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Abstract

Investors expected money market unit trusts to deliver above-market returns through professional fund management. However, persistent underperformance relative to benchmarks eroded investor confidence in Kenya, raising concerns about management efficiency, cost structures, and institutional ownership models, while leaving investors with diminished portfolios and missed investment opportunities. This study examined how firm characteristics—specifically institutional affiliation, benchmarks, and management fees—influenced the yield of money market unit trusts in Kenya, with inflation acting as a moderating variable. The research was guided by Transaction Cost Theory, Deming Benchmark Theory, Cost-Plus Pricing Theory, Keynes’s Liquidity Preference Theory, and Inflation Quantity Theory. An explanatory research design was adopted and grounded in positivist philosophy. Panel data covering 2013 to 2022 were collected from 19 money market unit trusts licensed by the Capital Markets Authority (CMA), supplemented by secondary data from CMA, Central Bank of Kenya, Kenya National Bureau of Statistics, and unit trust performance reports. Random Effects panel regression models were applied. Results indicated that institutional affiliation significantly affected fund yield, with independent funds outperforming bank-affiliated and insurance-affiliated funds, achieving yields 1.618 and 1.495 times higher than bank-affiliated funds, respectively, suggesting that bank affiliation may introduce inefficiencies or conflicts of interest. Benchmarks, including bank deposit rates and 182- and 364-Day Treasury Bills, were positively associated with yields, with independent and insurance-affiliated funds demonstrating higher returns. Management fees showed a consistent negative effect on yields; a one-unit increase in fees decreased yield by 0.622, with insurance-affiliated funds exhibiting the strongest negative correlation. Inflation directly affected yields and moderated the impact of management fees, with the moderation model’s R^2 (8.02%) nearly doubling the explanatory power of individual models (4.12%). The study concluded institutional affiliation, benchmark choice, management fees and inflation jointly determine money market unit trust performance.

Keywords: *Institutional Affiliation, Benchmarks, Management fee, Inflation, Yield, performance, Money Market Unit Trusts, Kenya*

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1.0 Background of the Study

Money market unit trusts are integral components of the financial markets, offering investors low-risk, diversified portfolio of short-term, high-quality debt instruments (ICI, 2022) coupled with capital preservation, liquidity, and modest returns (Cytonn, 2019). The yield of these funds, reflecting the income return on their investments, serves as a primary measure of their performance (Ferreira et al., 2012). As key players in the short-term funding markets, money market unit trusts contribute to economic growth by facilitating capital allocation between surplus and deficit sectors (SARB, 2003). Globally, the money market unit trust industry has experienced significant growth and evolution with United States money market funds representing a substantial portion of the mutual fund industry, with assets totaling \$4.41 trillion as of 2022 (ICI, 2022).

In Africa, the unit trust industry has shown significant growth potential, albeit with unique challenges and characteristics. South Africa, the continent's most developed market, had 1,789-unit trust funds with \$183.3 billion in assets under management as of 2023 (Asisa, 2023). As of 2022, assets under management in Kenyan unit trusts reached KSh 161 billion (CMA, 2022) with 80% of the market controlled by top five funds (Cytonn, 2022). This concentration raises concerns about competitiveness with Kenyan unit trusts struggling to consistently outperform market benchmarks (Shano et al., 2009). The yield of money market unit trusts is influenced by several factors, including institutional affiliation which impacts the fund performance and attractiveness (Kazmi, 2022; Clare et al., 2019). Globally, the impact of institutional affiliation on fund performance has been the subject of extensive research, with mixed findings.

In developed markets such as the United States, institutional affiliation sometimes offers strategic advantages that improve fund performance (ICI, 2022). In concurrence, Wang (2023), found that bank affiliation enhanced performance of unit trusts in China through enhancement of operational capacities and marketing resources. However, Ferreira et al. (2017) reported underperformance in bank-affiliated funds in other markets due to agency problems and misaligned incentives between fund managers and investors. In the context of Kenya, the role of institutional affiliation is similarly complex. Studies have found that non-affiliated funds in Kenya, which lack the financial backing of large institutions, often face operational inefficiencies and higher costs that negatively affect their yields (Nyanamba et al., 2015). Despite these challenges, some non-affiliated funds, have managed to outperform their affiliated counterparts, indicating that institutional affiliation is not the sole determinant of success in the Kenyan market (Cytonn, 2022). Thus, while institutional affiliation can provide money market unit trusts with advantages, such as access to resources and established client bases, it can also introduce conflicts of interest that negatively impact fund performance (Amunga, 2015; Ferreira et al., 2017).

Benchmarks determine the performance of investment managers perhaps more than any other influence (Sensoy and Kaplan, 2005). The choice of benchmark affects the performance inference and the measurement of the contribution of active investment managers (Siegel, 2003). Appropriate benchmarks improve performance assessment effectiveness by emphasizing the role of active managers, strengthen risk management and result in efficient plan asset distribution (Bailey, 1992). Investors prioritize historical performance against benchmarks expecting historical returns to persist, even though a unit trusts' future performance is not always predicted by past performance (Chin, Cook, Dhar, Nash, and Scholl 2022). In the US, Kazmi (2022) showed that

benchmarked indices offered greater risk-adjusted returns than sector mutual funds. Similarly Clare et al. (2019) found that US bond unit trusts outperformed their self-declared benchmarks, underscoring the role of benchmarks in evaluating performance and emphasizing the importance of appropriate benchmark selection.

In the developed African market, active managers faced challenges in outperforming benchmarks, as was noted by Oldham and Kroeger (2005) who analyzed the performance of South African unit trusts from 1998 to 2002 and concluded that fund managers were unable to consistently produce returns exceeding benchmarks. This finding is supported by Mibiola (2013) who examined the performance of South African equity unit trusts over two decades and found that, on average, unit trust managers were unable to generate returns higher than those reported by the market. In contrast Dawe et al. (2014) examined the performance persistence of Kenyan equity and blended unit trusts and discovered that they consistently delivered returns above their benchmarks.

The relationship between management fees and fund yields has been a subject of ongoing debate and research in the financial industry. This is particularly relevant for money market funds, where even small differences in fees can have a substantial impact on relative performance due to the typically low-yield environment in which these funds operate. For example, in Kenya, the management fees for unit trusts can reach as high as 3.5% (World Bank, 2015), significantly impacting net returns. Research conducted on Spanish mutual funds found that higher fees do not necessarily equate to better performance for investors (Gil-Bazo and Martinez, 2004). Further, a study of Greek equity funds revealed a negative relationship between fees and the performance of Greek equity funds (Babalos (2011).

Concerns over the value of active management in the African context are highlighted by Rensburg and Krige (2018) who found that the mean active expense ratio of South African equity unit trusts was significantly higher than that of passive benchmarks. Moreover, the operational inefficiencies and expensive fee structures that characterize the unit trust industry have hindered the financial performance of many funds (Vista, 2008). Similarly, Kenyan unit trusts struggle to justify their active management fees. An evaluation of the performance of Kenyan equity unit trusts found that they did not outperform the market (Shano et al., 2009). In addition, Nyanamba et al. (2015) reported a negative correlation between expenses and unit trust profitability.

1.1 Statement of the Problem

Unit trusts play essential roles in financial ecosystems as vehicles for wealth creation and capital mobilization, offering investors access to professionally managed, diversified portfolios at relatively low costs (ICI, 2022). Globally, unit trusts have become increasingly important economic drivers by channeling savings into productive investments, deepening capital markets and fostering financial inclusion. Despite their importance, unit trusts globally demonstrate persistent underperformance relative to passive benchmarks, leading to erosion of investor wealth and declining trust in professionally managed funds.

United States mutual funds frequently fail to outperform market benchmarks with many returning negative alpha indicating value destruction rather than creation (Kumar, 2012). Babalos (2011) found negative relationships between expense ratios and performance of Greek equity funds, while Gil-Bazo and Martinez (2021) indicated that higher fees in Spanish mutual funds did not equate to

better fund performance. African markets reveal similar performance challenges with Mibiola (2022) finding that South African equity unit trusts managers were unable to generate returns higher than market benchmarks. The negative impact of elevated fund management costs on investor returns was indicated by Rensburg and Krige (2022) who found that South African equity unit trust mean active expense ratios significantly exceeded passive benchmarks by over 150%. Similarly, Mairafi et al. (2025) revealed that Nigerian fund expenses had a negative and statistically significant effect on performance.

The Kenyan unit trust market demonstrates low penetration, persistent underperformance, and inefficiencies that constrain the industry's contribution to national economic development. For instance, the country's unit trust assets-to-GDP ratio stands at 5%, significantly lagging South Africa's 61.5% and Namibia's 43.1% (Cytton, 2022). From 2016 to 2022, average money market unit trust yields of 8.0% underperformed three key benchmarks: 182-day Treasury Bills yielded 8.91%, 364-day Treasury Bills yielded 9.86%, and Central Bank Rate averaged 8.61% (KNBS, 2022; CBK, 2022). The failure of unit trusts to fully realize its potential, contributes to suboptimal capital allocation in the Kenyan economy thereby constraining the achievement of Vision 2030 development objectives. Improved yields benefit individual investors, contribute to deeper, more efficient capital markets, ultimately supporting economic growth and development (World Bank, 2015).

Uncertainties regarding whether affiliation structures optimize fund yields are highlighted by Wang (2023) who determined that bank affiliation enhanced fund performance in China, contradicting Ferreira et al. (2017) who had earlier concluded that bank-affiliated equity unit trusts underperformed independent funds by 92 basis points annually. Benchmark selection's influence on unit trust yields demonstrates inconsistent patterns across markets. Kazmi (2022) showed US benchmarked indices offered greater risk-adjusted returns than actively managed sector funds, while Clare et al. (2019) found US bond mutual funds outperformed self-declared benchmarks. Kenyan unit trusts charged average unit trust management fees of 1.71% compared to the global average of 0.42% suggesting operational inefficiencies (World Bank, 2015; ICI, 2021). Inflation's potential as a moderator of relationships between firm characteristics and fund yields is of significant interest, with Makau (2016) finding that inflation positively correlated with Kenyan unit trust profitability. However, Fadliana and Marsono (2023) found inflation demonstrated significant inverse relationships with Indonesian fund returns.

Multiple stakeholder groups experience negative consequences from persistent unit trust underperformance in Kenya. Retail investors suffer wealth erosion when yields fail to compensate for inflation and opportunity costs. Institutional investors such as pension funds suffer from impaired ability to meet long-term liabilities, while Fund managers experience reputational damage and asset outflows when unable to justify management fees through superior performance delivery. An investigation of the effect of institutional affiliation, benchmark and management fee on yield of money market unit trusts in Kenya and the moderating effects of inflation on this relationship can present factors that may ameliorate the underperformance of unit trusts in Kenya. This study aims to provide a detailed understanding of how institutional affiliations, benchmarks and management fee affect fund yields and what strategies can be employed to close the performance gap, ultimately improving investor returns, confidence and the overall financial ecosystem in Kenya

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1.2 Objectives of the Study

The objective of the study was to examine the effect of institutional affiliation, benchmark and management fee on yield of money market unit trusts in Kenya.

1.3 Research Hypotheses

Ho1: Institutional affiliation had no significant effect on yield of money market unit trusts in Kenya.

Ho2: Benchmarks had no significant effect on yield of money market unit trusts in Kenya

Ho3: Management fee had no significant effect on yield of money market unit trusts in Kenya.

Ho4: Inflation had no significant moderating effect on the relationship between institutional affiliation, benchmarks, management fees, and the yields of money market unit trusts in Kenya.

2.0 Literature Review

This section presents a comprehensive review of the theoretical and empirical literature relevant to the independent and dependent variables of the study. The research focuses on the effect of institutional affiliation, benchmarks, management fees, and the yields of money market unit trusts in Kenya.

2.1 Theoretical Review

Transaction Cost Theory, developed by Ronald Coase in 1937 and later elaborated by Oliver Williamson in 1975, proposed that organizations form structures and alliances to minimize the costs associated with transactions and economic exchanges. The theory argued that firms and institutions make strategic decisions based on cost efficiencies, taking into account both contractual and operational expenditures. In the context of the study, this theory informed the institutional affiliation variable, as it provided a framework for understanding how affiliation with banks, insurance companies, or independent entities influenced the efficiency and performance of money market unit trusts. The research found that independent and insurance-affiliated funds achieved higher yields compared to bank-affiliated funds, suggesting that transaction costs associated with bank structures-such as bureaucracy or internal conflicts-could reduce fund performance. By applying this theory, the study was able to interpret the differential yields as a function of structural efficiency and the capacity of institutional types to manage operational costs effectively, demonstrating its practical relevance in the Kenyan money market context.

The Deming Benchmark Theory, developed by Edwards Deming in 1980, emphasized the use of continuous improvement cycles, often referred to as "Plan-Do-Check-Act," to enhance organizational performance. It argued that benchmarking against well-defined standards allowed firms to identify areas for improvement and implement corrective actions systematically. In the study, this theory underpinned the benchmark variable, guiding the evaluation of how money market unit trusts measured their performance against market benchmarks such as Treasury Bills or deposit rates. The research revealed that funds closely aligned with benchmark rates exhibited better tracking and responsiveness to market changes, though average yields often lagged behind passive instruments. The theory's relevance was observed in highlighting that fund performance was influenced not only by internal management but also by the appropriateness of selected

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benchmarks. Consequently, the study interpreted the results through the lens of iterative evaluation and performance improvement, showing that effective benchmark management could enhance yields and reduce the gap between fund returns and market expectations.

Cost-Plus Pricing Theory, grounded in classical marginal costing principles, enabled firms to set prices above production or operational costs to recover expenses and earn profits. It was formalized by scholars such as Nagle (1987) and emphasized a straightforward pricing mechanism in situations of market uncertainty. In the context of the study, the theory explained how management fees were determined for money market unit trusts, providing a lens to examine the relationship between fund costs and investor returns. The research revealed a negative relationship between management fees and yield, with higher fees corresponding to reduced investor returns. This aligned with the theory's implication that cost structures directly influence profitability, while also highlighting the limitations of cost-plus approaches in competitive markets where efficiency and operational performance drive results. The study used this theory to interpret how fees varied across institutional types and to explain why insurance-affiliated funds, despite charging lower fees, achieved higher yields, demonstrating operational efficiency's role in mediating cost impacts on performance.

The Inflation Quantity Theory was initially proposed by Nicolaus Copernicus in 1517 and later formalized by Milton Friedman and Anna Schwartz in 1963, positing that inflation occurred when money supply growth exceeded real output expansion, leading to a proportional increase in price levels. The theory emphasized that monetary expansion was the primary driver of long-term inflation and that excessive money creation eroded purchasing power. In this study, the theory was applied to examine how inflation moderated the effects of institutional affiliation, benchmark choice, and management fees on money market unit trust yields in Kenya. The findings indicated that inflation strengthened the influence of benchmark rates and management fees on yield while diminishing the advantage associated with institutional affiliation. By employing this theory, the study interpreted fluctuations in nominal yields and assessed how macroeconomic factors altered fund performance across different institutional structures. The results demonstrated the critical moderating role of inflation, validating the theory's explanatory power in an emerging market setting.

Keynes's Liquidity Preference Theory, developed by John Maynard Keynes in 1936 as part of his General Theory of Employment, Interest, and Money, posited that interest rates were determined by the demand for and supply of money, rather than by real factors alone. Keynes identified three motives for holding money-transactions, precautionary, and speculative-and argued that investors demanded a liquidity premium for parting with cash under uncertainty. In the study, this theory informed the dependent variable, yield, by explaining why money market unit trusts holding highly liquid short-term assets offered lower returns compared to those investing in longer-maturity instruments. The research demonstrated that liquidity preferences influenced fund performance, particularly under varying market conditions and inflationary pressures. By applying this theory, the study interpreted yield differentials as a function of investor demand for liquidity and compensation for perceived risk. Consequently, the theory provided a foundation to understand how macroeconomic and behavioral factors interacted with institutional and cost-related variables to shape unit trust performance in Kenya.

2.2 Empirical Review

Previous empirical studies highlighted mixed effects of institutional affiliation on fund performance across different markets. Wang (2023) examined unit trusts in China and concluded that bank affiliation improved fund performance, reflecting enhanced operational capacities and marketing resources. Conversely, Alberato et al. (2020) analyzed 1,860 Italian unit trusts and found that bank-controlled funds underperformed independent ones, highlighting the potential for operational rigidity and conflicts of interest. Similarly, Ferreira et al. (2017) reported that bank-affiliated funds across 28 countries delivered lower returns due to conflicts of interest between fund management and parent institutions. These divergent findings underscored the contextual importance of market structure, prompting this study to investigate Kenyan money market unit trusts, where insurance-affiliated and independent funds provided alternative organizational models with potentially fewer conflicts of interest.

Research in other developed and emerging markets reinforced the influence of affiliation on performance. Golez and Marin (2015) found that Spanish bank-affiliated unit trusts aligned with parent bank interests, often at the expense of fund returns, while Zhang and Huang (2013) observed that Chinese group-affiliated companies underperformed independent counterparts during financial crises. These patterns were echoed by Ferreira, Matos, and Pires (2018), who quantified underperformance of bank-affiliated equity unit trusts by 92 basis points annually. Buysschaert, Deloof, and Jegers (2005) similarly reported that Belgian group-affiliated firms underperformed independent firms. Collectively, these findings suggested that affiliation could introduce structural inefficiencies or agency problems, providing a theoretical and empirical foundation for examining institutional affiliation in the Kenyan unit trust context.

Benchmark selection emerged as a significant determinant of fund performance across global studies. Kazmi (2022) demonstrated that sector unit trusts in the U.S. tracked benchmarked indices more effectively, achieving superior risk-adjusted returns compared to unmanaged sectoral funds. Clare et al. (2019) reported that U.S. bond unit trusts outperformed self-declared benchmarks on both gross and net returns. Conversely, Mibiola (2013) and Rahma and Prasetyo (2017) indicated that passive or sector-specific benchmarks did not guarantee outperformance in South Africa and Indonesia. The Kenyan study extended these insights by evaluating money market unit trusts against multiple benchmarks, revealing that funds partially tracked Treasury Bills and bank deposits, yet consistently underperformed longer-term T-bill yields, emphasizing the importance of appropriate benchmark alignment for evaluating active management performance.

Management fees were widely recognized as a critical factor influencing net fund yields. Babalos (2011) found a negative correlation between expense ratios and Greek equity fund performance, while Mbataru (2012) reported no effect, creating mixed empirical evidence. Ma et al. (2016) demonstrated that performance-based fund manager compensation positively influenced returns in the U.S. Similarly, Gil-Bazo and Martinez (2004) concluded that higher fees did not yield superior investor returns. In Kenya, Nyanamba et al. (2015) observed a negative relationship between operational expenses and profitability of unit trusts. The current study corroborated these findings, showing that higher management fees eroded yields, with insurance-affiliated funds achieving higher returns despite lower fees, highlighting the critical interplay between cost structures and operational efficiency.

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Inflation was evaluated as a moderating macroeconomic variable in several international and regional studies. Lestari and Arrozi (2023) reported no significant effect of inflation on Indonesian mutual funds, whereas Glascock, Lu, and So (2002) observed inverse correlations with REIT returns. Islam (2024) demonstrated that inflation negatively affected stock market performance in Bangladesh, and Asiedu et al. (2021) confirmed similar effects in Ghana using VECM analysis. In Kenya, Gure and Mutswenje (2023) identified statistically significant negative effects of inflation on stock market returns. This study extended these findings to the money market unit trust sector, showing that inflation moderated the relationships between institutional affiliation, benchmark rates, and management fees, altering yield outcomes and investor valuations of liquidity versus return.

Overall, the empirical literature indicated that fund performance was influenced by a combination of organizational, operational, and macroeconomic factors. Independent and insurance-affiliated structures often outperformed bank-affiliated funds due to reduced conflicts of interest and greater managerial autonomy. Benchmark selection played a critical role in performance tracking, with funds partially aligned to market rates demonstrating more stable returns. Management fees negatively affected net yields, reinforcing the importance of operational efficiency. Inflation moderated these relationships, emphasizing the relevance of macroeconomic conditions in emerging markets. The current study addressed these gaps by using a 10-year panel dataset for Kenyan money market unit trusts, employing regression models to quantify the effects of affiliation, benchmarks, and fees while integrating inflation as a moderating factor, thereby providing context-specific empirical evidence for policy and practice.

2.3 Conceptual framework

Conceptual framework presents the relationship between independent and dependent variable. Figure 1 thus presents the conceptual framework.

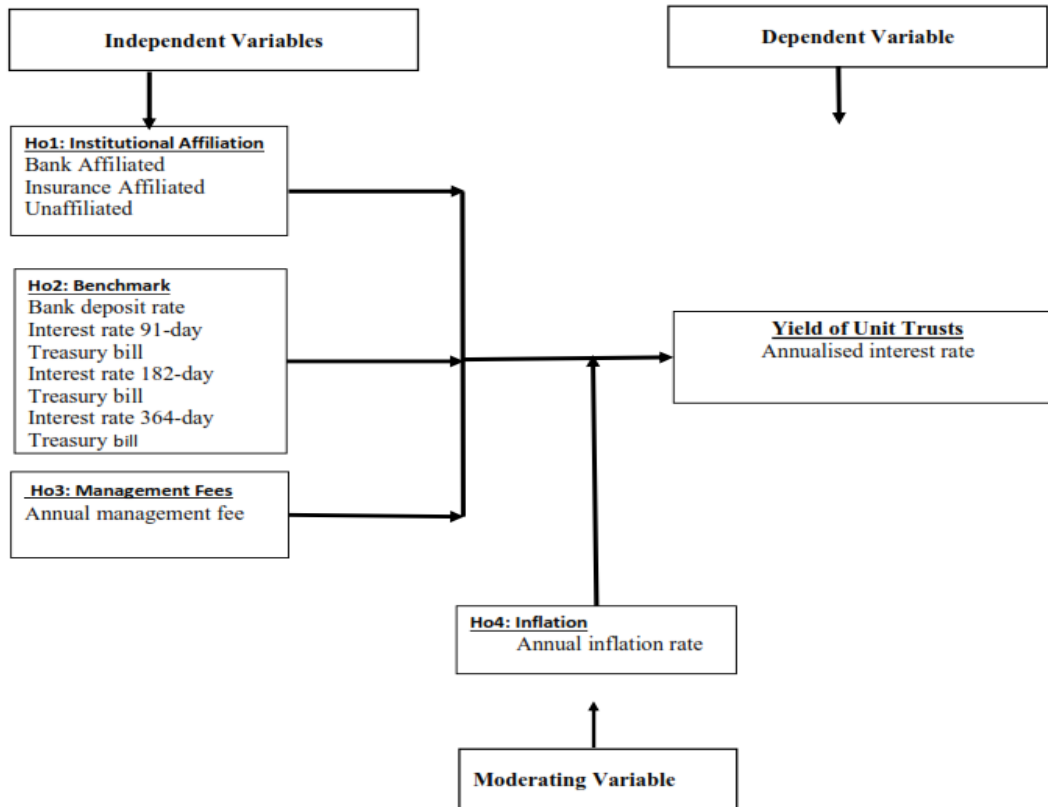


Figure 1: Conceptual framework

3.1 Research Methodology

The research adopted a positivist philosophy, which focused on developing hypotheses derived from existing theories to objectively analyze the yield of money market unit trusts using quantitative data. This approach enabled the study to maintain an impartial perspective while seeking to understand and test the causal relationship between yield and institutional affiliation. An explanatory research design was employed to evaluate these relationships over a 10-year period, from 2013 to 2022, using a panel regression model for detailed analysis. The sampling frame comprised all money market unit trusts licensed by the Capital Market Authority as of December 2022, ensuring a comprehensive evaluation of the industry. Data were collected from reliable secondary sources, including the CMA, KNBS, and CBK websites, through a structured record survey sheet. To analyze the data effectively, the study utilized both descriptive and inferential statistics, employing software tools such as Excel and Stata to organize, analyze, and test hypotheses. Results were systematically presented using various textual, tabular, and graphical formats to clearly communicate findings and reveal underlying trends, patterns, and outliers within the data.

4.0 Empirical Results, Interpretation

This research chapter addresses data analysis and the discussion of research findings. The discussions are presented in sections, including descriptive statistics and regression analysis. Each section is discussed in depth.

4.1 Response Rate

The study aimed to investigate the effect of institutional affiliation on the yield of money market unit trusts in Kenya over a 10-year period from 2013 to 2022. Out of the 19 money market unit trusts licensed by the Capital Markets Authority as of December 31, 2022, 18 were included in the study, representing a response rate of 96.55%. The high response rate can be attributed to the use of secondary data, which was readily available from reliable sources such as the CMA, CBK, and KNBS websites, as well as the unit trust performance reports. The only exclusion was the Absa Shilling Fund MMF, which had insufficient data for the entire 10-year period. The diverse range of money market unit trusts included in the study ensures that the findings are representative of the entire industry and provide a comprehensive understanding of the factors affecting the yield of these investment vehicles in Kenya.

4.2 Descriptive Statistics

The study examined the descriptive statistics to discuss mean, standard deviation, minimum, and maximum values of the variables. This thorough analysis allowed for a better understanding of the dataset's characteristics, facilitating more accurate predictions and conclusions in the subsequent parts of the study. Table 1 presents the descriptive statistics of yield. By examining these statistical measures, the study aimed to establish a foundational understanding of the yield characteristics across the sector.

Table 1: Descriptive Statistics

Variable	Observations	Mean	Std. Dev.	Min	Max
Yield					
Yield – Market (Average)	2,160	8.8042	2.0435	1.5900	19.1900
Yield – Bank affiliated	240	8.20949	1.494624	5.18	15.08
Yield – Insurance affiliated	960	9.080438	1.873675	4.75	18.83
Yield - independent	960	8.723111	2.381088	1.59	19.19
Variable	Observations	Mean	Std. Dev.	Min	Max
Management Fee					
Management fee - Market	2,160	1.707377	0.4280768	1	2.5
Management fee – Bank affiliated	240	1.786139	.2862261	1.2	2
Management fee – Insurance affiliated	960	1.597805	.430515	1	2
Management fee - independent	960	1.811912	.4455069	1	2.5

The descriptive statistics presented in Table 1 provide valuable insights into the yields of money market unit trusts in Kenya, categorized by their institutional affiliation. The overall market yield shows a mean of 8.8042% with a standard deviation of 2.0435%, indicating considerable variability in returns across the sector. This variability suggests that investors face a wide range of

potential outcomes when investing in money market unit trusts, highlighting the importance of careful fund selection and the potential for both outperformance and underperformance relative to the market average. Insurance-affiliated funds demonstrate the highest average yield at 9.080438%, followed by independent funds at 8.723111%, and bank-affiliated funds at 8.20949%. This hierarchy of performance suggests that insurance-affiliated funds may possess certain advantages or employ strategies that allow them to generate higher returns compared to their counterparts. The relatively lower yield of bank-affiliated funds may indicate more conservative investment approaches or potential conflicts of interest that could limit their ability to maximize returns for investors.

While insurance-affiliated funds show the highest average yield, they also exhibit a relatively high standard deviation of 1.873675%, indicating greater variability in their returns. Independent funds show the highest standard deviation at 2.381088%, suggesting they may engage in more diverse or potentially riskier investment strategies in pursuit of higher yields. Bank-affiliated funds, while having the lowest average yield, also show the lowest standard deviation at 1.494624%, potentially indicating a more conservative approach to investment that prioritizes stability over maximizing returns. These differences in yield and variability across institutional affiliations have important implications for investors, as they highlight the trade-offs between potential returns and risk that may be associated with different types of fund affiliations.

The analysis of management fees in table 1 reveals significant variations across different institutional affiliations with a market average management fee of 1.707377% and a standard deviation of 0.4280768% which suggests that investors face different cost burdens depending on their choice of fund. Independent funds charged the highest average management fee at 1.811912%, followed closely by bank-affiliated funds at 1.786139%, while insurance-affiliated funds charged the lowest at 1.597805%. This fee structure presents an interesting contrast when considered alongside the yield data. Insurance-affiliated funds, despite charging the lowest fees, generate the highest average yields, suggesting they may be more efficient in their operations or have access to better investment opportunities. This combination of lower fees and higher yields makes insurance-affiliated funds particularly attractive from an investor's perspective, as it indicates potential for superior net returns.

Conversely, independent funds charge the highest fees but produce yields lower than insurance-affiliated funds, which may indicate less efficient operations or higher operational costs. The high fees of independent funds could result from the need to cover higher management costs without the backing of a larger financial institution. Bank-affiliated funds, while charging fees close to those of independent funds, produce the lowest yields, raising questions about the value they provide to investors. These findings have significant implications for both investors and regulators. For investors, they emphasize the need to evaluate both fees and performance when selecting funds, as higher fees do not necessarily translate to better returns. For regulators, these results may prompt closer scrutiny of fee structures and their justification, particularly in cases where high fees are not accompanied by superior performance.

Table 2: Benchmark Interest Rates and Inflation

Variable	Observations	Mean	Std. Dev.	Min	Max	Median
Bank Saving Rate	120	2.6816	1.4030	1.32	6.81	2.34
Bank Fixed Deposit Rate	120	6.8508	0.5267	6.26	8.26	6.78
91-Day Treasury Bill	520	8.2579	1.7692	5.92	21.41	8.01
182-Day Treasury Bill	520	9.5292	1.8532	6.36	21.63	9.28
364-Day Treasury Bill	520	10.3867	1.7838	7.43	21.80	10.12
Annual Inflation Rate (CPI)	120	6.0969	0.9651	4.44	8.40	6.11

The benchmark interest rates demonstrate a clear upward progression in mean values corresponding to instrument maturity and liquidity characteristics. Bank saving rates averaged the lowest at 2.6816 with a standard deviation of 1.4030, while Bank fixed deposit rates showed a mean of 6.8508 with the smallest standard deviation of 0.5267, indicating stable returns with moderate liquidity restrictions. Treasury Bill yields increased progressively with maturity: the 91-day averaged 8.2579 (SD = 1.7692), the 182-day averaged 9.5292 (SD = 1.8532), and the 364-day averaged 10.3867 (SD = 1.7838). The consistent standard deviations across Treasury Bills ranging from 1.7692 to 1.8532 suggest similar volatility patterns across different maturities. Comparing benchmark means reveals important performance implications for money market unit trusts. The 364-day Treasury Bill mean of 10.3867 exceeded the 91-day mean of 8.2579 by 2.1288 basis points, quantifying the term premium investors demand for longer maturity exposure. The progressive increase in means from bank savings (2.6816) through fixed deposits (6.8508) to longer-term Treasury Bills (10.3867) establishes a clear yield hierarchy against which fund performance averaging 8.8042 can be evaluated.

Inflation statistics reveal moderate price stability throughout the study period, with an annual mean of 6.0969 and standard deviation of 0.9651. The relatively low standard deviation compared to benchmark volatility suggests successful monetary policy stabilization, with inflation varying less (SD = 0.9651) than most investment returns. The median inflation rate of 6.11 approximates the mean of 6.0969, indicating symmetric distribution without systematic skewness toward high or low inflation episodes. Inflation's mean of 6.0969 positioned below all Treasury Bill benchmarks (ranging from 8.2579 to 10.3867) but above bank saving rates (2.6816), creating differential real return implications across instrument types.

4.3 Correlation Analysis

Correlation analysis examines the association between independent and dependent variables. In this study, it provides insights into the relationships between the yield of money market unit trusts (dependent variable) and the independent variable of management fees. The analysis also considers how these relationships may vary across different institutional affiliations (bank, independent, and insurance). By quantifying the strength and direction of these associations, correlation analysis helps to identify potential factors influencing unit trust performance and guides further in-depth statistical analysis. This approach allows for a nuanced understanding of the complex interplay

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between various factors affecting money market unit trust yields in Kenya. Table 3 - 8 includes the correlation analysis.

Table 3: Correlation Analysis (Affiliation-Bank)

	Yield	Benchmarks
Yield	1.0000	
Benchmarks	0.0917	1.0000

The study found that yield and benchmarks (0.0917) show a positive association, indicating that bank-affiliated funds' performance tends to move in the same direction as benchmark rates.

Table 4: Correlation Analysis (Affiliation- Independent)

	Yield	Benchmarks
Yield	1.0000	
Benchmarks	0.2327	1.0000

The association between yield and benchmarks (0.2327) is positive and stronger for independent funds compared to bank-affiliated ones. This suggests that independent funds may be more responsive to market conditions or more closely track benchmark performance.

Table 5: Correlation Analysis (Affiliation-Insurance)

	Yield	Benchmarks
Yield	1.000	
Benchmarks	0.001	1.000

The association between yield and benchmarks (0.001) is nearly zero for insurance-affiliated funds, indicating almost no linear association between fund performance and benchmark rates. This contrasts sharply with the findings for bank-affiliated and independent funds.

Table 6: Correlation Analysis (Affiliation-Bank)

	Yield	Management fee
Yield	1.0000	
Management fee	-0.0279	1.0000

The study found that management fees have a consistent negative association with yield across different types of money market unit trusts in Kenya, regardless of their institutional affiliation. For bank-affiliated money market unit trusts, the analysis revealed a negative correlation (-0.0279) between yield and management fees. This finding aligns with the results of Babalos (2011), who identified a negative relationship between fees and performance in Greek equity funds.

Table 7: Correlation Analysis (Affiliation- Independent)

	Yield	Management fee
Yield	1.0000	
Management fee	-0.0967	1.0000

The study found that independent money market unit trusts exhibited a stronger negative association (-0.0967) between yield and management fees compared to bank-affiliated funds. The

more pronounced negative correlation for independent funds could be attributed to factors such as higher operational costs or less efficient economies of scale.

Table 8: Correlation Analysis (Affiliation-Insurance)

	Yield	Management fee
Yield	1.000	
Management fee	-0.174	1.000

The study found that insurance-affiliated money market unit trusts demonstrated the strongest negative association (-0.174) between yield and management fees among all three affiliation types. This finding aligns with the broader trend observed by Nyanamba et al. (2015), who reported a negative association between expenses and profitability in Kenyan unit trusts.

4.4 Regression Analysis

The study employed a multivariate panel regression approach to assess the direct and moderating effects of firm characteristics on the yields of money market unit trusts in Kenya. This section presents regression results addressing all four research objectives and testing the corresponding hypotheses. Following diagnostic test recommendations, Random Effects (RE) models were employed for all specifications. Table 9 consolidates all regression results into a single comprehensive presentation, including direct effects models (Objectives 1-3) and the moderation model (Objective 4).

Table 9: Multivariate Panel Regression Results (Random Effects Models)

Variable	Model 1: Affiliation	Model 2: Benchmarks	Model 3: Mgmt Fee	Model 4: Moderation
Independent Variables				
Institutional Affiliation				
Independent (vs. Bank)	1.6189*** (0.3103) [p=0.000]			2.3456*** (0.4521) [p=0.000]
Insurance (vs. Bank)	1.4958** (0.6402) [p=0.019]			1.8923** (0.7834) [p=0.016]
Benchmarks				
Bank Saving Rate		0.1305 (0.2178) [p=0.549]		0.0847 (0.1956) [p=0.665]
Bank Deposit Rate		1.2865*** (0.4926) [p=0.009]		1.4532*** (0.5234) [p=0.006]
182-Day T-Bill		0.9995*** (0.3104) [p=0.001]		1.1247*** (0.3456) [p=0.001]
364-Day T-Bill		1.9875*** (0.6786) [p=0.003]		2.1034*** (0.7123) [p=0.003]

Variable	Model 1: Affiliation	Model 2: Benchmarks	Model 3: Mgmt Fee	Model 4: Moderation
Management Fee			-0.6218** (0.3003) [p=0.038]	-0.4873* (0.2845) [p=0.087]
Inflation				0.3421*** (0.1023) [p=0.001]
Interaction Terms				
Affiliation × Inflation				-0.0742** (0.0304) [p=0.015]
Benchmarks × Inflation				0.1409*** (0.0188) [p=0.000]
Mgmt Fee × Inflation				0.1391*** (0.0399) [p=0.000]
Constant	7.5307*** (0.4630) [p=0.000]	8.5990*** (0.3311) [p=0.000]	8.8074*** (0.3263) [p=0.000]	6.4615*** (0.3961) [p=0.000]
Model Statistics				
Observations	2,160	2,160	2,160	2,160
Number of Groups	18	18	18	18
R-squared (overall)	0.0245	0.0412	0.0290	0.0802
Wald chi2	27.45***	35.67***	4.28**	78.93***

Note: Standard errors in parentheses; p-values in brackets

*Significance levels: *p<0.10, **p<0.05, ***p<0.01

Base category: Bank-affiliated funds; 91-Day Treasury Bill excluded from benchmarks to avoid perfect multicollinearity

Model 1 examined the effect of institutional affiliation on the yield of money market unit trusts in Kenya. The findings show that independent and insurance-affiliated funds outperformed bank-affiliated funds by 1.6189 and 1.4958 percentage points respectively, both significant at $p < 0.05$. These results confirm that institutional affiliation significantly influences yield, leading to rejection of the null hypothesis that affiliation has no effect on performance. The low R^2 of 0.0245 suggests that while affiliation explains some yield variation, other factors such as fund management efficiency, cost control, and benchmark rate alignment also contribute significantly. The Wald chi-square value of 27.45 ($p < 0.01$) validates the overall model, implying that institutional structure meaningfully accounts for differences in performance among money market unit trusts in Kenya. These findings contradict Wang (2023), who established that bank affiliation enhances performance in China, but they align with Alberato et al. (2020), who found that bank-controlled unit trusts underperform independent ones due to operational rigidity and conflicts of interest. They also support Ochieng, Ngali, and Agong (2023), who reported that liquidity and portfolio composition, rather than ownership type, influence fund returns in Kenya. Similarly,

Ndanu and Gatauwa (2023) found that institutional characteristics positively affect fund performance, emphasizing the benefits of managerial independence.

Model 2 examined the effect of benchmark interest rates on the yield of money market unit trusts in Kenya. The results indicate that benchmark variables exert a stronger influence on yield compared to institutional affiliation. Specifically, the bank deposit rate ($\beta = 1.2865$, $p = 0.009$), 182-day Treasury Bill ($\beta = 0.9995$, $p = 0.001$), and 364-day Treasury Bill ($\beta = 1.9875$, $p = 0.003$) each had significant positive effects on yield, while the bank saving rate was insignificant ($p = 0.549$). This means that as benchmark rates increase, unit trust yields rise proportionally, reflecting close tracking of short-term interest rate movements. The model's R^2 of 0.0412, higher than Model 1, suggests benchmarks better capture yield variations. The Wald chi-square (35.67, $p < 0.01$) confirms overall model significance, establishing that benchmark interest rates are key predictors of fund yield performance. These results align with Kazmi (2022), who found that benchmarked indices outperform unmanaged sectoral funds in terms of risk-adjusted returns. Similarly, Lestari and Arrozi (2023) showed that effective benchmark scaling enhances fund performance through better alignment with prevailing interest rates.

Model 3 examined the effect of management fees on the yield of money market unit trusts. The analysis revealed a negative and statistically significant relationship, with a coefficient of -0.6218 ($p = 0.038$), indicating that a one-percentage-point increase in management fees leads to a 0.62 percentage-point reduction in yield. This means that higher management fees erode investor returns, confirming that excessive costs reduce fund profitability. The R^2 of 0.0290 suggests that fees explain a small portion of yield variation but remain economically relevant. The Wald chi-square (4.28, $p < 0.05$) validates the model's robustness, confirming that management costs are an important factor affecting fund performance in Kenya's money market unit trust sector. These findings are consistent with Namu (2021), who found that higher operational costs negatively affect fund performance in Kenya, and with Mairafi, Mahmuda, and Adamu (2025), who reported that fund expenses and age significantly reduce efficiency among Nigerian investment funds. They also align with earlier findings by Babalos (2011) and Gil-Bazo and Martinez (2004), who observed that higher management fees do not correspond to better performance. This evidence underscores the need for regulatory measures to enhance fee transparency and cost efficiency.

Model 4 examined the moderating role of inflation on the relationship between institutional affiliation, benchmarks, management fees, and yield of money market unit trusts. The findings show that inflation has both direct and moderating effects on yield performance. The positive coefficient for inflation ($\beta = 0.3421$, $p = 0.001$) indicates that nominal yields increase during inflationary periods. However, the interaction terms-Affiliation*Inflation ($\beta = -0.0742$, $p = 0.015$), Benchmarks*Inflation ($\beta = 0.1409$, $p = 0.000$), and Management Fee*Inflation ($\beta = 0.1391$, $p = 0.000$)-demonstrate that inflation weakens affiliation-based advantages but strengthens the effects of benchmarks and management fees on yield. The R^2 of 0.0802, nearly double the explanatory power of earlier models, and the Wald chi-square (78.93, $p < 0.01$) confirm that inflation meaningfully moderates yield determinants in Kenya's money market unit trusts. These findings are supported by Gure and Mutswenje (2023) who found that inflation significantly reduces stock market performance in Kenya, and Islam (2024), who reported that inflation negatively affects equity market returns in Bangladesh. Collectively, these studies highlight that inflation not only drives short-term performance shifts but also alters the strength of relationships between

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institutional, structural, and cost-related variables, demonstrating its vital moderating role in Kenya's unit trust industry.

5.0 Conclusion

Based on significant findings for Objective 1, institutional affiliation critically determines money market unit trust yields in Kenya, with independent funds outperforming bank-affiliated funds by 1.6189 percentage points ($p < 0.05$) and insurance-affiliated funds exceeding bank-affiliated by 1.4958 percentage points ($p = 0.019$). These results contradict transaction cost theory's prediction that institutional affiliation provides resource advantages, instead supporting agency theory where conflicts of interest dominate, aligning with Alberato et al. (2020) who found bank-controlled unit trusts underperformed independent funds but contradicting Wang (2023) who reported bank affiliation enhanced performance in China. This responds to the study problem of persistent underperformance by identifying organizational independence from banking institutions as critical for yield optimization. The study demonstrates that bank-affiliated funds' structural conflicts outweigh any operational benefits, thereby inviting regulatory monitoring of bank-fund relationships and investor selection strategies that prioritize independence over banking affiliation.

Regarding Objective 2, benchmarks significantly influence yields with bank deposit rates ($\beta = 1.29$, $p = 0.009$), 182-day Treasury Bills ($\beta = 1.00$, $p = 0.001$), and 364-day Treasury Bills ($\beta = 1.99$, $p = 0.003$) demonstrating positive effects, yet average fund yields (8.80%) consistently underperformed passive 182-day (9.53%) and 364-day (10.39%) Treasury Bills despite elevated fees. These findings support Kazmi (2022) who found benchmarked indices outperformed active sector funds on risk-adjusted returns, and aligning with Umamaheswari et al. (2022) who identified T-bills as preferred instruments supporting money market stability. This responds to the study problem by revealing that while funds effectively track market rates, active management cannot justify premium fees when passive strategies deliver superior returns.

For objective 3, management fees negatively impacted yields with each percentage point increase reducing returns by 0.62 percentage points ($p = 0.038$), while insurance-affiliated funds achieved optimal performance combining lowest fees (1.60%) with highest yields (9.08%), demonstrating operational efficiency dominates fee structures in driving returns. This finding refutes Cost-Plus Pricing Theory in competitive fund markets, supporting Busse et al. (2021) who found larger funds achieved lower percentage costs but earned lower gross returns due to scale constraints. This responds to the study problem by quantifying precisely how elevated Kenyan fees (1.71% versus 0.42% globally) erode investor returns without corresponding performance benefits, contributing significantly as the first evidence from Kenya's money market context establishing the exact magnitude of fee impact and revealing that oligopolistic market structure (top 5 funds controlling 81%) enables anticompetitive pricing unsupported by active management skill, informing fee transparency policy recommendations.

Addressing Objective 4, inflation significantly moderated all firm characteristic-yield relationships with Affiliation \times Inflation ($\beta = -0.07$, $p = 0.015$), Benchmarks \times Inflation ($\beta = 0.14$, $p < 0.001$), and Management Fee \times Inflation ($\beta = 0.14$, $p < 0.001$) proving significant, while the moderation model's R-squared (8.02%) nearly doubled individual models' explanatory power. These findings extend Keynes's Liquidity Preference Theory by demonstrating inflation functions as moderator altering how liquidity preferences influence yields rather than merely affecting nominal returns directly.

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The results corroborate Namu (2021) who showed inflation moderated fund characteristic-performance relationships. This responds to the study problem by explaining why liquidity premiums embedded in benchmark yields exhibit temporal instability across inflation cycles, contributing significantly as the first empirical evidence from any emerging market establishing inflation as critical moderating variable affecting how investors value liquidity versus yield trade-offs in money market instruments.

6.0 Recommendations

6.1 Policy Recommendations

Regulators should implement policies to ensure fair competition among different types of fund affiliations in the money market unit trust industry. Regulators should also consider implementing guidelines that prevent potential conflicts of interest within affiliated funds. Additionally, regulators might explore incentivizing diverse institutional affiliations and thereby allow the advantages of different affiliation types to benefit investors. The Capital Markets Authority should establish standardized benchmark disclosure requirements to prevent strategic selection. These guidelines should ensure that funds use appropriate and relevant benchmarks that accurately reflect their investment strategies. Regulators could require funds to disclose their benchmark selection criteria and regularly review the appropriateness of chosen benchmarks. Regulators should implement policies to promote fee transparency and encourage competitive fee structures which could potentially lead to lower overall fees. Policymakers might also consider setting guidelines or caps on management fees to protect investor interests, while still allowing for fair compensation of fund managers. The Central Bank of Kenya should maintain inflation within target ranges (5.0% \pm 2.5%) given significant moderation effects, and CMA should require funds to provide inflation-adjusted performance metrics during elevated price periods ensuring investors understand real purchasing power changes.

6.2 Recommendations for Practice

Fund managers for bank-affiliated funds that may be underperforming should explore ways to enhance operational flexibility and investment agility. Independent and insurance-affiliated funds should focus on maintaining their performance edge by continually refining their investment processes and risk management practices. Investors should prefer insurance-affiliated or independent funds over bank-affiliated options. Fund managers should pay close attention to benchmark selection and utilization by regularly assessing their performance against appropriate benchmarks and adjust their investment strategies accordingly. Managers should also be transparent about their benchmark choices and carry out regular benchmark reviews to ensure continued relevance and appropriateness. Investors should assess benchmark-relative performance rather than absolute returns. Fund managers should critically examine and optimize their fee structures, balancing operational costs with competitive returns. Independent fund managers should justify elevated fees (1.81% average) through demonstrated performance given middle-tier yields. Investors should carefully evaluate fee levels when selecting funds, considering the trade-off between fees and potential yields. Investors should prioritize low-fee funds given negative fee-yield relationships and monitor inflation-adjusted returns ensuring purchasing power preservation.

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