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The Effects of risk-based supervision on the financial performance of insurance companies in Kenya moderated by the supervision implementation framework.

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THE EFFECTS OF RISK-BASED SUPERVISION ON THE FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN KENYA MODERATED BY THE SUPERVISION IMPLEMENTATION FRAMEWORK

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the dissertation contains no material previously published or written by another person except where due reference is made in the dissertation itself.

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ABSTRACT

The insurance industry in many African countries has been adversely affected by a high level of risk exposure due to volatility in returns and losses related to underwriting, reducing premiums, and a general reduction in net income. This has necessitated a more effective risk-based supervision (RBS). RBS seeks to address inherent vulnerabilities within individual insurance firms by focusing on their contribution to overall financial instability due to their interconnectedness with the larger financial system. This study aimed to assess the effects of RBS on the financial performance of insurance companies in Kenya. Grounded in the Economic Theory of Regulation and the Public Interest Theory of Regulation, the study adopted a positivist research philosophy and employed a descriptive, quantitative research design. The study population included all 56 licensed insurance companies in Kenya, with a census sampling technique used to select the sample size, categorizing companies based on the number of authorized classes of business. Primary data was collected through close-ended questionnaires, targeting specific RBS elements that could influence financial performance, including Risk-Based Supervision planning, RBS quality control mechanisms, access to reliable information, and the supervision implementation framework. Data analysis combined descriptive and inferential statistical methods. Descriptive statistics were applied to calculate means, standard deviations, frequencies, and percentages for each variable, while inferential analysis utilized Pearson correlation and multiple regression to evaluate relationships, predictive ability, and variance within the data. Statistical Package for Social Sciences (SPSS) was used for data processing. The findings indicate that the key elements of RBS namely, RBS planning, quality control mechanisms, access to reliable information, and the RBS implementation framework positively and significantly influence financial performance. Specifically, RBS planning was found to have a substantial positive impact on financial performance, suggesting that effective planning within RBS enhances financial outcomes by equipping companies to better manage and mitigate risks. Similarly, RBS quality control mechanisms were found to positively and significantly influence financial performance, implying that strong quality control measures lead to improved financial results by ensuring accountability and consistency in supervisory processes. Furthermore, the study highlighted that access to reliable information positively and significantly boosts financial performance, enabling more informed decision-making among supervisors and improving financial outcomes. Lastly, the RBS implementation framework was identified as a moderating factor, with results showing that the framework strengthened the relationship between RBS practices and financial performance, reinforcing the overall effectiveness of RBS strategies.

This study underscores that the collective implementation of RBS planning, quality control mechanisms, access to reliable information, and a strong implementation framework positively contributes to improved financial performance in Kenyan insurance companies. This comprehensive approach to RBS serves as a critical driver of financial performance and resilience within the insurance sector. To further strengthen the sector's financial performance, the study recommends that the Insurance Regulatory Authority (IRA) collaborate closely with industry stakeholders to address barriers to effective RBS adoption. While this study examined RBS planning, quality control mechanisms, and access to reliable information, future research could explore additional factors, such as risk governance structures and capital adequacy requirements, which may also positively influence financial outcomes.

Key words; *Risk-Based Supervision (RBS), Financial Performance, Risk Management, Compliance and Regulation.*

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LIST OF ABBREVIATIONS

RBS	Risk Based Supervision
AKI	Association of Kenya Insurers
CBK	Central Bank of Kenya
EU	European Union
EVT	Extreme Value Theory
IRA	Insurance Regulatory Authority
NIC	National Insurance Commission
NSE	Nairobi Securities Exchange
OLS	Ordinary Least Squares
RBA	Retirement Benefits Authority
RBS	Risk Based Supervision
ROA	Return on Assets
ROE	Return on Equity
SPSS	Statistical Package for Social Sciences
SR	Solvency Ratio

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DEDICATIONS

I dedicate this thesis to my parents, whose unwavering support, guidance, and sacrifices have been the foundation of my academic journey. To Skylar, Tracy, and Joshua, you are my greatest inspiration and motivation.

DEFINITION OF TERMS

Risk-Based Supervision (RBS): A regulatory approach that focuses on identifying, assessing, and managing risks in financial institutions rather than just enforcing compliance with rules.

Financial Performance: A measure of how well an insurance company utilizes its assets to generate revenue and profit, often assessed using indicators like Return on Assets (ROA).

Risk Management: The process of identifying, analysing, and mitigating risks that could negatively impact a company's financial health and stability.

Compliance and Regulation: The adherence of insurance firms to industry laws and standards to ensure financial stability and protect policyholders.

CHAPTER ONE

INTRODUCTION

1.1 Background to the Study

The insurance sector plays a crucial role in providing financial stability to individuals and businesses during crises, acting as a global shock absorber (AKI, 2021). Its importance in fostering economic recovery and resilience underscores the need for robust regulatory frameworks. Due to its fiscal and socio-cultural significance, the insurance sector operates under strict regulation aimed at safeguarding policyholders and ensuring the stability of the industry.

Insurance companies have a dual objective: restoring policyholders to their pre-loss positions while maintaining profitability. This balance inherently involves managing risks, defined as the probability of incurring losses due to market vulnerabilities or operational inefficiencies (Eikenhout, 2015). Risk is unavoidable for any organization striving to create value for its stakeholders, making effective risk management critical for achieving business goals (Ng'ang'a, 2014).

Risk management entails identifying exposures, evaluating mitigation strategies, and implementing measures to minimize the potential impact of risks. It enhances organizational performance by addressing risks that hinder the achievement of optimal returns (Mustapha et al., 2023). Historically, Compliance-Based Supervision (CBS) has been the dominant approach to financial sector regulation. CBS relies on a rules-based framework, requiring firms to comply with specific standards at a given point in time (Black, 2001). However, the dynamic nature of markets and varying firm characteristics prompted the adoption of Risk-Based Supervision (RBS) as an alternative for unconventional markets (Randle, 2009).

RBS provides a forward-looking framework for analyzing risks and implementing strategies to mitigate them. Unlike CBS, which focuses on adherence to regulations, RBS emphasize assessing the adequacy of a firm's risk management systems to ensure they address potential vulnerabilities (Giudici, 2018). This approach is particularly relevant for unconventional markets, as it aligns regulatory efforts with the evolving nature of risks (Randle, 2009).

The International Association of Insurance Supervisors (IAIS, 2015) highlights several critical elements for effective RBS: understanding the nature of the insurer's business, identifying inherent risks, evaluating mitigation strategies, and assessing the potential impact of risks. By addressing systemic vulnerabilities and interconnected risks within the financial system, RBS fosters industry stability (Schwarcz & Schwarcz, 2014).

The financial performance of insurance companies serves as a key measure of their success, indicating their capacity to achieve satisfactory returns in relation to the resources and expenses involved (Tudose et al., 2022). Profitability metrics, such as underwriting profits, return on equity, and return on investment, are commonly used to evaluate this performance (Tesfaye, 2018). Factors specific to the firm, including its size, capital efficiency, and ownership structure, along with broader macroeconomic variables such as economic conditions and debt levels, greatly impact financial outcomes (Nyakundi, 2022). While larger firms often benefit from economies of scale to achieve higher profitability, successful financial performance also depends on sound risk management and optimal leverage strategies (Morara & Sibindi, 2021).

Profitability metrics can be classified into two main categories: profit performance and investment performance. Profit performance focuses on the gap between income and expenses, whereas investment performance evaluates the returns earned from assets (Tesfaye, 2018). Companies with strong profitability not only maintain solvency but also attract external funding, enhancing their competitiveness and capacity to achieve strategic goals (Tsvetkova, 2023; Zainudin et al., 2018). A combination of internal factors, such as operational efficiency, and external influences, like market volatility, plays a significant role in determining revenue and expenditure levels (Pjanic et al., 2018)

RBS emphasizes the assessment of an organization's risk management systems, ensuring timely identification, measurement, and control of risks. By focusing on both internal and external factors influencing profitability, RBS provides a structured approach to maintaining financial stability (Hirtle et al., 2020). Adjustments in asset and liability classifications driven by RBS directly impact financial outcomes, promoting long-term stability (Ng'ang'a, 2014).

While profit maximization remains a key goal for insurers, maintaining sufficient liquidity and solvency is equally critical for competitiveness (Asaba & No, 2023). Effective regulation under RBS enhances accountability and decision-making, enabling insurers to align operations with regulatory expectations and improve financial outcomes (IAIS, 2015; O'Brien, 2019). By

addressing gaps in traditional regulatory frameworks, RBS supports the long-term sustainability of insurance firms while safeguarding policyholder interests.

The adoption of RBS in the insurance sector addresses critical shortcomings in traditional CBS approaches, offering a dynamic framework for managing risks and enhancing financial performance. By integrating proactive risk assessments and focusing on systemic stability, RBS aims to ensure the resilience and sustainability of the industry.

This study focused on RBS planning, quality control mechanisms, and access to reliable information due to their direct impact on risk management and regulatory compliance. However, capital adequacy requirements and corporate governance structures also influence financial performance by ensuring financial stability and accountability. These factors were not deeply analyzed due to scope limitations and data constraints, but future research should explore their role in enhancing financial performance in the Kenyan insurance industry.

1.1.1 RBS Implementation in Insurance Companies

The implementation of Risk-Based Supervision (RBS) has been widely studied in various sectors, including insurance, with research focusing on its effects across different contexts. Yu and Xiao (2022) investigated how innovation information disclosure impacts stock price crash risk, revealing that greater transparency in innovation efforts mitigates future stock price crashes. Their study also noted that RBS has prompted insurance companies in China to improve disclosure practices. However, their research primarily focuses on innovation disclosures, limiting its relevance to broader RBS aspects and suggesting a gap in understanding RBS's broader impact on financial stability and company performance.

In Nigeria, Ajao and Oluwadamilola (2020) examined the relationship between internal control systems and the quality of financial reporting in the insurance sector. They found that weak regulatory oversight led to ineffective internal controls, especially in areas such as risk assessment and communication. Their study underlines the importance of strengthening internal controls, but it does not explore how these systems influence the broader financial performance of insurance firms, indicating a gap in integrating RBS with overall financial outcomes.

Sunday (2018) explored how Risk-Based Capital (RBC) policies affect insurance firms' performance in Nigeria. The study found that RBC enhanced performance by improving

prudential measures and providing regulators with better information. While this aligns with broader findings on the importance of information availability in regulatory effectiveness, it focuses only on RBC, not the comprehensive scope of RBS, limiting the insights into RBS's holistic impact on financial performance and risk management practices.

Mbonye (2019) investigated the implementation of RBS by the Insurance Regulatory Authority (IRA) in Uganda, focusing on its risk rating practices, anti-money laundering measures, and self-assessment processes. While the study highlights key regulatory priorities, it is limited in scope and raises questions about the comprehensiveness of RBS implementation across different regions and sectors. This suggests a need for further research on how regulatory bodies prioritize and implement RBS on a broader scale.

In Kenya, the Central Bank implemented RBS in 2003 following the collapse of several financial institutions, initially within the banking sector and later extending to insurance. The Insurance Regulatory Authority (IRA) played a pivotal role in transitioning from a compliance-based framework to a more dynamic, risk-based approach. This shift aimed to enhance responsiveness to industry risks but has yet to fully capture the complexities involved in RBS adoption across different sectors, especially insurance.

The International Association of Insurance Supervisors (IAIS, 2015) reported on RBS implementation in Kenya's insurance sector, highlighting the introduction of quantitative and qualitative requirements, along with improved supervision and disclosure mechanisms. Key measures included a risk-based capital model and enhanced corporate governance structures. This transition was aimed at ensuring the sector's alignment with international standards, yet the broader impact on insurance companies' operational effectiveness and financial stability remains underexplored, creating an opportunity for further research.

Ng'ang'a (2014) specifically examined RBS adoption's effects on Kenyan insurance firms, finding that RBS drove companies to adopt more rigorous risk management practices, such as forming independent risk committees and allocating resources for internal auditing. Although the study offers valuable perspectives on the operational transformations driven by RBS, its primary emphasis was on general performance metrics rather than an in-depth examination of financial performance. This highlights a conceptual gap in understanding the specific effects of RBS on financial outcomes.

The existing body of research demonstrates notable progress in understanding the influence of RBS on the insurance industry. However, significant gaps persist, especially regarding its full implementation across various regions and sectors and its impact on financial performance beyond operational improvements. This study seeks to bridge these gaps by examining the wider implications of RBS on the financial stability and performance of insurance companies, with a specific focus on contexts such as Kenya.

1.1.2 Financial Performance of Insurance Companies

The financial performance of insurance companies is typically assessed through metrics such as net premiums earned, underwriting profitability, return on assets (ROA), and return on equity (ROE) (Ishtiaq & Siddiqui, 2019). Batool and Sahi (2019) studied the impact of internal organizational factors such as leverage, firm size, and turnover on the profitability of insurance companies in the USA and UK during the global financial crisis (2007–2016). They found that profitability, measured by ROE and return on assets (ROA), was significantly affected by these factors. However, their study primarily focuses on internal factors and does not consider the broader impact of external regulatory frameworks, such as Risk-Based Supervision (RBS), on financial performance.

Chmielowiec-Lewczuk et al. (2023) explored the comparability of financial information in insurance companies using the NiCE qualitative characteristics measurement. The study highlighted that effective sustainability reporting was crucial for maintaining strong financial performance, given the growing emphasis on sustainability within the industry. Furthermore, it found a high level of comparability in sustainability reporting among the companies examined. While this study underscores the role of internal factors, it does not explore how RBS frameworks might further influence these financial metrics, revealing a gap in the understanding of the interaction between sustainability reporting and RBS in shaping financial outcomes.

Research on the relationship between risk and financial performance in insurance companies has produced mixed findings. Mutua (2023) examined how various insurance risks such as credit, solvency, liquidity, and underwriting risks affect financial performance in Kenyan insurance firms. His study found a negative correlation between risk and financial performance, suggesting that higher risk levels are associated with poorer financial outcomes. In contrast, Nyongesa (2017) highlighted the importance of effective financial risk management practices in achieving optimal performance in Kenya's insurance sector, suggesting that robust risk

management can enhance financial performance. These differing perspectives reveal a conceptual gap in understanding how risk management practices, specifically under RBS, influence overall financial performance.

Leverage is a common indicator of financial performance in various sectors. Khan et al. (2017) explored its impact in Pakistan's financial sector, finding a positive correlation between Economic Value Added (EVA) and leverage, but a negative correlation with tangibility, risk, and liquidity. However, other studies have reported conflicting results, with some finding negative correlations between leverage and financial performance. Adams and Kastrinaki (2023) investigated the role of co-opted boards in insurance firms' performance, discovering that insider boards, particularly after CEO successions, tended to reduce profitability but improve solvency. However, this study's narrow focus on co-opted boards highlights a conceptual gap, as it overlooks broader factors like RBS that influence financial performance.

Morara and Sibindi (2021) found that firm size positively correlated with Return on Assets (ROA), while insurer age had a negative relationship with ROA. Similarly, higher levels of debt were found to negatively impact both ROA and Return on Equity (ROE). Kimani (2023) identified a negative correlation between underwriting risk and financial performance, although liquidity had a minimal effect. However, Kimani's focus on underwriting risk rather than a broader RBS framework limits the scope of his findings, suggesting a need for more comprehensive research that includes the role of RBS in shaping financial performance.

This body of research points to gaps in understanding how internal organizational factors, risk management practices, and external regulatory frameworks like RBS intersect to influence the financial performance of insurance companies. There is a clear need for further studies that integrate these elements into a unified framework to provide a more comprehensive view of financial performance in the insurance sector.

1.1.3 RBS Supervision Implementation Framework

The development of conceptual frameworks for Risk-Based Supervision (RBS) has underscored the need for tailored risk management functions. Dalhatu and Sharoffidin (2021) proposed an ideal RBS framework for Islamic banks in Nigeria, which included three essential control functions: a Shariah board, a Shariah internal audit, and a Shariah compliance function. These components were crucial for ensuring adherence to Shariah-compliant financial practices and establishing effective risk management. However, this study focused solely on

the banking sector and did not address the broader applicability of such a framework in the insurance sector, nor did it consider financial performance outcomes, highlighting the need for research that integrates sector-specific requirements and financial performance within the RBS framework.

Kaur and Molla (2023) explored the risk management regulatory and supervisory framework for microfinance institutions (MFIs) in Ethiopia. They identified key risks i.e. interest rate, liquidity, operational, credit, and strategic risks and highlighted that MFIs adopted a comprehensive risk management approach, including risk identification, measurement, control, and monitoring. While this research is valuable for understanding risk management in MFIs, it is limited in its focus on microfinance rather than the insurance sector, and it does not explore the impact of these practices on financial performance. This suggests a need for broader research that considers how risk management frameworks, like RBS, impact the financial performance of insurance companies.

Bett and Wepukhulu (2019) investigated the effects of RBS adoption on the financial performance of Kenyan insurance firms. Their research revealed that RBS enhanced compliance with capital adequacy requirements, leading to improved financial performance. However, the study encountered limitations due to inconsistencies in theoretical frameworks and research designs, which could affect the generalizability of the results. This highlights the need for standardized frameworks and methodologies to better understand the impact of RBS on financial performance across various sectors and contexts.

These studies emphasize the importance of tailored RBS frameworks that account for sector-specific risks and regulatory requirements. However, there remains a gap in integrating these frameworks with financial performance outcomes, particularly in the insurance sector. Further research is needed to develop comprehensive, standardized RBS frameworks that can be applied across different financial institutions, with a focus on both risk management and financial performance.

1.1.4 Insurance Companies in Kenya

In Kenya, the insurance industry plays a critical role in the economy, offering financial security, supporting trade, and creating investment opportunities (IRA, 2023). A study by Mwangi and Netshitandani (2021) identified that Kenya has 58 insurers and reinsurers, with major market players including CIC, Jubilee, Britam, ICEA Lion General, and APA Insurance General,

which collectively hold 60% of the market share. Despite these efforts, the country's insurance penetration remains low at just 2%, significantly below the global average, and the third lowest in Sub-Saharan Africa, behind South Africa's 17%. This low penetration is largely due to the public's attitude, with many viewing insurance as a non-essential service that can be easily discarded. The study also pointed to opportunities for growth, particularly in addressing the industry's reliance on traditional face-to-face distribution and outdated legacy systems, which do not meet the evolving needs of consumers.

The Insurance Regulatory Authority (IRA) (2022) provided an analysis of the financial performance of Kenya's insurance sector between the second quarter of 2019 and the second quarter of 2022. The findings showed a 20.5% average increase in annual gross income and a 17.8% rise in net income. However, challenges persisted, including a 4.2% decline in net commissions, a 10.1% increase in underwriting management expenses, and a 4.7% rise in total claims and policyholders' benefits. Direct expenses rose by 5.6%, and investment income saw a sharp decline of 37%. Despite these challenges, the sector experienced growth in key financial indicators, such as a 17.1% increase in paid-up capital, 6.2% growth in shareholders' funds, and a 12% increase in both total assets and liabilities. These findings highlighted both positive financial trends and areas requiring attention.

As of the first quarter of 2023, the long-term insurance sector in Kenya was primarily dominated by five companies: Britam Life Assurance (18.5%), ICEA Lion Life Assurance (16.1%), Jubilee Insurance Company (11%), CIC Life Assurance Company (9%), and ABSA Life Assurance (6.1%), controlling a combined 60.7% of the market share (IRA, 2023). The remaining 39% was distributed among other companies. During this period, gross premium income (GPI) was split between the general insurance sector (61.6%) and the long-term insurance sector (38.4%). In total, the long-term insurance sector generated KES 38.97 billion, with contributions from various products such as life assurance, group life, annuities, and personal pensions. On the other hand, the general insurance sector generated KES 62.52 billion in premiums, with key players like GA Insurance, Old Mutual General, and APA Insurance making up significant portions of the market share.

The Association of Kenya Insurers (2022) reported improvements in the insurance sector's performance in 2022, driven by the easing of COVID-19 restrictions and economic recovery. Gross Written Premiums (GWPs) grew by 13.51%, reaching KES 312 billion, up from KES 275 billion in 2021. Insurance penetration increased slightly from 2.29% to 2.33%, reflecting modest growth. This growth was attributed to advancements in digitization, heightened

consumer awareness, and increased strategic partnerships, which improved accessibility to insurance products.

While there are positive signs of growth, the Kenyan insurance sector still faces significant challenges, such as low penetration, reliance on traditional distribution channels, and outdated systems. Addressing these issues, coupled with continued industry innovation and strategic development, presents opportunities for enhancing both sector performance and consumer engagement.

1.2 Problem Statement

The global business environment has recently experienced a rise in corporate failures and financial crises, highlighting significant concerns regarding corporate governance and accountability deficiencies (Spira & Page, 2003). In response, new regulations, particularly within the financial sector, have underscored the importance of Risk-Based Supervision (RBS) in promoting robust corporate governance practices. While existing research has explored RBS's impact on various sectors, including banking and microfinance, there remains a limited focus on its effects within the insurance industry.

The insurance sector in Kenya is a critical component of the country's financial system, providing risk management and financial security for businesses and individuals. Despite its importance, the sector has faced persistent challenges in achieving sustainable financial performance. According to reports by the Insurance Regulatory Authority (IRA), several insurance companies in Kenya have struggled with issues such as declining profitability, inadequate capitalization, and a high claims ratio, exacerbating the financial strain on the industry (IRA, 2023). For instance, data reveals that the industry's underwriting losses have increased significantly in recent years, with more than half of the insurers failing to achieve profitability in core operations. Such performance issues not only threaten the stability of individual firms but also undermine public confidence in the sector and limit its contribution to economic growth.

Existing literature offers mixed findings on financial performance metrics, underscoring the need for further investigation. Khan et al. (2017) identified a positive correlation between leverage and financial performance, as measured by Economic Value Added (EVA). Conversely, Kimani (2023) observed a negative significant correlation between underwriting risk and financial performance in Kenyan insurance companies. Taha (2015) found no meaningful relationship between profitability and leverage ratios among Egyptian insurance

firms, suggesting that the relationship may vary across different contexts. Yu and Xiao (2022) highlighted that enhanced innovation information disclosure under RBS could reduce stock price crash risks in insurance companies, offering insights into the role of transparency. Meanwhile, Ajao and Oluwadamilola (2020) highlighted deficiencies in risk assessment and internal controls within the Nigerian insurance sector, attributing these issues to weak regulatory oversight. Additionally, Sunday (2018) found that risk-based capitalization positively influenced insurance performance in Nigeria through improved prudential measures and better information access.

Despite these studies, notable gaps remain. First, there is limited empirical research specifically examining the effects of RBS on the financial performance of Kenyan insurance companies. Second, existing studies often focus on broader financial or regulatory contexts, such as banking or pension schemes, leaving a dearth of literature directly applicable to the unique characteristics of the insurance industry. Third, many studies provide conflicting results, highlighting the need for more nuanced analysis tailored to local conditions. This study, therefore, seeks to address these gaps by investigating how RBS influences the financial performance of insurance companies operating in Kenya.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of this study is to assess the effect of Risk-Based Supervision (RBS) on the financial performance of insurance companies in Kenya.

1.3.2 Specific Objectives

1. To assess the effect of RBS planning on the financial performance of insurance companies in Kenya.
2. To determine the effect of RBS quality control mechanisms on the financial performance of insurance companies in Kenya.
3. To evaluate the effect of access to reliable information by supervisors on the financial performance of insurance companies in Kenya.
4. To establish the moderating effect of the supervision implementation framework on the relationship between RBS and the financial performance.

1.3.3 Research Questions

This study seeks to answer the following questions.

1. What is the effect of RBS planning on the financial performance of insurance companies in Kenya?
2. To what extent have RBS quality control mechanisms affected the financial performance of insurance companies in Kenya?
3. What is the effect of access to reliable information by supervisors on the financial performance of insurance companies in Kenya?
4. How does the supervision implementation framework moderate the relationship between RBS and the financial performance of insurance companies in Kenya?

1.4 Scope of the Study

This research is designed to comprehensively explore the way RBS affects Kenyan insurance companies' financial performance. The study primarily focused on the 56 insurance companies operating in Kenya, examining the intricate relationships between the implementation of RBS and various facets of financial performance. The geographical scope of the study was restricted to Kenya, with a detailed examination of insurance companies operating within the country. This was essential to ensure the study's findings are contextually relevant to the Kenyan insurance industry. The study specifically concentrated on the insurance sector in Kenya, encompassing both general and life insurance companies. The study delved into various financial indicators and metrics relevant to insurance operations, providing a comprehensive understanding of the industry's financial landscape.

The study considered a defined temporal scope, focusing on the period after the implementation of Risk-Based Supervision in the Kenyan insurance sector. This temporal boundary ensured the examination of contemporary practices and outcomes. The target population was all 56 licensed insurance firms in Kenya while the respondents were risk managers (56), internal audit managers (56), and finance managers (56), totalling 168. The study was done for a period of 6 months between January and June 2024.

1.5 Significance of the Study

This study holds considerable significance across multiple dimensions, contributing valuable insights to academic, regulatory, industry, and societal perspectives within the context of the Kenyan insurance sector.

1.5.1 Policy Makers

From a regulatory standpoint, the findings of this study can inform policymakers and regulatory bodies, including the Insurance Regulatory Authority (IRA) and the Retirement Benefits Authority (RBA) in Kenya. The insights derived from the study can guide the formulation and adjustment of regulatory frameworks, ensuring they align with the evolving needs of the insurance industry. Policymakers can use the study's conclusions to enhance the effectiveness of RBS and other regulatory measures.

1.5.2 Risk Management Practitioners

The findings of the study are important for risk management practitioners within the insurance industry regarding how to best implement RBS requirements within their organizations through the improved understanding of the determinants of RBS to ensure improved financial performance. Indeed, it is anticipated that the insights into risk management will inform improvements in the implementation of RBS by these individuals.

1.5.3 Insurance Professionals

Industry practitioners, including executives and risk managers within insurance companies, stand to gain actionable insights from the study. A deeper understanding of how RBS influences financial performance enables these professionals to make informed decisions, refine risk management practices, and strategically plan. Investors and shareholders in the insurance sector also benefit by gaining insights into factors affecting financial stability and profitability, aiding in their investment decisions.

1.5.4 Researchers and Scholars

The academic contribution of this study lies in its detailed examination of how Risk-Based Supervision (RBS) influences the financial performance of insurance companies in Kenya. By providing nuanced insights into the regulatory framework's impact, the study enriches existing literature on regulatory practices and financial performances within the insurance industry. Scholars, researchers, and students interested in these areas will benefit from the study's comprehensive analysis.

1.6 Chapter Summary

In this chapter, the study has focused on establishing a comprehensive foundation for the research study. The background highlights the critical role of the insurance sector as a global shock absorber and emphasizes the need for effective regulatory structures, leading to the adoption of Risk-Based Supervision (RBS) in the Kenyan insurance industry. The statement of the problem emphasizes the concerns arising from corporate failures and financial crises, particularly in terms of accountability failures, prompting the adoption of RBS. The subsequent section formulates specific objectives and research questions, providing a clear roadmap for the study. The general objective is to assess the impact of RBS on the financial performance of insurance companies in Kenya.

The scope of the study outlines the temporal and geographical boundaries, specifying the focus on the post-RBS period in the Kenyan insurance industry. The significance of the study is articulated, highlighting the importance of understanding the effects of RBS on financial performance with a focus on RBS planning, oversight and quality control mechanisms, access to reliable information by supervisors and the moderating effect of supervision implementation framework.

This chapter sets the stage for the empirical investigation, guiding the reader through the motivations, objectives, and contextual considerations that underpin the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter explored various components of the literature review, including theoretical review, empirical review, research gaps, and conceptual framework. The theoretical review discussed the economic theory of regulation and the public interest theory. The empirical review highlighted previous studies on the study variables, covering the independent variables (RBS planning, RBS quality control mechanisms, and access to reliable information by supervisors), the moderating variable (supervision implementation framework), and the dependent variable (financial performance). The research gaps identified areas of divergence between the reviewed studies and the current study. Lastly, the conceptual framework presented the variables, their respective indicators, and the nature of their relationships.

2.2 Theoretical Framework

This part provides a theoretical perspective underpinning the current study. The theoretical framework offers direction for given research through a structure grounded on an established theory through the application of an understandable articulation of a particular phenomenon (Grant & Osanloo, 2016). The main theories discussed in the section are the theory of economic regulation and the public interest theory.

2.2.1 Economic Theory of Regulation

This theory, which was originally proposed by Stigler (1971), advanced the notion that regulations majorly encourage private interest due to the political interferences and incentives given to political leaders to promote industry interest over public interest. According to Stigler, regulations majorly encourage private interest due to the political interferences and incentives given to political leaders to promote industry interest over public interest. This is clear in the insurance industry, where insurers might seek strict regulations that will hinder new companies from entering the market to guard their economic position (Tica & Weißenberger, 2022).

The theory focuses on the guidelines that should rule over the insurance companies and address market failure, for instance, the uneven powers and principal-agent conflicts that can result in losses. Den Hertog (2010) added that the economic theory of regulation assumes that regulators lack adequate information pertaining to demand, cost, and quality amongst other components of organizational behaviour, and as such are bound to act imperfectly. Thus, this creates agency

concerns and result in the incurrence of organizational and information costs since economic agents are assumed to prioritise the accomplishment of their self-interest rather than the public's.

Peltzman et al. (1989) affirmed that one of the criticisms labelled at the theory is the lack of consistency amongst the proponents regarding the subject of entry into and exit from regulation, this notwithstanding, there has not emerged a viable alternative to the theory. Further, as far as the theory is concerned, emphasis by the regulators is on politically optimal distribution of rents across well-organized groups through a continued adjustment process that makes up for any changes in demand and cost conditions by off-setting changes in this optimal allocation of rents. Den Hertog (2010) maintained that one of the drawbacks to this theory is that it unrealistically assumes that there are efficient institutions that can replace or correcting real world inefficiencies to ensure optimal distribution of rents.

According to Carrigan and Coglianese (2016) Stigler's assertion that regulation is obtained by the industry and is designed to operate for its benefit ought to be challenged since it assigns unrealistically altruistic intentions on regulators who are operating with imperfect knowledge about the behaviour of consumers. Secondly, there needs to be a clear differentiation between legislators and bureaucrats since they belong to different regulatory environments, and their incentives are different, where most legislators affect what bureaucrats gain. Thirdly, as determined by Carpenter and Moss (2013), its empirical evidence fails to rule out a competing explanation with the public interest theory that it sought to challenge.

This theory is aligned with the research variables in several ways. First, the assumption of information asymmetry is consistent with the motivation for the establishment of RBS in the first place since risk management in general is based on uncertainty, thus the theory is consistent with the first independent variable, RBS planning, owing to the need for planning by the regulators on how to minimize the issue of information asymmetry when discharging their mandate.

Similarly, there are definite linkages between the theory and oversight and quality control mechanisms since these are the tools employed by the regulator to address the shortcomings of conventional supervision to enable the optimal distribution of rents that is espoused by the theory. Thirdly, in concert with the linkages with RBS planning, the theory is also aligned with access to reliable information given the assumption of information asymmetry.

2.2.2 Public interest theory

The theory, which was formulated by Pigou (1938), held that the proper supervision of a regulated firm's behaviour demands simultaneous price control which is the essence of welfare economics where the focus on public interest obligations is prioritized. The theory was formulated by the desire of the government to promote social and protect the public.

According to Den Hertog (2010), the theory is built on assumptions of the adequacy of regulators' information as well as the powers to carry out the enforcement and effective promotion of public interest. In other words, it is the most efficient way of allocating of limited resources for individuals and shared goods and services in the country. This theory highlights that the set regulations should adhere to a cost-benefit analysis to establish if the increased social welfare overshadows regulation cost (OECD, 2011).

This theory of regulation, as explained by Shleifer (2005), is used as a framework of what the regulating agencies or the government are obliged to do and a clear explanation of what they do. Pursuant to this theory, regulators oversee the market to control the monopolies, from overcharging and imposition of safety standards to control losses to ensuring that investors and registering employees are not exploited. The government achieves this by registering new companies entering the market, which acts as an official approval for them to engage in the market (Tica & Weißenberger 2021).

In most developed economies, the distribution of resources is controlled by market dynamics. When the set price mechanism controlling the free market fails to achieve its desired role, the government intervenes, leading to market failure. The theory has been proposed by many (Den Hertog, 2010; Franco, 2004) owing to the assertion that it provides a detailed framework for describing and prescribing the needs and interests of the public. The theory distinguishes the public interest from the personal interest of the officials to ensure community focused policies. In addition, it acts as a guide for motivating public servants to promote public interest.

According to Shleifer (2005), the public interest theory of regulation has been criticized on three fronts: market failures can be resolved by markets and private orderings rather than necessitating government intervention or regulation; whenever conflicts occur amongst market participants owing to imperfections in the markets, private is still a viable alternative to regulation; and the incompetence and corruption of government regulators tends to worsen things rather than remedy them. Hantke-Domas (2003) added that although the concept of

public interest has been accepted widely, it needs to be more clearly defined, it needs to look at laws developed in the industry that can meet the public interest by assisting marginalized groups without them having to retain lawyers. Proper regulation does not fully control the systemic risks that are a result of liability insurance, showing loopholes for failure in regulation.

This theory of public interest has emphasized the role of government regulation in the insurance sector to promote public welfare and to help protect minority groups from malpractices in the industry. This provides a definite linkage with the study variables since its focus on the welfare of the public through proper regulation of firms is consistent with the intentions of the RBS particularly in terms of planning, oversight and quality control mechanisms, access to reliable information, the supervision implementation framework, and available of resources. In other words, through the integration of all the aforementioned, regulators are in a better position to properly supervise the activities of insurance firms from a risk management perspective.

2.3 Empirical Review

This is the systematic investigation of techniques and research methodologies pertaining to a study to provide answers to research questions (Cooper & Schindler, 2014). It also refers to impartial assessment of quantifiable and experiential occurrences that leads to the acquisition of knowledge (Smith et al., 2011). The following sections explores the empirical review of this study.

2.3.1 Risk Based Supervision Planning and Financial Performance

Risk-Based Supervision (RBS) planning involves supervisory activities prioritizing critical risk areas while determining the resources and timelines necessary for implementation. Regulators aim to bridge gaps between supervision and the institution under assessment (CBK, 2013). According to the Financial Action Task Force (2021), RBS planning establishes objectives, defines methodologies for addressing risks, and determines supervisory schedules. This process is pivotal in ensuring regulatory compliance and effective risk management.

Pearson and Mitroff (2019) highlighted contingency planning as a critical aspect of risk management, entailing risk identification, quantification, and response development. Chache et al. (2020) examined the relationship between risk-based capital and investment returns among Kenyan insurance companies, employing secondary data analysis of 63 insurance firms from 2014 to 2018. Their study underscored the integration of contingency plans and stress-testing frameworks but noted persistent funding challenges. While the study offered valuable

insights into contingency planning's role in risk management, its focus on investment returns rather than overall financial performance limited its applicability. Additionally, methodological reliance on secondary data restricted the depth of insights.

Similarly, Kulchmanov et al. (2016) explored risk management practices in Islamic banks in Kazakhstan. Using semi-structured interviews and financial ratio analysis, the study revealed that integrating contingency approaches, such as internal audits and Basel regulations, enhanced risk management. However, the single case study design limited the generalizability of findings, and the study's focus on Islamic banks created a contextual gap when comparing it to broader financial institutions.

Capital planning, another critical aspect of RBS planning, allows financial institutions to assess appropriate capital levels for supporting business strategies across scenarios (Bank of International Settlements, 2014). Mbura (2019) investigated the influence of capital structure on the financial performance of listed Kenyan insurance firms, finding a significant positive relationship between capital planning processes and performance. However, the study's narrow focus on capital structure without explicitly linking it to RBS limited its scope. Furthermore, its use of secondary data reduced opportunities for exploring qualitative aspects of capital planning. Similarly, Jaishi (2020) analyzed Nepalese insurance firms, finding a positive correlation between leverage, asset tangibility, and financial performance. The study emphasized frequent capital planning meetings as a key strategy for improved financial outcomes. Despite its contributions, differences in geographical and regulatory contexts presented limitations, and its lack of focus on RBS created a conceptual gap.

Risk quantification is integral to RBS planning, involving prioritizing risks by determining potential losses to inform budget allocations, investments, and mitigation strategies (Belles-Sampera et al., 2017). Kiptoo et al. (2021) studied risk management's impact on Kenyan insurance firms, finding that non-performing loans posed the most significant risk and emphasizing institutionalized credit management strategies for proper risk quantification. While the study provided actionable recommendations, its limitation in addressing RBS directly highlighted a conceptual gap. Similarly, Oyerogba and Gbolagade (2023) analyzed Nigerian insurance firms and concluded that profitability was tied to quantifying credit risks through accounts receivables and reinsurance assets. This contrasted with Kimani (2023), who emphasized reducing underwriting risks as a strategy for profitability. Oyerogba and

Gbolagade's study, while robust in methodology, was limited by its geographical scope and lack of focus on RBS.

The reviewed studies collectively highlight the significance of RBS planning components: contingency planning, capital planning, and risk quantification in enhancing financial performance and regulatory compliance. However, limitations in focus, geographical contexts, and methodologies underscore the need for more comprehensive research explicitly addressing RBS in diverse institutional settings. This analysis reveals critical gaps, such as inadequate exploration of RBS frameworks and the need for integrating qualitative and quantitative approaches, which future studies should address to strengthen the empirical foundations of RBS planning.

2.3.2 RBS Quality Control Mechanisms and Financial Performance

Quality control mechanisms are pivotal in ensuring consistency and reliability in supervisory processes, facilitating informed decisions that enhance organizational outcomes. These mechanisms include supervisory panels that review critical risk assessments and supervisory programs through input from senior management, legal experts, and independent supervisors (Toronto Centre, 2018). By embedding accountability, regular monitoring, and independence in control functions, quality control mechanisms significantly influence financial performance.

Muoti (2021) examined how risk management processes impact financial performance in Kenyan insurance firms, revealing that accountability mechanisms, including risk monitoring systems, foster stakeholder confidence by ensuring transparency throughout the risk management process. Similarly, Nyongesa (2017) identified financial management practices such as claims management policies, capital structure decisions, and corporate governance as critical to financial performance. The study highlighted corporate governance as a moderating factor that strengthened accountability, aligning with Sofat and Singh (2017). However, both studies lacked an explicit focus on the integration of quality control mechanisms into Risk-Based Supervision (RBS), leaving a conceptual gap.

The frequency of monitoring procedures is another vital aspect of quality control. Nyarangi and Ngali (2021) found that frequent risk surveillance practices in Kenyan insurance firms enhanced risk management and financial performance, consistent with the findings of Talesh (2018). Conversely, Osiemo (2016) argued that compliance with risk standards was more

effectively achieved through scheduled monitoring procedures than through governance mechanisms. These findings contrasted with Cerrone (2019), who emphasized corporate governance mechanisms over monitoring frequency as the primary enabler of compliance. The lack of a standardized approach to frequency and its integration with RBS in these studies underscores a methodological gap that warrants further exploration.

The independence of control functions is crucial for maintaining objectivity in quality control mechanisms. Chirchir (2018) highlighted the use of external quality assurance auditors and reviewers by Kenyan insurance companies to ensure independence and objectivity, aligning with Alam et al. (2022), who emphasized external oversight's importance in quality assurance. Machira (2016) identified board diversity and independence as critical aspects of corporate governance contributing to effective oversight and quality control, contrasting with Okok (2017), who prioritized board size and meeting frequency as determinants of performance. These divergent findings indicate inconsistencies in defining and implementing independence within control functions, creating a contextual and conceptual gap for future studies to address.

Overall, these studies underscore the importance of accountability, monitoring frequency, and independence in quality control mechanisms. However, the limited focus on RBS frameworks in most studies reveals a significant gap in integrating these mechanisms into a cohesive supervisory approach. Addressing these gaps requires further research to bridge the divide between theoretical constructs and practical applications, particularly within RBS contexts, to enhance the financial performance and resilience of organizations.

2.3.3 Access to Reliable Information by Supervisors and Financial Performance

According to Devece-Carañana et al. (2015), access to reliable information by organizations pertains to the timeliness, the adequacy, the ease of access, and the adaptability of the information to end users to enable more informed decision making. This is enabled by the institutionalization of appropriate information management systems that feature formal processes that gather, manipulate and distribute information that is needed for the proper functioning of the organization. Newbury and Izaguirre (2019) posited that for supervisors to discharge their mandates effectively, they need to invest in information technology that enables the conduct of on-sight and off-sight IT supervision so as to improve efficiency of risk management in line with international best standards and practices.

Makau (2014) examined how the risk-based supervision (RBS) approach influenced the financial performance of Kenyan pension schemes. The study highlighted that, while there were improvements in risk management practices, the lack of an adequate information management system hindered the full implementation of RBS. This gap in information management restricted supervisors' ability to make real-time and informed decisions, reducing the effectiveness of the supervision process. This finding is consistent with Alserda et al. (2017), who also found that insufficient information management systems limited the success of RBS in other financial sectors. However, Makau's study was limited by its narrow focus on pension funds, which presents a contextual gap as it did not consider the broader financial services industry, including insurance companies. The study also did not consider the role of emerging technologies in improving data access.

Bett and Wepukhulu (2019) explored the impact of RBS on the financial performance of Kenyan insurance companies. Their findings suggested that while RBS adoption showed potential for improving financial oversight, resource constraints and inadequate information management systems hindered supervisors' access to critical risk data. This aligned with Odipo (2020), who similarly identified limitations in the supervision process due to data accessibility issues. Bett and Wepukhulu's study faced methodological weaknesses, as their use of secondary data from public sources may have lacked the granularity needed to assess real-time risk information. Additionally, their reliance on a longitudinal design may not have fully captured the dynamic nature of risk management practices, which often evolve in response to changing market conditions. This represents a methodological gap that could have been addressed by incorporating primary data on the supervisory practices of the Insurance Regulatory Authority (IRA).

Mukuche (2019) examined the adoption of business intelligence in Kenyan insurance firms and found that companies employed tools like data mining and digital dashboards to improve decision-making. However, these tools were often hampered by poor technical expertise, lack of interoperability between systems, and insufficient planning. While Mukuche's study corroborated findings from Ouda (2018) regarding the potential of business intelligence, it failed to explore how organizational culture and management support influence the successful adoption and use of these tools. Moreover, the study did not consider how emerging technologies like artificial intelligence (AI) could further enhance the effectiveness of business intelligence systems. The study could have been more critical by analyzing the broader

challenges that organizations face when integrating these tools into existing systems, including the high cost of implementation and the potential for data overload.

Safi et al. (2023) explored the role of financial intelligence in enhancing the financial performance of banks and insurance companies. The study found that companies that invested in recruiting highly qualified personnel and acquiring industrial intelligence tools to monitor competitors' financial metrics achieved better financial performance. This supports the findings of Ying et al. (2019), who also identified the importance of financial intelligence in achieving competitive advantage. However, Safi et al.'s study was geographically limited to the Gaza Strip, which presents a contextual gap when considering global practices in financial supervision. Furthermore, the study did not provide a theoretical framework for understanding how financial intelligence directly impacts performance, which limits its analytical depth. Future studies should incorporate a more diverse range of geographical contexts and a stronger theoretical underpinning to make the findings more universally applicable.

Lawal et al. (2018) examined the effect of ownership structure on the financial performance of Nigerian listed insurance companies and found that institutional ownership had a positive impact, while ownership concentration negatively affected performance. This finding aligns with Al Mutairi and Bakar (2022), who also observed that institutional ownership was positively correlated with performance. However, Lawal's study did not account for the influence of non-institutional ownership types, such as family-owned businesses, which may also have a significant impact on performance. Moreover, the study failed to consider the evolving nature of ownership structures, particularly the rise of digital platforms and private equity investors, which could provide a more comprehensive view of how ownership structure influences financial outcomes in the modern insurance landscape.

Ng'ang'a (2017) examined how ownership structure influences the financial performance of listed companies in Kenya, including those in the insurance sector. The study concluded that government, local, and foreign ownership had a positive correlation with financial performance. In contrast, Wanyama and Olweny (2013) reported no significant relationship between ownership structure and financial performance, highlighting differing perspectives on this issue.

However, Ng'ang'a's study lacked a focus on RBS, which is a critical oversight given the importance of risk-based supervision in regulating ownership structures and ensuring financial stability. Additionally, the study's reliance on secondary data from audited financial statements may have overlooked important non-financial factors that influence ownership structure, such as corporate governance practices and management quality. More robust methodologies that incorporate primary data on ownership dynamics would provide a fuller picture of how ownership structure impacts financial performance in Kenya.

In conclusion, while previous studies have contributed to understanding the relationship between risk management, industrial intelligence, and financial performance in the insurance industry, there are notable gaps in their methodologies, conceptual frameworks, and contextual applicability. Future studies should address these gaps by incorporating primary data, focusing on RBS, and exploring the role of emerging technologies in improving financial supervision. Additionally, a more critical approach to analyzing the limitations of past research, such as its reliance on secondary data or insufficient theoretical grounding, will enhance the quality and relevance of future empirical work in this area.

2.3.4 Moderating Effect of Supervision Implementation Framework on the Relationship between RBS and Financial Performance

The risk-based supervision (RBS) implementation framework serves as a critical structure within financial regulatory environments, providing the rules, policies, processes, and statutes necessary for managing risks across financial institutions. It facilitates regulators in making informed decisions to maintain stability in the financial system, focusing on high-risk areas and evaluating the adequacy of institutions' risk management systems. Through this framework, regulators can take a proactive approach to mitigate potential systemic risks, anticipating threats that could disrupt the financial sector.

Bett and Wepukhulu (2019) explored the impact of RBS adoption on the financial performance of Kenyan insurance companies, focusing on tools such as the Electronic Regulatory System (ERS) reporting tool. This tool facilitates efficient communication between regulators and industry players, allowing for real-time risk data exchange. Their study found that the introduction of the ERS tool in Kenya following the roll-out of RBS in 2013 improved the management of risk-related data and communication. However, a significant limitation of this study lies in its reliance on secondary data from publicly available company statements, which

does not fully capture how these tools are actively utilized in decision-making processes. Furthermore, the study overlooked the broader regulatory environment's influence on the implementation of these tools, which could have provided a more comprehensive understanding of the dynamics at play.

Similarly, Tarsono et al. (2020) examined the influence of RBS tools, particularly risk-based capital, on the financial performance of Indonesian life insurance companies. The study found that risk-based capital helped regulators assess the solvency of insurance companies, improving their financial performance. While this study contributes to the understanding of supervision tools, it suffers from geographical limitations, as it focuses solely on Indonesia. This contextual gap reduces the applicability of the findings to other countries with different regulatory frameworks, such as Kenya. Additionally, the absence of a theoretical framework in the study undermines its analytical rigor, making it difficult to generalize the findings beyond the specific context of Indonesian life insurance companies.

Nyongesa (2017) studied the relationship between financial management practices and financial performance in Kenyan insurance companies, highlighting how the introduction of RBS led to improvements in governance structures and decision-making processes. Specifically, RBS requires insurance companies to strengthen their risk management practices, resulting in better financial performance. While this study makes a valuable contribution, its theoretical framework mismatches the context of the study, which weakens the credibility of its findings. The study also fails to account for the external factors influencing decision-making, such as the broader economic environment or global financial trends, which may have also played a role in shaping the observed outcomes.

In contrast, Lakstutiene et al. (2018) examined the impact of systemic risk assessment within the European Union's risk-based common deposit insurance system. Their study found that strict adherence to RBS principles led to more effective decision-making in financial institutions. However, this study's limitations are notable, as it focuses on a specific region (Lithuania) and banking institutions rather than insurance companies, which creates both a contextual and methodological gap. The choice of banks over insurance companies is a crucial distinction, as the regulatory needs and risk management strategies in these two sectors differ significantly. Additionally, the study's findings may not be directly applicable to countries with different regulatory structures or economic contexts.

Ahmed (2023) explored risk management practices across multiple countries, including the US, UK, China, and Pakistan, and found that regulators in these countries combined quantitative and qualitative approaches during risk assessments. This study emphasizes the importance of human judgment and supervisory discretion in the assessment process. However, the study's broad geographical scope limits its applicability to specific regulatory environments, particularly in emerging markets like Kenya or Indonesia. Moreover, the absence of a theoretical framework and the reliance on a broad comparative analysis weaken the study's ability to provide actionable insights for any one jurisdiction.

Gomes et al. (2022) developed a risk-based approach to financial consumer protection (FCP) supervision. Their research demonstrated the importance of components such as data collection, risk indicator determination, and risk assessment frameworks in implementing an effective RBS strategy. The study highlighted that risk assessment approaches should be tailored to the unique needs of each jurisdiction, factoring in local risk indicators and the practical context in which the authority operates. While this study provides valuable insights, its generalized geographical context and lack of a clear research design limit its relevance to specific financial markets, particularly in non-Western economies where regulatory challenges may differ.

The empirical studies reviewed provide useful insights into the role of supervision tools, decision-making processes, and risk assessment approaches in the effective implementation of RBS. However, several gaps are evident across these studies. Most notably, the reliance on secondary data in several studies, such as those by Bett and Wepukhulu (2019) and Tarsono et al. (2020), limits the ability to capture real-time impacts of RBS implementation on financial institutions. Furthermore, the geographic and contextual limitations of many studies reduce their applicability to other countries with different regulatory structures, such as Kenya. Additionally, the lack of clear theoretical frameworks in several studies undermines their analytical rigor, making it difficult to draw definitive conclusions or generalize the findings across different financial sectors.

2.4 Research Gap

The literature review identified various knowledge gaps in prior studies addressing risk-based supervision (RBS) and financial performance. Table 2.1 provides an empirical review, summarizing each author's work alongside the research title, key findings, and the specific gaps that this study intends to address.

Table 2.1: Literature Review Summary and Knowledge Gap

Author	Topic	Findings	Research Gaps	How the Study addressed the Gap
Pearson and Mitroff (2019)	From crisis prone to crisis prepared: A framework for crisis management.	Contingency planning entails actual identification of the risk, then the quantification of the risk, the development of appropriate responses to the risk, and the execution of the risk management plan	Focused on investment returns specifically rather than on financial performance	The study focused on financial performance.
Chache et al. (2020)	Risk-Based Capital and Investment Returns of Insurance Companies in Kenya- The Intervening Effect of Asset Allocation	Insurance firms have endeavored to integrate contingency planning by focusing on contingency and business recovery plans.	The study was limited by its focus on investment returns specifically rather than on financial performance.	The study focused on financial performance.
Kulchmanov *et al.*'s (2016)	Contingency theory approach to risk management practices in Islamic banks: a case study on Kazakhstan.	Risk monitoring was a critical component of risk management at the banks.	Different geographical context, the different institutional context of banks rather than insurance companies and the lack of focus on RBS	The study focused on RBS on Kenyan context and insurance companies
Mbura (2019)	Capital structure and financial performance of	There is a positive and significant relationship between	Lack of focus on RBS.	The study focused on RBS

	insurance companies listed in the Nairobi securities exchange	capital structure and financial performance owing to the enhanced capital planning processes that have been integrated into their operations.		
Jaishi (2020)	Capital Structure and its Impact on Financial Performance in Insurance Companies of Nepal	There was a positive correlation between leverage and tangibility with financial performance.	Different geographical context as well as the lack of focus on RBS.	The study focused on RBS on Kenyan context
Kiptoo et al. (2021)	Risk management and financial performance of insurance firms in Kenya.	High proportions of non-performing loans were the critical source of risk amongst the firms.	Lack of focus on RBS	The study focused on RBS
Oyerogba and Gbolagade (2023)	The influence of risk management on the financial performance of listed insurance companies in Nigeria.	Insurance companies had been able to ensure profitability by quantifying credit risks	Different geographical context and the lack of focus on RBS.	The study focused on RBS on Kenyan context
Muoti (2021)	The influence of risk management processes on financial performance of insurance firms in Kenya	To enhance accountability, insurance firms incorporated risk monitoring mechanisms	Lack of focus on RBS	The study focused on RBS
Nyongesa (2017)	Effect of financial management practices on financial performance of insurance companies in Kenya	Claims management policies, working capital management, and capital structure decisions were all significant determinants of financial performance.	Lack of focus of RBS as well as its different research design.	The study focused on RBS and adopted a descriptive research design

Nyarangi and Ngali (2021)	Risk management practices and financial performance of insurance companies listed in Nairobi Securities Exchange, Kenya	Risk monitoring practices were one of the risk management practices that were adopted by the companies and included frequent surveillance practices that were used to track the risks.	Lack of focus on RBS as well as its different research design	The study focused on RBS and adopted a descriptive research design
Osiemo (2016)	Effects of Risk Management Practices on Financial Performance of Non-Life Insurance Firms Operating in Kisii County, Kenya	Companies ensured compliance with risk standards by scheduling risk surveillance	Lack of focus on RBS	The study focused on RBS
Chirchir (2018)	Quality Management Practices and Operational Performance of Insurance Companies in Kenya	Insurance companies utilize external quality assurance auditors and reviewers in order to ensure the maintenance of objectivity and independence.	The study was limited by its lack of focus on RBS and its different dependent variable.	The study focused on RBS and used financial performance as its dependent variable.
Machira (2016)	Effect of Corporate Governance on Financial Performance of Insurance Companies in Kenya	The study found that two of the most critical aspects of corporate governance that were implemented by the insurance companies were board diversity and board independence which enabled more effective oversight and quality control.	Lack of focus on RBS	The study focused on RBS
Makau (2014)	The effect of risk-based supervision on the financial performance of pension schemes in Kenya	The study showed that, whilst there has been an improvement in the risk management of pension funds, the effect has been dampened by the	The study was limited by its different institutional context of pension funds rather than	The study focused on insurance companies

		lack of adequate information management systems for RBS.	insurance companies.	
Bett and Wepukhulu (2019)	Effect of adoption of risk-based supervision methodology on the financial performance of insurance companies in Kenya	The results revealed that there were compliance deficiencies among a few of the companies in relation to risk management information systems owing to the inability of effective supervision by the IRA which brought about resource constraints.	Different research methodology	The study adopted quantitative research methodology
Mukuche (2019)	Business intelligence and competitive advantage in insurance firms in Kenya	Insurance companies have employed several business intelligence tools. However, the use of these tools was hampered by poor planning, lack of understanding, interoperability of organizational systems, and poor technical expertise.	Lack of focus on RBS as well as the focus on competitive advantage rather than financial performance.	The study focused on RBS and financial performance
Safi et al. (2023)	Impact of Senior Management's Financial Intelligence on the Financial Performance of Banks and Insurance Companies in the Gaza Strip	Insurance companies ensured a high level of financial intelligence by recruiting highly qualified individuals to work in finance, and they were also found to have invested adequately in the acquisition of industrial intelligence on financial metrics of the competition.	Different geographical context and lack of a theoretical framework	The study focused on Kenyan context and adopted a theoretical framework.
Lawal *et al.* (2018)	Effect of ownership structure on financial	Ownership structure was responsible for 37% of the variation in financial	Different geographical context, the lack of focus on RBS,	The study focused on RBS on Kenyan context and

	performance of deposit money banks in Nigeria	performance of the insurance firms	and the different research design	adopted a descriptive research design
Ng'ang'a (2017)	Effect of Ownership Structure on Financial Performance of Companies listed at the Nairobi Securities Exchange in Kenya	Positive and significant relationship between government ownership and financial performance; local ownership as well as foreign ownership were also positively and significantly correlated with financial performance.	Lack of focus on RBS.	The study focused on RBS
Tarsono *et al.* (2020)	The Influence of Net Premium Growth, Claim Ratio and Risk-Based Capital Financial Performance of Life Insurance Companies	The regulator used risk-based capital as a measurement tool to enable the assessment of financial performance through the determination of the level of solvency of the companies during RBS.	Different geographical context, and the lack of a theoretical framework.	The study focused on Kenyan context and adopted a theoretical framework.
Lakstutiene *et al.* (2018)	The importance of systemic risk assessment in a risk-based common European Union deposit insurance system: case of Lithuania	The study found that stringent adherence to the newly established RBS had enabled more effective decision-making processes in the organizations.	Different geographical context, the lack of theoretical framework, the choice of banks rather than insurance companies, and the different research methodology.	The study focused on insurance companies in Kenya and used quantitative research methodology
Ahmed *et al.* (2023)	Custodian of wealth: an assessment of insurers' risk management practices	Majority of regulatory regimes established both quantitative and qualitative risk assessment approaches which necessitated both human decision-making and	Expanded geographical context, the lack of a theoretical framework, and the different research methodology	The study focused on Kenyan context, adopted a theoretical framework and used quantitative research methodology.

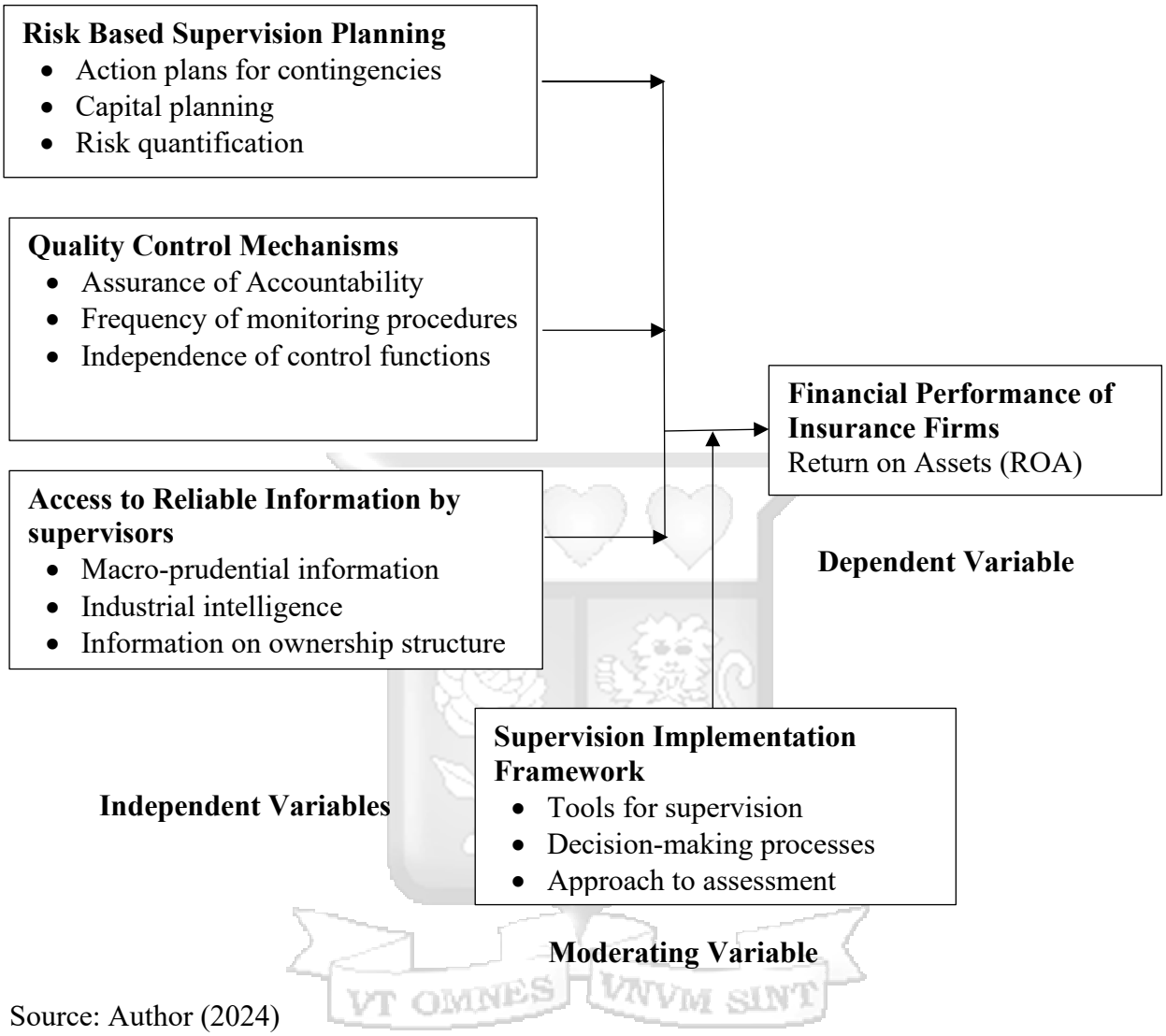
		supervisory judgement during the assessments.		
Gomes *et al*. (2022)	Developing a Risk-Based Approach to Financial Consumer Protection Supervision	The study established that there are four critical components of an FCP RBS approach including collection and data analysis, determination of risk indicators, preparing a risk assessment framework, and risk-based monitoring.	Research design, and its generalized geographical context	The study adopted a descriptive research design and focused on Kenya.
Ibrahim (2023)	Measuring the Financial Performance of Insurance Companies during the Financial Crisis	The results showed that there was a reduction in the ROE by 3.2%; while the ROA declined by 2.7%; however, all the companies managed to maintain a steady level of liquidity as measured by the current ratio.	Different geographical context and the lack of a theoretical framework.	The study adopted a theoretical framework and focused on Kenyan context

2.5 Conceptual framework

A conceptual framework establishes the foundation for identifying critical elements of a research study, aiding in the development of answers to research questions (Ravitch & Riggan, 2016). It offers a structured approach that links concepts, empirical studies, and relevant theories, clearly outlining the researcher's intended contributions to knowledge (Adom et al., 2018).

The conceptual framework for this study is illustrated in Figure 2.1. The independent variables include RBS supervision planning, oversight and quality control mechanisms, and access to reliable information by supervisors. The dependent variable is the financial performance of insurance firms, with the relationship between the independent and dependent variables moderated by the supervision implementation framework.

Figure 2.1: Conceptual Framework



Source: Author (2024)

2.5.1 Operationalisation of Variables

Rao and Reddy (2013) define operationalization as the process of clarifying research concepts and constructs while determining the procedures for measuring them. Similarly, Tariq (2015) asserts that variables are operationalized when they are defined using a valid, measurable, and quantifiable index that enables their manipulation. The operationalization of the variables is outlined in Table 2.2 below.

Table 2.2: Operationalization of Variables

Variable	Variable Definition	Elements	Measurement Scale	Supporting Literature	Supporting theories
RBS Planning	This is the process through which regulators incorporate all the supervisory activities, conduct a prioritization of all the critical areas of risk, and determine timelines and resources involved in the implementation of the RBS to bridge any gaps that may exist between the supervisors and the institution that needs to be risk assessed	• Action plans for contingencies • Capital planning • Risk quantification	Ordinal	Pearson and Mitroff (2019); Chache et al. (2020); Kulchmanov et al. (2016); Mbura (2019); Jaishi (2020); Kiptoo et al. (2021); and Oyerogba and Gbolagade (2023)	Modern Portfolio Theory, Sklar's theorem, Contingency Theory, Pecking Order Theory, Trade-off Theory of Capital Structure, Modigliani and Miller Theory, Credit Risk Theory, Resource Based Theory, Keynesian Liquidity Theory
Quality Control Mechanisms	Enable the review of decisions and assessments by peers and managers to ensure consistency in the chosen approach by all concerned.	• Assurance of accountability • Frequency of monitoring procedures • Independence of control functions	Ordinal	Muoti (2021); Nyongesa (2017); Nyarangi and Ngali (2021); Osiemo (2016); Chirchir (2018); and Machira (2016)	Risk Management Theory, Contingency Planning Theory, Agency Theory, Modern Portfolio Theory, Pecking Order Theory, Real Options Theory, and the Stewardship Theory
Access to reliable information for supervisors	Pertains to the timeliness, the adequacy, the ease of access, and the adaptability	• Macro-prudential information		Makau (2014); Bett and Wepukhulu (2019); Mukuche	Agency theory, neoclassical theory, independent supervision

	of the information to end users to enable more informed decision making	• Industrial intelligence • Information on ownership structure	Ordinal	(2019); Safi et al. (2023); Lawal et al. (2018); and Ng'ang'a (2017)	theory, resource dependence theory, regulatory capture theory, Buffer Theory of Capital Adequacy, Theory of Economic Regulation, Private Empowerment Theory, Valuation Theory and Modern Portfolio Theory
Supervision implementation framework	refers to the rules, policies, processes and statutes established to enable the regulator to deliver dependable, high-quality supervision in the financial sector of a country and risk profiles of institutions that are subject to this framework in response to competitive pressures	• Tools for supervision • Decision making processes • Approach to assessment	Ordinal	Bett and Wepukhulu (2019); Tarsono et al. (2020); Nyongesa (2017); Lakstutiene et al. (2018); Ahmed (2023); and Gomes et al. (2022)	Buffer Theory of Capital Adequacy, the Theory of Economic Regulation, Private Empowerment Theory, Valuation Theory, Modern Portfolio Theory, modern portfolio theory, the pecking order theory, the real options theory and the stewardship theory
Financial Performance	a determination of how well an organization has been able to attain higher monetary outputs relative to its expenses in each period of operation	• Return on Assets (ROA)	Ordinal	Kiboi and Bosire (2021); Morara and Sibindi (2021); Ibrahim (2023); Gachibi (2021); Karuiki et al. (2021); and Kipngetich (2019)	Modern Portfolio Theory, Liquidity Preference Theory, Capital Asset Pricing Model, the Gordon Model, and the Expectations Theory

Source: Author (2024)

2.6 Chapter Summary

This chapter offered a detailed review of the theoretical and empirical foundations relevant to the study. The theoretical review examined the Economic Theory of Regulation and the Public Interest Theory of Regulation. The empirical review explored prior studies on the relationships between the independent variables—RBS planning, oversight and quality control mechanisms, and access to reliable information by supervisors—and the dependent variable, financial performance. It also addressed the moderating role of the supervision implementation framework in the relationship between RBS and financial performance.

The chapter also identified research gaps, emphasizing areas where the reviewed literature diverged from the current study. Furthermore, the conceptual framework outlining the relationships among the study variables was presented. Finally, a summary of the reviewed literature was provided.

CHAPTER THREE

RESEARCH METHODOLOGY

3.0 Introduction

The chapter encompasses a coverage of the various aspects of research methodology that pertain to the study. The chapter featured the research philosophy, the research design, the target population, sampling design, data collection methods, data analysis, the research quality, and the ethical considerations.

3.1 Research Philosophy

This study applied a positivism research philosophy since it is quantitative in nature and was focused on the way functional relationships can be derived between independent and dependent variables as suggested by Park et al. (2020). Positivism relates to the management of an apparent social reality to lead to the making of generalisations (Saunders et al. (2019). According to the positivist ideology, knowledge ought to be impartial and free from prejudice stemming from the researcher's values and opinions (Howell, 2013). One must pick between ontology and epistemology while using positivist research philosophy; in this instance, epistemological positivism—a school of thought that holds that the only kind of scientific results that can be defended is observable evidence—was applied.

According to positivist epistemology, only "facts" obtained via scientific procedures are capable of supporting assertions about knowing (Howell, 2013). The study's research methodology is restricted to quantitative techniques, which depend on data that can be statistically analysed and assessed quantitatively. This is supported by gathering information from a chosen sample of respondents in order to use statistical techniques to determine the type of link between the variables.

3.2 Research Design

The study adopted a descriptive research design. According to Bassett et al. (2020), using descriptive research design in studies helps in adequate information collection, which helps in the adequate resolution of inquiries, especially regarding the present state of variables under investigation. Hence, a descriptive research design was deemed effective and suitable for this study as it helped to adequately provide a comprehensive exploration of the relationship between the Financial Performance (dependent variable) and RBS Planning, RBS Quality Control Mechanisms, Access to reliable information for supervisors (independent variables).

3.3 Target Population

The target population for this study was all 56 insurance companies operating in Kenya (Appendix 4), reflecting the comprehensive scope needed to draw meaningful insights into the impact of Risk-Based Supervision (RBS) on financial performance. The study focused on key participants within these companies, including risk managers, internal audit managers, and finance managers, with each category contributing one representative per company. This resulted in a total of 168 participants, encompassing the entire unit of observation for the research.

3.3.1 Sampling design

A census sampling approach was employed for the study. This method was chosen due to the manageable size of the target population and the critical nature of the insights expected from each participant (Israel 2020). By including all eligible participants, the study ensured comprehensive coverage, enhancing the reliability and validity of the findings. Each participant was directly involved in roles related to RBS implementation or financial performance, making their inclusion essential for addressing the research objectives.

This sampling design provided a robust framework for collecting data, ensuring that the perspectives of all relevant stakeholders were captured. By targeting a complete enumeration of the population, the study offered a comprehensive understanding of the dynamics of RBS within the Kenyan insurance sector.

3.4 Data Collection Methods

The study employed closed-ended questionnaires designed with Likert scales to collect quantitative data. This design facilitated the measurement of variables and enabled statistical analysis, ensuring consistency and comparability across responses. The approach enhanced the reliability of the data collected while streamlining the data collection and analysis process for efficient interpretation of trends and patterns (Cooper & Schindler, 2014).

The questionnaires were administered electronically via Google Forms, targeting risk managers, internal auditors, and finance managers from 56 insurance companies. Each of the 56 companies was represented by three key roles, risk managers, internal auditors, and finance managers resulting in a total of 168 questionnaires. This calculation was based on the formula:

Total questionnaires = 56 (companies) ×3 (roles per company) =168

Responses were received electronically and systematically recorded to ensure data integrity.

3.5 Data Analysis

The data collected was analyzed using a combination of descriptive and inferential statistical methods. Descriptive statistics were used to compute means, standard deviations, frequencies, and percentages for each variable, providing an overview of the data distribution. Inferential statistics, including regression analysis, were utilized to examine the relationships between independent and dependent variables. The Pearson correlation coefficient was applied to determine the direction and strength of the associations between variables. Multiple regression analysis was conducted to evaluate the model's predictive capability, analyze variance, and assess the significance of the beta coefficients. All data analysis was performed using the Statistical Package for Social Sciences (SPSS) version 21, with results presented in tables displaying frequencies and percentages for ease of interpretation.

The variables input into SPSS were defined as follows: Risk-Based Supervision Planning (RBSP) included action plans for contingencies, capital planning, and risk quantification. Quality Control Mechanisms (QCM) encompassed accountability assurance, the frequency of monitoring procedures, and the independence of control functions. Access to Reliable Information (ARI) for supervisors included macro-prudential information, industry intelligence, and details on ownership structures. Supervision Implementation Framework (SIF) covered tools for supervision, decision-making processes, and assessment approaches.

Thus, the regression model for assessing the relationship between these variables and financial performance was specified as follows:

$FP = \beta_0 + \beta_1 RBSP + \beta_2 QCM + \beta_3 ARI + \beta_4 SIF + \varepsilon$ ..... (i)

Where.

FP = Financial Performance

RBSP = RBS Planning

QCM = Quality Control Mechanisms

ARI = Access to Reliable Information

SIF = Supervision Implementation Framework

ε = error term

β_0 = constant term

$\beta_1 - \beta_4$ = Beta coefficient

To account for the moderating effect of the Supervision Implementation Framework (SIF), the model was adjusted as follows:

$$FP = \beta_0 + \beta_1 RBSP \times SIF + \beta_2 QCM \times SIF + \beta_3 ARI \times SIF + \varepsilon \quad \text{.....(ii)}$$

In this adjusted model, the interaction terms RBSP × SIF, QCM × SIF, and ARI × SIF capture the moderating role of the Supervision Implementation Framework in influencing the relationship between the predictors and financial performance.

3.7 Research Quality

This study adopted several procedures to ensure research quality, including obtaining approval to conduct the study, performing a pilot test, and establishing the reliability and validity of the research instrument. The research instrument was then administered to the main study respondents, followed by the data collection and analysis processes. These steps were designed to ensure the accuracy and credibility of the research findings.

3.7.1 Test of Validity and Reliability

In this study, we ensured validity through the following procedures. Construct validity was established by reviewing evidence from existing studies that used the same measuring instrument to confirm that it accurately measures the intended construct. Criterion-related validity was assessed by comparing scores from our new measure with scores from established measures of the same construct to check for strong correlations. Content validity was ensured by carefully evaluating whether the items included in the instrument effectively covered all aspects of the construct being measured, ensuring a comprehensive and representative sample.

Reliability was assessed using Cronbach's alpha, with a threshold of 0.7 adopted as recommended by Taber (2018). A Cronbach's alpha of 0.7 or higher indicates acceptable internal consistency of the research instrument, ensuring that the items within each scale were consistently measuring the same construct. Values between 0.5 and 0.7 were considered marginally acceptable, while values below 0.5 were deemed unacceptable. This approach ensured that the data collected was reliable and could be consistently reproduced in similar studies.

3.8 Ethical Considerations

This study addressed ethical issues by informing them of their willingness to participate in the study. After successful defence of the proposal permission to conduct research was also obtained from the university as well as the National Commission for Science, Technology and Innovation (NACOSTI).

3.9 Chapter Summary

This chapter provides a structured approach to data collection and analysis, ensuring the study's findings are valid, reliable, and ethically conducted. The use of quantitative techniques, statistical tools, and a census sampling approach ensures accurate evaluation of the effects of RBS on financial performance in the Kenyan insurance industry.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The objective of this study was to assess the impact of Risk Based Supervision (RBS) on the financial performance of insurance companies in Kenya. This chapter presents the findings of the study. The research findings include the general information pertaining to the results, demographic information, the descriptive statistics and the inferential statistics. The chapter is organized on the bases of specific objectives which were: to determine the effects of RBS Planning, RBS quality control mechanisms, access to reliable information by supervisors and the moderating effect of RBS implementation on the financial performance of insurance companies in Kenya.

4.2 Response Rate

The table below shows the response rate of the questionnaires administered.

Table 4.1: Response Rate

	Number	Percentage
Questionnaires that were responded to	126	75%
Questionnaires that were not responded to	42	25%
Total Number of Questionnaires	168	100%

The study administered a total of 168 questionnaires but only 126 were responded to, representing a response rate of 75% which was well above the 60-70%. The response rate was considered suitable for making inferences from the collected data as recommended by Morton *et al.* (2012) for social research studies.

4.3 Demographic Characteristics of the Respondents

The first section of the questionnaire collected background information about the respondents, including their age, gender, and years of service with their current employer and their job title. The results are presented below.

4.3.1 Distribution by Age

Age plays an important role in this study, as an individual's knowledge and experience of a subject can be influenced by their age, making it a crucial factor in understanding different

perspectives and responses. The age distribution of the respondents is shown by the figure below:

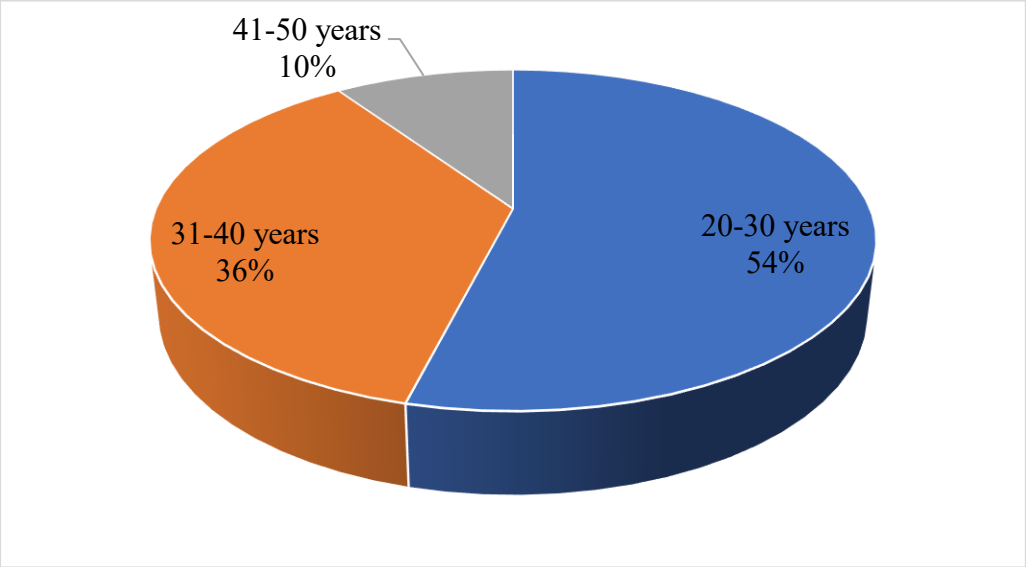


Figure 4.1: Distribution of Respondents by Age

The results revealed that out of 126 respondents, 68 were between 20-30 years old, 46 were between 31-40 years old, and 12 were between 41-50 years old, representing 54%, 37%, and 10%, respectively. This suggests that the majority of employees at the insurance companies were relatively young, indicating a higher staff turnover.

4.3.2 Gender Distribution

The researcher sought to understand the gender distribution among the respondents, recognizing its importance for the study. Analyzing gender diversity enhances the depth and quality of research by capturing a wide range of perspectives. The gender breakdown is presented in the figure below.

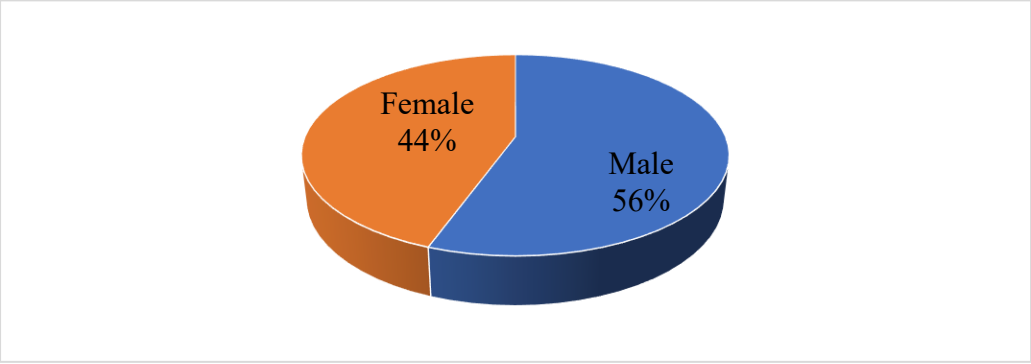


Figure 4.2: Gender Distribution of the Respondents

The results revealed that majority of the respondent were male comprising of 56% of the total respondent, while 44% were female. This is an indicator that there was a fairly good gender diversity in insurance companies in Kenya.

4.3.3 Distribution by Title of Employment

The inclusion of job titles in this research is important as it helps to understand the roles and perspectives of respondents, ensuring that the data reflects the insights of those directly involved in risk management and financial oversight. The results of distribution by title of employment are shown below.

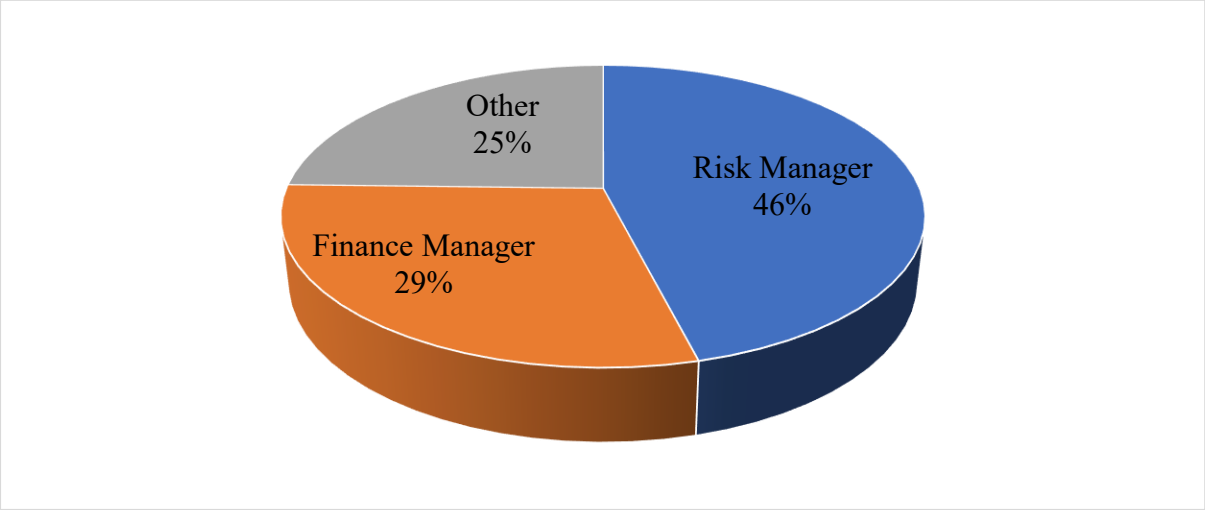


Figure 4.3: Distribution of Respondents by Title of Employment

Of the 126 respondents, 58 were risk managers, 37 were finance managers, and 31 held other titles, representing 46%, 29%, and 25%, respectively. This distribution suggests that the majority of participants were risk managers, highlighting their significant relevance to the study.

4.3.4 Distribution by Length of Employment

The length of employment is a significant factor in this study as it provides insights into employees' experience and familiarity with the organization and its practices. The distribution of respondents by length of employment, as shown in the figure below.

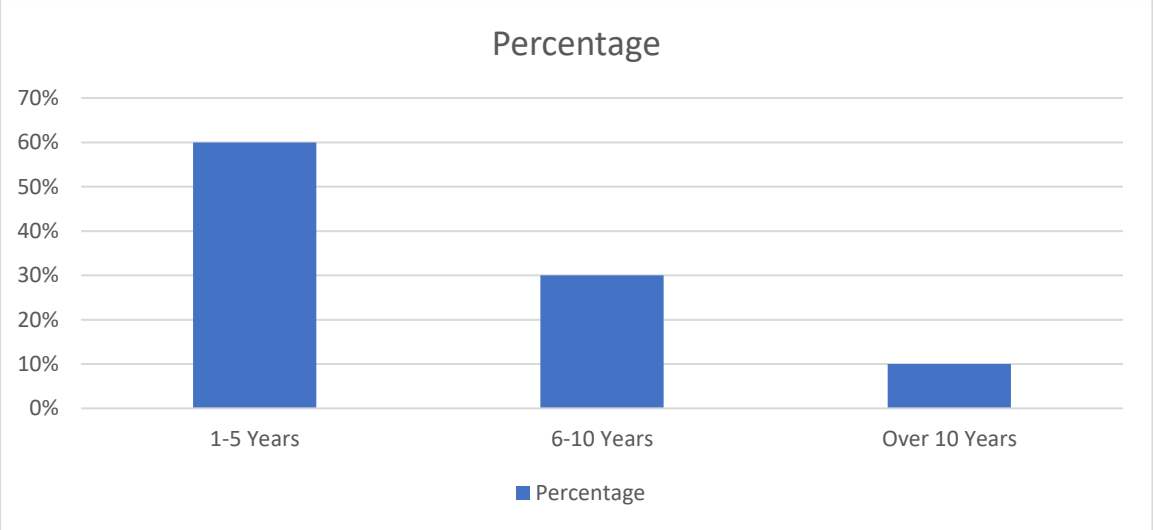


Figure 4.4: Distribution of Respondents by Length of Employment

The distribution of respondents by length of employment, as shown in Figure 4.3, reveals that out of 126 respondents, 76 had worked for 1-5 years, 38 for 6-10 years, and 12 for over 10 years, representing 60%, 30%, and 10%, respectively. These results indicate a relatively high turnover of staff within the insurance companies in Kenya, with many employees having worked for fewer than five years.

4.4 Descriptive Analysis

This subsection presents the descriptive findings for each variable examined in the study, expressed through percentages, means, and standard deviations. Descriptive statistics for the independent variables are organized and presented in alignment with each specific objective of the study.

4.4.1 Risk Based Supervision Planning and Financial Performance

This study aimed to assess how different aspects of Risk-Based Supervision (RBS) planning influence the financial performance of insurance companies in Kenya. The descriptive findings are detailed in Table 4.2 below.

Table 4.2: Components of RBS Planning in Insurance Companies

Component	N	Mean	Std. Deviation
Risk monitoring had been reinforced with contingency approaches.	126	4.7540	0.4505
The firm has endeavored to integrate contingency planning by focusing on contingency and business recovery plans.	126	4.5714	0.5430

The firm has been engaging in frequent capital planning meetings to establish the right capital structure mix.	126	4.2143	0.4120
The firm has enhanced capital planning processes that have been integrated into its operations.	126	4.1746	1.0437
The company has been able to ensure profitability by quantifying credit risks through the determination of accounts receivables.	126	4.1429	0.4329
The firm has institutionalized credit management strategies to ensure proper quantification of risks.	126	3.9286	0.7175
Average	126	**4.2976**	**0.5999**

Source: Author (2024)

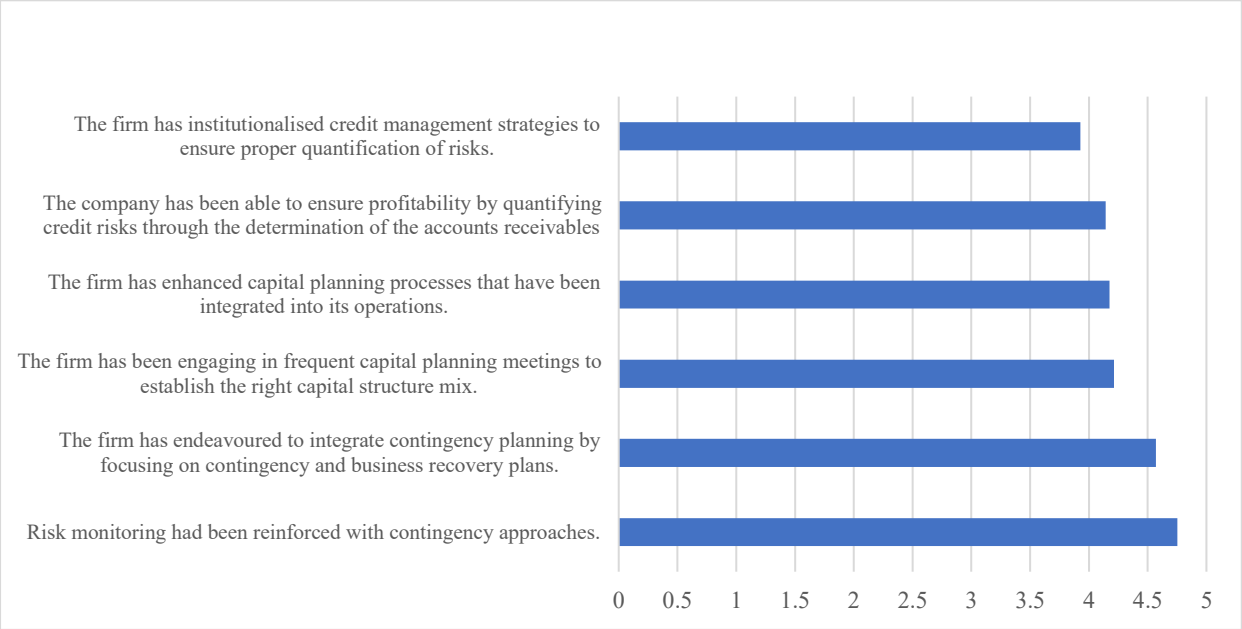


Figure 4.5: RBS Planning in Insurance companies

Source: Author (2024)

The mean values in Table 4.2 reflect how well different RBS planning components have been implemented in the insurance companies. Risk monitoring reinforced with contingency approaches had the highest mean score. This indicates that this component of RBS planning is well-developed, and insurance companies prioritize risk contingency measures. The high mean values across other components, like contingency and business recovery plans and capital planning, indicate that insurance companies have institutionalized key planning processes essential for improving financial outcomes.

The overall mean score of 4.2976 indicates that RBS planning is integrated into the operational strategies of insurance companies in Kenya to a significant extent, and these efforts are closely aligned with financial performance objectives. Despite minor variations in the implementation as reflected in the standard deviations ranging from 0.41196 to 1.04368, the results demonstrate a relatively consistent adoption of RBS planning practices across the firms.

4.4.2 RBS Quality Control Mechanisms and Financial Performance

This study aimed to assess the impact of Risk-Based Supervision (RBS) quality control mechanisms on the financial performance of insurance companies in Kenya. Table 4.5 provides descriptive statistics of various quality control mechanisms.

Table 4.3: Measure of RBS Quality Control Mechanisms

Measure	N	Mean	Std. Deviation
The firm has incorporated risk monitoring mechanisms to enhance accountability.	126	4.3730	0.4855
The board has ensured effective oversight by reviewing and approving risk strategies.	126	4.3968	0.9040
Continuous monitoring of risk has been applied by the company.	126	4.1984	0.8581
The company ensures compliance with risk standards by scheduling risk surveillance.	126	4.2302	0.6831
External quality assurance auditors and reviewers are used to maintain objectivity and independence.	126	4.0159	0.8098
Board diversity has been ensured to enable more effective oversight and quality control.	126	4.1111	0.9053
Average	**126**	**4.2209**	**0.7743**

Source: Author (2024)

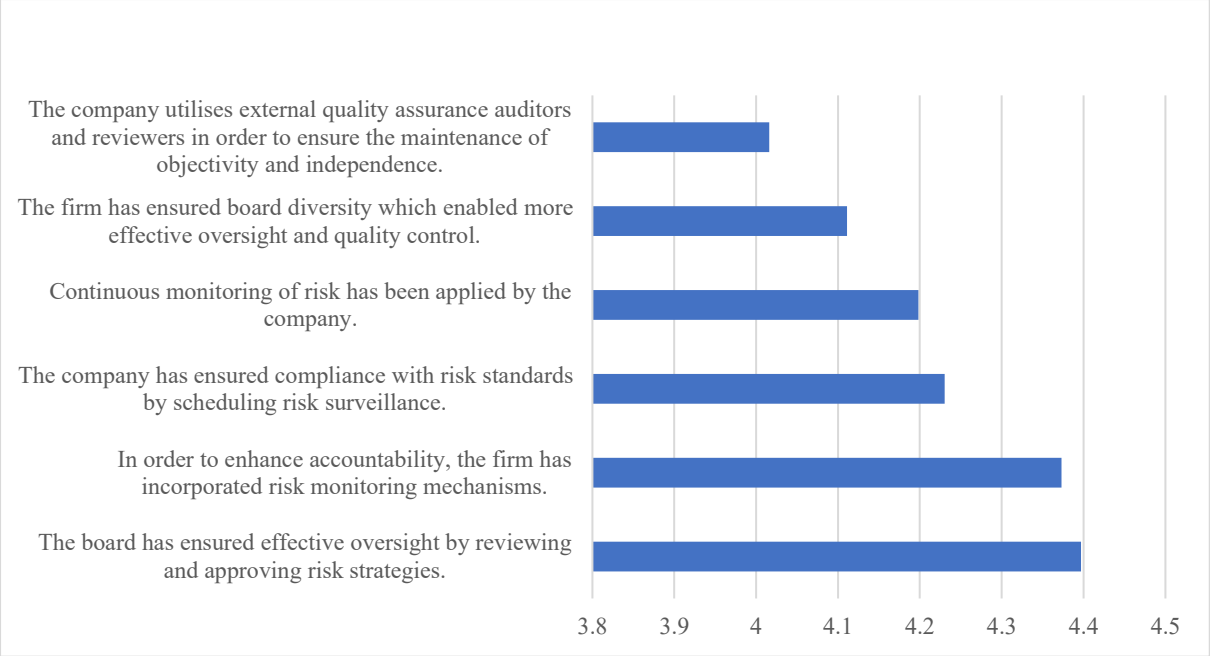


Figure 4.6: Measure for RBS Quality Control Mechanisms.

The mean values in Table 4.5 reflect the extent to which various RBS quality control mechanisms are adopted by insurance companies. The highest mean score for the board's role in reviewing and approving risk strategies suggests that this aspect of quality control is well-prioritized by insurance companies. This is followed closely by risk monitoring mechanisms for accountability, indicating the significance of accountability in enhancing risk management and ensuring the integrity of the system. The other mechanisms have relatively high mean scores which indicate that insurance companies have incorporated them in their operations.

The overall average mean score of 4.2209 suggests that these companies have widely adopted RBS quality control mechanisms, which play a crucial role in their financial performance. The relatively low standard deviations across all components, ranging from 0.48554 to 0.90529, indicate a high level of consistency in responses, showing that most companies are applying these quality control mechanisms similarly.

4.4.3 Access to Reliable Information by Supervisors and Financial Performance

The study sought to assess the impact of access to reliable information by supervisors on financial performance. Table 4.4 provides the mean and standard deviation for the individual attributes of this variable.

Table 4.4: Reliable Information by Supervisors

Statement	N	Mean	Std. Deviation
There have been adequate information management systems for RBS.	126	3.8175	1.1342
There has been adequate compliance in the company regarding risk management information systems.	126	3.6984	0.9057
The company has employed a number of business intelligence tools, including data mining.	126	3.6508	1.4876
The company has ensured a high level of financial intelligence by recruiting highly qualified individuals in finance.	126	3.8413	0.9158
Ownership structure has influenced the financial performance of the firm.	126	4.3016	0.7722
Government ownership has influenced the financial performance of the firm.	126	3.7302	1.4989
Average Score	**126**	**3.8399**	**1.1191**

Source: Author (2024)

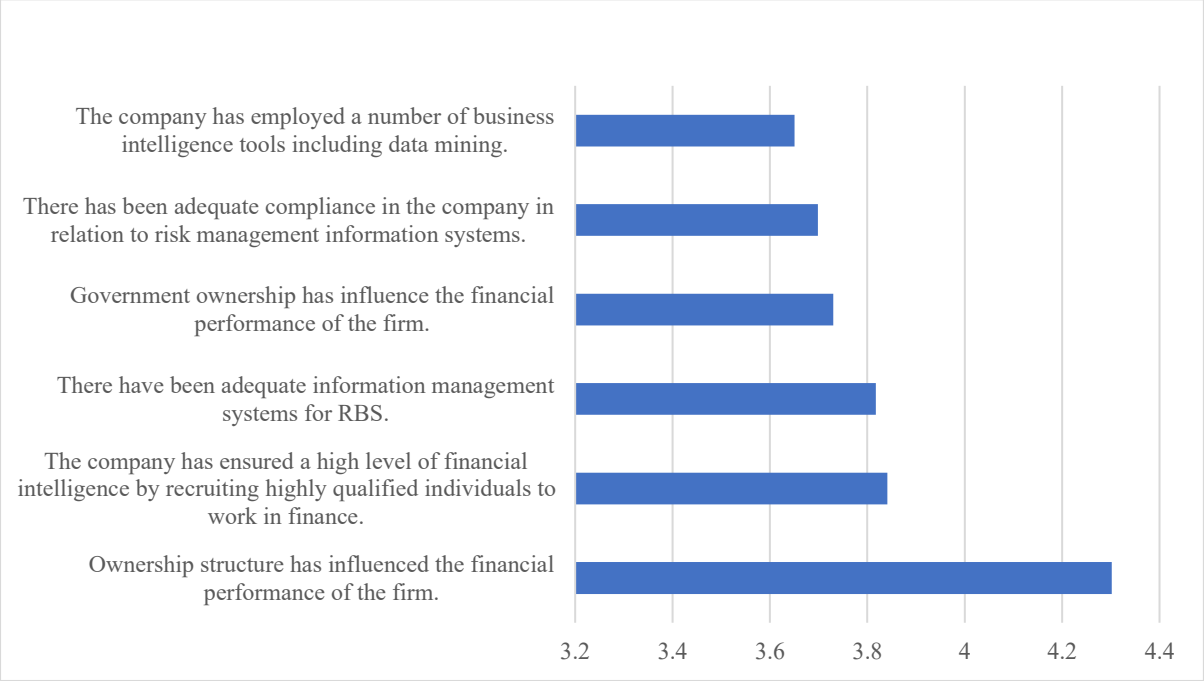


Figure 4.7: Facets of Reliable Information by Supervisors

Source: Author (2024)

According to the table, access to reliable information by supervisors had an overall mean score of 3.8399 and a standard deviation of 1.1191. This indicates that respondents generally agreed

that insurance companies had established systems to ensure access to reliable information for supervisors, which is a crucial component of Risk-Based Supervision (RBS). The standard deviation indicates that there was little variation in each of the responses with the average responses and that there was a high level of agreement amongst the respondents.

For individual factors associated with access to reliable information by supervisors, the respondents agreed that ownership structure is a significant factor influencing financial performance in the companies. The high score indicates that respondents observed a strong relationship between the structure of ownership and the overall financial outcomes of the firms. With a mean of 3.8413, the results emphasize the importance of financial intelligence in achieving optimal performance by recruitment of qualified individuals in finance.

However, the lower mean score for the statement "the company has employed business intelligence tools, including data mining" highlights that there may be gaps in the adoption of advanced data analytics and business intelligence tools.

The standard deviations ranged from 0.77222 to 1.49887, indicating varying levels of dispersion in responses. The relatively larger standard deviations (e.g., 1.49887 for "government ownership") suggest a higher level of variability in responses, indicating mixed views on the influence of government ownership on financial performance.

4.4.4 Financial Performance

The study examined the financial performance of insurance companies in Kenya, focusing on Return on Assets (ROA) as a key indicator. Descriptive statistics were utilized to analyze respondents' perceptions of ROA-related aspects. The results are summarized in Table 4.5.

Respondents generally agreed that their companies had experienced a consistent increase in ROA over the past five years, with a mean score of 4.0127 and a standard deviation of 0.8123. This finding suggests a positive trend in financial performance, highlighting the impact of effective resource utilization. Similarly, a high level of agreement (mean = 4.2206, SD = 0.7215) was noted regarding the influence of ROA on investment decisions and the selection of financial securities. This underscores the strategic importance of ROA in guiding asset allocation and investment strategies.

The role of external factors in maintaining ROA was also evident. Respondents strongly agreed that strict prudential guidelines and regulatory requirements contributed to positive ROA

outcomes, as indicated by a mean score of 4.4048 and a low standard deviation of 0.6347. Additionally, economic stability was found to support consistent ROA levels, with respondents reporting agreement (mean = 3.9921, SD = 0.8899) on the role of stable macroeconomic conditions in sustaining financial performance.

Operational factors further emerged as critical contributors to ROA. Respondents strongly agreed that their focus on risk management positively influenced ROA (mean = 4.3206, SD = 0.5785), reflecting the value of proactive risk mitigation strategies. Access to reliable financial and operational data also scored highly (mean = 4.4508, SD = 0.4927), emphasizing the importance of accurate and timely information in enhancing decision-making and optimizing performance.

Interestingly, respondents were less consistent in their perceptions of the negative effects of declining ROA on overall financial performance (mean = 3.7857, SD = 1.0323). This variability could indicate differing experiences or the presence of mitigating factors in some firms that buffer against the adverse impacts of declining ROA.

The overall average score across all items was 4.1696, with a standard deviation of 0.7410, reflecting a generally positive perception of factors influencing ROA. These findings highlight the critical role of internal management practices, regulatory frameworks, and external economic conditions in shaping financial performance within the Kenyan insurance sector.

Table 4.5: Descriptive Statistics on Financial Performance (ROA)

Statement	N	Mean	Std. Deviation
The company has experienced a consistent increase in its ROA over the past five years.	126	4.0127	0.8123
A decline in ROA has negatively affected the company's overall financial performance.	126	3.7857	1.0323
The company's ROA influences its investment decisions and the selection of financial securities.	126	4.2206	0.7215
Strict prudential guidelines and regulatory requirements have helped the company maintain a positive ROA.	126	4.4048	0.6347
During periods of economic stability, the company has been able to maintain a stable and positive ROA.	126	3.9921	0.8899
The company's focus on risk management has positively impacted its ROA.	126	4.3206	0.5785
Access to reliable financial and operational data has improved the company's ability to achieve a positive ROA.	126	4.4508	0.4927
Average Score	**126**	**4.1696**	**0.7410**

4.5 Diagnostic Test Results

To determine the statistical values of the variables under study using inferential measures, it is assumed that the data follows a normal distribution. However, statistical analyses often involve potential errors that must be identified. In this study, multicollinearity, normality, linearity, and homoscedasticity tests were conducted to assess the presence or absence of such errors. The absence of these errors indicates that the data is suitable for modeling. Multicollinearity was tested using Variance Inflation Factor (VIF) method, normality was assessed using the Shapiro-Wilk test, linearity was evaluated using ANOVA output by comparing the level of significance where, when the significance is higher than 0.05 then it can be concluded that there is a linear relationship while the reverse is true when the significance is less than 0.05, and heteroscedasticity was tested through Breusch-Pagan test. The findings of these tests are presented below.

4.5.1 Multicollinearity Test Results

The multicollinearity test results for the study are presented in the table below.

Table 4.6: Multicollinearity Statistics

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	(Constant)		
	RBS Planning	.572	1.748
	RBS Quality Control Mechanisms	.900	1.111
	Access to Reliable Information	.590	1.695

a. Dependent Variable: Financial Performance

The Variance Inflation Factors (VIFs) for the three independent variables were as shown in the table above. Since these VIF values are greater than 1 but remain well below the threshold of 10, there is no evidence of multicollinearity among the independent variables. This suggests that the independent variables are not strongly correlated with each other. Consequently, the independent variables are statistically significant and contribute meaningfully to the model. These results confirm the suitability of using a multiple regression model for the study.

4.5.2 Normality Test Results

The results of the normality test for the study are summarized in the table below:

Table 4.7: Normality Test Results

	Shapiro-Wilk		
Variable	**Statistic**	**DF**	**Sig.**
RBS Planning	0.271	7	0.128
RBS Quality Control Mechanisms	0.311	9	0.133
Access to Reliable Information	0.28	6	0.128

Dependent Variable: Financial Performance

The Shapiro-Wilk test results indicate that all variables: have significant values greater than the 0.05 threshold. This indicates that the data for these variables do not significantly deviate from a normal distribution, and the null hypothesis of normality cannot be rejected. Therefore, the assumption of normality is satisfied, supporting the appropriateness of using inferential statistics in the study.

4.5.3 Heteroscedasticity Test Results

The results of the heteroscedasticity test are presented in the table below.

Table 4.8: Heteroscedasticity Statistics

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1.913	3	.638	11.174	.201[b]
	Residual	.742	13	.057		
	Total	2.655	16			

a. Dependent Variable: sqres

b. Predictors: (Constant), Access to Reliable Information, RBS Quality Control Mechanisms, RBS Planning

The ANOVA analysis shows that the regression model has a p-value of 0.201, which is greater than the significance threshold of 0.05. This indicates that the results are not statistically significant. Therefore, there is no evidence of heteroscedasticity in the data. As a result, the standard errors reported in the regression output are reliable, and the inferences and interpretations derived from the model are valid.

4.5.4 Linearity Test Results

The results of the linearity test for the study are shown in Table 4.9.

Table 4.9: Linearity Statistics

ANOVA Table

			Sum of Squares	df	Mean Square	F	Sig.
Financial Performance * RBS Planning	Between Groups	(Combined)	1.376	2	.688	1.507	.255
		Linearity	.906	1	.906	1.986	.181
		Deviation from Linearity	.469	1	.469	1.029	.328
	Within Groups		6.389	14	.456		
	Total		7.765	16			
Financial Performance * RBS Quality Control Mechanisms	Between Groups	(Combined)	1.165	2	.582	1.235	.321
		Linearity	.065	1	.065	.137	.717
		Deviation from Linearity	1.100	1	1.100	2.333	.149
	Within Groups		6.600	14	.471		
	Total		7.765	16			
Financial Performance * Access to Reliable Information	Between Groups	(Combined)	2.265	3	.755	1.784	.200
		Linearity	1.753	1	1.753	4.143	.063
		Deviation from Linearity	.512	2	.256	.605	.561
	Within Groups		5.500	13	.423		
	Total		7.765	16			

The deviation from linearity test shows p-values which are greater than 0.05. This indicates that there is a linear relationship between the dependent and independent variables.

4.6 Inferential Analyses

4.6.1 Correlation Analysis

The study employed Pearson correlation to examine the relationships between various aspects of RBS (independent variables) and financial performance. The correlation matrix was used to determine the direction, strength, and significance of these relationships. The test was conducted at a 5% significance level with a two-tailed test. A critical value of 0.025 was used to assess significance: values equal to or above 0.025 were considered insignificant, while those

below were deemed significant. The results of the Pearson correlation coefficients are presented in the table below.

Table 4.10: Pearson Correlation Coefficients

Correlations

		RBS Planning	RBS Quality Control Mechanisms	Access to Reliable Information	Supervision Implementation Framework	Financial Performance
RBS Planning	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	126				
RBS Quality Control Mechanisms	Pearson Correlation	-.052**	1			
	Sig. (2-tailed)	.565				
	N	126	126			
Access to Reliable Information	Pearson Correlation	.639**	.024	1		
	Sig. (2-tailed)	.000	.794			
	N	126	126	126		
Supervision Implementation Framework	Pearson Correlation	.427**	.143	.584**	1	
	Sig. (2-tailed)	.000	.110	.000		
	N	126	126	126	126	
Financial Performance	Pearson Correlation	.462	.242**	.506	.275	1
	Sig. (2-tailed)	.007	.005	.004	.02	
	N	126	126	126	126	126

**. Correlation is significant at the 0.01 level (2-tailed).

The results, which include the correlation coefficient (r) and p-value, reveal important insights into nature and significance of these relationships.

The analysis found a correlation coefficient of 0.462 and a p-value of 0.007 between RBS planning and ROA, indicating a moderate positive relationship. This suggests that effective RBS planning plays a role in determining the return on assets for insurance companies in Kenya.

A weaker, though still positive, relationship was observed between RBS quality control mechanisms and ROA, with a correlation coefficient of 0.242 and a p-value of 0.005. This

implies that while RBS quality control mechanisms have some influence on ROA, their impact is less significant compared to other factors.

Access to reliable information by supervisors showed a moderate positive correlation with ROA, with a correlation of 0.506 and a p-value of 0.005. This suggests that having accurate information readily available to supervisors is an important factor influencing financial performance in terms of ROA.

Finally, the relationship between the supervision implementation framework and ROA was found to be weakly positive, with a correlation coefficient of 0.275 and a p-value of 0.020. This indicates that the structure and execution of supervision have a limited, but still positive, effect on the return on assets.

4.6.2 Regression Analysis

The study focused on examining the assumed relationship between RBS planning, RBS quality control mechanisms, access to reliable information by supervisors, and financial performance. To analyze the connection between these variables, a simple multiple linear regression analysis was performed to assess the individual impact of the independent variables on the dependent variable. This initial analysis was an unmoderated regression. The steps outlined by Baron and Kenny (1986) for testing moderating effects were applied:

Step 1 (Model 1) involves estimating the relationship between the dependent and independent variables, ensuring the relationship is statistically significant.

Step 2 (Model 2) utilizes the regression model and the Hausmann test to examine the association between the independent variables, the moderating variable, and the dependent variable. The model should demonstrate statistical significance.

Step 3 (Model 3) calculates the interaction term by multiplying the centred predictor and the centred moderator.

In Step 1 (Model 1), regression analysis was used to evaluate the relationship between financial performance and each of the independent variables (RBS planning, RBS quality control mechanisms and Access to reliable information by supervisors). The results for regression statistics are presented in the table below.

Table 4.11: Regression between Risk Based Supervision and financial performance

Financial Performance	Coef.	Std. Err.	P>t
RBS Planning	.330*	0.369	0.008
RBS Quality Control Mechanisms	.531*	0.359	0.006
Access to Reliable Information by Supervisors	.419*	0.369	0.004
_cons	1.292	0.587	0.000
Model Summary			
Adjusted R-squared	0.364		
F (3, 126)	23.267		
Prob > F	0.000		
Observations	126		

p<0.05*

The statistical significance of the overall model was confirmed by the F-test statistic (F (3, 126) = 23.267, $p < 0.05$), indicating that the combined influence of RBS planning, quality control mechanisms and access to reliable information by supervisors contributes to enhanced financial performance. Additionally, the results provide strong support for the idea that the collective impact of Risk Based Supervision on performance is more substantial than the individual effects of the elements of RBS.

The study revealed that RBS Planning ($\beta = 0.330$, $p < 0.05$) moderately predicts the financial performance of insurance companies, meaning that a one-unit increase in human capital leads to a 0.330-unit improvement in financial performance. Similarly, RBS Quality Control Mechanisms ($\beta = 0.531$, $p < 0.05$) was found to be a significant predictor, with each unit increase in quality control mechanisms resulting in a 0.531-unit boost in financial performance. Finally, Access to reliable information by supervisors ($\beta = 0.419$, $p < 0.05$) was also identified as a significant predictor, where a one-unit rise in access to reliable information by supervisor's results in a 0.419 unit increase in financial performance.

Thus, the regression equation, before accounting for the moderating effect of RBS implementation framework, can be expressed as follows:

FP= 1.292+0.330SP+0.531QCM+0.419ARI

Where;

FP = Financial Performance

RBSP = RBS Planning

QCM = Quality Control Mechanisms

ARI = Access to Reliable Information

SIF = Supervision Implementation Framework

4.6.3 Moderated Regression

The final regression model was determined after considering the moderation effect and the results are presented in the table below.

Table 4.12: Regression (Moderated) between RBS and Financial Performance

Financial Performance	Coef.	Std. Err.	P>t
RBS Planning (RBSP)	0.330*	0.369	0.008
RBS Quality Control Mechanisms (QCM)	0.531*	0.359	0.006
Access to Reliable Information by Supervisors (ARI)	0.419*	0.369	0.004
RBS Implementation Framework (RIF)	0.250	0.270	0.020
RBSP * SIF	0.120	0.040	0.015
QCM * SIF	0.150	0.035	0.008
ARI * SIF	0.080	0.045	0.042
_cons	1.200	0.560	0.000
Model Summary			
Adjusted R-squared	0.423		
F (6,119)	16.23		
Prob > F	0.000		
Observations	126		

After incorporating the moderating effect of the RBS Implementation Framework into the regression model, the results suggest that the framework significantly influences the relationship between certain components of Risk-Based Supervision (RBS) and financial performance. The unmoderated model, which included RBS Planning, RBS Quality Control Mechanisms, and Access to Reliable Information by Supervisors, explained 36.4% of the variance in financial performance, with each of these variables showing a significant positive relationship with financial performance.

When the RBS Implementation Framework was introduced as a moderating variable, the adjusted R-squared value increased slightly to 0.423, indicating an improvement in the model's explanatory power. The interaction between RBS quality control mechanisms and the RBS implementation framework was found to be significant ($p < 0.05$), suggesting that the implementation framework strengthens the impact of quality control mechanisms on financial performance. This indicates that a well-executed RBS implementation framework enhances the effectiveness of quality control measures in improving financial performance.

However, the interaction terms for RBS planning and access to reliable information by supervisors with the RBS implementation framework were insignificant, implying that the framework does not significantly moderate the relationship between these factors and financial performance. Overall, the findings indicate that while the RBS implementation framework plays a crucial role in moderating the relationship between quality control mechanisms and financial performance, its effect on the other RBS elements is less pronounced. Based on the results above, the moderated regression equation is:

FP= 1.200+0.120SP+0.150QCM+0.080ARI

Where;

FP = Financial Performance

RBSP = RBS Planning

QCM = Quality Control Mechanisms

ARI = Access to Reliable Information

SIF = Supervision Implementation Framework

4.7 Chapter Summary

This chapter has presented the findings of the study in relation to each research objective. The results include analyses on the impact of Risk-Based Supervision (RBS) planning, quality control mechanisms, and access to reliable information on the financial performance of insurance companies in Kenya. Descriptive analysis provided insights into the average responses and variability across these variables, while inferential analysis, through correlation and regression, revealed that each RBS component; planning, quality control, and information access had a positive and significant relationship with financial performance. Additionally, the analysis showed that the RBS implementation framework strengthened the association between these components and financial outcomes, supporting its role as an effective moderating variable.

CHAPTER FIVE

DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter encompasses a comprehensive summary of the research findings, followed by a discussion of the conclusions drawn from those findings. The conclusions are linked to the research objectives and provide meaningful insights into the subject matter. Based on these conclusions, a set of actionable recommendations is presented, offering practical guidance for relevant stakeholders to implement.

Additionally, the chapter presents suggestions for future research, identifying potential areas that could be further explored to expand the current understanding of the topic. The implications of the study are also highlighted, addressing both theoretical and practical contributions to the field.

Finally, the limitations of the study are acknowledged, outlining any factors that may have influenced the results and placing the findings in the proper context. This ensures a balanced and critical reflection on the study, providing clarity on its scope and applicability.

5.2 Discussion of Findings

The following subsections provide a summary and discussion of the research findings in relation to each specific objective of the study.

5.2.1 Risk Based Supervision Planning and Financial Performance

The findings showed a positive relationship between Risk-Based Supervision (RBS) planning and the financial performance of insurance companies, indicating that RBS planning significantly enhances financial outcomes. This suggests that insurance companies that strengthen their RBS planning are more likely to experience improved financial performance. By effectively implementing RBS planning, insurers can bolster their financial health through better risk management and compliance practices.

The findings also challenge the Economic Theory of Regulation, which argues that regulations often prioritize private interests due to political interference and incentives that favor industry interests over public welfare. The study refutes this claim, showing that RBS planning aligns with the Public Interest Theory, which emphasizes that regulatory mechanisms, such as quality control and safety standards, protect policyholders, investors, and employees from exploitation.

This perspective echoes Den Hertog's (2010) work, which argues against the dominance of private interests in regulatory decisions.

Moreover, the results support Pearson and Mitroff's (2019) study, which highlighted the importance of contingency plans integrated with stress-testing frameworks for enhancing organizational resilience. The findings also align with Chache et al. (2020), who found that insurance firms have focused on contingency and business recovery plans as part of their risk management strategies. Additionally, the study concurs with Kulchmanov et al. (2016), who emphasized that risk monitoring in banks must be complemented by robust contingency approaches, such as contingency plans, internal audit systems, board oversight, and adherence to regulatory standards like Basel.

The findings of this study showed a positive relationship between Risk-Based Supervision (RBS) planning and the financial performance of insurance companies, suggesting that effective RBS planning significantly enhances financial outcomes. This contrasts with Sawalha (2020), who argued that insufficient funding limits the full implementation of contingency plans, citing funding constraints as a barrier to effective RBS planning. Additionally, these results differ from Kimani (2023), who recommended reducing underwriting risks as the primary strategy for profitability, a perspective not supported by the positive impact of RBS planning on financial performance observed in this study.

5.2.2 Quality Control Mechanisms and Financial Performance

The study found a positive relationship between Risk-Based Supervision (RBS) quality control mechanisms and the financial performance of insurance companies, indicating that enhancing RBS mechanisms leads to improved financial outcomes. This suggests that insurance companies that strengthen their RBS quality control systems, particularly by promoting board diversity to enable more effective oversight and control, are more likely to experience better financial performance. By leveraging RBS quality control mechanisms, insurers can ensure enhanced financial health, which benefits stakeholders, including policyholders, investors, and regulators.

The study also challenges the Economic Theory of Regulation, which posits that regulations primarily promote private interests due to political interference and incentives for political leaders to favor industry interests over the public. Instead, the findings show that through RBS quality control mechanisms, insurance companies can improve their financial performance while aligning with the broader public interest. This contradicts the theory's premise and

supports the findings of Den Hertog (2010), highlighting that regulatory frameworks can promote public welfare by ensuring stronger financial performance and accountability in the insurance sector.

These findings align with previous studies, such as Muoti (2021), which found that insurance firms enhanced accountability by incorporating risk monitoring mechanisms, thereby increasing stakeholder confidence. Similarly, Nyongesa (2017) identified claims management policies, working capital management, and capital structure decisions as key determinants of financial performance. The study also corroborates the work of Nyarangi and Ngali (2021), who emphasized the importance of frequent risk monitoring practices, including surveillance, as essential components of risk management in insurance companies.

However, the findings contradict Gichuru (2018), who revealed that despite the existence of quality objectives, many insurance companies did not adopt quality control as a performance measure. Additionally, the results diverge from Kimani (2023), who argued that reducing the underwriting of risk was the best strategy for ensuring profitability. In contrast, this study emphasizes that quality control mechanisms through RBS provide a more holistic approach to improving financial performance.

5.2.3 Access to reliable Information by Supervisors and Financial Performance

The results indicated a positive and significant correlation between access to reliable information by supervisors and the financial performance of insurance companies. This suggests that when supervisors have better access to accurate and timely information, it leads to improved financial outcomes for the companies. By implementing mechanisms to enhance supervisors' access to reliable information, insurance firms can ensure stronger financial performance and more effective decision-making.

The study challenges the Economic Theory of Regulation, which argues that regulations mainly promote private interests due to political interference and incentives aimed at advancing industry over public interests. However, the study shows that improved access to reliable information for supervisors fosters better financial performance, benefiting a broad range of stakeholders, including the public. This finding aligns with Den Hertog (2010), demonstrating that regulatory frameworks can indeed support public welfare by enabling supervisors to make informed decisions that enhance financial outcomes.

These results are consistent with Makau (2014), who found that while risk management in pension funds improved, the lack of adequate information management systems for RBS hindered full effectiveness. Similarly, Bett and Wepukhulu (2019) revealed compliance deficiencies in some companies' risk management information systems due to insufficient supervision by the Insurance Regulatory Authority (IRA), largely due to resource constraints. This was compounded by supervisors' inability to access all necessary information consistently. Additionally, Mukuche (2019) found that insurance companies have employed various business intelligence tools, such as data mining, data warehousing, and digital dashboards, to improve their information systems and decision-making processes.

However, the study's findings were inconsistent with Haas et al. (2011), IRA (2020), and Ipomai (2016). These studies revealed that many European insurance firms had ensured reliable information access through significant investments in information management systems. Further improvements in the RBS regulatory framework were made possible by support from donor partners. Additionally, some companies faced challenges aligning business intelligence solutions with their specific needs due to the absence of a validation model for facilitating improved adoption of these tools. These inconsistencies highlight the regional and organizational differences in the implementation and effectiveness of information systems in the insurance industry.

5.2.4 Moderating Effect of RBS Implementation Framework on the Relationship between RBS and Financial Performance

The study established that the Risk-Based Supervision (RBS) implementation framework had a positive and significant moderating effect on the relationship between different RBS components and the financial performance of insurance companies in Kenya. This means that through the enhanced adaptation and application of the RBS implementation framework, insurance companies were able to strengthen the impact of RBS on their financial performance. The findings suggest that a well-executed RBS framework improves how insurance firms manage risk, leading to better financial outcomes.

The study challenges the Economic Theory of Regulation, which posits that regulations primarily promote private interests due to political interference and incentives that favor industry interests over public welfare. Consistent with Den Hertog (2010), the study demonstrates that by improving the adaptation of the RBS implementation framework,

insurance companies enhance their financial performance, benefiting both the industry and stakeholders who are part of the public.

These findings align with previous studies such as Bett and Wepukhulu (2019), which found that tools like the Electronic Regulatory System (ERS), introduced after the RBS rollout in 2013, and facilitated effective management of communication between industry players and the regulator, leading to improved compliance and performance. Similarly, Tarsono et al. (2020) highlighted those regulators used risk-based capital as a key measurement tool to assess companies' financial performance, particularly solvency, under the RBS framework. Nyongesa (2017) also supported these findings, noting that the introduction of RBS compelled insurance firms to enhance governance mechanisms, leading to more robust decision-making processes in risk management.

However, the results contradicted studies by Kumar (2021). These inconsistencies stem from several factors, including resource and technical constraints faced by Sub-Saharan African countries in adopting ERS tools and other RBS innovations. Additionally, many insurance companies struggled to recover their capital outlays following the alignment of their systems with RBS requirements due to challenges in accessing risk-based capital. Smaller insurance firms, in particular, faced difficulties investing in appropriate governance mechanisms required for effective RBS implementation. These limitations highlight the challenges of fully adopting RBS frameworks in resource-constrained environments.

5.3 Conclusions

This study investigated the effects of various Risk-Based Supervision (RBS) factors on the financial performance of insurance companies in Kenya. The findings indicate that key elements of RBS namely, RBS planning, quality control mechanisms, access to reliable information, and the RBS implementation framework all positively and significantly influence financial performance.

Specifically, RBS planning was shown to have a substantial impact, leading to the conclusion that effective planning within RBS enhances financial outcomes by equipping companies to better manage and mitigate risks. Similarly, RBS quality control mechanisms were found to positively and significantly impact financial performance, suggesting that strong quality control measures improve financial results by ensuring accountability and consistency in supervisory processes. Furthermore, the study highlighted the importance of access to reliable information, with findings demonstrating that enhanced information access significantly boosts

financial performance by enabling more informed decision-making among supervisors. Finally, the RBS implementation framework was examined as a moderating factor, and the results suggest that this framework strengthens the relationship between RBS practices and financial performance, thereby reinforcing the effectiveness of RBS strategies.

In conclusion, this study underscores that the collective implementation of RBS planning, robust quality control mechanisms, access to reliable information, and a strong implementation framework meaningfully contributes to improved financial performance in Kenyan insurance companies. This comprehensive approach to RBS serves as a critical driver of financial stability and resilience within the insurance sector.

5.4 Recommendations

5.4.1 Policy Recommendations

To strengthen Risk-Based Supervision (RBS) adoption, the government, through the IRA, should collaborate with industry stakeholders to identify and address specific bottlenecks that hinder effective RBS implementation, particularly for smaller insurance firms. Additionally, the IRA should consider conducting research to explore how RBS has been successfully adopted in developed countries, allowing for the application of best practices and lessons learned to the Kenyan context.

5.4.2 Managerial Recommendations

The management of insurance firms should prioritize aligning their information systems with those of the IRA to enhance seamless integration and compliance with RBS requirements. Additionally, they should employ external quality assurance auditors and reviewers to uphold objectivity and independence in quality control processes, thereby strengthening RBS practices and contributing to better financial performance.

5.4.3 Implications for Academia and Research

This study highlights the need for further research into RBS adoption within Kenya's insurance sector, as there is limited local research in this area. By building on this foundational study, future researchers can expand the body of knowledge on RBS, contributing to a deeper understanding of its impacts and best practices in prudential regulation within the Kenyan context.

5.5 Suggestions for Further Research

The study has revealed several specific research gaps that future researchers could address. Firstly, this study focused on three independent variables: Risk-Based Supervision (RBS) planning, quality control mechanisms, and access to reliable information. Future research could investigate additional factors, such as risk governance structures, the role of regulatory compliance culture, and capital adequacy requirements, which may also impact financial performance.

Secondly, this study introduced the RBS implementation framework as a moderating variable. Future studies could examine other potential moderating variables, such as organizational resilience, technological adoption, or management expertise, to further explore their effects on the relationship between RBS practices and financial outcomes. Finally, as this study used a cross-sectional approach, future research could adopt a longitudinal design to observe changes in the impact of RBS over time.

5.6 Limitations of the Study

In pursuing its research objectives, this study encountered several limitations. First, while objective financial performance indicators such as return on assets (ROA) and return on equity (ROE) are typically available in financial statements, this study relied on self-reported data from respondents due to limited access to comprehensive, standardized financial data across the industry. The absence of readily accessible secondary data restricted the study's ability to use objective measures and, instead, required subjective indicators that can be vulnerable to biases like order effects, scale effects, and halo effects, as outlined by Jahedi & Méndez (2014). Future studies could address this limitation by accessing secondary data from financial statements, annual reports, or regulatory filings to enhance reliability and validate self-reported data.

Additionally, reliance on self-reported data introduced the possibility of response bias, where participants might adjust their responses based on personal biases or perceptions of the study's intent. To mitigate this, future research could employ a mixed-methods approach, combining quantitative data with qualitative interviews or triangulation techniques to cross-verify self-reported data. Anonymous surveys could also help encourage honest responses, ultimately improving data quality and validity.

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APPENDICES

Appendix 1 – Letter of Introduction

RE: Request to Collect Data

I am a master's student at the Strathmore Business School pursuing a Master of Commerce (Finance Option). I am currently carrying out research on **"Effects of risk-based supervision on the financial performance of insurance companies in Kenya".**

The purpose of this study is to find out the correlation that exists between the independent variables (RBS Planning, Oversight and Quality Control Mechanisms, and Access to Reliable Information) and financial performance in insurance companies in Kenya as well as the moderating effect of supervision implementation framework. The results of the study will provide a practical reference for all concerned parties wishing to influence financial performance through the use of RBS Planning, Oversight and Quality Control Mechanisms, and Access to Reliable Information including government officials, risk management practitioners, proprietors and other stakeholders in the insurance industry and researchers and scholars. As respondents, you stand to benefit through your own personal contribution in shedding more light to the reasons why the insurance companies in Kenya have struggled to integrate the requirements of RBS into their risk management.

Strathmore University respects participants' right to privacy and, as such, as a student of the institution, I am bound to uphold this principle by ensuring the anonymity of all participants and confidentiality of any information gotten from the study. Additionally, my professional ethics precludes me from engaging in any practices that will cause undue injury to any participant. Finally, it should be noteworthy that your participation is fully voluntary, and you have a right to get prior consent for use of any information prior to that information being used in the study. Your participation is highly invaluable and will be gratefully appreciated.

Yours Sincerely,

_____

Daniel Kimani

Appendix 2 – Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 721332

Date of Issue: 30/April/2024

RESEARCH LICENSE

This is to Certify that Mr.. Daniel Irungu Kimani of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: THE EFFECTS OF RISK-BASED SUPERVISION ON THE FINANCIAL PERFORMANCE OF INSURANCE COMPANIES IN KENYA for the period ending : 30/April/2025.

License No: **NACOSTI/P/24/35122**

721332

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.

Appendix 3 – Ethics Approval Letter

Strathmore UNIVERSITY

22nd April 2024

Mr Kimani Daniel,
daniel.kimani@strathmore.edu

Dear Mr Kimani,

RE: The Effects of Risk-Based Supervision on the Financial Performance of Insurance Companies in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above SU-masters research proposal. Your application reference number is **SU-ISERC2211/24.** The approval period is from **22nd April 2024 to 21st April 2025.**
This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
v. Clearance for the export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) https://research-portal.nacosti.go.ke/ and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email admissions@strathmore.edu www.strathmore.edu

Appendix 4 – Research Instruments

Primary Data Collection Questionnaire

SECTION A: DEMOGRAPHIC INFORMATION

1. Gender of Participant ☐ Male ☐ Female
2. Please indicate your title of employment.

   ☐ Risk Manager ☐ Finance Manager ☐ Other
3. How long have you worked for the insurance company? (Kindly tick one below):

   ☐ Less than 1 years ☐ 6-10 years

   ☐ 1-5 years ☐ Over 10 years
4. What is your age? (Kindly tick one below):

   ☐ 20-30 years ☐ 41-50 years ☐ Above 60 years

   ☐ 31-40 years ☐ 51-60 years

SECTION B: Effects of RBS Planning on Financial Performance.

Kindly (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A), 5-Strongly Agree (SA).

	Statement	SD	D	N	A	SA
1.	The firm has endeavoured to integrate contingency planning by focusing on contingency and business recovery plans.					
2.	Risk monitoring had been reinforced with contingency approaches.					
3.	The firm has enhanced capital planning processes that have been integrated into its operations.					
4.	The firm has been engaging in frequent capital planning meetings to establish the right capital structure mix.					

5.	The firm has institutionalised credit management strategies to ensure proper quantification of risks.					
6.	The company has been able to ensure profitability by quantifying credit risks through the determination of the accounts receivables					

SECTION C: Influence of RBS Quality Control Mechanisms on Financial Performance.

Kindly (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A), 5-Strongly Agree (SA).

	Statement	SD	D	N	A	SA
7.	In order to enhance accountability, the firm has incorporated risk monitoring mechanisms.					
8.	The board has ensured effective oversight by reviewing and approving risk strategies.					
9.	Continuous monitoring of risk has been applied by the company.					
10	The company has ensured compliance with risk standards by scheduling risk surveillance.					
11	The company utilises external quality assurance auditors and reviewers in order to ensure the maintenance of objectivity and independence.					
12	The firm has ensured board diversity which enabled more effective oversight and quality control.					

SECTION D: Influence of Access to Reliable Information on Financial Performance

Kindly (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A), 5-Strongly Agree (SA).

	Statement	SD	D	N	A	SA
13	There has been adequate information management systems for RBS.					

14.	There has been adequate compliance in the company in relation to risk management information systems.					
15.	The company has employed a number of business intelligence tools including data mining.					
16.	The company has ensured a high level of financial intelligence by recruiting highly qualified individuals to work in finance.					
17.	Ownership structure has influenced the financial performance of the firm.					
18.	Government ownership has influenced the financial performance of the firm.					

SECTION E: Moderarting Effect of Supervision Implementation Framework.

Kindly (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A), 5-Strongly Agree (SA).

	Statement	SD	D	N	A	SA
19.	The Electronic Regulatory System (ERS) reporting tool ensures the effective management of all the formal communication between the company and the regulator.					
20.	Risk-based capital has been used as a measurement tool to enable the assessment of the firm's solvency during RBS implementation.					
21.	The recently introduced RBS compelled the company to enhance its governance mechanisms by including more robust decision-making processes pertaining to risk management.					
22.	Stringent adherence to the newly established RBS has enabled more effective decision-making processes in the firm.					
23.	The regulator has established both quantitative and qualitative risk assessment approaches as part of RBS.					
24.	The assessment approach is defined by the available resources for supervision.					

SECTION E: Financial Performance of Insurance Companies in Kenya.

Kindly (√) tick appropriately on a scale of 1-5. 1-Strongly Disagree (SD), 2-Disagree (D), 3-Neutral (N), 4-Agree (A), 5-Strongly Agree (SA).

	Statement	SD	D	N	A	SA
25.	The company has experienced a consistent increase in its ROA over the past five years.					
26.	A decline in ROA has negatively affected the company's overall financial performance.					
27.	The company's ROA influences its investment decisions and the selection of financial securities.					
28.	Strict prudential guidelines and regulatory requirements have helped the company maintain a positive ROA.					
29.	During periods of economic stability, the company has been able to maintain a stable and positive ROA.					
30.	The company's focus on risk management has positively impacted its ROA.					
31.	Access to reliable financial and operational data has improved the company's ability to achieve a positive ROA					

Thanks for your participation

Appendix 5 – List of Insurance Companies

	INSURANCE COMPANIES	AUTHORISED CLASSES OF BUSINESS
1	AAR Insurance Company Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14
2	Africa Merchant Assurance	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14
3	AIG Kenya Insurance Company	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 13, 14
4	Allianz Insurance Company of Kenya Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13,14
5	APA Insurance Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13,14
6	APA Life Assurance Company	31, 32, 33a, 33b, 34, 35, 37a, 37b
7	ABSA Life Assurance Kenya	31, 34, 35
8	Britam General Insurance Company	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14
9	Britam Life Assurance Company	31, 32, 33a, 33b, 34, 35, 36, 37a, 37b
10	Capex Life Assurance Company	31,32,33a,33b,34,35
11	CIC General Insurance Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14
12	CIC Life Assurance Limited	31,32,33a,33b,34,35,37a,37b
13	Corporate Insurance Company	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14, 31, 34
14	Directline Assurance Company	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 14
15	Fidelity Shield Insurance Company	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 14
16	First Assurance Company Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 14
17	GA Insurance Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 14
18	GA Life Assurance Limited	31,32,33a,33b,34,35
19	Geminia Life Insurance Company	31, 33a, 33b, 34, 35, 37a
20	Geminia Insurance Company	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14
21	ICEA LION General Insurance Company Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11,12, 13,14
22	ICEA LION Life Assurance	31,32,33a,33b,34,35,37a,37b
23	Intra Africa Assurance Company	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14
24	Invesco Assurance Company	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14
25	Jubilee Life Insurance Limited	31, 32, 33a, 33b, 34, 35 ,37a
26	Jubilee Allianz General Insurance	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14
27	Jubilee Health Insurance Limited	12
28	Kenindia Assurance Company Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 14,31,32,33a 33b, 34, 35 ,37b
29	Kenya Orient Insurance Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11,12, 14
30	Kenya Orient Life Assurance	31,32,33a,33b,34,35
31	Kuscco Mutual Assurance Limited	31,32,33a,33b,34,35,37a,37b
32	Liberty Life Assurance Kenya	31,32,33a,33b,34,35,37a,37b
33	Madison Life Assurance Kenya	31,32,33a 33b, 34, 35 , 37a, 37b

34	Madison General Insurance Kenya Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14
35	Mayfair Insurance Company	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14
36	Metropolitan Cannon Life	31,34,35,37a,37b
37	Metropolitan Cannon General Insurance Company Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12,14
38	MUA Insurance (Kenya) Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12,13,14
39	Occidental Insurance Company	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14
40	Old Mutual Life Assurance Limited	31,33a, 33b, 34,35,37a, 37b
41	Pacis Insurance Company Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14
42	Pioneer General Insurance Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 14
43	Pioneer Assurance Company	31,32,33a,33b,34,35,37a,37b
44	Prudential Life Assurance Kenya	31,32,33a,33b,34,35,37a,37b
45	Resolution Insurance Company Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14
46	Sanlam General Insurance	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 14
47	Sanlam Life Insurance Limited	31,32,33a,33b,34,35,37a,37b
48	Takaful Insurance of Africa Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13,14
49	Tausi Assurance Company Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 14
50	The Heritage Insurance Company Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 14
51	The Kenyan Alliance Insurance Company Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 14, 31, 32, 33a, 33b, 34, 35, 37a
52	The Monarch Insurance Company Limited	02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13, 14, 31, 32,33a 33b 34, 35, 37a
53	Trident Insurance Company Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 14
54	UAP Insurance Company Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13,14
55	UAP Life Assurance Company	31,32,33a,33b,34,35,37a,37b
56	Xplico Insurance Company Limited	01, 02, 03, 04, 05, 06, 07, 08, 09, 10, 11, 12, 13,14

KEY:

Long Term Insurance Business

31 Life Assurance

32 Annuities

33 Pensions

a. Personal Pension

b. Deposit Administration

34 Group Life

35 Group Credit

36. Permanent Health

37 Investment

a. Unit Link and Linked Investments

b. Non-Linked investment

General Insurance Business

1 Aviation

2 Engineering

3 Fire Domestic

4 Fire Industrial

5 Liability

6 Marine

7 Motor Private

8 Motor Commercial

9 Personal Accident

10 Theft

11 Workmen's compensation

12 Medical

13 Micro insurance

14 Miscellaneous

Source: Insurance Regulatory Authority (2023)