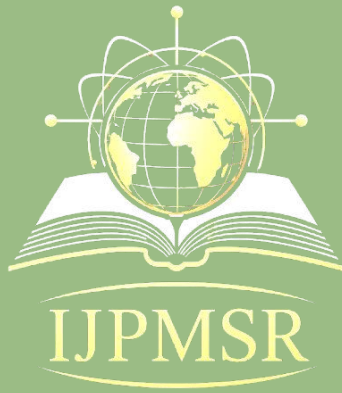




International Journal of Project Management Studies and Research

INFLUENCE OF RISK MITIGATION ON PERFORMANCE OF PROJECTS BY REAL ESTATE INVESTMENT TRUSTS IN NAIROBI METROPOLITAN AREA, KENYA

Michael Chege Ng'ang'a , Dorothy Kiriimi, and Mary Mbithi



Influence of Risk Mitigation on Performance of Projects by Real Estate Investment Trusts in Nairobi Metropolitan Area, Kenya

Michael Chege Ng'ang'a

Corresponding Author, Kenya Methodist University

Dorothy Kirimi

Lecturer, Department of Business Administration, Kenya Methodist University

Mary Mbithi

Lecturer, Department of Business Administration, Kenya Methodist University

Article History:

Published on: 04/8/2026

DOI:

<https://doi.org/10.5281/zenodo.21783615>

How to Cite: Ng'ang'a, M. C., Kirimi, D., & Mbithi, M. (2026). Influence of Risk Mitigation on Performance of Projects by Real Estate Investment Trusts in Nairobi Metropolitan Area, Kenya. *International Journal of Project Management Studies and Research*, 3(2), 1–11.

<https://doi.org/10.5281/zenodo.21783615>

Abstract:

Purpose of the Study: This study examined the influence of risk mitigation on the performance of projects undertaken by Real Estate Investment Trusts (REITs) in the Nairobi Metropolitan Area, Kenya. Specifically, it assessed whether effective and timely risk mitigation practices significantly improve project performance while contributing empirical evidence to contingency theory and REIT risk management.

Methodology: The study adopted an ex-post facto research design targeting 171 respondents from three licensed REIT organizations managing 16

completed projects. Stratified random sampling produced 120 respondents, with 106 valid questionnaires analyzed using descriptive statistics and bivariate binary logistic regression to determine the influence of risk mitigation on project performance.

Findings: The findings revealed that REIT project teams widely implemented risk mitigation strategies, with effective resource allocation and change management receiving the highest ratings, while risk avoidance was least emphasized. Logistic regression established that effective and timely risk mitigation had a statistically significant positive influence on project performance ($B = 2.234$, $p < .001$; $\text{Exp}(B) = 9.333$), indicating that projects applying effective mitigation practices were over nine times more likely to achieve improved performance than those with delayed or poorly executed mitigation. Consequently, the null hypothesis was rejected, confirming the importance of structured, adaptive risk mitigation in enhancing project success.

Conclusion: The study concluded that effective, timely, and well-resourced risk mitigation significantly enhances the performance of REIT projects. Adaptive mitigation strategies aligned with project-specific risks improve project outcomes and support contingency theory. REIT organizations should strengthen risk governance through structured mitigation plans, adequate resources, and clearly assigned responsibilities.

Keywords: Risk Mitigation, Project Performance, Real Estate Investment Trusts, Contingency Theory, Nairobi Metropolitan Area.

©2026 By The Authors. This Article is an open-access article distributed under the terms and conditions of the Creative Commons Attribution (CC BY) license (<https://creativecommons.org/licenses/by-nc-sa/4.0/>)

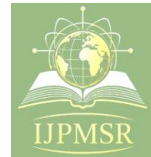
1. INTRODUCTION

According to Onyuma and Ndung'u (2022), REITs are investment companies that collect money from investors to buy and manage real estate properties that are used as sources of income to the investors. In Kenya, the number of authorized REITs is currently three, with Acorn Investment Management, operating its two REITs as ASA I-REIT, and Student Accommodation D-REIT; LAPTRUST Imara I-REIT, and ILAM Fahari I-REIT. These handles the completed and ongoing projects in Nairobi Metropolitan Area. Some of REITs' strategies in Kenya essential for mitigating project value when it comes to market and financial uncertainty include diversification in property type, diversification in property location, and phased implementation (Onyuma & Ndung'u, 2022; Muigai, 2022).

Project performance is usually measured in terms of budget, schedule, quality and stakeholder satisfaction. It must be managed effectively by project teams, using risk management tools to respond to problems when they occur (Egiyi & Eze, 2022). In the case of Kenya, projects by Real Estate Investment Trusts (REITs) have to deal with increasing construction expenses, time-consuming licensing and approval procedures, and diminishing returns for investors. Developers also often face higher construction costs, which increased by approximately 17.6 percent in 2024 to about KSh 83,731 per square metre (Cytonn Research, 2025). During this time, the REIT unit prices decreased by 45 percent from 2021 to 2025, hampering investor confidence in the sector (Cytonn Research, 2025; REITs Association of Kenya, 2024). All of these pressures require REIT project teams to plan for and manage risks to minimize threats and safeguard project outcomes.

Although risk mitigation is considered as a key factor in successful REIT projects, empirical evidence of the specific link between REIT project performance and risk mitigation practices in Kenya is limited. Existing local studies tend to have a more general focus on investment or construction-sector dynamics rather than on structured risk responses in general REIT projects. Kioko and Ochieng (2021), for example, focused on portfolio diversification on the Nairobi Securities Exchange, with a specific focus on investment dynamics rather than risk management practices. Maina and Mungai (2023) did a general study of risk management problems in construction projects in Nakuru County and did not consider REIT project structures. Karunakaran et al. (2020) in their study of project risk-response strategies and impact on losses caused by delays in construction projects in Malaysia found that the structured risk response planning approach had positive effects on the losses caused by delays in construction projects in Malaysia. Mutula et al. (2024) studied the impact of structured project risk-response planning on implementation outcomes in construction projects in the Ngong area of Kenya. These researchers concluded that structured project risk-response planning had a positive effect on implementation outcomes in construction projects in the Ngong area of Kenya.

Makambajeki and Mjema (2023) found direct positive impact of Risk Management practices on the Performance of Information Technology Projects in Tanzania. Ghaeb and Mahjoob (2023)



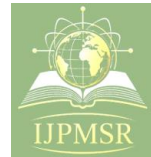
conducted a review of 38 studies on construction risk response and concluded that the effective response to risks minimizes losses and maximizes benefits. Igihozo et al. (2022) found that risk response planning has a positive influence on the performance of a construction project in Rwanda. Okoro and Ayaba (2023) also noted resource allocation to be a discussion point that is present in the performance risks pertaining to the REITs sector, although it was not empirically tested in a specific REIT market. All those studies were performed in various institutional, sectoral and geographical settings. As such, they create a contextual void on the nature of risk mitigation practices affecting the performance of REIT projects in Kenya, which this study fills.

In addition to these project-specific risk-response studies, there are wider aspects of enterprise risk management (ERM) literature that reinforce the importance of the practices of risk mitigation for organizational and project outcomes. In the European context, Ghazieh and Chebana (2021) found that the adoption of an effective risk management framework had a positive impact on the firm's performance when risk responses were embedded in the firm's routine decision making process instead of being seen as a compliance routine. Likewise, Nocco and Stulz (2022) argue that enterprise risk management adds value most importantly by providing an organization with financial and operational flexibility to respond to risks manifested according to its plans. This aligns with the current study's findings that resource allocation was the highest rated mitigation activity for REIT project teams.

Anton and Nucu (2020), reviewed the literature on enterprise risk management (ERM). Herein, they emphasized that the gains from implementing risk management are not linked to the actual process of identifying risk but to the consistency and effectiveness of the subsequent response that can be activated. These wider views support the reasons behind the choice of risk mitigation as a specific arena for this study. This is because it is at the risk mitigation stage that risks identified and assessed can be converted into practical steps that can make a difference to the performance of REIT projects. This reflects the findings that many REIT specific mitigation studies have focused on mitigations in the Nairobi Metropolitan Area, while only a small number of studies have explored mitigation strategies in secondary Kenyan property markets.

2. THEORETICAL REVIEW

The study was based on the theory of contingency. This theory suggests that there is no one right or wrong approach to organizational management; rather, the management practices of an organization need to be tailored to the circumstances found in the external and internal environment (Müller et al., 2024). When applied to REIT project risks, the theory indicates that the responses must be flexible to the context at hand, and must not be one size fits all (Ottaviani et al., 2024). A REIT project team might have to address a risk by transferring it through insurance or subcontracting. It is also good to accept risk if the response cost is heavier than the probable outcome, negotiate risk resolution with stakeholders, and request a change in the project or allocate extra resources to the risk response. In this regard, the general principles of contingency theory



may be helpful to explain why project teams that design mitigation responses to the particular risks are more likely to show project performance than is the case for those that use a one size fits all approach.

This study was guided by the following hypothesis:

H03: *Risk mitigation does not have a significant influence on performance of projects by REITs in the Nairobi Metropolitan Area.*

3. METHODOLOGY

Research Design

The study utilized an ex-post facto design. This approach was appropriate for the study because the independent variable (risk mitigation) cannot be manipulated by the researcher. More so, it is possible to determine if there is an influence relationship between the risk mitigation practices and project performance (Huntington-Klein, 2021).

Location and Population of the Study

The study targeted three licensed REIT organizations in the Nairobi Metropolitan Area: namely ILAM Fahari I-REIT, Acorn Student Accommodation D-REIT and LAPTRUST Imara I-REIT, which collectively had undertaken a total of 16 real estate projects. The target groups included 171 participants; Project Managers (42), Investment Analysts (33), Construction Managers (47), Finance Managers (26) and representatives of the Trustees (23).

Sample and Sampling Procedure

A census of all 16 projects was applied since the population of projects was small and manageable. Stratified random sampling was used, along with the Taro Yamane formula, to provide respondents in each of the five participant categories and a 5 percent margin of error.

Research Instrument and Data Collection

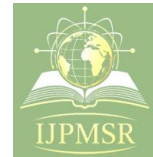
Structured questionnaire was used for data collection, which includes demographic data, risk identification, risk assessment, risk mitigation, risk monitoring, and project performance. The seven items in the risk mitigation section were rated on a 5-point scale. Data were gathered using a two-week collection time via a physical drop-and-pick and an online version of the questionnaire using Google forms, advertised via email and social media.

Reliability and Validity

For instrument reliability, Cronbach's alpha was used, and the result was assumed to be acceptable if the alpha value was above 0.7. For instrument validity, content validity which included the expert review and construct validity which included the Kaiser-Meyer-Olkin (KMO) measure and Bartlett's test of sphericity were used.

Data Analysis

The quantitative data were analyzed using descriptive statistics (means and standard deviation) and bivariate binary logistic regression model to check the influence of risk mitigation on project



performance with $P(Y = 1) = 1 / (1 + \exp(-(B_0 + B_3 X_3)))$. In this model, X_3 is the risk mitigation, and Y is the project performance (1 = improved project performance, 0 = non-improved project performance). The null value was discounted if the P value is less than 0.05.

4. RESULTS

Response Rate, Validity, and Reliability

A total of 120 questionnaires were handed out and 106 were returned complete and usable (yielding an 88.3 per cent response rate). Overall Kaiser-Meyer-Olkin value was .833, with a Bartlett's test of sphericity ($\chi^2(10) = 274.279$, $p < .001$), a confirmation of the adequate construct validity of the overall instrument. The seven items of the risk mitigation construct had a Cronbach's alpha of .743, which is considered an adequate level of reliability.

Demographic Characteristics of Respondents

Among the 106 respondents, 59.4 per cent were male, and 40.6 per cent female. Regarding age group, 40.6% of the respondents belonged to the age group between 31 and 39 years, followed by 34.0% between 40 and 49 years, 17.0% of the respondents were above 50 years and 8.5% were below 30 years. Concerning education, 46.2% had a bachelor's degree, 35.8% had a postgraduate qualification, 15.1% had a diploma and 2.8% had a certificate. 49.1 percent held the position for between 6 and 10 years, 26.4 percent for less than 5 years, and 24.5 percent for over 10 years. Altogether, the demography suggests that respondents were mostly working age adults who have significant levels of formal education and sustained employment. More so, they were likely having high levels of knowledge and understanding of risk management practices and the performance of their projects within their own REIT organization. This is especially important for a risk mitigation study. This is because the allocation of resources, risk transfer, and change requests are usually determined by a manager or analyst who is qualified to make the decision, or to get the decision, as a result of their seniority and technical expertise.

Descriptive Statistics for Risk Mitigation

The descriptive statistics for the risk mitigation practices implemented in the samples of REIT projects are presented in Table 1.

Table 1: Descriptive Statistics for Risk Mitigation

Risk mitigation statement	N	Min	Max	M	SD
The project team plans to avoid risks with a high impact and a high likelihood of occurrence	106	1	5	3.53	0.918
The project team transfers risks to insurance companies and third parties with greater expertise, such as subcontractors	106	2	5	3.75	0.916
The project team accepts less severe risks when the cost of managing them is greater than the likely consequences	106	1	5	3.80	0.909

The project team develops strategies for exploiting positive risks and enhancing opportunities	106	1	5	4.07	0.939
The project team uses change requests as a risk mitigation strategy	106	1	5	4.08	0.912
The project team relies on negotiation and facilitation during risk mitigation	106	1	5	3.92	0.953
Resources are effectively allocated to respond to risks during risk mitigation	106	1	5	4.12	0.963

The highest mean score was registered by the effective allocation of resources to the risk responses ($M = 4.12$, $SD = 0.963$). It was followed by use of change requests as a risk mitigation strategy ($M = 4.08$, $SD = 0.912$) and strategies for exploiting positive risks and enhancing opportunities ($M = 4.07$, $SD = 0.939$). The means for using negotiation and facilitation, acceptance of lesser risk, and insurance and subcontracting practices as a means for risk transfer were 3.92, 3.80, and 3.75, respectively. Risk avoidance had the lowest mean score ($M = 3.53$, $SD = 0.918$), an indication that project teams were less likely to avoid all activities involving risks than to advocate for mitigating the risks, transferring the risks, accepting the risks, allocating resources or changing projects when faced with risks in real estate development.

Bivariate Logistic Regression: Risk Mitigation and Project Performance

A bivariate binary logistic regression was used to determine the level of significance of the effect of risk mitigation effectiveness and timeliness on the odds of improved project performance. The results are shown in Tables 2 & 3.

Table 2: Model Summary for Risk Mitigation and Project Performance

Step	-2 log likelihood	Cox and Snell R^2	Nagelkerke R^2
1	80.442	.141	.236

Note. Estimation termination happened at iteration 5 as parameter estimates changed by less than .001.

Table 3: Variables in the Equation for Risk Mitigation and Project Performance

Predictor	Category	B	SE	Wald	df	p	Exp(B)
Risk mitigation	Delayed, poorly executed, or unimplemented risk mitigation (RC)	—	—	—	—	—	0
Risk mitigation	Effective and timely risk mitigation	2.234	.615	13.173	1	< .001	9.333

Constant	—	.539	.336	2.569	1	.109	1.714
----------	---	------	------	-------	---	------	-------

Note. RC = reference category. Reference categories were coded 0.

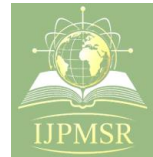
The model achieved a -2 log likelihood of 80.442, a Cox and Snell R^2 of .141, and a Nagelkerke R^2 of .236. The odds ratio for effective and timely risk mitigation was 9.333 and had a statistically significant positive coefficient ($B = 2.234$, $SE = .615$, Wald $\chi^2(1) = 13.173$, $p < .001$). This means that projects that were effective and timely at managing risks were about 9 times more likely to achieve better results than projects that were ineffective in mitigating risks, or that did so poorly or late. This constant was not significant ($p = .109$). The p-value for the effect of risk mitigation on performance of projects by REITs in Nairobi Metropolitan Area was found to be < 0.05 which meant that the null hypothesis was rejected.

5. DISCUSSION

The descriptive findings indicate that REIT project teams used a wide range of mitigation responses. The highest level of focus was on making change requests (new or revised plans, schedules, or budgets) when risk exposure escalated and financial, technical, and human resources being available to implement planned risk responses. The comparatively low rating for "risk avoidance" was a reflection of the fact that project teams are often willing to manage risk through resourcing, negotiation, transfer, and acceptance. This is opposed to avoiding risk themselves, and the ability to do so would, in most real estate projects, be necessary for the project to proceed at all.

The results of this study are consistent with Mutula et al. (2024) study, which investigated the correlation between structured risk response planning and project implementation outcomes in faith-based construction projects in Ngong, Kenya. In this study, the former emerged as the significant positive influence on project performance. This is in tandem with the findings of Karunakaran et al. (2020) who found that sound risk-response measures in construction projects in Malaysia have mitigated the negative impact of construction delays in the cost and time of construction projects. Subsequently, Ghaeb and Mahjoob (2023) reviewed the construction risk-response literature and found that sound response measures had the potential of minimizing losses, maximizing benefits and supporting achievement of the construction project objective. In the Kenyan REIT context more specifically, this implies that the process of mitigation is not only a documentation process, but also one that is resourced, actively managed and based on risk transfer through insurance and subcontracting. It also points to informed risk acceptance, contractual change management, negotiation of relevant stakeholders and deliberate exploitation of upside opportunities, which all keep with adaptive, context-dependent responses expected by contingency theory.

6. CONCLUSIONS AND RECOMMENDATIONS



The study concludes that effective risk mitigation makes a significant positive influence on the projects undertaken by REITs in Nairobi Metropolitan Area when used at the right time in the projects. Project teams that successfully minimized the negative effects of uncertainty by allocating resources, managing change requests, offloading risks, accepting risks, negotiating, or enhancing opportunities tended to see better project outcomes than teams whose strategies to mitigate uncertainty were poorly executed, under resourced, and/or delayed. The effectiveness of the mitigation strategy was dependent on the corresponding nature and scale of the particular risk. The study results also support the contingency theory in the REIT project context by showing that adapting risk responses to the situation, and not one standardized approach, is correlated with project outcomes.

REIT organizations should act for practice and link risk mitigation plans to resources, risk owners and risk implementation timelines, and contingency budgets where risks are identified and deemed high priority. Financial and contractual risks are to be passed on to competent parties by insurance, performance guarantees, fixed-price contracts, and subcontracting. More so, the accepted risks should be documented along with the basis for their acceptance and conditions under which they are to be re-evaluated. Modifying requests due to a change in the level of risk that is acceptable should be formally approved and the impact of the change on project cost, time, scope and quality should be clearly identified. Regarding policy, REIT regulators and industry associations should include minimum risk-mitigation documentation and resourcing requirements in REIT governance and reporting requirements. This instance provides investors with increased confidence that identified risks are “being taken on.” This study should be extended to REIT projects in other regions of Kenya considering objective success metrics like audited cost schedule variance, and factors that may moderate the impact of risk mitigation including project size, contractor’s capability, and financing structure.

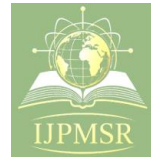
7. ETHICS APPROVAL

Ethical approval for the study was obtained from the Kenya Methodist University Ethical Review Committee (KEMU/ISERC/BUS/18/2026) and research authorization was granted by the National Commission for Science, Technology and Innovation (NACOSTI/P/26/4188570) prior to data collection.

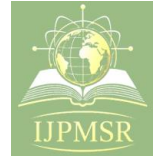
8. RESEARCH AND PUBLICATION ETHICS STATEMENT

The author certifies that this manuscript is original work research and has not been published elsewhere.

9. REFERENCES



- Anton, S. G., & Nucu, A. E. A. (2020). Enterprise risk management: A literature review and agenda for future research. *Journal of Risk and Financial Management*, 13(11), 281–299. <https://doi.org/10.3390/jrfm13110281>
- Cytonn Research. (2025). Kenya's real estate investment trusts (REITs) H1 2025 report. Cytonn Research. <https://cytonnreport.com/topicals/kenyas-real-estate-5>
- Egiyi, M., & Eze, R. (2022). The influence of risk management on organizational efficiency. *Annals of Management Sciences*, 9(1), 10–15.
- Ghaeb, H., & Mahjoob, A. M. R. (2023). Risk response in construction project: A review study. *Journal of Engineering*, 29(8), 121–137. <https://doi.org/10.31026/j.eng.2023.08.09>
- Ghazieh, L., & Chebana, N. (2021). The effectiveness of risk management system and firm performance in the European context. *Journal of Economics, Finance and Administrative Science*, 26(52), 182–196. <https://doi.org/10.1108/JEFAS-07-2019-0118>
- Huntington-Klein, N. (2021). The effect: An introduction to research design and causality. Chapman and Hall/CRC. <https://doi.org/10.1201/9781003226055>
- Igihozo, L., Irechukwu, E. N., & Mount Kenya University, Rwanda. (2022). Project risk management process and performance of Mpazi Channel construction project in Nyabugogo, Kigali-Rwanda. *Journal of Strategic Management*, 6(2), 31–44. <https://doi.org/10.53819/81018102t2047>
- Karunakaran, P., Halid, A., Nagapan, S., Sambasivan, M., & Sekar, G. (2020). The moderating effect of project risk response-related measures on the relationship between project-related delay factors and construction project performance. *Humanities & Social Sciences Reviews*, 8(2), 405–412. <https://doi.org/10.18510/hssr.2020.8246>
- Kioko, D., & Ochieng, M. (2021). Effect of portfolio diversification on the financial performance of investment firms listed in the Nairobi Securities Exchange. *Journal of Finance and Accounting*, 4(5), 77–96. <https://stratfordjournalpublishers.org/journals/index.php/journal-of-accounting/article/view/656>
- Maina, L., & Mungai, A. (2023). Risk management practices and performance of real estate construction projects in Nakuru County, Kenya. *Journal of Strategic Management*, 7(7), 98–120. <https://doi.org/10.53819/81018102t5284>
- Makambajeki, R. P., & Mjema, E. A. (2023). Assessment of the effectiveness of risk management practices in the performance of IT projects. *European Journal of Theoretical and Applied Sciences*, 1(4), 1023–1030. [https://doi.org/10.59324/ejtas.2023.1\(4\).97](https://doi.org/10.59324/ejtas.2023.1(4).97)
- Muigai, P. (2022). Effect of real estate investment management on financial performance of investment banks in Nairobi County, Kenya [Doctoral dissertation, Kenya Methodist University]. <http://repository.kemu.ac.ke/handle/123456789/1385>



- Müller, S. D., Konzag, H., Nielsen, J. A., & Sandholt, H. B. (2024). Digital transformation leadership competencies: A contingency approach. *International Journal of Information Management*, 75(6), 102–117. <https://doi.org/10.1016/j.ijinfomgt.2023.102734>
- Mutula, P., Engairo, P., & Kimathi, D. (2024). Risk response planning and project implementation among faith-based construction projects in the Diocese of Ngong. *International Journal of Innovations and Interdisciplinary Research*, 2(1), 11–25. <https://doi.org/10.61108/ijiir.v2i1.78>
- Nocco, B. W., & Stulz, R. M. (2022). Enterprise risk management: Theory and practice. *Journal of Applied Corporate Finance*, 34(1), 81–94. <https://doi.org/10.1111/jacf.12490>
- Okoro, C., & Ayaba, M. M. (2023). Research trends and directions on real estate investment trusts' performance risks. *Sustainability*, 15(6), 5436–5447. <https://doi.org/10.3390/su15065436>
- Onyuma, S. O., & Ndung'u, D. T. (2022). Relationship between property type-location diversification and performance of real estate investment trusts in Kenya. *European Journal of Economic and Financial Research*, 6(4), 67–84. <https://doi.org/10.46827/ejefr.v6i4.1357>
- Ottaviani, F. M., De Marco, A., Rafele, C., & Castelblanco, G. (2024). Risk perception-based project contingency management framework. *Systems*, 12(3), 93–111. <https://doi.org/10.3390/systems12030093>
- REITs Association of Kenya. (2024). Trends in the Kenyan real estate sector: A focus on real-estate investment trusts (REITs). REITs Association of Kenya.