigeria.

Although the study is one of the few modest attempts to empirically approach the new DC pension system in Nigeria; the methodology employed does not seem to be

appropriate. The objective of empirically establishing the impact of the application of the DC scheme on employee retirement benefits may not have been actually realized because the t-test does not test relationships. In otherwords, impact cannot be established by just merely finding the difference before and after the introduction of the scheme. Similarly, a sample of only 10 companies out of the 182 listed firms raises the question of adequate representation of the study population.

2.10 Theoretical Framework

Ando-Modigliani life cycle model is a simple life cycle model pioneered by Ando-Modigliani in (1963). The model asserts that the utility of individuals depends on their planned bequests; and the resources an individual channels for bequest are an increasing function of the individual's resources, relative to the average level of resources of his/her age group. Thus, the model implies that individuals strive to maintain their standard of living by adjusting their cosumption and saving decisions over their entire life cycle. It further specifies consumption as a function of disposable wage income and non-wage or property income.

Using the Ando-Modigliani specification, many other studies have been conducted. Feldstein (1974), in one of the most cited studies in this regard, extended the Ando-Modigliani specification to include the effect of social security wealth on consumption. Asher (1999) proposed another modification to the study by Ando and Modigliani and the Feldstein specification to include the effect of per capita government surpluses and real per capita consumption expenditure on durable goods. He suggested that unemployment be entered into the equation as the product of the unemployment rate and the level of real per capita disposable income. For instance, higher rates of

unemployment would lower per capita disposable income and therefore, the effect of retirement benefits on consumption equation would be sensitive to the levels of unemployment.

In a related study, Yaari (1965) employed the life cycle model to show that an individual facing an uncertain lifetime with no consumption risk such as unexpected healthcare needs and with no bequest motive, should annuitize all of his or her wealth at retirement. This prediction stands in stark contrast to actual experience with annuity markets. In most developed nations such as UK and US, these markets are small.

The savings and consumption theory is premised on the life-cycle hypothesis (LCH) of savings and consumption. Proponets of this theory viewed the saving behaviour exhibited by individuals as generally the desire to smooth consumption over one's life time, within the constraints imposed by limited life time resources. The standard references to the life –cycle saving model is Modigliani and Brumberg (1954); and Ando and Modigliani (1963). Accumulating and decumulating asstes is central to the life cycle theory of consumers saving behaviour.

The LCH is a forward looking model which assumes that people base their consumption decisions on their expected lifetime income rather than just their current income. Instead of allowing consumption to vary automatically with variations in income, the LCH implies that people would prefer to engage in consumption smoothing from year to year through the action of borrowing and saving. That is, people would prefer to save out of current income in order to fund future consumption. How current income is split between consumption and savings is driven by individual preferences about their present and

future consumption prospects.The theory states that during the early part of working life, consumption generally exceeds income, meaning that current consumption is partly financed by borrowing against future income. By middle age, income is generally higher than current consumption, meaning that debt can be retired and a propotion of current income can be saved for future consumption. In the later stage of life, at retirement; current consumption once again exceeds income but now consumption is financed out of accumulated savings rather than borrowing.

However, the simple model of lifecycle saving and consumption assumes that there is no uncertainty, for example, about the rate of return on assets, inflation or the date of death. For example, if the retiree knew for certain how long he/she was going to live the optimal drawdown of wealth over the retirement period would be straight forward. Yaari (1965) was the first to demonstrate the economic value of annuitisation in a lifecycle model with uncertain lifetimes, and this framework has been used extensively to value the insurance value of annuities.

While the introduction of uncertainty to the LCH makes the model more complex, the findings remain consistent with the original findings by Moddigliani and Brumberg (1954) that there is a fall in the stock of wealth over the retirement period, which is a requirement of the LCH (Hurd, 1990). However, consumption might not be smooth between pre and post retirement or within the retirement period in most cases. Thus, he argued that given an uncertain situation, annuitization provides the best means of savings for retirement. This, according to him, is especially expedient for a society that has no social security.

The study adopts this theory because it provides justification for annuitization in a society with a robust pension system. Furthermore, the theory is considered relevant to the study because it stresses the need for individuals to prepare for themselves a savings vehicle that would provide a relatively stable stream of income at old age. Given the volatility of the Nigerian investment environment in which most pension funds are invested, the need for an alternative source of income becomes inevitable, especially considering the absence of a social security system in the country.

2.11 Summary of the Chapter

In summary, this chapter dealt with the review of literature relating to the area under study such as historical evolution of annuity market, annuity products and providers, annuity market and retirement financing, concept of pension funds decumulation, concept of retirement benefit, forms of benefit payment at retirement, main retirement payout options and features, overveiw of international pension practice and the pension regulation in Nigeria. The chapter also reviewed relevant studies on the topic showing clearly the various tools for analysis, their findings, recommendations and conclusions. Finally, the chapter discussed the theoretical framework underpinning the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights issues relating to the procedure of conducting the research. It discusses the methods used in conducting the research work, the population and sample of the study, the sample size; the sources from which data for the study was collected; and the techniques(s) used in analyzing the data collected.

3.2 Research Design

This study employed the survey method of research as its design. The design was chosen because of its advantage over other methods in collecting data for studying a population that is too large to observe and in studies that have individuals as the unit of analysis (Kumar, 2005). The method also avails researchers the opportunity to select and study a representative sample from the population. The generalizations made on the sample selected will enable the study arrive at conclusions that can be extended to cover the entire population.

The choice of the method is justified by the fact that it will be extremely difficult, if not impossible; to study the whole population within the limit of resources available.Thus, it is believed that this method would avail the study the opportunity to collect data in way facts and events can better be understood, interpreted and expressed.

3.3 Population of the Study

The population of the study is in two folds, namely the stakeholders and the current retirees' population. The stakeholders' population figure is 4,723 consisting of all 36

management staff in PenCom; 3,723 management staff in the twenty six PFAs (PenCom, 2010); and 964 management staff in the five PFCs (The Nigerian Stock Exchange, 2010) as at 31st December, 2010; while 5,228 constitute the population figure for current retirees as at 31st December, 2010 (PenCom, 2010). The choice of only management staff as against all staff is necessitated by the fact that they are believed to be more informed and conversant with the intricacies of retirement under the new DC plan. Thus, the entire population consists of a total of 9,951 individuals.

3.4 Sample Size and Sampling Technique

A sample size was drawn from the population using Cochran's (1977) sample size formula. According to Cochran (as cited in Bartlett, Kotrlik and Higgins, 2001); sample size for a survey population can be arrived at using the following formula:

$$n_0 = \frac{(t)^2 * (p)(q)}{(d)^2}$$

Where

n_0 = Cochran required return sample size.

t = Value for selected alpha level in each tail.

(*p*)(q) = Estimate of population variance (computed as maximum possible proportion *1 – maximum possible proportion).

d = Accceptable margin of error for proportion being estimated.

Based on the formular above, the various values are defined below:

t = Value for selected alpha level of 0.025 in each tail equals 1.96.

(*p*)(q) = (0.5) * 1 – 0.5 = 0.25

d = 0.05

Substituting these values into the formula; we have:

$$n_0 = \frac{(1.96)^2 * (0.5)(0.5)}{(0.05)^2} = 384$$

A maximum possible proportion of 0.5 was utilized because according to Krejcie and Morgan (1970), this proportion will result in the maximization of variance which will also produce the maximum sample size. Similarly, an acceptable margin of error of 5% was also adopted for computing the sample size because Krejcie and Morgan (1970) posited that the general rule for acceptable margin of error in educational and social research is 5% for categorical data and 3% for continuous data. The above formula resulted in a sample size of 384 individuals.This would then be subjected to the correction formular for the two populations to get the sample size of each population. However, the sample size would have to be further exposed to a correction mechanism as recommended by Cochran. Thus, the Cochran (1977) correction formula was employed to adjust the return sample size. According to Cochran (as cited in Bartlett, et al., 2001), the correction formula is expressed as follows:

$$n_{-1} = \frac{n_{-0}}{1 + n_{-0}/\mathrm{N}}$$

Where

n_{-1} = Minimum returned sample size

n_{-0} = Required return sample size

N = The population

To draw the approporiate sample for the stakeholders, we substitute the relevant values into the formula. From the formular above, the various values are defined below:

n_{-0} = 384

N = 4,723

Substituting these figures into the correction formular, we have:

$$n_{-1} = \frac{384}{1 + 384/4{,}723} = 355$$

As a result of applying the above formula, the sample size was eventually reduced to approximately 355 individuals. Initially, the administration was proportionately done according to the contribution to the population which gives PenCom 3, PFAs 74, and PFCs 279; making a total of 355 respondents. However, given the fact that the PenCom is the most important among the stakeholders and has a major role to play in addressing

the problem that prompted this research, all the 36 management staff of this regulator of the pension industry were considered as part of the sample of the study. Accordingly, the balance of 319 was proportionately allocated between the management staff of the PFAs and PFCs, and this resulted in 253 for PFAs and the remaining 66 for PFCs. For current retirees; the same procedure also applies. We therefore also substitute into the correction formula as follows:

$$n_{-1} = \frac{n_{-0}}{1 + n_{-0} / \mathrm{N}}$$

Where;

n_{-1} = Minimum returned sample size

n_{-0} = Required return sample size

N = The population

From the formula above, the various values are defined below:

n_{-0} = 384

N = 5,228

Substituting these figures into the correction formula, we have:

$$n_{-1} = \frac{384}{1 + 384/5{,}228} = 358$$

As a result of applying the above formula the sample size for the current retirees is approximately 358 individuals. This minimum returned sample size for each population

is what was used by the study. Thus, the sample size for the stakeholders was proportionately allocated among the identified stakeholders in the pension industry. After the allocation, the sample from each group was randomly drawn to arrive at the study sample as this technique gives all elements equal chances of representation in the sample.

3.5 Sources and Methods of Data Collection

The study employed data from both primary and secondary sources in its analysis. Primary data for the study was collected with the aid of the questionnaire, which contains carefully and logically framed open and close ended questions aimed at addressing the research problem. Similarly, secondary data relating to the performance of the new DC pension system was sourced from the annual report of the Pencom for the period under study.

The collection of data from both primary and secondary sources is important to the study. Data collected through the questionaire, a primary source instrument; were employed to test the hypotheses of the study. On the other hand, the secondary data collected enabled the study to provide a picture of the performance of the Nigerian pension industry under the new DC scheme so far.

3. 6 Administration of Data Collection Instruments

In line with the sampling procedure of this study, primary data were collected from the 355 sampled respondents of stakeholders with the aid of the questionnaire. Thus, 355 copies of the questionnaire were administered to the identified stakeholders in the pension industry, namely; management staff of Pencom, management staff of the PFAs, management staff of the PFCs; and 358 sampled respondents from current retirees with the aid of their separate questionaire.

Table 3.1 Questionnaire Distribution among Stakeholders and current retirees in the Pension Industry

S/No.	Stakeholders	Stakeholders Copies	Current retirees Copies
I	PenCom	36	
Ii	PFAs	253	
Iii	PFCs	66	
Iv	Current retirees		358
	Total Number of Questionnaire copies	**355**	**358**

Source: Researchers Computations, 2010

As revealed by table 3.1, the management staff of PenCom were given full allocation of 36, while the balance of 319 copies of the questionnaire was proportionately allocated among the PFAs and PFCs. In the final analysis, the PFAs were allocated 66 copies while the PFCs had 253 copies of the questionnaire. The full allocation of 36 copies of the questionnaire to all the management staff of PenCom became expedient in view of the important role their professional and technical response has to play in addressing the problems and objectives of the study. As the regulators of the industry, the perception of this category of management staff on the technical issues of annuity cannot be equalled with the perception of any other stakeholder. On the other hand, a total of 358 copies of the questionnaire were also separately administered to current retirees.

In order to enhance the quality of primary data to be collected, the purpose and relevance of the study was explicitly explained to the respondents in a letter attached to the questionnaire.This is very vital when using a questionnaire as one may not be there to get specific answers required for the study (Punch, 2008). The questionnaire administered to both populations partly contained similar questions with a view to testing and

appreciating differences in their perception on similar issues that jointly affect the industry. The other set of questions were carefully framed to address the uniqueness of each category of respondents.

3.7 Technique of Data Analysis

For the purpose of this study, the simple percentage method was used to analyse the responses from the questionnaire. Similarly, the Chi Square Test of Independence, a non-parametric tool; was employed to test all the three hypotheses of the study. According to Kothari (2007), the Chi Square Test of Independence can be computed using the formula below:

$$\chi^2 = \sum_{j=1}^{k} \frac{(o_j - e_j)^2}{e_j}$$

Where

$\chi^2 =$ Chi Square Statistic

$\sum_{j=1}^{k} =$ Summation of observations from j= 1 to k

$o_j =$ Observed frequency

$e_j =$ Expected frequency

The number of degrees of freedom is equal to the number of cells *rc*, minus the reduction in degrees of freedom, *p*, which reduces to $(r - 1)(c - 1)$.

Decision Rule: We reject the null hypothesis (H_0) if the calculated value is greater than the critical value, and do not reject the null hypothesis (H_0) if the calculated value is less

than the critical value at the 5% level of significance.ie at any specified degree of freedom.

3.8 Justification of the Methods used

The choice of Chi Square as a tool of analysis was necessitated by the fact the study utilized primary data in the form of responses from stakeholders in the pension industry, and thus the Chi Square is the ideal tool of analysis for this study. Besides, the new DC scheme is just seven years old (2004-2010) and thus, secondary data may not be sufficient to establish an empirical relationship because the apex industry commensed the official reporting of pension data in 2007. .Given the importance of the subject matter however, the Chi square could be used to provide some valid insights for the study. Thus, nature of the data utilized by the study justifies the choice of Chi Square for this study.

3.9 Summary of the Chapter

This chapter deals with methods and procedure used in conducting this research. The survey method is the research design while the population is of two folds due to the nature of the respondents. The sample size and sampling technique were computed using Cochran's (1977) sample size formula which was later subjected to the correction mechanism to adjust the return sample size. The sources and methods of data collection, the administration of data collection instruments, and the technique of data analysis for the study were also discussed under this chapter. Lastly, the justification for the choice of technique of analysis was also presented.

CHAPTER FOUR

DATA PRESENTATION AND ANALYSIS

4.1 Introduction

This chapter presents the analysis of both the primary data gotten through the administration of questionnaire and the test of hypotheses using chi-square and the analysis of secondary data using trend analysis. It also presents a discussion of the findings of the study. With a view to pinpointing positive policy issues that if implemented would move forward the pension industry in line with best practices in other countries undergoing the same process.

4.2 Data Presentation and Analysis

The analyses of copies of the questionnaire returned in the course of this study are presented under this section. In line with the nature of the study's population, the analyses of the responses are presented under two separate headings. The set of questionnaire for the stakeholders of the pension industry is first presented, followed by the set of questionnaire that was administered to current retirees. Table 4.1 presents a summary of copies of the questionnaire issued and returned.

Table 4.1: Administered and Returned Questionnaire.

Categories	Administered	Returned	Percentage returned
Stakeholders	355	155	53.3
Retirees	358	136	46.7
Total	713	291	100

Source: Researcher's Computations, 2010

From table 4.1, it can be seen that 355 copies of the questionnaire were administered to stakeholders, while 358 copies were administered to the retirees, resulting in a total of 713 administered copies. This was based on the Cochran's (1977) sample size subjected to the correction formula. Out of this figure, only a total of 291 copies were returned by stakeholders, representing 53.3% of the total copies administered. On the otherhand, only 136 copies were retrieved from current retirees, constituting 46.7% of the total copies administered to this category of respondents.

4.2.1 Analysis of Responses from Stakeholders

In this sub-section, the data collected from the field survey with the aid of the questionnaire are presented and analyzed using simple percentages.

Table4.2: Age of Stakeholders

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	35-40 Years	42	27.1	27.1	27.1
	41-45 Years	78	50.3	50.3	77.4
	46-50 Years	34	21.9	21.9	99.4
	51-60 Years	1	0.6	0.6	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.2 reveals that 42 respondents, constituting 27.1% of the respondents are within the age group of 35-40 years. Furthermore, 78 respondents, representing 50.3% fall within the age group of 41 to 45 years; and another 34 respondents, constituting 21.9% are aged between 46-50 years. However only one respondent, representing less than one percent of the total number of respondents fell in the age bracket of 51 to 60 years. This implies that the stakeholders in the pension industry are predominantly staff that are young and in their middle ages. Hence, a significant proportion of respondents can be said to be in their active age bracket.

Table4.3: Gender of Stakeholders

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	99	63.9	63.9	63.9
	Female	56	36.1	36.1	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.3 depicts the presentation of stakeholders by their gender. An analysis of the gender of respondents reveals that 99 are males while 56 are females, representing 63.9% and 36.1% respectively. This implies that the number of male stakeholders are almost double that of the female respondents.

Table4.4: Experience of Stakeholders

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	10-15 Years	90	58.1	58.1	58.1
	16-20 Years	50	32.3	32.3	90.3
	21-25 Years	14	9.0	9.0	99.4
	26-30 Years	1	0.6	0.6	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.4 above depicts the experiences of the stakeholders in the pension industry. From the table, it can be seen 90 of the respondents who represent approximately 58.1% had 10-15 years of experience, and this was closely followed by 50 respondents, constituting 32.3 % who had 16-20 years of experience. Only 14 respondents, representing 9% had working experience of between 21-25 years, while an individual respondent, representing a meager 0.6% of the total respondents, had worked for a period of between 26-30 years in the industry. The revelations of this table further confirm those of table 4.3 that most of the stakeholders in the pension industry are young and in the active age group. This means that their working experiences would not be much in terms of years of service.

Thus, this explains why the lowest class range of experience which is 10-15 years had the highest frequency of respondents.

Table 4.5: Educational Qualifications of Stakeholders

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	B.Sc.	38	24.5	24.5	24.5
	M.A./MBA/M.Sc.	90	58.1	58.1	82.6
	PhD.	26	16.8	16.8	99.4
	Others (please Specify)	1	0.6	0.6	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

From table 4.5, it can be seen that 38 respondents have B.Sc. as their highest qualification, and this number constitutes 24.5% of the total number of respondents under this category. It is also clear from the table that a total of 90 respondents, which happens to be the majority, and constitutes 58.1% of the respondents, have qualifications up to M.A/MBA/M.Sc. On the otherhand, 26 respondents possess Ph.D as their highest qualification, and this number represents 16.8% of the total number of respondents.

Lastly, a single respondent holds qualifications other than those stated in the table, and his response represents less than one percent of the total responses recorded. Thus, it can be deduced from the table that the industry is dominated by young men/women majority of whom are master degree holders.

Table4.6: Stakeholders' Responses by Category

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	PenCom Management Staff	30	19.4	19.4	19.4
	PFA Management Staff	105	67.7	67.7	87.1
	PFC Management Staff	20	12.9	12.9	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.6 indicates the categories of the stakeholders in terms of their cadre. It depicts that a total of 30 respondents, representing 19.4% are PenCom management staff; while the PFAs had the highest recorded responses of 105 mangement staff which constitutes 67.7% of the total number of respondents. Lastly, PFCs recorded the lowest rate of response of only 20 management staff, which represents 12.9% of the respondents. This implies that the PFCs were not willing to respond since as banks, they are bound by their

oath of secrecy as to the kind of information they can make available, especially as it regards important issues of this nature. On the otherhand, the PFAs were more responsive due to the relative transparency with respect to information dissemination in the industry.

Table 4.7: Familiarity with the DC Pension System in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Familiar	39	25.2	25.2	25.2
	Familiar	85	54.8	54.8	80.0
	Not Familiar	31	20.0	20.0	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.7 presents the percentage of familiarity of the DC scheme by the stakeholders in the Nigerian pension industry. A total of 85 respondents constituting 54.8% of the respondents admitted that they are familiar with the new DC scheme while another 39 respondents, making up 25.2% of the responses recorded are very familiar with the scheme. However, about 31 respondents, representing only 20% of the stakeholders

admitted they are not familiar with the scheme. This implies that majority of stakeholders are on the average familiar with the new pension system and its mechanics.

Table 4.8: Stakeholders Comparative Rating of the DB and DC Schemes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	16	10.3	10.3	10.3
	Very Good	68	43.9	43.9	54.2
	Good	41	26.5	26.5	80.6
	Fair	30	19.4	19.4	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.8 presents a summary of the responses from the comparative rating of the old DB and the new DC pension schemes in Nigeria. From the table, it can be seen that 68 respondents representing 43.9% of respondents rated the the DC scheme as very good

vis-à-vis the DC scheme. Furthermore, another 41 respondents constituting 26.5% assessed the new scheme as good, while only 16 respondents rated the scheme as excellent compared to the DB scheme. On the whole, about 80% of respondents believe that the new DC schmene is way better than the defunct DB pension arrangement in Nigeria. Lastly, only 30 respondents, constituting 19.4% rated the performance of the new scheme vis-à-vis the old as fair. This implies that majority of stakeholders believe that the new DC scheme is better than the hitherto existing DB pension system in Nigeria and this performance is manifest in how tremendously pension assets heve grown since the advent of the DC scheme.

Table 4.9: Level of Fears Concerning Retirement under the DC Scheme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	44	28.4	28.4	28.4
	High	36	23.2	23.2	51.6
	Moderate	74	47.7	47.7	99.4
	None of the above	1	0.6	0.6	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.9 depicts stakeholders' responses on the rating of the level of fear expressed concerning retirement under the new DC scheme. A total of 74 respondents who

represent 47.7% admitted they nurse moderate fears concerning retirement under the new scheme, while 44 respondents constituting 28.4% had low fears concerning retirement. Furthermore, 36 respondents constituting 23.2% admitted that they have high fears regarding the mode of retirement under the scheme. On the otherhand, only one respondent was of the opinion that the nature of fears he nurses about the scheme does not fall within any of the options provided. On fears concerning retirement, table 4.9 showed 28.4% as low, 23.2% as high while 47.7% were moderate and those that were ignorant had point six percent. This, on the whole, implies that the stakeholders nurse fears concerning retirement under the new DC pension scheme in Nigeria as depicted by the majority of responses.

Table 4.10: Level of Familiarity with Annuity Option at Retirement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Familiar	59	38.1	38.1	38.1
	Familiar	61	39.4	39.4	77.4
	Not Familiar	34	21.9	21.9	99.4
	Ignorant	1	0.6	0.6	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.10 presents responses regarding the level of stakeholders' familiarity with annuity as a pay out option under the DC scheme in Nigeria. It can be seen from the table that fifty none respondents, representing 38.1% of respondents confirmed that they are very familiar with annuity as a pay out option. Furthermore, sisty one respondents constituting 39.4% of responses are familiar with annuity as a pay out option, while only thirty four respondents making up 21.9% are not familiar with the pay out option. However, only a single respondent representing a mere 0.6% claimed not to be familiar with annuity as a pay out option. A general implication of the responses revealed that majority of the respondents (about 77.4%) are familiar with annuity as a pay out option under the new DC pension scheme in Nigeria.

Table 4.11: Perception on the Role of Retirement Financing in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Familiar	43	27.7	27.7	27.7
	Familiar	110	71.0	71.0	98.7
	Not Familiar	2	1.3	1.3	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.11reports the perception of respondents on the role of retirement financing in Nigeria. The table shows forty three respondents, constituting 27.7% of responses

recorded are very familiar with retirement financing in Nigeria while one hundred and ten repondents representing 71% are familiar with retirement financing in Nigeria. Conversely, only two respondents, making up 1.3% are not familiar with retirement financing in Nigeria. This implies that stakeholders in the pension industry are generally familiar with retirement financing as depicted by a cummulative response rate of 98.7 percent.

Table 4.12: Stakeholders' Perception of Role of Annuities in Retirement Financing in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	31	20.0	20.0	20.0
	Agree	57	36.8	36.8	56.8
	Undecided	34	21.9	21.9	78.7
	Disagree	3	1.9	1.9	80.6
	Strongly Disagree	30	19.4	19.4	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.12 reveals that thirty one respondents constituting 20% of responses strongly agree that annuities have no significant role to play in financing retirement in Nigeria. Similarly, fifty seven respondents representing 36.8% agreed that annuities have no role to play under the current retirement financing arrangement in Nigeria. A total of thirty four respondents representing 21.9% were undecided on the role of annuities in retirement financing, while another three respondents disagreed that annuities have no role to play in financing retirement in Nigeria. However, thirty respondents who constitute 19.4% of responses strongly disagreed that annuities have no significant role to play in retirement financing in Nigeria. This implies that the stakeholders are not familiar with the technical issues of retirement financing; and this is why 56.8% agreed that annuities are not perceived to have significant impact on retirement financing in Nigeria.

Furthermore, table 4.10 and 4.11 showed that they are familiar with annuities as a retirement financing option but despite this, their perception of its significant impact does not tally. This has to do with the fact that most of the stakeholders do not have the requisite background on pension or actuarial science to succinctly comprehend the technicalities of the payout phase.

Table 4.13: Perception on the Need for Annuity Markets in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Agree	43	27.7	27.7	27.7
	Agree	4	2.6	2.6	30.3
	Undecided	1	0.6	0.6	31.0
	Disagree	43	27.7	27.7	58.7
	Strongly Disagree	64	41.3	41.3	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.13 depicts the perception of respondents on the need for annuity market in Nigeria. A total of forty three respondents who constitute 27.7% of the respondents strongly agreed that there is no need for annuity markets in Nigeria. Furthermore, another four respondents, representing 2.6% of responses recorded agreed that there is no need for annuity markets in Nigeria. However, only one respondent was undecided on the need

for annuity markets in Nigeria. On the otherhand, forty three respondents representing 27.7% disagreed that annuity markets have no role to play in financing retirement in Nigeria. Lastly, sixty four respondents, who happen to constitute 41.3% of responses strongly disagreed that annuity markets have no role to play in financing retirement in Nigeria. This implies that majority of the respondents believe that there is need for annuity market in Nigeria since 69% of them disagreed with the notion of the irrelevance of annuity markets in retirement financing in Nigeria.

Table 4.14: Familiarity with the Legal/Regulatory Framework Guiding the DC Scheme in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Familiar	70	45.2	45.2	45.2
	Familiar	51	32.9	32.9	78.1
	Not Familiar	1	0.6	0.6	78.7
	Ignorant	33	21.3	21.3	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.14 provides a summary of stakeholders' responses on their extent of familiarity with the existing legal/regulatory guiding the DC scheme in Nigeria.From the table, it can be seen that seventy respondents representing 45.2% of the respondents are very familiar with the existing regulations guiding the DC scheme, while fifty one respondents or 32.9% of the responses recorded were familiar with the framework. However, only one

respondent constituting only 0.6% claimed to be ignorant of the regulation of pensions in Nigeria, while another thirty three respondents or 21.3% claimed to be ignorant of the existing legal/regulatory framework. On the whole, majority of respondents can be said to be familiar with the existing legal/regulatory framework guiding the DC scheme in Nigeria as depicted by a total of 78.1% response in favour of familiarity with the scheme. This should be expected because the respondents are the stakeholders who are familiar with the scheme they actively participate in managing or administering.

Table 4.15: Adequacy of the Existing Legal/Regulatory Framework Guiding the Decumulation of Pension Funds in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Adequate	1	0.6	0.6	0.6
	Adequate	45	29.0	29.0	29.7
	Fair	64	41.3	41.3	71.0
	Inadequate	25	16.1	16.1	87.1
	Very Inadequate	20	12.9	12.9	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.15 depicts the responses of stakeholders on the adequacy of the existing legal/regulatory framework guiding the pay out phase in Nigeria. From the table, one respondent constituting 0.6% considered the the existing framework to be very adequate. Furthermore, another forty five respondents, representing 29.0% of the responses

recorded considered the regulatory framework guiding the payout phase of accumulated pension funds in Nigeria as adequate. On the otherhand, a total of sixty four respondents or 41.3% of responses considered the existing framework to be fair. However, twenty five respondents who make up 16.1% of responses considered the the existing framework as inadequate, while another twelve respondents constituting 12.9% adjudged it as very inadequate. This implies that the stakeholders of the scheme who are aware of it feel that the regulatory framework is poor and needs to be completely overhauled and reviewed as suggested by a cummulative response of 29% in support of the inadequacy of the scheme. It also implies that the Act has to be reviewed to take care of the perceived inadequacies hindering the smooth operation of payout phase of accumulated pension funds in Nigeria.

Table 4.16: The Need to Review the Existing Legal/Regulatory Framework Guiding the DC system in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Crucial	35	22.6	22.6	22.6
	Crucial	88	56.8	56.8	79.4
	Neutral	31	20.0	20.0	99.4
	Not Crucial At All	1	0.6	0.6	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

From table 4.16, it can be seen that thirty five respondents representing 22.6% of the responses are of the opinion that the need to review the existing legal /regulatory framework guiding the current DC system is very crucial, while another eighty eight respondents who make up 56.8% of responses adjudged the need as crucial. Furthermore, thirty one respondents who happen to constitute 20.0% of responses were neutral as to the cruciality or otherwise of the need to review the existing regulatory framework underlying the management of pension funds in Nigeria. However, only one respondent, representing 0.6% feels such need is not crucial at all. On the whole, a total of 79.4% of the respondents feel that there is the crucial need to review the existing legal/regulatory framework guiding the DC system in Nigeria. This implies that the stakeholders that are aware of the laws feel the crucial need to review it owing to the observed inadequacies, especially with respect to the pay out phase. This finding confirms the findings of table 4.15.

Table 4.17: Adequacy of Publicity on Annuity Market as a Payout Option in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very Adequate	9	5.8	5.8	5.8
	Adequate	38	24.5	24.5	30.3
	Not Adequate	65	41.9	41.9	72.3
	Very Inadequate	43	27.7	27.7	100.0
	Total	155	100.0	100.0	

Source: Survey Data, 2010

Table 4.17 presents the summary of responses by stakeholders on the adequacy of publicity on annuity market as a pay out option under the DC scheme. A total of nine respondents, constituting 5.8% of the reponses are of the opinion that annuity as a pay out pension under the DC scheme in Nigeria has received very adequate publicity, and this is closely followed by thirty eight respondents or 24.5% of the responses who feel that the publicity is adequate. Furthermore, an overwhelming sixty five respondents representing 41.9% of the responses believe that the level of publicity annuity as a pay out option has received is not adequate; and lastly, forty three respondents constituting 27.7% of the responses are of the view that the level of publicity is very inandequate.It can therefore be deduced from the foregoing that annuity is not adequately publized and these responses came from the stakeholders who are key players and very indispensable to the implementation of the new scheme.

4.2.2 Analysis of Responses from Current Retirees

This section presents analysis on the bio-data and data from current retirees. It can be seen that the analysis is based on a total of 136 copies of the questionnaire returned, representing a response rate of 46.7 percent of the total copies of the questionnaire issued.

Table 4.18: Age of Current Retirees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	55-60 Years	89	65.4	65.4	65.4

	61-65 Years	34	25.0	25.0	90.4
	66-70 Years	13	9.6	9.6	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

Table 4.18 depicts that eighty nine of the respondents who constitute 65.4% are between ages 55-60 years. Furthermore, thirty four respondents or 25.0% of respondents fall between 61-65 years, while only thirteen respondents representing 9.6% fall within the range of 66-70 years. This goes in line with section 8 (1) of the Pension Reform Act that states that those that have three or less years to retire should not form part of the new contributory scheme. Thus, ages 55 to 60 had the highest percentage of 65.4 percent.

Table 4.19: Gender of Current Retirees

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	58	42.6	42.6	42.6
	Female	78	57.4	57.4	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

Table 4.19 indicates that fifty eight respondents representing 42.6% were male, while the remaining seventy eight respondents or 57.4% of respondents were female The number of females is greater than that of the males because it has been argued that the life span of a woman almost always outlives that of a man.

Table 4.20: Years of Contributions under the Old DB Scheme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1-10 Years	14	10.3	10.3	10.3
	11-20 Years	104	76.5	76.5	86.8
	21-30 Years	17	12.5	12.5	99.3
	31-40 Years	1	0.7	0.7	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

Table 4.20 shows the number of years of contribution put in by current retirees under the old DB scheme. It shows that fourteen respondents constituting 10.3% have contributions ranging from one to ten years; while one hundred and four respondents constituting 76.5% have contributed between 11-20 years. Furthermore, seventeen respondents representing 12.5% of responses have contributed between 21-30 years under the DB scheme and only one respondent constituting 0.7% of responses have contributed for up to 31-40 years. The implication of this is the transitional phase of the scheme. Thus, retirees under study have contributed for longer period in the DB as compared to the DC.

This gave raise to the high percentage of 76.5% with contributions of 11-20 years in the DB scheme.

Table 4.21: Years of Contributions under the New DC Scheme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	2 Years	8	5.9	5.9	5.9
	3 Years	73	53.7	53.7	59.6
	4 Years	43	31.6	31.6	91.2
	5 Years	12	8.8	8.8	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

From table 4.21 depicts respondents' years of contribution under the new DC scheme. It shows that eight respondents constituting 5.9% have made contributions for up to two years only under the new DC scheme, while another seventy three respondents who happen to represent 53.7% of the responses recorded have made contributions for only three years under the new scheme. Furthermore, forty three respondents representing 31.6% have contributed for four years under the new scheme and lastly; twelve respondents constituting 8.8% have contributed for up to five years under the new schemem. This indicates that the current retirees have contributions both under the old

and new schemes, even though most of their contribution comes from the old scheme. This implies that retirees are gradually transiting from the old scheme to the new one with a steady growth in the amount of contributions under the new DC scheme.

Table 4.22: Familiarity with the new DC Scheme in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Very familiar	34	25.0	25.0	25.0
	Familiar	30	22.1	22.1	47.1
	Not Familiar	32	23.5	23.5	70.6
	Ignorant	40	29.4	29.4	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

From table 4.22 presents retirees' responses on the extent of familiarity with the new DC scheme in Nigeria. Thirty four respondents constituting 25.0% of the responses revealed that they are very familiar with the new DC schemem, while another thirty respondents who constitute 22.1% are familiar with the new scheme. Furthermore, thirty two respondents representing 23.5% reported that they are not familiar with the new DC scheme in Nigeria. However, forty respondents who who make up 29.4% are ignorant of the new DC scheme in Nigeria. This implies that majority of the current retirees are either ignorant or not familiar with the new DC scheme. Furthermore, table 4.22 had close

range of percentage meaning that those that were familiar and those not familiar with DC were close, thus, implying that publicity is still low.

Table 4.23 Reasons for Retirement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Disability	39	28.7	28.7	28.7
	Voluntary	23	16.9	16.9	45.6
	Normal At Age of 65	21	15.4	15.4	61.0
	35 Years of Service	53	39.0	39.0	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

Table 4.23 provides a summary of the responses from current retirees regarding their respective reasons for retirement. Thirty nine respondents who make up 28.7% of responses retired because of one form of disability or the other, while another twenty three respondents constituting 16.9% retired voluntarily from active service. On the otherhand, twenty one respondents representing 15.4% retired after attaining the retirement age of sisty five years, while fifty three respondents constituting 39.0% gave the attainment of thirty five years of service as the reason for their retirement from active

service. This implies that the majority of retirees retired as a result of their attainment of the mandatory service age of sixty five years.

Table4. 24: Sector Served Before Retirement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Private Sector	29	21.3	21.3	21.3
	Public Sector	5	3.7	3.7	25.0
	Federal Capital Territory	52	38.2	38.2	63.2
	Others (Pls specify)	50	36.8	36.8	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

Table 4.24 discusses the sector under which current retirees served before retirement. Twenty nine respondents who constitute 21.3% of responses served under the private sector, while only five respondnets making up 3.7% of responses served under the public sector. Similarly, fifty two respondents or 38.2% of respondents served under the Federal Capital Territory (FCT), while fifty respondents who represent 36.8% of responses served under sectors other than those specified. This implies that respondents are predominantly from the FCT, the private sector and other sectors that were allowed by law to join the scheme.

Table 4.25: Retirees' Comparative Rating of DB and DC Schemes

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Excellent	13	9.6	9.6	9.6
	Very Good	30	22.1	22.1	31.6
	Good	65	47.8	47.8	79.4
	Fair	26	19.1	19.1	98.5
	Poor	2	1.5	1.5	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

Table 4.25 reports the comparative rating by current retirees of the old DB scheme vis-à-vis the new DC scheme in Nigeria. Thirteen respondents representing 9.6% rated the new Dc scheme as excellent in relation to the old DB scheme, while another thirty respondents making up 22.1% of responses recorded rated the scheme as very good. Furthermore, sixty five respondents representing 47.8% adjudged the new DC scheme as very good, while twenty six respondents who constitute 19.1% of responses rated it as fair. However, only two respondents representing 1.5% rated the DC scheme as poor in relation to the DB scheme in Nigeria. This means that majority of respondents feel the benefits derivable from the new DC scheme by far outweigh those under the old DB scheme in Nigeria.

Table4.26: Retirees' Perception of the Payout Phase in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Fair Arrangement	63	46.3	46.3	46.3
	Good Arrangement	17	12.5	12.5	58.8
	Very Good Arrangement	26	19.1	19.1	77.9
	Poor Arrangement	30	22.1	22.1	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

Table 4.26 reports the perception of current retirees regarding the payout phase in Nigeria. From the table, it can be seen that sixty three respondents constituting 46.3% of responses recorded are of the opinion that the pay out phase is a fair arrangement for retirement, while another seventeen repondnets representing 12.5% believed that it is a good arrangement. Furthermore, twenty six respondents who make up 19.1% of responses opined that the existing payout phase is a very good arrangement for retirement. On the otherhand, thirty respondents who constitute 22.1% believed the payout arrangement is poor. This implies that retirees generally perceive the payout phase as fair arrangement since it had the highest percentage response of 46.3 percent.

Table 4.27: Preferred Payout Option for Retirement

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Lump Sum	31	22.8	22.8	22.8
	Programmed Withdrawal	59	43.4	43.4	66.2
	Annuities	20	14.7	14.7	80.9
	Ignorant	26	19.1	19.1	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

Table 4.27 presents the response of current retirees on their preferred mode of payment of retirement benfits. Thirty one respondents representing 22.8% prefer to receive all their benefits as a lumpsum, while fifty nine respondents who constitute 43.4% opted for programmed withdrawals as their preferred payout option. On the otherhand, twenty respondents or 14.7 of respondnets chose annuities as their preferred mode of payment after retirement. However, twenty six respondents making up 19.1% of respondents claimed ignorance to the three modes of payment under the new DC scheme. This implies that the perception of retires on the payout phase option of annuities is low. Put differently, retirees are not quite converscant with annuities as a payout option, but prefer programmed withdrawals despite the risk of outliving their income. This implies that retirees would rather keep their money at retirement with the PFAs to manage.

Table 4.28: Rating for Fears Concerning Retirement under the DC Scheme

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Low	7	5.1	5.1	5.1
	High	73	53.7	53.7	58.8
	Moderate	55	40.4	40.4	99.3
	None of the above	1	0.7	0.7	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

Table 4.28 depicts fears concerning retirement under the new pension arrangement. Seven respondents constituting 5.1% reported they have low fears regarding retirement under the new DC scheme, while seventy three respondents with 53.7% rated the level of fear they entertain concerning retirement under the DC scheme as high. Furthermore, fifty five respondents constituting 40.4% expressed moderate fears about retirement under the scheme. However, only one respondent representing 0.7% opted for none of the options provided above. This implies that retirees have high to moderate fears concerning retirement under the new pension scheme. This is so because they feel their retirement income is not secured and there is also the possibility of outliving one's income.

Table 4.29: Perception on the Need for Establishing Annuity Market in Nigeria

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Strongly Diagree	9	6.6	6.6	6.6
	Disagree	62	45.6	45.6	52.2
	Undecided	13	9.6	9.6	61.8
	Agree	28	20.6	20.6	82.4
	Strongly Agree	24	17.6	17.6	100.0
	Total	136	100.0	100.0	

Source: Survey Data, 2010

Finally, table 4.29 discusses the perceptional views of establishing annuity market. It shows that nine respondents constituting 6.6% of responses recorded strongly disagreed that the need to establish annuity markets in Nigeria is not crucial, while sixty two respondents representing 45.6% disagreed with the notion that there is no need for annuity markets in Nigeria. Furthermore, thirteen respondents who constitute 9.6% were undecided as to the desirability or otherwise of annuity markets in Nigeria. On the otherhand, twenty eight respondents representing 20.6% agreed that there is no need for annuity markets in Nigeria, while another twenty four respondents constituting 17.6% strongly agreed that there is no need for the market. This implies that there is the lack of

awareness of annuity and so retirees do not see any reason for establishing annuity market, since 45.6% of respondents disagree with the establishment of annuity market. This corroborates the the findings of table 4.17 that implied that stakeholders are not making adequate publicity on annuity market.

4.2.3 Responses to Open Ended Questions

Open ended questions were included for the two categories of questionnaire administered. The closed ended questions were run through SPSS to obtain the table, but the open ended questions which have to do with descriptive statistics since they are open ended. From the responses on the extent to which the stakeholders have fears concerning retirement under the new pension arrangement; one interesting finding is that majority of respondents are of the view that amendments have to be made on the Pension Reform Act 2004 and the PFAs had the highest number of respondents in this regard. This is because they constitute the stakeholders of the scheme and are aware of the underlying policy issues and their implications. In the same vein, some respondents are also of the view that the regulation policies, rules and guidelines of the scheme are still in progress; and the view was predominantly held by PFAs. Naturally, one will not be surprised to receive such responses from PFAs, especially given the fact that they are statutorily saddled with the responsibility of managing the accumulated funds under the scheme. The most interesting revelation is perhaps the one by majority of Pencom management staff who believe that if adequate policy measures for the pay out phase are not clearly outlined and adequately put in place, the new DC scheme may not be sustainable. This view may be informed by the fact that they are those stakeholder that are the policy makers in the pension industry hence they advice government on the policy issue.

Furthermore, all the stakeholders who had variant and reasonable degree of fears on retirement under the new scheme attributed it to inflation and interest rates instabilty in Nigeria. Thus, responses from the open ended question on issues regarding retirees' fears concerning retirement under the new pension arrangement show that majority of the respondents were skeptical about their retirement. This is due to the fact that they believe that a fairly reasonable proportion of their pension contributions were lost to the Nigerian stock meltdown and the resulting banking crisis that saw a number of banks who serve as PFCs go down with a significant percentage pensioners' contributed funds. Although the PRA 2004 allows the investment of a portion of pension funds is in Nigerian stock market, the proviso is subject to a number of restrictions aimed at limiting the exposure of such funds to the volatility of the stock market.

The responses received also showed that some of the respondents nursed fears about the capacity and strength of the infrastructure employed by PFAs in their operations, especially as they pertain to their database data base. They feared that such databases if not efficiently managed, can crash and substantial data about their contribution may be lost. This opinion was expressed under their awareness of the new scheme, as each PFA is required by law to back up its data vital information regarding the management of pension funds must periodically be rendered to the PenCom. Others expressed their fears in relation to the payout phase, which PRA 2004 failed to do justice to. This implies that the lack of clearly spelt out rules and guidelines regarding the decumulation policies on the payout phase under the PRA 2004 heightened retirees' fear of retirement under the new DC scheme in Nigeria

4.2.4 Trends in the Accumulation and Investment of Pension Funds in Nigeria

One of the most critical functions associated with a pension plan is not only the accumulation of the funds but also the investment of its asset in areas that are relatively less risky and would yield a reasonable rate of return. Burman (2002) and Soares and Warshawsky (2004) opined that pension funds accumulation cannot be diverse from risk. Pension funds, being a long term fund usable at a future period, face several risks such as, market risk, inflation risk, longevity risk, and rate of return volatility. In Nigeria, accumulated pension funds and investible pension assets have grown steadily since the inception of the DC system. The table below provides the details of accumulated pension funds and total pension assets in Nigeria from 2004 to 2010:

Table 4.30 Total Pension Contributions and Pension Fund Assets

Year	Total Pension Contributions	Total Pension Fund Assets
2004	N15.60 Billion	-
2005	N34.68 Billion	-
2006	N60.41 Billion	-
2007	N148.97 Billion	N815.18 Billion
2008	N180.09 Billion	N1,099.01 Billion

2009	N228.31 Billion	N1,529.63 Billion
2010	N289.91 Billion	N2,029.77 Billion

Source: PenCom (2010). Annual report. Abuja: Author

The table above reveals that at the inception of the new DC plan in Nigeria in 2004, a total of N15.60 billion was remitted to the RSA accounts of various employees as pension contributions. The remittances were wholly from public sector employees, as the private sector had not joined the scheme then. On the other hand, the total size of pension assets acquired and managed by PFAs on behalf of prospective retirees with the pension contributions were not reported by the apex regulator (PenCom) during the period.

In the following year 2005, the total funds contributed under the scheme grew by approximately 22.31% to stand at N34.68 billion. As in the preceding year, the contributions were also wholly from the public sector, because the private sector was still yet to join the scheme. The size of pension assets acquired with employees' contributions during the year was also not reported by the PenCom.

Furthermore, the total contribution of pension funds rose to N60.41billion in 2006, representing a whooping 74.19% increase. The reason for this astronomical growth is not farfetched. The private sector joined the new scheme during this period. Thus, contribution by the private sector amounted to N23.03 billion, representing 38.12%; while the remaining N37.38 billion (or 61.88%) came from the public sector. The total size of pension fund assets as at 2006 was also not reported by the apex regulator of the industry.

The growth in pension funds contribution was sustained in 2007 as the value of contributions more than doubled during the period. The value of total pension contributions grew by approximately 146.60% over the previous year's figure to stand at N148.97 billion. This growth was necessitated by increase in both public and private sector remittances. Precisely, the public sector contributed N80.63 billion (or 54.12%), while the private sector accounted for the remaining contribution of N68.34 billion (or 45.88%). On the other hand, the pension industry portfolio revealed that total pension fund assets as at the end of the period was N815.18 billion, implying that in 2007; total pension assets were at least five times the size of total pension contributions. Investment in FGN Securiries had the lion's share of N279.69billion or 34.31%, followed by local ordinary shares which had 240.38 billion or 29.49% of the total pension funds portfolio.

In 2008, both pension fund contributions and assets continued to grow in relation to the previous year's figures. Total remittances to RSA accounts during the year stood at N180.09 billion, with an annual growth rate of 20.89%. The chunk of the contribution came from the public sector which accounted for 99.28 billion or 55.13%, while the balance of N80.81billion or 44.87% was from the private sector. Similarly, the pension industry portfolio grew by 34.82% over the previous year, wih total pension assets hitting N1,098.99 billion. As in the previous year, FGN securities had the highest investment of N350.67 billion or 31.91% of total pension assets portfolio. The figure is a 25.38% growth when compared to that of the previous year. The sharp increase in the investment in FGN securities could be as a result of the choice by pension fund operators to only invest in asset classes that are relatively safe and less volatile in their returns in the wake of the global financial crisis. However, investment in local ordinary shares declined by

N19.84 billion or 8.25% during the same period to stand at N220.54 billion. The decline in local ordinary shares investment was as a result of the Nigerian stock market crisis which resulted in the plunging of share prices and erosion of market capitalization.

In the year 2009, the total value of pension contributions by employees in the public and private sectors as well as pension fund assets increased. A 26.76% growth in pension fund contributions increased total RSA contributions to N228.31 billion during the period. This growth was sustained because of the increase in the number of employees joining the scheme since its inception. As in the previous years, the public sector had the highest contribution of N137.10 billion, representing 60.05%, while N91.21 billion or 39.95% came from the private sector. In the same vein, total pension assets during the period grew with 39.19% compared to the previous year to N1,529.63 billion. Investment in FGN securities continued to dominate pension fund portfolio with an investment value of N498.88 or 32.61% of total pension assets. On the other hand, investment in local ordinary shares marginally increased to N220.71 billion as a result of the slight improvement in stock market activities vis-à-vis the previous year.

In the year 2010, the size of pension funds contribution continued to grow steadily in relation to what was remitted in the previous years. Precisely, remittances to RSA accounts stood at N289.91 billion, with a growth rate of approximately 111.46% over the previous year. Expectedly, the growth in pension funds contribution was sustained because of the growing number of individuals from both the public and private sectors that are joining the scheme. On the otherhand, pension funds assets in the form of investments also grew in relation to their initial size in 2009. The amount of pension assets in various forms of investment as at the end of 2010 stood at N2,029.77 billion,

and this figure depicts that the size of pension assets grew by approximately 32.70%. As has been the trend in previous years, growth in the pension funds portfolio during the year was driven by investment in FGN bonds which accounted for approximately 40.90% of the total pension assets. Investment in FGN bonds was closely followed by investment in local money market securities, which accounted for 24.10%; while investment in local ordinary shares accounted for 17.60% of the total pension funds portfolio. The foregoing trend clearly depicts that the growth in pension assets vis-à-vis the amount of contributions by prospective retirees has been modest, despite the turbulences that have recently befallen the Nigerian financial system, notably the 2007 global financial crisis that affected the stock market. The analysis also showed that the PFAs have not been excessively reckless in their investments as they have consistently proved that the priority is safety of the pension funds. In this regard the credit goes to the apex regulator for putting in place a fairly objective guideline for the investment of pension funds; even though the guidelines have not been frequently and periodically reviewed to reflect changing times and emerging challenges in the Nigerian investment environment.

Among the various ways of how savings can be invested and how wealth available for the financing of retirement consumption can be accumulated, is the purchase of private life annuities. Given the market risk and volatility in returns on invested pension funds, especially in Nigeria; annuities would allow the individual to avoid running out of assets before death as well as leaving unintended bequests. By transferring wealth from those who die early to those who live long, annuities provide a higher rate of return than investments in the capital market (Yaari, 1965).

According to Beach and Davis (1998), retirement funds in prívate capital markets across a diverse portfolio will generate a higher net return relative to the implicit return generated by the DB investment. The imperfection of capital markets and other liquidity constraints do not allow individuals to borrow freely in the markets, thereby compelling them to save (Hannah, 1986). Studies by Rocha, Gutierrez and Hinz (1999) and Walker and lefort (2002) have documented that pension reform and capital market have a significant degree of linkage. They further argued that improving the regulation and supervisión of pension funds are basically the lesson learnt from most capital market crises accross the globe. In the exercise of the statutory and regulatory powers conferred on it by the PRA 2004, PenCom in its guidelines on pension funds investment stipulated that PFAs may invest up to 25% of accumulated pension funds in the Nigerian stock market. According to Ahmed (2008), about N33 billion of the pension funds invested in the Nigerian stock market was lost to the stock market crisis in 2008. Given the risk in the investment environment, it would be expedient to purchase annuities that provide guaranteed and steady income.

4.3 Test of Hypotheses

This section tests all the three null hypothesis of the study. The Pearson chi-square result were computer generated using SPSS. The decision criteria for the hypotheses of the study have been spelt out under the methodology section.

Hypothesis 1 (H_{01}):

Hypothesis 1 states that "annuities are not perceived to have significant impact on financing retirement" In order to test this H_{01}, we cross tabulated the responses on how familiar are the respondents with the new Defined Contributory (DC) Pension System in

Nigeria and annuities are not perceived by stakeholders to have significant impact on retirement financing in Nigeria. The results of these produced the chi-square for hypothesis testing.The degree of freedom (df) = (c-1) (r-1) , Where C is number of column and R is number of Rows. The following table provides results for the test of hypothesis one.

HYPOTHESIS I: Annuities are not perceived to have significant impact on financing retirement

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	56.904[a]	8	.000
Likelihood Ratio	68.032	8	.000
Linear-by-Linear Association	4.917	1	.027
N of Valid Cases	155		

a. 3 cells (20.0%) have expected count less than 5. The minimum expected count is .60.

Therefore, the degree of freedom is eight and the test of hypothesis will be test at 5% level of significance. From the chi-square distribution table the critical value is 15.51 at

eight (8) degree of freedom and 5% level of significance while, Pearson chi-square was calculated as 56.90. Since 56.90 is greater than critical value of 15.15 then the null hypothesis is hereby rejected. This implies that annuities have significant impact on financing retirement in Nigeria, those that are familiar believe in annuity due to awareness. Thus, the stakeholders are aware of annuities and they perceive it to be important. Since their responses was higher than the critical value. Studies such as Porteba, Mark, and Warshaskey (1999), Mitchell (2001), Doyle (2006), Antolin,(2008) and Antolin et al (2008) all agree that annuities are important in the new defined contributory scheme and it would enhance retirement security for the retirees. On the contrary, Warshawsky, Findlater and Boardman (2001) believe in reinventing annuities, while Soares and Warshawsky (2004) opined that pension funds cannot be divorced from risk.

HYPOTHESIS II (H_{02})

This Hypothesis states that: there is no significant relationship between publicity for annuity market and its impact on financing retirement in Nigeria. In order to test the hypothesis a cross tabulation of question eight and ten of the stakeholder's questions was carried out to produce the required chi-square value. The following table shows the results for the test of hypothesis two:

HYPOTHESIS II: There is no significant relationship between publicity for annuity market and its impact on financing retirement in Nigeria

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	32.317[a]	12	.001
Likelihood Ratio	34.234	12	.001
Linear-by-Linear Association	.598	1	.439
N of Valid Cases	155		

a. 8 cells (40.0%) have expected count less than 5. The minimum expected count is .17.

Therefore, we test the hypothesis at 5% level of significance and 12 degree of freedom. From the table, Pearson chi-square is calculated to be 32.32. However, comparing this with our critical value obtained from the table at 5% level of significance and 12 degree of freedom which is 21.03. This shows that the calculated value is still greater than the critical value; hence the null hypothesis is also rejected. This implies that there is significant relationship between publicity for annuity market and its impact on financing retirement. It means that, the more publicity given on annuity market, the more will be its possible impact on financing retirement in Nigeria. Therefore, more publicity by all stakeholders on the concepts of annuities, concept application, will result to positive impact on the retirement investments. In line with studies such as, James and Vittas (1999), Blake and Hudson (2000), Poterba, (2001), Babbel and Merrill (2006), Rusconi (2008) and Rocha and Thorburn (2008) who agreed that annuity market is important in

the DC scheme and it needs to be publized adequately by the policy makers. This would then impact significantly at retirement. On the contray, Lechor (1996) and Brune and Pech (2006) opined that individual might deliberately save to little because they expect to receive some social assistance.

HYPOTHESIS III, (H_{03})

It states that; the existing legal/regulatory framework for the payout phase of pension funds is not perceived to have significant impact on management of pension funds for retirement in Nigeria. A cross tabulation of questions eight and eleven from stakeholders questionnaire was carried out to test this hypothesis. The results for hypothesis three are presented in the following table:

HYPOTHESIS III: The existing legal/regulatory framework for the payout phase of pension funds is not perceived to have significant impact on management of pension funds for retirement in Nigeria

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	143.327[a]	12	.000
Likelihood Ratio	115.989	12	.000
Linear-by-Linear Association	.765	1	.382
N of Valid Cases	155		

Chi-Square Tests

	Value	Df	Asymp. Sig. (2-sided)
Pearson Chi-Square	143.327[a]	12	.000
Likelihood Ratio	115.989	12	.000
Linear-by-Linear Association	.765	1	.382
N of Valid Cases	155		

a. 8 cells (40.0%) have expected count less than 5. The minimum expected count is .02.

Thus, we test the hypothesis at 5% level of significance. The critical value is 21.03 at 12 degree of freedom and 5% level of significance. However, the calculated value of Pearson chi-square as obtained from the cross tabulation of the relevant questions is 143.33. This is by far greater than 21.03. Hence, the null hypothesis is hereby rejected. This implies that, an improvement in the legal and regulatory framework for the payout phase of pension scheme is required. Thus, there will be expected significant impact on management of pension funds in Nigeria framework all the loopholes and areas of obstacles would be clearly and carefully eliminated and this will have significant impact on management of pension fund in Nigeria, thereby creating retirement security of the retires funds/income. Studies such as, Vittas and iglesia (1992), Milevsky (2006), Antolin and Blommestein (2007), Rocha, Gutierrez and Hinz (1999) and Scott (2007) agree with the result of this hypothesis

4.4 Discussion of Findings

The primary aim of this study is to examine the relevance/perception of annuity market and the payout phase of accumulated pension funds in Nigeria. The result in table 4.7 revealed that stakeholders in the pension industry are familiar with the new defined contributory (DC) Pension System in Nigeria. This is because respondents with very familiar had 25.2% and familiar 54.8% this gave a total of 80%. This implies that the stakeholders who are key players of the scheme are very familiar with the PRA 2004. Despite, their familiarly with the scheme they still indicated fears concerning retirement under the new pension arrangement from table 4.9 the stakeholders responses with high as 23.2% and moderate as 47.7% giving a total of 70.4%.

Also from table 4.10, one interesting findings is that majority of respondents revealed they were familiar with annuity as a retirement option under the new DC pension scheme, with 38.1% as very familiar and 39.4% as familiar giving a total of 77.5% This percentage is high, thus it implies that the stakeholder, who also are these that unravel the PRA 2004 dynamics are familiar with annuities as a payout option, despite the fact that the PRA 2004 has not clearly outlined policies regarding the payout (decumulation) phase. From table 4.12, responses from annuities are not perceived by stakeholders to have significant impact on retirement financing in Nigeria showed that stakeholder agree to this statement with 36.8% as agree and 20.0% strongly agree a total of 56.8% .However 21.9% were undecided. This implies that majority of the respondents are of the view that annuities are not perceived by stakeholders to have significant impact on retirement financing in Nigeria.

Furthermore, the finding of table 4.13 revealed that 27.7% disagree and 41.3% strongly disagree giving a total of 69.0% believe that there is the need for annuity market in Nigeria. This implies that the stakeholder are participants in the pension scheme and are aware of annuity see the need for the creation of annuity market in Nigeria to avail retirees the risk of exhausting their retirement income with the other two payout option which are lump sum and programmed withdrawals.

From the forgoing analysis, the result of tables 4.14,415 and 4.16 relate to issues on the legal/regulatory framework guiding the DC pension system in Nigeria. Table 4.14 with 78.1% responses as being familiar with the scheme, and table 4.15 29.6% as responses from stakeholders that say the scheme is adequate and very adequate this is a low percentage and it implies that they feel that improvements/amendments need to be done on the scheme to improve the legal/regulatory frame guiding the pay-out phase. While table 4.16 had 79.4% as responses from crucial and very crucial need to review the existing legal/regulatory framework guiding the DC system in Nigeria. The general revelation from these tables is that the stakeholders that are familiar with the DC system also saw the crucial need to review the Act to outline clearly areas of payout phase.

On the other hand, analysis of the responses of the retires showed that table 4.22 had percentages close to each other with very familiar as 25.0%, familiar 22.1%, not familiar 23.5% and ignorant had the highest percentage of 29%. This implies that they are not so familiar or ignorant of the new scheme. However, tables 4.23 depict 39.0% who retired due to 35 year of active service which was the highest. It can be inferred from tables 4.26 and 4.27 with high perceived percentage of 46.3% as fair arrangement on payout phase and low percentage of 14.7% as those that would prefer annuities as a payout option. This

implies that retiree are not aware of annuities with a low response of 14.7% therefore their perception from table 4.26 of the payout phase to them in perceived as fair arrangement since it had a high percentage of 46.3%.

Finally, from the forgoing analysis and the results in tables 4.28 and 4.29 also showed from table 4.28, 53.7% a high percentage of responses from retirees as having the highest fears concerning retirement under the new pension arrangement and as such lead to a high percentage of responses of 45.6% in table 4.29, this evidently indicates lack of awareness of annuities as an option of retirement payout, hence they invariably saw no need for the creation of annuity market.

4.5 Summary of the findings.

From the analyses carried out, this study established the followings;

Firstly, that annuity has significant impact on financing retirement since the Pearson chi square statistics gave a calculated value of 56.90%. This finding is consistent with the finding report by Mitchel (2001) Doyle (2006), and Antolin (2008). The implication of this finding is that annuities are important in the payout phase of retirement financing.

Secondly, there is significant relationship between publicity for annuity market and its impact on financing retirement. This finding is consistent with Babbel and Merrill (2006) and also it represented views of the majority of our respondents (calculated with Pearson chi-square to be 32.32.The implication from the response, is the more publicity given on annuity market, the more will be impact on financing retirement. Furthermore, this finding is also consistent with that of James and Vittas (1999) and Poterba (2001) who argued that the decumulation phase must be well organized and for the under

development of annuity market a lot of factors are responsible lack of publicity inclusive. They further stressed the importance of annuity market in retirement financing.

Thirdly, that the existing legal/regulatory framework for the payout phase of pension funds is perceived to be insignificant on the management of pension funds for retirement. The Pearson chi square revealed higher value of 143.3, which implies that improvement and review on the legal/regulatory framework work for the payout phase of the DC scheme. However, the finding contradicts that of Antolin (2008) who despite the believe in retirement financing and the contributory scheme lacks any concrete solution on the regulation process of the payout phase, holding that decumulative phase would be achieved through trial and error or on the phase experiences.

Generally, the finding of the study rejected the three hypotheses. On the over all, the study revealed that the payout decumulation is equally important as the accumulation phase. it is the two phase that makeup the DC scheme. Furthermore, the implication of this is that since all the hypothesis were rejected it means that few studies on this area appreciate the effort of the accumulation phase but believe that more effort on publicity, awareness and improvement on the legal regulatory framework need to be done to achieve a sustainable payout phase Blake and Hudson (2000), Rocha and Thorburn (2008).

Antolin et al (2008) revealed in their study the essential of development of Nigerian pension system especially on issues of retirement financing and the design framework and management of an efficient benefit system that can be sustained. Thus the finding of Ezugwu and Sule (2009) was considered weak due to the application of a weak

methodology. It is the only attempts to empirically approach the subject matter. Furthermore Antolin (2008) agreed with annuity as a retirement payout option to guide the payout, the study lacks a defined recommendation on the payout phase issue holding that countries can turn policies depending on what works for them into policies. This contradicts the finding of the study which required a plan of a mapped out payout phase.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary

A general summary of the work is presented below: Chapter one of this study basically outlined the background of the study, statement of the problem, research questions which are in line with the objectives and hypothesis of the study. It did not only define the scope of the study but outlined its significance.

The second chapter of the work, labelled literature review and theoretical framework concentrated on the review of related literature on the subject matter. Relevant concepts such as pension fund decumulation, retirement benefit and the historical evolution of annuity market. Basically, a critical review of empirical works on retirement payout options of the DC scheme, financing retirement and annuity market, including developments in the international arena was presented under this chapter. Furthermore, the theoretical framework upon which the study is premised was also presented under this chapter.

Chapter three consisted of the methodology employed by the study. Thus, the chapter discussed the design employed by the study and its justification, the population of the study; sample size, the technique of sampling employed and its justification; sources of data for the study; and the method/technique of data analysis utilized by the study.

The fourth chapter presented and discussed the analysis of the data. Results from the test of hypotheses as well as the responses from the stakeholders and retirees questioniare.

The findings revealed by the test of hypotheses was also presented and thoroughly discussed under this chapter.

The findings from the test of hypotheses show that annuity market is an important component in the payout phase of many countries that have adopted the defined contributory scheme. The creation and implementation of the decumulation phase would require strategic planning and policy improvement to ensure that the retiree investment in form of retirement income is adequately secured. Besides the availability of annuity product and annuity providers for the decumulation of pension funds to retirees, there needs to be ensured safeguard measures were all the retirement benefits meant for retired generations would be secured.

Pension reforms have gained pace worldwide in recent years and funded arrangements are likely to play an increasingly important role in delivering retirement income security and also affect securities markets in future years. The overall intention of these reforms has been to ensure financial stability amongst retires so as to influence economic growth and development of the economy in general. And thereby reduce government liabilities toward employees as they approach retirement. In particular, the defined contributory pension scheme has injected a large amount of pension fund in the Nigerian economy. These long-term funds could if invariably invested in the long run generate fund and reposition the industry. However, the reform was intended to provide reasonable self-financed pension upon retirement, freeing the state from onerous future liabilities. The transition lead to the shift from DB to DC scheme in 2004 and this resulted to the establishment of a privately managed pension industry in Nigeria. However, significant progress has been made in the accumulation and management of pension funds in

Nigeria. The payout phase (decumulation) was left unresolved on necessary policies and retirement options available to the retiree on the payout phase Pencom, (2007).

Another problem is that retirement financing option that would diversify longevity risk such as annuities was left unresolved. This inherent risk was what brought about the change in the pension system of most countries and to sustain it the proper regulations has to be adopted.

This study indicates that stakeholder and some retires are familiar with the DC scheme. But despite this, it shows that annuities have significant impact of financing retirement but awareness needs to be improved as they perceive annuities to be important in the payout phase. Therefore, adequate publicity and amendment of the PRA 2004, to map out the legal/regulatory framework has to be implemented to ensure a sustainable retirement period under the DC scheme.

It is worthy to note that Other Challenges have further been increased by the credit crunch issue, were total funding of the nation's 100 largest corporate pension plans fell between 2007 and 2008 with the advent of the Global Financial Meltdown. This directly affected the Nigerian Stock Exchange were pension funds were allowed by the regulation to invest up to the tune of 25% of the PFAs' funds.

Finally, chapter five, which is the last chapter of the work, presented a summary of the study with specific emphasis on findings; conclusions and the accompanying policy implications. The recommendations based on the findings of the study was also presented under this chapter.

5.2 Conclusion

The results of this study revealed that annuties have significant impact on financing retirement in Nigeria. This suggests that those that are familiar believe in annuity as a measure of hedging against longevity risk (risk of retiree outliving his/her retirement income). Thus, the perception of the stakeholders as regards annuities is important. In this case, the annuitant makes a lump sum payment to the insurance company before the payout begins. This conclusion is consistent with the results reported by Vittas and Iglesias (1991), Poterba, Mark and Warshaskey (1999), Mitchell (2001), Justen (2001), Poterba (2001), Ndadinbe, (2005), Antolin, (2007) and Brown (2008), Antolin (2008). Our result however contradicts the result reported by Soares and Warshawskey (2004) who opined that pension funds cannot be diverse from risk.

Likewise, from the findings of this study it can be concluded that creation of a well-developed and transparent annuity market is necessary as a pre-requisite for the development of the payout phase to not only aid retirement financing but to generate publicity on the implementation process in general. This conclusion is also in line with the results reported by Blake and Hudson (2000), Rocha and Thorburn (2008) and Rusconi (2008). As stated in the results of Doyle (2006) using Australian data since individual's pattern of savings is as predicted in the life-cycle hypothesis of consumption and savings. The economic issues that raises in the payout phase, such as annuities to aid the individual in managing his risk. Contrary to this finding, Lechor (1996) and Brune and Pech (2006) found that individual might deliberately save to little, because they expect to receive some social assistance while Disney (2000) found that low-wage earners may have little too small to be adequate for retirement.

Another conclusion that can be deduced from the finding of this study is that of the legal/regularly framework guiding of PRA 2004 which depicts that it is not devoid of laps. Therefore, improvement and amendments of the Act needs to be undertaken. As maintained by Vittas and leglesia (1992) policy makers in countries like Chile have to put in place effective mechanism such as regulatory framework to guide the payout and inevitably provide mechanism for investing and efficiently managing their accumulated funds.

Ultimately, the findings of this study are consistent with the theoretical models of Ando-Modighani life cycle models, the standard references to the life-cycle saving model is Modigani and Brumberg (1954): and Ando and Modiglinai (1963). Our result are basically in line with the life-cycle model of savings and consumption our results therefore, lend support to the proposition that annuities plays an important role in the payout phase of the scheme, therefore aids retirement financing Poterba (2001) and Doyle (2006).

5.3 Recommendations

Following from the findings and conclusions of this study; the following recommendations are hereby proffered:

i. Since annuities are perceived to have significant impact on financing retirement then adequate measure to set up an annuities institution and also put in the product and provider of the annuities needs to be implemented. As a result, also improvement on insurance companies on sales of annuities should also be ensured.

ii. PenCom should devise a means of publicizing the need for annuity market. Thus, with adequate publicity on annuity market, the more will be its impact on financing retirement in Nigeria. This recommendation is based on the finding that more publicity by government and other regulatory agencies will result to awareness in the form of campaigns, conferences by the experts and stakeholders on concept and the application and design of annuity market. These strategies would help solve the perceived problems so that annuity market can be better developed in Nigeria and this will go a long way in impacting on financing retirement in Nigeria.

iii. Although the legal/regulatory framework is not adequate, there is need for its review to meet the standard of an Act, which is a policy issue to guide the management of pension funds for retirement in Nigeria. A carefully packaged legal framework of the payout phase will not only serve for effective pension management, but for the sake of retirees, as this would ensure retirement security. A provision and procedures for the payout phase must be properly and clearly carried out. This study also recommends the examples of chile in the payout phase in Nigeria. Studies conducted using chilen data, maintained same issues on developing annuity market. Thus, The development of annuity market for retirees to purchase a means of receiving retirement income. The decumulation phase after the creation of a sound annuity market offering various products, to suit different retirees need would then balance the second part of the scheme.

5.4 Suggestions for Further Research

In view of the fact that the Nigerian pension industry is still enmerging and there is the insufficiency of secondary data at the moment, there is the need to conduct a study using secondary data in the future with a view to establishing the viability or otherwise of

annuity as a pay out option under the new DC scheme. This can be accomplished by collecting secondary data relating to the total amount of retiree contribution that goes into annuity on monthly, quarterly or annual basis.

There is also the need in the future to conduct research on the nature and operations of life insurance companies in Nigeria who would be the likely providers of annuity in the Nigerian pension industry when the regulators eventually recognize the need for annuity and accord it the desired priority. Specifically, a study on the nature of business of life insurance companies in Nigeria as evidenced by their types of assets and mode of investment becomes imperative.

Finally, there is also the need for a study that will identify clearly the role of Actuaries in evaluating the mortalities and life expectancies of prospective annuitants under the scheme when it becomes effective. This is especially important considering the attendant risks that annuities as a form payment carry.

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APPENDIX I: QUESTIONNAIRE INTRODUCTION LETTER

Department of Business Administration,

Faculty of Administration,

Ahmadu Bello University, Zaria

10th May, 2011.

Dear Respondent,

I am an M. Sc. Student at the Department of Business Administration, Ahmadu Bello University, Zaria undertaking research on the topic **Annuity Markets and Payout Phase of Accumulated Pension Funds in Nigeria**. Attach herewith is a copy of the questionnaire for the study. The aim of the questionnaire is to solicit for response on whether or not annuity markets have any role to play under the current pension arrangement. Your professional opinion is very indispensable to achieving the objectives of this study. Kindly help answer the following questions that will guide the course of this study. I want to assure you that your responses will be treated in strict confidence and will be strictly used for the purpose of this research only. Thank you for in anticipation of your cooperation.

SAMBO, Halimah Sani

M.Sc/Admin/13617/06-07

(Researcher)

APPENDIX II: QUESTIONAIRE FOR STAKEHOLDERS

SECTION A: BIODATA

1. Age

   (a) 35 – 40 years [ ]

   (b) 41 – 45 years [ ]

   (c) 46 – 50 years [ ]

   (d) 51 – 60 years [ ]

2. Gender

   (a) Male [ ]

   (b) Female [ ]

3. Working Experience

   (a) 10 – 15 years [ ]

   (b) 16 – 20 years [ ]

   (c) 21 – 25 years [ ]

   (d) 26 – 30 years [ ]

4. Educational qualifications

   (a) B.Sc. [ ]

   (b) M.A./MBA/M.Sc. [ ]

   (c) PhD. [ ]

   Others (please Specify) ……..

SECTION B: INDUSTRY DATA

1. Please tick which of the following categories you belong to:

   (i) PenCom management staff [ ]

   (ii) PFA management staff [ ]

   (iii) PFC management staff [ ]

   (iv)Non of the above [ ]

2. How familiar are you with the new Defined Contributory (DC) pension system in Nigeria?

   (i) Very familiar [ ]

   (ii) Familiar [ ]

   (iii) Not familiar [ ]

   (iv) Ignorant [ ]

3. How would you rate the new Defined Contributory (DC) pension system in Nigeria vis-à-vis the old DB system?

   (i) Excellent [ ]

   (ii) Very good [ ]

   (iii) Good [ ]

   (iv) Fair [ ]

   (v) Poor [ ]

4. To what extent do you assess the fears you have concerning retirement under the new pension arrangement?

   (i) Low [ ]

   (ii) High [ ]

   (iii)Moderate [ ]

   (iv)Non of the above [ ]

5. If high, please specify
……
……
……
……..

6. How familiar are you with annuity as a retirement option under the new DC pension scheme?

(i) Very familiar [ ]
(ii) Familiar [ ]
(iii) Not familiar [ ]
(v) Ignorant [ ]

7. To what extent do you understand the role of retirement financing in Nigeria ?

(i) Very familiar [ ]
(ii) Familiar [ ]
(iii) Not familiar [ ]
(vi) Ignorant [ ]

8. Annuities are not perceived by stakeholders to have significant impact in retirement financing in Nigeria

(i) Strongly Agree [ ]
(ii) Agree [ ]
(iii) Undecided [ ]
(iv) Disagree [ ]
(v) Strongly disagree [ ]

9. There is no need for annuity markets in Nigeria.

(i) Strongly Agree [ ]
(ii) Agree [ ]
(iii) Undecided [ ]
(iv) Disagree [ ]
(v) Strongly disagree [ ]

10. How familiar are you with the legal/regulatory framework guiding the DC pension system in Nigeria?

(i) Very familiar [ ]
(ii) Familiar [ ]
(iii) Not familiar [ ]
(vii) Ignorant [ ]

11. How do you assess the existing legal/regulatory framework guiding the payout phase of accumulated pension funds in Nigeria?

(i) Very Adequate [ ]
(ii) Adequate [ ]
(iii) Fair [ ]
(iv) Inadequate [ ]
(v) Very. Inadequate [ ]

12. How would you rate the need to review the existing legal/regulatory framework guiding the DC system in Nigeria?

(i) Very crucial [ ]

(ii) Crucial [ ]

(iii) Neutral [ ]

(iv) Not so crucial [ ]

(v) Not crucial at all [ ]

APPENDIX III: QUESTIONAIRE OF CURRENT RETIREES

SECTION A: BIODATA

1. Age

   (a) 55 – 60 years [ ]

   (b) 61 – 65 years [ ]

   (c) 66 – 70 years [ ]

   (d) 71 – 80 years [ ]

2. Gender

   (a) Male [ ]

   (b)Female [ ]

3. Number of years of contributions in the old Defined benefit (DB) scheme?

   (a) 1 - 10 years [ ]

   (b) 11 - 20 years [ ]

   (c) 21- 30 years [ ]

   (d)31- 40 years [ ]

4. Number of years of contributions into the New Defined Contributory (DC) scheme?

   (a)2 years [ ]

   (b)3 years [ ]

   (c)4 years [ ]

   (d)5 years [ ]

SECTION B : DATA FROM CURRENT RETIREES

1. How familiar are you with the new DC pension system in Nigeria?

   (i) Very familiar [ ]

   (ii) Familiar [ ]

   (iii) Not familiar [ ]

   (iv) Ignorant [ ]

2. Reason for retirements

   (i) Disability [ ]

   (ii) Voluntary [ ]

   (iii)Normal at age 65 [ ]

   (iv) 35 years of service [ ]

3. Sector served before retirement

   (i)Private sector [ ]

   (ii)Public sector [ ]

   (iii)Federal capital territory [ ]

   (iv)Others (please Specify) …….. [ ]

4. How would you rate the new DC pension system in Nigeria vis-à-vis the old DB system?

   (i) Excellent [ ]

   (ii) Very good [ ]

   (iii) Good [ ]

   (iv) Fair [ ]

   (v) Poor [ ]

5. What is your perception of the payout phase?

   (i) Fair arrangement [ ]

   (ii) Good arrangement [ ]

   (iv) Very Good arrangement [ ]

   (v) Poor arrangement [ ]

6. Which form of payout option would you rather choose at retirement?

   (i) Lump sum [ ]

   (ii) Programmed withdrawal [ ]

   (iii) Annuities [ ]

   (iv) Ignorant [ ]

7. How do you assess your fears concerning retirement under the new pension arrangement?

   (i) Low [ ]

   (ii) High [ ]

   (iii)Moderate [ ]

   (iv)Non of the above [ ]

8. If high, please specify

   ……
   ……
   ……
   ……
   ……..

9. What is your perception on establishing annuity market to make pension payments to retirees until the retiree dies?

(i) Strongly Disagree [ ]

(ii) Disagree [ ]

(iii) Undecided [ ]

(iv) Agree [ ]

(v) Strongly agree [ ]

APPENDIX IV: CROSSTABS FOR HYPOTHESIS I:Annuities are not perceived to have significant impact on financing retirement

How familiar are you with the new Defined Contributory (DC) Pension System in Nigeria? * Annuities are not perceived by stakeholders to have significant impact on retirement financing in Nigeria Crosstabulation

			Annuities are not perceived by stakeholders to have significant impact on retirement financing in Nigeria					
			Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
How familiar are you with the new Defined Contributory (DC) Pension System in Nigeria?	Very Familiar	Count	18	18	2	1	0	39
		Expected Count	7.8	14.3	8.6	.8	7.5	39.0
		% of Total	11.6%	11.6%	1.3%	.6%	.0%	25.2%
	Familiar	Count	9	22	22	2	30	85
		Expected Count	17.0	31.3	18.6	1.6	16.5	85.0
		% of Total	5.8%	14.2%	14.2%	1.3%	19.4%	54.8%
	Not Familiar	Count	4	17	10	0	0	31
		Expected Count	6.2	11.4	6.8	.6	6.0	31.0
		% of Total	2.6%	11.0%	6.5%	.0%	.0%	20.0%
Total		Count	31	57	34	3	30	155

	Expected Count	31.0	57.0	34.0	3.0	30.0	155.0
	% of Total	20.0%	36.8%	21.9%	1.9%	19.4%	100.0%

APPENDIX V: CROSSTABS FOR HYPOTHESIS II: There is no significant relationship between publicity for annuity market and its impact on financing retirement in Nigeria.

How do you rate the extent of the adequacy of publicity on annuity market as provided by stakeholders generally ? * Annuities are not perceived by stakeholders to have significant impact on retirement financing in Nigeria Crosstabulation

			Annuities are not perceived by stakeholders to have significant impact on retirement financing in Nigeria					
			Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
How do you rate the extent of the adequacy of publicity on annuity market as provided by stakeholders generally ?	Very Adequate	Count	2	5	2	0	0	9
		Expected Count	1.8	3.3	2.0	.2	1.7	9.0
		% of Total	1.3%	3.2%	1.3%	.0%	.0%	5.8%
	Adequate	Count	9	9	12	3	5	38
		Expected Count	7.6	14.0	8.3	.7	7.4	38.0
		% of Total	5.8%	5.8%	7.7%	1.9%	3.2%	24.5%
	Not Adequate	Count	9	33	6	0	17	65
		Expected Count	13.0	23.9	14.3	1.3	12.6	65.0
		% of Total	5.8%	21.3%	3.9%	.0%	11.0%	41.9%
	Very	Count	11	10	14	0	8	43

	Inadequate	Expected Count	8.6	15.8	9.4	.8	8.3	43.0
		% of Total	7.1%	6.5%	9.0%	.0%	5.2%	27.7%
Total		Count	31	57	34	3	30	155
		Expected Count	31.0	57.0	34.0	3.0	30.0	155.0
		% of Total	20.0%	36.8%	21.9%	1.9%	19.4%	100.0%

APEENDIX VI: CROSSTABS FOR HYPOTHESIS III:The existing legal/regulatory framework for the payout phase of pension funds is not perceived to have significant impact on management of pension funds for retirement in Nigeria

How familiar are you with the legal/regulatory framework guiding the DC pension system in Nigeria? * Annuities are not perceived by stakeholders to have significant impact on retirement financing in Nigeria Crosstabulation

			Annuities are not perceived by stakeholders to have significant impact on retirement financing in Nigeria					
			Strongly Agree	Agree	Undecided	Disagree	Strongly Disagree	Total
How familiar are you with the legal/regulatory framework guiding the DC pension system in Nigeria?	Very Familiar	Count	26	23	19	2	0	70
		Expected Count	14.0	25.7	15.4	1.4	13.5	70.0
		% of Total	16.8%	14.8%	12.3%	1.3%	.0%	45.2%
	Familiar	Count	0	16	5	0	30	51
		Expected Count	10.2	18.8	11.2	1.0	9.9	51.0
		% of Total	.0%	10.3%	3.2%	.0%	19.4%	32.9%
	Not Familiar	Count	0	0	0	1	0	1
		Expected Count	.2	.4	.2	.0	.2	1.0
		% of Total	.0%	.0%	.0%	.6%	.0%	.6%

	Ignorant	Count	5	18	10	0	0	33
		Expected Count	6.6	12.1	7.2	.6	6.4	33.0
		% of Total	3.2%	11.6%	6.5%	.0%	.0%	21.3%
Total		Count	31	57	34	3	30	155
		Expected Count	31.0	57.0	34.0	3.0	30.0	155.0
		% of Total	20.0%	36.8%	21.9%	1.9%	19.4%	100.0%