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EFFECT OF PENSION FUND CHARACTERISTICS ON FINANCIAL PERFORMANCE OF PENSION FUNDS IN NIGERIA

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Abstract

Pension Fund Characteristics have a propensity of influencing financial performance of pension funds. The study examined the effect of Pension Fund Characteristics on Financial Performance of Pension Funds in Nigeria using pension funds data drawn from the annual reports of eleven (11) Nigerian Pension Fund Administrators (PFAs) over the period of 2008 to 2021. The secondary data was analysed through use of regression model. The dependent variable was proxied by the unit price while Pension Idle Contribution, Pension Fund Size and Retirement Age served as the independent variables. The study found that fund size and retirement age have a positive and significant influence on financial performance of pension funds in Nigeria. It is recommended that the Government at all levels should create an enabling environment for improved life expectancy of employees in the country for improved pension funds' performance

Keywords: Fund Size, Pension Fund Administrators (PFAs), Financial Performance, Retirement age, unit price.

1. Introduction

Pension Fund Characteristics have a tendency of influencing financial performance. Fund Characteristics are pension fund attributes such as Idle Contribution, Fund Size, Retirement Age, and Density of Contributions among other fund specific factors. Such factors are crucial characteristics needed to be identified by retirement fund schemes so as to attain their goals for a particular period of time (Nyangeri, 2014). Thus, this study particularly examined effect of idle contribution, fund size and retirement age on financial performance perhaps, due to their weighty explanatory powers over pension fund performance. Prior empirical studies on Fund Characteristics and Financial Performance of pension Funds were scanty. For instance, Aminu (2022) as well as Ajibade, Jayeoba and Aghahowa (2018) carried out an empirical research on Idle Contribution and Pension funds' Financial Performance locally whereas Waweru (2021) and Sitienel (2019) conducted a study on similar subject internationally. This meagre empirical investigation on effect of idle contribution and financial performance has opened a way for a further study on the subject. More so, domestic studies such as Adekoya, Nwaobia and Siyanbola (2022); Oloruntoba and Jimoh (2021); Tijjani (2014) found a positive connection between firm size and financial performance in Nigeria, leaving a gap of pension fund size variable to explore in this jurisdiction.

In other words, some international studies dwelt on the nexus between fund size and financial performance of pension funds. For instance, Ondieki (2022) sought to establish connection between fund

size and financial performance of pension funds in Kenya for nine years. Also, Onyango (2020) assessed how fund size affects pension funds' financial performance in Kenya for the period of ten years. The studies were notwithstanding conducted outside the context of Nigeria without incorporating crucial variables such as retirement age. Not only that, Waweru (2021) investigated effect of fund size on financial performance of pension fund schemes in Kenya for five years. The research was however restricted to the use of ordinary least square (OLS) regression model for estimating five-year data within the Kenyan jurisdiction. A study was equally conducted by (Kigen, 2016) on the relationship between fund size and Kenyan Pension Funds' financial performance for five and retirement age variable was employed but within the context of East African Region, Kenya. Nonetheless, domestic studies such as Aminu (2022); Damilare (2021); Aderibigbe (2021); Ajibade, Jayeoba and Aghahowa (2018); Tijjani(2014) determined effect of firm size on financial performance and sustainability of pension fund schemes. Their research focus was on Corporate Age rather than Retirement Age, which is more critical to fund contributors. The inclusion of retirement age variable with longer study duration within the context of Nigeria has made the current research distinguishable from the previous studies. In light of the observed vacuum from the prior studies mentioned above, this study will therefore seek to answer the question; what is the effect of fund specific factors on financial performance of pension funds in Nigeria? The motivation of the study is to add value to the body of knowledge on effect of fund characteristics such as idle contribution, fund size and retirement age on pension funds' performance.

Objectives of the Study

The main objective of this study is to examine effect of fund characteristics on financial performance of pension funds in Nigeria. Other specific objectives of the study are:

i. To determine effect of Idle Contribution on Financial Performance of Pension Funds in Nigeria.
ii. To determine effect of Fund Size on Financial Performance of Pension Funds in Nigeria.
iii. To determine effect of Retirement Age on Financial Performance of Pension Funds in Nigeria.

Hypotheses of the Study

In line with the objectives of the study, the following hypotheses have been formulated in null forms:

i. H_{O1}. Idle Contribution has no significant effect on Financial Performance of Pension Funds in Nigeria.
ii. H_{O2}. Fund Size has no significant effect on Financial Performance of Pension Funds in Nigeria.
iii. H_{O3}. Retirement Age has no significant effect on Financial Performance of Pension Funds in Nigeria.

The major aim of this study is to examine effect of fund characteristics on financial performance of Pension Funds in Nigeria. This study utilizes idle contribution, fund size and retirement age for measuring financial performance. The period of the study spans from 2008 to 2021. This period is crucial because the Retiree Fund Guideline was created in 2008 and it stipulated that the retiree assets should be invested in fixed income instruments (PenCom, 2008). From then, the Nigerian pension industry perhaps continued to experience performance related instability. The study is therefore restricted to financial performance of pension funds due to the fact that contributors of the pension funds would always need assurances as to the safety and fair returns on their pension assets managed and invested by Pension Fund Administrators (PFAs) on their behalf.

This study is vital as it provides relevant knowledge to the following pension funds stakeholders. Firstly, Private and public sectors retired employees will find this study useful because they are mainly concerned about the safety and management of their contributed funds. Secondly, Policy Makers such as Federal Ministry of Finance, Central Bank of Nigeria as well as the National Pension Commission (PenCom) will find this study useful as it will aid their insights into factors that drive financial performance of pension funds in Nigeria. This will enable the Government promulgate compelling pension laws and regulations that can aid financial performance of contributory pension funds in Nigeria. Thirdly, the Pension Fund

Administrators (PFAs) are licensed by the National Pension Commission (PenCom) to invest and manage the contbributory pension funds in Nigeria. This study therefore will aid understanding of the PFAs about factors to be taken into account when making decisions on financial performance of pension funds invested on behalf of the contributors. Fourthly, the study findings will contribute to the extant literature on determinant factors of financial performance of Pension funds. It will also be helpful to future researchers who may wish to utilize the findings of this study as a foundation for further studies.

2. Literature Review

2.1Conceptual Review

Idle Contributions: Idle contributions or funds in the statement of assets and liabilities of the Pension Funds represent the amount of cash and cash equivalent not invested at the end of a financial year. This is referred to as fund liquidity in some jurisdictions. This variable is conceptualized in different ways. For instance, Waweru (2021) considered the variable as any cash at hand, which yields no interest and such a fund-holding was deemed risky. Sitienei (2019) considered idle funds or contributions as funds owned by an entity but not producing any interest. Such idle funds portend greater risks to the organizations.Idle contribution was then measured as log of cash at bank as recorded in the financial statements of the companies. Ajibade, Jayeoba and Aghahowa (2018) measured the variable as cash unutilized by the Pension Fund Schemes during the financial year. Based on the above highlighted empirical works, this study will therefore measure the variable in terms of logarithm of cash held at year end in the financial records of the pension funds in Nigeria.

Fund Size: Fund Size is also known as Fund under Management (FUM). The variable is conceptualized differently in literature. For instance, Waweru (2021) opined that bigger pension fund schemes outperform the smaller ones due to economies of scale. The variable was then measured as the log of fund value. Additionally, Kigen (2016) stated that Fund Size is a crucial factor influencing performance of pension funds. Fund Size was also represented by the natural logarithm of fund value. This measurement basis is also upheld by Ondieki (2021). On the other hand, Studies such as Onyango (2020) and Tijjani (2014) measured the size in terms of firm size, which is the natural logarithm of pension firms' total assets and log of revenue respectively. Based on the above studies reviewed, this study will therefore measure the variable in terms of logarithm of net assets (fund value) in the financial records of the pension funds in Nigeria.

Retirement Age: This refers to the exit age of pension fund contributors from the active employment. Age is measured differently in social and management sciences literature as corporate age, fund age or contributors' age. For instance, the variable was represented as corporate age by studies such as Aderibigbe (2021); Damilare (2021) whereas studies such as Aminu (2022); Suseno (2020); Sitienei (2019); Ajibade, Jayeoba and Aghahowa (2018) viewed it as Fund Age. Contrarily, Kigen (2016); Rabikauskaite and Novickyte (2015); Oluoch (2013) as well as Petraki (2012) used retirement age of contributors measured by life expectancy of the country of study. In line of the above citations, the retirement age will be aligned with and measured using life expectancy because of difficulties of obtaining pension funds' contributors real ages so as to represent the Age variable in this study.

Financial Performance of the Pension Fund

Financial performance could be referred to as the extent to which a pension fund is used for the attainment of the financial objectives, long-term financial health and survival of the fund contributors. The financial performance can be measured in terms of: return on assets (ROA), return on capital (ROC), return on investment (ROI), profit before tax (PBT) and Unit Price as employed by studies such as Aminu (2022); Damilare (2021); Waweru (2021);); Gyimah, Addai and Asamoah (2021); Thompson (2021); Wulandari and Harjito (2021);Rameshbhai (2020); Suseno (2020); Xuan, Pheng, Chien, Hei and Mei (2020); Osazefua (2019); Sitienel (2019); as well as Ajibade, Jayeoba and Aghahowa (2018). Howver, Unit Price is used in the pension industry as a conventional measure of pension funds' performance because it serves as an indicator of the return on the pension fund assets (Ajibade, Jayeoba & Aghahowa,

2018). Hence, Unit Price will be utilized in this study as a measure of the financial performance of the pension funds.

2.2 Empirical Review

Some previous studies have attempted to examine effect of pension fund characteristics such as Idle pension contribution, pension fund size and retirement age of the pension contributors on financial performance of pension funds. Some have established positive association between pension fund characteristics and pension funds' financial performance while some have established negative association. Meanwhile, others have established no relationship between the dependent (Financial Performance) and independent (Pension Fund Characteristics) variables.

Idle Contribution and Financial Performance

The financial performance of Nigerian pension fund was evaluated by Aminu (2022) for the period of 2016 to 2020. The study utilized variables such as idle contribution and Age of fund to represent independent variables while Profit before tax served as a proxy for the dependent variable. The estimation of the study quantitative data was carried out through the regression analysis. The findings showed that idle contribution has a positive but insignificant effect on financial performance. Some of the study limitations are the use of five-year (5) period of time and the inability to employ financial performance variables such as unit of price, which is key in determining the pension fund performance. While Aminu (2022) and Waweru (2021) identified no significant relationship between idle contribution and financial performance of pension funds, some studies such as Sitienel (2019) and Ajibade, Jayeoba and Aghahowa (2018) found that idle contribution has a positive and statistically significant relationship on financial performance. The studies were however, restricted to five-year and seven-year time periods respectively.

Fund Size and Financial Performance

Ondieki (2022) investigated effect of fund characteristics on financial performance of pension funds in Kenya from 2009 to 2017. The study data was estimated using Random Effect Model. The dependent variable was represented by Return on Assets (ROA) while the independent variables consisted of fund size, asset allocation, social coverage span and fund design plans. It was found that fund size has a positive and significant influence on pension funds' financial performance. The study did not take into account the incorporation of variables such as membership Age. Also, Waweru (2021); Onyango (2020) and Tijjani (2014) established positive and significant relationships between the two variables whereas Kigen (2016) identified a contrary result. Their research limitations were however hinged on limited time periods.

Retirement Age and Financial Performance

Aminu (2022) sought to establish factors influencing pension funds' financial performance in Nigeria over the period of 2016 to 2020. The dependent variable was measured by profit before tax while the independent variables were measured by fund age, idle contribution expenditure and contribution density. The data of the study was analysed through a regression method. The results revealed that there is a negative and insignificant association between age of the fund and financial performance. The study used Fund Age whereas pension contributors' retirement age as a crucial variable was ignored. The study also used only five (5) time frame. As Aminu (2022); Onyango (2020); Sitienei (2019) and Kigen (2016) found a negative and insignificant relationship Aderibigbe (2021) as well as Ajibade, Jayeoba and Aghahowa (2018), on the other hand, established a positive and significant effect of corporate fund age on financial performance of PFAs in Nigeria. A longer study duration as the inclusion of variables such as contributors' retirement age was notwithstanding, recommended for further research.

Study Framework

The figure 1 shows the relationship between pension funds characteristics and financial performance of pension funds in Nigeria in line with studies such as Ondieki (2022); Kuncoro, Sudrajat, Saroso, Syahchari and Moeke (2021).

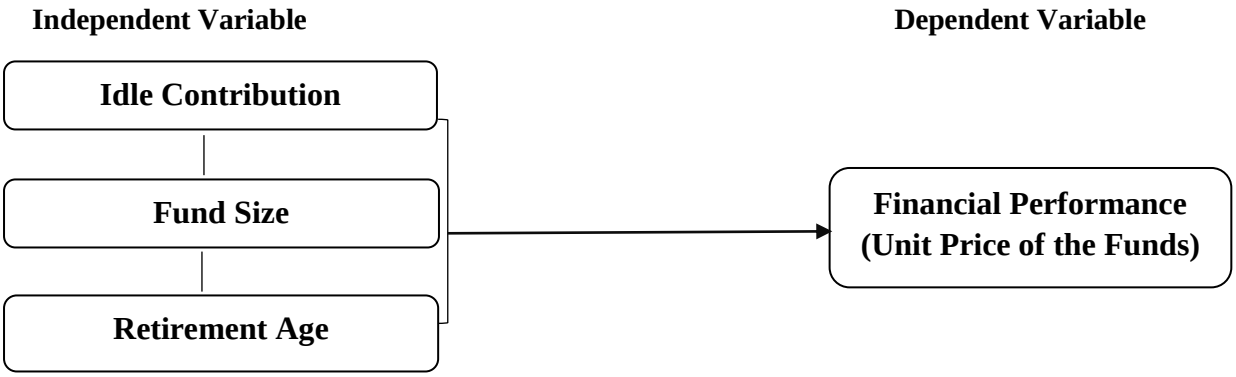

Figure 1: Study Framework
Source: Researcher's Compilation

2.3 Theoretical Framework

Fund Accounting Theory

An Economist, William Joseph Vatter first propounded the Fund Accounting Theory in 1947 in his book "The Fund Theory of Accounting and Its Implications for Financial Reports". The theory became an alternative to the Entity and Proprietary Theories as their approaches were considered inadequate to the contemporary reporting system and they cannot practically address accounting challenges. More so, Fund accounting dwells more on accountability instead of profitability by way of the use of funds. Fund theory is applicable in public and private sector organizations. Fund is therefore the unit of accounting in government and institutional accounting because it is based on a certain set of financial records as well financial reports. With the implementation of fund theory, it will be hard for any public-sector organization to expend fund without proper authorization (Goncharenko, 2013). This theory is relevant to the understanding of effect of retirement fund characteristics such as idle contribution, fund size and age of the contributors employed in this study with respect to financial performance of pension funds.

3. Methodology

3.1 Research Design

The research design that was employed in this study is the correlational research design because it is used to determine the statistical relationship between two or more variables.

3.2 Population of the Study and Adjusted Population of the Study

The study population contains all the twenty-two (22) Licensed Pension Fund Administrators (PFAs) whose RSA fund and Retiree Fund Annual Reports were published by the pension companies or PenCom as at 31st December, 2021. Those whose RSA Fund and Retiree Fund Annual Reports were not published within period of 2008 to 2021 were filtered out so as to avoid data availability and reliability challenge. Subsequently, eleven (11) PFAs were removed because they did not meet the filtering criteria of annual reports publications with respect to RSA Fund and Retiree Fund between 2008 and 2021 financial periods. The eleven (11) PFAs that fulfilled the condition were utilized as the adjusted population of this research as depicted in table I of this study.

Table 1: Lists of Pension Fund Administrators (PFAS) in Nigeria as At 31st December, 2021

POPULATION		ADJUSTED POPULATION		FILTERING
S/N	Pension Fund Administrators (PFAs)	S/N	Pension Fund Administrators (PFAs)	REMARKS
1	Aiico Pension Managers Limited			REMOVED
2	APT Pension Funds Managers Limited			REMOVED
3	ARM Pension Managers Limited	1	ARM Pension Managers Limited	
4	AXA Mansard Pensions Limited			REMOVED
5	Crusader Sterling Pension Limited	2	Crusader Sterling Pension Limited	
6	First Guarantee Pension Limited			REMOVED
7	VeritasGlanvills Pensions Limited	3	VeritasGlanvills Pensions Limited	
8	Fidelity Pension Managers Limited			REMOVED
9	IEI-Anchor Pension Managers Limited			REMOVED
10	Investment One Pension Managers Limited			REMOVED
11	Leadway Pensure PFA Limited	4	Leadway Pensure PFA Limited	
12	NPF Pensions Limted			REMOVED
13	FCMB Pensions Limited	5	FCMB Pensions Limited	
14	Nigerian Univ.Pension Mgt Co. (NUPEMCO)			REMOVED
15	NLPC Pension Fund Administrators Ltd.	6	NLPC Pension Fund Administrators Ltd.	
16	Oak Pensions Limited	7	Oak Pensions Limited	
17	Pensions Alliance Limited	8	Pensions Alliance Limited	
18	Premium Pension Limited			REMOVED
19	Radix Pension Managers Limited	9	Radix Pension Managers Limited	
20	Sigma Pensions Limited			REMOVED
21	Stanbic IBTC Pension Managers Limited	10	Stanbic IBTC Pension Managers Ltd	
22	Trustfund Pensions Limited	11	Trustfund Pensions Limited	

Source: Researcher's Compilation

3.3 Data Collection Methods and Sources

The secondary data used in this study was mainly obtained from the official websites of the selected PFAs and the National Pension Commission (PenCom). The quantitative research method was utilized in this study. The use of the quantitative data could be justified because numerous studies examined on fund size, retirement age and Pension Funds' performance employed it. Such studies include Wang, and Liu (2022); Aminu (2022); Sani, Sani and Hassan (2022); Waweru (2021); Gyimah, Addai and Asamoah (2021); Okparaka and Jimoh (2021); Muzammi and Siddiqui (2020).

3.4 Data Analysis and Methods

The study adopted Generalized Least Square (GLS) Regression technique in examining effect of fund specific factors on pension funds' financial performance (Unit Price) in Nigeria. Consequent upon the utilization of secondary data, the application of the technique of data analysis (GLS) is justified because it can be used to test the relationship between or among variables. Robustness tests such as autocorrelation, heteroscedasticity and normality tests were performed in order to strengthen the research results.

Table 2: Variable Description and Measurements

Variables	Measure	Notation	Source
Dependent variable:			
Financial Performance	Unit Price of the pension fund at the end of financial year. It's computed as Net Assets divided by Number of Units	$UnitPrice_{it}$	Pension Funds (RSA, Retiree & Transitional Contribution Funds) Statements of Assets and Liabilities at the end of financial year
Independent variables:			
Idle Contribution	Natural Log of Cash at bank at the end of the financial year.	$IdleC_{it}$	Pension Funds (RSA, Retiree & Transitional Contribution Funds) Statements of Assets and Liabilities at the end of financial year
Fund Size	Natural Log of Net Pension assets	$FundSize_{it}$	Pension Funds (RSA, Retiree & Transitional Contribution Funds) Statements of Assets and Liabilities at the end of financial year
Membership Age	Contributors' Life Expectancy	Age_{it}	Nigeria Life Expectancy obtained through Macrotrends.Net

Source: Researcher's Compilation

3.7 Specification of the Study Model

The study on effect of fund characteristics on financial performance of pension funds in Nigeria was examined by obtaining and analysing the study quantitative data as well as substituting the values in the model of the study, the estimation of the study model was based on the Hausman specification of either fixed effect (FE) or random effect (RE) and in line with studies such as Kigen (2016) as shown below:

$$UnitPrice_{it} = B_0 + B_1 IdleC_{it} + B_2 Size_{it} + B_3 Age_{it} + \varepsilon \quad (1)$$

Where:
$UnitPrice_{it}$= Performance
β_0 = Intercept
β_1-$\beta_{3=}$ =Slope coefficient
ε = error term.
t = Time
i = Pension Funds.

4. Results and Discussions

4.1 Descriptive Statistics

Table 2: Descriptive Statistics

Variable	Obs	Mean	Std.Dev.	Min.	Max.	Skewness	Kurtosis
UnitPrice	120	2.053124	0.5670811	0.9721	3.41	0.2115066	2.285337
Idle Contribution	120	10400000	52300000	920340	512000000	8.364026	75.5928
Fundsize	120	195000000	567000000	48713720	3920000000	5.111761	29.69486
Retirement Age	120	52.57071	1.711864	49.76	55.12	-0.0943216	1.720017

Source: Stata Output

In table 2, the adjusted population of the study consists of eleven Pension Fund Schemes for the period of 2008 to 2021. All financial performance (Unit Price) observations are in naira value. So, the Unit Price had an average value of 2.053124 with a standard deviation of 0.5670811, minimum of 0.9721 and maximum of 3.41. This indicates that there is a relatively high dispersion of Unit Price among the Pension Funds as the standard deviation is somewhat far from the mean value. The Skewness and Kurtosis values of Price Unit are within +/-7 acceptable range

for normality as proposed by Tabathnic and Fidell (2007).

Furthermore, the mean score for Idle Contribution is N10.4billion with a standard deviation of N52.3billion, minimum of N9.2million and maximum of N512billiion. These results showed that there is a wide variability regarding Idle Contributions among the big and small pension fund schemes.

More so, the mean score for Fund Size is N195billion with a standard deviation of N567billion, minimum of N48.713million and maximum of 3.92Trillion. These results showed that there is a wide variability in terms of fund value (net assets) among the big and small pension fund schemes.

Nevertheless, retirement age had a mean of 52.57 with a standard deviation of 1.712, minimum of 50 and maximum of 55 years. This shows that there is bit dispersion in terms of contributors' retirement age. It also implies that most of the pension contributors had a life expectancy that is a bit far from the retirement age of sixty (60) years in Nigeria, thereby making more pension funds available for investments, returns and in turn, higher financial performance.

Furthermore, the skewness and kurtosis values for Idle Contribution are outside the range. Nevertheless, the skewness value for Fund Size is within the range but the Kurtosis value suggests that most of the values are higher than mean. Hence, the data did not meet the Gaussian distribution criteria. On the other hand, Retirement Age with Skewness of -0.094322 and Kurtosis of 1.720017 showed that the data met the symmetrical distribution requirement.

4.2 Multicollinearity

The Variance Inflation Factor (VIF) and Tolerance Value (TV) are two key measures used to assess the existence or otherwise of multicollinearity between the independent variables. Table 3 shows the results of the VIF and TV.

Table 3: Variance Inflation Factor (VIF) Test for Multicollinearity

Variables	**VIF**	**I/VIF**
Idle Contribution	3.75	0.266778
Fund Size	3.13	0.319629
Retirement Age	1.36	0.733199
Mean VIF	**2.75**	

Source: Stata Output

The table 3 indicates that the VIF and TV are consistently lower than 10 and above 0.10 respectively implying absence of multicollinearity as stated by Neter; Kutner, Nachtsheim & Wasserman (1996); Tobachnick and Fidell (1996) and Casey & Anderson (1999). The low mean VIF also shows slight correlation among the regressors. This indicates the appropriateness and fitness of the explanatory variables used in the model.

4.3 Regression Results

Tables 4 present the regression results of the study.

Table 4: Regression Result

Variables	**Coeff.**	**Std. Err.**	**t-Value**	**P-Value**
Constant	-34.084	4.66948	-7.3	0.000
Idle Contribution	0.05662	0.07379	0.77	0.443
Fundsize	0.3796	0.07799	4.87	0.000
Retirement Age	19.0893	2.78501	6.85	0.000
Obs.	120			
R-Sq	0.6717			
Wald Chi^2 (3)	199.07			
Prob > Chi^2	0.0000			

Source: Stata Output

The Hausman Specification Test as well as Breusch and Pagan Lagrangian Multiplier Test for Random Effects in Appendix 2 of the study indicates that Random Effect Model is the most suitable model when considering the inclusion of idle contribution, fund size and retirement age variables as depicted in Table 4 The equation 4 therefore shows the linear relationship between the study variables.

Unitprice= B_0 + B_1IdleContribution +B_2Fundsize + B_3RetirementAge + ε.....(2)

The Table 4.3 displayed the Random Effect Model results with R^2 (coefficient of determination) of 67.17, indicating that 67.17% of the variation in Pension Funds' financial performance was explained by the study model whereas the remaining 32.83% was explained by other factors outside the model. The result showed that fund specific factors have a substantial effect on financial performance of pension funds in Nigeria.

The Table 4 indicated that idle contribution has a positive and insignificant effect on financial performance of pension funds. This implies that a unit increase in idle contribution will lead to an increase in the financial performance of pension funds slightly. The findings of the study have bearings with that of studies such asAminu (2022); Waweru (2021); Sitienel (2019)). The result is related to Fund Theory.

The Table 4 also showed that fund size has a positive and significant effect on financial performance of pension funds at 1% significance level. This implies that a unit increase in fund size will lead to an increase in the financial performance of pension funds by 0.3796. The findings of the study are in line with studies such as Ondieki (2022); Waweru (2021); Kigen (2016). The result is also consistent with Fund Theory.

Additionally, from the Table 4, it is shown that retirement age has a positive and statistically significant effect on financial performance of pension funds in Nigeria at 1% level of significance. This implies that a unit increase in retirement age of contributors leads to an increase in financial performance of pension fund by 19.0893. This finding is in line with studies such as Ajibade, Jayeoba and Aghahowa (2018); Aderibigbe (2021) whereas studies such as Onyango (2020); Kigen (2016) found a contraryresult.

So, the following estimated regression equation;

UnitPrice= B_0 + B_1IdleContribution + B_2Fundsize + B_3RetirementAge + ε

Where B_0 = constant (-34.084), B_1= coefficient of Idle Contribution (0.05662), B_2= coefficient of Fund Size (0.3796), B3= Coefficient of Retirement Age (19.0893), which leads to the fitted regression equation of the study as;

UnitPrice= -34.084 + 0.05662IdleContribution+0.3796Fundsize + 19.0893RetirementAge + ε

4.4 Implication of the Research Findings

The findings of the study would enable the pension policy makers and regulators promote pension reforms and regulations that will encourage younger pension contributors for enhanced fund value and in turn, greater financial performance of pension funds in Nigeria.

The findings of this study are also key to pension fund contributors who would be curious to know how their age bracket influence the choice of their pension fund type for higher returns and ultimately improved financial performance of pension funds in Nigeria.

5. Conclusion and Recommendations

The discussions of the study findings from the preceding section signified that idle contribution marginally affects financial performance of pension funds' financial performance in Nigeria. Therefore, it can be concluded that idle contribution improves financial performance of pension funds slightly.

Also, based on the findings of the study, fund size is a significant pension fund factor influencing financial performance of pension funds in Nigeria. Hence, it can be concluded that larger pension fund value increases pension funds' returns and greater financial performance. This could be related to effective pension fund management with regards to larger pension funds value.

In addition, it was established that Retirement Age has a positive and significant effect on financial performance of pension funds in Nigeria. Therefore, it can be concluded that financial performance of pension funds improves as the retirement age of pension contributors increases.

Overall, the entire regression results were positively and statistically significant, signifying that pension fund characteristics such as idle contribution, fund size and retirement age are significant determinants of pension funds' financial performance.

Determinants of financial performance enhancement identified through the findings of this study should be taken into account. It is specifically recommended that:

Various stakeholders in the Nigerian Pension Industry should advocate for pension policies that will make contributory pension scheme more alluring to potential younger contributors and organisations, especially those in the informal sector of the Nigerian economy for greater returns and financial performance of idle contribution and fund size.

Also, the Government at all levels should create an enabling environment for improved life expectancy of employees in the country for improved pension funds' performance. Increasing the retirement age can equally increase the financial performance of pension funds as more pension fund resources will be available for the PFAs to manage, leading to a greater fund availability and higher performance of pension funds in the country.

Suggestions for Further Studies

The study focused mainly on drivers of financial performance behaviour such as Idle Contribution, Fund Size and Retirement Age. Future studies can look into effect of other pension fund characteristics such as Fund Expenditure and macroeconomic factors such as Interest Rate, Inflation Rate on financial performance of pension fund. The inclusion of the moderating variables such as pension regulation should also be considered for further research.

References:

Adekoya, O, M., Nwaobia, A. N., & Siyanbola T. T. (2022). Firm Attributes and Value of Pension Fund Administrators in Nigeria. *Journal of Finance and Accounting*. *10*(2): 96-106.

Aderibigbe, S. D. (2021). Effect of Pension Fund Characteristics on Financial Performance of Pension Fund Administrators in Nigeria. Bsc. Accounting Project, Mountain Top University, Nigeria.

Ajibade A., Jayeoba, O., & Aghahowa, E. O. (2018). Pension Fund Characteristics and Financial Performance in Nigeria. *International Journal of Research and Innovation in Social Science* (IJRISS) II *(XII):* 540-546.

Allen, F., & Santomero, A. M. (1998). The Theory of Financial Intermediation. *Journal of Banking and Finance, 21*: 1461-1485.

Aminu, S. A. (2022). Financial Performance of Pension Funds in Nigeria. *Masters in Actuarial Science Dissertation, Lisbon School of Economics and Management, Lisbon, Universidade de Lisboa.* 1-65.

Casey, K. M. & Anderson, D. C. (1999). Examining the impact of the tax reform act on corporate dividend policy: a new methodology. *Journal of Financial Review, 34(3),* 17– 28.

Damilare, A. S. (2021). Effect of Pension Fund Characteristics on Financial Performance of Pension Fund Administrators in Nigeria. *Bsc. Degree in Accounting Project, Mountain Top University, Nigeria.* 2-48.

Datom, N. V., & Mancha, M. (2021). Appraisal of the Impact of Contributory Pension Fund Investment on Economic Growth in Nigeria. *World Journal of Innovative Research (WJIR). 10* (4): 190-200.

Goncharenko, G. (2013). Fund Accounting: Theoretical and Empirical Study, *a Master Thesis in International Business in Norges Handelshoyskole,* 27 – 32.

Gyimah, G. A., Addai, B., & Asamoah, G. K. (2021). Macroeconomic determinants of mutual funds' performance in Ghana. *Cogent Economics and Finance, 9*:1-20.

Hair, J. F., Black, W. C., Babin, B. J. & Anderson, R. E. (2014). Multivariate Data Analysis.

Pearson New International Edition (7th Ed.), Essex, England.

Kigen, A. K. (2016). Effect of Fund Size on the financial performance of Pension Funds in Kenya. *MSc. Degree in Finance and Investment Dissertation, KCA University, Kenya.* 2-77.

Kuncoro, E. A., Sudrajat, D., Saroso, H., Syahchari, D. H., & Moeke, D. (2021). Moderating Effect of Government Regulation on Supply Chain Collaboration and Firm Performance. *Proceedings of the 11th Annual International Conference on Industrial Engineering and Operations Management Singapore, March 7-11, 2021*.

Mutula, A. K., & Kagiri, D. A. (2018). Determinants Influencing Pension Fund Investment Performance in Kenya. *International Journal of Finance*, *3*(1): 14–36.

Muzammi, M., & Siddiqui, D. A. (2020). Effect of interest rates and bank size on profitability of Islamic Banks in an Interactive Model. https://ssrn.com/abstract=3641634.

Neter J., Kutner M. H., Nachtsheim C. J. & Wasserman W. (1996). Applied Linear Statistical Models, *Irwin Company Inc., Chicago, U.S.A.*

Njuguna, A. G., & Arnolds, C. (2015). Improving the Financial Efficiency of Pension Funds in Kenya. *Nelson Mandela Metropolitan University, South Africa*.

NLPC, (2022). Nigerian Life & Provident Company-Management and Administrative Fees. https://www.nlpcpfa.com/fees/

Nyangeri, F. O. (2014). The Effect of Firm Characteristics on the Financial Performance of Pension Schemes in Kenya. *[MBA Degree Project, University of Nairobi, Kenya]*.

Ohioma, E. (2018). Implementation Guidelines on Retirement Savings Account (RSA) Multi-fund Structure. https://www.pencom.gov.ng/wp-content/uploads/2018/07/RSA-Multifund-Implementation-Guidelines-21-June-2018-1.pdf

Ohioma, E. (2018). Revision of the Fees Structure in the Pension Industry. https://www.pencom.gov.ng/wp-content/uploads/2018/07/Revision-of-the-Fees-Structure-in-the-Pension-Industry.pdf

Okparaka, V. C., & Jimoh, T. M. (2021). Impact of Inflation on Pension Fund of the Nigerian Pension Industry. *International Journal of Advanced Finance and Accounting*, *2* (9): 17-29.

Oloruntoba, A. D., & Jimoh, I. O. (2021). Financial Sustainability and Pension Performance in Nigeria: the Effects of Inflation Rates. *UMYU Journal of Accounting and Finance Research, 2*(2): 54-67.

Oluoch, M. A. (2013). The Determinants of Performance of Pension Funds in Kenya. MBA Research Project, Univerisity of Nairobi, Kenya. 1-48.

Ondieki, N. W. (2022). Retirement Fund Characteristics and Financial Performance of Pension Schemes in Kenya. *Msc. Degress in Finance, Kenyatta University, Kenya.* 1-88.

Onukwu, J. (2017). Challenges of implementing the contributory pension scheme in public universities in Nigeria. *International Journal of Educational Administration and Policy Studies. 9*(11): 146-151.

Onyango, O. J. (2020). Factors affecting Financial Performance of Pension Schemes in Kenya. *Msc. in Commerce (Finance and Investment), KCA University, Kenya.*

Osazefua, I. J. (2019). Operational efficiency and financial sustainability of listed manufacturing companies in Nigeria. *Journal of Accounting and Taxation 11*(1):17-31.

Oyoo, J., & Ochieng, M. (2022). Factors Affecting Financial Performance of Pension Schemes in Kenya. Journal of Finance and Accounting, 6(5): 41 – 55.

PenCom, (2018). Frequently Asked Questions and Answers on the Contributory Pension Scheme in Nigeria. https://www.pencom.gov.ng/wp-content/uploads/2018/04/FAQ-CPS-reviewed.-17-Apr.-2018.pdf

PenCom, (2021). Fourth Quarter Report. https://www.pencom.gov.ng/wp-content/uploads/2022/02/Approved-Q4-2021-Report.pdf

PenCom, (2021). Unaudited Report on Pension Funds Industry Portfolio for the Period Ended 31

December 2021. https://www.pencom.gov.ng/wp-content/uploads/2022/02/2021-December-Monthly-Report.pdf.

PenCom, (2022). National Pension Commission. 2022 March Monthly Report. Available at https://www.pencom.gov.ng/category/publications/monthly-reports/

Petraki, A. (2012). Performance of personal pension funds in the United Kingdom. PhD Thesis. University of Bath. 1-281

Rabikauskaite, V., & Novickyte, L. (2015). II Pillar Pension Funds: How the Selection of Fund Influences the Size of The Old-Age Pension. Ekonomika. 94 (3): 96-118.

Rameshbhai, G. M. (2020). Impact of Change in Interest Rates on Profitability of Banking Sector in India. *Theme no: 2: banking and economy*. 1-15.

Sani, A. B., Sani, I., & Hassan, A. (2022). Modeling the Effect of Macro-economic Variables on Pension Contribution in Nigeria. *Archives of Current Research International*, *22*(2): 23-33.

Sitienei, P.K. (2019). The Effect of Fund Characteristics on Financial Performance of Pension Schemes in Kenya. *Master of Business Administration, University of Nairobi, Kenya*. 1-53.

Stewart, F., & Yermo, J. (2009). Pensions in Africa. *OECD Working Papers on Insurance and Private Pensions, No. 30.*

Suseno, M. A. (2020). Financial Performance, Macroeconomic Factors and Company Characteristics in Consumer Goods Company in Indonesia. *International Journal of Economics, Business, and Accounting Research (IJEBAR)*. 4 (3): 296-304.

Tabachnick, B. G. & Fidell L. S. (1996). *Using Multivariate Statistics (3rd Edition),* HarperCollins, New York, U.S.A.

Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics (5th ed). Allyn & Bacon/Pearson Education.*

Thompson, F. (2021). The Effect of Macroeconomic Variables on the Asset Positions and Financial Performance of Non-Banking Financial Institutions (NBFIs) in Jamaica. *Open Journal of Business and Management, 9*:1424-1445.

Tijjani, M.S. (2014). Determinants of Financial Sustainability of Pension Fund Administrators in Nigeria. *PhD Accounting and Finance Dissertation, Ahmadu Bello University (ABU), Zaria*. 1-135.

Tirimba, O. I. (2013). Role of Pension Funds in Financial Intermediation. *International Journal of Finance and Accounting*, 2*(7):* 365-372.

Wang, Y., & Liu, K. (2022). The effect of environmental regulation on firm productivity: evidence from pulp and paper industry in China, Economic *Research-Ekonomska Istraživanja. Routledge Taylor & Francis Group*.1-32.

Waweru, W. (2021). Effect of fund characteristics on financial performance of pension schemes in Kenya. *Msc. Degree in Business and Management Sciences Research Project, University of Nairobi, Kenya*, 1-60.

Waweru, W. (2021). Effect of fund characteristics on financial performance of pension schemes in Kenya. *Msc. Degree in Business and Management Sciences Research Project, University of Nairobi, Kenya*, 1-60.

Wu, C., Odden, M. C., Fisher, G. G., & Stawski, R. S. (2016). The Association of Retirement Age with Mortality: A Population-Based Longitudinal Study among Older Adults in the United States Journal of Epidemiol Community Health. 70(9): 917–923.

Wulandari, D., & Harjito, A. (2021). The effect of interest rates, exchange rates and capital structure on banking profitability of BUMN and Private Go Public in Indonesia. *International Journal of Research in Business and Social Science, 10*(3): 338–351.

Xuan, C. T., Pheng, H. T., Chien, K. Y., Hei, N. K., & Mei, S. S. (2020). Effect of Macroeconomic Factors on Selective Mutual Fund Performance in Malaysia. *Bachelor of Finance Degree Project, Universiti Tunku Abdul Rahman, Malaysia*.1-97.