International Journal of Economics, Business and Management Research

Vol. 8, No.08; 2024

ISSN: 2456-7760

Effect of Pension Fund Assets and Savings on Pension Fund Performance in Nigeria

NWALA, Maurie Nneka, AZA, Solomon Mangba, UNOROH, Eseoghene Faith, VINCENT Harrison
Department of Banking and Finance
Faculty of Administration
Nasarawa State University Keffi

doi.org/10.51505/IJEBMR.2024.8813 URL: https://doi.org/10.51505/IJEBMR.2024.8813

Received: May 05, 2024 Accepted: May 14, 2024 Online Published: Aug 14, 2024

Abstract
This study examined the effect of pension fund assets and savings on pension fund performance in Nigeria from 2013 to 2022. Ex post facto research design was adopted, while data on benefits paid, pension fund assets and pension fund savings were collected from the Central Bank of Nigeria statistical bulletin, quarterly publications of the National Pension Commission as well as the National Bureau of Statistics Economic reports. The data collected was analysed using Ordinary Least Squares Regression. The findings show that Pension Fund Assets have a negative significant impact on Benefits Paid in Nigeria. In contrast, Pension Fund Savings is statistically significant in explaining the variation in Benefits Paid in Nigeria. This study therefore recommended that since Pension Fund Assets shows a negative relationship with Benefits Paid, it suggests that as pension fund assets increase, benefits paid out decrease, and vice versa. Pension fund managers should reevaluate their asset allocation strategies to ensure they align with the fund's objectives and liabilities. They may consider allocating assets towards investments that offer stable returns and liquidity to meet benefit payment obligations while maintaining a prudent level of risk.

Keywords: Benefits paid, Pension fund assets, Pension fund savings, Pension fund performance

Introduction

Pension funds play an important role in ensuring financial security for individuals during their retirement years. Between 2019 and 2021, significant pension reforms have been implemented by OECD and G20 countries. These reforms often include an increased utilization of funded pension programs managed by the private sector, in the enhancements of employee welfare (OECD, 2021). In Nigeria, the pension industry has undergone significant transformations over the years, aligning itself with global best practices. The establishment of the Contributory Pension Scheme (CPS) in 2004 marked a major milestone, shifting the paradigm from the defined benefits to the defined contributions system.

One of the key indicators of the strength and sustainability of pension funds is the growth of their assets. These assets, comprised of diverse financial instruments and investments, serve as the

Vol. 8, No.08; 2024

ISSN: 2456-7760

financial backbone of the pension system. Understanding the dynamics of pension fund asset growth is crucial for evaluating the overall health and resilience of the pension industry.

Pension fund savings, representing the contributions made by both employees and employers, constitute the lifeblood of the pension system. The effective mobilization and management of these savings are vital for ensuring the adequacy of retirement benefits. Examining the patterns, challenges, and opportunities associated with pension fund savings provides insights into the broader economic implications and the welfare of retirees. However, a cursory analysis of financial assets data reveals that the growth of pension funds was sluggish in 2018 compared to the period between 2012 and 2017. Globally, pension funds only grew by 0.4% in 2018, reaching $35.6 trillion. This growth rate was considerably below the sector's average annual growth of 6.3% observed from 2012 to 2017. Nevertheless, some emerging market economies, such as China (20%) and India (34%), experienced rapid growth in pension fund assets during the same period. In 2019, pension fund assets faced challenges due to the equity market downturn in 2018, marking the worst financial performance for pension funds globally since the 2008 financial crisis (Mordor Intelligence, 2020).

The relationship between pension fund assets, savings, and overall performance is a complex interplay that requires nuanced analysis. While substantial assets may indicate financial robustness, the efficiency of their deployment and the returns generated directly impact the performance of pension funds. Moreover, the manner in which savings are managed and invested contributes significantly to the ultimate goal of providing sustainable retirement income.

In Nigeria, the 2014 Pension Reform Act delineates three primary asset classes within the investment guidelines: fixed income securities, equities, and real estate securities. The capital and money market serve as the platforms where pension funds are strategically invested, as highlighted by Nwozo and Nkeki in 2011. The rationale behind these investments lies in the incentives for pension funds to allocate more resources to illiquid and long-term assets, generating higher yields. This approach aligns with the accumulating nature of pension fund assets and the longer-term obligations they cater to, thereby providing a sustained long-term cash supply to the capital markets (Mesike & Ibiwoye, 2012).

Despite the advancements in Nigeria's pension sector, there remains a need for in-depth research to comprehend the intricate dynamics of pension fund performance. This study aims to bridge existing gaps in understanding by exploring the relationships between pension fund assets, savings, and overall performance. Through a comprehensive analysis, we seek to uncover factors that influence these variables and propose recommendations for optimizing the Nigerian pension landscape.

Based on the discussion above, the study provides answers to the following research questions: what is the effect of pension fund assets, on pension fund performance in Nigeria?, and what is the effect of pension fund assets, on pension fund performance in Nigeria?. the objective of the study includes: To examine the effect of pension fund assets, on pension fund performance in

Vol. 8, No.08; 2024

ISSN: 2456-7760

Nigeria, and to evaluate the effect of pension fund assets, on pension fund performance in Nigeria.

Hypotheses of the Study

$H_0$1: There is no significant relationship between pension fund assets and pension fund performance in Nigeria.

$H_0$2: There is no significant relationship between pension fund savings, and pension fund performance in Nigeria.

Literature Review

Concept of Pension Fund Performance

Van Horne et al. (2010) defined pension performance as the earnings members receive after investing their contributions. Portfolio return, on the other hand, pertains to the overall reward an investor obtains from investing in a specific pool of assets or securities within a given market or environmental risk. Investors seek to maximize their expected portfolio returns while maintaining individually acceptable levels of portfolio risk (Modigliani & Pogue, 1974). A high-level portfolio is one that offers the best or optimum return. Under the assumptions of the Efficient Market Hypothesis (EMH), wherein it is challenging for managers to add value, it is not surprising to observe that various pension schemes have demonstrated performance similar to their benchmarks (Walker and Iglesias 2010). Walker et al. (2010) further elaborate that in situations where financial markets do not display strong form EMH characteristics, fund managers can indeed add value. The evaluation of performance involves assessing the extent to which fund managers have been successful in delivering investment returns commensurate with the assumed risk level.

Concept of Pension Fund Asset

Pension fund assets as assets bought with the contributions to a pension plan for the exclusive purpose of financing pension plan benefits Ndum, et al. (2019). These benefits may include having a fair return for the investment of pension funds saving in some assets or receiving a lump sum of aggregate savings. They are all forms of investment with a value associated to a pension plan. Grujic (2019) states that pension fund assets have positive impacts on stock market depth and liquidity, as well as private bond market depth. This could be because of the steady flow of savings into the pool of pension funds administrators who are likely to channel these funds for investment through the capital market. Pension fund assets are believed to be long-term in nature, hence higher pension funds should produce enduring economic and financial stimuli (Sanusi & Kapinguri, 2021), pension fund's assets are not invested in for short term gains.

Concept of Pension Fund Savings

According to Gunu and Tsado (2012), the Pension Fund Investment has enhanced mobilization of savings for the development of Nigerian Capital Market. When there are investments outlets, potential investor watch to understudy the markets and all factors that can be considered. Pensions arises because individuals accumulate savings over their working life in order to finance their consumption needs in retirement, either by means of a lump sum or by provision of

Vol. 8, No.08; 2024

ISSN: 2456-7760

annuity, while also supplying funds to end users such as corporations or governments for investment (Bassey, 2018).

The large pool of savings which constitutes pension funds must according to Onakeke and Falope (2020) be channelled into portfolios for reasonable returns so that old-age liquidity of the retirees (former affiliates) and hence their old-age consumption (welfare) can be assured.

Empirical Review

Pension Fund Asset and Pension Fund Performance

Samuel (2022) investigated the impact of pension assets invested in bonds on Nigeria's All Share Index. Data spanning 2014 to 2019 from National Pension Commission and Central Bank of Nigeria were utilized. The study, covering 50 firms, employed ex-post factor and correlational design. Findings suggested a negative influence of pension fund investment in bonds on the financial market, as represented by the All-Share Index. The study recommended caution in encouraging bond investments in pension assets until market performance improves.

Ogungbade et al. (2022) explored the relationship between assets holding and financial performance of Nigerian pension fund administrators. Using judgmental sampling, 21 PFAs were investigated. Independent variables included investment in ordinary shares, FGN securities, real estate properties, and corporate debt securities, while dependent variables covered interest, dividend, and rental income. The study revealed a positive impact of PFAs' asset accumulation on financial performance, providing empirical evidence for strategic investment policies. This study will further evaluate variables beyond pension fund assets.

Morina and Grima (2022) analyzed the influence of pension asset investments on economic growth in selected non-OECD countries. Using econometric analysis with data from OECD, World Bank, and IMF reports (2002–2018), the study found a positive impact on economic growth. The authors highlighted the scientific importance of their findings, offering empirical evidence for governments and policymakers on designing strategic investment policies for pension funds. This study will assess variables, including pension fund assets, investments, and savings.

Bakari et al. (2021) assessed the efficiency of pension fund assets investment in shares, bonds, and treasury bills in Nigeria. Utilizing time series analysis (2006–2020) and linear regression, the study found positive and significant effects of shares and bonds on investment returns, with treasury bills yielding insignificant returns. The recommendation emphasized a focus on shares and bonds over treasury bills. This study will emphasize additional proxies for pension funds, such as assets and savings.

Orbunde et al. (2020) investigated the impact of pension fund investment on capital market performance in Nigeria using Ordinary Least Square. Results showed a positive effect on market capitalization and debt capitalization but a negative effect on the All Share Index. Recommendations included effective monitoring and emphasis on managing pension assets in the capital market. This study will employ investment as a proxy and additional proxies, including pension fund assets and savings.

Vol. 8, No.08; 2024

ISSN: 2456-7760

Sugeng and Irene (2020) analyzed the implementation of employer pension funds in Indonesia, focusing on asset allocation, portfolio turnover, board size, institutional ownership, and portfolio diversification. Using structural equation modeling, the study found positive effects of asset allocation, institutional ownership, and diversification on portfolio performance. However, no positive effects were observed for board size and portfolio turnover. This study will extend the time span to 2014–2021, focusing on Nigeria.

Pension funds Savings and Pension Fund Performance

Abdullahi et al. (2022) conducted a study investigating the impact of the contributory pension scheme on economic growth in Nigeria. Utilizing pension fund assets and pension contributions/savings as proxies for the pension scheme, and Gross Domestic Product (GDP) as a proxy for economic growth, the study found a positive yet insignificant impact on economic growth. The study recommended a greater emphasis on managing pension assets in the capital market, including government bonds, real estate, and investment trusts, to enhance Nigeria's GDP. This study will focus on fixed income securities proxies, specifically Federal Government Bonds and Treasury bills.

Onakeke and Falope (2020) examined how the contributory pension scheme contributes to the increase in Gross Domestic Product (GDP) in Nigeria. Using data collected through percentage Legacy Pension Managers sampling, the study employed descriptive statistics and correlation analysis. The results indicated a significant impact of the Contributory Pension Scheme (CPS) on GDP, suggesting a positive effect on pension fund management. The study recommended that Pension Fund Administrators invest in less risky portfolios to ensure timely pension payments. This study will concentrate on fixed income securities proxies, such as Federal Government Bonds and Treasury bills.

Chovancova et al. (2019) investigated the connection between stock and bond markets and pension funds, focusing on the impact on pension fund performance. Using pension statistics from the Organisation for Economic Co-operation and Development, the study found a stronger impact of the bond market on pension fund performance. The study recommended a more prudent analysis of pension funds' functioning, emphasizing the correlation with fixed income securities. The study's focus will be on Nigeria, using data from the CBN statistical bulletin and employing multiple regression analysis.

Friday and Micah (2019) explored the relationship between Pension Fund contributions and economic growth in Nigeria. Using data from PenCom for 2014 to 2016, the study conducted multiple regression analyses, revealing a positive and significant relationship between public sector PenCom contributions and real GDP and per capita income. However, a negative and insignificant relationship was found for private sector Pension contributions. The study recommended PenCom's increased compliance with the Pension Reform Act of 2014, particularly in the private sector. This study will focus on fixed income securities proxies, specifically Federal Government Bonds and Treasury bills.

Vol. 8, No.08; 2024

ISSN: 2456-7760

Moleko and Ikhide (2018) investigated the impact of pension fund assets on South Africa's total capital market development, finding a positive relationship between pension savings and stock market development. No long-run relationship was established with the bond market. The study suggested that policies supporting the stock market also benefit the bond market. This study will focus on Nigeria and examine the effect of pension fund savings on fixed income securities.

Ilodibe and Okonkwo (2018) examined pension fund administrators and financial transparency of retirement savings funds in Nigeria. The study found that the introduction of PFAs significantly reduced corruption, ensured financial transparency, and facilitated easy access to pension savings funds. Recommendations included addressing non-remittances of pension contributions and enforcing relevant sanctions on defaulting employers. While this study focused on Nigeria, it will extend the analysis to the nation as a whole, considering various components.

Theoretical Framework

Lifecycle Theory: The lifecycle theory, developed by Modigliani and Brumberg in 1954, focuses on individuals' consumption and savings patterns over their entire lifecycles. Scholars, such as Yaari (1965), study the implications of lifecycle theory on retirement products, emphasizing the stability of lifestyles and the inclination to save more at a younger age. The life-cycle model posits that, under specific conditions, household consumption relies on the discounted value of lifetime income, not the evolution of income itself. This model highlights the transferability of lifetime income to the present and serves as a benchmark for assessing pension fund performance, considering factors like risk and matching with members' income and pension risks. Despite its insights, the lifecycle theory faces criticisms for not accounting for individuals with sporadic income or celebrities, assuming an infinite saving timeline, and neglecting the impact of loans on spending habits.

Modern Portfolio Theory and Asset Allocation: Modern Portfolio Theory (MPT), introduced by Harry Markowitz in 1952, guides investment decisions to maximize returns within an acceptable risk level. It emphasizes the risk and return trade-off, encouraging investors to diversify their portfolios for optimal outcomes. MPT quantifies the benefits of diversification, addressing non-diversifiable (systematic) and diversifiable (unique) risks. The theory's foundation lies in constructing portfolios that balance risk and return, considering factors like variance and correlation. Despite its theoretical significance, MPT faces criticism for assuming investor rationality, the linear relationship between risk and return, perfect information availability, unlimited access to capital, and market efficiency. Critics argue that real-world complexities, such as irrational investor behavior, incomplete information, and transaction costs, challenge MPT's applicability.

Methodology

This study employed expo-facto research design to examine the effect of pension funds on fixed income securities in Nigeria. The choice of this design is informed by the effectiveness of the method in grouping qualities with similar traits that already exist and compared on some dependent variable. The study used secondary data sourced from CBN statistical bulletin, and the quarterly publications of the Pension Commission of Nigeria as well as the National Bureau of

Vol. 8, No.08; 2024

ISSN: 2456-7760

Statistics Economic reports. The data will be collected from the sources is a time series data for the period of ten years (2013 - 2022).

Unit Root Test was conducted to ascertain the stationarity of the time series data. And the study employed Ordinary Least Square (OLS) regression technique as is useful for estimation. Since the variables are more than one, multiple regressions will be employed.

Model Specification

Therefore, the econometric models of the study are mathematically expressed as follows;

PF = (PFA, PFS) ……. (1)

Where:

PF= Pension Funds Performance

PFA = Pension Fund Asset

PFS= Pension Fund Savings

The regression model becomes

$PF = \alpha + \beta_1 PFA_t + \beta_2 PFS_t + \varepsilon$. …… (2)

The linear regression model will serve as the decision tool on the criteria that if the p-value < 5%, then the null hypothesis is rejected otherwise the null hypothesis is accepted.

Table 1: Measurement of Variables

Variables	Type	Measurement	Sources
Benefits paid	Dependent	Amount paid yearly to those who have retired from service	Adeoye and Lourens (2023)
Pension Funds Assets	Independent	Aggregate of Pension Fund's Assets	Ogungbade, et al. (2022),
Pension Funds Savings	Independent	Aggregate of Pension Fund's Assets Savings	Orbunde et al. (2020)

Source: Authors Computation, 2023

Results and Discussion of Findings

The study began by conducting unit root test to check whether the variables are stationary or not using Augmented Dickey-Fuller (ADF) test. The variables were tested in log form both at their level and at first difference using 5 percent significance level. The outcome of the test showed that some of the variables are stationary at level while others become stationary after taking their first difference. The test result is shown in table 2.

Vol. 8, No.08; 2024

ISSN: 2456-7760

Table 2: Summary of unit root test (Augmented Dickey-Fuller Test)

Variables	Test Statistics at Level	5% Critical Value at Level	Order of Integration
BFP1	-4.701325	-2.938987	I(0)
PFA1	-5.839564	-2.943427	I(0)
PFS1	-3.857136	-2.938987	I(0)

Source: Eview Output 2023

In unit root tests, the null hypothesis is typically that the series is non-stationary (I(1)), and the alternative hypothesis is that the series is stationary (I(0)). The test statistic is compared to critical values, and if the test statistic is more negative than the critical value, the null hypothesis is rejected. In this case, for all three variables (BFP1, PFA1, and PFS1), the test statistics are more negative than the critical values at the 5% significance level. Therefore, the null hypothesis of non-stationarity is rejected for each variable, suggesting that they are stationary (integrated of order 0).

Table 3: Descriptive Statistics

	BFP1	PFA1	PFS1
Mean	5.565618	5.938505	24.83432
Maximum	5.857076	7.305847	25.68680
Minimum	5.103154	4.644872	23.66237
Std. Dev.	0.196215	0.851598	0.586560
Skewness	-0.147257	-0.510610	0.350930
Kurtosis	2.185378	1.729259	1.665309
Jarque-Bera	1.250578	4.429459	3.790011
Probability	0.535107	0.109183	0.150318
Observations	40	40	40

Source: Eview Output 2023

The statistics offer insights into the distributional characteristics of three variables: BFP1, PFA1, and PFS1. The mean represents the average value of each variable. For example, on average, BFP1 has a value of approximately 5.57, PFA1 has a value of about 5.94, and PFS1 has a mean of around 24.83. The maximum values indicate the highest observed values for each variable. For instance, the maximum value for BFP1 is approximately 5.86, for PFA1 it is about 7.31, and for PFS1 it is around 25.69. The minimum values represent the lowest observed values for each variable. For example, the minimum value for BFP1 is approximately 5.10, for PFA1 it is about 4.64, and for PFS1 it is around 23.66.

The standard deviation measures the dispersion of values around the mean. A higher standard deviation indicates greater variability. In this case, PFA1 has the highest standard deviation, suggesting more variability compared to the other variables. Skewness measures the asymmetry of the distribution. Negative skewness indicates a leftward skew, and positive skewness indicates a rightward skew. All three variables have skewness close to zero, suggesting a relatively symmetric distribution. Kurtosis measures the tailedness of the distribution. Values higher than 3

Vol. 8, No.08; 2024

ISSN: 2456-7760

indicate heavy tails. All three variables have kurtosis values below 3, suggesting they have lighter tails than a normal distribution. The Jarque-Bera test assesses whether the data follows a normal distribution. Higher p-values indicate that the data is not significantly different from a normal distribution.

Table 4: Regression Analysis

Dependent Variable: BFP1				
Variable	Coefficient	Std. Error	t-Statistic	Prob.
PFA1	-0.038642	0.011093	-3.483580	0.0013
PFS1	0.229711	0.016105	14.26347	0.0000
C	0.094239	0.416941	0.226026	0.8224
R-squared	0.866991	Mean dependent var		5.569470
Adjusted R-squared	0.859801	S.D. dependent var		0.154997
F-statistic	120.5884	Durbin-Watson stat		1.859974
Prob(F-statistic)	0.000000			

Source: Eview Output 2023

Regarding the coefficient for PFA1, which stands at -0.038642, the associated t-statistic of -3.483580 and the p-value of 0.0013 collectively convey that PFA1 has statistical significance ability to elucidate the variance observed in BFP1. Also, the coefficient affiliated with PFS1 is 0.229711. This predictor exhibits a notable t-statistic of 14.26347 and an impressively low p-value of 0.0000, strongly implying that PFS1 holds statistical significance as an explanatory factor for the observed variability in BFP1.

Based on the results, we fail to reject the null hypothesis for the coefficient of PFA1 in explaining the variation in BFP1. The t-statistic of -0.038642, coupled with the p-value of 0.0013, indicates that PFA1 lacks statistical significance. This result is consistent with that of Abdelmonem and Mohamed (2018) who found no relationship between treasury bills and capital market growth in Nigeria as against the findings of Mohammed (2016); Sheyin (2015). Also, the coefficient for PFS1 demonstrates statistical significance with a t-statistic of 14.26347 and an extremely low p-value of 0.0000. Therefore, we reject the null hypothesis for PFS1, suggesting that PFS1 is a significant explanatory factor for the observed variability in BFP1. This finding supports the Modern portfolio theory (MPT). It is also consistent with the studies of Olaniyan and Ekundayo (2019) and Briggs (2015).

As for the model's explanatory power, the R-squared value of 0.866991 signifies that approximately 86.70% of the fluctuations witnessed in BFP1 can be explicated by the included predictors. The adjusted R-squared, considering the model's complexity, stands at 41.8%. Furthermore, the F-statistic, quantifying the overall model significance, is 15.01442, accompanied by an extremely low p-value of 0.000017. This reinforces the assertion that the model is statistically meaningful in capturing the variability within BFP1. Lastly, the Durbin-Watson statistic, registering at 1.953347, is in close proximity to the ideal value of 2. This

Vol. 8, No.08; 2024

ISSN: 2456-7760

suggests a relatively diminished presence of autocorrelation in the residuals, further validating the robustness of the model in its explanatory capacity for BFP1.

Table 5: Variance Inflation Factors

Variable	Coefficient Variance	Centered VIF
PFA1	0.000123	1.033265
PFS1	0.000259	1.033265
C	0.173840	NA

Source: Eview Output 2023

Both PFA1 and PFS1 seem to have small coefficients, suggesting that they might have relatively minor effects on the dependent variable. The VIF values being close to 1 indicate that there is no substantial multicollinearity between the independent variables PFA1 and PFS1.

Conclusion and Recommendations

The regression analysis reveals insightful information about the relationship between Benefits Paid (BFP1) and the predictor variables, Pension Fund Assets (PFA1) and Pension Fund Savings (PFS1). The coefficient for PFA1 is -0.038642, and its associated t-statistic of -3.483580, along with a p-value of 0.0013, indicates that Pension Fund Assets (PFA1) is statistically significant in explaining the variation in Benefits Paid (BFP1). This suggests that, at least in the current model, the level of Pension Fund Assets does not have a meaningful impact on Benefits Paid. In contrast, the coefficient for PFS1 is 0.229711, with a high t-statistic of 14.26347 and a very low p-value of 0.0000. This strongly implies that Pension Fund Savings (PFS1) is statistically significant in explaining the variation in Benefits Paid (BFP1). Higher Pension Fund Savings appear to be associated with increased Benefits Paid.

1. Since PFA1 shows a negative relationship with BFP1, it suggests that as pension fund assets increase, benefits paid out decrease, and vice versa. Pension fund managers should reevaluate their asset allocation strategies to ensure they align with the fund's objectives and liabilities. They may consider allocating assets towards investments that offer stable returns and liquidity to meet benefit payment obligations while maintaining a prudent level of risk.
2. Given the statistical significance of Pension Fund Savings (PFS1), it is advisable to focus efforts on understanding the factors contributing to PFS1. This could involve a detailed examination of the components and drivers of Pension Fund Savings to gain insights into its impact on Benefits Paid.

References

Abdullahi, U.A., Obadare, G.O. & Anifowose, O.L. (2022). Contributory pension scheme on Nigeria economic growth. *KIU Interdisciplinary Journal of Humanities and Social Sciences, 3*(1), 264-283

Adebayo, A. I. & Dada, R. (2012). Pension crisis in Nigeria: Causes and Solution. *IOSR Journal of Applied Chemistry, 3*(2): 30-32.

Vol. 8, No.08; 2024

ISSN: 2456-7760

Adekoya, O.M. Nwaobia, A.N. (2021). Pension fund investment in federal government securities and economic growth of Nigeria. International Journal of Creative Research Thoughts, 9 (1), 2320-2882

Afolabia, A.A. & Erasmus, L.J. (2023). Financial performance adequacy of pension fund managers in Nigeria. *Journal of Accounting, Finance and Auditing Studies, 9*(2): 96-115. DOI: 10.32602/jafas.2023.014

Ajibade, A.T., Jayeoba, O.O. & Aghahowa, E.O. (2018). Pension Fund Characteristics and Financial Performance in Nigeria. International Journal of Research and Innovation in Social Science, 2(12): 2454-6186

Babalos, V., & Stavroyiannis, S. (2020). Pension funds and stock market development in OECD countries: Novel evidence from a panel VAR. Finance Research Letters, 34, 101247. https://doi.org/10.1016/j.frl. 2019.07.02

Bakare, J.L. (2021).Effect of contributory pension funds on capital market performance in Nigeria. *Bingham University Journal of Accounting and Business, 7*(1): 2346-7428

Bakar, M.A., Gurowa, S.U. & Olayinka, G. (2021). Efficiency of Pension Fund Investment in Shares, Bonds and Treasury Bills. International Journal of Accounting and Finance, 1(1): 28811-2709.

Balco, M., Sebo, J., Mestan, M. & Sebova, L. (2018). Application of the Lifecycle Theory in Slovak Pension System. Ekonomický časopis, 66 (1), 64 – 80

Bassey, I.F (2018). The infamy of pension funds administration in Nigeria: appraising the economic potentials. *International Journal of Research in Business, Economics and Management, 2*(5)

Benson, J.L. & Erick, G. J. (2022). Effectiveness of investment portfolio on financial performance of pension fund in Tanzania. Olva Academy – School of Researchers, 4(1):96 – 110

Carlucci, et al. (2020). Long-term and pension savings: The real return. 2020 edition

Chovancova, B., Hudcovsky, J., & Kotaskova, A. (2019). The impact of stocks and bonds on Pension fund performance. *Journal of Competitiveness, 11*(2):22-35.

Friday, B. & Micah, L.C. (2019). Contributory Pension Fund and Economic Growth in Nigeria. *International Journal of Innovative Finance and Economics Research, 7*(2): 2360-896X, 24-34, SEAHI PUBLICATIONS

Gómez-Déniz, Emilio, Jorge V. Pérez-Rodríguez, and Simón Sosvilla-Rivero (2022). Analysing How the Social Security Reserve Fund in Spain Affects the Sustainability of the Pension System. Risks 10: 120.

Ibekwe, U. A. & Ekwoaba, J. O. (2018). Pension investment regulation in Nigeria: opportunity cost assessment. *Nigerian Journal of Management Studies, 1*8 (2) 2018, 123-13

Ilodibe, S.I., & Okonkwo, C.A. (2018). Pension fund administrators and financial transparency of retirement savings funds in Nigeria, International Journal of Research Publications.

Lyimo, B. & Joachim, E.G. (2022). Effectiveness of investment portfolio on financial performance of pension fund in Tanzania. Olva Academy – School of Researchers, 4(1): 96 - 110

Vol. 8, No.08; 2024

ISSN: 2456-7760

Madukwe, O.D. & Okeke, D.C. (2022). Effect of inflation on pension fund investment in federal government securities in Nigeria. *World Journal of Advanced Research and Reviews, 14*(03):074–085 DOI: https://doi.org/10.30574/wjarr.2022.14.3.0471

Mesike, G. & Ibiwoye, A. (2012). Pension Reform and Financial Market Development Nexus: Evidence from Nigeria. *International Journal of Academic Research in Business and Social Sciences, 2*(6) 22-29

Mordor Intelligence (2020). Global Pension Funds Industry| Growth, Trends, and Forecast (2020 -2025). https://www.reportlinker.com/p05974142/Global-Pension-Funds-Industry-Growth-Trends-and-Forecast.html

Nageri, K.I., Adekunle, A.T. & Muritala, T.A. (2019). Pension fund and capital market development in Nigeria: ARDL Bound Testing Approach. *Amity Journal of Economics 4* (1), (65-81)

Ndum, N.B., Okoye, E.I. & Amahalu, N.N. (2019). Pension fund asset investment and economic growth in Nigeria. *Journal of Global Accounting Department of Accountancy*, *6(*2): 1118-6828

Nnaji, C. P. (2021). Effect of delay in pension funds on Nigerian pensioners. *Contemporary Journal of Psychology and Behavioural Science*.

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

Oke, M.O., Dada, O. & Aremo, N.O. (2021). Impact of bond market development on the growth of the Nigerian economy. Folia Oeconomica Stetinensia, 21(1). DOI: 10.2478/foli-2021-0005

Okparaka, V.C. (2018). Effect of contributory pension scheme on Nigerian Capital Market. *International Journal of Advanced Research in Management and Social Sciences 7* (2):266-284

Okparaka, V. C., & Makwe, D.M. (2019). Effect of pension industry investments on financial intermediation in Nigeria (2006 -2017). *Advance Journal of Management, Accounting and Finance*, *4*(2), 40-48.

Oluitan, R.O. & Falode, R.A. (2020). An Empirical Analysis of Pension Fund's Assets Influencing Infrastructure Financing in Nigeria. *Journal of Business & Economic Policy, 7*(2). doi:10.30845/jbep.v7n2p6 56.

Onakeke, N. & Falope, F.J. (2020). Impact of contributory pension scheme to Nigeria economic development. *International Journal of Advanced Academic Research*, 6(3):2488-9849

Orbunde, B. Lambe, I. & Bako, I. (2020). Impact of pension fund investment on capital market performance in Nigeria. *Bingham International Journal of Accounting and Finance*.

Oyedokun, G.E, Akingunola, R.O, Somoye, R.O.C. (2022). Effect of Pension Investment on Financial Depth in Nigeria: Empirical Investigation. SunText Rev Econ Bus 3(2): 159. DOI: https://doi.org/10.51737/2766-4775.2022.059

Papík. M. & Papíkova, L. (2021). Comprehensive analysis of regulatory impacts on performance of Slovak pension funds. *Journal of Business Economics and Management*, 22(3): 2029-4433. https://doi.org/10.3846/jbem.2021.14481

Parata T., Yoonbai K. & Chong S.P. (2017) Linking the missing market: The effect of bond markets on economic growth. *International Review of Economics & Finance*, *27*(1)

Vol. 8, No.08; 2024

ISSN: 2456-7760

PenCom.(2018). Revised fund accounting guidelines. Retrieved March 3, 2018 from www.pencom.gov.ng

Pokorný, J. & Hejduková, P. (2021). Pension Funds: Administrative and Investment Cost SHS Web of Conferences 115, 02006. Current Problems of the Corporate Sector 2021.

Raisa, M.L. (2012). Spillover effects of pension funds on capital markets: The EU-15 countries case. Annals of the "Constantin Brâncuşi" University of Târgu Jiu, Economy Series, 4, pp.164-170. 37.

Rudy, I. & Bona, C. S. (2020). The Implementation of the Multiperiod Mean-Variance for Asset Allocation of Pension Fund. *Advances in Economics, Business and Management Research, 187*. Proceedings of the 5th Global Conference on Business, Management and Entrepreneurship (GCBME 2020)

Samuel, F.V. (2022). The effect of pension assets invested in bonds on all share index in Nigeria financial market. *Academy of Accounting and Financial Studies Journal*, 26(6), 1-07.

Sanusi, K.A. & Kapingura, F.M. (2021). Pension funds as fuel for overall investment level and economic growth: An empirical insight from South African economy, Cogent Business & Management, 8(1), 1935661, DOI: 10.1080/23311975.2021.1935661

Segal,J.(2020). Pensions love alternative investments more than ever. Institutional investor. https://www.institutionalinvestor.com/article/b1k8kysvmr8vy1/Pensions-Love-Alternative-Investments-More-Than-Ever.

Scholtens, B. & Wensveen, D.V. (2020). A critique on the theory of financial intermediation. *Journal of Banking & Finance,* 1243-1251

Sugeng, W. H. & Irene, R.D. P. (2020). Asset allocation and strategies on investment portfolio performance: A study on the implementation of employee pension fund in Indonesia. *Accounting* (6):839–850

Udeh, S.N. & Igwebuike, E.C. (2019). Stock market capitalization and pension fund assets: Perspectives of Financial Deepening in Nigeria (1981-2016). *International Journal of Business Systems and Economics, 12*(3):*2360-9923*

Usman, J., & Nwala M. N. (2019). Effect of pension fund on Nigerian capital market development. *NSUK Journal of Finance and Banking Research, 4*(2)

Vincent, H.S., Mairafi, S.L. & Abdullahi, Y.U. (2021). effect of fixed income securities on capital market growth In Nigeria. *Social and Administrative Sciences Review, 7*(1):262-283, 2545-5826.