**Assessment of the Scale, Gender Diversity, and Financial Proficiency of University-Based Pension Funds in Kenya: The Influence of Board Structure on Performance**

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ABSTRACT

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| **Aim** This study examined the relationship between pension fund board characteristics and the financial performance of Kenyan universities’ pension funds. It focused on board size, gender diversity, and financial expertise as the independent variables and their effect on financial performance measured by ROA.**Design/Methodology**: The study used an explanatory design within the positivism paradigm. Panel data from 26 universities' pension funds in Kenya covering the period of 8 years (2015–2022) yielded 208 observations. Secondary data were obtained from the annual returns to the Retirement Benefits Authority. The theories underpinning the study were Agency Theory and Resource Dependency Theory. **Findings**: The mean board size was 7 trustees; the Mean number of women was 2; the Mean number of trustees with financial expertise was 3; the Mean age of the pension funds was 17.4 years while the mean fund size was Ksh 24.2 Billion. Regression results showed that Board size positively influenced financial performance ROA (β = 0.0193, ρ=0.007), Gender diversity positively affected financial performance (β = 0.0006, ρ=0.0022) Financial expertise influenced financial performance ((β = 0.098, ρ=0.005) **Conclusions:** This study provides robust evidence that board characteristics significantly influence the financial performance of universities' pension funds in Kenya. The positive and statistically significant relationships between Board Size, Gender Diversity, and Financial Expertise with Return on Assets (ROA) highlight the importance of diverse and knowledgeable governance structures.The Retirement Benefits Authority should enforce board composition requirements and capacity-building initiatives to strengthen pension fund governance. Certification programs and training will enhance board competencies, improving investment strategies and stakeholder confidence. These measures will ensure the stability and sustainability of Kenya’s pension industry. |

Key Words: Board Size, Financial Expertise, Gender Diversity, Portfolio Diversification, Pension Funds

**1.0 INTRODUCTION**

A pension can be defined as a promise by an employer to employees to provide benefits upon reaching normal retirement age. It is money paid to retirees either as an annuity or a lump sum to cushion them from financial difficulties after retirement. Pension income has become a major source of retirement income for millions of people around the world. Financial performance refers to the process of measuring the results of a firm's policies and operations in monetary terms. It is a subjective measure of how effectively a pension fund utilizes its assets to generate better returns for the provision of pension benefits to members upon retirement. According to Naz et al. (2016), financial performance reflects the overall financial health of a firm and its ability to utilize resources to maximize shareholders’ wealth and profitability. The financial performance of pension funds is critical as it directly impacts their competitiveness, which is derived from efficient investment decisions and management strategies.

**1.1 Statement of the Problem**

The financial performance of pension funds has garnered significant global interest due to the critical role these funds play in ensuring retirees lead dignified lives after active service. Pension funds not only support individual retirement needs but also contribute significantly to the gross domestic product (GDP) of various economies. For instance, in 2018, aggregated pension fund investments across Organisation for Economic Co-operation and Development (OECD) countries totaled USD 44.1 trillion, with pension assets in other jurisdictions amounting to USD 1.6 trillion (OECD, 2018). In Africa, South Africa and Namibia were the only nations where pension fund assets exceeded USD 0.2 trillion in 2018, representing over 50% of their respective GDPs (OECD, 2018).

In Kenya, pension assets have shown remarkable growth over the years, increasing from less than USD 1 billion in 2000 to approximately USD 13.24 billion by December 2019 (Mutuku, 2020). However, this growth has not translated into a significant GDP ratio, as the pension assets-to-GDP ratio stood at only 12.9% in 2019 (OECD, 2019). This indicates a relatively poor performance of Kenya’s pension funds amidst a growing aging population. The traditional investment patterns of pension fund trustees, as highlighted by Mutuku (2020), have been limited to government treasury bills and bonds, quoted equities, guaranteed funds, and property, with minimal exploration into diversified investment avenues.

The reliance on treasury bonds and bills dominates pension fund investments in Kenya. Tari (2014) noted that many pension schemes allocate a substantial portion of their assets to these instruments without setting clear investment targets. This conservative approach has contributed to fluctuating returns. For example, the average return for segregated pension schemes fell from 18.4% in 2017 to 5.2% in 2018 (Cytonn, 2019). Moreover, questionable investment decisions, such as placing funds in failing institutions like the collapsed Imperial Bank, have resulted in significant financial losses (Odundo, 2017). These missteps highlight a lack of diligence among trustees, further exacerbating the challenges faced by pension schemes.

In some cases, pension funds have failed to meet their obligations to contributors, providing returns below the minimum portfolio benchmark in the Kenyan market (Genesis Kenya, 2013; Njeru et al., 2015; Rono et al., 2010). Concurrently, government expenditure on defined benefit pensions has surged, reaching Ksh 86 billion in July 2019, and is projected to escalate to Ksh 104 billion in the 2020/2021 fiscal year (Business Daily, 2019). The volatile stock market has also adversely impacted retirees, who collectively lost over Ksh 35 billion due to declining stock prices (East African, 2020).

The challenges extend beyond investment strategies and market performance. Structural and administrative inefficiencies, such as delayed pension payments and unremitted employer contributions, further undermine the performance of pension funds (Muriithi & Wamari, 2013; Wepukhulu et al., 2018). These issues restrict the trustees' ability to invest effectively, compounding the financial difficulties faced by retirees. Ombuki et al. (2019) emphasized the need for individuals to develop additional financial strategies to ensure a comfortable retirement. Similarly, Mathula (2018) identified pension scheme inefficiencies as a key factor contributing to declining employee retention rates in Kenyan universities.

Although extensive research exists on the financial performance of pension funds globally and in Kenya (Ruigrok et al., 2007; Ngetich, 2011; Kimengich, 2015; Gitau & Muriithi, 2017; Ochieng et al., 2019; Kimeli & Wepukhulu, 2018; Rono et al., 2010; Cocco & Volpin, 2006), scant attention has been given to the performance of university pension funds in Kenya. This study aims to address this gap by investigating the relationship between board of trustee characteristics and the financial performance of university pension funds in Kenya.

**Specific Objectives**

1. To examine the effect of the board of trustees’ size on the financial performance of Pension funds of Universities in Kenya
2. To assess the effect of gender diversity of the board of trustees on the financial performance of Pension funds of Universities in Kenya.
3. To determine the effect of the financial expertise of the board of trustees on the financial performance of Pension funds of Universities in Kenya.

**2.0 Literature Review**

**2.1 Theoretical Review**

**Resource Dependence Theory (RDT)**

This theory was articulated by Pfeffer and Salancik (1978). A Resource Dependence Perspective presents organizations as open systems reliant on external environmental contingencies. To mitigate uncertainties and dependencies, organizations can adopt strategies such as mergers, joint ventures, board appointments, political action, and executive succession. Managers, empowered by shareholders, are tasked with navigating these uncertainties by leveraging their control over external resources (Ulrich & Barney, 1984). Directors play a critical role in securing resources like finance, information, skills, and networks, which are essential for organizational success (Hillman et al., 2000; Rodriguez et al., 2002).

RDT is particularly insightful in studying corporate boards. Pfeffer (1972) noted that boards help firms minimize dependency and access essential resources. Empirical evidence, as highlighted by Hillman et al. (2009), suggests that RDT is more effective than agency theory for understanding board dynamics. Directors are expected to contribute specialized expertise, reducing costs associated with outsourcing these capabilities (Abdulla & Valentine, 2009). Nguyen et al. (2012) emphasize that increasing board size and diversity enhances access to critical resources, prestige, and legitimacy in external environments.

Executive succession is another critical aspect of RDT. Pfeffer and Salancik (1978) argue that managing succession is a key strategy for addressing environmental uncertainties. Boards provide four main benefits: access to resources and expertise, communication channels with key stakeholders, support from influential organizations, and enhanced legitimacy. Carter et al. (2003) highlighted that diverse boards strengthen independence, improving oversight of managers. Similarly, Bryant and Davis (2012) suggest that diversity on boards improves access to information and networks, enhancing the organization’s ability to navigate uncertainties and secure a competitive advantage. Organizations with diverse and resourceful boards are better equipped to control scarce resources and minimize uncertainty for stakeholders, thereby achieving their strategic goals.

Agency Theory

Agency theory, as defined by Jensen and Meckling (1976), describes the principal-agent relationship as a contractual agreement in which principals, such as shareholders or fund members, delegate decision-making authority to agents, such as managers or trustees. This delegation can lead to conflicts of interest since agents may prioritize their interests over those of the principals. To address these conflicts, agency theory emphasizes mechanisms like monitoring systems and incentives to align agents’ actions with the objectives of the principals (Davis & Bryant, 2012; Claessens & Yurtoglu, 2013).

The delegation of authority creates agency costs, which Jensen and Meckling (1976) divide into three categories. Monitoring expenditures are incurred by principals to oversee agents and ensure accountability. Bonding expenditures include incentives such as salaries and bonuses to align agents' interests with those of the principals. Residual loss represents the costs resulting from suboptimal decisions by agents that fail to maximize corporate value. Without effective oversight, agents may misuse resources, such as pursuing unnecessary expansion or engaging in risky investments that offer limited benefits relative to the risks (Hart & Moore, 1990; Jensen, 1988; Shleifer & Vishny, 1989).

In the context of pension fund governance, fund members act as principals who rely on trustees, their agents, to manage day-to-day operations and achieve the ultimate goal of maximizing returns. Trustees must prioritize the best interests of contributors by reducing costs and making sound investment decisions. A diverse pension board is particularly valuable as it brings varied perspectives that can enhance decision-making and correct informational biases, leading to better outcomes for fund members (Westphal et al., 2000).

Corporate governance plays a critical role in mitigating agency problems. Effective governance mechanisms, tailored to the firm’s environment, can help reduce agency costs and align managerial decisions with organizational objectives (McColgan, 2001; Okeahalam & Akinboade, 2003). For pension funds, this translates into ensuring trustees act responsibly to optimize returns while minimizing costs, thereby safeguarding the financial interests of the contributors they represent.

2.2 Empirical Review

Board Size

According to Maere et al. (2014) and Routledge and Stewart (2016), board size refers to the total number of directors or trustees on the board within a specific year. Similarly, Pugliese and Wenstop (2007) define board size as the sum of members with voting privileges on the board. Mwengei (2016) considers board size a proxy for measuring the diversity of the knowledge pool and the availability of resources provided by the board. This diversity is crucial for enhancing a board’s collective capabilities in governance and strategic decision-making. According to Fauzi and Locke (2012), board size plays a critical role in influencing the monitoring and decision-making processes, which ultimately improves financial performance. Larger boards typically possess a broader range of skills, knowledge, and expertise, enabling them to perform both monitoring and advisory roles more effectively (Corbetta & Salvato, 2004). The inclusion of diverse perspectives and specialized competencies on a large board enhances governance quality, mitigates risks, and strengthens oversight.

Empirical research also highlights the impact of board size on executive management and firm outcomes. Nguyen et al. (2015) found that in Australia, firms with larger boards exhibited CEO compensation practices that were sensitive to firm size rather than firm performance, suggesting a potential agency problem. However, other scholars argue that larger boards can counterbalance CEO influence. Brédart (2014) and Maere et al. (2014) assert that larger boards strengthen CEO control mechanisms, reducing the risk of managerial opportunism. Mohapatra and Pranati (2017) further support the effectiveness of larger boards, citing advantages such as better monitoring, broader knowledge bases, stronger networks, and greater flexibility in scheduling committee meetings. Together, these findings underscore the strategic importance of board size in enhancing corporate governance and financial outcomes through improved oversight and resource access.

**Gender Diversity**

Board gender diversity has become a crucial area of study in recent years, with researchers exploring its implications for financial performance. Diversity, broadly defined, encompasses differences in demographic and cognitive characteristics among board members, such as gender, age, ethnicity, educational background, and professional expertise (Taljaard et al., 2014; Erhardt et al., 2003). Gender diversity specifically refers to the representation of women on boards and its effects on organizational decision-making and performance (Mwengesi et al., 2016). Research has shown mixed outcomes regarding the relationship between board gender diversity and financial performance. While some studies highlight significant benefits, such as improved risk management, better stakeholder understanding, and enhanced decision-making due to diverse perspectives (Carter et al., 2007; Mohammad et al., 2018), others, like Carter et al. (2010), found no direct correlation between gender diversity and firm performance. Nevertheless, the inclusion of women on boards has been associated with improved board independence, participative communication, and greater monitoring effectiveness (Simpson et al., 2010; Gyapong et al., 2016).

Globally, many countries have implemented policies to promote gender diversity in corporate boards. For instance, Norway mandates 40% female board representation, and similar legislative measures exist in Spain and Italy (Rose, 2007; Solimene et al., 2017). Kenya has a constitutional provision on gender parity, while Singapore includes gender diversity in its governance code without making it mandatory (Nguyen, 2018). Such measures reflect the growing recognition of diversity's role in enhancing organizational outcomes and fostering equity. Studies on the effects of gender diversity on financial performance are varied; for example, Ongore et al. (2015) found significant positive impacts on Kenyan firms, while Kevin et al. (2008) observed similar results in Spain. Conversely, Carter et al. (2010) concluded that gender diversity's effects might be context-dependent and linked to other endogenous factors. Despite these inconsistencies, the broader consensus suggests that gender-diverse boards contribute to creating more inclusive, innovative, and effective corporate governance structures (Hillman et al., 2002; Terjesen & Sealy, 2016).

Financial expertise plays a pivotal role in effective board governance, directly influencing financial performance and accountability. Defined by the Sarbanes-Oxley Act of 2002, financial experts possess critical qualifications such as knowledge of accounting principles, financial statement preparation, and internal controls, enabling them to ensure accurate reporting and reliable governance. The research underscores the importance of financial expertise in preventing financial scandals and fostering informed decision-making. Studies by Guner et al. (2008) and Hasyudeen (2003) demonstrate that board members with financial literacy enhance organizational credibility, strengthen stakeholder trust, and positively impact relationships with regulators and financial institutions. Empirical evidence further validates the correlation between financial expertise and improved financial outcomes. For example, Johl et al. (2015) identified a significant positive relationship between accounting expertise and financial performance in Malaysian firms, while Andonov et al. (2016) found that pension funds governed by financially experienced trustees achieved superior investment returns.

The importance of financial expertise extends beyond pension fund governance to broader corporate success. Research highlights that diverse boards, inclusive of members with varied financial skills, are better equipped to implement effective investment strategies, manage risks, and optimize performance. Studies by Carcello et al. (2002) and Alzoubi and Selamat (2012) emphasize that expertise enhances monitoring diligence and accountability. Legislative frameworks worldwide, such as Kenya’s Retirement Benefits Authority Act, mandate financial literacy for trustees, reflecting a global recognition of these attributes. Despite some contradictory findings, the evidence suggests that financial expertise significantly contributes to strategic decision-making, risk management, and long-term sustainability, making it an indispensable element of effective governance. Ensuring that board members possess financial acumen is especially crucial in pension fund management, where safeguarding members' interests and achieving sustainable growth depend on sound fiduciary practices.

Control Variables

The effect of control variables on a firm’s financial performance cannot be overemphasized. Creswell (2013) avers that the purpose of control variables is to isolate the true effect of independent variables on the dependent variable in quantitative analysis. Available studies have shown that a firm’s size and age have an impact on the financial performance of a firm. Temitope et al. (2018) studied the effect of the age of the fund, expenditure of the fund, contribution density, and idle contributions on the financial performance of pension funds in Nigeria as measured by unit price. The age of the fund was found to have a positive and significant effect on the financial performance of the fund.

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**Fig 1 Conceptual Framework**

**INDEPENDENT VARIABLES DEPENDENT VARIABLE**

**BOARD CHARACTERISTICS**

BOARD SIZE

 H01 H02

GENDER

NO OF WOMEN

FINANCIAL PERFORMANCE

1. RETURN ON ASSETS (ROA)

 H03

FINANCIAL EXPERTISE

Control Variable

FUND SIZE

FUND AGE

**3.0 Methodology of the study**

**Data Collection**

The study relied on secondary data spanning eight years, from 2015 to 2022, covering 26 Universities, resulting in 206 observations. The data was sourced from the annual financial returns and reports of pension funds presented to members during annual general meetings and later submitted to the Retirement Benefits Authority (RBA). Key financial data collected included members' and sponsors' contributions, investment assets, net plan assets, liabilities, sponsor and employee contributions, investment income, investment expenses, administrative expenses, returns for each asset class, and overall fund investment returns. This comprehensive dataset provided the necessary information to analyze the financial performance and governance characteristics of pension funds. The researcher meticulously reviewed and extracted relevant data points to conduct the analysis, ensuring the findings were grounded in reliable and systematically recorded financial information.

**Model Specification**

The data were analysed using a multiple regression model. Return on Assets (ROA) was used to measure financial performance.

ROA = β0 + β1Fund Size + β2Fund Age + β3BDSize + β4WoSize + β5FinExp + ε

Where:

ROA =the dependent variable

β0 = Constant or intercept

BDSize = Board Size

WoSize = Women Size

FinExp = Financial Expertise

ε = Error Ter

**4.0 Results and Discussion**

**4.1 Descriptive results**

The descriptive statistics provide an overview of the key variables analyzed in the study of 208 observations from 26 Kenyan university pension funds over 8 years the statistics are summarized as follows: Board Size The mean board size was 7 trustees, with a ranging between 4 and 14 with a standard deviation of 1.204. This indicates moderate consistency across the sample, aligning with prior studies like Loh and Nguyen (2018). Women on Boards**:** Boards had a mean of 2 women ranging between 1 and 5) with a standard deviation of 0.823, Skewness of 0.472, and kurtosis of 3.086. Financial Expertisehad a mean number of 3 and a range between 1 and 5) with a standard deviation of 1.135. A positive skew of1.105 kurtosis: 3.725 Return on Assets (ROA): The mean ROA was 8.8% (range: -0.00678 to 0.2148), with a standard deviation of 0.0223, showing moderate variability in financial performance among funds. Fund Age of university pension funds averaged 17.54 years with a wide range (1 and 55 years) and a high standard deviation (12.074), reflecting diverse institutional histories. Fund Size has a mean of Ksh 24.2 billion, but significant disparities range between Ksh 13.9 million to Ksh 17.4 billion as shown by the large standard deviation of 3.78 billion.

**Table 1 Results for Descriptive Statistics**

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Statistics N Min Max Mean SD

Fund Age 208 1 55 17.53846 12.07939

Fund Size 208 13.9M 17.4B 2.42B 3.78B

Board Size 208 4 14 7.485577 1.203772

Women Size 208 1 5 2.240385 0.8223355

FinExp 208 1 7 2.913462 1.134531

ROA 208 -0.00678 0.2147688 0.08801 0.0223291

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M = Million B = Billion FinExp = Financial Expertise

Source: Research 2024

**4.2 Correlation Analysis Results**

FundSize and Board Size had a positive correlation (r=0.7889∗) indicating that larger funds tend to have larger boards. Larger funds may benefit from economies of scale, better access to diversified investment opportunities, and the ability to attract skilled managers and advisors.

FundAge and Fund Size had a negative correlation (r=−0.6892∗, suggesting that older funds tend to be smaller. Older funds may face legacy issues such as outdated investment strategies, higher liabilities, or insufficient adaptation to modern financial markets.

BoardSize and Women Size had a positive correlation (r=0.4412∗ showing that larger boards might also have a higher proportion of women. Women on boards may bring unique perspectives and decision-making approaches, contributing to more balanced and comprehensive strategies.

FinancialExpertise and Other Variables: Financial expertise was positively correlated with Fund Size (r=0.4302∗), Board Size (r=0.3167∗), and Women's Size (r=0.2930∗) suggesting that larger and more diverse boards are associated with greater financial expertise.

**Table 2 Correlation Analysis Results**

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 ROA Fund Size Fund Age Board Size Women Size FinExp

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ROA 1.0000

Fund Size 0.8760\* 1.0000

Fund Age -0.5161\* -0.6892\* 1.0000

Board Size 0.7800\* 0.7889\* -0.3662\* 1.0000

Women Size 0.4121\* 0.3640\* -0.2314\* 0.4412\* 1.0000

FinExp 0.4837\* 0.4302\* -0.3096\* 0.3167\* 0.2930\* 1.0000

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 ***\* Sig = significant at 0.05 FinExp = Financial expertise***

**Regression Analysis Result Findings and Hypothesis Testing**

The primary essence of the research was to determine the relationship between the board of trustee characteristics (Board Size, Gender Diversity, and Financial expertise) and the financial performance of university pension Funds in Kenya as represented by ROA. To actualize this, a random effects regression model was run for Board Size, Women's Size, and Financial Expertise on the ROA while controlling for the effects of Fund Age and size which are the control variables. The overall R-squared value for the model is 0.7889 which implies that approximately 78.89% of the variation in ROA is explained by the independent variables and shows the fitness of the model. The within values are 0.7726 indicating that 77.26% of the variation in ROA within the same group i.e. year is explained by the model. The R-squared value of 0.9534 suggests a high explanatory power both within and between groups. The Wald chi-squared statistic of 751.05with a p-value of 0.0000, confirms that the model is statistically significant, indicating that the independent variables collectively have a meaningful effect on ROA.

***H01: Board of Trustees' Size and Financial Performance***

The study tested this hypothesis and found that the board of trustees’ size had a positive and significant effect on ROA (β = 0.0192945, ρ=0.007). The p-value of 0.0007 is less than the 0.05% threshold. This leads to the rejection of the null hypothesis that board size has no significant effect on the financial performance of university pension funds in Kenya. Instead, the alternative hypothesis is accepted, indicating that board size has a significant effect on the financial performance of university pension funds in Kenya. The Z-Value (2.70) suggests that the coefficient for board size is 2.70 standard errors away from zero, reinforcing the decision to reject the null hypothesis.

These findings align with prior research. Coles, Daniel, and Naveen (2008) found that larger boards benefit complex firms by bringing diverse knowledge to manage multiple business lines. Similarly, Tijjani (2012) established that board size is an essential board characteristic positively impacting pension fund sustainability in Nigeria. Naz et al. (2023) concluded that board size significantly affects financial performance, particularly when combined with gender diversity and foreign directors. Tuo et al. (2021) also found a significant and positive relationship between board size and financial performance in non-financial firms in West Africa.

***H02: Gender Diversity in the Board of Trustees and Financial Performance***

An analysis of WoSize (β = 0.0006797, ρ<0.05) shows a p-value of 0.022, which is less than 0.05, confirming that the variable has a significant effect on ROA. The inclusion of one woman on the board increases ROA by 0.0006797 units. Consequently, the null hypothesis is rejected, and the alternative hypothesis is accepted, indicating that gender diversity, particularly the representation of women on the board of trustees, significantly affects the financial performance of university pension funds in Kenya. The positive Z-Value (2.30) further supports this conclusion.

Past research presents mixed results regarding gender diversity and financial performance. However, these findings align with those of Ongore et al. (2015), who found a significant impact of gender diversity on the financial performance of companies listed on the Nairobi Securities Exchange. Kevin et al. (2008) reported a positive effect of gender diversity on firm value in Spain. Simpson et al. (2010) found that increased female board presence fosters participative communication. Gyapong et al. (2016) suggested that appointing women, ethnic minorities, and foreign nationals to corporate boards enhances diversity, independence, and monitoring effectiveness. Aluoch et al. (2020) and Naz et al. (2023) similarly found that gender diversity positively influences financial performance.

***H03: Financial Expertise of the Board of Trustees and Financial Performance***

The study found that financial expertise has a coefficient of β = 0.0981211, ρ<0.022, with a p-value of 0.005, which is below 0.05, indicating a significant effect on ROA. The z-value for financial expertise is 2.79, a strong positive indicator. Given these values, the null hypothesis that financial expertise has no significant effect on financial performance is rejected in favour of the alternative hypothesis, which asserts that financial expertise positively affects the financial performance of university pension funds in Kenya. Every unit increase in financial expertise improves financial performance by 0.0981211 units.

The importance of financial expertise on boards is well-documented. Guner et al. (2008) stated that board members with financial expertise significantly influence firms' finance and investment policies. Johl et al. (2015) found a positive and significant relationship between accounting expertise and financial performance. Andonov et al. (2016) determined that financial literacy is a crucial factor in pension fund board performance. These findings also align with Aluoch et al. (2020), who observed a significant relationship between financial expertise and ROA.

**Table3 Regression Analysis Matrix**

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ROA Coef. Std. Err. z P>z [95% Conf. Interval]

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FundAge 0.0051608 0.000579 8.91 0.000 0.004026 0.0062957

FundSize 114.9791 10.8969 10.55 0.000 93.62156 136.3366

BDSize 0.0192945 0.0071474 2.70 0.007 0.0052859 0.033303

WoSize 0.0006797 0.0002958 2.30 0.022 0.0001 0.0012595

FinExp 0.0981211 0.0351541 2.79 0.005 0.0292203 .1670218

\_cons 0.8376808 0.0123881 67.62 0.000 0.8134005 0.8619611

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sigma\_u 0

sigma\_e .05592313

rho 0 (fraction of variance due to u\_i)

**Summary of the Findings**

This study investigates the relationship between board characteristics (Board Size, Gender Diversity, and Financial Expertise) and the financial performance of universities' pension funds in Kenya Universities, measured by Return on Assets (ROA). Using a random effects model with Fund Age and Fund Size as control variables, the model explains 78.89% of ROA variation, demonstrating strong fit and statistical significance (Wald chi-squared = 751.05, p < 0.000). Board Size (β = 0.0193, p = 0.019) has a positive and significant impact on ROA, aligning with prior studies on board diversity and decision-making. Gender Diversity (WoSize) also shows a significant positive effect (β = 0.0006, p < 0.05), supporting research linking diverse boards with improved performance. Financial Expertise (β = 0.0981, p < 0.005) significantly enhances ROA, emphasizing the value of financial literacy in governance. The findings highlight the critical role of well-structured, diverse, and knowledgeable boards in optimizing pension fund performance.

**Table 4: Summary of Hypotheses Tested**

\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Hypothesis test Decision

Tested statistic

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H01: Board of trustees’ size has no significant β= -0.0193 ρ<0.05 Reject the

Effect on the financial performance of Pension p = 0.007 Null Hypothesis

Funds of Universities in Kenya

H02: Gender Diversity Board of trustees has β= -0.0006 ρ<0.05 Reject the Null

no significant effect on the financial performance p = 0.0022 Hypothesis

of Pension funds of Universities in Kenya

H03: Financial expertise of board of trustees has β= 0.0981 ρ<0.05 Reject the Null

no significant effect on the financial performance p = 0.005 Hypothesis

of Pension funds of Universities in Kenya

4. Conclusion

This study provides robust evidence that board characteristics significantly influence the financial performance of universities' pension funds in Kenya. The positive and statistically significant relationships between Board Size, Gender Diversity, and Financial Expertise with Return on Assets (ROA) highlight the importance of diverse and knowledgeable governance structures.

**Limitations of the Study and Future Research**

This study focused on board size, WoSize, and financial expertise, but it did not consider other board attributes like age, education, or tenure, which may influence financial performance. Future research should explore a broader range of board characteristics and incorporate multiple performance metrics like ROE and ROI for a more comprehensive analysis.

**COMPETING INTERESTS DISCLAIMER:**

Authors have declared that they have no known competing financial interests, non-financial interests, or personal relationships that could have appeared to influence the work reported in this paper.

Disclaimer (Artificial intelligence)

Option 1:

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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