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INFLUENCE OF SECTOR DIVERSIFICATION ON FINANCIAL PERFORMANCE OF PENSION FUNDS IN KENYA

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ABSTRACT

The study aimed to investigate the influence of sector diversification on the financial performance of pension funds in Kenya. The current study was guided by capital market efficiency theory. This study employed a descriptive survey research design. The target population consisted of all registered pension systems. The study utilized stratified sampling, categorizing pension systems into two groups: occupational pension schemes and individual retirement schemes. The primary research data was collected using a standardized questionnaire. The collection of secondary data on the financial performance of pension funds encompassed diverse sources such as websites, yearly and published financial statements, annual general meetings, and in-house periodicals. A preliminary investigation was conducted to evaluate the dependability and accuracy. Model diagnostics test was administered to the dependent and independent variables. The analysis of the quantitative data encompassed the utilization of descriptive statistics alongside inferential statistics, such as Pearson correlation and regression analysis. The analysis was conducted using SPSS version 29. Based on the findings, regression and Pearson's correlation results indicated that there was a positive and significant relationship between sector diversification and the financial performance of pension funds in Kenya. The study recommended conducting thorough sector analysis to identify sectors with favorable growth prospects.

Key Words: *Sector Diversification, Pension Funds, Financial Performance*

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INTRODUCTION

A pension fund is a pool of funds that employees contribute to in order to secure sufficient financial assistance for their post-retirement requirements (Akwimbi, 2022). Nyabuto (2022) states that the main purpose of pension funds is to provide as a means for individuals to save money throughout their working years, which they can then use to support their expenses after they retire from their jobs. Pensions have two primary purposes: firstly, they provide individuals with income based on their previous economic actions (Luo, Zhang & Li, 2022; Ruttoh, 2020). Furthermore, pensions serve as a type of insurance, created through enduring contracts between savers and pension administrators. Pension economics pertains to the management of restricted resources during a saver's lifetime, including their allocation, accumulation, and payout (Morina & Grima, 2022).

Global Pension Statistics Report (2022) of the OECD points out that, as of the end of 2021, OECD pension assets were USD 58.9 trillion. Including countries that did not report to the OECD brought the total to USD 60.6 trillion. With a growth of almost 7% from 2020's end, OECD pension assets are now at 54.3 trillion USD. There were 56.3 trillion USD in pension assets throughout the OECD area. According to the research conducted by Kandie, Macheru, and Osoro (2023), by the end of 2021, the majority of pension funds in 35 out of 38 OECD nations allocated more than 50% of their investments to bonds and equities. The study underscores the significant growth in pension assets compared to GDP over the last two decades, underscoring the heightened significance of retirement savings on a global scale.

The percentage of pension assets in the OECD relative to the total OECD GDP had a substantial increase, rising from 59% at the conclusion of 2001 to 64% by the conclusion of 2011, and further escalating to 105% by the conclusion of 2021 (OECD, 2021). By the end of 2021, the total value of pension assets in the OECD region surpassed the combined gross domestic products (GDPs) of all OECD countries. Furthermore, the analysis highlights a substantial increase in pension assets in many non-OECD nations, surpassing their respective GDPs in certain instances (OECD, 2022).

Mokaya, Chogi, and Nyamute (2020) assert that portfolio diversity is a key element in investment management, crucial for managing the balance between risk and return in investment portfolios. Diversification is a crucial strategy in Kenyan pension funds, as it helps to reduce risks caused by market fluctuations and aims to maximize long-term profits. Portfolio diversification is based on the idea that distributing assets across different asset classes, sectors, and geographic regions might potentially lower total risk without necessarily compromising returns (Li, Yang, Su & An, 2021).

Kusiluka and Kongela (2020) assert that proficient investment portfolio management ensures effectiveness, liquidity, and security in allocating resources across several goals. The key justification for maintaining a broad portfolio rather than a single investment is to maximize returns while minimizing risk. Diversification of investments is essential as it reduces the amount of systematic risk linked to a portfolio (Kinyua, Muturi & Simiyu, 2022). Throughout the decision-making process, the portfolio manager has a list of potential investments and can decide whether to pursue a position based on market conditions and various evaluation considerations. Prudent investing choices result in higher investment returns (Kobor & Muralidhar, 2020).

According to Roncalli and Weisang (2020) and Hasanudin and Pangestutia (2020), Kenyan pension systems make use of systematic risk to direct the selection of their investment portfolios. This helps to ensure that assets are distributed in the most effective manner across a variety of asset classes, including various types of bonds and stocks. An essential element in efficiently overseeing pension plans is the deliberate integration of asset classes with suboptimal correlation in the construction of portfolios. This methodology enables the

achievement of an ideal equilibrium between potential hazards and benefits (Moleko & Ikhide, 2021; Nanda & Atahau, 2020).

The Retirement Benefits Authority (RBA) reports that the retirement benefits plan industry has experienced a substantial amount of growth in recent years. A compound annual growth rate (CAGR) of 11.1% has been experienced by the Assets under Management (AUM) over the course of the past decade, which has led to an increase from Kshs 0.6 trillion in 2012 to Kshs 1.6 trillion in 2022 at the end of the decade. On the other hand, the value of assets increased by a relatively modest 1.2% in 2022, reaching Kshs 1.6 trillion, which is a significant decrease from the Kshs 1.5 trillion that it reached in the previous year. When compared to the 10.6% increase that was reported in 2021, the growth rate that was observed is obviously far lower (RBA, 2022). The increased cost of living in the country, which was a direct result of significant inflationary pressures, was one of the factors that contributed to the slowdown in gross domestic product growth. Consequently, this led to a decrease in the quantity of money that was available for spending among the individuals who were employed. The slow and gradual comeback of the financial markets following the negative impacts of COVID-19, in addition to the general elections in 2022 both contributed to the slowdown of commercial operations in the country. As a consequence of this, the number of individuals who are continuously paying payments to a variety of schemes has been negatively impacted (Nyabuto, 2022).

Pension funds in Kenya employ diversified investment methods to maximize returns while effectively controlling risks. Diversifying investments across stocks, bonds, real estate, and other assets is a widely adopted strategy (Ruttoh, 2020). Nevertheless, attaining an equilibrium between risk and return continues to be a formidable task, particularly in the face of market fluctuations and economic ambiguities. The performance of pension funds in Kenya is rigorously reviewed and assessed (Keli, 2021). Key performance measures for reviewing investments include returns, fund growth, liquidity, and compliance with regulatory norms. Furthermore, there is a growing focus on environmental, social, and governance (ESG) considerations, which involves making investment choices that are in line with sustainable and responsible practices (Ogendi, 2022).

Statement of the Problem

Numerous studies have delved into assessing how effective pension plans are in Kenya's fiscal landscape. Ngetich (2022) investigated the factors influencing the growth of individual pension systems in Kenya. Akwimbi (2022) sought to understand how corporate governance and investment strategies influence the financial performance of pension systems in Kenya. Nyabuto (2022) focused on exploring how diversifying portfolios affects the financial performance of pension funds in Kenya. Wanjohi and Kariuki (2019) investigated the relationship between asset allocation and the effectiveness of occupational pension schemes in Kenya. Mungai and Elly (2018) examined how alternative investments affect the financial performance of pension funds in Kenya. Nzioka (2020) analyzed the asset allocation and financial performance of various pension schemes in Kenya. Mwachanya (2020) aimed to understand how asset allocation impacts the financial performance of pension funds in Kenya. Ndungu (2021) evaluated the influence of asset allocation on the financial performance of pension systems in Kenya.

The results of these studies differ in terms of the effect of portfolio diversification on pension fund performance. The relationship between sector diversification and financial success of pension funds poses a significant dilemma for pension fund members, elected trustees, fund managers, and sponsors. Pension funds employ various investment policy statements to enhance their performance, guiding their decisions on sector diversification. The impact of sector diversity on pension fund

performance remains uncertain. Pension funds are distinctive entities as they possess enduring obligations that pertain to beneficiaries. The current study aimed to assess the impact of sector diversity on the financial performance of pension funds in Kenya.

Research Objective

The purpose of this study was to determine the influence of sector diversification on financial performance of pension funds in Kenya.

LITERATURE REVIEW

Theoretical Framework

Theory of Capital Market Efficiency

During the 1960s, Eugene Fama laid the groundwork for what would later become known as Kapital Market Efficiency. The theory offers valuable insights into the diversification of sectors within pension funds (Morina & Grima, 2022). The notion of Capital Market Efficiency posits that markets effectively assimilate all accessible information, rendering it arduous for investors to continually surpass the market based on existing information (Luo et al., 2022). Applied to sector diversification within pension funds, this theory underscores the difficulty in consistently predicting sector-specific performance, advocating for a diversified approach to mitigate sector-specific risks (Ruttoh, 2020).

Within pension fund management, the theory of Capital Market Efficiency implies that sector-specific information is quickly assimilated into market prices, making it challenging for fund managers to consistently identify undervalued or overvalued sectors (Othman & Albuainain, 2022). According to Son and Kim (2022), this theory supports the notion that trying to time the market or predict the outperformance of specific sectors consistently is arduous due to the efficiency with which market information is reflected in asset prices. As a result, pension funds may opt for sector diversification as a means to navigate this market efficiency and reduce dependency on predicting sector-specific performance.

The theory of Capital Market Efficiency resonates well with sector diversification. It underlines the challenges of consistently outperforming the market or predicting sector-specific movements. This theory supports the rationale behind sector diversification within pension funds as a strategy to mitigate sector-specific risks and aligns with a more passive investment approach, emphasizing the difficulty in consistently beating an efficiently priced market through active sector selection.

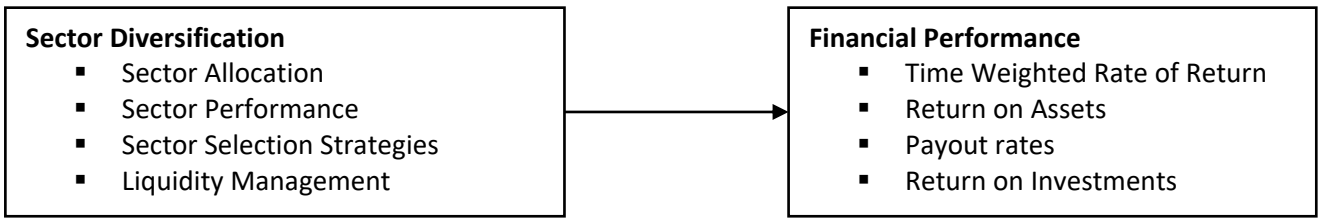
Empirical Literature Review

Martí-Ballester (2020) conducted a comprehensive analysis to determine the economic effectiveness of pension funds that allocate their investments to sectors that align with sustainable investment objectives. These sectors include agribusiness, healthcare, energy, infrastructure, technology, and natural resources. There is also the possibility that these industries adhere to ethical or environmental standards. For the purpose of this study, the Carhart model as well as the Bollen and Busse model are utilized in order to conduct an analysis on a sample of 1,546 pension funds that were traded worldwide between January 2007 and December 2018. According to the findings, certain pension funds that direct their investments toward a particular industry that is connected with sustainable development goals have the potential to outperform both the general market performance and the performance of conventional pension funds. Through the application of both conditional and unconditional Carhart models, it was shown that the category of pension funds that are associated to technology creates the highest average risk-adjusted return, whilst the category of pension funds that are related to energy generates the lowest average risk-adjusted return. According to these findings, lowering the number of investment options does not result in a fall in the risk-adjusted return as expected. In contrast to the insufficient ability of managers in the energy industry to make selected selections, the most important aspect that contributes to this financial success is the skillful ability of managers in the

technology sector to select stocks. It appears from the findings that the prospects for investment vary depending on the sector of the economy that is related with sustainable development goals.

Keli (2021) conducted a study to determine the influence of real estate investments on the financial performance of pension funds catering to the Kenyan populace. The analysis focused on evaluating the variables of real estate investments, fixed income investments, listed shares, and fund size individually. The investigation employed a methodology called descriptive research. The study explicitly focused on the demographics of 1,340 pension funds in Kenya. The sample consisted of 134 pension funds, representing 10 percent of the overall population. From 2016 to 2020, the Retirement Benefits Authority (RBA) provided the data used for the research variables. The study examined the hypotheses by employing regression and correlation analysis to determine the association between real estate investments and performance. The analysis revealed that investments in real estate (β=0.095, p=0.000), fixed income (β=0.082, p=0.001), and listed equities (β=0.033, p=0.008) had a statistically significant positive impact on the performance of pension funds in Kenya. Based on the study's findings, policymakers in charge of pension funds should develop strategies to enhance real estate investments in order to achieve better financial outcomes. The report recommends that trustees and management of pension funds focus on enhancing their financial performance by diversifying their investments in fixed income and listed equity.

Conceptual Framework



Independent Variable **Dependent Variable**

Fig 1: Conceptual Framework

METHODOLOGY

For the purpose of this investigation, a descriptive survey research design was utilized. According to the RBA (2023), there are a total of 343 officially registered pension funds in Kenya. The target population consisted of all registered pension schemes.

All pension fund providers in Kenya who were registered as of December 31, 2023 made up the sampling frame for this study. The utilization of stratified random sampling was planned for this study to pick respondents for the sample. The Yamane formula (1967) provided a method for determining the sample size required for a specific study. The calculation is as follows:

$$\mathbf{n} = \frac{\mathbf{N}}{\mathbf{1+N(e^2)}}$$

$$\mathbf{n} = \frac{\mathbf{343}}{\mathbf{1+343(0.05^2)}}$$

n = 185

The collection of primary research data was conducted through the utilization of a standardized questionnaire. Websites, public financial statements in national media, annual general meetings, and in-house magazines were used to obtain secondary data on the financial performance of pension funds.

Reliability and validity of the instruments was checked by conducting a pilot test amongst a few respondents outside the sample.

The study used SPSS software to calculate Cronbach's Alpha Coefficients.

To determine if the questionnaire is valid, factor analysis was used.

Due to the reliance on primary data, the research gathered quantitative information through a questionnaire. A combination of descriptive statistics and inferential statistics were used to examine the numerical data. The statistical software SPSS, version 29, was used to conduct the analysis. To facilitate easy comparison and the development of reasonable conclusions, the results were offered in a tabular graphical format.

RESULTS AND DISCUSSIONS

The response rate was eighty-nine (89) percent which was sufficient for a representative opinion to guide in making appropriate conclusions.

Table 1: Response Rate

Response	Frequency	Percent
Returned	165	89
Unreturned	20	11
Total	**185**	**100**

Descriptive Results

Sector Diversification

The second objective of the study delves into assessing the influence of sector diversification on the financial performance of pension funds in Kenya. Sector diversification refers to the distribution of investment assets across various sectors in order to spread risk and optimize returns. This strategy is essential for mitigating the impact of adverse market movements within any particular sector. The findings, as presented in Table 2, shed light on several key aspects of sector diversification within pension funds.

Firstly, the mean scores indicate a generally positive perception regarding sector diversification among the respondents. The mean values for all statements regarding sector diversification range from 3.7515 to 4.2242 on a scale of 1 to 5, suggesting a favorable outlook on the effectiveness of sector diversification strategies within pension funds. This signifies that pension funds in Kenya are perceived to be adequately allocating their assets across various sectors, selecting sectors that consistently demonstrate strong performance compared to industry benchmarks and employing effective strategies aligned with long-term growth objectives.

Moreover, the findings suggest that pension funds are maintaining optimal liquidity levels within sectors. This is crucial for meeting short-term obligations without compromising long-term investment goals. The mean score for the statement “The fund maintains optimal liquidity levels within sectors, ensuring the ability to meet short-term obligations without compromising long-term goals” is 3.8970, indicating a positive perception regarding the liquidity management practices of pension funds in Kenya.

Furthermore, the study reveals that sector diversification strategies are perceived to enhance the stability and resilience of investment portfolios. This is evidenced by the high mean score of 4.2242 for the statement “The fund’s sector diversification strategy enhances the stability and resilience of the investment portfolio.” This suggests that sector diversification is viewed as a crucial mechanism for mitigating risks and ensuring the stability of pension fund investments. Additionally, the findings indicate that sector diversification strategies align well with the overall objectives of pension funds in Kenya. The mean score of 3.7515 for the statement "Sector diversification strategies align well with the fund's overall objectives, balancing risk and return effectively" implies that these strategies are perceived to effectively balance risk and return

while aligning with the broader investment objectives of pension funds.

The findings of this study concur with those of Keli (2021) who conducted a study to determine the influence of real estate investments on the financial performance of pension funds catering to the Kenyan populace. The analysis focused on evaluating the variables of real estate investments, fixed income investments, listed shares, and fund size individually. The analysis revealed that investments in real estate, fixed income and listed equities had a statistically significant positive impact on the performance of pension funds in Kenya. Based on the study's findings, policymakers in charge of pension funds should develop strategies to enhance real estate investments in order to achieve better financial outcomes. The report recommends that trustees and management of pension funds focus on enhancing their financial performance by diversifying their investments in fixed income and listed equity.

Similarly, Son and Kim (2022) focused on the U.S. pension fund industry, analyzing the relationship between sector diversification and risk-adjusted returns. The findings underscored a notable relationship between strategic sector diversification and the subsequent reduction in portfolio volatility. Pension funds that effectively spread their investments across multiple sectors exhibited lower levels of volatility compared to those with concentrated holdings in specific industries. This diversification acted as a cushion, mitigating the impact of sector-specific fluctuations or market downturns, thus contributing to a more stable overall financial performance. The study findings also revealed that funds with a well-diversified portfolio were better positioned to navigate through adverse sectoral conditions, exhibiting more consistent financial performance even when particular sectors experienced downturns. This aspect highlighted the resilience and risk-mitigating benefits associated with a diversified approach to sector allocations. The findings served as a guiding principle for pension fund managers in formulating investment strategies aimed at optimizing risk-adjusted returns, particularly by leveraging sector diversification to navigate market fluctuations and volatility.

Table 2: Sector Diversification

Statement	N	Mean	Std. Deviation
The pension fund adequately allocates its assets across various sectors to spread risk and maximize returns	165	3.8788	1.02878
The sectors in which the fund invests consistently demonstrate strong performance compared to industry benchmarks	165	3.9030	.82805
The fund employs effective strategies in selecting sectors for investment that align with long-term growth objectives	165	3.9515	1.04652
The fund maintains optimal liquidity levels within sectors, ensuring the ability to meet short-term obligations without compromising long-term goals	165	3.8970	.77005
The fund's sector diversification strategy enhances the stability and resilience of the investment portfolio	165	4.2242	.62812
Sector diversification strategies align well with the fund's overall objectives, balancing risk and return effectively	165	3.7515	.97784
Valid N (listwise)	**165**		

Financial Performance of Pension Funds

The financial performance of pension funds is a critical aspect of their overall effectiveness in meeting the retirement needs of their members. Table 3 presents findings regarding various aspects of the financial performance of pension funds in

Kenya, shedding light on their investment strategies, returns, and ability to support retirees' financial needs. The mean scores across the statements suggest a generally positive perception among respondents regarding the financial performance of pension funds in Kenya. Scores range from 3.9152 to 4.3515 on a scale of 1 to 5, indicating a favorable outlook on the effectiveness of pension fund investment strategies in generating returns that align with long-term objectives and industry benchmarks.

The high mean score of 4.3515 for the statement "The pension fund's investment strategies have consistently generated favorable returns" indicates a positive perception regarding the ability of pension funds to generate satisfactory returns for their members. This suggests that pension funds in Kenya are effectively deploying investment strategies that yield favorable outcomes over time. Furthermore, the mean score of 4.0909 for the statement "The fund's investment performance meets industry benchmarks" suggests that pension funds in Kenya are performing in line with industry standards. This indicates that pension funds are able to achieve investment results that are comparable to or better than those of their peers within the industry.

Moreover, the findings suggest that pension funds are effectively utilizing their assets to generate satisfactory returns. The mean score of 4.2121 for the statement "The fund effectively utilizes its assets to generate satisfactory returns" indicates that pension funds are adept at deploying their assets in a manner that maximizes returns while managing risks effectively. Additionally, the mean score of 4.0727 for the statement "The fund's pay out rates adequately support retirees' financial needs" suggests that pension funds in Kenya can provide retirees with the financial support they need during retirement. This indicates that pension funds are successful in managing their pay out rates to ensure the long-term sustainability of retirement benefits.

However, the slightly lower mean score of 3.9152 for the statement "The returns achieved by the fund's assets align with the fund's long-term objectives" suggests that there may be room for improvement in ensuring that investment returns are fully aligned with the long-term objectives of pension funds. This highlights the importance of closely aligning investment strategies with the broader goals of pension funds to optimize performance and achieve desired outcomes. The mean score of 4.0667 for the statement "The Time Weighted Rate of Return is a reliable measure for assessing the fund's investment success" suggests that pension funds in Kenya rely on robust performance metrics to evaluate their investment success. This indicates a commitment to transparency and accountability in assessing and communicating investment performance to stakeholders.

The findings of this study are consistent that of Nguthu (2020) who did a study on the effect of assets allocation on retirement Benefits schemes performance in Kenya. The study explored metrics such as the Time Weighted Rate of Return (TWRR), Sharpe ratio, Information ratio, and tracking error, assessing their reliability and suitability in measuring investment success. By validating the use of TWRR as a reliable measure for assessing investment success, this study reinforces the findings presented in Table 3 regarding the robustness of performance measurement practices adopted by pension funds in Kenya. Overall, these studies provide valuable insights and theoretical frameworks that support the findings regarding the financial performance of pension funds in Kenya, enhancing the understanding of the factors influencing their effectiveness in meeting the retirement needs of their members.

Table 3: Financial performance of Pension Funds

Statement	N	Mean	Std. Deviation
The pension fund's investment strategies have consistently generated favorable returns	165	4.3515	.72251
The fund's investment performance meets industry benchmarks	165	4.0909	.47905
The fund's pay out rates adequately support retirees' financial needs	165	4.0727	.78526
The fund effectively utilizes its assets to generate satisfactory returns	165	4.2121	.68777
The returns achieved by the fund's assets align with the fund's long-term objectives	165	3.9152	.76034
The Time Weighted Rate of Return is a reliable measure for assessing the fund's investment success	165	4.0667	.49551
Valid N (listwise)	**165**		

Normality Test using Kolmogorov-Smirnov

Table 4 provides insights into the normality of the distribution of variables under examination, employing both the Kolmogorov-Smirnova and Shapiro-Wilk tests. Both statistical tests yield statistically significant results with p-values less than 0.001, indicating a departure from normality. The Kolmogorov-Smirnova statistics is at 0.139 while the Shapiro-Wilk statistics is at 0.930 to 0.957. These results suggest that the distributions of the variable deviate significantly from a normal distribution. Furthermore, the use of the Lilliefors Significance Correction reaffirms the statistical significance of these findings. Consequently, the departure from normality underscores the necessity for caution when employing parametric statistical analyses, emphasizing the potential implications for subsequent analytical procedures and the importance of considering alternative non-parametric approaches where applicable.

This study therefore rejected the null hypotheses (H01), and concluded that the data set for the variable was not normally distributed. Despite the significant departure from normality indicated by the Kolmogorov-Smirnova and Shapiro-Wilk tests, there are arguments from researchers supporting the use of parametric procedures even in instances of non-normally distributed data.

Firstly, as stated by Cumming and Finch (2022), parametric tests such as t-tests and ANOVA tend to be robust against violations of normality when sample sizes are sufficiently large. In the context of the study's sample size of 165, the robustness of parametric tests may provide assurance in the face of non-normality. This assertion aligns with the findings of Keselman et al. (2021), who demonstrated through simulation studies that the robustness of parametric tests increases with sample size, even in cases of moderate departures from normality.

Secondly, according to Field (2023), parametric tests can still yield accurate results when underlying assumptions are only moderately violated, particularly if other assumptions such as homogeneity of variance are met. This argument suggests that while the data may not strictly adhere to the assumptions of normality, the overall integrity of parametric procedures may remain intact if other assumptions are upheld.

Lastly, Harwell et al. (2022) advocate for the use of parametric tests when the research question specifically pertains to mean differences or relationships between variables, rather than the distributional characteristics of the data itself. In this perspective, the focus shifts from the shape of the distribution to the inferential goals of the analysis, thereby justifying the use of parametric procedures despite non-normality.

where;

H_0: The data is normally distributed.

H_1: The data is not normally distributed.

Table 4: Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Sector Diversification	.139	165	<.001	.957	165	<.001
Financial Performance	.218	165	<.001	.930	165	<.001

a. Lilliefors Significance Correction

Test for Multicollinearity

In examining Table 5, which presents the results of the multicollinearity test utilizing Tolerance and Variance Inflation Factor (VIF), several critical insights emerge regarding the interplay between sector diversification and its impact on the financial performance of pension funds. Multicollinearity, the phenomenon wherein predictor variables in a regression model are highly correlated, poses a significant challenge in statistical analysis, potentially inflating standard errors and undermining the reliability of regression coefficients (Zhu et al., 2020). As a rule of thumb, tolerance values below 0.1 or VIF values exceeding 10 indicate problematic multicollinearity suggesting the need for remedial action such as variable exclusion or data transformation (Ghauri & Gronhaug, 2020). However, in the context of the presented data, while some predictors exhibit tolerance values slightly below the conventional threshold, all VIF values remain comfortably below 10, indicative of manageable multicollinearity.

Sector diversification, the model under scrutiny, demonstrates a tolerance of 0.662.

Table 5: Multicollinearity test using Tolerance and VIF

		Collinearity Statistics	
Model		**Tolerance**	**VIF**
1	Sector Diversification	.662	1.510

a. Dependent Variable: Financial Performance of Pension Funds

Correlation Analysis

Table 6 provides an overview of the correlation between sector diversification and the dependent variable, which pertains to the financial performance of pension funds. Zhu et al. (2020) opine that correlation analysis serves as a pivotal tool in elucidating the degree and direction of association between variables, offering insights into potential relationships and patterns within the dataset. Notably, the Pearson correlation coefficient, a widely utilized measure of linear association, is employed to quantify the strength and direction of these relationships, while the significance level of correlations is assessed through two-tailed tests, providing insights into the reliability and robustness of observed associations.

An examination of sector diversification reveals a positive correlation of 0.551 with the financial performance of pension funds, indicating a significant association between these variables. Pension funds that allocate their investments across diverse sectors tend to exhibit superior financial performance, as evidenced by the robustness of the correlation and its statistical significance level of $p < .001$. This underscores the importance of sectoral diversification as a strategy for mitigating risk and optimizing investment returns within pension fund portfolios.

Table 6: Correlation Analysis

		X_1	Y
X_1	Pearson Correlation	1	
	Sig. (2-tailed)		
	N	165	
Y	Pearson Correlation	.551**	1
	Sig. (2-tailed)	<.001	
	N	165	165

Key: Y = Financial Performance of Pension Funds; X_1 = Sector Diversification

Regression Coefficients

Table 7 presents the coefficients derived from a multiple regression analysis aimed at understanding the relationship between the diversification strategy and the financial performance of pension funds.

The coefficient for Sector Diversification is .075, suggesting that for every unit increase in sector diversification, there is an anticipated increase of .075 units in the financial performance of pension funds. With a standard error of .036 and a Beta value of .095, sector diversification emerges as a moderately influential factor.

Table 8: Regression (Coefficients)

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.499	.163		3.070	.003
	Sector Diversification	.075	.036	.095	2.074	.040

a. Dependent Variable: Financial Performance of Pension Funds

$Y = 0.499 + 0.075X_1$

Where:

Y = Financial Performance of Pension Funds

β_0= Constant

X_1= Sector Diversification

e_i= Stochastic term

CONCLUSIONS AND RECOMMENDATIONS

The objective of the study was to assess the influence of sector diversification on financial performance of pension funds in Kenya. Sector diversification was found to be satisfactory in explaining the financial performance of pension funds in Kenya. Further, results showed that sector diversification is a good predictor of financial performance of pension funds. Correlation analysis revealed that sector diversification was positively and significantly associated to the financial performance of pension funds. Regression of coefficient revealed that there was a positive and significant relationship between sector diversification and financial performance of pension funds. This means that an improvement in sector diversification leads to an improvement in financial performance of pension funds. The study adopted the alternative hypothesis that sector diversification has a significant influence on financial performance of pension funds in Kenya.

This study affirms the substantial and positive impact of sector diversification on the financial performance of pension funds within the Kenyan context. The study findings elucidate that the pension fund under scrutiny employs a comprehensive asset allocation strategy across diverse sectors, thereby effectively spreading risk and optimizing returns. Notably, the sectors in which the fund allocates its resources consistently exhibit robust performance relative to industry benchmarks, indicating the efficacy of its diversification approach. Moreover, the study underscores the pension fund's adeptness in

strategically selecting sectors for investment that align with its long-term growth objectives. This strategic alignment between investment decisions and overarching goals is a testament to the fund's forward-looking approach to portfolio management. Furthermore, the fund's prudent management of liquidity levels within sectors ensures its capacity to meet short-term obligations without compromising its overarching long-term objectives.

Overall, the sector diversification strategy adopted by the fund emerges as a critical driver in fortifying the stability and resilience of its investment portfolio. By effectively balancing risk and return, these strategies align closely with the fund's overarching objectives, thus contributing to its sustained financial health and performance.

Sector diversification is crucial for spreading risk and optimizing returns within pension fund portfolios. Firms should conduct thorough sector analysis and research to identify sectors with favorable growth prospects and align investment decisions accordingly. A balanced approach to sector allocation is essential to mitigate concentration risk and capture opportunities across diverse industries. Regular monitoring and evaluation of sector performance are necessary to identify emerging trends and adjust sector allocations accordingly, ensuring portfolio resilience and adaptability to changing market conditions.

Areas for Further Research

The study aimed to determine the influence of sector diversification on financial performance of pension funds in Kenya. The study has shown that there is need for further research on other financial performance of pension funds in Kenya. From the results, sector diversification explains to some extent financial performance of pension funds in Kenya, with some percentage not being explained. The study suggests further research to be carried out on the other determinants of financial performance of pension funds in Kenya not captured in the current study.

The current study did not use neither a moderating nor an intervening variable. There are other factors that can affect by mediating or intervening which could be researched further for example portfolio rebalancing. Therefore, future studies can introduce a moderating or an intervening variable in their models.

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