

RETIREMENT SAVINGS ACCOUNT AND TIME LAG IN NIGERIA

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Abstract

Retirement savings account is a complex phenomenon that involves procedural aspect related to preparation for retirement and, it is frequently seen as an abrupt switch from being employed one minute to total ceasing of work activity in the next minute, evidence suggests that it is a more complex and progressive transition. The aim of this research is to investigate the effect of retirement savings account on time lag in Nigeria. Time series data on different types of pension fund accounting (Retirement savings account) on time lag from 2000-2016 were collected from the central bank of Nigeria and National Bureau of statistics. The ordinary least square analysis, unit root test, cointegration, pair-wise Granger casualty test and error correction model with aid of e-view version 10.0 was used in analyzing the data. The econometric results indicate that retirement savings account has a significant effect on time lag, explaining about 78.3% of the total variation in time lag. The study therefore conclude that retirement savings account has the potency to make significant to time lag and recommends that; Organizations, especially those that do not have any contributory plans should create an enabling environment for employees to operate retirement savings plans. This can be either individual or cooperative saving plans. Organizations can achieve this by embedding a benefit schemes such as compulsory savings plan for employees or by setting aside a certain amount of money for individuals that want to operate a cooperative savings plan. Public and private sector organizations should embark on educating and enlighten its employees on retirement planning through organizing workshops and seminars that are aimed at retirement counseling. Conducive and enabling environment should be created by the government for smooth implementation of the scheme particularly in the areas of investment of the pension funds/asset, and full remittance of contributions to the Pension Fund Trusts. For timely processing of retirees' retirement benefits Pension Fund Trusts must ensure that, qualified staff are recruited and posed to every government organization operating under the scheme as pension desk officers' particularly local government area.

Keywords: Retirement savings accounting, time lag, pension fund accounting, accounting information quality, Nigeria.

Introduction

Over recent decades, the global pension fund landscape has changed. In many developed countries, there has been a gradual shift from defined benefit retirement plans to defined contribution retirement plans. As a consequence, individuals now face a wide range of retirement decisions, such as when to save and how much to contribute to their pension plans. In countries where defined benefit plans remain predominant, recent years have also taught that individuals; in fact should actively consider their retirement situations and cannot simply assume that their retirement savings will be sufficient. In Nigeria, for example, defined pension payoffs have become less generous in the last decade and the number of pension funds that needed to cut indexation or normal pension rights recently has increased (Ayegho., James & Odoh, 2013; Anyim., Olusanya & Okere, 2014; Njera., Dominic & Fredrick, 2015; Bayar, 2016; were., Irowo & Wanjala, 2017; Fapohunda, 2018). As a result, guaranteed pension incomes after retirement have come under pressure and individuals are increasingly asked to take a more active role in planning for a financially secure retirement (Biobebe, 2015; Onyx & Daker, 2016; Were., Irowo & Waujala, 2017; Fapohunda, 2018; Antolin, 2018; Davis & Hu, 2018; Nwaiwu, 2019). Nowadays, it is well known that many individuals are not very eager to plan for their retirement. In particular, individuals typically do not tend to think about their future retirement situation (Lusardi & Mitchell, 2017), and once they do, they are reluctant to change their planning and savings behaviour accordingly (Thaler & Benartzt, 2004). As a consequence, many individuals are considered at risk of preparing inadequately. According to the retirement confidence survey, for example, more than 40 percent of American workers are not confident that they will have enough money to live comfortably throughout their retirement (Helman, 2015). Similarly, in the Nigeria, more than 25% of workers are worried they are not saving enough to maintain their standard of living in retirement (Wijzer in Geldzaken, 2014). Hence, there is a clear need for many individuals to take more active control of their retirement planning.

Planning for retirement involves different decisions. When individuals plan for a financially comfortable retirement, they can utilize several strategies to adjust their level of retirement income. One of the most prominent strategies for individuals to follow is to adjust how much they contribute to their employer pension plan or individual retirement accounts. On the other hand, they might also adjust their planned retirement age. This seems an increasingly interesting strategy given that recent changes in many pension systems make later retirement financially more rewarding and timely.

Strikingly, several empirical studies both in developed and less developing countries has been carried out on the effect or relationship between retirement savings account and time lag (Ku., Ismail & Chandler, 2003; Lai & Check, 2005; Abdullah, 2006, Ahmad & Abidin, 2008; Mohamad-Nor., Shafie & Won-Hussian, 2010; Ibadin., Izedonmi & Ibadin, 2011; 2012; Modugu., Eragbhe & Ikehatua, 2012; Yadirichuwu & Ebimobowei, 2013; Ismail & Lode, 2014; Nwaiwu, 2018; Nwaiwu & Anurume, 2019; Nwaiwu & Brown, 2019), there is still much to be desired. For instance, most of these empirical studies were however not on total delay of timely “annual report” and equally restricted to audit characteristics (Modugu etal 2012; Shukeri & Islam, 2012; Ismail; Mustapha & Ming, 2012; Sharinah., Mohd & Azlina, 2014; Ismail & Lode, 2014; Nwaiwu 2018; Nwaiwu & Anurume, 2019). Those who viewed timeliness from the perspective of audit reporting lag (ARL), thus, ignoring pre and post audit delay were Ahmed and Abidin (2008), Hashim and Rahman (2011), Nwaiwu (2019). In same vein, the findings of most of the studies above revealed mixed relationship between retirement savings account and time lag of financial reporting and as such, one cannot draw

conclusions from them with any minimal acceptable level of confidence most especially in an emerging economy like Nigeria. Although sketches of empirical attention to retirement savings account on time lag are springing up in Nigeria, these are fundamentally peripheral; the main issues remain largely unresolved. One particular area requiring systematic inquiry is the economic consequences of retirement savings account and time lag in Nigeria.

Hence, the aim of this empirical study is to bridge this gap by assessing the effects of retirement savings account on time lag in developing country, Nigeria. The remainder of this paper is organized as follows after the introduction, section two provides a review of related literature and hypothesis, section three articulates the methodology, section four presents the econometric results and discussion, section five wraps it up with conclusion and recommendations, limitation and suggestion for further study.

Review of Related literature and Hypothesis Development

Although retirement savings account can, in theory, help to promote time lag, there is as yet no robust empirical evidence that this causal influence is quantitatively very important. A large growing body of evidence exists in the finance, accounting, management and sociological literature pointing to the effect of retirement savings account on time lag. This literature is rooted in the legency framework (Jensen & Meckling, 1976). The framework presumes fundamental tension between shareholders and corporate managers (Alchian & Demsety, 1972; Jensen & Meckling, 1976; Demsetz, 1983; Dockey., Herbest & Taylor, 2000; Javel & Iqbal, 2007; Nwaiwu & Ogbonna, 2019). The agency theory, developed principally from the organizational economics and management literature, brings striking insight by viewing the firm as a set of contracts among factors of production.

Agency Theory

The theoretical framework adopted for this study is agency theory. Agency theory in a formal sense originated in the early 1970s, but the concepts behind it have a long and varied history. Among the influences are property-rights theories, organization economics, contract law, and political philosophy, including the works of Locke and Hobbes. Some noteworthy scholars involved in agency theory's formative period in the 1970s included Armen Alchian, Jensen & Meckling, (1976), Ross & Mitnick, (1952). The concept of agency theory originated from the works of Berle & Means (1932), Ross & Mitnick (1952), some of who were discussing the issues of the agent and principal as early as 1932. Ross was responsible for the origin of the economic theory of agency and Ross and Mitnick (1952) originated the institutional theory of agency, though the basic concepts underlying these approaches are similar as they are conceived as complementary in their uses of similar concepts under different assumptions.

Berle and Means (1932) explored the concepts of agency and their applications toward the development of large corporations. They saw how the interests of the directors and managers of a given firm differ from those of the owner of the firm, and used the concepts of agency and principal to explain the origins of those conflicts. Jensen & Meckling (1976) shaped the work of Berle & Means (1932) in the context of the risk-sharing research, popular in the 1960s and 1970s to develop agency theory as a formal concept. Jensen & Meckling (1976) formed a school of thought arguing that corporations are structured to minimize the costs of getting agents to follow the direction and interests of the principals. Indeed, Ross introduced the study of agency in terms of problems of compensation contracting.

In essence, agency was seen as an incentives problem. Mitnick introduced the now common insight that institutions form around agency, and evolved to deal with agency in response to the essential imperfection of agency relationships. The theory stresses that behaviour never occurs as it is preferred by the principal because it does not pay to make it perfect. However, society creates institutions that attend to these imperfections, managing or buffering them, adapting to them, or becoming chronically distorted by them. These institutions are legally created to instruct and manage agents, and to deal with the inevitable imperfections of control (<http://www.wisegeek.com/what-is-ariagency-theory.htm>).

Simon's (1945) work straddled both economics and public administration, and in political science, Clark & Wilson (1961) developed an incentives model of organizations. The key concepts of agency theory were developed by scholars in economics and political science and incorporated into the agency approach. Besides, agent-principal was employed in a number of works across the social sciences, well before an explicit theory of agency was proposed. In political science, Pitkin (1967) and Tussman (1960) used agent-principal language in works on political philosophy; and Swanson (1971) described collective society using such terms in sociology. In the early 1970s, agency theory was not known in political science and sociology before Mitnick, Susan Shapiro introduced agency concepts to sociology in 1987.

Agency theory was first introduced to political science by Moe in 1984. Eisenhardt introduced the theory to management in 1989. In all cases, these scholars acknowledged Mitnick's works. Mitnick introduced the study of delegation as the creation of agents in government. His book on Corporate Political Agency in 1993 included the applications of agency theory and basic theory about agency relationships developed in the context of corporate political activity.

Agency theory explains the relationship between principals, such as shareholders and agents. In this relationship, the principal delegates or hires an agent to perform work. The theory attempts to deal with two specific problems; firstly, that the goals of the principal and agent are not in conflict (agency problem), and secondly, that the principal and agent reconcile different tolerances for risk. Agency theory suggests that the firm can be viewed as a nexus of contracts (loosely defined) between resource holders. An agency relationship arises whenever one or more individuals called principals, (in this sense the contributory employees) hire one or more other individuals called agents, (here also the pension fund administrators and the pension fund custodians) to perform some service and then delegate decision-making authority to the agents to keep custody of the fund and assets and to invest as he considers fit on behalf of the principal. The primary agency relationships in business are those between stockholders and managers; and between debt holders and stockholders. These relationships are not necessarily harmonious; indeed, agency theory is concerned with so-called agency conflicts, or conflicts of interest between agents and principals whereby the agents, taking advantage of their expertise, skill and knowledge of the act, pursue personal interest rather than that which will serve and protect the interest of the principals, with the belief that the principal will not understand the agents' behaviour. The theory argues that this has implications for, among other things, corporate governance and business ethics. When agency occurs it also tends to give rise to agency costs, which are expenses incurred in order to sustain an effective agency relationship (e.g. offering management performance bonuses to encourage managers to act in the shareholders' interests). Accordingly, agency theory has emerged as a dominant model in the financial economics literature, and is widely discussed in business ethics texts. Research on agency theory has had several findings to support this argument. The most notable result holds that an agent is more likely to adopt the goals of the

principal, and thus behave in the interest of the principal, when the contract is outcome-based. Also, when the agent is aware of a mechanism in place that allows the principal to verify the behaviour of the agent, he is more likely to comply with the goals of the principal to sustain and respect the letters of the contractual agreement. (<http://www.enotes.com/biz-encyclopedialagency-theory>).

The agency theory framework analysis was applied to the study and it explained explicitly the relationship between the principal and the agent in a contractual venture. The application of the operational guidelines and the regulatory policy instruments issued (from time to time) by the National Pension Commission to the licensed pension fund administrators and pension fund custodians translated to prompt and regular payment of pension benefits to retirees. The application of the theory indicated that the activities of the agent serve the interest of the proletariat-principal in terms of meagre investment returns, accountability and transparency where the principal does not know the exact amount earned as investment returns at any given period; and the level of protection of the principal's interest in investments and payment of accrued investment returns with undisclosed formula to legitimate recipients as the hallmark of pension fund administration in Nigeria. The application of the theory in the analysis revealed also that there are adequate fit and proper pension protections to prevent the agency from being deliberately manipulated by the government or the board of the agency to the principal's detriment.

This impetus saves an insight of agent's capability to secure the consolidated funds bond through maintenance of "retirement savings account" to sustain higher borrowing capacity of investors for enhanced investment returns. Therefore, it was imperative to study and evaluate the administration of the new pension scheme using the theory of principal-agent tools as the appropriate theoretical framework, and how they are supervised. The basic goal of pension fund governance regulation is to minimize the potential agency problems, or conflicts of interest, that can arise between the fund members and those responsible for the fund's management, and which can adversely affect the security of pension savings and promises. Good governance goes beyond this basic goal and aims at delivering high pension fund performance while keeping costs low for all stakeholders. In meeting these goals, pension fund governance is structured in different ways in different countries.

All autonomous pension funds have a governing body or board, which is the group of persons responsible for the operation and oversight of the pension fund. The governing body may be internal or external to the pension fund, it may have a single or dual-board and may delegate certain functions to professionals. Ambachtsheer, Capelle and Lum (2006) show how good governance and good performance are linked. Using pension funds based in Australia, New Zealand, Canada, the United States and Europe, their analysis is based on pension funds executives own opinions and how well their governance is working as a proxy for good governance, with pension fund returns over a passive asset benchmark taken as a performance proxy. They conclude that —the poor —good governance gap, as assessed by pension fund CEOs (or their equivalents) themselves, worth as much as 120 of additional returns per annum, and the authors think this is probably an underestimations. In a later article, Ambachtsheer et al. (2007) identify the main governance weaknesses as poor selection processes for members of the governing board, a lack of self-evaluation of board effectiveness, and weak oversight by the board. Other specific problems include lack of delegation clarity between board and management responsibilities, board micro-management, and non-competitive compensation policies in pension funds.

Good governance can also bring indirect benefits to pension funds. It can spare them the costs of overregulation and it can facilitate supervision by the authorities. The stronger the governance of the fund, the better the risks (such as operational risk, investment risk) will be managed and controlled. The supervisory approach is increasingly dictated by their assessment of a pension fund's risk profile, with funds judged to pose less risk likely to receive a lighter supervisory touch. This could mean that more of the day to day governance or supervision of the fund is left to the governing board itself. The links between pension fund governance and corporate governance have been recognized by, among others, Clapman (2007) from the perspective of the United States. Various studies and surveys have also identified general governance problems that affect broadly and deeply the pension fund industry. For example, a survey by Mercer (2006) on the governance of global retirement plans offered by multinational corporations reveals that sponsoring employers are very concerned about the lack of governance of their benefit plans in the different countries in which they operate. The International Organization of Pension Supervisors (IOPS 2003) recently surveyed its members to ascertain which governance issues they find the most challenging: Initial results suggest that pension fund supervisors are particularly concerned with transparency and the disclosure of information to pension fund members and the competency and expertise of the governing body and internal controls.

Country specific surveys include a report by Man, Blackwell and Donaldson (2006) highlighting administrative problems in governance practices in the United Kingdom, claiming that 1 in 3 pension funds still have administrative problems (from using the wrong index level, or wrong salary to calculate pension benefits to allocate spouse benefits to the wrong account). Clark (2007) examines trustees' ability in solving problems relevant to their investment responsibilities and results show that trustees are more cautious with other peoples' money than theirs, which may be an impact of the predominance of the prudent pension rule in UK common law. Cocco and Volprin (2005) examine DB plans in the UK and find that pension plans of indebted companies with more insiders' (i.e. executive directors of the sponsoring company) on the trustee board invested more in equities, contribute less to the pension fund and have a higher dividend payout ratio.

The conclusion drawn is that when finances get tough, conflicts of interest may arise and impartial trustee are needed on the board to make governance work. However, other explanations could be found such as trustees who are also directors of the sponsorship company potentially having greater investment knowledge which could allow them to maximize returns and, therefore, lower funding demands for the sponsor. Two recent studies by (Bridgen & Meyer 2005, Borella & Fornero 2007) now specifically focused on the issue of the differences between the levels of DII and DC governance in the United Kingdom. A recent NAPF survey concludes that trustees are not doing enough to explain that there may well be better ways for members to deploy their funds (NAPF, 2007b). A report on reluctant investors by (Byrne, Harrison, Blake (2007) points out that, with the exception of senior executives, it is unusual for employers to pay for face-to-face regulated investment advice (due to cost). In its DC consultation work (Pensions Regulator 2007c), the Pensions Regulator has concluded that two of the areas where there are opportunities for improvements are with member understanding and member choices, and the Regulator has stated that it will issue guidance for trustees with the aim of raising standards in those areas. The guidance will be targeted primarily at trustees, encouraging them to take a more pro-active role in member education.

In Ireland, the Pensions Board produced a review in 2006 of the trustee structure of governance (Pensions Board, 2006). The Irish Report identified some weaknesses such as the small size of some schemes, wide variation in awareness and understanding of trustee responsibilities and conflicts of interest among trustees, particularly among employer nominated trustees of defined benefit plans. In addition, the Pension Boards review finds evidence that ongoing, quality trustee training is an exception rather than the rule. Governance problems also affect countries that have mainly contract-based private pension arrangements, where pension funds take a contractual form. In most Central and

European countries like Poland and Slovak Republic and Latin American countries, such as Mexico, mandatory pension funds are managed by financial institutions that are faced with potential conflicts of interest. Given the low level of education of the population and the generally low interest in pension matters, there is an incentive for pension fund managing companies to engage in costly marketing campaigns to attract membership. Such campaigns often provide little benefit in terms of improved investment performance but lead to high administration costs and fees paid by the plan members, Governance reviews have also been carried out in some non-OECD countries with occupational pension systems. For example, Dias (2006) argues that in Brazil, sponsoring employers tend to dominate decision-making at pension funds, even though nominally the main decision-making body is the so-called deliberative council (a kind of supervisory board). There are also some instances in which the one-third member representation of members in the deliberative council is not being met. Rusconi (200) reviews pension fund governance in South Africa and identifies major knowledge gaps in trustee boards, weak board discipline, and conflicts of interest among consultants and asset managers that are going unaddressed, leading to a prevalence of active over passive management and higher fees than would otherwise be the case. Such conflicts reach even training programmes for trustees as these are mostly delivered or financed by asset managers and consulting firms.

Time Lag

Agency theory suggests that shareholders require protection because management may not always act in the best interests of shareholders (Fama, 1976). Agency theory begins with the assumption that people act in their own self-interest, and that, under normal conditions, the goals, interests and risks of the two actors (Principal and agent) are not identical. Agency theory states that when a manager does not own 100% of company inventory, there will inevitably be a latest conflict between shareholders and managers. This leads to numerous agency problems, such as excess spending as a result of special privileges, suboptimal investment decisions, information asymmetry and finance purchasing (Jensen & Meckling, 1976).

One of the remedies for the agency problem is to implement good corporate entity. The organization for economic co-operation and development (OECD) (2004) lists transparency as one element of good corporate practice. Reducing reporting lag is considered another component of good corporate practice to reduce agency problem (Blanchet., 2002; Kulzick, 2004; Prichett, 2002). This illustrates that timeliness of reporting is not just as a creditable practice in itself but required as a critical mechanism to ensure transparency between the management and other stakeholders in a firm. This is also an essential elements of information asymmetry. The information used by investors and payables should be current at the time of making the predictions and decisions.

The timeliness of financial reporting is an important characteristic of usefulness of financial information. The timeliness of financial reports needs to be relevant. Research on timeliness emphasizes that annual reports need to be made available to decision makers before the financial information loses its capacity to influence economic decisions. It is not only necessary that users have financial information that is relevant to their predictions and decisions, but the information should also be current rather than relating only to prior periods. Theoretically, having information available to decision makers before its losses its capacity to influence investment decisions contributes to the prompt and efficient performance of any corporate entity and evaluation (Jaggi & Tsui, 1999). Timely reporting helps mitigate insider trading, leaks and rumours in the organization.

Givolvy and Palmon (1982), Nwaiwu (2018) examine several other aspects of the timeliness of earnings announcements that have implications for regulatory actions. The results show a considerable shortening of reporting lag over the years. This implies that the assumption conveniently made in many “events studies” that the announcement week or month is fixed overtime is inappropriate and should be avoided as it tends to weaken the power of the tests. The time lag of individual companies appears to be more related to intra-industry patterns and tradition than company attributes. The ability of most entity to report ahead of the filing deadline, coupled with the finding that bad news tends to be delayed, might be considered when assessing the adequacy of the length of the current filing period Givolvy and Palmon (1982).

Courtis (2016), Ashton (2017), Ng and Tai (2018) Ashton (2019) argue that industry membership influences the reporting delay of the corporate reports of each member. Abdulla (2016) hypothesizes that there are a number of plausible causes for his behaviour, including: the importance of the company in terms of its role in the economy; and the company’s importance relative to the other listed firms. Some industries are followed by different regulators who may differ in terms of expertise and effectiveness, which might affect the timeliness of the corporate of the companies they regulate and monitor (AlAjmi, 2008).

The predominant focus of empirical timeliness studies has been on the developed entities in North-America for the United States (e.g Ashton et al., 1989; Ashton et al., 1987; Atiase et al., 1989; Bamber et al., 2006; Chambers & Penman, 1984; Ettredge et al., 2006; Givolvy & Palmon 1982; Henderson & Kaplan, 2000) and for Canada (Ashton et al., 1989; Kimney & McDaniel, 1993; Knechel & Payne, 2001., lee et al., 2008; Newton & Ashton, 1989; Schwartz & Soo, 1996), Europe (Owusu-Ansah & Leventis, 2006; Soltani, 2002; Australia (Brown et al., 2011; Davies & Whatfoed, 1980). Several emerging entity’s have also been studies, including Bahrain (Abdulla, 1996; Al-Ajmi, 2008; Khsharmeh & Aljifri, 2010), Bangladesh (Ahmed, 2003; Imam et al., 2001; Kari metal 2006), China (How et al., 2003); Egypt (Afty, 2009; El-Bannay, 2006; Mohamad, 1995), Grecee (Leventis & Weetman, 2004; Leventis, et al. 2005; Owusu- Ausah & Leventis, 2006), Hong Kong (Jaggi & Tusi, 1999; Ng & Tai, 1994), Malaysia (Ahmad & Kamarudin, 2003), Pakiskan (Hossain & Taylor, 1998). The United Arah Emirates (Khasharmeh & Aljifri, 2010) Zimbabwe (Owusu-Ahsah, 2000), Nigeria (Nwaiwu & Ironkwe, 2018; James, 2018).

Prior Studies

Since the seminar work of Abiodun (2012), Hunton (2018), Blank (2019), Nwaiwu (2019) on retirement savings account and time lag, several affirmative arguments have canvassed. For example, Agbata (2016) Ekwueme & Jeroh (2017), Bodie (2018) offer strong arguments in support of the need to tighten retirement savings account. Others, such as Ahmed (2016)

Copocci & Corhay (2017) aver that retirement savings account influence negatively on time lag. Some empirical studies (Collins, Maydew & Weiss, 2017) support anecdotal evidence (Chris & Attanah, 2015) which suggests that retirement savings account are not only affected by time lag, but also retain a strong national identity. Thus, going by empirical studies, the studies reviewed are classified according to author's', year's', topic of the research work, journal, volume, number's' and paged as declared in the webometric analysis of retirement savings account and time lag in Nigeria.

Table 1: Webometric Analysis of PFA and AIQ in Nigeria

Authors and Year of Publication.	Title of Article	Journal, Volume, Number and Page's'
Nwaiwu, (2019)	Pension fund accounting and financial reporting quality	International Journal of Advanced Academic Research & Financial Management ISSN: (2), 2280-2291.
Hunton (2018)	Blending information and communication technology with accounting research.	Accounting Horizons, 16(1), 55-67
Agbata., Ekwueme & Jeroh (2017)	The anatomy of pension fund in Nigeria: its motives, the management and future of the Nigerian pension scheme.	Economic Horizons, 19(3), 181-192
Black (2019)	The tax consequences of long-run pension policy.	Financial Analysts Journal, 36(5), 21-8
Bodie (2018)	Pensions as retirement income insurance.	Journal of Economic Literature, 28(8), 28-44
Sipe., Metrejean & Donaldson (2015)	Defined benefit pension fraud: A ticking time bomb.	Journal of Forensic and Investigative Accounting, 2(2), 196-194
Exley., Inehta & Smith(2017)	The financial theory of defined benefit pension schemes.	British Actuarial Journal, 4(3), 213-383
Tepper (2018)	Taxation and corporate pension policy.	Journal of Finance, 36(3),1-13
Abiodun (2012)	Significance of accounting and pension fund accounting in Nigeria.	Research Journal in Organisation Psychology & Educational studies, 1(2),105-113.
Adeniji., Akianusi., Falolola & Ohunakin 2017	Administration of retirement benefits in Nigeria? Periscoping the effect on retirees.	International Journal of Applied Business and Economic Research ,15(17), 255-269.
Agba & Nwosa (2011)	Contributing pension scheme, workers commitment, retention and attitude towards retirement in the Nigerian civil service.	Global Journal of management and business research, 11(4),32-45.
Ahmed (2016)	The contributing pension scheme institutional and frameworks.	Central Bank of Nigeria Ballion, 30(2), 1-18
Alm & Liu (2013)	Did China's tax-for fee reform improve farmers welfare in rural areas?	The Journal of Development Studies, 49(4),576-532
Al-Mamary.,	The impact of management	Management Information System

Shamsuddin Aziah (2013)	information systems adoption in managerial decision making: A review-----	Journal, 8(4),610-617
Armitoye & Conner 2001	Efficiency of the theory of planned behaviour: A meta-analytic review.	British Journal of Social Psychology, 40(4), 471-499
Ayzer & Cama (2013)	Effects of new financial reporting standards on value relevance. A study of Turkish stock markets.	International Journal of Economic and Finance, 5(16), 10-13
Basel., Baker & Omar (2016)	The critical success factor of accounting information system and its impact on organizational performance of Jordanian commercial banks.	International Journal of Economic, Commerce, and Management, 4(4), 658-676
Copocci & Corhag (2017)	Hedge Fund Performance and Persistence in bull and bear Markets.	The European Journal of Finance 11(5), 361-391.
Chen (2015)	Old age pension and intergenerational Living arrangements: A regression discontinuity design.	Review of Economics of the Household, 13(2), 1-12.
Chris & Attamah (2015)	Impact of contributory pension scheme on workers savings and investment in Nigeria: Anambra case study.	Journal of Economics and Finance, 6(2), 9-20
Collins., Maydew & Weiss (2017)	Changes in the value relevance of earnings and book values over the past forty years.	Journal of Accounting and Economics, 24(1), 39-68
Daganda & Adeyinka (2013)	An analysis of impact of the 2004 pension policy on the welfare of the 2014 pension policy on the welfare of Nigerian civil servants: A case study of selected federal ministries.	Global Journal of Human Resource Management, 1(4), 6-13
Dandago & Rofai (2014)	Information technology and accounting information system in Nigeria banking industry.	Asian Economic and financial review, 4(5),653-670
Dandago & Forouk (2012)	Impact of investment in information technology on return on assets and pension income measurement in Nigeria.	International Journal of Arts and Commerce, 1(5), 234-244.
Daros & Hu (2018)	Does funding of pension stimulate economic growth.	Pension Economics and Finance, 7(2), 221-249.
Dedquechi (2001)	Donided rationality, institutions and uncertainty.	Journal of Economic Issues, 35(4), 911-929
Delone & Mclean (2016)	Information system success measurement.	Foundations and Trends in Information System, 2(1), 1-16
Edogbamgo (2013)	An assessment of the impact of contributory pension scheme to Nigerian economic development.	Global Journal of Management and Business Research, 13(2) 46-59
Eme & Sam (2017)	The law and administrator of retirement in Nigeria: A historical approach.	Kuwait chapter of Arabian Journal Of Business And Management Review, 1(2), 1-10
Fapohnada (2013)	The pension system and retirement planning in Nigeria.	Mediterranean Journal of Social Sciences, 4(2), 25-34

Feiock (2007)	Rational choice and regional governance.	Journal of Urban Affairs, 29(1), 47-63
Feldstein & Seligman (2017)	Pension funding, share prices and national savings.	The Journal of finance, 36(4), 801-824
Goughf & Niza (2011)	Retirement savings choices: Review of the literature and policy implications.	Journal of population ageing, 4(2),97-117
Fenggi., Oliola & Sheng (2015)	An integrated information system through effective data quality management: A framework for reducing costs and improving performance.	International Journal of Scientific and Technology Research, 1(10), 56-94.
Goughf & Niza (2011)	Retirement savings choices: Review of the literature and policy implications.	Journal of Population Ageing, 4(2) 97-117
Gunu & Tsado (2012)	Contributory pension scheme as a tool for economic growth in Nigeria.	International Journal and Behavioural Sciences, 2(9), 6-13
Hann., Heflin & Sabramanyan (2017)	Fair-value pension accounting	Journal of Accounting and Economics, 44(3), 328-358
Herley's Mowen (2000)	Psychological determinants of financial preparedness for retirement.	The Gerontologist, 40(6), 687-697
Hershy., Jacob-Lawson., Hamagumi (2007)	psychological foundations of financial planning for retirement.	Journal of Audit Development, 14(1), 26-36
Holzman (2018)	The world bank approach to pension reform.	International Social Security Review, 53(1),11-34
Kecher (2012)	The relative value relevance of earnings and book values across industries.	Journal of Finance and Accounting, 3(21), 9-19.
Klumpes (2001)	Implications of four theoretical perspectives for pension accounting research.	Journal of Accounting Literature, 20(5), 30-61
Kokun., Adeoye & Alaka (2016)	Effects of contributory pension scheme on employee's productivity: Evidence from Lagos State government.	African Journal of Business Management, 10(6),384-399
Lin (2012)	The challenges of establishing basic pension insurance for migrant workers in urban China.	China Journal of Social Work, 5/2/,123-137
Mohd., Manson & Ahmad (2012)	Social pension, aging and poverty in Malaysia	Journal of the Economies of Aging, 5(3), 136-148
Nenyiaba & Okoye (2015)	Evaluation of key determinants of fraud free financial report: A focus on Nigeria.	Business and Management Studies, 1(2), 20-35
Noone., Stephans & Alpass (2009)	Preretirement planning in Nigeria.	Mediterranean Journal of Social Sciences, 4(2), 25-33
Nwaiwu (2018)	Pension fund accounting and accounting information quality in Nigeria.	Asian Economic and Financial Review, 4(5), 655-670.
Nweke (2019)	Post—retirement stress under non-	Canadian Social Science, 11(0), 100-

	contributory pension regime: A study of retired civil servants in Ebonyi State, Nigeria.	107.
Nyong & Duze (2011)	The pension Reform Act 2004 and retirement planning in Nigeria.	Journal of Economics and International Finance, 3(2)-109-115.
Odia & Okeye (2012)	Pension reform in Nigeria: A comparison between old and the new scheme.	Afro Asian Journal of Social Sciences, 3(3), 1-17
Ogunbameru & Bamiwaye (2014)	Attitude towards retirement and non-retirement education among Nigerian bank workers.	Education Gerontology, 30(5), 391-401
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Ohlson (2011)	Earnings, book values, and dividends in equity valuation: An empirical perspective.	Contemporary Accounting Research, 18(1), 107-120.
Okums & Peter (2015)	The value relevance of accounting: Evidence from Nigeria	Accounting and Finance Research, 4(3), 20-30
Olivera & Zalnoga (2014)	The execute effects of non-contributory pension in Colombia and Persu.	Journal of International Development, 26(7),949-973.
Oyiya (2017)	Impact of contributory pension scheme on economic growth in Nigeria. An empirical analysis.	International Journal of Research in Humanities and Social Studies, 4(6), 24-35
Pichev (2008)	On the balance sheet – based model of financial reporting.	Accounting Horizons, 22(4), 413-470
Wang (2006)	Rationalization behind the avoidance of pension contributors by companies.	Economic Research Guide, 1(1), 35-37
Zandbery & Spierdijk (2013)	Finding of pensions and economic growth: Are they really related?	Journal of Pension Economics and Finance, 12(2), 151-167
ZhaO & Xu (2012)	China urban pension system reforms and problem.	Cata Journal, 21(3), 34-46.

Hypothesis Development

In line with the empirical study and arguments of various sociological researchers, the foregoing discussion provides the context for one important hypothesis that track the effect of retirement savings account on time lag, formulated in the null form, to wit:

H₀₁: Retirement savings account does not exert any significant effect on time lag in Nigeria.

Methodology:

This section shows the methodology used to evaluate the long run equilibrating effect and short run dynamics in the variables if any to achieve the target of the study. The research design applied is ex-post facto research design. The ex-post facto research design according to Onwumere (2009), Ibanichuka (2012), Ibanichuka and Nwaiwu (2019) is the type of research involving events that have already taken place. Time series data regarding the variables of study were sourced from the central bank of bank statistical bulletin, central bank of Nigeria Reports, National Bureau of statistics and financial statements of years 2000-2016 of pencom in Nigeria. The choice of secondary data and its sources were based on the fact that the data are assumed to be reliable, suitable and adequate for the nature, scope and objectives of the study and are therefore assumed to be error free.

We utilized ordinary least squares (OLS) regression analysis, unit root test, co-integration and error correlation model were used in analyzing the data with the aid of electronic view version 10.

Model Specification

The model specification is based on the existing theory that retirement savings account and time lag significantly influence each other (Agbaam & Dinbabo, 2014; Falola & Ohumakin, 2017). Specifically, the model from related empirical evidences used by Al-mamary Shamsudlin & Aziah (2013), Ahmad (2016), Basel., Baker & Omar (2016), Collins., Maydew & Weiss (2017), Nwaiwu (2018), Nwaiwu & Ironkwe (2019) was adopted but we made modifications. We infact generated three models that empirically achieve the first objectives and the corresponding research questions. Consequently, the model specification was formulated in the following functional forms:

$$TL_{it} = f(RSA_{it}) \quad i$$

These functional or deterministic forms do not have Beta, we then introduced Beta into the mathematical form as thus:

$$TL_{it} = \alpha_0 + \beta_1 TL_{it} \quad ii$$

These functional and mathematical forms do not equally have a random or stochastic variable and since in statistical effect we deal with random or stochastic disturbance term stated as a multiple regression model as follows:

$$TL_{it} = \alpha_0 + \beta_1 RSA_{it} + \mu_{it} \quad iii$$

Where: TL_{it} = Time lag for the period of time. RSA_{it} = Retirement savings account for the period of time. μ_{it} = Represents the random or stochastic disturbance term or error term or unexplained variables for the period of time. α_0 = Intercept term for the period of time. β_1 = Are parameters known as partial regression coefficients or partial slope coefficients for the period of time. it = Denotes the value of the variables for the period of time

Aprior Expectation: In order to ensure that the empirical results are robust, several diagnostic tests will be performed. Thus, as stated above, our parametric estimates are expected to confirm to apriori expectation. In all, the retirement savings account is expected to increase with the increase in this time lag as shown below

$$\beta_1 > 0 <$$

Econometrics Results and Discussion

The focus of this chapter is the presentation and analysis of Time series data based on the outcome of the results obtained from Econometric Views package version 10. The analysis will include the tests of relevant hypotheses postulated in the chapter one of this study using relevant tools described in chapter three. The statistical tests performed include; stationarity test like the Unit root Augmented Dickey-Fuller test, Johansen Cointegration Test, Engle-Granger Error Correction and Granger Causality tests. For stability sake, the variables are integrated of order $I(1)$ which is a precondition for the adoption of the Johansen technique. The cointegration test enables us to determine the possibility of long run adjustment among the variables. If the long run adjustment condition is satisfied, then the fitting in of the error correction model (ECM) is carried out.

Data Presentation

The data presented below show the values of Retirement Saving Accounts and Time Lag, covering 2000 to 2016 period.

Table 4.1: Retirement Saving Account (RSA), Time Lag (TLAG), from 2000 to 2016.

Year	RSA	TLAG
2000	2,203,450,702	120
2001	2,503,540,207	100
2002	2,670,532,080	130
2003	3,542,531,211	140
2004	3,750,241,320	130
2005	4,125,432,413	120
2006	4,953,423,432	110
2007	4,315,421,235	100
2008	2,902,476,238	130
2009	5,670,150,325	140
2010	5,982,215,115	150
2011	6,421,315,532	120
2012	6,821,341,515	140
2013	5,375,510,730	130
2014	6,354,321,201	110
2015	7,528,315,213	150
2016	6,313,325,195	170

Source: Central Bank of Nigeria Statistical Bulletin and Annual Report of pension fund administrators.

Table 1 Unit Root Test (Test for Stationarity)

Table 2: ADF unit root test results on Time Lag (TLAG) data

Null Hypothesis: D(TLAG) has a unit root
 Exogenous: Constant
 Lag Length: 0 (Automatic - based on SIC, maxlag=3)

	t-Statistic	Prob.*
Augmented Dickey-Fuller test statistic	-4.363116	0.0047
Test critical values: 1% level	-3.959148	
5% level	-3.081002	
10% level	-2.681330	

*MacKinnon (1996) one-sided p-values.
 Warning: Probabilities and critical values calculated for 20 observations
 and may not be accurate for a sample size of 15

Augmented Dickey-Fuller Test Equation
 Dependent Variable: D(TLAG,2)
 Method: Least Squares
 Date: 11/10/18 Time: 03:35
 Sample (adjusted): 3 17
 Included observations: 15 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
D(TLAG(-1))	-1.166667	0.267393	-4.363116	0.0008
C	0.005000	0.005480	0.912421	0.3782
R-squared	0.594216	Mean dependent var		0.002667
Adjusted R-squared	0.563002	S.D. dependent var		0.031952
S.E. of regression	0.021122	Akaike info criterion		-4.753404
Sum squared resid	0.005800	Schwarz criterion		-4.658997
Log likelihood	37.65053	Hannan-Quinn criter.		-4.754409
F-statistic	19.03678	Durbin-Watson stat		1.750958
Prob(F-statistic)	0.000768			

At first difference, table 4.2.2 reveals that at 5 percent significance level TLAG has a calculated absolute ADF- test statistic of 4.363116, which is more than the Test critical value of 3.081002, also the table indicates a 0.4 percent probability value, which is far less than the conventional 5 percent level of significance. Hence, TLAG is stationary at first difference. Note that only intercept was included in the ADF test equation (no trend).

Analysis of Cointegration

Table 3: Results of Johansen Cointegration Test on TLAG and RSA

Date: 11/12/18 Time: 08:09
 Sample (adjusted): 3 17
 Included observations: 15 after adjustments
 Trend assumption: Linear deterministic trend
 Series: TLAG RSA
 Lags interval (in first differences): 1 to 1

Unrestricted Cointegration Rank Test (Trace)

Hypothesized No. of CE(s)	Eigenvalue	Trace Statistic	0.05 Critical Value	Prob.**
None *	0.647872	17.67339	15.49471	0.0231
At most 1	0.125817	2.016975	3.841466	0.1555

Trace test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegration Rank Test (Maximum Eigenvalue)

Hypothesized No. of CE(s)	Eigenvalue	Max-Eigen Statistic	0.05 Critical Value	Prob.**
None *	0.647872	15.65641	14.26460	0.0299
At most 1	0.125817	2.016975	3.841466	0.1555

Max-eigenvalue test indicates 1 cointegrating eqn(s) at the 0.05 level

* denotes rejection of the hypothesis at the 0.05 level

**MacKinnon-Haug-Michelis (1999) p-values

Unrestricted Cointegrating Coefficients (normalized by $b'S_1^{-1}b=I$):

	TLAG	RAS
	-102.7979	4.27E-10
	-12.86545	-6.47E-10

Unrestricted Adjustment Coefficients (alpha):

	D(TLAG)	D(RAS)
	0.013770	-3.73E+08
	0.003253	3.18E+08

1 Cointegrating Equation(s): Log likelihood -286.5903

Normalized cointegrating coefficients (standard error in parentheses)

TLAG	RSA
1.000000	-4.15E-12
	(1.5E-12)

Adjustment coefficients (standard error in parentheses)

D(TLAG)	-1.415510
	(0.42405)
D(RSA)	3.83E+10
	(2.9E+10)

In table 3 above, Trace as well as Max-eigenvalue tests indicate there is one co-integrating equation. Thus, the co-integration results reported in the Table show that the null hypothesis of no co-integration should be rejected and the alternative of hypothesis that states that at most one cointegration equation (CE) is accepted. Yet, deviation from this relationship may occur due to shocks in any of the variables in the short run. Therefore, short run changes in the variables are examined utilising Error Correction Model (ECM) in the study. Hence, having established Co-integration, (ECM) is specified to show the short run changes in the variables under study.

Analysis of Error Correction Model

Table 4: Error Correction Model of TLAG and RSA

Dependent Variable: D(TLAG)

Method: Least Squares

Date: 11/12/18 Time: 07:45

Sample (adjusted): 2 17

Included observations: 16 after adjustments

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	0.000817	0.004786	0.170726	0.8671
D(RSA)	2.04E-12	4.53E-12	0.450997	0.6594
U(-1)	-0.847081	0.326574	-2.593844	0.0223
R-squared	0.341896	Mean dependent var		0.003125
Adjusted R-squared	0.240649	S.D. dependent var		0.020887
S.E. of regression	0.018201	Akaike info criterion		-5.007349
Sum squared resid	0.004306	Schwarz criterion		-4.862488
Log likelihood	43.05879	Hannan-Quinn criter.		-4.999931
F-statistic	3.376856	Durbin-Watson stat		1.517497
Prob(F-statistic)	0.065905			

Table 4 indicates that the independent variable, Retirement Saving Account explains only roughly 34 percent change in Time Lag. The Durbin-Watson statistics (1.571) is not far more or far less than the acceptable range and shows no presence of autocorrelation, with one independent variable ($k = 1$) and 17 observation ($n = 17$), lower critical value of Durbin-Watson (d_L) = 1.133 and upper critical value of Durbin-Watson (d_U) = 1.381. Evidently there is no positive autocorrelation because Durbin-Watson = 1.571 and greater than 1.188 as well

as 1.381. The Error Correction Model (ECM) indicated in the table as U is negative as expected. The absolute value of the coefficient of the error correction term indicates that roughly 84% of the disequilibrium in the level of Accrual is offset by short run adjustment in each year.

The estimation results show that the independent variable RSA is statistically insignificant in explaining changes in the level of Audit Lag in Nigeria at 5% level of significance. The coefficient of RSA is 2.04 while the p-value is 0.6594, which is far more than 0.05 level of significance and indicating an insignificant positive relationship with Accrual, the Dependent variable. Having conducted Error Correction Model (ECM) analysis, the study proceeds to test for causality using Pair-Wise Granger Causality Test.

Pair-Wise Granger Causality Analysis

Table 5: Pairwise Granger Causality Tests on TLAG and RSA

Pairwise Granger Causality Tests

Date: 11/12/18 Time: 07:54

Sample: 1 17

Lags: 2

Null Hypothesis:	Obs	F-Statistic	Prob.
RSA does not Granger Cause TLAG	15	1.93339	0.1950
TLAG does not Granger Cause RSA		0.70255	0.5182

The results of the Pair-wise Granger Causality tests presented in table 5 above show an F-Statistic of 1.93339 as well as 0.70255 with a corresponding p-value of 0.1950 and 0.5182, which implies that no causalities exist between RSA and Time Lag using 0.05 level of significance.

Test of Hypotheses

Having performed the analysis, we proceed to test the hypotheses formulated in chapter one above to enable us discuss our findings.

Hypothesis One: Retirement saving account does not exert any significant influence on Time Lag

The estimated ECM results in table 4, showed a positive and insignificant effect of funds assist record on time lag. From the results, the relationship between retirement saving account and audit lag has a p-value = 0.6594. This figure is far more than 0.05 the expected level of significance and the decision guideline is that if the p-value is more than 0.05 we accept the Null Hypothesis, if otherwise we reject. Hence, we accept the Null Hypothesis that retirement saving account has no significant influence on time lag.

Discussion of Findings:

This section dealt with discussion of findings, utilizing three series data of Fund Assets Record (FAR), Fund Income Measurement (FIM), Retirement Savings Account (RSA) of Pension Fund Accounting (PFA) and Book Value (BV), Time lag of Accounting Information Quality (AIQ) in Nigeria. Data were from the central bank of Nigeria (CBN), Pencom 2016 and National Bureau of statistics but empirical analysis was limited to seventeen (17) years, from 2000-2016.

Retirement Savings Account and Time Lag in Nigeria.

There is statistical evidence from table 5 above that analysis the existence of insignificant and positive influence of retirement savings account on time lag as indicated by coefficient of retirement savings account value of 2.04 and p-value of 0.6594 far ore than 0.05 level of significance and equally indicating on insignificant positive effect on time lag, the dependent variable. Indicating that any variable that affects Retirement Savings Account positively will equally affect time lag positively in Nigeria. It is essentially to point out that retirement savings account helping to generate fund for development. Again, our empirical findings is curious when compared to the findings of Walker & Lefort (2002), Zandberg & Spierdijk (2010), Sibanda & Holden (2014), Aron & Muellauer (2015), Sipe; Metrejeam & Donaldson (2015).

This is because their study was for a period of five years and this study is for a 17 years period. More so, this study finds changes in RSA to have significant positive and insignificant effect, respectively on time lag. This is consistent with prior studies as earlier identified.

Conclusion and Recommendations

The econometric study is to analyse the effect of retirement savings account on time lag in Nigeria by utilizing time series data of pension fund accounting variable, retirement savings account on time lag from 2000-2016 collected from the CBN, National Bureau of statistics, Annual CBN reports and pencom financial statement. We utilized the ordinary least square regression analysis to analyse the effect of retirement savings account on time lag. Various dynamic statistical techniques were employed starting from unit root test, co-integration test and error correction model. The findings were that retirement savings account collectively has statistical significant existing long run equilibrium effect on time lag in Nigeria. Thus, we conclude that retirement savings account influence on time lag in Nigeria.

From the foregoing, we accordingly make the following recommendations that:

- (i) Employer and employee contributions should be regularly transferred to the pension plan, and any refund to the sponsoring firm should be prohibited.
- (ii) Investments of pension funds need not to be solely driven by investment returns/investment yield out also the desired economic and social goal. Investment of retirement benefits assets need to compliment the government development agenda like Nigeria vision 2020. However, government needs to provide incentives for schemes to invest pension funds in government ventures.
- (iii) There should be need for the government to put in placed the necessary fiscal and monetary policy measures aimed at reducing pressures and ensuring stable and predictable macroeconomic environment which rewards savers and reduce fears of inflation.

Limitation and Suggestion for further studies

This study is limited to the pencom. Therefore, the findings are only applicable to them and not to other firms that are not quoted. In order words, the findings in this study could only be generalized to pencom so covered. Moreover, the study used time lag while the independent variable used are retirement savings account. This study is also limited to seventeen years (2000-2016) Annual report of the sampled firms. Hence, further studies should be conducted using both primary and secondary data.

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