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## REAL ESTATE INVESTMENT AND FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN KENYA

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### ABSTRACT

**Purpose:** Insurance firms play a critical role as institutional investors, allocating substantial resources as well as mobilizing contractual savings while simultaneously meeting long-term policyholder obligations under a regulated environment. Despite the growing adoption of investment diversification, empirical evidence on whether real estate investment enhances insurers' financial performance in Kenya remains mixed and inconclusive. The study examined the effect of real estate investment on the financial performance of insurance companies in Kenya.

**Methodology:** The study adopted a descriptive research design and targeted all 55 insurance companies licensed and operating in Kenya, applying a census approach due to the manageable population size. Secondary panel data covering seven years (2019 – 2025) was obtained from IRA reports, audited financial statements, and relevant regulatory publications. Financial performance was measured using ROI. Data analysis was conducted using panel regression techniques, with random effects models estimated.

**Findings:** The findings revealed that the model had strong explanatory power with an R-squared of 0.6423, indicating that approximately 64.23% of the variation in financial performance is explained by real estate investment. The regression results showed real estate investments ( $\beta = 0.2684$ ,  $p < 0.05$ ) had positive and statistically significant effects on financial performance. The study concludes real estate investment significantly enhances the financial performance of insurance firms in Kenya; however, the average ROI remains below the recommended industry benchmark, indicating sub-optimal portfolio efficiency.

**Recommendations:** Based on these findings, the study recommends that insurance firms should adopt optimal asset allocation strategies, increase exposure to high-performing asset classes such as real estate and strengthen portfolio management practices through continuous performance monitoring and rebalancing. Policymakers are also encouraged to review investment guidelines to provide greater flexibility for insurers while ensuring prudent risk management.

**Keywords:** Real Estate Investment, Financial Performance, Insurance Firms in Kenya

## BACKGROUND OF THE STUDY

Investing is widely recognized as a strategic process in which a firm's ability to meet its operational and financial goals is directly shaped by the allocation of financial resources among various asset types. The most effective investment strategies align portfolio structure with the firm's risk tolerance, liability profile, and regulatory requirements, thereby ensuring sustainable financial performance without exposing the organization to excessive risk (Gitahi & Kosgei, 2024). Shiu (2021) defines financial performance as a key indicator used to evaluate how effectively an entity utilizes its resources to generate income, manage costs, and achieve profitability over time. According to Gitahi and Kosgei (2024), financial performance reflects the overall results of a firm's operational and investment decisions, encompassing profitability, solvency, and growth measures derived from both realized and unrealized gains as well as recurring income such as interest, dividends, and rent.

In the context of insurance firms, financial performance assesses the efficiency and effectiveness with which an insurer converts its asset base into sustainable income streams that support profitability, solvency, and long-term obligations (Cummins & Weiss, 2021; Shiu, 2021; Gitahi & Kosgei, 2024). Insurance firms are not only critical providers of financial protection but also serve as major institutional investors whose investment diversification strategies influence their financial performance, solvency positions, and shareholder value (Wandabusi, 2023). According to Mutia, Agong, and Ochieng (2025), real estate investments refer to the allocation of institutional capital into physical property assets, including commercial buildings, residential complexes, industrial properties, and land, with the primary objectives of generating rental income and achieving capital appreciation over time.

In the context of institutional investors such as insurance companies, real estate is treated as a distinct asset class that can provide stable and predictable cash flows, often indexed to long-term leases, which support insurers' ability to meet long-dated policy obligations (IRA, 2024; Mutia, Agong, & Ochieng, 2025). Unlike purely financial instruments, real estate has tangible value, offers potential inflation hedging through rent escalation clauses, and contributes to asset base diversification, key considerations in environments with rising costs of living and fluctuating interest rates (Mwangi & Wanjugu, 2022). In Kenya, real estate investments play an important role in the multi-asset portfolios of insurance companies and have a substantial impact on their financial performance.

According to studies, allocations to real estate assets are strongly correlated with performance measures like Return on Equity (ROE) and Return on Assets (ROA), mainly because of consistent rental yields and capital gains in cities like Mombasa and Nairobi (Gitahi & Kosgei, 2024). In contrast to more liquid assets like government securities or stocks, these advantages are mitigated by liquidity limitations, greater transaction costs, and vulnerability to local market. In the context of insurance firms in Kenya, effective investment diversification strategies are essential for enhancing profitability, ensuring solvency, and maintaining sustainable financial growth amid changing market dynamics and regulatory environments.

This research specifically examines insurance firms in Kenya, providing a focused understanding of how real estate investments influence their financial performance within a sector that manages long-term obligations and operates under distinctive regulatory frameworks. The study analyzed seven years of financial performance data for insurance firms operating in Kenya. Despite the critical role that real estate investment plays in shaping the financial performance of insurance firms in Kenya, the sector continues to experience notable disparities in performance outcomes. Mutia, Agong, and Ochieng (2025) reveal that the Kenyan insurance sector has experienced mixed growth in key performance indicators. It is against this backdrop that the present study sought to empirically examine the relationship between investment diversification and the financial performance of insurance companies operating in Kenya.

## Statement of the Problem

Over the past years, insurance firms in Kenya have faced a challenging operating environment marked by market volatility, fluctuating interest rates, and stringent regulation (IRA, 2024). Although many have adopted real estate investment strategies to enhance efficiency and long-term stability, their financial performance, measured by ROI, remains below expectations. According to IRA (2024), a good ROI for Kenyan insurers should range between 6–8%, yet most firms have averaged only 4–5.7% over the past seven years, reflecting limited investment efficiency and weak profitability (Cytonn, 2025). For instance, statistical trends reveal that ROI for the insurance firms in Kenya fell from 5.7% in 2019 to 4.8% in 2020. In 2021, the ratio rose to 5.1% and sharply dropped again to 3.1% in 2022. Despite the modest recovery to 4.2% in 2023, it fell again to 4.0% in 2024 before dipping further to 3.8% in 2025 (NSE 2022; NSE, 2024). All these were below the required benchmark of 6–8%. Firm-level statistics reinforce the trend of declining financial performance among Kenyan insurers. CIC Insurance Group reported ROI values of 4.8% in 2022, 4.2% in 2023, and 3.9% in 2024, while Liberty Kenya Holdings saw a sharp decline from 7.5% in 2023 to 2.8% in 2024, despite asset expansion (IRA, 2024). Similarly, Britam Holdings recorded ROI levels of 5.1% in 2020, 6.2% in 2021, 5.0% in 2022, 4.3% in 2023, and 3.6% in 2024, indicating weakening investment efficiency and profitability (Britam, 2025). Other firms, such as Sanlam Kenya and Kenya Reinsurance Corporation, have also maintained low and fluctuating ROI ratios averaging between 3% and 5% during the same period (IRA, 2024). Collectively, these figures highlight persistent underperformance across the insurance industry, with most firms operating below the recommended 6–8% ROI benchmark, reflecting inefficiencies in investment diversification strategies and limited portfolio optimization. Previous empirical studies on real estate investment and financial performance have produced inconsistent and often contradictory findings, revealing conceptual, contextual, and methodological gaps. While some scholars report a positive effect of real estate investment on financial performance (Mwaura, 2020; Oduor et al., 2022; Laitinen, 2021), others find negative or insignificant relationships (Chen et al., 2024; Kinyua, 2021; Singh & Kumar, 2021), with several studies showing mixed results (Mwangi et al., 2017; Chikweche & Mudzamba, 2023). Moreover, much of the existing research has focused on other sectors such as banking, pension funds, and asset management, or on non-Kenyan contexts like the US, UK, Nigeria, and Zimbabwe, limiting its applicability to Kenya's insurance industry. Since insurance firms operate under unique regulatory environments and investment constraints tied to long-term policy liabilities, these findings cannot be directly generalized. Consequently, the inconsistent results and volatile financial performance patterns among Kenyan insurers underscore a significant research gap. This study, therefore, aimed to fill that gap by examining the relationship between real estate investment and the financial performance of insurance companies in Kenya from 2019 to 2025, to determine whether real estate investment has truly enhanced performance or merely redistributed risk without measurable financial improvement.

## Objective of the Study

The objective of this study is to evaluate the effect of real estate investment on the financial performance of insurance firms in Kenya

## LITERATURE REVIEW

### Theoretical Review

This section reviews existing theoretical, empirical, and contextual literature relevant to real estate and the financial performance of insurance companies.

### Income Capitalization Theory

Income Capitalization Theory was proposed by Fisher in 1930. Income Capitalization Theory posits that the present value of a real estate asset's anticipated future income streams, typically rental income and terminal resale value, determines the asset's worth (Fisher 1930). Brueggeman (2021) states that investors capitalize net operating income (NOI) using a suitable capitalization rate that takes risk, growth expectations, and

market conditions into account in order to evaluate property performance. According to the idea, long-term investors looking for consistent cash flows rather than speculative gains find real estate appealing since it emphasizes income stability and predictability as crucial factors in investment decisions (Gordon, 1962; Geltner, Miller, Clayton, & Eichholtz, 2014; Brueggeman, 2021).

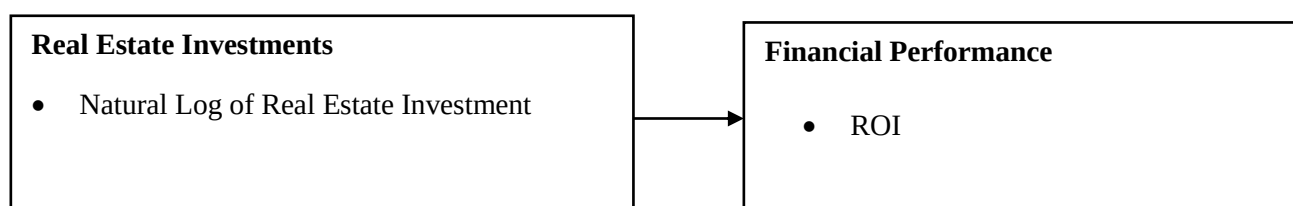
Income Capitalization Theory rests on several assumptions. First, it assumes that real estate generates regular and measurable income over its economic life (Geltner et al., 2014). Second, it assumes that future income streams can be reasonably forecast based on market conditions, lease structures, and property characteristics (Fabozzi, 2023). Third, it presumes relatively stable operating expenses and occupancy levels over time. Finally, the theory assumes that capitalization rates adequately capture risk, inflation expectations, and opportunity cost of capital (Ratcliff, 1965; Geltner et al., 2014). These assumptions allow investors to translate future income into present value estimates.

Despite its widespread use, Income Capitalization Theory has several limitations. One major critique is its reliance on accurate income forecasts, which may be difficult in volatile or underdeveloped property markets (Case & Shiller, 2003). According to Geltner et al. (2014), changes in occupancy rates, rental defaults, regulatory interventions, or macroeconomic shocks can significantly distort expected cash flows. Additionally, capitalization rates are often subjective and sensitive to interest rate movements, investor sentiment, and market liquidity. Critics also argue that the theory underemphasizes speculative price appreciation and ignores behavioral factors that influence real estate markets (Case & Shiller, 2003; Geltner et al., 2014).

In practice, Income Capitalization Theory is the dominant framework used by real estate investors, valuers, lenders, and institutional investors to assess property investments (Brueggeman 2021). In real estate investment, the theory directly links property value and performance to income generation. For insurance companies, real estate investments aligned with this theory enhance financial performance by providing stable rental income, capital preservation, and inflation protection. These predictable cash flows support insurers' long-term liabilities, improve return on investment, and reduce earnings volatility compared to more speculative assets. Consequently, the theory provides a strong basis for analyzing how real estate investments contribute to sustainable financial performance within multi-asset portfolios

### Conceptual Framework

This framework has been used to present the real estate investments and how it impact the financial performance of insurance firms in Kenya. Consequently, the dependent variable, that is, financial performance, has been measured by Return on Investment (ROI).



**Independent Variable**

**Dependent Variable**

**Figure 1: Conceptual Framework**

### Empirical Review

Yat, Keong, Chai, and Kwun (2017) examined the influence of real estate investment on risk diversification and financial performance of publicly listed companies over the period 2007–2015. The study applied Sharpe,

Treynor, and Jensen performance measures to assess the contribution of real estate investment to portfolio risk diversification, while financial ratio analysis was used to evaluate its effect on financial performance. The results showed that beta values were below one, indicating that real estate investments were relatively less risky and, consequently, had no significant effect on financial returns. However, the low coefficients of determination ( $R^2$ ) revealed that portfolios were poorly diversified, suggesting substantial scope for improved diversification. The study concluded that portfolios comprising a broader mix of real assets, such as commercial property and Real Estate Investment Trusts (REITs), could potentially enhance diversification and overall performance.

Nworah, Idu, and Ogbuefi (2023) examined the effect of real estate investment performance on investment decisions in Nigeria using secondary data covering the period 2005–2022. The study applied Pearson correlation analysis to assess the relationship between real estate investment performance, measured by annual returns, and overall market returns. In addition, regression analysis was employed to evaluate the extent to which macroeconomic variables, specifically inflation and exchange rate movements, influenced real estate investment performance. The findings indicated that real estate investment performance had a significant impact on market returns in Nigeria, highlighting the important role of real estate as a key driver of investment outcomes within the Nigerian market.

Mutia, Agong,' & Ochieng (2025) conducted a study to establish the effect of real estate investments and the financial performance of insurance firms in Kenya. The study conducted a census panel study of all 55 licensed insurance firms in Kenya from 2014 to 2023. Using secondary data from IRA reports and company financials, the study applied panel regression models with ROA as the dependent variable. Results show a positive and statistically significant relationship, indicating that investing in real estate is significantly associated with improved insurer performance. The study concludes that, when properly managed within a multi-asset portfolio, real estate investments contribute significantly to insurers' profitability in Kenya.

Kamuru and Opuodho (2025) conducted a study to examine the effect of real estate investment on the firm value of investment companies listed at the Nairobi Securities Exchange (NSE). The study adopted a quantitative research design with a longitudinal approach. The target population comprised five investment firms listed on the NSE, and due to the small population size, a census study was undertaken. The study relied on secondary data sourced from the audited annual financial statements of the listed firms, ensuring data reliability and credibility. The analysis covered ten years from 2013 to 2022. Given the panel nature of the data, a panel regression model was employed to account for both cross-sectional and time-series dimensions. The findings indicated that real estate investment had a statistically significant and positive effect on firm value, implying that an increase in real estate asset holdings led to a corresponding increase in the value of the investment firms.

## **METHODOLOGY**

This research utilized a descriptive research design, which is suitable for characterizing the nature of the variables being studied and comparing their features and the connections between them (Kothari, 2014; Creswell & Creswell, 2023). The target population comprised all 55 insurance companies licensed and operating in Kenya during the study period. This study applied the census approach for data collection, whereby information was gathered from all insurance firms in Kenya. Data for this research were gathered from secondary sources, utilizing a secondary data collection sheet to capture financial statement-related information. The data was sourced from official documents, including annual reports, financial statements, regulatory submissions to the IRA, and other publications from life insurance companies listed on the NSE during the examination period. The research employed descriptive and inferential statistics. The descriptive statistics encompassed mean, minimum, maximum, standard deviation, skewness, and kurtosis. Inferential statistical methods included Pearson's correlation analysis and panel regression analysis. Inferential statistical

approaches were utilized to identify relationships among the studied variables. The panel regression analysis model is expressed as follows:

$$Y_{it} = \beta_0 + \beta_1 X_{it} + \varepsilon$$

Where:

**Y** represents financial performance (measured by ROI)

**$\beta_0$**  represents the constant or coefficient of the intercept

**$\beta_1$**  represent the regression coefficients of the independent variable

**$X_1$**  represents real estate investments

**$\varepsilon$**  represents the error term

**$i$**  represents an individual firm at time  $t$

## FINDINGS AND DISCUSSIONS

This section presents the analysis, interpretation, and discussion of the study findings on the relationship between real estate and the financial performance of insurance firms in Kenya.

### Descriptive Statistics

Descriptive statistics were computed to summarize the distribution and general characteristics of the study variables before conducting inferential analysis.

**Table 1: Descriptive Statistics Results**

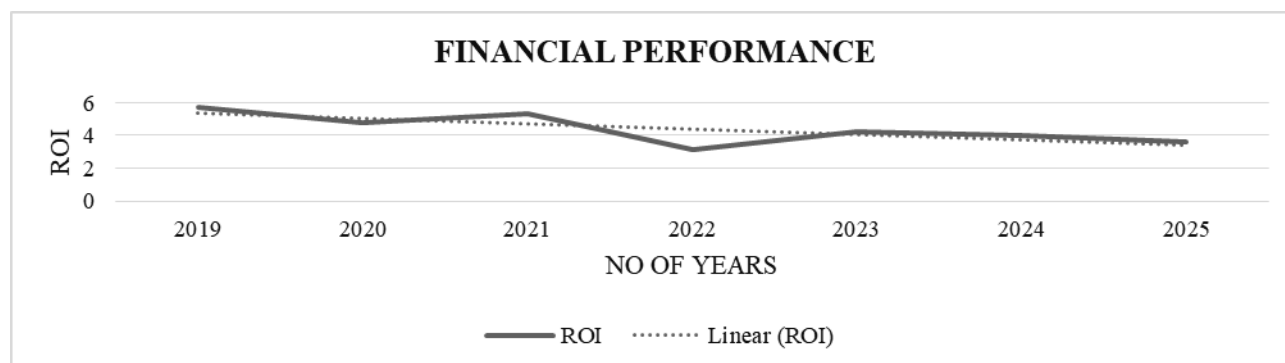
| Statistics                     | Min     | Max     | Mean    | SD     | Skewness | Kurtosis |
|--------------------------------|---------|---------|---------|--------|----------|----------|
| <b>ROI</b>                     | 1.8712  | 9.7431  | 5.3602  | 1.9412 | 0.7123   | 2.8641   |
| <b>Real Estate Investments</b> | 14.5163 | 20.1845 | 17.3216 | 1.5734 | 0.3472   | 2.2168   |

In line with the dependent variable, ROI recorded a minimum value of 1.8700% to a maximum of 9.7400%, indicating variation in financial performance among insurance firms during the study period. The mean ROI of 5.3602 (5.36%) suggests that, on average, insurance firms generated moderate returns from their diversified investment portfolios. However, this average return falls below the recommended industry benchmark of approximately 6–8% for insurance firms, which is generally considered necessary for maintaining sustainable profitability and supporting long-term policyholder obligations (IRA, 2024). The relatively lower average return, therefore, suggests that many insurers may not be fully optimizing their investment portfolios, despite holding diversified assets. This finding supports the concern raised in the problem statement, which indicated that insurance firms in Kenya have been experiencing sub-optimal financial performance.

Real estate investments recorded a minimum value of 14.5163 and a maximum value of 20.1845, indicating substantial variation in property investment levels among insurance firms. The mean value of 17.3216 suggests that real estate forms a significant long-term investment component within insurers' portfolios due to its potential for rental income and capital appreciation. This finding is consistent with studies by Kamuru and Opuodho (2025) and Nworah, Idu, and Ogbuefi (2023), which reported that real estate investments contribute to portfolio stability and improved financial performance among institutional investors. The standard deviation of 1.5734 indicates relatively higher dispersion compared to other asset classes, reflecting the large capital requirements associated with property investments. The skewness value of 0.3472 indicates slight positive skewness, suggesting that most insurers maintain moderate property investments while a few firms hold larger real estate portfolios. The kurtosis value of 2.2168 indicates a relatively flat distribution but remains within acceptable limits for normality (Hair et al., 2019; Kline, 2016).

## Trend Analysis

Trend analysis was conducted to examine the pattern of financial performance of insurance firms in Kenya over the 7 years (2019 – 2025), as measured by ROI. The results are presented in Figure 1.



**Figure 1: Trend Analysis for Financial Performance**

Figure 1 presents the trend in financial performance of insurance firms in Kenya, measured using ROI over the period 2019–2025. The trend illustrates that in 2019, the average ROI was approximately 5.7%, which represents the highest performance level within the study period. In 2020, ROI declined to about 4.8%, indicating a reduction in financial performance. This decline can largely be attributed to the economic disruptions caused by the COVID-19 pandemic. During this period, many insurance firms experienced lower investment income due to reduced interest rates and declining asset prices. In 2021, ROI increased slightly to approximately 5.3%, indicating a partial recovery in financial performance following the economic reopening and recovery of financial markets after the pandemic.

However, in 2022, ROI dropped sharply to around 3.1%, representing the lowest level of financial performance during the study period. Similar trends were observed by Cytonn Investments (2022), which reported that investment returns for institutional investors declined due to macroeconomic pressures and increased financial market volatility. In 2023, ROI improved moderately to approximately 4.2%, indicating some recovery in investment performance.

## Inferential Analysis

The study employed panel regression analysis to determine the magnitude and significance of the relationship between ROI and the independent variable.

## Correlation Analysis

Correlation analysis was conducted to examine the strength and direction of the relationship between real estate investments and the financial performance measured by ROI. The results are indicated in Table 2.

**Table 2: Correlation Matrix**

| Variables               |                     | ROA      | Real Estate Investment |
|-------------------------|---------------------|----------|------------------------|
| ROA                     | Pearson Correlation | 1        |                        |
|                         | Sig.(2-tailed)      |          |                        |
| Real Estate Investments | Pearson Correlation | 0.6289   | 1                      |
|                         | Sig.(2-tailed)      | (0.0009) |                        |

The results indicate that real estate investments show the strongest positive and statistically significant relationship with ROI ( $r = 0.6289$ ,  $p = 0.0009$ ). Overall, the correlation analysis shows that investment diversification variables have strong positive and statistically significant relationships with financial performance.

### Model Summary

The model summary presents the overall fitness of the regression model in explaining the relationship between real estate investment and the financial performance (ROI) of insurance firms in Kenya.

**Table 3: Model Summary Results**

| Statistic    | Multiple R | R-squared | Adjusted squared | R- | F-statistic | Prob (F-statistic) |
|--------------|------------|-----------|------------------|----|-------------|--------------------|
| <b>Model</b> | 0.8014     | 0.6423    | 0.6287           |    | 47.2185     | 0.0000             |

The results in Table 3 indicate that the Multiple R value is 0.8014, which shows a strong positive correlation between the observed and predicted values of ROI. This suggests that the model has a strong ability to predict changes in ROI based on the independent variable. The R-squared of 0.6423 implies that approximately 64.23% of the variation in financial performance (ROI) among insurance firms is explained by real estate investments. This indicates that the model has good explanatory power. The Adjusted R-squared of 0.6287 shows that after adjusting for the number of predictors in the model, about 62.87% of the variation in ROI is still explained by the independent variable. This confirms that the model is not overfit and remains reliable. The F-statistic of 47.2185 with a p-value of 0.0000 indicates that the overall regression model is statistically significant at the 5% level of significance. Overall, the model summary results indicate that the regression model is robust, statistically significant, and suitable for explaining the relationship between real estate investment and the financial performance of insurance firms in Kenya.

### Analysis of Variance (ANOVA)

The Analysis of Variance (ANOVA) was conducted to test the overall significance of the regression.

**Table 4: ANOVA Results**

| Source of Variation | Sum of Squares | df  | Mean Square | F-statistic | F-statistic |
|---------------------|----------------|-----|-------------|-------------|-------------|
| <b>Regression</b>   | 8.7426         | 4   | 2.1857      | 47.2185     | 0.0000      |
| <b>Residual</b>     | 4.8723         | 105 | 0.0464      |             |             |
| <b>Total</b>        | 13.6149        | 109 |             |             |             |

The ANOVA results in Table 4 show that the F-statistics are 47.2185 with a corresponding p-value of 0.0000, which is less than the significance level of 0.05. This indicates that the regression model is statistically significant, and therefore, the null hypothesis that the coefficient are equal to zero is rejected. The results further indicate that the regression sum of squares (8.7426) is substantially higher than the residual sum of squares (4.8723), suggesting that a large proportion of the variation in financial performance is explained by the model. Overall, the ANOVA results confirm that the model is fit for explaining the relationship between real estate investment and financial performance, and therefore suitable for further interpretation of individual regression coefficients

### Regression Coefficients Results

The regression coefficient was estimated to determine the effect of real estate investment on the financial performance (ROI) of insurance firms in Kenya.

**Table 5: Regression Coefficients Results (Random Effects Model)**

| Variable                       | Coefficient ( $\beta$ ) | Std. Error | t-Statistic | p-value | 95% Confidence Interval |
|--------------------------------|-------------------------|------------|-------------|---------|-------------------------|
| <b>Constant</b>                | 0.8124                  | 0.2437     | 3.3342      | 0.0012  | 0.3346 - 1.2902         |
| <b>Real Estate Investments</b> | 0.2684                  | 0.0587     | 4.5736      | 0.0000  | 0.1533 - 0.3835         |



Based on the fixed effects model, the estimated regression equation is:

$$Y_{it} = 0.8124 + 0.2684X_{it}$$

### Hypothesis Testing

**H<sub>01</sub>: Real Estate Investments have no Significant Effect on the Financial Performance of Insurance Firms in Kenya.**

The findings of the fourth hypothesis indicate that real estate investments have a positive and highly significant effect on ROI ( $\beta = 0.2684$ ,  $p = 0.0000 < 0.05$ ). The findings imply that, when investment in real estate is controlled and other factors remain constant, a unit increase in real estate investment will increase the financial performance of insurance firms by 0.2684 units. The rise will have a significant effect on the financial performance of these firms, given that  $p < 0.05$ . Thus, the null hypothesis is rejected, confirming that real estate investments significantly influence financial performance.

This result is supported by Income Capitalization Theory (Fisher, 1930), which emphasizes that real estate derives value from stable income streams such as rent and long-term capital appreciation. The findings are in tandem with studies of Mohamad and Saad (2017), Nworah, Idu, and Ogbuefi (2023), and Kamuru and Opuodho (2025), who found that real estate investments positively affect firm value among diverse sectors of the economy. According to Mel(2025), real estate investment acts as a powerful economic lever, typically providing a steady income stream and inflation protection while significantly impacting firm value and portfolio diversification. On the contrary, Wanjiku, Bosire, and Matanda (2021) and Yat et al. (2017) found that real estate investments had no significant effect on financial returns. According to Wanjiku, Bosire, and Matanda (2021), real estate investments negatively impact a firm's financial performance through illiquidity, high interest rate costs, and exposure to market busts. The study concludes that these investments often involve long recovery periods and are sensitive to pro-cyclical lending criteria, which can lead to increased credit risk during economic downturns

### CONCLUSIONS AND RECOMMENDATIONS

This section presents a summary of the key findings of the study, draws conclusions based on the empirical results, and provides recommendations arising from the analysis. The findings revealed that real estate investments have a positive and highly significant effect on financial performance, with the strongest influence among all the study variables. This indicates that increased investment in real estate significantly enhances ROI for insurance firms. Real estate investments provide stable and predictable income through rental yields, as well as long-term capital appreciation, making them an attractive asset class for institutional investors. The results also showed that real estate investments exhibit relatively higher variability, reflecting the large capital requirements and uneven distribution of property investments across firms. The strong positive effect of real estate suggests that it plays a crucial role in improving portfolio performance and ensuring long-term financial stability. Additionally, real estate investments offer a hedge against inflation, which further enhances their value in diversified portfolios.

The study concludes that real estate investments have the strongest and most significant positive effect on financial performance among all the variables examined. Real estate provides stable rental income, long-term capital appreciation, and protection against inflation, making it a highly valuable component of insurance firms' investment portfolios. The findings imply that real estate investments play a crucial role in enhancing long-term financial stability and profitability. However, the study also recognizes that real estate investments are relatively illiquid and capital-intensive, which may limit their flexibility in addressing short-term financial needs. Consequently, while real estate is a key driver of financial performance, it must be balanced with more liquid assets to ensure efficient portfolio management.

Given that real estate investments have the strongest positive effect on financial performance, the study recommends that insurance firms should increase their allocation to income-generating real estate assets, such as commercial properties and Real Estate Investment Trusts (REITs). However, due to the illiquid nature of real estate, firms should adopt a strategic investment approach, focusing on high-quality properties in prime locations with stable rental income. Insurance firms should also consider diversifying within the real estate sector, including investments in residential, commercial, and mixed-use properties, to reduce risk. Additionally, incorporating REITs into the investment portfolio can provide exposure to real estate while maintaining liquidity, thereby addressing the limitations associated with direct property ownership.

### **Areas for Further Studies**

The study examined the effect of real estate investment on the financial performance of insurance firms in Kenya and found that the independent variable explain approximately 64.23% of the variation in financial performance ( $R^2 = 0.6423$ ). This implies that while estate investment plays a significant role in influencing financial performance, there remains about 35.77% of the variation unexplained, which may be attributed to other factors not included in the model. Based on this, several areas for further research are recommended. First, future studies should consider incorporating additional firm-specific variables such as firm size, leverage, liquidity, underwriting risk, and management efficiency, which may influence financial performance. Including these variables would provide a more comprehensive understanding of the determinants of financial performance in the insurance sector.

Second, further research could examine the role of macroeconomic factors, such as inflation, interest rates, exchange rates, and GDP growth, in influencing the relationship between estate investment and financial performance. This would help to capture the broader economic environment within which insurance firms operate. Third, future studies may explore the effect of alternative investment assets, such as private equity, infrastructure investments, derivatives, and offshore investments, which were not included in this study. This would provide insights into emerging investment opportunities and their impact on financial performance. Finally, researchers can conduct comparative studies across different sectors, such as comparing insurance firms with commercial banks, pension funds, or collective investment schemes, to determine whether the effect of estate investment differs across financial institutions. Overall, these suggested areas for further research would help to build on the findings of this study and contribute to a deeper understanding of the factors influencing the financial performance of insurance firms in Kenya and beyond.

### **REFERENCES**

- Ahmed, H. M., El-Halaby, S. I., & Soliman, H. A. (2022). The consequence of the credit risk on the financial performance in light of COVID-19: Evidence from Islamic versus conventional banks across MEA region. *Future Business Journal*, 8(1), 21.
- Breusch, T. S., & Pagan, A. R. (1979). A simple test for heteroscedasticity and random coefficient variation. *Econometrica*, 47(5), 1287–1294.
- Brealey, R. A., Myers, S. C., & Allen, F. (2020). 4.3. Economic and Legal Governance. *Curriculum & Syllabi Handbook MBA International Management Full-Time*.
- Breusch, T. S., & Pagan, A. R. (1980). The Lagrange multiplier test and its applications to model specification in econometrics. *Review of Economic Studies*, 47(1), 239–253.
- Brueggeman, W. B., & Fisher, J. D. (2021). *Real estate finance and investments* (16th ed.). McGraw-Hill Education.
- Case, K. E., & Shiller, R. J. (2003). Is there a bubble in the housing market? *Brookings Papers on Economic Activity*, 2, 299–362.

- Chen, J. S., Khiêm, M. Đ., & Tsou, H. T. (2024). Investment diversification strategies and performance in financial institutions during market volatility. *Investment Management Review*, 36(12), 4036-4051.
- Chikweche, T., & Mudzamba, T. (2023). Portfolio diversification strategies in emerging market financial institutions. *African Finance Journal*, 28(4), 112-135.
- Dupont, R., & Rahman, M. (2022). Portfolio diversification and insurer performance in Canada. *Journal of Risk and Insurance*, 89(4), 987–1012.
- Elton, E. J., Gruber, M. J., Brown, S. J., & Goetzmann, W. N. (2022). *Modern portfolio theory and investment analysis* (10th ed.). Wiley.
- Fabozzi, F. J. (2023). *Bond markets, analysis and strategies* (10th ed.). Pearson Education.
- Fabozzi, F. J., & Gupta, F. (2021). Portfolio construction and analytics. *Journal of Portfolio Management*, 47(5), 1–15.
- Fama, E. F., & Schwert, G. W. (1977). Asset returns and inflation. *Journal of Financial Economics*, 5(2), 115-146
- Geltner, D., Miller, N., Clayton, J., & Eichholtz, P. (2014). *Commercial real estate analysis and investments* (3rd ed.). Cengage Learning.
- Gitahi, D., & Kosgei, D. (2024). Investment diversification strategies and financial performance of insurance companies in Kenya. *African Journal of Finance and Accounting*, 12(1), 45–58.
- Gordon, M. J. (1962). The investment, financing, and valuation of the corporation. *Review of Economics and Statistics*, 44(1), 37–51.
- Gorton, G., & Metrick, A. (2012). Regulating the shadow banking system. *Brookings Papers on Economic Activity*, 261–312.
- Gorton, G., & Pennacchi, G. (1993). Security baskets and index-linked securities. *Journal of Business*, 66(1), 1–27.
- Gujarati, D. N., & Porter, D. C. (2010). *Basic econometrics* (5th ed.). McGraw-Hill.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2019). *Multivariate data analysis* (8th ed.). Cengage Learning.
- Harelimana, J. B. (2017). Equity investments and financial performance of Rwanda Social Security Board. *International Journal of Business and Management*, 12(8), 32–44.
- Hausman, J. A. (1978). Specification tests in econometrics. *Econometrica*, 46(6), 1251–1271
- He, L., Shen, C. H. H., & Shiu, C. Y. (2023). Mark-to-market or Mark-to-sentiment–The Sensitivity of Fair Value Measurement to Investor Sentiment. *Available at SSRN 4541086*.
- Ilahi, I., Jamil, M., & Kazmi, S. H. A. (2024). Equity investment and financial performance of investment banks in Pakistan. *Pakistan Journal of Finance*, 15(2), 55–72.
- Jepkemoi, A., & Solomon, R. (2023). Government securities investment and financial performance of insurance firms in Kenya. *Journal of Finance and Accounting*, 11(2), 101–115.
- Kacperczyk, M., & Schnabl, P. (2013). How safe are money market funds? *Quarterly Journal of Economics*, 128(3), 1073–1122.
- Kamau, S., & Njoroge, A. (2018). Determinants of investment performance in Kenyan insurance companies. *Journal of Insurance Studies*, 18(9), 81-88.

- Kamuru, J., & Opuodho, R. (2025). Real estate investment and firm value of NSE-listed investment firms. *Journal of Property Research*, 42(1), 66–84.
- Kariuki, P., & Mwangi, L. (2017). Investment portfolio management and performance in Kenyan insurance sector. *Kenya Finance Journal*, 15(2), 45–62.
- Kasee, J. (2024). Equity financing and shareholder value creation of NSE-listed firms. *International Journal of Finance*, 9(3), 211–229.
- Keynes, J. M. (1936). *The general theory of employment, interest and money*. Macmillan.
- Kinyua, F., & Kihara, A. (2021). Influence of multi-asset strategies on performance of financial services firms in Kenya. *Journal of Investment Management*, 6(3), 82–101.
- Kioko, N., & Ochieng', P. (2020). Portfolio diversification and financial performance of NSE-listed firms. *Nairobi Journal of Economics*, 5(2), 89–104.
- Kothari, C. R. (2004). *Research methodology: Methods and techniques* (2nd ed.). New Age International.
- Kumaraswamy, S., Ebrahim, R., & Nasser, H. (2019). Impact of corporate restructuring on the financial performance of gulf cooperation council firms. *Polish Journal of Management Studies*, 19(2), 262–272
- Lamichhane, R. (2021). Investment diversification and financial performance of commercial banks in Nepal. *Asian Journal of Finance*, 6(1), 25–39.
- Mathuva, D. M. (2016). Investment Performance Analysis in Kenyan Financial Institutions (Doctoral dissertation, University of Nairobi).
- Malkiel, B. G. (2020). *A random walk down Wall Street* (12th ed.). W. W. Norton & Company.
- Mhando, D., & Mgaya, K. (2022). Investment diversification and insurer performance in Tanzania. *Journal of African Financial Studies*, 8(2), 140–156.
- Muema, K. (2021). Equity investment and financial performance of collective investment schemes in Kenya. *Journal of Accounting and Finance*, 13(1), 55–69.
- Mugenda, O. M., & Mugenda, A. G. (2003). *Research methods: Quantitative and qualitative approaches*. African Centre for Technology Studies
- Mwangi, S. W. (2025). *Portfolio Composition and Financial Performance of Mutual Funds in Kenya* (Doctoral dissertation, Kenyatta University).
- Mwangi, W., & Wanjugu, M. (2022). Investment portfolio composition and performance of Kenyan insurers. *International Journal of Economics and Finance*, 14(5), 88–101.
- Nasieku, T., & Susan, J. K. (2016). Effect of investment diversification on financial performance of insurance firms in Kenya. *International Journal of Finance and Investment*, 68, 2–1.
- Njoroge, A. M. (2019). Analyzing Investment Return Determinants of Life Insurance Companies in Kenya (Doctoral dissertation, Strathmore University).
- Nworah, O., Idu, O., & Ogbuefi, J. (2023). Real estate investment performance and market returns in Nigeria. *Journal of Property Investment & Finance*, 41(6), 601–618.
- Umar, M. A. (2023). Investment diversification Strategies: A Framework for Institutional Performance. *International Journal of Strategic Investment Sciences*, 14(1), 1–11.

- Wandabusi, C., Ombok, B. O., & Nyamita, M. O. (2023). Effect of portfolio management on the financial performance of listed insurance firms in the Nairobi securities exchange, Kenya. *European Journal of Economic and Financial Research*, 7(3).
- Wanjiru, V. K. (2021). Investment Portfolio Performance and Financial Sustainability of Insurance Companies in Kenya (Doctoral dissertation, Kabarak University).
- Wooldridge, J. M. (2016). *Introductory econometrics: A modern approach* (6th ed.). Cengage Learning.
- Yaşar, B. (2021). Impact investing: A review of the current state and opportunities for development. *Istanbul Business Research*, 50(1), 177-196.
- Yat, K. C., Keong, C. C., Chai, W. Y., & Kwun, L. T. (2017). Real estate investment and portfolio diversification. *Journal of Property Investment & Finance*, 35(2), 134–150.
- Yazdifar, H., Zaman, M., Tsamenyi, M., & Askarany, D. (2022). Portfolio management strategies in UK insurance companies. *British Accounting Review*, 54(3), 445-467.
- Zulfikar, R., & STp, M. M. (2018). Panel data regression methods in financial performance analysis. *Journal of Financial Analytics*, 9(2), 1-10.