Contributory Pension Fund Risk Management and Pension Fund Sustainability in Nigeria.

By

Benjamin Evbuomwan Oseghale (Ph.D)
Department of Business Administration
College of Social and Management Sciences
Achievers University Owo, Ondo State, Nigeria.
Oseghale.be@achievers.edu.ng +238027468040

Olasoji Morakinyo Olotu
Department of Business Administration
Faculty of Administration andManagement Sciences
Adekunle Ajasin University
Akungba Akoko, Ondo State, Nigeria.
moraksoj2016@gmail.com +2348039118836
&
Bashiru Eraigba Ilavbare
Department of Business Administration
Faculty of Management Sciences University Benin,
Benin City, Edo State, Nigeria.
Bashirilavbare@gmail.com+2348144734254

Abstract

This study examined the relationship between contributory pension fund risk management and pension fund sustainability, focusing on active and retired staff of the University of Teaching Hospital in Benin City, Edo State, Nigeria. The objective was to determine whether effective risk management practices influence the long-term stability of pension funds. A cross-sectional survey design was adopted, target staff population from 2010 to 2022 who were participants in the contributory pension scheme, regardless of their cadre. From this population, a sample of 400 beneficiaries was selected. Data were collected using a structured questionnaire designed to capture information on risk management practices and perceptions of pension fund sustainability. Descriptive statistics summarised the data, while linear regression analysis tested the

study's hypothesis at a 5% level of significance using SPSS version 23. The analysis revealed a significant and positive relationship between contributory pension fund risk management and pension fund sustainability. This suggests that effective risk management is a key determinant in ensuring that pension funds remain financially viable and capable of meeting long-term obligations. Based on these findings, the study recommends that pension fund risk management teams be continually trained to adapt to the dynamic financial environment. Regular skill updates will enable them to identify, assess, and mitigate risks more effectively, providing informed guidance to fund managers. Such proactive measures will strengthen decision-making, safeguard pension assets, and enhance the sustainability of the contributory pension scheme for both current and future beneficiaries.

Keywords: Pension Fund, Risk Management, Pension Sustainability, Pension Reform Act, Contributory Pension Scheme.

Introduction

The contributory pension scheme in Nigeria was established to create a sustainable pool of financial resources that could prevent old-age poverty by ensuring timely payment of retirement benefits to beneficiaries. One of its fundamental objectives was to safeguard the welfare of retirees through structured savings and prudent investment of accumulated pension funds (National Pension Commission (PenCom), 2021). The Pension Reform Act (PRA, 2014) made explicit provisions for investing pension funds in approved asset classes while setting out risk management requirements to protect contributors' assets. At its inception, the scheme was widely applauded for its modern approach, aligning with both current and future socio-economic realities.

A significant shift introduced under the defined contribution plan was the strategic diversification of pension fund investments across multiple portfolios. These include equities listed on the Nigerian Exchange, treasury bills, federal and state government bonds, corporate debt instruments, debentures, and real estate properties (PenCom, 2022). This diversified approach was designed to enhance returns and ensure long-term sustainability of pension payments for contributors. However, ensuring sustainability extends beyond placing funds in seemingly

attractive portfolios, as investment environments can change rapidly, turning profitable assets into underperforming ones.

Recognising this, the PRA (2014) mandated the establishment of dedicated risk management committees within Pension Fund Administrators (PFAs). These committees are tasked with evaluating and mitigating potential risks inherent in any investment decision involving pension funds (PenCom, 2023). Risk management measures include periodic stress testing, scenario analysis, compliance monitoring, and diversification reviews to safeguard contributors' funds against market volatility, inflation, and default risks (Onyema, 2021).

Given these provisions, assessing pension sustainability requires examining the effectiveness of risk management practices within the contributory scheme. A robust risk management framework not only preserves capital but also supports consistent pension disbursements, thereby fulfilling the scheme's core mandate. As economic and financial landscapes evolve, continuous improvement in risk assessment methodologies remains critical. This approach ensures that pension funds are resilient enough to meet present obligations while securing the financial future of contributors (Adebayo & Hassan, 2024)

Statement of the Research Problem

The Pension Reform Act (PRA, 2014) provides a legal framework for risk management in Nigeria's contributory pension scheme. Section 78 mandates the establishment of a Risk Management Committee (RMC) within Pension Fund Administrators (PFAs) to ascertain investment portfolio risk profiles, set adjustment policies for variations, determine adequate risk coverage levels, advise on internal control systems, and perform other prescribed risk oversight functions (PenCom, 2023). Complementing this, Section 60 outlines stringent licensing requirements for organisations managing pension funds. These include incorporation as a limited liability company, a minimum paid-up share capital of ₦150 million, professional capacity to manage pension assets, a clean management history, exclusive engagement in pension management, and adherence to additional conditions set by PenCom.

These provisions reflect a deliberate strategy to ensure that pension funds are prudently managed and sustainable, with a focus on protecting contributors' retirement benefits. Annual reports from PenCom consistently highlight the regulator's monitoring of risk management activities across the industry (PenCom, 2023). Public opinion has generally viewed these measures as positive, given their alignment with the objective of guaranteeing timely pension disbursements.

However, effective risk management must transcend policy documentation; it should translate into tangible benefits for retirees, particularly in terms of timely and adequate pension payments amidst economic volatility (Adebayo & Hassan, 2024). This study, therefore, examines the perceived effectiveness of pension fund risk management from the beneficiaries' perspective, assessing whether current measures instill confidence in the safety and sustainability of their retirement savings.

Objective of the Study

The objective of the study is to provide insight using empirical evidence to ascertain the relationship between contributory pension fund risk management and pension fund sustainability in Nigeria with a case study of the University of Benin Teaching Hospital and to understand the nature of the relationship.

Research Hypothesis

The hypothesis is stated in the null form was used to guide the study:
Ho1: There is no significant relationship between contributory pension fund risk management and pension fund sustainability in Nigeria.

Literature Review

The sustainability of pension funds has gained significant scholarly and policy attention in recent years, particularly in the context of contributory pension schemes designed to protect retirees from old-age poverty. Oseghale and Amadasun (2024) define a sustainable pension fund as one that can meet the needs and obligations of its stakeholders financially, socially, and otherwise both in the present and in the future. Their empirical study, focusing on staff of the University of Benin Teaching Hospital, revealed a significant and positive relationship

between pension fund motivation and pension sustainability. They argue that motivated employees are more likely to actively participate in pension schemes, contribute consistently, and monitor fund performance, thereby supporting the scheme's resilience.

Oseghale and Iduozee (2025) approach pension sustainability from an intergenerational perspective, describing it as the evolution of a pension system that meets today's needs without jeopardising benefits for future generations. In their analysis, pension sustainability was found to be significantly and positively associated with pension regulation. This underscores the importance of adequate and responsive regulatory oversight, which ensures that Pension Fund Administrators (PFAs) and Pension Fund Custodians (PFCs) operate within guidelines that protect contributors' funds. They recommend continuous updates to regulatory strategies and regular training for regulatory officers to adapt to evolving financial and demographic challenges.

Operational practices also feature prominently in the literature. Ughulu and Uwamusi (2023) emphasised the timely remittance of pension deductions and continuous investment in viable ventures as essential strategies for achieving sustainability. Their view aligns with the investment diversification mandates in the Nigerian Pension Reform Act (PRA, 2014), which encourages spreading investments across asset classes to optimise returns while managing risk.

On the other hand, risk management is repeatedly identified as a vital driver of pension fund sustainability. Srinivas (2019) offers a broad definition, framing risk management as a structured, planned process that enables decision makers to identify, quantify, classify, control, and manage risks effectively. Within the pension context, this means not only mitigating financial market risks but also addressing operational, regulatory, and demographic risks that could undermine fund viability.

Asset allocation decisions form a core part of pension risk management. Bakare (2022) argues for a stronger revolves towards government securities in Nigerian pension portfolios due to their lower risk profile and dependable returns. This

conservative approach may help stabilise funds, particularly in volatile market conditions, although it can also limit growth potential if over relied upon.

From a macroeconomic perspective, Onakeke and Falope (2020) link the contributory pension scheme (CPS) to broader economic development, noting its positive contribution to Nigeria's GDP. They also find that risks in pension asset management can have a positive effect on fund performance when handled effectively, suggesting that calculated risk taking within a sound management framework can enhance returns.

The perception of risk within the pension industry has also been explored. Kesinro (2018) studied contributory pension reforms and risk perception among employees in Nigeria's banking sector, finding that reforms significantly influence how employees assess and respond to pension related risks. This suggests that communication and transparency about reforms are crucial for maintaining confidence in the system.

Internal governance and control systems are another important subject matter. Jimoh and Khadijah (2021) examined the effects of risk management and internal controls on pension administration in Nigeria, using survey data from staff of PFAs and PFCs. Applying linear regression, they found that both factors have substantial positive impacts on pension management outcomes. They conclude that robust internal controls such as segregation of duties, compliance monitoring, and periodic audits enhance the security and growth of pension funds.

Overall, the literature converges on two major points. First, pension fund sustainability is multidimensional, encompassing prudent investment strategies, timely contribution remittances, workforce motivation, and strong regulatory frameworks. Second, effective risk management is indispensable, requiring diversified investments, judicious allocation to low-risk assets, clear communication of reforms, and well-structured internal control mechanisms.

This body of evidence reinforces the argument that sustainability cannot be achieved solely through legislative provisions or policy documents. Instead, it requires the operationalisation of sound governance, disciplined fund

management, and adaptive strategies that respond to changing economic and demographic realities. In a volatile economic environment like Nigeria's, the alignment of risk management practices with sustainability objectives is essential to ensure that pension funds remain capable of delivering on their promises to both current and future retirees.

Theoretical Review

Modern Portfolio Theory (MPT) emerged from the pioneering work of Harry Markowitz, published in the "Journal of Finance" in March 1952. Markowitz (1952) provided mathematical evidence that appropriate diversification can reduce portfolio risk without sacrificing returns. The theory focuses on the selection of portfolios that maximize expected returns at a given risk level, using historical data and quantitative models to construct an "optimal portfolio" (Wen, 2023). MPT rests on several assumptions, including the rationality of investors, predictable market behaviour, the existence of two asset return types (low or high), and an organised market structure. It further assumes that risk can be evaluated using standard deviation or variance of returns. These foundations made MPT a cornerstone of modern investment strategy, offering a structured approach to balancing risk and reward in asset allocation decisions.

Despite its influence, MPT has faced significant criticism. Morien (2011) challenged the reliance on variance and standard deviation as accurate measures of risk, suggesting they fail to capture all dimensions of uncertainty. The assumption of investor rationality has also been questioned, as behavioural finance evidence shows that real world investors often deviate from logical decision making. Murphy (1997) argued that high or low risk does not necessarily lead to proportionate rewards, undermining one of MPT's implied premises. Similarly, Haugen and Heins (1975) found no consistent link between higher risk and higher returns, contradicting traditional expectations. These criticisms highlight the limitations of MPT in capturing market complexities and human behaviour, suggesting that while it remains a useful framework, it should be applied alongside more complex risk management approaches.

Pension fund risk management and Modern Portfolio Theory (MPT) are closely linked through their shared goal of balancing risk and return. MPT provides the

framework for diversifying assets to minimize volatility for a given return, a principle pension funds adopt to protect large capital pools. Pension funds adapt MPT by incorporating liabilities into the optimization process, ensuring investments align with future pension payment obligations. This liability driven approach shifts the focus from pure return maximization to funding stability and risk control. In essence, pension fund strategies are an MPT application tailored to long term, obligation driven investment goals.

Methodology

This study examined the relationship between contributory pension fund risk management and pension fund sustainability among active and retired employees of the University of Benin Teaching Hospital (UBTH), Benin City, Edo State, Nigeria. The target population comprised 3,885 active staff and 783 retired employees between 2010 and 2022, totalling 4,668 beneficiaries of the hospital's contributory pension scheme as of July 2023, irrespective of cadre.

A cross-sectional research design was adopted, and a sample size of 400 respondents was selected. Data were collected using a structured questionnaire, which served as the primary research instrument. The questionnaire was designed to capture respondents' perceptions of the independent variable-contributory pension fund risk management and the dependent variable-pension fund sustainability. Reliability analysis using Cronbach's alpha produced scores of 0.742 for risk management items and 0.846 for sustainability items, indicating acceptable internal consistency.

Data analysis involved descriptive statistics to summarise respondents' demographic and perceptual data, and inferential statistics specifically linear regression to test the hypothesised relationship between the variables. Hypothesis testing was conducted at a 5% significance level. All statistical analyses were performed using the Statistical Package for the Social Sciences (SPSS) Version 23.

Regression Analysis:

Contributory Pension Fund Risk Management effect on Pension Fund Sustainability

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.823[a]	.814	.801	4.637
a. Predictors: (Constant), Contributory Pension Fund Risk Management				

ANOVA[b]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	405.482	1	405.482	18.855	.023[a]
	Residual	64.518	399	21.506		
	Total	470.000	400			
a. Predictors: (Constant), Contributory Pension Fund Risk Management						
b. Dependent Variable: Pension Fund Sustainability						

Coefficients[a]						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.140	4.813		.237	.828
	Contributory Pension Fund Risk Management	1.943	.217	.929	4.342	.023
a. Dependent Variable: Pension Fund Sustainability						

Source: Researchers Computation (2025)

Interpretation of Regression Analysis Result

The table presents the summary of the linear regression model for the effect of the contributory pension fund risk management on pension fund sustainability. The result obtained from the model data show that the R value is 0.823, which indicate that pension fund sustainability has a strong correlation with the contributory pension fund risk management at 82.3%. Also, the R^2 is 0.814 which indicate that 81.4% of pension fund sustainability was explained by the contributory pension fund risk management.

Hypothesis Testing

H0: There is no significant relationship between contributory pension fund risk management and pension fund sustainability.

Decision Rule:

The null hypothesis (H0) will be rejected if the significant value (p-value) of the independent variable – pension fund risk management is less than 0.05; otherwise, the null hypothesis will be accepted.

Thus, from table above, it shows that the significant value (p-value) of the independent variable – contributory pension fund risk management is 0.023, which is less than 0.05. This indicates that there is a significant relationship between contributory pension fund risk management and pension fund sustainability.

Discussion of Findings

This study aimed to ascertain the relationship between contributory pension risk management and pension fund sustainability from the perspective of beneficiaries. The hypothesis tested in this study demonstrated that contributory pension fund risk management significantly affects pension fund sustainability, with a (p-value) of 0.023 and a coefficient of 1.943. This result indicates that contributory pension fund risk management practices positively influence the sustainability of pension funds. The finding implies that the level of risk management undertaken by pension administrators in Nigeria is capable of ensuring the long-term sustainability of the contributory pension fund.

This result aligns with Adekunle et al. (2019), who provided empirical evidence that risk management has a significant positive effect on pension fund sustainability in Lagos State. Similarly, Falope and Onakeke (2020) found that the contributory pension scheme (CPS) significantly impacts Nigeria's GDP and that the risks inherent in pension operations have a positive effect on pension fund management. In the same vein, Jimoh and Khadijah (2021) reported that internal control and risk management exerted a considerable beneficial impact on Nigeria's pension administration, leading to commendable growth and safety of pension funds. According to their findings, risk management and effective internal controls are key drivers of sustainable pension management in Nigeria.

Conclusion

This study investigated the relationship between contributory pension fund risk management and pension fund sustainability, focusing on active and retired staff of the University of Teaching Hospital in Benin City, Edo State. Using a crosssectional survey of 400 beneficiaries from 2010 to 2022, data were collected through structured questionnaires and analysed with descriptive statistics and linear regression at a 5% significance level. The results revealed a significant and positive relationship between risk management practices and pension fund sustainability, indicating that effective risk management is a vital driver of financial stability in the contributory pension scheme. These findings highlight that the ability of pension fund administrators to identify, assess, and mitigate risks directly influences the long-term viability of pension funds. Properly implemented risk controls ensure that pension obligations to beneficiaries are met without jeopardising asset security. The study underscores the importance of continuous improvement in risk management skills to address the complexities of the financial environment. Without sustained investment in risk management capacity, pension funds may face heightened vulnerability to economic shocks. Therefore, proactive and adaptive risk management strategies remain essential for the sustainability of Nigeria's pension system.

Recommendations

1. Continuous Capacity Building: Regularly train pension fund risk management teams to adapt to evolving financial risks, ensuring they remain proficient in emerging risk assessment and mitigation techniques.

2. Enhanced Monitoring and Compliance: Implement more rigorous oversight mechanisms, including periodic audits and compliance checks, to ensure adherence to best practices and regulatory requirements.
3. Proactive Risk Mitigation Strategies: Introduce forward looking tools such as scenario analysis and stress testing to anticipate potential threats and protect pension assets from market volatility.

References

Adebayo, T., & Hassan, M. (2024). Risk management strategies in Nigeria's contributory pension scheme. *Journal of African Financial Management, 16*(1), 45–60.

Adekunle, O. A., Bakare, O. A., & Ogunyemi, S. (2019). Risk management and pension fund sustainability in Lagos State, Nigeria. *Journal of Finance and Investment Research, 5*(2), 101–115.

Bakare, O. A. (2022). Strategic asset allocation and risk minimisation in Nigerian pension funds. *African Journal of Finance and Management, 14*(2), 112–124.

Federal Government of Nigeria. The Pension Reform Act (2014).Retrieved fromhttp://www.pencom.gov.ng/download/Pension%20Laws/Pension%20Reform%20Act%202014.pdf.

Haugen, R. A., & Heins, A. J. (1975). Risk and the rate of return on financial assets: Some old wine in new bottles. *Journal of Financial and Quantitative Analysis, 10*(5), 775 – 784. https://doi.org/10.2307/2330270](https://doi.org/10.2307/2330270)

Jimoh, M., & Khadijah, S. O. (2021). Risk management and internal control in pension administration in Nigeria. *Nigerian Journal of Financial Studies, 9*(1), 55–70.

Kesinro, O. R. (2018). Contributory pension reforms and risk perception in Nigeria's banking industry. *Journal of Banking and Finance, 6*(2), 87–98.

Markowitz, H. (1952). Portfolio selection. *The Journal of Finance, 7*(1), 77–91. https://doi.org/10.1111/j.1540-6261.1952.tb01525.x

Morien, J. (2011). Modern portfolio theory: An overview [Unpublished manuscript].

Murphy, J. (1997). Technical analysis of the financial markets: A comprehensive guide to trading methods and applications. New York Institute of Finance.

National Pension Commission. (2021). Guidelines for pension fund investment. https://www.pencom.gov.ng

National Pension Commission (2022). Annual report 2022. https://www.pencom.gov.ng

National Pension Commission (2023). Risk management framework for pension fund investments. https://www.pencom.gov.ng

Onakeke, A., & Falope, J. O. (2020). Contributory pension scheme and Nigerian economic development. West African Economic Review, 8(3), 211–229.

Onyema, C. (2021). Investment risk analysis in Nigeria's pension sector. *Nigerian Journal of Economics and Finance, 12(*2), 101–115.

Oseghale, E.B, & Amadasun, J. (2024). Pension fund motivation and pension sustainability in Nigeria: A case of the University of Benin Teaching Hospital, Benin City, Edo State, Nigeria. *GVU Journal of Management and Social Sciences, 9*(2), 140–146. https://gvujmass.com/index.php/pub/article/view/43

Oseghale, E.B, & Iduozee, I. (2025). Pension fund regulation and sustainability in Nigeria. A case of the University of Benin Teaching Hospital, Benin City, Edo State, Nigeria. *Icheke Journal of the Faculty of Humanities, 23*(2), 1–14.

Srinivas, R. (2019). Risk management in financial systems: Principles and practice. *Global Journal of Finance, 7*(4), 201–215.

Ughulu, B., & Uwamusi, P. (2023). Timely remittance and investment as drivers of pension sustainability. *Journal of African Pension Studies, 4*(1), 55–70. Wen, Y. (2023). Modern portfolio theory and investment analysis. Wiley.