

Drivers of financial sustainability of individual pension schemes in Kenya

Saul Nzioka Ngao^{1*}
James Ndegwa²

^{1*} mr.ngao@gmail.com

¹Strathmore University, ²Co-operative University of Kenya, ^{1,2}Kenya

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ABSTRACT

This study sought to determine the drivers of the financial sustainability of individual pension schemes in Kenya. Specifically, the study examined the effect of market timing, security selection, portfolio rebalancing, asset allocation, and market sentiment on the financial sustainability of individual pension schemes registered by the Retirement Benefits Authority (RBA). The study was guided by Modern Portfolio Theory, Institutional Theory, and Capital Market Efficiency Theory. A pragmatic research philosophy and a sequential explanatory mixed-methods design were adopted. The target population comprised 49 individual pension schemes registered by the RBA, and a census approach was applied. Primary and secondary data were collected between 27th November and 27th December 2024. Data analysis was conducted using the Statistical Package for Social Sciences (SPSS) Version 27. An ordinal logistic regression model was employed to determine the effect of the independent variables on financial sustainability. The findings established that security selection and market sentiment had statistically significant positive effects on the financial sustainability of individual pension schemes in Kenya. Specifically, security selection had a significant positive effect ($\beta = 0.620$, $p = 0.000$), implying that an improvement in security selection practices increased the likelihood of higher financial sustainability among pension schemes. Similarly, market sentiment demonstrated a statistically significant positive effect ($\beta = 0.561$, $p = 0.007$), indicating that favourable market sentiment enhanced the probability of improved financial sustainability outcomes. However, asset allocation ($\beta = 0.430$, $p = 0.138$), market timing strategies ($\beta = 0.360$, $p = 0.095$), and portfolio rebalancing ($\beta = 0.282$, $p = 0.165$) exhibited positive but statistically insignificant effects on financial sustainability. The findings therefore suggest that while these strategies may contribute positively to pension scheme sustainability, their effects were not sufficiently strong to be statistically confirmed within the study context. The study concludes that security selection and market sentiment are critical determinants of the financial sustainability of individual pension schemes in Kenya. The study recommends that pension fund managers strengthen security selection frameworks, enhance investment analysis capacity, and integrate market sentiment monitoring into investment decision-making processes. Regulatory authorities should also encourage prudent investment governance practices and improved market information systems to enhance the long-term sustainability of pension schemes in Kenya.

Keywords: Asset Allocation, Financial Sustainability, Market Sentiments, Market Timing, Portfolio Rebalancing, Pension Schemes, Security Selection

I. INTRODUCTION

Kenya's pension system is currently grappling with a severe crisis, underscored by significant gaps in contributions and payments (Ambani, 2024). The Retirement Benefits Authority (RBA) has raised concerns about the sustainability of the country's pension schemes, highlighting that only about 20% of Kenyans are covered by any form of pension, leaving the majority financially vulnerable in retirement. Despite transitioning from a defined benefit to a defined contribution model, several state-owned enterprises, such as Posta Kenya, continue to struggle to meet their pension obligations (Mathenge, 2023). By the end of the last financial year, outstanding employer contributions for pensions amounted to KSh 42.06 billion, with unremitted contributions alone totalling KSh 40.8 billion, excluding penalties (Retirement Benefits Authority [RBA], 2023). This growing deficit poses a direct threat to the financial sustainability of individual pension schemes, risking that some retirees may receive no pensions at all. Further, the Financial Sector Deepening (FSD) Kenya annual report has pointed to systemic inefficiencies and weak enforcement mechanisms as major contributors to the crisis. The situation is exacerbated by the National Treasury's recent inability to remit pensions for civil servants during the first half of the 2023/24 financial year, leaving arrears of KSh 4.59 billion from May and June 2023. (Financial Sector Deepening [FSD], 2024)

This crisis coincides with projections from the National Treasury, estimating that approximately 85,400 public service workers will retire between 2024 and June 2026. Of these, about 30,155 were expected to leave in the financial year ending June 2024, with numbers gradually decreasing in subsequent years. The pension schemes are also contending with high volatility in the stock market and rising interest rates, which have negatively affected pension investments (National Treasury, 2024). According to the Central Bank of Kenya [CBK] report, the sector's exposure to market fluctuations has worsened due to instability in equity and bond prices. Major declines in capital markets were

reported, with quoted equities dropping by 32.6 per cent and corporate bonds by 15.4 per cent. Capital markets were characterized by declines in equity and bond prices, with significant scale-downs by foreign investors and inactive corporate bond markets. This negatively impacted the returns on investment for the pension sector (CBK, 2024).

Several research gaps are evident in the existing literature. First, a contextual research gap exists where there is a growing body of work on global pension crises, research has not sufficiently explored the specific impact of liquidity constraints on Kenya's pension schemes, mainly how such constraints influence fund sustainability during large-scale retirements. Secondly, conceptual research gaps exist where studies; Atandi and Bosire (2023) and Mathenge (2023) have examined investment strategies, they do not sufficiently address the efficacy of current investment strategies regarding their financial returns for individual pension schemes in Kenya. Thirdly, a methodological research gap exists where many studies (Yakubu et al., 2023) rely on short-term or cross-sectional data, but there has been little to no longitudinal analysis of pension reforms or management practices. Lastly, knowledge research gaps exist where there is limited research on the systemic causes of large outstanding balances and unpaid contributions and the stability of contribution rates relative to liabilities (Arslan et al., 2020; Danso 2019; Waweru, 2022; Temba, 2025).

This study, therefore, addressed these research gaps by exploring the drivers of the financial sustainability of individual pension schemes in Kenya. The study addressed the theoretical and empirical literature gaps, by providing actionable insights to policymakers and fund managers seeking to stabilize pension contributions and improve long-term financial outcomes. The rest of the paper is organized as follows. Section 2 presents the literature review, covering theoretical foundations, empirical perspectives, and research questions development. Section 3 outlines the research methodology. Section 4 presents and discusses the empirical findings. Section 5 provides the conclusions, recommendations, and contributions of the study.

1.1 Research Objectives

The main objective of this study was to determine the drivers of the financial sustainability of individual pension schemes in Kenya.

The study was structured around the following specific objectives:

- i. To assess the effect of market timing on the financial sustainability of individual pension schemes in Kenya.
- ii. To examine the effect of security selection on the financial sustainability of individual pension schemes in Kenya.
- iii. To investigate the effect of portfolio rebalancing on the financial sustainability of individual pension schemes in Kenya.
- iv. To assess the effect of asset allocation on the financial sustainability of individual pension schemes in Kenya.
- v. To examine the effect of market sentiment on the financial sustainability of individual pension schemes in Kenya.

II. LITERATURE REVIEW

2.1 Theoretical Review

2.1.1 Modern Portfolio Theory (MPT)

Modern Portfolio Theory was created by Harry Markowitz in 1952. The theory holds that investors behave as they attempt to avoid risk but, at the same time, endeavor to earn the highest possible return on their investment (Blay, 2024). MPT directly applies to the specific objectives of the study, particularly in understanding the effect of asset allocation and portfolio rebalancing on the financial sustainability of individual pension schemes in Kenya (Jones & Trevillion, 2022).

2.1.2 Institutional Theory

Institutional theory was developed by John Meyer and Brian Rowan (1977) and later expanded by Richard Scott (1995). This theory suggests that organizational behavior is shaped not only by efficiency and performance imperatives but also by the need to conform to societal and institutional expectations to gain legitimacy (Meyer & Höllerer, 2014). Institutional theory explains how financial sustainability and market sentiments are influenced by regulatory frameworks, cultural norms, and market dynamics (Lawrence & Shadnam, 2008).

2.1.3 Capital Market Efficiency Theory

Capital Market Efficiency (CME) Theory developed by Eugene Fama in 1970. This theory postulates that financial markets are "efficient" in incorporating all available information in the prices of financial assets (Erdem, 2020). CME theory offers a framework through which it is possible to analyse pension fund managers' and investors' decisions regarding investment choices, entry and exit timings and portfolio management, in the light of prevailing market conditions (Soares, 2020).

2.2 Empirical Review

2.2.1 Effect of market timing on the financial sustainability of individual pension schemes

Empirical evidence on market timing presents mixed findings regarding its influence on pension scheme sustainability. Sievänen et al. (2017) find that market timing can improve short-term performance but requires active portfolio rebalancing to sustain benefits. Similarly, Parker and Sun (2025) report that market timing is effective under stable conditions but loses significance during financial volatility, though their findings lack applicability to Kenya. Oloruntoba and Ihiovi (2022) report a negative but statistically insignificant effect, highlighting methodological limitations in measuring market timing. In Uganda, Okech and Ogola (2023) show that market timing yields positive results during low inflation but negative outcomes during high inflation, emphasizing the importance of macroeconomic conditions, although this was not fully explored. In Kenya, Ondieki (2022) finds that market timing has minimal impact compared to asset allocation, though the study overlooked short-term market dynamics. Overall, the reviewed studies suggest that market timing has limited or context-dependent effects, with stronger outcomes when combined with portfolio rebalancing strategies. Based on the foregoing review and theoretical foundations, the following research question was formulated:

What is the effect of market timing on the financial sustainability of individual pension schemes in Kenya?

2.2.2 Effect of asset allocation on the financial sustainability of individual pension schemes

The literature consistently identifies asset allocation as a key determinant of pension fund sustainability, particularly through diversification strategies. Zhao and Sutcliffe (2021) find that multi-asset diversification enhances resilience during economic downturns in the UK, while Umar and Olson (2022) emphasize optimal long-term allocation strategies in South Africa, though without addressing external shocks. In Kenya, Ondieki (2022) shows that asset allocation accounts for a significant proportion (58%) of pension fund performance, but does not consider external economic influences. Atandi and Bosire (2023) extend this by incorporating liquidity and fund size as additional determinants of sustainability. Mwangi (2021) highlight the benefits of combining government securities, real estate, and equities, though they neglect global market effects. Similarly, Zaimovic et al. (2021) emphasize diversification across traditional and alternative assets, as well as regional cooperation, but do not examine global trends. Overall, while there is consensus on the centrality of asset allocation, studies differ in scope, with most overlooking external and global market dynamics, except for limited attention to regional interdependencies. Based on the foregoing review and theoretical foundations, the following research question was formulated:

What is the effect of asset allocation on the financial sustainability of individual pension schemes in Kenya?

2.2.3 Effect of security selection on the financial sustainability of individual pension schemes

The literature generally supports a positive relationship between security selection and pension scheme sustainability. Wang (2024) finds that active security selection enhances long-term sustainability in Chinese pension schemes, though findings are context-specific. Makocheke et al. (2024) report improved performance in Zimbabwe during economic recovery periods but do not account for external shocks. Oloruntoba and Ihiovi, (2022) identify security selection as a key predictor of sustainability in Nigeria, though with limited analytical depth. In Kenya, Waweru (2022) confirms that effective security selection improves returns, while LinLin (2024) highlight the role of ethical and diversified investments, albeit without considering macroeconomic influences. Despite contextual and methodological gaps, most studies agree that careful security selection enhances returns and reduces risk. However, contrasting views exist, with some scholars emphasizing active selection (Wang, 2024) and others highlighting diversification within passive strategies (Mwangi, 2021), while Makocheke et al. (2024) stress its varying importance across economic cycles. Based on the foregoing review and theoretical foundations, the following research questions was formulated:

What is the effect of security selection on the financial sustainability of individual pension schemes in Kenya?

2.2.3 Effect of portfolio rebalancing on the financial sustainability of individual pension schemes

Existing literature underscores the importance of portfolio rebalancing in enhancing pension scheme sustainability, though with notable contextual and conceptual gaps. Bikker et al. (2018) show that rebalancing behavior varies with market performance, with limited rebalancing during short-term equity gains leading to allocation shifts and increased risk exposure, particularly among larger funds; however, their findings are limited to Dutch schemes. Pan (2023) demonstrates that integrating portfolio rebalancing with market sentiment analysis improves decision-making and performance in South Africa, though the study lacks relevance to Kenyan contexts. In Kenya, Ondieki (2022) emphasizes asset allocation but does not explicitly address rebalancing, creating a conceptual gap on how periodic adjustments influence sustainability. Okoth (2024) highlight the need for continuous portfolio review and rebalancing to optimize returns and manage risk, although they overlook external shocks such as economic crises. Overall, the reviewed studies agree that rebalancing supports financial sustainability, with variations in focus on market asymmetry,

strategic alignment, and the integration of sentiment analysis. Based on the foregoing review and theoretical foundations, the following research question was formulated:

What is the effect of portfolio rebalancing on the financial sustainability of individual pension schemes in Kenya?

2.2.4 Effect of market sentiment on the drivers of financial sustainability of individual pension schemes

The literature highlights market sentiment as an important determinant of pension fund sustainability, primarily through its influence on investment decisions and risk behavior. Yakubu et al., (2023) found that positive market sentiment enhances investor confidence and improves pension fund performance in Nigeria, though their findings are not directly applicable to Kenya due to regulatory differences. Dautaj (2023) shows that in European markets, positive sentiment encourages investment in higher-risk assets, while negative sentiment prompts shifts toward safer instruments. Similarly, Osina (2019) demonstrates that sentiment significantly shapes investment behavior during financial crises, though the global scope limits contextual relevance to Kenya. In the Kenyan context, Temba (2025) finds that market sentiment significantly affects property investment returns and valuations but does not examine its interaction with other key investment strategies, creating a conceptual gap. Makau (2021) confirm a strong relationship between market sentiment and investment performance in Kenyan pension schemes; however, their reliance on primary data limits analysis of long-term trends, presenting a methodological gap. Overall, the reviewed studies agree that market sentiment influences pension fund sustainability through its effect on risk-taking and asset allocation decisions, though gaps remain in long-term analysis and integration with other investment factors. Based on the foregoing review and theoretical foundations, the following research question was formulated:

What is the effect of market sentiment on the drivers of financial sustainability of individual pension schemes in Kenya?

III. METHODOLOGY

3.1 Research Design

This study employed a sequential explanatory mixed methods design. By employing this design, the study aims to determine the degree and direction of association between various strategies used by pension fund managers and the financial sustainability of individual pension schemes in Kenya. This approach is carefully chosen to align with the study's objectives.

3.2 Study Area

This study was carried out in Nairobi, Kenya. Nairobi was selected as the study area due to its central role in Kenya's financial and pension sectors. It hosts key institutions such as regulators, pension fund managers, and administrators, providing easy access to relevant data and stakeholders. As the country's main financial hub, Nairobi offers a dynamic environment where investment strategies like market timing, security selection, portfolio rebalancing, asset allocation, and market sentiment are actively applied, making it suitable for achieving the study objectives.

3.3 Target Population

The target population comprised 49 Individual retirement benefit schemes registered in Kenya as of December 2024 (RBA, 2024). This study adopted a census approach, so there was no sampling since the study's population was small (unit of analysis). Thus, five respondents were targeted per Individual pension scheme, comprising a Pension Manager, a Deputy Pension Manager, and three senior pension officers. Thus, the study's sample size was 245 respondents (unit of observation).

3.4 Sampling Procedure and Sample Size

This study adopted a census approach, so there was no sampling since the study's population was small. As per the RBA website, there are 49 Individual pension schemes in Kenya (unit of analysis). Thus, five respondents were targeted per Individual pension scheme, comprising a Pension Manager, a Deputy Pension Manager, and three senior pension officers. Thus, the study's sample size was 245 respondents (unit of observation).

3.5 Data Collection Instruments and Procedure

This study used both primary and secondary data. The primary data was collected through questionnaires distributed to pension fund managers in Kenya. The structured format, with predominantly closed-ended questions, was designed to accumulate quantitative data, which can be analysed using statistical tools to identify correlations between strategies and financial sustainability outcomes. The few open-ended questions were analysed qualitatively to provide additional insights and context, complementing the quantitative findings. The study also used secondary data to determine if retirement benefit schemes are financially sustainable or not. Financial statements were used to compute



the asset/liability ratio (the higher, the better), which was used as a measure so that for each retirement pension scheme, the researcher first computed this ratio and also established the growth rate of the scheme to establish whether it was financially sustainable or not, by doing this the researcher converted the dependent variable (continuous data) that was derived from secondary sources over periods of 3years ranging from 2020 to 2023 frequencies so that it can be combined with other variables in the study, i.e. independent variable (categorical data) measured using Likert / ordinal scale, the dependent variable must be also in categories of whether a pension scheme was financially sustainable or not. This was recorded in a data collection sheet. Questionnaires were distributed and collected using a drop-and-pick method. The official financial statements were accessed from the individual retirement pension scheme head offices in Nairobi. Data collection was done from 27th November to 27th December 2024.

3.6 Data Analysis

This study employed a quantitative approach to analysing the collected data, which ensured a comprehensive understanding of the variables under study (Mulisa, 2022). The data underwent meticulous cleaning to facilitate comprehensive analysis and was organised within an MS Excel spreadsheet. Subsequently, Statistical Package for Social Science (SPSS) Version 27 was utilised for statistical analysis. Descriptive statistics, including the mean and median, were calculated to summarise the data. Additionally, inferential analysis which included correlation analysis and binary logit regression analysis were computed. Results were presented using tables, graphs, and charts. This study adopted a binary logit regression model as follows:

$$LN(P / 1 - P) = B_0 + B_1SS + B_2AL + B_3PR + B_4MT + B_5MS + e \dots\dots\dots (i)$$

P = probability that a pension scheme was financially sustainable, and 1-P = probability that a pension scheme was not financially sustainable (depending on the computation)

B₀= Constant

B₁= Coefficient for security selection

SS= Security Selection

B₂=Coefficient for Asset Allocation

AL=Asset Allocation

B₃=Coefficient for Portfolio Rebalancing

PR= Portfolio Rebalancing

B₄=Coefficient for Market Timing

MT=Market Timing

B₅=Coefficient for Market Sentiment

MS= Market Sentiment

e =Error Term

3.7 Ethical Consideration

The researcher remained keen on ethical considerations such as confidentiality, anonymity, privacy, and informed consent in carrying out this study. Permission from the participants was sought before involving them in the study, in this manner informing them of the rise of the study, what the study was all about, the processes to be undertaken, and freedom to withdraw at the participant’s wish. Further, the conduct of the study was guided by the Strathmore University Institutional Scientific Ethics Review Committee. Permission to carry out the research, code of ethics approval and NACOSTI permit were obtained before the commencement of the study. Lastly, published, and unpublished materials used in the study were fully acknowledged by referencing to avoid chances of plagiarism.

IV. FINDINGS & DISCUSSION

4.1 Ordinal Logistic Regression Analysis

4.1.1 Model Fitness Test Findings

The model fitness results presented in Table 1 indicate a Nagelkerke R Square value of 0.493, implying that the model explained approximately 49.3% of the variation in the financial sustainability of pension schemes (Hair et al., 2014).

Table 1

Findings on R Square Test

-2 Log likelihood	Cox & Snell R Square	Nagelkerke R Square
439.812a	0.156	0.493

The Hosmer and Lemeshow test were carried out as an additional test of model fitness, as presented in Table 2.

Table 2*Findings on Hosmer & Lemeshow Test*

Chi-square	df	Sig.
9.159	5	0.103

The null hypothesis for the Hosmer and Lemeshow test stated that the model predictions fit the observed data adequately. Since the p-value of 0.103 was greater than 0.05, the null hypothesis was not rejected, indicating that the model adequately fitted the data (Hair et al., 2014).

4.1.2 Regression Analysis

The goodness-of-fit tests were used to assess the association between the predictor variables and financial sustainability. The Pearson Chi-square test results are presented in Table 3.

Table 3*Pearson Chi-square Tests of Independence*

Factor	Pearson χ^2 Value	df	P Value
Security Selection * Financial Sustainability	216.902	111	0.000
Asset Allocation * Financial Sustainability	104.561	61	0.000
Market Timing Strategies * Financial Sustainability	110.104	17	0.000
Portfolio Rebalancing * Financial Sustainability	161.302	53	0.000
Market Sentiment * Financial Sustainability	192.923	52	0.000

The findings indicate that financial sustainability was significantly associated with security selection, asset allocation, market timing strategies, portfolio rebalancing, and market sentiment at the 5% significance level. The proportional odds assumption was tested using the Test of Parallel Lines presented in Table 4.

Table 4*Test of Parallel Lines*

Factor	Model	-2 Log Likelihood	Chi-Square	df	Sig
Security Selection * Financial Sustainability	Null Hypothesis	129.34			
	General	124.128	5.212	2	0.074
Asset Allocation * Financial Sustainability	Null Hypothesis	91.416			
	General	68.62	22.796	4	0.121
Market Timing Strategies * Financial Sustainability	Null Hypothesis	73.194			
	General	56.19	17.004	2	0.098
Portfolio Rebalancing * Financial Sustainability	Null Hypothesis	69.62			
	General	55.834	13.786	3	0.087
Market Sentiment * Financial Sustainability	Null Hypothesis	72.926			
	General	68.209	4.717	4	0.317

The results in Table 4.15 indicate that all variables satisfied the proportional odds assumption since all p-values were greater than 0.05. Therefore, interpretation of the ordinal logistic regression coefficients was appropriate. Further, the measures of determination were established using the Nagelkerke Pseudo-R Square, as presented in Table 5.

Table 5*Measures of Determination*

Model	Nagelkerke R ²	Cox and Snell R ²	McFadden R ²
Security Selection * Financial Sustainability	0.18	0.129	0.084
Asset Allocation * Financial Sustainability	0.162	0.139	0.118
Market Timing Strategies * Financial Sustainability	0.104	0.093	0.049
Portfolio Rebalancing * Financial Sustainability	0.082	0.053	0.026
Market Sentiment * Financial Sustainability	0.135	0.063	0.031

The pseudo-R square results indicate that security selection explained 18% of the variation in financial sustainability, asset allocation explained 16.2%, market timing strategies explained 10.4%, portfolio rebalancing explained 8.2%, while market sentiment explained 13.5%.

Table 6
Ordinal Logistic Regression Parameter Estimates

Variable	Estimate	Std. Error	Wald	df	Sig.
Constant	0.211	0.051	0.29	1	0.59
Security Selection	0.62	0.081	58.57	1	0
Asset Allocation	0.43	0.29	2.2	1	0.138
Market Timing Strategies	0.36	0.216	2.78	1	0.095
Portfolio Rebalancing	0.282	0.203	1.93	1	0.165
Market Sentiment	0.561	0.208	7.27	1	0.007

The ordinal logistic regression results showed that security selection and market sentiment had statistically significant positive effects on the financial sustainability of individual pension schemes in Kenya. Security selection recorded $\beta = 0.620$ ($p = 0.000$), indicating that better investment selection significantly improved financial sustainability. Similarly, market sentiment recorded $\beta = 0.561$ ($p = 0.007$), implying that favourable investor perceptions positively influenced pension scheme sustainability. Although asset allocation ($\beta = 0.430$, $p = 0.138$), market timing strategies ($\beta = 0.360$, $p = 0.095$), and portfolio rebalancing ($\beta = 0.282$, $p = 0.165$) had positive coefficients, their effects were statistically insignificant at the 5% level. Therefore, the findings provided partial support for the study hypotheses, with only security selection and market sentiment emerging as significant predictors of financial sustainability.

4.2 Discussion of Findings

4.2.1 Security Selection and Financial Sustainability

The study established that security selection had a statistically significant positive effect on the financial sustainability of individual pension schemes in Kenya. This supports Modern Portfolio Theory, which emphasizes the importance of selecting optimal investment combinations to maximize returns while minimizing risk. The findings are consistent with Wang (2024), Waweru (2022), and Oloruntoba and Ihiovi (2022), who similarly found that prudent security selection improves pension fund performance and sustainability.

4.2.2 Market Sentiment and Financial Sustainability

The findings further revealed that market sentiment had a statistically significant positive effect on financial sustainability. The findings are consistent with Yakubu et al. (2023), Dautaj (2023), and Makau (2021), who established that market sentiment influences investment decisions and financial performance. The findings support Capital Market Efficiency and Modern Portfolio Theories.

4.2.3 Asset Allocation and Financial Sustainability

Although asset allocation exhibited a positive relationship with financial sustainability, the effect was statistically insignificant. The findings are consistent with findings of by Zhao and Sutcliffe (2021) and Mwangi (2021). The findings support the Modern Portfolio and Capital Market Efficiency theories, in managing systemic risk while maximizing returns and underlining the need for effective asset allocation to navigate efficiently priced markets.

4.2.4 Market Timing and Financial Sustainability

The findings showed that market timing strategies had a positive but statistically insignificant effect on financial sustainability. The findings are consistent with the findings of Baker et al. (2021) and Muhanguzi (2021). However, they contradict the findings of Oloruntoba & Ojo (2021). The findings partially support Capital Market Efficiency Theory, which argues that consistently outperforming markets through timing strategies is difficult due to rapid information incorporation into asset prices.

4.2.5 Portfolio Rebalancing and Financial Sustainability

Portfolio rebalancing also exhibited a positive but statistically insignificant relationship with financial sustainability. This result aligns with studies such as Pan (2023) and Bikker et al. (2018). The findings support Modern Portfolio Theory emphasizing rebalancing as essential for maintaining the desired risk-return profile.

CONCLUSION & RECOMMENDATIONS

5.1 Conclusion

The study concludes that security selection, asset allocation, portfolio rebalancing, and market timing have a positive and significant effect on financial sustainability of individual pension schemes in Kenya.

5.2 Recommendations

5.2.1 Policy Recommendations

The Retirement Benefits Authority (RBA) and other regulatory agencies should strengthen investment governance frameworks to improve the financial sustainability of pension schemes in Kenya. Regulatory authorities should particularly encourage pension schemes to adopt rigorous security selection frameworks and enhance transparency in investment decision-making processes. Regulators should also improve access to reliable market information and strengthen investor education initiatives to enable pension schemes to make informed investment decisions based on prevailing market conditions and sentiment indicators.

5.2.3 Managerial Recommendations

Pension fund managers should prioritize effective security selection strategies by enhancing investment research, conducting detailed risk-return analyses, and strengthening portfolio evaluation mechanisms. Investment managers should also continuously monitor market sentiment and integrate market intelligence into investment decision-making processes. Although asset allocation, market timing, and portfolio rebalancing were not statistically significant, managers should continue applying these strategies cautiously as complementary portfolio management tools, especially during periods of market volatility and economic uncertainty.

5.2.4 Recommendations for Further Research

Future studies should examine the long-term effects of investment strategies on pension scheme sustainability using longitudinal or panel data approaches. Further research should also investigate the moderating effects of macroeconomic variables such as inflation, interest rates, exchange rates, and economic growth on pension scheme sustainability in Kenya and other emerging economies.

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