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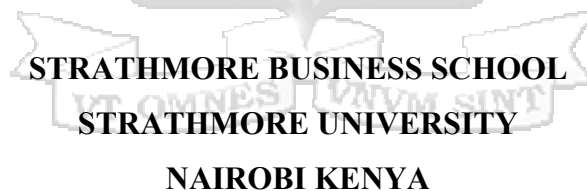
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**EFFECT OF INTEGRATED RISK MANAGEMENT ON FINANCIAL PERFORMANCE
OF COMMERCIAL PARASTATALS IN KENYA MODERATED BY RISK MATURITY**

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MCOM/059465/23

**A THESIS SUBMITTED IN PARTIAL FULFILMENT FOR REQUIREMENT FOR
DEGREE OF MASTER OF COMMERCE (MCOM) AT STRATHMORE BUSINESS
SCHOOL AT STRATHMORE UNIVERSITY**



MAY 2025

DECLARATION

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

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ADMISSION NO 059465

Wambui

20/05/2025

Signature..... Date.....



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20/05/2025

Signature..... Date.....

DEDICATION

I wish to dedicate this thesis to my dear Mum Rosemary Wakarindi Wangombe for her love and encouragement. She has always been a pillar of support and Wisdom in my studies and career.



ACKNOWLEDGEMENTS

Above all, I wish to sincerely thank God for his guidance and providing all that I needed in my studies.

To my Supervisor Dr. David Mathuva whose expertise, Guidance and support were invaluable throughout the course of my Research and writing of this thesis. Your encouragement and constructive feedback pushed me to achieve more than I thought possible.

Finally, I want to thank my friends, colleagues and most importantly, my classmates, for their support and challenge in helping me finish the course on time.



ABSTRACT

This study investigated how integrated risk management (IRM) affects the financial performance of Kenyan commercial parastatals and moderating role of risk maturity. Commercial Parastatals in Kenya contribute to the economic development of the country, through their contributions in various sectors such as Transport, Agriculture, Energy and public services. However, these organizations face several challenges which threaten their performance and sustainability. While risk management practices, such as risk identification, analysis, and mitigation, are known to impact financial outcomes in various sectors, the application of IRM within Kenyan parastatals remains underexplored. The objectives of the study were to assess the influence of risk identification, risk analysis and risk mitigation on financial performance of commercial parastatals in Kenya and to establish the moderating influence of risk maturity level on the association between IRM and the financial performance of commercial parastatals in Kenya. The study was based on Resource based view (RBV) and contingency theory and adopted a descriptive correlation research design. The target population for this study consists of all the 30 commercial state parastatals in Kenya with a total of 1813 employees. A purposive sampling technique was employed for senior management to ensure that key decision-makers with relevant expertise are represented. For each of the 30 commercial parastatals, three purposive respondents were selected from senior management thus a sample size of 90. Structured questionnaires and a data collection sheet were used in data collection. Data collected was analysed using descriptive and inferential statistics. The study found that risk identification and risk analysis have a positive and statistically significant impact on financial performance of commercial parastatals in Kenya. Risk Mitigation was also statistically significant thus a key driver of financial performance in commercial parastatals in Kenya. The study confirms that risk maturity is a significant moderator in the relationship between integrated risk management and financial success in commercial parastatals. The study recommends that the commercial parastatals should implement structured mechanisms for employee input, such as anonymous suggestion systems and regular feedback forums. They should institutionalize risk analysis frameworks such as scenario analysis and quantitative scoring across all departments. Management of the commercial parastatals should conduct regular internal audits to assess adherence to mitigation strategies and effectiveness of control measures. Parastatals should also implement targeted capacity-building programs.

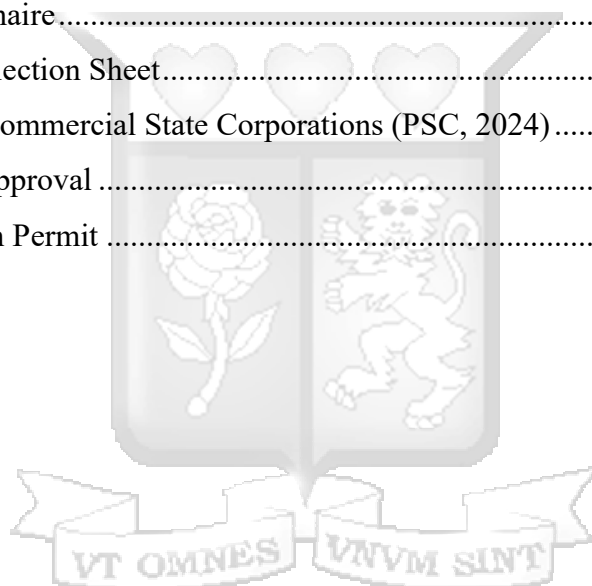
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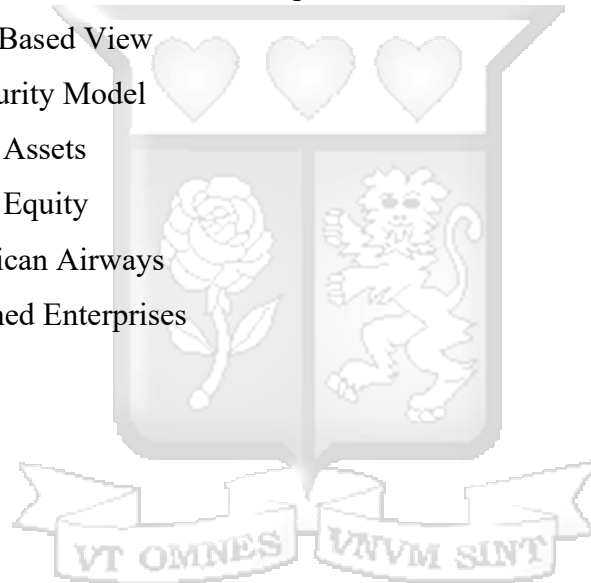
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ABBREVIATIONS AND ACRONYMS

COSO	Committee of Sponsoring Organizations
ECG	Electricity Company of Ghana
ERM	Enterprise Risk Management
GAO	Government Accountability Office
IRM	Integrated Risk Management
KPA	Kenya Ports Authority
KPI	Key performance Indicator
KPLC	Kenya Power and Lighting Company
NNPC	Nigerian National Petroleum Corporation
RBV	Resource-Based View
RMM	Risk Maturity Model
ROA	Return on Assets
ROE	Return on Equity
SAA	South African Airways
SOEs	State-Owned Enterprises



DEFINITION OF KEY TERMS

Integrated risk management (IRM) is a holistic approach to risk management that entails locating, evaluating, controlling, and keeping an eye on hazards throughout the whole company to make sure risk management is in line with the strategic goals of the company (Omondi & Muturi, 2021).

Performance of State Parastatals is the capacity of state parastatals to fulfil their strategic goals, provide services effectively, and continue to be financially viable (Al-Tamimi & Al-Mazrooei, 2020).

Risk analysis is the process of assessing the identified risks to determine their potential impact on the organization. It involves evaluating the likelihood and the severity of the risks, typically categorizing them in terms of their probability and the extent of damage they could cause (Abdelrahman et al., 2022).

Risk identification is the process of systematically identifying potential risks that could affect the achievement of an organization's objectives. It involves recognizing and documenting both internal and external threats that might have a negative impact on operations, strategy, or performance (Karanja and Muturi, 2020)

Risk Maturity Level: the extent to which an organization has developed risk governance structures, risk awareness, and proactive risk management techniques, among other aspects of its risk management processes and culture (Mugambi & Kinyua, 2022).

Risk mitigation refers to the strategies and actions implemented to reduce, control, or eliminate identified risks. This phase involves deciding how to address the risks based on their priority and potential impact and implementing measures to minimize their effect on the organization (Njeri, 2014).

CHAPTER ONE

INTRODUCTION

1.1 Background of Study

Financial performance is a crucial indicator of the health and success of commercial state corporations (Al-Hashimy & Jamal, 2022). These entities, being government-owned, play a significant role in bridging the public and private sectors by providing goods and services while generating revenue for the state. Operating across various sectors such as energy, transport, telecommunications, and finance, they contribute significantly to national economies in terms of employment and economic output. Their performance is not only a reflection of their operational success but also a measure of the government's investment effectiveness in these organizations (Turner, 2023; Okeke, 2024). Given that parastatals often rely on taxpayer funding, ensuring their financial sustainability is essential for maintaining public trust and meeting broader socio-economic goals.

To sustain and improve their financial performance, parastatals must address the complex risks they face, including financial, operational, compliance, and reputational risks (Kouvelis et al., 2021). These risks, if unmanaged, can severely impact their ability to achieve organizational goals and long-term viability. Integrated Risk Management (IRM) offers a framework to manage these risks in a coordinated and proactive manner. It ensures that risks are identified, assessed, and mitigated effectively across the organization, ultimately optimizing decision-making and enhancing financial outcomes (Diero et al., 2019; Saeidi et al., 2021). By embedding IRM into their organizational culture, commercial parastatals can anticipate and address potential risks, which leads to improved financial performance and better resource utilization (Landi et al., 2022).

Globally, the importance of Integrated Risk Management has gained recognition across industries and regions. In the United States, Europe, and Asia, many commercial state corporations have adopted sophisticated risk management frameworks to safeguard their financial health and improve operational efficiency. In the US, organizations like the Government Accountability Office (GAO) have long emphasized the importance of risk management in public sector entities, and many large corporations have integrated risk management into their corporate governance structures (Barrett, 2022). Similarly, in Europe, particularly in the EU, a risk-based approach is

embedded in the regulations governing state-owned enterprises, ensuring that risk is identified and mitigated across all levels (Kordsachia, 2021). In Asia, countries like Singapore and Japan have pioneered integrated risk management practices in their public sector organizations, focusing on long-term sustainability and financial stability. These global trends highlight the growing recognition of the need for comprehensive risk management practices in commercial state corporations (Roche et al., 2021).

In Africa, the adoption of Integrated Risk Management is still in its early stages, although several countries have begun to incorporate it into their governance frameworks. In South Africa, for example, the King IV Report on Corporate Governance emphasizes the role of risk management in ensuring organizational success and sustainability (Maroun & Cerbone, 2024). However, many African nations, including Kenya, still face challenges in fully integrating risk management into the culture and operations of their commercial parastatals. Factors such as limited resources, inadequate risk management training, and weak regulatory frameworks have hindered the effective implementation of IRM in many African state corporations. Despite these challenges, there is growing awareness of the importance of IRM, and several African governments are now focusing on improving risk management practices within their state-owned enterprises (Phaladi & Marutha, 2023).

In the Kenyan context, commercial state corporations have also faced financial challenges, often stemming from inefficiency, corruption, and poor governance practices (Mwangi & Nkuru, 2024). The need for effective risk management within these corporations is increasingly being recognized by the Kenyan government and policymakers. Initiatives to enhance financial transparency and accountability, as well as improve the overall financial performance of these parastatals, have been launched. The adoption of integrated risk management practices is seen as a key tool in addressing these challenges and ensuring the sustainability of state corporations. However, the implementation of such practices is still at various stages of maturity, with some organizations leading the way while others continue to struggle with basic risk management processes. Understanding the role of IRM in improving the financial performance of Kenyan parastatals is therefore crucial for enhancing their operational effectiveness and ensuring long-term financial sustainability.

A review of existing literature reveals that while considerable research has been conducted on risk identification and analysis, most of these studies focus on small and medium enterprises (SMEs) or financial institutions such as banks in various geographical contexts including Lebanon (Aoun, 2023), South Sudan (Kioko, 2023), and Kenya (Karanja & Muturi, 2020). However, these studies do not address the unique dynamics of commercial parastatals in Kenya, which operate within distinct financial and regulatory frameworks compared to private entities. Similarly, while studies by Abdelrahman et al. (2022) and Faisal et al. (2023) investigate risk and financial performance in Egypt and Indonesia respectively, their findings are context-specific and lack applicability to Kenya's public sector. More so, limited attention has been given to how the maturity level of risk management systems (i.e., risk maturity) influences the effectiveness of such integrated frameworks. This study therefore seeks to address these gaps by examining the effect of IRM on the financial performance of commercial parastatals in Kenya and investigating how risk maturity moderates this relationship. By doing so, it aims to contribute to the evolving discourse on risk governance in public sector entities and provide actionable insights for policy and practice.

1.1.1 Integrated Risk Management

Integrated Risk Management (IRM) involves a coordinated approach to identifying, assessing, and mitigating risks across an organization, ensuring that these processes are embedded in the organization's strategic, operational, and financial practices (COSO, 2017). According to Schulte and Knuts (2022) the effectiveness of IRM is contingent upon several key elements, including risk identification, risk analysis, and risk mitigation. Each of these components plays a crucial role in optimizing decision-making, reducing uncertainty, and enhancing the overall financial performance of organizations, particularly public entities (Waly et al., 2021).

Risk identification is the first and foundational step in the risk management process (Jia & Bradbury, 2021). It involves systematically recognizing the various risks that an organization faces, which can range from financial, operational, strategic, compliance, and reputational risks, to more specific industry-related threats. Identifying risks early enables organizations to understand their risk landscape comprehensively and proactively address potential threats before they escalate into significant issues. Risk identification is not only about spotting negative threats but also recognizing opportunities for growth and improvement, as failing to identify emerging

risks can result in missed opportunities and operational failures (Hunjra et al., 2022). Once risks are identified, they must be analyzed to assess their potential impact and likelihood.

Risk analysis involves evaluating the significance of the identified risks, determining the extent to which they could affect the organization, and understanding the relationship between different types of risks (Al-Amari, 2022). This process typically includes both qualitative and quantitative assessments, using various tools such as risk matrices, probability-impact charts, and scenario analysis (COSO, 2017). In commercial parastatals, risk analysis is crucial because it allows for prioritizing risks based on their potential effects on financial performance and strategic objectives. Through effective risk analysis, organizations can develop an understanding of which risks require immediate attention, and which can be monitored over time. This analytical approach also facilitates better decision-making by providing a clearer view of the trade-offs and potential outcomes associated with different courses of action (Kouvelis et al., 2021).

Risk mitigation refers to the strategies and actions put in place to reduce, transfer, or eliminate risks identified during the risk analysis process (Majumdar & Govindan, 2021). This stage involves the development and implementation of risk treatment plans to minimize the adverse effects of risks on organizational operations and financial performance. According to Aljohani et al. (2023) risk mitigation can take various forms, including the implementation of controls, diversification of investments, purchase of insurance, or adopting alternative strategies that reduce exposure to specific risks. Mitigation strategies help ensure that risks do not materialize into crises that could jeopardize the sustainability and profitability of these organizations. Additionally, by embedding risk mitigation practices into the organizational culture, parastatals can foster a proactive approach to risk, encouraging staff at all levels to contribute to managing risks in their respective areas (Aljohani et al., 2023).

Globally, both developed and developing countries continue to face challenges towards effective public sector risk management (Slavyuk & Slaviuk, 2018). Institutions in the public sector are required by law to offer goods or services that advance the general welfare. However, no organisation can afford to operate in a risk-free environment, and public institutions are particularly susceptible to risks related to carrying out their missions (Kiplagat, 2014). The importance of IRM has grown significantly, particularly in large corporations, government agencies, and public enterprises globally.

In the United States, the Sarbanes-Oxley Act (2002) and the Committee of Sponsoring Organizations (COSO) framework for Enterprise Risk Management (ERM) have been instrumental in encouraging organizations to adopt more comprehensive risk management practices (Phillips-Pakkianathan, 2022). In Europe, the European Union has introduced regulations that require state-owned enterprises to apply integrated risk management principles, promoting financial stability and accountability (Manes-Rossi et al., 2021). In Asia, the focus on sustainability and resilience has heightened the adoption of IRM practices, particularly in state-owned enterprises that play significant roles in critical sectors. Countries like Japan and Singapore are leading examples in Asia, where integrated risk management is seen as a crucial element of both corporate governance and national economic stability (Huy et al., 2021).

In Africa, the adoption of integrated risk management is still evolving (Bracci & Papi, 2021). While some countries like South Africa have adopted more sophisticated risk management frameworks, many African nations, including Kenya, are still in the early stages of implementing comprehensive IRM strategies. African countries face unique challenges in IRM, including limited resources, inadequate risk management training, and evolving regulatory environments. However, there is growing recognition of the importance of IRM in improving corporate governance, especially in state-owned enterprises that are critical to the region's economic development.

The Mwongozo Code of Governance is Kenya's first comprehensive framework for corporate governance in state corporations. Established in 2015 through Executive Order No. 7, it serves as a critical tool for enhancing transparency, accountability, and performance among commercial parastatals (State corporations Advisory Committee, 2015). The Mwongozo Code's emphasis on structured governance directly supports the implementation of Integrated Risk Management (IRM) practices in commercial parastatals. According to the Mwongozo code of corporate governance, every state corporation should implement the Risk Management Framework. By ensuring that boards are well-composed, trained, and held accountable, the Code facilitates the identification, analysis, and mitigation of risks, which are crucial for enhancing financial performance (Tuya, 2023).

Locally, the adoption of Integrated Risk Management in state-owned corporations (parastatals) has been relatively slow, but there has been increasing momentum in recent years. Kenyan policymakers are increasingly recognizing the importance of effective risk management in

ensuring the sustainability and profitability of these corporations (Rop & Jagongo, 2021). Although efforts are underway to integrate risk management into the fabric of these organizations, challenges such as lack of trained personnel, inadequate infrastructure, and inconsistent enforcement of policies persist. Nevertheless, the government has set up frameworks to encourage risk management practices in these corporations, including risk management guidelines for parastatals.

Despite the recognition of risk management as a key strategic function, many parastatals in Kenya still exhibit limited maturity in their risk management frameworks. Weak internal controls, inadequate stakeholder engagement, and insufficient capacity for risk forecasting and mitigation are persistent challenges (Kariuki & Murimi, 2020). In Kenya, parastatals are mandated to practice risk management as outlined in the Public Finance Management Act of 2012 and its accompanying regulations of 2015. These regulations require accounting officers to establish risk management strategies, including fraud prevention mechanisms, and to ensure robust internal controls (Public Finance Management Act, 2012).

1.1.2 Financial Performance

Financial performance refers to how well an organization is managing its financial resources to achieve its objectives (Coelho, Jayantilal & Ferreira, 2023). In the case of commercial state corporations, financial performance serves as a critical metric for assessing the success of government investments and the ability of these corporations to generate revenue, control costs, and achieve profitability. Key aspects of financial performance include profitability, Liquidity, efficiency and solvency (Blessing & Sakouvogui, 2023). Profitability is the ability of an organization to generate profit from its activities, typically measured by net income, Return on Assets (ROA), and Return on Equity (ROE) (Munteanu & Ilie, 2021). Liquidity is measured by the current ratio or quick ratio (Blessing & Sakouvogui, 2023). Efficiency refers to how well an organization uses its resources to generate revenue. This is assessed through measures like asset turnover and operational cost management (Hu et al., 2022). Solvency on the other hand is long-term financial health of the organization, often assessed using debt-to-equity ratios or leverage ratios (Amoa-Gyarteng & Dhliwayo, 2023).

Globally, the financial performance of state parastatals has long been a subject of scrutiny (Nhete, 2021). Unlike private enterprises, state-owned entities are typically driven by both financial goals and political or social objectives, which can create a complex operational environment. The

financial performance of these organizations, therefore, often reflects the interplay between political agendas, management practices, regulatory frameworks, and market conditions (Sadiq et al., 2020). In the United States and Europe, there are stringent regulations in place requiring public enterprises to maintain high standards of financial transparency and performance (Manes-Rossi et al., 2021; Cicchiello et al., 2023). These regulations, along with rigorous auditing and reporting practices, help ensure that these organizations are financially healthy and operate efficiently. In Asia, countries like China and India are working towards improving the financial performance of their state-owned enterprises by encouraging privatization and market-driven reforms. These reforms aim to improve the efficiency and profitability of these corporations, thus contributing to broader national economic goals (Waris & Din, 2024).

In Africa, the financial performance of commercial parastatals (State-Owned Enterprises or SOEs) has been an ongoing challenge for many years. Despite their critical role in national economies particularly in sectors such as energy, transportation, telecommunications, and utilities, many parastatals struggle with inefficiencies, mismanagement, corruption, and financial instability (Owiti & Aden, 2024). The performance of these enterprises has significant implications not only for their own sustainability but also for the broader economy and development goals of the respective countries.

South Africa stands out as one of the African countries that has made substantial progress in improving the financial performance of its state-owned enterprises. Parastatals such as Eskom (the national electricity supplier), Transnet (transport and logistics), and South African Airways (SAA) are central to the country's infrastructure and economic development. However, over the years, many of these parastatals have faced severe financial difficulties, with Eskom and SAA being frequent examples of financial distress (Nhete, 2021). To address these challenges, the South African government has introduced several reforms aimed at improving the financial performance of SOEs. These include the implementation of more stringent governance frameworks, financial audits, and greater transparency in the management of state resources. In recent years, South Africa has also explored privatization or partial privatization of certain parastatals, to improve efficiency and reduce government spending. For instance, the government has considered selling off a portion of its stake in South African Airways to reduce financial burdens (Olarewaju & Msomi, 2021).

Nigeria's experience with commercial parastatals offers a different perspective. As one of the Africa's largest economy, Nigeria has a large number of state-owned enterprises in sectors such as oil, transportation, and telecommunications. Despite their importance, many of these organizations have faced significant financial difficulties. For example, the Nigerian National Petroleum Corporation (NNPC) has long been plagued by inefficiencies, corruption, and mismanagement, leading to significant losses and reducing its ability to contribute to the national economy effectively (Alhassan & Islam, 2021). The Nigerian government has recognized the need for reform in its SOEs. In 2016, Nigeria began implementing a series of reforms to increase transparency, improve financial performance, and reduce the heavy reliance of parastatals on government subsidies. These reforms have included financial restructuring, divestment from non-core assets, and efforts to improve corporate governance. For instance, the Nigerian government has taken steps to commercialize some of its state-owned oil refineries, aiming to reduce the country's dependence on imported refined petroleum products. However, the pace of reform has been slow, and many parastatals continue to face substantial financial challenges (Korolo & Korolo, 2024).

Ghana has made significant strides in reforming its commercial parastatals, with a focus on improving the financial performance of key state-owned enterprises such as the Electricity Company of Ghana (ECG) and the Ghana Water Company (Amoako, 2024). In the past, many of these parastatals struggled with financial instability due to inefficiencies, outdated infrastructure, and poor management practices. However, in recent years, Ghana has undertaken a series of structural reforms aimed at improving the financial health of these entities. These reforms include the introduction of performance-based management contracts, enhanced financial monitoring, and the implementation of tariff adjustments in public utilities to better reflect actual costs.

Kenya, like many African countries, has faced significant challenges with the financial performance of its commercial parastatals. Most state parastatals in Kenya have continued to perform poorly due to financial mismanagement, operational inefficiency and debt accumulation leading to collapse and loss of funds by the Kenyan taxpayers. A Report by the national Treasury show that the commercial sector parastatals were the worst performing (see Table 1.1).

Table 1.1: Performance Evaluation Results for State Corporations by Functional Category

Functional Category	Average composite score
Public Universities	2.7752
Training and Research	2.9196
Service	2.9351
Financial	2.9773
Regulatory	3.0734
Regional Development Authorities	3.1001
Tertiary Education	3.1005
Commercial/Manufacturing	3.3460

Scale is 1-5 where a score of 1.00 is the best while 5.00 is the worst

Source (National Treasury Report, 2022)

Several parastatals such as Kenya Airways, Kenya Power, and the National Oil Corporation of Kenya have been grappling with financial difficulties, mismanagement, and inefficiencies in recent years (Owiti & Aden, (2024). The Kenyan government in 2020 transferred Kenya meat commission from ministry of agriculture to the Kenya defence forces in an effort to revive its operations. Postal Corporation of Kenya has been struggling to remain viable due to the decline mail volumes, due to technology use of emails and competition from private courier services. Telkom Kenya faced competition from private players like Safaricom and airtel Kenya. In 2016 the government of Kenya decided to privatise a portion of the company. Kenya Airways, for example, has faced recurring financial losses and mounting debt, primarily due to mismanagement, high operational costs, and external factors like fuel price volatility (Wanyama, & Aila, 2022).

In response to these challenges, the Kenyan government has focused on implementing measures to improve the financial performance of parastatals. This includes enhanced financial oversight, better management practices, and considerations for privatization. In Kenya, the privatization process has been a subject of considerable discussion, particularly regarding its potential to improve the financial performance of commercial parastatals, enhance competition, and reduce government expenditure. However, concerns about its impact on public welfare, job losses, and the risks of monopolies have also fueled significant opposition (Onsongo, 2021). The government has also worked to increase accountability by enforcing stricter regulations for corporate

governance and auditing. However, Kenya's parastatals still face challenges such as political interference, inefficiency, and corruption, which continue to undermine their financial performance. Despite these efforts, much remains to be done to ensure that these organizations become financially self-sufficient and contribute positively to the economy.

1.1.3 Risk Maturity Levels

Risk maturity is the degree to which an organization has developed a culture of risk management and established formal structures for risk governance. A proactive risk management culture, formalized risk governance, and great risk awareness are characteristics of organizations with high-risk maturity. In contrast, organizations with poor risk maturity could have disjointed risk procedures, little control of risks, and a reactive strategy for possible dangers (Mugambi & Kinyua, 2022). A mature risk management process is essential for maximizing its benefits, incorporating both its design and implementation, along with the skills, experience, and culture of those who apply it. To achieve maturity in risk management, an accepted framework for assessing risk management maturity is necessary, allowing for benchmarking against recognized standards (Hopkinson, 2020). Risk maturity can be measured in organisations using the risk maturity model (RMM) which is usually in five stages from ad hoc to optimised stage. According to Sinansari et al. (2021), state-owned companies generally have a well-developed system that effectively minimizes existing risks. As a result, the risk maturity level of state parastatals may influence their financial performance.

Risk maturity acts as a moderating variable by influencing the direction and strength of the association between IRM and financial performance. Several empirical studies have demonstrated the moderating effect of risk maturity on the relationship between risk management practices and organizational performance. For instance, a study by Yasmin (2019) found that as the maturity of integrated risk management increases, firms experience higher returns on assets and equity. This suggests that risk maturity enhances the capacity of organizations to implement IRM effectively, thereby boosting financial performance. Similarly, studies by Sinansari et al. (2021) and Hutter et al. (2020) confirmed that organizations with higher levels of risk maturity are better positioned to optimize the benefits of IRM, leading to improved financial outcomes. In contrast, organizations with lower risk maturity may face challenges in integrating IRM into their daily operations, which could hinder its effectiveness and dampen its impact on financial performance. In another

empirical study, Muralidharan et al. (2020) investigated the role of risk maturity in the public sector and found that risk maturity significantly influences the effectiveness of risk management practices. Public organizations with higher risk maturity were better able to integrate risk management strategies across departments and improve operational efficiency, ultimately leading to better financial outcomes. These findings underscore the importance of risk maturity as a moderating variable in shaping the relationship between IRM and financial performance. Additionally, empirical research by Ritchie and Brunt (2018) highlighted that organizations with low-risk maturity often face difficulties in aligning risk management with organizational goals. These challenges are reflected in their lower financial performance compared to organizations that have higher risk maturity, reinforcing the moderating effect of risk maturity on the relationship between IRM and financial performance.

1.1.4 Kenyan Parastatals

Parastatals play a vital role in the country's economic development. These entities, which are government-owned but operate as separate legal entities, are involved in various sectors of the economy, including transport, utilities, telecommunications, agriculture, energy, and financial services. Parastatals are established to carry out activities that are deemed essential for national development, provide public services, or support industries that may not attract sufficient private sector investment. Kenya's parastatals are established under Section 3 of the State Corporations Act, Cap 446, or by an act of Parliament, or under the Companies Act, Cap 486 (National Treasury, 2023). These entities operate on the principles of public service delivery while balancing the need for financial sustainability. Kenya's parastatals are broadly divided into commercial and non-commercial categories. The key distinction between these two types lies in their objectives, sources of revenue, and the extent to which they rely on the government for funding. According to inspectorate of state corporations there are 280 operational state parastatals in Kenya, 250 are non-commercial and 30 are commercial parastatals.

Commercial parastatals are state-owned enterprises whose primary goal is to generate profit or operate efficiently in the marketplace. These parastatals provide goods or services for which they charge fees, and they typically operate in sectors where private sector involvement is either insufficient or deemed unviable. Their financial performance is expected to be self-sustaining, and they are held to similar standards of profitability, efficiency, and performance as private

companies. Examples include Kenya Airways (KQ), Kenya Power and Lighting Company (KPLC), Kenya Ports Authority (KPA) and Telkom Kenya among others. Non-commercial parastatals, on the other hand, are established primarily to provide essential services to the public that may not be profitable or are considered strategic for national development. These entities typically operate in sectors where the government seeks to maintain control over key services, infrastructure, or resources, even if these operations do not generate profit. They are often funded through government budgets or subsidies and are not required to operate in a commercially viable manner. Examples include: the Social Health Authority (SHA), National Social Security Fund (NSSF), Kenya Wildlife Service (KWS) and the Kenya Civil Aviation Authority (KCAA) among others (National Treasury, 2023).

This study specifically focused on commercial state corporations, as they play a crucial role in driving economic growth and providing essential services while simultaneously generating revenue for the government. Commercial state corporations in Kenya operate in competitive markets and are expected to be financially self-sufficient. Their performance directly impacts the country's economy, as they contribute significantly to sectors such as energy, transportation, telecommunications, and infrastructure. Understanding how the integration of risk management influences their financial performance is essential for improving their efficiency, profitability, and sustainability.

I.2 Statement of the Problem

Financial performance is a critical determinant of the sustainability and growth of commercial state corporations, which are pivotal to Kenya's economic development. These parastatals provide essential goods and services across various sectors, including energy, transportation, and telecommunications. However, many of these organizations face persistent financial challenges, which hinder their ability to effectively contribute to national development. According to the National Treasury Report 2022, only 10 commercial parastatals, representing 32.3% of the total, achieved 100% or more of their annual targets in the 2021/2022 fiscal year. This indicates a significant gap between targets and actual performance, underlining the widespread financial difficulties within these organizations. Specific examples of these challenges include Kenya Railways, which reported a loss of KSh 24.17 billion in the 2019/2020 financial year. More recently, the total loss for Kenya Railways in the 2022/2023 financial year ballooned to KSh 33.59

billion, compared to KSh 12.71 billion in the previous year (National Treasury Report, 2023). Similarly, Kenya Power and Lighting Company reported a loss of KSh 4.4 billion for the 2022/2023 fiscal year and has remained in a negative working capital position for the last seven consecutive years (Office of the Auditor General, 2023). These figures point to inefficiencies, mismanagement, and governance issues that undermine the financial stability of these organizations, impacting their ability to fulfill their roles effectively.

The financial performance crisis in Kenyan parastatals highlights a significant gap in effective management practices, particularly in the area of risk management. Integrated Risk Management (IRM) has been identified as a potential solution to enhance the effectiveness of risk mitigation and improve financial performance. IRM offers a comprehensive framework for managing risks across all levels of an organization, ensuring that decision-making is optimized, and risks are addressed proactively (Schulte & Knuts, 2022). However, despite its recognized potential, there is limited empirical research on the application of IRM within Kenyan parastatals, especially in light of varying levels of risk maturity across these organizations.

Existing studies, such as those by Aoun (2023) and Kioko (2023), have examined the role of risk management in SMEs and financial institutions across different regions like Lebanon, South Sudan, and Kenya. However, these studies fail to focus on the unique characteristics and challenges faced by commercial parastatals in Kenya. Additionally, while research by Abdelrahman et al. (2022) and Faisal et al. (2023) explored the link between risk management and financial performance in other developing economies (e.g., Egypt and Indonesia), they do not consider the distinctive risk dynamics within Kenyan parastatals. This geographical gap in the literature highlights the need for a focused investigation into the relationship between IRM and financial performance within Kenya's public enterprises.

Furthermore, the role of risk maturity, as a moderating factor in the relationship between IRM and financial performance, remains underexplored in the Kenyan context. While there is substantial literature on risk maturity from developed economies, limited research exists on how varying levels of risk maturity influence the financial performance of Kenyan parastatals. This study, therefore, sought to address the critical gap by examining the effect of Integrated Risk Management on the financial performance of Kenyan commercial parastatals. Additionally, it aims

to investigate the moderating role of risk maturity in this relationship, providing a context-specific analysis that can inform policy and practice in Kenya's public sector.

1.3 Research Objectives

1.3.1 General Objectives

To examine the effect of integrated risk management on financial performance of commercial parastatals in Kenya and the moderating role of risk maturity.

1.3.2 Specific Objectives

- i. To assess the influence of risk identification on financial performance of commercial parastatals in Kenya.
- ii. To evaluate influence of risk analysis on the financial performance of commercial parastatals in Kenya.
- iii. To determine the influence of risk mitigation on financial performance of commercial parastatals in Kenya.
- iv. To establish the moderating influence of risk maturity level on the association between IRM and the financial performance of commercial parastatals in Kenya.

1.4 Research Questions

- i. How does risk identification influence financial performance of commercial parastatals in Kenya.
- ii. What is the influence of risk analysis on the financial performance of commercial parastatals in Kenya?
- iii. To what extent does risk mitigation influence financial performance of commercial parastatals in Kenya?
- iv. What is the moderating influence of risk maturity level on the association between IRM and the financial performance of commercial parastatals in Kenya?

1.5 Scope of the study

The study examined the effect of integrated risk management on financial performance of commercial parastatals in Kenya and the moderating role of risk maturity. The study focused on the influence of risk identification, risk analysis and risk mitigation on financial performance of commercial parastatals in Kenya. The scope of the research was geographically limited to state parastatals in Kenya. This study targeted selected 30 commercial parastatals in Kenya. The study was conducted in the month of March-April 2025.

1.6 Significance of the Study

1.6.1 Policy Makers

The study may offer insights which may assist regulatory bodies overseeing parastatals such as inspectorate of state corporations (ISC) by identifying the best practise in IRM and risk maturity levels in parastatals. The study may inform the development of regulations and guidelines that ensure state parastatals adopt robust and standardized risk management processes.

1.6.2 Parastatals

The study may assist managers in state parastatals, enabling them to understand the critical role of Integrated Risk Management in improving financial performance and offer practical insights into how managers can optimize risk management practices according to their organization's risk maturity level.

1.6.3 Academia

The study aims to bridge the knowledge gap on influence of IRM on performance of Kenyan commercial parastatals and moderating role of risk maturity. This research may not only advance academic understanding in the fields of risk management and public sector performance but also serve as a valuable reference for future studies in related areas, particularly those examining risk management practices in emerging markets and public sector organizations.

1.7 Chapter Summary

Chapter one of this study has provided a comprehensive introduction to the investigation into the effect of Integrated Risk Management (IRM) on the financial performance of commercial parastatals in Kenya, and the moderating role of risk maturity levels. The chapter outlines the critical concepts, context, research objectives, and significance of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter examines existing literature on Integrated Risk Management, its influence on financial performance and moderating role of risk maturity. By exploring how IRM frameworks are applied within state parastatals and examining the influence of risk maturity levels, this literature review provides a foundation for understanding the potential improvements that IRM can bring to the performance of these organizations. The chapter is structured to first present a theoretical review, then an empirical review, followed by a summary of the literature, identification of gaps, the development of a conceptual framework as well as the operationalization of the study variables.

2.2 Theoretical Review

This section analyses the theoretical foundation of the current study. It reviews the Resource based view (RBV) theory and the contingency theory. Together, these theories offer a comprehensive lens for understanding how IRM and risk maturity influence financial performance in commercial state parastatals in Kenya.

2.2.1 Resource Based View (RBV) theory.

The Resource-Based View (RBV) theory, developed by Jay Barney in 1991, emphasizes the importance of internal resources in achieving and sustaining competitive advantage. According to the theory, resources must be valuable, rare, inimitable, and non-substitutable (VRIN framework) to provide long-term advantages (Barney, 1991). RBV has been extensively applied to demonstrate how Integrated Risk Management (IRM) serves as a strategic resource that enhances organizational performance. For instance, Gordon, Loeb, and Tseng (2009) argued that IRM is aligned with RBV by leveraging an organization's unique resources to effectively manage risks. Mikes and Kaplan (2015) emphasized that advanced risk management systems contribute to competitive advantage by enabling firms to handle strategic uncertainties. Similarly, Shad and Lai (2019) highlighted that IRM frameworks create strategic advantages by embedding risk management into organizational strategies, thus improving firm performance. Al-Matari (2021) empirically demonstrated that effective risk management practices function as a unique

organizational resource that positively impacts financial performance, as evidenced in Yemeni banks.

In the context of Kenyan commercial parastatals, the RBV theory provides a valuable lens through which to examine how these organizations leverage their internal resources to navigate financial challenges and enhance performance. Kenyan parastatals face unique constraints, such as political interference, resource scarcity, bureaucratic inefficiencies, and inconsistent regulatory frameworks (Patrick, 2020). These challenges make it difficult to manage resources effectively, yet they also create an opportunity for risk management to become a valuable and unique resource.

One of the critical internal resources for Kenyan parastatals is Integrated Risk Management (IRM), which can act as a strategic resource to mitigate the risks posed by these challenges (Nyangoya, 2022). Integrated Risk Management is valuable as it helps organizations prevent losses, seize opportunities, and make better-informed decisions, directly contributing to improved financial outcomes (Grant, 1996). Second, it is rare, particularly when organizations develop advanced and tailored IRM systems incorporating cutting-edge technology, specialized expertise, and organizational learning that are not easily replicated by competitors (Kouvelis et al., 2021). Furthermore, IRM is inimitable due to the complexity of embedding risk management practices across diverse organizational processes and the unique firm-specific risk cultures that develop over time. This complexity creates significant barriers to imitation, protecting the organization's strategic advantage. Commercial parastatals operating in a resource-constrained environment benefit significantly from incorporating IRM into their operations, as it helps them identify, analyse and mitigate potential risks, thus improving their financial sustainability. IRM is valuable in this context because it assists organizations in preventing financial losses, capitalizing on opportunities, and making better-informed decisions.

The risk maturity of a parastatal plays a pivotal role in shaping its capacity to optimize these internal resources, allowing it to adapt to the changing market environment. A parastatal with higher risk maturity can better anticipate and respond to both internal and external risks, thus enhancing its financial sustainability and performance. Therefore, RBV in the Kenyan context underscores the importance of building and optimizing resources such as risk management capabilities to navigate the complex operational environment and improve financial outcomes.

2.2.2 Contingency Theory

The theory was developed in the 1960s by prominent scholars like Joan Woodward, Fred Fiedler, and Paul Lawrence and Jay Lorsch. These scholars suggested that organizational effectiveness depends on matching the organization's structure and processes to the demands of its environment (Luthans & Kreitner, 1974). Contingency Theory is a management theory that asserts there is no one-size-fits-all approach to organizational design, leadership, or decision-making (Donaldson, 2001). Instead, it suggests that the optimal course of action depends on various internal and external factors, and that organizations must adapt their strategies, structures, and processes to fit their specific circumstances (Otley, (2016). This theory challenges the traditional, universal models of management that advocate for standardized approaches. Instead, Contingency Theory emphasizes the importance of adapting management practices and organizational structures to the external environment, technological demands, or internal resources (Fiedler, 2015).

In the context of Kenya, Contingency Theory can be applied to understand how commercial parastatals adapt their organizational strategies and structures to the unique challenges faced in a developing country. These challenges include political instability, fluctuating economic conditions, limited access to capital, and institutional inefficiencies, all of which differ significantly from the more predictable environments of developed countries where the theory was originally conceived (Wanyama & Aila, 2022). For Kenyan commercial parastatals, the application of Contingency Theory suggests that risk management practices and organizational structures must be adaptable to the specific contextual factors they face. For instance, political instability or changes in government can influence organizational priorities, making it necessary for commercial parastatals to modify their governance structures and risk management strategies. Similarly, fluctuating economic conditions, such as inflation or currency devaluation, may force commercial parastatals to reconsider their financial management approaches, particularly in managing risks related to budget fluctuations and financial sustainability (Kihanya, 2013).

Moreover, Kenya's unique regulatory environment and the ongoing challenges with institutional inefficiencies further complicate the ability of commercial parastatals to follow standardized risk management processes. Thus, Contingency Theory asserts that Kenyan commercial parastatals must adjust their internal practices, including their approach to Integrated Risk Management (IRM), based on these external uncertainties and internal constraints (Nyagaki, 2022). A critical

component of Contingency Theory is the understanding that an organization's structure and management practices must align with its situational context. In the case of Kenyan commercial parastatals, Risk Maturity is a key situational factor that determines how well an organization can respond to external challenges and adapt to changing environments. Commercial parastatals with higher risk maturity have well-established structures, processes, and cultures that allow them to be more adaptive to environmental shifts. These organizations are more likely to successfully implement IRM practices, as they can better anticipate risks and implement strategic changes to mitigate them. In contrast, organizations with low-risk maturity may struggle to integrate risk management strategies into their daily operations, leading to inefficiencies in responding to external challenges and, ultimately, poor financial performance.

2.3 Empirical Review

This section reviews prior research on the key variables of the study. It explored literature related to Influence of risk identification, analysis and mitigation on financial performance as well as risk maturity level on financial performance.

2.3.1 Risk Identification and Financial Performance

A quantitative study by Aoun (2023), investigated the impact of risk management practices, particularly risk identification, on the financial performance and resilience of SMEs in Lebanon amid crisis situations. The research involved 283 respondents, including SME owners, managers, and key decision-makers, and employed a structured questionnaire for data collection. The study found that robust risk management practices, with a focus on risk identification, positively influenced the financial performance and resilience of SMEs during crises. The study uses a cross-sectional design, which limits the ability to draw causal inferences. The research was focused on SMEs in Lebanon, and its applicability to larger organizations or state-owned enterprises (like Kenyan parastatals) is unclear due to different governance structures and operational challenges.

Kioko (2023) explored the influence of credit risk identification on the financial performance of commercial banks in South Sudan. The study adopted a descriptive research design as it sought to explore and describe the relationship between credit risk identification and financial performance in commercial banks. The study concluded that credit risk identification activities significantly influence the financial performance of commercial banks, emphasizing the importance of effective risk identification in the banking sector. The descriptive research design

is appropriate for understanding the relationship between risk identification and financial performance. The context of South Sudan, with its unique political and economic challenges, makes the findings difficult to generalize to other contexts, especially in stable environments like Kenya

Turyakira et al. (2023) examined the relationship between risk management and financial performance in a public sector organization. The study adopted a longitudinal research design. The results established a significant positive relationship between risk identification, risk assessment, and risk control on financial performance. The study highlighted that comprehensive risk management practices, including effective risk identification, are crucial for enhancing financial performance in public sector organizations. The focus on public sector organizations adds value to the study, however, while the study acknowledges risk control and risk assessment, it does not explicitly address the role of Integrated Risk Management (IRM) as a holistic framework.

A study by Karanja and Muturi (2020), examined the effect of risk identification on the performance of financial institutions in Kenya. The research utilized an explanatory design and stratified random sampling to select respondents from commercial banks, microfinance institutions, and SACCOs. The findings indicated a positive relationship between risk identification and the performance of these institutions, suggesting that effective risk identification practices contribute to improved financial outcomes. The explanatory research design used by Karanja and Muturi primarily aimed to establish cause-and-effect relationships, which assumes that risk identification directly causes improved performance. However, a descriptive correlational design, as proposed for the current study, would focus on the relationship between variables without inferring direct causality, making it more appropriate for understanding the correlation between Integrated Risk Management (IRM) practices and financial performance in commercial parastatals.

2.3.2 Risk Analysis and Financial Performance

A meta-analysis by Faisal et al. (2023) examined the effect of risk management on a company's financial performance in Indonesia by analyzing 20 previous studies. This research employed a meta-analytic design, synthesizing findings from 20 previous studies to assess the overall effect of risk management on financial performance. The analysis involved calculating effect sizes and conducting statistical tests to determine the significance of the findings. The study concluded that effective risk management practices positively impact financial performance, emphasizing the

importance of comprehensive risk management strategies. The meta-analysis approach, while comprehensive, aggregates data from various studies that might differ in methodology, sample size, and context. This could introduce heterogeneity and limit the ability to draw specific conclusions about individual risk management practices in specific industries or regions. Contextual differences between Indonesia and Kenya might limit the direct applicability of these findings to Kenyan commercial parastatals, where institutional frameworks, governance issues, and risk maturity may differ.

Abdelrahman et al. (2022) examined the impact of risk assessment on the financial performance of firms in Egypt during the COVID-19 pandemic. The study employed a quantitative research design, utilizing surveys to collect data from a sample of firms. Statistical analysis was conducted to assess the relationship between risk assessment practices and financial performance metrics. The research found that effective risk assessment practices positively influenced financial performance, highlighting the importance of proactive risk management in uncertain environments. The study's focus on COVID-19 as a risk factor may limit the generalizability of the findings to other periods or types of risks, particularly when examining the ongoing challenges faced by Kenyan commercial parastatals.

Olayinka et al. (2020) investigated the influence of risk governance on the financial performance of 50 quoted firms in Nigeria's financial sector over a five-year period. This research utilized a quantitative approach, analyzing panel data from 50 firms over five years. Regression analysis was employed to examine the impact of various risk governance variables on financial performance indicators. The study concluded that robust risk governance mechanisms, including enterprise risk management programs and active risk committees, significantly contributed to improved financial performance. The study's focus on the Nigerian financial sector limits the ability to directly apply its findings to other sectors, such as commercial parastatals, which face different institutional and governance challenges. While the panel data analysis adds depth to the research, the study does not account for the potential moderating effect of risk maturity in shaping how risk governance influences financial performance.

Muoti (2021) conducted a study to explore how risk management processes affect the financial performance of insurance companies in Kenya. The research employed a census sampling method, encompassing all 112 insurance firms within the target population. A descriptive research

design was utilized, with data gathered through structured questionnaires. Both descriptive and inferential statistical techniques were applied in the analysis. The results revealed that the null hypothesis, which posited no significant effect of risk analysis on financial performance, was not rejected. Although a negative influence was identified, the study underscored the importance of improving risk analysis strategies among Kenyan insurance firms. It highlighted the necessity of reassessing existing risk management practices to mitigate risk exposure effectively. The negative relationship between risk analysis and financial performance may be context-specific and not representative of the broader Kenyan business environment, particularly in commercial parastatals, which may face different challenges.

2.3.3 Risk Mitigation and Financial Performance

Mardiana and Purnamasari (2018) examined the impact of credit risk on the financial performance of commercial banks in Sri Lanka over a ten-year period (2005 to 2014). The study utilized a quantitative approach, analyzing secondary data from the annual reports of six commercial banks. Correlation and multiple regression analyses were employed to assess the relationship between credit risk management and financial performance indicators. The research found that effective risk management practices, particularly in credit risk, positively influence financial performance. The study focuses solely on credit risk and does not examine other types of risks (e.g., operational, market, or liquidity risk) that could also influence financial performance, especially in commercial banks. The use of secondary data does not capture aspects of risk management practices, such as managerial decision-making or the organizational culture surrounding risk management.

Mupedziswa and Mupedziswa (2024) examined the effectiveness of risk management strategies in improving the financial performance of commercial banks listed on the Zimbabwe Stock Exchange (ZSE). The study utilized a quantitative research design, analyzing data from ZSE-listed commercial banks. The data were collected from annual reports and analyzed using statistical methods to assess the impact of risk management strategies on financial performance. The research indicates that robust risk management practices positively impact financial performance. Given Zimbabwe's economic instability, external factors such as inflation, currency devaluation, and political instability may have confounded the results, making it difficult to isolate the effect of risk management strategies alone.

Kavoi et al. (2014) examined how risk management strategies influence the financial performance of state corporations in Kenya. The study focused on a sample of six state corporations and used a descriptive research design. Data, sourced from the public domain over a five-year period, were analysed through both descriptive and inferential methods. The findings indicated that the financial performance of these state corporations in Kenya was not influenced by factors such as interest coverage ratio, firm size, capital structure, or liquidity ratio. The sample size of only six state corporations is too small to draw broad conclusions about the risk management practices of state corporations in Kenya as a whole, which limits the generalizability of the findings.

Diero et al. (2019) conducted a study to examine the relationship between risk management and the financial performance of parastatals in Kenya. The research explored the impact of various risk management practices, including governance, operational, financial, and strategic risk management, on the financial outcomes of these entities. The findings indicated that effective governance risk management plays a crucial role in enhancing financial performance. Additionally, the study observed a steady increase in Return on Equity, rising from 0.946 in 2015 to 1.023 in 2017. This trend suggests that parastatals improved their efficiency, requiring less capital to fulfill their functions, potentially due to improved risk management practices alongside other contributing factors. While the study identifies the impact of governance risk management, it lacks an in-depth exploration of other forms of risk management (e.g., operational and financial) that may contribute to performance.

Njeri (2014) investigates the effects of risk mitigation strategies on the financial performance of manufacturing firms in Kenya. The study employed a descriptive research design, collecting data through questionnaires from a sample of manufacturing firms. The data were analyzed using descriptive statistics and correlation analysis to determine the relationship between risk mitigation strategies and financial performance. The study concludes that implementing effective risk mitigation strategies significantly enhances financial performance. The study focuses only on manufacturing firms, limiting its generalizability to other sectors such as commercial parastatals.

2.3.4 Moderating Influence of Risk Maturity Level on the Association between IRM and Financial Performance

Sinansari et al. (2021) examined the maturity level of risk management in state-owned enterprises through a case study of Perun Jasa Tiara II. The study used a mixed-methods approach,

integrating both qualitative and quantitative analyses to assess the organization's risk maturity. Data was gathered from three key personnel responsible for risk within the company that is the head of the risk division, the risk manager, and the risk assistant manager. The study utilized the Risk Maturity (RM) Simple Model to evaluate the organization's risk maturity level. Findings indicated that, based on state-owned enterprise standards, Perun Jasa Tiara II had a relatively mature risk management system, enabling effective risk mitigation. The study's focus on a single organization limits its generalizability to other state-owned enterprises or industries.

Meskovic et al. (2021) investigated risk management maturity, its determinants, and its effect on firm value, using empirical data from joint-stock companies in Herzegovina and Bosnia. The study revealed that firms in the financial sector exhibit more advanced risk management models than those in the real sector. Additionally, auditor and firm size were identified as key factors influencing risk management maturity. Furthermore, the study's findings, based on the ordinary least squares (OLS) model, confirmed a positive and statistically significant relationship between the maturity of risk management models and Tobin's Q value. By using Tobin's Q value, the study linked risk management maturity to firm value, which is a strong proxy for financial performance, demonstrating that mature risk management practices can positively influence firm performance. However, the study did not explore the moderating role of risk maturity on the relationship between Integrated Risk Management (IRM) and financial performance. It instead focused solely on risk management models' maturity, leaving out the influence of specific risk management frameworks like IRM.

Farrell et al. (2018) investigated the moderating effect of ERM maturity on firm performance. Their study focused on how ERM maturation influences firm value and return on assets, highlighting the role of firm-specific characteristics in enhancing or limiting these effects. The findings indicated that, overall, ERM maturation positively impacts firm value and profitability, with stakeholder-related factors, such as innovation intensity and knowledge-driven industry structures, moderating this relationship. Additionally, the study revealed that a firm's complexity influences the long-term effect of ERM valuation. The study's focus on ERM maturation provides a direct link to broader risk management practices that affect financial performance, demonstrating the importance of integrated approaches to risk management. However, the research did not examine the influence of IRM on financial performance or the role of risk maturity.

2.4 Summary of Literature Gaps

Most of the studies on risk identification (Aoun, 2023; Kioko, 2023; Karanja & Muturi, 2020) focus on SMEs or banks in countries like Lebanon, South Sudan, and Kenya. However, the studies lack a specific focus on commercial parastatals in Kenya, a distinct sector with unique financial management structures. None of the reviewed studies focus on the public sector parastatals in Kenya specifically, which is critical for the study of commercial parastatals. Although studies like Abdelrahman et al. (2022) and Faisal et al. (2023) explore risk analysis and financial performance in firms, they focus on different geographical contexts, particularly Egypt and Indonesia.

The absence of research that links risk analysis with the financial performance of commercial parastatals in Kenya remains a gap. While studies such as Mardiana & Purnamasari (2018) and Mupedziswa & Mupedziswa (2024) focus on the banking sector in Sri Lanka and Zimbabwe, they do not address the unique risk mitigation strategies used by commercial parastatals in Kenya. The parastatal sector may have different financial challenges and mitigation strategies compared to the banking or manufacturing sectors, which these studies target.

Many of the studies reviewed relied on secondary data (e.g., Mardiana & Purnamasari, 2018, who analyzed data from bank reports) or interviews with key individuals (e.g., Sinansari et al., 2021), which may not capture the perceptions of a larger, more diverse set of individuals within the organization. While Karanja & Muturi (2020) used questionnaires, their sample was limited to financial institutions. The gap here is the lack of studies utilizing structured questionnaires to capture a wide range of views from employees at different levels of commercial parastatals. A significant gap in the reviewed studies is the lack of research on how the moderating role of risk maturity affects the relationship between integrated risk management (IRM) and financial performance, particularly in Kenyan commercial parastatals. Studies such as Sinansari et al. (2021) and Farrell et al. (2018) explore risk maturity, but none focus on IRM specifically or how risk maturity influences the financial performance of Kenyan parastatals.

Table 2.1: Summary of Research Gaps

Study	Focus Area	Methodology	Findings	Research Gap(s)	How this study filled the Gaps
Aoun (2023)	Impact of risk management practices, particularly risk identification, on the financial performance and resilience of SMEs in Lebanon amid crisis situations	Structured questionnaire	Robust risk management practices, with a focus on risk identification, positively influenced the financial performance	Contextual Gap- studied SMEs in Lebanon, not directly applicable to commercial parastatals in Kenya	Focused on commercial parastatals in Kenya
Abdelrahman et al. (2022)	Impact of risk assessment on the financial performance of firms in Egypt during the COVID-19 pandemic	Quantitative research design	Effective risk assessment practices positively influenced financial performance	Contextual Gap- findings from Egypt cannot be generalised to Kenyan context	Focused on financial performance of commercial parastatals in Kenya
Karanja and Muturi (2020),	Effect of risk identification on the performance of financial institutions in Kenya	Explanatory design	Positive relationship between risk identification and the performance	Methodology gaps- employed an explanatory research design, which seeks to establish cause-and-effect relationships limiting a more comprehensive overview of the various risk management practices and their general patterns Contextual focused on financial institutions does not appear to address the specific context of commercial parastatals in Kenya	The descriptive research design provided a more comprehensive overview of the various risk management practices and their general patterns. Focused on commercial parastatals in Kenya
Mardiana and Purnamasari (2018)	Impact of credit risk on the financial performance of commercial banks in Sri Lanka over a ten-year period (2005 to 2014)	Quantitative approach, analyzing secondary data	Effective risk management practices, particularly in credit risk, positively influence financial performance.	Methodology gaps- relied solely in secondary data which secondhand information.	Relied on both primary and secondary data to provide specific, detailed, and current information
Diero et al., 2019	Risk management and performance in state-owned enterprises		Risk management is critical for financial sustainability in parastatals	Conceptual Gap- focused on risk management practices such as governance, operational, financial, and strategic risk management while overlooking other dimensions of risk management, such as risk	Focused on integrated risk management and its dimensions of risk identification, risk analysis, risk mitigation moderated by risk maturity

Study	Focus Area	Methodology	Findings	Research Gap(s)	How this study filled the Gaps
Aoun (2023)	Impact of risk management practices, particularly risk identification, on the financial performance and resilience of SMEs in Lebanon amid crisis situations	Structured questionnaire	Robust risk management practices, with a focus on risk identification, positively influenced the financial performance	Contextual Gap- studied SMEs in Lebanon, not directly applicable to commercial parastatals in Kenya	Focused on commercial parastatals in Kenya
Abdelrahman et al. (2022)	Impact of risk assessment on the financial performance of firms in Egypt during the COVID-19 pandemic	Quantitative research design	Effective risk assessment practices positively influenced financial performance	Contextual Gap- findings from Egypt cannot be generalised to Kenyan context	Focused on financial performance of commercial parastatals in Kenya
Karanja and Muturi (2020),	Effect of risk identification on the performance of financial institutions in Kenya	Explanatory design	Positive relationship between risk identification and the performance	Methodology gaps- employed an explanatory research design, which seeks to establish cause-and-effect relationships limiting a more comprehensive overview of the various risk management practices and their general patterns Contextual focused on financial institutions does not appear to address the specific context of commercial parastatals in Kenya	The descriptive research design provided a more comprehensive overview of the various risk management practices and their general patterns. Focused on commercial parastatals in Kenya
Mardiana and Purnamasari (2018)	Impact of credit risk on the financial performance of commercial banks in Sri Lanka over a ten-year period (2005 to 2014)	Quantitative approach, analyzing secondary data	Effective risk management practices, particularly in credit risk, positively influence financial performance.	Methodology gaps- relied solely in secondary data which secondhand information.	Relied on both primary and secondary data to provide specific, detailed, and current information
				identification, risk analysis, risk mitigation, and risk maturity.	

2.5 Conceptual Framework

A conceptual framework is a written or graphic depiction of the main variables and their connections in a research investigation. It guides the study's design and technique by providing an explanation of the theories and concepts underlying the research challenge (Riggan 2017). The independent variables were risk identification, risk analysis and risk mitigation. The moderating variable was risk maturity while the dependent variable was financial performance.

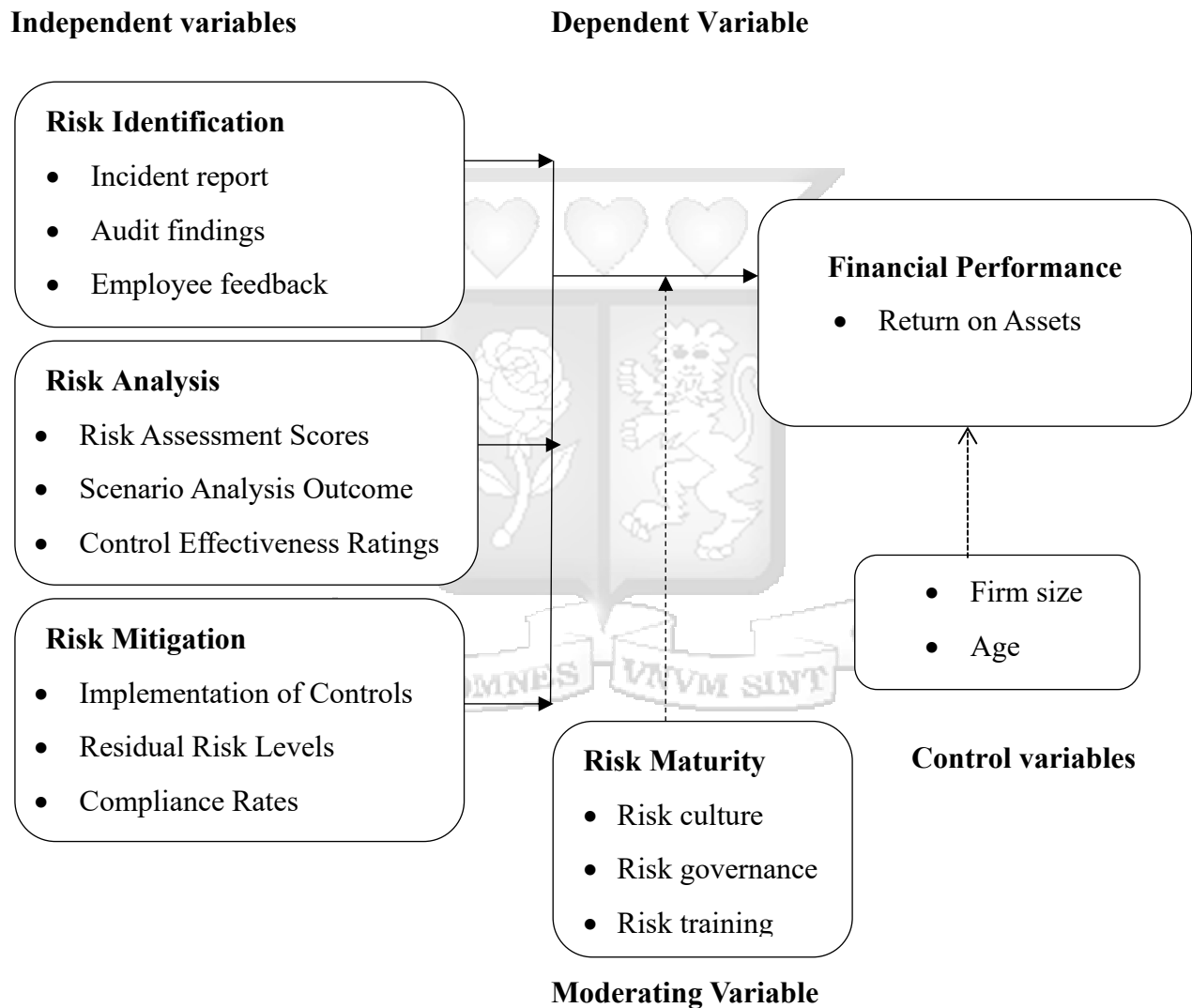


Figure 2.1 Conceptual framework

Source (Researcher, 2025)

2.6 Operationalization of the Variables

Table 2.2: Operationalization of the Variables

Variable	Definition	Indicator	Measurement	Supporting Literature
Risk identification	Recognition and identification of potential threats that could impact an organization's objectives	<ul style="list-style-type: none"> • Incident report • Audit findings • Employee feedback 	Likert scale (1-5)	Karanja and Muturi (2020)
Risk Analysis	Assessment of the potential impact and likelihood of identified risks.	<ul style="list-style-type: none"> • Risk Assessment Scores • Scenario Analysis Outcome • Control Effectiveness Ratings 	Likert scale (1-5)	Abdelrahman et al. (2022)
Risk Mitigation	Implementation of strategies and actions to reduce identified risks.	<ul style="list-style-type: none"> • Implementation of Controls • Residual Risk Levels • Compliance Rates 	Likert scale (1-5)	Njeri (2014)
Risk Maturity	A measure of an organization's ability to manage risks effectively	<ul style="list-style-type: none"> • Risk culture • Risk governance • Risk training 	Likert scale (1-5)	Sinansari et al. (2021)

Financial Performance	Corporates financial health and how well it is achieving its financial objectives.	<ul style="list-style-type: none"> Profitability (Return on Assets) 	Continuous	Abdelrahman et al. (2022)
Control variables				
Size	Refers to the scale or magnitude of a firm's operations and resources	<ul style="list-style-type: none"> Number of employees 	Continuous	Meskovic et al. (2021)
Age	The number of years since the firm was established or incorporated	<ul style="list-style-type: none"> Age in years 	Continuous	Han (2024)

2.7 Chapter Summary

Chapter Two of this study has provided a comprehensive literature review that supports the research objectives. The chapter reviews both theoretical and empirical literature, identifies gaps, and outlines a conceptual framework to guide the study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the research methodology used to investigate the effect of IRM on financial performance of Kenyan commercial parastatals, with a particular emphasis on the moderating role of risk maturity. It details the research philosophy, research design, population and sample, data collection methods, data analysis techniques, research quality and ethical issues employed in this study.

3.2 Research Philosophy

Research philosophy is a foundational concept in research that shapes how knowledge is acquired, interpreted, and applied. It refers to the belief system that underpins how researchers approach their study of reality, the nature of knowledge, and how this knowledge can be obtained and validated. It is essential because it determines the methodology and methods to use in a research, influencing the approach to collecting and analysing data (Mauthner, 2020). The three most commonly recognized research philosophies are Positivism, Interpretivism, and Pragmatism. Positivism is a philosophy of science that asserts that knowledge is derived from empirical, observable facts, which can be measured and quantified. Positivists argue that only knowledge that is scientifically verifiable. This philosophy emphasizes objective observation, precise measurements, and causal relationships (Marsonet, 2019). Interpretivism focuses on understanding the meaning and interpretation of human experiences and social phenomena. Interpretivism acknowledges that reality is subjective and constructed through human perception. This approach is often employed in qualitative research (Alharahsheh & Pius, 2020). Pragmatism is a philosophy that blends both quantitative and qualitative methods to address research questions. Pragmatists argue that the best research method depends on the research problem itself (Simpson, 2018).

Given the aim to understand and measure relationships, a positivist philosophy is often suitable for its objective stance, seeking generalizable results through measurable data (Saunders et al., 2019). Positivism believes that reality is objective, can be measured, and exists independently of the researcher. In this study, positivist philosophy was thus the best suited for the study.

3.3 Research Design

Research design is a planned framework that directs the process of gathering, measuring, and analysing data in a study. It serves as a guide to effectively address research questions (Creswell & Creswell, 2018). The study adopted a descriptive correlational research design, which is appropriate for exploring the association between integrated risk management (IRM) and the financial performance of state parastatals. The design also facilitates examining how the level of risk maturity moderates this relationship. Descriptive research aims to provide an accurate representation of the phenomena under study, while correlational research helps in understanding the extent to which IRM and risk maturity influence financial performance and moderating role of risk maturity.

A descriptive research design is used to describe the current status of variables without manipulating them. In this case, the study does not aim to alter the existing risk management practices of state parastatals but rather to assess their current state and analyse their influence on financial performance. The aim is to identify patterns or trends in how IRM influences financial outcomes and how risk maturity moderates this relationship. The correlational design is particularly useful in this study because it allows for examining the strength and nature of the relationships between these variables.

3.4 Population of the Study

The target population is a specific subset of the broader population that aligns with the study's objectives and criteria. It is the group from which a sample was drawn. According to Creswell and Creswell (2018) the target population is a carefully selected segment of the broader population that is intended to be studied to achieve the study's aims. Sekaran and Bougie (2016) also define the target population as those individuals or entities that possess the specific characteristics relevant to the research questions, focusing on attributes essential to the study. Population represents the broader group that the study focuses on and from which a sample may be drawn for further analysis. The target population for this study consisted of all the commercial state parastatals in Kenya. According to the Kenyan government's list of state corporations, there are 30 commercial parastatals with a total of 1813 employees.

3.5 Sampling Design

Sekaran and Bougie (2016) describe sampling as “a process of selecting a sample from a larger population to represent the whole population, with the aim of drawing conclusions about that population.” They emphasize the role of sampling in enhancing the reliability and validity of research findings.

3.5.1 Sampling Frame

A sample frame is essentially a list or a map of the units in the target population, such as individuals, organizations, or events that a researcher can potentially sample from. It is used to ensure that the sample drawn is representative of the population being studied (Neuman, 2014).

The sample frame ensures accuracy in sampling by providing the basis from which researchers can select individuals or units. It helps prevent sampling bias and ensures the reliability of the study’s results (Bryman, 2016). The sampling frame consisted of the list of the 30 commercial parastatals, along with a total of 1813 employees working across these entities. This includes senior management, middle management, and staff involved in risk management practices or financial decision-making.

3.5.2 Sampling Technique

A purposive sampling technique was employed for senior management to ensure that key decision-makers with relevant expertise are represented. For each of the 30 commercial parastatals, three purposive respondents were selected from senior management. These were; chief finance officer responsible for overseeing the financial performance, budgeting; risk manager responsible for overseeing risk management within the organization and administration head or any senior manager involved in overall organizational strategy and operations responsible for coordinating the administrative functions, ensuring that organizational strategies are aligned with operational execution. These three roles ensured a comprehensive understanding of both financial performance and risk management strategies within each organization.

3.5.3 Sample Size

Given that there are 30 commercial parastatals, and each parastatal contributed 3 purposive respondents (Finance Officer, Risk Manager, and Administration Head), the total sample size was 90 respondents. This sample size provided adequate representation from each parastatal’s senior

management team, ensuring that the study captures the insights of key decision-makers involved in both financial performance and risk management practices.

3.6 Data Collection Method

Data collection is a critical component of research as it provides the raw information needed to analyse relationships among variables and test hypotheses (Creswell, 2017). The study utilised both primary and secondary data. Primary data was collected through structured questionnaire designed to capture data on risk identification, risk analysis, risk mitigation and risk maturity. The structured questionnaire used in this study was developed based on both empirical literature and theoretical foundations to ensure that the constructs of risk identification, risk analysis, risk mitigation, and risk maturity were comprehensively and validly captured. Secondary data was collected on the financial performance data mainly Return on Assets through a data collection sheet.

3.7 Data Collection Procedures

The questionnaire was distributed to key informants within each selected parastatal who are knowledgeable about the organization's IRM practices and performance metrics. To reach respondents, an online survey platform such as SurveyMonkey or Qualtrics were used, ensuring ease of access and convenience for participants (Dillman, Smyth & Christian, 2014). Where access to the internet is limited, paper-based questionnaires was used as an alternative.

Secondary data was collected on financial performance data for the selected parastatals and was gathered from published annual reports, financial statements, and government publications. These documents provide quantitative insights into the financial health of the parastatals.

3.8 Data Analysis

Data analysis involves the systematic examination, interpretation, and manipulation of collected data to extract meaningful insights, patterns, and relationships. It is crucial as it transforms raw data into understandable information, validating research hypotheses and drawing objective conclusions (Smith 2021). Data collected was analysed using descriptive and inferential statistics. The Statistical Package for Social Sciences (SPSS) was used in the analysis. Descriptive statistics was employed to summarize the demographic characteristics, IRM practices, and financial performance of the parastatals. Frequency distributions, means, and standard deviations were calculated.

Inferential Statistics was used using correlation analysis and Ordinary Least Squares (OLS) regression analysis were used to examine the relationship between IRM and financial performance.

The regression model was expressed as follows: -

$$FP = \beta_0 + \beta_1 RI + \beta_2 RA + \beta_3 RM + \beta_4 Size + \beta_5 Age + e \dots \text{before moderation}$$

$$FP = \beta_0 + \beta_1 RI + \beta_2 RA + \beta_3 RM + \beta_4 Size + \beta_5 Age + \beta_6 RMaturity + \beta_7 RI * RMaturity + \beta_8 RA * RMaturity + \beta_9 RM * RMaturity + e \dots \text{after moderation}$$

Where:

FP = Financial Performance (dependent variable)

RI = Risk Identification (independent variable)

RA = Risk Analysis (independent variable)

RM = Risk Mitigation (independent variable)

Risk Maturity = Risk Maturity (moderating variable)

β_0 = Intercept term

$\beta_1, \beta_2, \beta_3$ = Coefficients of the independent variables

β_4, β_5 = Coefficients of the controls

β_6 = Coefficient of the moderating variable (Risk Maturity)

$\beta_7, \beta_8, \beta_9$ = Interaction terms between the independent variables and the moderating variable (Risk Maturity)

ϵ = Error Term.

3.9 Research Quality

For a research project to be valuable and credible, ensuring validity and reliability of data and conclusions is crucial.

3.9.1 Validity

Validity refers to the degree to which the research accurately measures the intended variables and draws appropriate conclusions based on the data (Bryman, 2016). In this study, various forms of validity were addressed to guarantee the research's robustness. Construct validity is essential to ensure that the variables being studied integrated risk management (IRM), financial performance, and risk maturity are accurately operationalized and measured. Established frameworks for assessing IRM practices, financial performance metrics like profitability and return on assets, and risk maturity models were used to ensure that the constructs are well-defined and reflect their theoretical counterparts (Saunders 2019).

To enhance external validity, the study utilized purposive sampling, ensuring a representative sample from various state-owned parastatals across different sectors. This approach strengthens the ability to generalize the findings to a broader population. Furthermore, a sufficient sample size was determined using statistical power analysis, ensuring that the study has the power to detect meaningful relationships between the variables (Sekaran & Bougie, 2016).

3.9.2 Reliability

Reliability, which refers to the consistency of the measurements, was rigorously addressed. First, the survey instrument underwent pilot testing to identify any ambiguities or inconsistencies in the questions. Pilot testing was done with a small sample of 9 respondents (approximately 10% of the sample size) composed of the state parastatal employees to ensure clarity and relevance of questions. This pilot phase helped refine the questionnaire, identify any ambiguous wording, and enhance the reliability and validity of the instrument (Bryman, 2016). Reliability tests, such as Cronbach's alpha, was used to assess the internal consistency of the measurement scales. A Cronbach's alpha value above 0.7 was considered acceptable for confirming the reliability of the instrument (Sekaran & Bougie, 2016). The study also ensured data consistency by checking for and addressing any inconsistencies or missing data during analysis. Response bias was minimized by ensuring anonymity and confidentiality, encouraging honest responses. To reduce measurement bias, the study used validated and standardized scales to measure the key variables.

Furthermore, the pilot test allowed for an assessment of the time it takes to complete the survey, ensuring that it is neither too long nor too short for the participants to engage with effectively. By the end of the pilot testing phase, a refined, reliable, and valid questionnaire was ready for

deployment to the full sample, ensuring that the data collected is both accurate and meaningful for the research.

Table 3.1: Reliability

Variable	Cronbach's alpha value
Risk identification	.824
Risk analysis	.837
Risk mitigation	.837
Risk maturity	.768

Source (Researcher, 2025)

The Cronbach's alpha values for Risk identification, Risk analysis, Risk mitigation and Risk maturity all fall within the range of above 0.7, indicating that these constructs have acceptable reliability.

3.9.3 Diagnostic Tests

Several diagnostic tests were performed to ensure the quality of the data and the reliability of the analysis. The normality of the data is a critical assumption in many statistical methods, particularly in regression analysis. A normal distribution ensures that the statistical tests produce valid results (Das & Imon, 2016). The Shapiro-Wilk test was applied in this study to test for normality. This test is preferred due to its sensitivity and effectiveness in detecting departures from normality, particularly for small sample sizes. If normality is violated, it can lead to biased or misleading results in hypothesis testing, leading to incorrect conclusions. If the data is not normally distributed, a possible remedy includes transforming the data (e.g., log or square root transformation) or using non-parametric methods that do not assume normality, such as bootstrapping (Das & Imon, 2016).

Multicollinearity refers to a situation where the predictor variables are highly correlated with each other (Alin, 2010). This can lead to unreliable estimates of regression coefficients, inflated standard errors, and difficulty in determining the individual impact of each predictor on the dependent variable. The Variance Inflation Factor (VIF) was used to assess multicollinearity in this study. A VIF above 10 indicates a high degree of multicollinearity, which can cause instability in the regression model. If multicollinearity is detected, potential solutions include removing one

of the highly correlated variables or combining them into a single composite variable. Addressing multicollinearity is essential because failing to do so could render the regression results invalid and difficult to interpret (Alin, 2010).

3.10 Ethical Considerations

Confidentiality and anonymity was prioritized to protect the privacy of participants and the sensitive information related to organizational performance. Since the study collected information on potentially sensitive topics like risk management practices and performance, measures were implemented to ensure that responses were collected without any identifying information that could link individual participants to their responses. Unique identification codes were used instead of names or employee IDs, ensuring that participants remained anonymous.

Participation was completely voluntary, and participants were made aware of their freedom to withdraw from this study at any time without having to provide a reason. This right was communicated in the initial informed consent process and reiterated before the completion of the questionnaire. This aspect is vital for ensuring that participant feel empowered and respected, contributing to a more ethical and transparent research process (Creswell & Creswell, 2017). The researcher also obtained authorization from the ethical review committee and permit from the National Commission for Science, Technology and Innovation.

3.11 Chapter Summary

Chapter Three presented the research methodology employed to examine the effect of Integrated Risk Management (IRM) on the financial performance of commercial parastatals in Kenya, with a focus on the moderating role of risk maturity. The chapter began by outlining the research philosophy, which adopted a positivist approach, allowing for objective data collection and statistical analysis. The chapter further described the target population and sampling strategy, noting the selection of commercial parastatals and the stratified sampling method used to ensure inclusion of diverse organizational roles and departments. Data collection procedures were explained, emphasizing the use of standardized instruments informed by prior literature and theory to ensure construct validity. Data analysis techniques included descriptive and inferential statistics, particularly multiple regression and moderation analysis. Overall, Chapter Three laid a comprehensive foundation for ensuring the rigor, relevance, and reliability of the study's findings, guiding the execution of the research in a systematic and ethically sound manner.



CHAPTER FOUR

PRESENTATION OF RESULTLS

4.1 Introduction

The chapter presents the analysis of the data obtained from the field. The presentation and interpretation is thematically based on the study objectives. The chapter begins with the response rate, the demographic information, the descriptive statistics and the inferential statistics. A chapter summary is finally presented in the chapter.

4.1.2 Response rate

In survey-based research, the response rate refers to the proportion of distributed questionnaires that are successfully completed and returned by respondents. It is a critical indicator of the study's data quality and representativeness, as higher response rates are generally associated with greater validity, reduced non-response bias, and stronger generalizability of the findings.

Table 4.1: Response rate

	Frequency	Percentage
Questionnaires distributed	90	100
Questionnaires returned	73	81.1
Questionnaires not returned/filled	17	18.9

Source (Researcher, 2025)

A total of 90 questionnaires were distributed to respondents across selected commercial parastatals in Kenya. Out of these, 73 questionnaires were returned, yielding a response rate of 81.1%, which is considered adequate for quantitative research. The remaining 17 questionnaires (18.9%) were either not returned or not properly filled and were therefore excluded from the analysis. According to Lune and Berg, (2017), a response rate of above 60% is adequate for analysis. The low non-response rate was achieved because the researcher informed the respondents of the confidentiality and anonymity of the data and did a follow up during data collection.

4.2 Demographic Data

The study collected demographic data including the position of the respondents, the years of experience, age and size of the commercial parastatals. The demographic data is presented in Table 4.2

Table 4.2: Demographic Data

		Frequency	Percent
Position of the respondents	Administration Officer	24	32.9
	Finance officer	28	38.4
	Risk manager	21	28.8
	Total	73	100
Years of experience	Below 5 years	2	2.7
	6-10 years	6	8.2
	11-15 years	15	20.5
	Over 15 years	50	68.5
	Total	73	100
Age of the firm in years	11-20 years	2	6.7
	21years and above	28	93.3
	Total	30	100.0
Size of the firm	0-49 employees	17	56.7
	over 100 employees	12	43.3
	Total	30	100.0

Source (Researcher, 2025)

The majority of respondents were Finance Officers (38.4%, n = 28), reflecting the study's focus on financial performance and the critical role finance professionals play in risk-related decision-making. Administration Officers accounted for 32.9% (n = 24) of the sample, suggesting a strong representation from managerial or operational roles that are often involved in the implementation of organizational policies, including risk practices. Risk Managers comprised 28.8% (n = 21) of the respondents, ensuring that the study captured insights from professionals directly responsible for risk identification, analysis, and mitigation.

The majority of respondents (68.5%) had over 15 years of experience, indicating that most participants were highly seasoned professionals likely to have deep insights into risk management and financial performance within their organizations. In addition, 20.5% of the respondents had between 11 and 15 years of experience, also suggesting a strong base of experienced personnel and a smaller proportion of participants had 6–10 years less than 5 years of experience. This distribution shows that the data primarily reflects the views of experienced individuals.

The study collected data on the age of the commercial parastatals. The majority of the commercial parastatals in the study (93.3%) have been in existence for over 21 years. This indicates that most of the firms are well-established institutions with long operational histories. Only a small portion, 6.7% have been in operation between 11 and 20 years.

The study also collected data on the size of the commercial parastatals in terms the number of employees. Over half of the firms (56.7%) in the study have fewer than 50 employees, classifying them as small-sized entities. This finding suggests that many commercial parastatals in Kenya operate on a relatively small scale in terms of workforce. However, a substantial proportion, 43.3% have more than 100 employees, reflecting a mix of small and large organizations in the sample.

4.3 Descriptive Statistics

This section presents the descriptive statistics of the study variables, which provide an overview of the central tendencies and variability in the data. Descriptive statistics are essential for understanding the general patterns of responses related to the key constructs under investigation namely, risk identification, risk analysis, risk mitigation, risk maturity, and financial performance. The analysis includes the mean and standard deviation for each item, allowing for an assessment of the extent to which respondents agree with various statements and the consistency of their responses.

4.3.1 Risk identification and financial performance of commercial parastatals in Kenya

The study sought to assess the risk identification in commercial parastatals in Kenya. Descriptive statistics were computed to examine the extent to which risk identification practices are implemented in commercial parastatals in Kenya. The respondents' views are presented in Table 4.3.

Table 4.3: Risk identification and financial performance of commercial parastatals in Kenya

	N	Median	Mean	Std. Deviation
The organization effectively identifies potential risks through incident reports	73	4	3.84	.91
Incident reports are regularly reviewed to identify new and emerging risks within the organization	73	4	3.75	.94
Audit findings are systematically used to identify financial and operational risks in the organization	73	4	4.01	.81
The organization takes corrective action based on audit findings to prevent potential risks.	73	4	3.86	.65
Employee feedback is actively collected and used to identify operational risks	73	4	3.82	.79
The organization considers employee suggestions when identifying potential risks that could impact financial performance	73	4	3.70	.84
Aggregate score			3.83	.82

Source (Researcher, 2025)

The results, as shown in Table 4.3, indicate that the respondents generally agreed that their organizations engage in risk identification activities (Mean = 3.83, SD = 0.82). This suggests a moderately strong presence of risk identification mechanisms. Among the individual items, the highest-rated statement was "Audit findings are systematically used to identify financial and operational risks in the organization" (Mean = 4.01, SD = 0.81), indicating a strong emphasis on using formal audits for risk detection. Similarly, respondents agreed that the organization takes corrective action based on audit findings to prevent potential risks (Mean = 3.86, SD = 0.65), reflecting a responsive risk management culture. The respondents agreed that the organization effectively identifies potential risks through incident reports (Mean = 3.84, SD = 0.91) and that employee feedback is actively collected and used to identify operational risks (Mean = 3.82, SD = 0.79). In addition, incident reports are regularly reviewed to identify new and emerging risks within the organization (Mean = 3.75, SD = 0.94). Conversely, the lowest-rated item was that the organization considers employee suggestions when identifying potential risks that could impact financial performance (Mean = 3.70, SD = 0.84), suggesting that employee-driven risk

identification processes are less prominent. This indicates an area where participatory risk management could be enhanced.

4.3.2 Risk analysis and financial performance of commercial parastatals in Kenya

Descriptive statistics were used to assess the extent to which risk analysis practices are implemented in commercial parastatals in Kenya and how these practices may relate to financial performance.

Table 4.4: Risk analysis and financial performance of commercial parastatals in Kenya

	N	Median	Mean	Std. Deviation
Risk assessment scores are regularly used to evaluate the severity of risks facing the organization	73	4	3.64	.93
The organization uses risk assessment scores to prioritize risks and determine appropriate mitigation strategies	73	4	4.03	.74
The organization conducts scenario analysis to predict potential outcomes of identified risks	73	4	3.96	.68
Scenario analysis results are used to guide decision-making in response to potential risks	73	4	4.08	.81
The effectiveness of risk controls is regularly evaluated and adjusted based on risk analysis	73	4	3.82	.99
The organization uses control effectiveness ratings to determine whether existing risk controls are adequate to mitigate risks	73	4	3.63	.96
Aggregate score			3.86	.85

Source (Researcher, 2025)

The results indicate a moderate to strong application of risk analysis approaches, with an overall average mean of 3.86 (SD = 0.85), suggesting that respondents generally agreed that their organizations apply structured risk analysis techniques. Among the specific items, the highest-rated statement was “Scenario analysis results are used to guide decision-making in response to potential risks” with a mean of 4.08 (SD = 0.81), followed closely by “The organization uses risk assessment scores to prioritize risks and determine appropriate mitigation strategies” (Mean = 4.03, SD = 0.74). These scores indicate that scenario analysis and risk prioritization are key

elements of risk management processes in many parastatals. Additionally, respondents reported a high level of agreement that “The organization conducts scenario analysis to predict potential outcomes of identified risks” (Mean = 3.96, SD = 0.68), further emphasizing the role of forward-looking tools in managing risk.

Moderate agreement was also recorded for “The effectiveness of risk controls is regularly evaluated and adjusted based on risk analysis” (Mean = 3.82, SD = 0.99), although the relatively higher standard deviation suggests variability in how consistently this practice is applied. On the lower end, “The organization uses control effectiveness ratings to determine whether existing risk controls are adequate to mitigate risks” received a mean score of 3.63 (SD = 0.96), and “Risk assessment scores are regularly used to evaluate the severity of risks facing the organization” had a similar mean of 3.64 (SD = 0.93). These lower scores point to potential areas for improvement in consistently applying risk assessment scores and control evaluations across all departments or parastatals. Overall, the findings suggest that while risk analysis practices are generally well-implemented, especially in terms of scenario planning and risk prioritization, there may be inconsistencies in the application of risk control evaluation and the routine use of assessment scores.

4.3.3 Risk mitigation and financial performance of commercial parastatals in Kenya

Descriptive statistics were analyzed to assess the extent to which risk mitigation practices are applied in commercial parastatals in Kenya and how these practices relate to financial performance. The respondents’ views are presented in Table 4.5.

Table 4.5: Risk mitigation and financial performance of commercial parastatals in Kenya

	N	Median	Mean	Std. Deviation
The organization has implemented appropriate controls to mitigate identified risk	73	4	3.85	.76
Risk mitigation strategies are regularly monitored to ensure controls are effective	73	4	3.95	.60
The organization regularly assesses residual risks after applying risk mitigation measures	73	4	3.90	.71

Residual risk levels are effectively managed to ensure they remain within acceptable thresholds.	73	4	3.93	.79
The organization maintains high compliance rates with internal and external risk management standard	73	4	3.85	.70
Compliance with risk mitigation strategies is regularly monitored and enforced across all departments	73	4	4.01	.77
Aggregate score			3.92	.72

Source (Researcher, 2025)

The findings reveal a strong implementation of risk mitigation measures, with an overall average mean score of 3.92 (SD = 0.72), indicating that most respondents agreed that their organizations actively engage in managing and controlling risks. The highest-rated item was that compliance with risk mitigation strategies is regularly monitored and enforced across all departments, which received a mean of 4.01 (SD = 0.77), reflecting a strong commitment to ensuring adherence to mitigation efforts across organizational units. This was closely followed by agreement that risk mitigation strategies are regularly monitored to ensure controls are effective (Mean = 3.95, SD = 0.60) and that residual risk levels are effectively managed to ensure they remain within acceptable thresholds (Mean = 3.93, SD = 0.79), both of which suggest that monitoring and residual risk management are key components of the mitigation process.

Additionally, respondents expressed agreement that the organization regularly assesses residual risks after applying risk mitigation measures (Mean = 3.90, SD = 0.71), indicating awareness and follow-up on post-mitigation outcomes. The respondents agreed that the organization has implemented appropriate controls to mitigate identified risk and that the organization maintains high compliance rates with internal and external risk management standards with an equal mean scores of 3.85, and standard deviations of 0.76 and 0.70, respectively, showing consistent application of controls and adherence to standards. The relatively low standard deviations across all items suggest a high level of agreement among respondents. Overall, these results indicate that risk mitigation is systematically implemented and monitored, which may positively influence the financial performance of commercial parastatals through reduced exposure to uncontrolled risks and enhanced regulatory compliance.

4.3.4 Moderating influence of risk maturity level on the association between IRM and the financial performance of commercial parastatals in Kenya

To evaluate the moderating influence of risk maturity on the relationship between integrated risk management (IRM) and financial performance, descriptive statistics on risk maturity were first examined.

Table 4.6: Moderating influence of risk maturity level

	N	Median	Mean	Std. Deviation
The organization has a strong risk-aware culture, where employees at all levels actively consider risks in their decision-making.	73	4	3.84	.67
Risk management is integrated into the daily operations and decision-making processes across all departments	73	4	3.93	.77
The organization has a well-established governance structure that ensures effective oversight of risk management activities	73	4	4.01	.79
Risk management responsibilities are clearly defined, and there is strong accountability at all levels of the organization	73	4	4.10	.75
Employees regularly receive training on risk management practices and their role in identifying and managing risks	73	4	3.64	.95
The organization ensures that employees are equipped with the necessary skills and knowledge to manage risks effectively	73	3	3.01	.91
Aggregate score			3.76	.81

Source (Researcher, 2025)

The overall average mean score for risk maturity was 3.76 (SD = 0.81), indicating a moderately positive perception of risk maturity levels within commercial parastatals in Kenya. The highest-rated statement was that risk management responsibilities are clearly defined, and there is strong accountability at all levels of the organization with a mean of 4.10 (SD = 0.75), suggesting that clarity of roles and accountability are well established and consistently observed. This was closely followed by the agreement that the organization has a well-established governance structure that ensures effective oversight of risk management activities (Mean = 4.01, SD = 0.79) and that risk

management is integrated into the daily operations and decision-making processes across all departments (Mean = 3.93, SD = 0.77).

Furthermore, respondents generally agreed that the organization has a strong risk-aware culture, where employees at all levels actively consider risks in their decision-making (Mean = 3.84, SD = 0.67), reflecting a healthy foundation for proactive risk thinking. However, lower mean scores were reported for training- and skills-related aspects of risk maturity. The respondents moderately agreed that employees regularly receive training on risk management practices and their role in identifying and managing risks with a mean of 3.64 (SD = 0.95), and the lowest-rated statement was that the organization ensures that employees are equipped with the necessary skills and knowledge to manage risks effectively (Mean = 3.01, SD = 0.91). These results suggest that while risk governance and cultural integration are relatively strong, there are notable gaps in risk capacity-building and training. This variation in maturity components may influence how effectively IRM translates into improved financial performance across different parastatals, underscoring the importance of risk maturity as a potential moderating variable in this relationship.

4.3.5 Financial Performance

To assess financial performance, Return on Assets (ROA) was used as the primary metric as shown in Table 4.7.

Table 4.7: Financial Performance

	N	Minimum	Maximum	Median	Mean	Std. Deviation
Return on Assets	30	-23.20	12.40	2	.8644	5.85658

Source (Researcher, 2025)

As shown in Table 4.7, ROA values among the commercial parastatals ranged from -23.20 to 12.40, with a mean of 0.86 (SD = 5.86). The wide range and high standard deviation indicate considerable variability in financial performance across the sampled organizations. The negative minimum ROA suggests that some parastatals experienced significant financial losses during the review period, while others achieved moderately positive returns. The relatively low mean ROA implies that, on average, the financial performance of commercial parastatals in Kenya is modest and potentially constrained by operational inefficiencies or external challenges. This variability in ROA strengthens the case for examining how integrated risk management practices and risk maturity might explain or influence these performance outcomes.

4.4 Inferential Statistics

4.4.1 Diagnostic tests

To ensure the validity and reliability of the multiple regression analysis, diagnostic tests were conducted to assess whether the assumptions underlying the model were met. Two key diagnostics applied in this study were the normality test and the multicollinearity test.

The assumption of normality requires that the residuals (errors) from the regression model are normally distributed. This assumption is critical for accurate hypothesis testing and confidence interval estimation. In this study, normality was tested using Shapiro-Wilk.

Table 4.8: Normality test

Variable	Statistic	Shapiro-Wilk	
		Df	Sig.
Risk identification	.991	73	.163
Risk analysis	.972	73	.122
Risk mitigation	.902	73	.107
Risk maturity	.893	73	.119

Source (Researcher, 2025)

All four variables (Risk identification, Risk analysis, Risk mitigation, and Risk maturity) show a p-value > 0.05 , meaning there is no significant departure from normality. Thus, we can assume that the data for these variables are approximately normally distributed. The results indicated that the residuals followed an approximately normal distribution, suggesting that the regression estimates are unbiased.

Multicollinearity occurs when independent variables are highly correlated with one another, which can inflate the standard errors and make it difficult to determine the individual effect of each predictor on the dependent variable. To test for multicollinearity, Variance Inflation Factor (VIF) values were computed.

Table 4.9: Multicollinearity test

Variable	Tolerance	VIF
Risk identification	0.788	1.269

Risk analysis	0.871	1.148
Risk mitigation	0.947	1.055
Risk maturity	0.774	1.291

Source (Researcher, 2025)

In this study, all VIF values were below the conventional threshold of 10, indicating that multicollinearity was not a concern and that the predictor variables (risk identification, risk analysis, risk mitigation, and risk maturity) were sufficiently independent for valid interpretation of regression coefficients.

4.4.2 Correlations Matrix

A Spearman's correlation was conducted to show the strength and direction of the relationships between the variables: Financial Performance, Risk Identification, Risk Analysis, and Risk Mitigation based on a sample of 73 observations.

Table 4.10: Correlations Matrix

			Financial Performance	Risk Identification	Risk Analysis	Risk Mitigation
Spearman's rho	Financial Performance	Correlation Coefficient	1.000			
		Sig. (2-tailed)				
		N	73			
	Risk Identification	Correlation Coefficient	.639**	1.000		
		Sig. (2-tailed)	.000			
		N	73	73		
	Risk Analysis	Correlation Coefficient	.541**	.252**	1.000	
		Sig. (2-tailed)	.000	.221		
		N	73	73	73	
	Risk Mitigation	Correlation Coefficient	.586**	.158**	.222**	1.000
		Sig. (2-tailed)	.000	.202	.232	

		N	73	73	73	73
**. Correlation is significant at the 0.01 level (2-tailed).						

Source (Researcher, 2025)

From the Spearman’s correlation matrix, there is a moderately strong, positive, and statistically significant relationship between financial performance and risk identification (Spearman’s rho= 0.639, p= 0.000). This suggests that better risk identification is associated with improved financial performance.

There is a moderate and significant positive relationship between financial performance and risk analysis (Spearman’s rho= 0.541, p= 0.000). This implies that as the quality or thoroughness of risk analysis improves, so does financial performance.

There is a moderate, positive, and statistically significant correlation between financial performance and risk mitigation (Spearman’s rho=0.586, p= 0.000. Effective risk mitigation strategies are associated with better financial outcomes.

4.4.3 Multiple regression Model

To examine the effect of integrated risk management components composed of risk identification, risk analysis, and risk mitigation on the financial performance of commercial parastatals in Kenya, a multiple linear regression analysis was conducted. The results are summarized in Tables 4.11-4.13.

Table 4.11: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.589 ^a	.347	.332	.35426

a. Predictors: (Constant), Risk Identification, Risk Analysis, Risk Mitigation, Age, Size

Source (Researcher, 2025)

The regression model revealed a moderate relationship between the independent variables and control variables (Age and Size of the firm) and financial performance, with an R value of 0.589 and an R² of 0.347. This indicates that approximately 34.7% of the variance in financial performance can be explained by the combined effect of risk identification, risk analysis, and risk mitigation and the control variables (Age and Size of the firm). The Adjusted R² value of 0.332 accounts for the number of predictors and suggests a reliable model fit. The standard error of the

estimate was 0.35426, indicating the average deviation of the observed values from the predicted values.

Table 4.12: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.895	5	4.379	87.587	.000 ^b
	Residual	3.35	67	.050		
	Total	25.245	72			
a. Dependent Variable: Financial Performance						
b. Predictors: (Constant), Risk Identification, Risk Analysis, Risk Mitigation, Age, Size Source (Researcher, 2025)						

The overall regression model was statistically significant, as evidenced by the F-value of 87.587 and a p-value of 0.000 ($F(5, 67) = 87.074, p < .001$). This confirms that the model provides a good fit for the data and that at least one of the predictors significantly contributes to explaining variations in financial performance.

Table 4.13: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.791	.140		12.796	.000
	Risk Identification	.121	.034	.147	3.558	.001
	Risk Analysis	.057	.017	.374	3.352	.003
	Risk Mitigation	.067	.019	.411	3.461	.001
	Age	0.49	0.21	.44	2.33	.05
	Size	0.61	0.011	.56	5.55	.003
a. Dependent Variable: Financial Performance Source (Researcher, 2025)						

Risk Identification had a positive and significant effect on financial performance ($B = 0.121, t = 3.558, p = 0.001$), suggesting that improvements in identifying risks are associated with better financial outcomes.

Risk Analysis also showed a significant positive influence ($B = 0.057$, $t = 3.352$, $p = 0.003$), indicating that the use of structured risk assessment and scenario analysis contributes to enhanced performance.

Risk Mitigation had the strongest standardized effect ($Beta = 0.411$) and was also statistically significant ($B = 0.067$, $t = 3.461$, $p = 0.001$), highlighting that actively managing and controlling risks is a key driver of financial performance in parastatals.

4.4.4 Moderated Model

To assess whether risk maturity moderates the relationship between integrated risk management practices (risk identification, risk analysis, and risk mitigation) and financial performance, a moderated multiple regression analysis was conducted. The model included the three main predictors, the moderating variable (risk maturity), and their interaction terms. The results are summarized in Tables 4.14- 4.16.

Table 4.14: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.589 ^a	.347	.332	.35426
2	.703 ^b	.494	.489	.28737
a. Predictors: (Constant), Risk Identification, Risk Analysis, Risk Mitigation, Age, Size				
b. Predictors: (Constant), Risk Identification, Risk Analysis, Risk Mitigation, Age, Size, Risk Maturity, Risk Identification*Maturity, Risk Identification*Maturity, Risk Mitigation*Maturity				
Source (Researcher, 2025)				

The moderated model yielded an R value of 0.703 and an R^2 of 0.494, indicating that the model explains approximately 49.4% of the variance in financial performance. There is an improvement over the non-moderated model ($R^2 = 0.347$). The adjusted R^2 was 0.489, suggesting that the inclusion of interaction terms (moderation effects) improves the explanatory power of the model. The standard error of the estimate was reduced to 0.28737, showing better predictive accuracy.

Table 4.15: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.895	5	4.379	87.587	.000 ^b
	Residual	3.35	67	.050		
	Total	25.245	72			
2	Regression	17.406	9	1.934	41.148	.000 ^c

Residual	2.961	63	.047	
Total	20.367	72		

a. Dependent Variable: Financial Performance
b. Predictors: (Constant), Risk Identification, Risk Analysis, Risk Mitigation, Age, Size
c. Predictors: (Constant), Risk Identification, Risk Analysis, Risk Mitigation, Age, Size, Risk Maturity, Risk Identification*Maturity, Risk Identification*Maturity, Risk Mitigation*Maturity
Source (Researcher, 2025)

The overall moderated regression model was statistically significant ($F(9, 63) = 41.148, p < .001$), indicating that the combination of risk management practices, risk maturity, and their interaction terms significantly predicts financial performance.

Table 4.16: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.791	.140		12.796	.000
	Risk Identification	.121	.034	.147	3.558	.001
	Risk Analysis	.057	.017	.374	3.352	.003
	Risk Mitigation	.067	.019	.411	3.461	.001
	Age	0.49	0.21	.44	2.33	.05
	Size	0.61	0.011	.56	5.55	.003
2	(Constant)	1.570	1.453		1.081	.004
	Risk Identification	.194	.051	.150	3.803	.003
	Risk Analysis	.058	.019	.076	3.085	.003
	Risk Mitigation	.184	.048	.174	3.833	.017
	Age	.101	.031	.11	3.258	.004
	Size	.23	.074	.171	3.108	.004
	Risk Maturity	.152	.046	.151	3.304	.003
	Risk Identification*Maturity	.116	.032	.113	3.625	.012
	Risk Analysis*Maturity	.126	.027	.120	4.666	.004
	Risk Mitigation*Maturity	.109	.035	.113	3.114	.012

a. Dependent Variable: Financial Performance
Source (Researcher, 2025)

From the moderated model, Risk Identification * Risk Maturity was significant ($B = 0.116, t = 3.625, p = 0.012$), suggesting that the influence of risk identification on financial performance is stronger when risk maturity is high. Risk Analysis * Risk Maturity was also significant ($B = 0.126, t = 4.666, p = 0.004$), indicating that mature risk management systems enhance the financial

benefits of effective risk analysis. Risk Mitigation* Risk Maturity showed a significant moderating effect ($B = 0.109$, $t = 3.114$, $p = 0.012$), revealing that risk maturity strengthens the impact of mitigation efforts on financial outcomes.

4.5 Chapter Summary

This chapter presented and interpreted the findings of the study based on the specific objectives. It began by outlining the response rate, which confirmed the adequacy and representativeness of the data collected. The demographic characteristics of the respondents were then summarized to provide context and background on the study participants. Descriptive statistics were used to explain the respondents' views on each of the variables. Inferential statistics, including regression analysis, were then used to determine the significance and strength of the relationship between the study variables.



CHAPTER FIVE

SUMMARY DISCUSSIONS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a comprehensive summary of the study's key findings, a discussion of the results in relation to existing literature, and the conclusions drawn based on the objectives of the study. It also outlines practical recommendations for policymakers and management alongside areas suggested for further research.

5.2 Summary of Findings

5.2.1 Risk identification and financial performance of commercial parastatals in Kenya

Descriptive statistics revealed that commercial parastatals in Kenya have moderately strong risk identification practices. The highest-rated practice was the use of audit findings to identify risks, indicating a formal and structured approach. Other commonly applied methods included corrective actions based on audits, incident reporting, and employee feedback. However, the consideration of employee suggestions in identifying risks scored the lowest highlighting a potential gap in participatory risk management. Inferential analysis showed that risk identification has a positive and statistically significant impact on financial performance, indicating that stronger risk identification practices contribute to better financial outcomes in commercial parastatals. The results from the Spearman's correlation matrix revealed a moderately strong, positive, and statistically significant relationship between risk identification and financial performance. This indicates that commercial parastatals in Kenya that demonstrate stronger risk identification practices tend to report better financial performance, as measured by Return on Assets (ROA).

5.2.2 Risk analysis and financial performance of commercial parastatals in Kenya

The study found that risk analysis practices are moderately to strongly implemented in commercial parastatals in Kenya. Respondents reported high agreement on the use of scenario analysis and risk prioritization, indicating these are well-established elements in their risk management frameworks. However, lower scores on control effectiveness evaluation and risk severity assessment suggest room for improvement in consistency and application across departments. Inferential results confirmed that risk analysis has a significant positive effect on financial performance, highlighting the importance of structured risk assessment and decision-support tools

in enhancing organizational outcomes. The study found a moderate and statistically significant positive correlation between risk analysis and financial performance. This suggests that improvements in the quality, structure, and consistency of risk analysis processes are associated with enhanced financial performance among commercial parastatals in Kenya. These findings underscore the relevance of structured risk evaluation and prioritization as essential components of financial stewardship in public sector entities.

5.2.3 Risk mitigation and financial performance of commercial parastatals in Kenya

The findings reveal a strong implementation of risk mitigation measures, indicating that most respondents agreed that their organizations actively engage in managing and controlling risks. The highest-rated item was that compliance with risk mitigation strategies is regularly monitored and enforced across all departments, reflecting a strong commitment to ensuring adherence to mitigation efforts across organizational units. This was closely followed by agreement that risk mitigation strategies are regularly monitored to ensure controls are effective and that residual risk levels are effectively managed to ensure they remain within acceptable thresholds, both of which suggest that monitoring and residual risk management are key components of the mitigation process. Risk Mitigation was statistically significant, highlighting that actively managing and controlling risks is a key driver of financial performance in parastatals. The study established a moderate, positive, and statistically significant correlation between risk mitigation and financial performance. This indicates that commercial parastatals in Kenya that implement effective risk mitigation strategies tend to perform better financially.

5.2.4 Moderating influence of risk maturity level on the association between IRM and the financial performance of commercial parastatals in Kenya

The study found that risk maturity levels in Kenyan commercial parastatals are moderately strong. Respondents agreed that risk governance structures, accountability, and cultural integration of risk management are well established evidenced by high ratings for clearly defined responsibilities and integration into operations. However, lower ratings in training and employee risk competencies indicate capacity gaps, suggesting that while risk frameworks are in place, staff skills and knowledge remain a challenge. In terms of the statistical model, the inclusion of risk maturity as a moderator significantly improved the model's explanatory power, with R^2 increasing and the standard error of estimate decreasing, reflecting stronger model fit and predictive accuracy. All

three interaction terms were significant which illustrate that higher levels of risk maturity enhance the positive effects of risk identification, analysis, and mitigation on financial performance. The findings thus confirm that risk maturity is a significant moderator in the relationship between integrated risk management and financial success in commercial parastatals.

5.3 Discussion

5.3.1 Risk identification and financial performance of commercial parastatals in Kenya

The regression findings of this study reveal that risk identification practices have a positive and statistically significant effect on the financial performance of commercial parastatals in Kenya. This suggests that organizations that effectively identify potential risks particularly through structured mechanisms like audit findings, incident reporting, and employee feedback are more likely to achieve stronger financial outcomes. These results align with those of Aoun (2023), who found that robust risk management practices, especially risk identification, positively influenced the financial performance and resilience of SMEs in Lebanon during crises. Although Aoun's study focused on small and medium enterprises in a crisis context, the core finding that proactive risk identification supports financial stability is mirrored in the current research. Similarly, Kioko (2023) reported a significant influence of risk identification on the financial performance of commercial banks in South Sudan. The emphasis on identifying specific types of risks corresponds with this study's focus on comprehensive risk identification strategies.

The results from the Spearman's correlation matrix revealed a moderately strong, positive, and statistically significant relationship between risk identification and financial performance. This indicates that commercial parastatals in Kenya that demonstrate stronger risk identification practices tend to report better financial performance, as measured by Return on Assets (ROA). Corroborating with the findings, Kioko (2023) demonstrated a significant relationship between credit risk identification and financial performance in South Sudanese banks. Despite contextual differences, the study affirms the value of tailored risk identification strategies, especially in finance-heavy sectors. Similarly, Turyakira et al. (2023), using a longitudinal design in the public sector, confirmed a significant impact of risk identification and assessment on financial performance. Although this study did not focus on Integrated Risk Management (IRM) as a holistic framework, it underscores the foundational role of risk identification within broader risk management processes.

The study results showed that organizations engage in risk identification activities, indicating a strong emphasis on using formal audits for risk detection. More directly relevant is the study by Turyakira et al. (2023), which examined public sector organizations and found a significant positive relationship between risk identification, assessment, and control and financial performance. Their results validate the assertion that public institutions benefit from strong risk identification mechanisms, consistent with the current findings. However, while Turyakira et al. emphasized individual risk management components, the current study positions risk identification as part of a broader Integrated Risk Management (IRM) approach. Karanja and Muturi (2020) also support the current results, having found a positive relationship between risk identification and the performance of financial institutions in Kenya.

These results align with the Resource-Based View (RBV) theory, which emphasizes that organizational resources and capabilities like effective risk identification systems serve as strategic assets that contribute to superior performance. By embedding risk identification into their internal processes, parastatals are essentially enhancing their intangible resource base, which provides a competitive edge and strengthens financial outcomes. Moreover, the findings resonate with the Contingency Theory, which posits that there is no one-size-fits-all approach to organizational management; instead, effectiveness depends on the alignment between internal processes and the external environment. In this context, effective risk identification is a contingent factor that allows parastatals to adapt to changing economic, regulatory, and operational environments. Institutions that customize their risk identification strategies based on their operational context are therefore more likely to achieve improved financial performance.

5.3.2 Risk analysis and financial performance of commercial parastatals in Kenya

The current study established that risk analysis has a significant positive influence on the financial performance of commercial parastatals in Kenya. The study found a moderate and statistically significant positive correlation between risk analysis and financial performance (Spearman's $\rho = 0.541$, $p = 0.000$). This suggests that improvements in the quality, structure, and consistency of risk analysis processes are associated with enhanced financial performance among commercial parastatals in Kenya. These findings underscore the relevance of structured risk evaluation and prioritization as essential components of financial stewardship in public sector entities. The results are supported by Faisal et al. (2023), who, through a meta-analysis of 20 studies conducted in

Indonesia, concluded that effective risk management practices including risk analysis are positively associated with financial performance. Although Faisal's research aggregates data across multiple contexts and sectors, making it difficult to isolate the effect of specific practices like risk analysis, the general consensus supports the importance of robust and integrated risk management systems. Similarly, Abdelrahman et al. (2022) found that effective risk assessment positively influenced firm performance in Egypt during the COVID-19 pandemic. Their focus on high-uncertainty environments aligns well with the current study's finding that proactive risk analysis, particularly scenario planning, supports stronger financial outcomes.

Descriptive statistics further revealed that scenario analysis and risk prioritization are widely adopted, while other aspects such as risk control evaluations, and the routine use of assessment scores were less consistently applied. These findings suggest that structured risk analysis tools particularly those that are forward-looking play a critical role in enhancing financial performance, though there remains scope to strengthen internal consistency in applying certain practices. Additionally, Olayinka et al. (2020) found that strong risk governance encompassing practices like enterprise risk management and the establishment of risk committees significantly improved financial performance among Nigerian financial institutions. Although their study did not isolate risk analysis as a standalone variable, their findings support the view that structured, institutionalized risk management practices contribute positively to performance.

In contrast, Muoti (2021) reported a negative relationship between risk analysis and financial performance among Kenyan insurance companies. While contrasting with the current study, this finding may reflect industry-specific differences; insurance firms, by their nature, deal with highly technical and actuarial risk assessments, which may not always translate into short-term financial gains. In contrast, parastatals may benefit more directly from general risk analysis practices that prevent operational inefficiencies or policy breaches.

From a Resource-Based View (RBV) perspective, this result highlights risk analysis as a valuable organizational capability one that is rare, inimitable, and strategically embedded. The ability to systematically analyze internal and external threats, assess their potential impact, and allocate resources accordingly strengthens a firm's ability to anticipate and respond to uncertainty. This risk intelligence becomes a performance-enhancing asset. Furthermore, the finding aligns well with Contingency Theory, which posits that the effectiveness of organizational practices depends

on how well they are adapted to the environment and context in which a firm operates. In the case of commercial parastatals, where political, regulatory, and economic uncertainties are often high, the application of context-sensitive and data-driven risk analysis techniques allows for more responsive and flexible financial management strategies. This alignment enhances the strategic fit between organizational capabilities and environmental demands, ultimately improving financial performance.

5.3.3 Risk mitigation and financial performance of commercial parastatals in Kenya

The study revealed that risk mitigation practices have a positive and statistically significant effect on the financial performance of commercial parastatals in Kenya. The study established a moderate, positive, and statistically significant correlation between risk mitigation and financial performance. This indicates that commercial parastatals in Kenya that implement effective risk mitigation strategies tend to perform better financially. These findings suggest that organizations that systematically manage risks by controlling exposures, enforcing compliance, and monitoring risk controls are better positioned to safeguard financial outcomes.

The study findings demonstrate a strong implementation of risk mitigation practices within Kenyan commercial parastatals. Respondents consistently agreed that risk mitigation efforts such as the monitoring of compliance, ongoing evaluation of mitigation strategies, and management of residual risk are integral to organizational operations. The highest-rated item, emphasizing enforcement of compliance across departments, reflects a systematic and institution-wide commitment to reducing risk exposure. Inferential results further underscore this relationship, showing that risk mitigation has a significant positive impact on financial performance, confirming that active risk control contributes meaningfully to the financial health of parastatals. These results align closely with the findings of Njeri (2014), who concluded that effective risk mitigation strategies significantly improve financial performance among Kenyan manufacturing firms. Although her study focused on a different sector, the shared context of Kenyan institutions lends support to the present findings and underscores the cross-sector importance of mitigating risk through structured practices.

Similarly, Mardiana and Purnamasari (2018) found a positive relationship between credit risk management and financial performance in Sri Lankan commercial banks. The findings further corroborate with Mupedziswa and Mupedziswa (2024) who also observed that robust risk

management strategies enhance financial performance in Zimbabwean commercial banks. Consistently, Diero et al. (2019) found that governance-related risk management practices positively influenced the financial performance of Kenyan parastatals. While their study highlighted governance as the central mechanism, it did not fully explore operational and residual risk mitigation, which the current study identifies as crucial contributors to financial outcomes.

From the lens of the Resource-Based View (RBV), risk mitigation practices can be interpreted as strategic organizational capabilities that contribute to competitive advantage. Well-structured risk mitigation systems such as internal control mechanisms, contingency plans, and compliance enforcement constitute intangible assets that are difficult to replicate. Their integration into core operations enables parastatals to avoid costly disruptions, reduce financial volatility, and maintain operational continuity, thereby contributing to superior financial performance. Additionally, Contingency Theory supports this interpretation by emphasizing that effective management practices must be tailored to specific organizational environments. In the context of commercial parastatals, which often operate under unique regulatory, political, and financial constraints, customized risk mitigation strategies enhance strategic alignment.

5.3.4 Moderating influence of risk maturity level on the association between IRM and the financial performance of commercial parastatals in Kenya

The findings from this study demonstrate that risk maturity significantly moderates the relationship between Integrated Risk Management (IRM) practices and financial performance in Kenyan commercial parastatals. These results resonate with prior literature that links risk maturity to better financial performance. For instance, Sinansari et al. (2021) assessed the risk maturity of a single Indonesian state-owned enterprise and found that a mature risk management system enabled effective risk mitigation, leading to more resilient operations. Although their study was case-specific and thus limited in generalizability, it supports the current finding that mature risk systems amplify the effectiveness of risk management efforts, especially in public organizations with structured governance. Further supporting evidence comes from Meskovic et al. (2021), who found a positive, statistically significant relationship between risk management maturity and firm value across firms in Bosnia and Herzegovina.

Furthermore, the work by Farrell et al. (2018), which examined how Enterprise Risk Management (ERM) maturity moderates firm performance outcomes showed that firms with higher ERM

maturity demonstrated stronger returns on assets and firm value, particularly in complex and knowledge-driven industries. This complements the current study's conclusion that risk maturity strengthens the relationship between IRM practices and financial results. However, unlike Farrell et al., who focused broadly on ERM and its interaction with firm-specific factors, the current study applies this moderation lens within a more integrated, sector-specific IRM context, emphasizing the unique operational challenges and accountability structures of public enterprises. Additionally, it identifies specific weaknesses in maturity, particularly in employee training and skills development, which could limit the full realization of IRM benefits unless addressed.

While Kenyan commercial parastatals scored highly in governance structures and operational integration, they lagged in areas such as employee training and competencies (Mean = 3.01). This discrepancy highlights a potential challenge. The presence of frameworks and policies does not guarantee success if the human capacity to implement them is underdeveloped. It suggests that risk maturity is multi-dimensional, and its influence on financial performance depends not only on formal systems but also on the people who operate within them. Supporting this, Meskovic et al. (2021) showed that firm value was positively correlated with maturity in both risk structure and internal capability across firms in Bosnia and Herzegovina. Their emphasis on capability development echoes the current study's insight.

From a Resource-Based View (RBV) perspective, risk maturity can be considered a unique and valuable organizational capability. High levels of maturity reflect deeply embedded competencies in managing uncertainty, which serve as a source of sustainable competitive advantage. These mature systems are difficult for competitors to imitate and can significantly enhance the strategic value of IRM practices.

5.4 Conclusions

The study concludes that risk identification has a positive and statistically significant impact on financial performance of commercial parastatals in Kenya. Stronger risk identification practices contribute to better financial outcomes in commercial parastatals. The commercial parastatals in Kenya have moderately strong risk identification practices including the use of audit findings to identify risks, corrective actions based on audits, incident reporting, and employee feedback. However, the consideration of employee suggestions in identifying risks is not effectively applied.

Risk analysis has a significant positive effect on financial performance of commercial parastatals in Kenya. The risk analysis practices are moderately to strongly implemented in commercial parastatals in Kenya. The firms use scenario analysis and risk prioritization, indicating these are well-established elements in their risk management frameworks. However, control effectiveness evaluation and risk severity assessment needs improvement in consistency and application across departments.

Risk Mitigation was statistically significant thus a key driver of financial performance in commercial parastatals in Kenya. Compliance with risk mitigation strategies is regularly monitored and enforced across all departments, reflecting a strong commitment to ensuring adherence to mitigation efforts across organizational units in the state-owned enterprises. Regular monitoring ensures controls are effective and the residual risk levels are effectively managed to ensure they remain within acceptable thresholds.

The study confirms that risk maturity is a significant moderator in the relationship between integrated risk management and financial success in commercial parastatals. The risk maturity levels in Kenyan commercial parastatals are moderately strong. The risk governance structures, accountability, and cultural integration of risk management are well established. However, training and employee risk competencies remain a challenge.

5.5 Recommendations of the Study

5.5.1 Policy and Managerial Recommendations

The study revealed that audit and incident reporting mechanisms are well utilized but found lower ratings for employee-driven risk identification. Commercial parastatals should implement structured mechanisms for employee input, such as anonymous suggestion systems and regular feedback forums.

The study revealed variability in the consistent use of risk assessment scores and control effectiveness ratings. Commercial Parastatals should institutionalize risk analysis frameworks such as scenario analysis and quantitative scoring across all departments.

Although risk mitigation practices are generally strong, continuous compliance monitoring across all departments should be reinforced. Management should conduct regular internal audits to assess adherence to mitigation strategies and effectiveness of control measures. Developing residual risk

dashboards for real-time tracking and accountability can help ensure risks remain within acceptable levels.

The findings highlighted gaps in employee skills and training related to risk management. Parastatals should implement targeted capacity-building programs. Such programs could include annual risk competency assessments and workshops on practical risk management tailored to each department's context.

Since risk maturity was found to moderate and enhance the impact of IRM practices on financial performance, organizations should formally assess their risk maturity levels using established models.

5.5.2 Theoretical Recommendations

This study makes theoretical contributions to the body of knowledge in risk management and public sector financial performance. Primarily, it extends the application of Integrated Risk Management (IRM) by empirically demonstrating its influence on the financial performance of commercial parastatals in Kenya. While previous studies have largely focused on private sector firms or specific risk categories (e.g., credit or operational risk), this research integrates multiple dimensions of risk identification, analysis, and mitigation within a holistic IRM framework.

Secondly, the study contributes to theory by introducing and testing risk maturity as a moderating variable, which adds depth to the understanding of how organizational capabilities in managing risk influence the effectiveness of IRM practices. The findings confirm that higher levels of risk maturity strengthen the positive impact of IRM on financial performance, aligning with and extending theories related to organizational capability and contingency theory which suggest that the effectiveness of management practices depends on internal organizational factors such as maturity, structure, and culture.

From the RBV perspective, the study conceptualizes risk identification, analysis, and mitigation as strategic organizational capabilities—intangible resources that can create competitive advantage when effectively developed and deployed. The findings support the RBV assertion that internal capabilities are critical to organizational performance. The positive and significant effects of these IRM practices on financial performance suggest that commercial parastatals that invest in

building structured and proactive risk management systems can better manage uncertainty and improve financial outcomes.

Lastly, this study reinforces the importance of viewing risk management not merely as a compliance tool but as a strategic function that contributes directly to financial outcomes. This perspective supports the evolving theoretical discourse that positions risk management as a value-enhancing activity in the public sector, where performance is often evaluated not just by profit but by operational efficiency and accountability.

5.6 Limitations of the Study

The study was limited to the use of structured questionnaires which relied heavily on respondents' perceptions, which may introduce social desirability bias or response subjectivity, potentially affecting the accuracy of the findings.

The study focused exclusively on commercial parastatals in Kenya, limiting the generalizability of the findings to other sectors such as manufacturing, education, or non-commercial state corporations.

The study focused on three IRM components (risk identification, analysis, and mitigation), but other risk management elements such as risk communication, monitoring and external environmental factors such as regulatory changes, economic shocks could also influence financial performance but were not considered.

5.7 Areas for further Studies

The study was limited to commercial parastatals limiting generalization of findings. Future studies could focus on a comparative study across different sectors such as private vs. public, or commercial vs. non-commercial parastatals to provide deeper insights into how sectoral dynamics influence the effectiveness of risk management.

The study relied on quantitative data, complementary qualitative studies involving interviews with senior risk officers, internal auditors, or board members could provide in-depth perspectives on how risk is managed and perceived within organizations.

Finally, the study findings demonstrate that approximately 34.7% of the variance in financial performance can be explained by the combined effect of risk identification, risk analysis, and risk

mitigation. Future studies could seek to reveal the other factors of the 65.3% disparity in financial performance of the commercial parastatals.



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APPENDICES

Appendix II: Questionnaire

Section A: Demographic Information

1. Name of Parastatal: _____
2. Your Position: _____
3. Years of Experience: _____

Section B: Integrated Risk Management (IRM)

Please rate the following statements based on your agreement:

(1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

Risk Identification

Items	1	2	3	4	5
The organization effectively identifies potential risks through incident reports					
Incident reports are regularly reviewed to identify new and emerging risks within the organization					
Audit findings are systematically used to identify financial and operational risks in the organization					
The organization takes corrective action based on audit findings to prevent potential risks.					
Employee feedback is actively collected and used to identify operational risks					
The organization considers employee suggestions when identifying potential risks that could impact financial performance					

Risk Assessment

Items	1	2	3	4	5
Risk assessment scores are regularly used to evaluate the severity of risks facing the organization					
The organization uses risk assessment scores to prioritize risks and determine appropriate mitigation strategies					
The organization conducts scenario analysis to predict potential outcomes of identified risks					
Scenario analysis results are used to guide decision-making in response to potential risks					
The effectiveness of risk controls is regularly evaluated and adjusted based on risk analysis					
The organization uses control effectiveness ratings to determine whether existing risk controls are adequate to mitigate risks					

Risk Mitigation

Items	1	2	3	4	5
The organization has implemented appropriate controls to mitigate identified risk					
Risk mitigation strategies are regularly monitored to ensure controls are effective					
The organization regularly assesses residual risks after applying risk mitigation measures					
Residual risk levels are effectively managed to ensure they remain within acceptable thresholds.					
The organization maintains high compliance rates with internal and external risk management standard					
Compliance with risk mitigation strategies is regularly monitored and enforced across all departments					

Section C: Risk Maturity

Please rate the following statements based on your agreement:

(1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree)

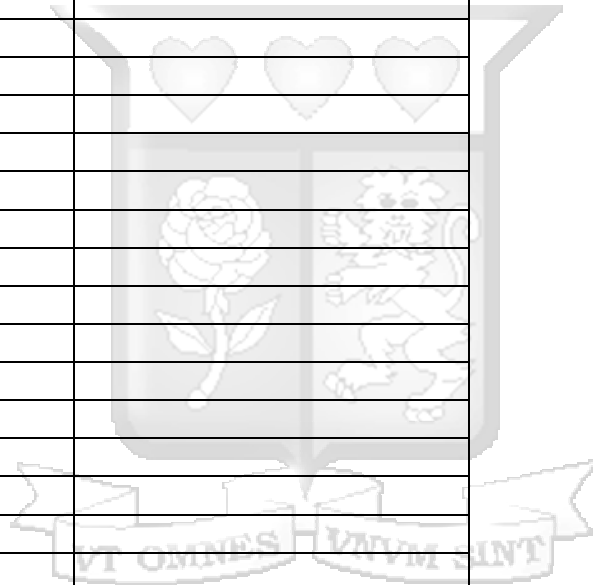
Items	1	2	3	4	5
The organization has a strong risk-aware culture, where employees at all levels actively consider risks in their decision-making.					
Risk management is integrated into the daily operations and decision-making processes across all departments					
The organization has a well-established governance structure that ensures effective oversight of risk management activities					
Risk management responsibilities are clearly defined, and there is strong accountability at all levels of the organization					
Employees regularly receive training on risk management practices and their role in identifying and managing risks					
The organization ensures that employees are equipped with the necessary skills and knowledge to manage risks effectively					

Section D: Age and Size of the Parastatal

Age of the parastatal in years	
Number of employees in the parastatal	

Appendix III: Data collection Sheet

Name of Parastatal	Return on Assets
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Appendix IV: List of Commercial State Corporations (PSC, 2024)

		Job Group N	Job Group P	Job Group Q	Total
1	Agro-Chemicals and Food Company	19	10	7	36
2	Chemelil Sugar Company	33	17	9	59
3	East African Portland Cement Company	27	13	6	46
4	Jomo Kenyatta Foundation	9	6	3	18
5	Kenya Airports Authority	49	21	12	82
6	Kenya Broadcasting Corporation	12	7	2	21
7	Kenya Civil Aviation Authority	7	7	3	17
8	Kenya Electricity Generating Company	41	33	10	84
9	Kenya National Shipping Line	4	3	1	8
10	Kenyan National Trading Corporation (KNTC)	8	9	4	21
11	Kenya Ordinance Factories Corporation	10	7	2	19
12	Kenya Pipeline Company	25	20	8	53
13	Kenya Ports Authority	92	61	20	173
14	Kenya Power and Lighting Company	389	261	130	780
15	Kenya Railways Corporation	18	3	2	23
16	Kenya Reinsurance Corporation Limited	22	12	8	42
17	Kenya Seed Company Limited	17	3	2	22
18	Kenyatta International Convention Center	8	2	2	12
19	National Cereals and Produce Board	12	6	4	22
20	National Housing Corporation	8	5	3	16
21	National Oil Corporation of Kenya	15	7	3	25
22	New Kenya Co-operative Creameries Limited	16	12	28	56
23	Numerical Machining Complex	11	7	2	20
24	Nyayo Tea Zones Development Corporation	6	4	2	12
25	Nzoia Sugar Company	9	3	2	14
26	Postal Corporation of Kenya	47	19	8	74
27	Pyrethrum Board of Kenya	4	2	1	7
28	School Equipment Production Unit	6	4	2	12
29	South Nyanza Sugar Company	17	9	4	30
30	University of Nairobi Enterprises and Services Limited	5	3	1	9

Total	946	576	291	181 3
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Appendix V: Ethical Approval



16th April 2025

Ms Wang'ombe Agnes,
agnes.wang'ombe@strathmore.edu

Dear Ms Wang'ombe,

RE: Effect of Integrated Risk Management on Financial Performance of Commercial Parastatals in Kenya Moderated by Risk Maturity

This is to inform you that SU-ISERC has reviewed and approved your above SU-masters proposal. Your application reference number is SU-ISERC2845/25. The approval period is from 16th April 2025 to 15th April 2026.

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,

A handwritten signature in black ink, appearing to read "Ambrose Rachier".

Mr Ambrose Rachier,
Chairperson; SU-ISERC

Appendix VI: Research Permit


REPUBLIC OF KENYA


NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

RefNo: **871147** Date of Issue: **17/April/2025**

RESEARCH LICENSE



This is to Certify that Miss.. Agnes Wambui Wangombe 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: EFFECT OF INTEGRATED RISK MANAGEMENT ON FINANCIAL PERFORMANCE OF COMMERCIAL PARASTATALS IN KENYA MODERATED BY RISK MATURITY for the period ending : 17/April/2026.

License No: **NACOSTI/P/25/4173015**

871147
Applicant Identification Number


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