

**RISK-BASED INTERNAL AUDIT, CORPORATE GOVERNANCE
AND FINANCIAL PERFORMANCE OF DEPOSIT TAKING
COOPERATIVE SOCIETIES IN NAIROBI METROPOLIS, KENYA**

JULIUS KIMIA NYERERE

**A RESEARCH PROJECT SUBMITTED IN THE SCHOOL OF BUSINESS AND
ECONOMICS IN PARTIAL FULFILMENT OF THE REQUIREMENTS FOR
THE AWARD OF THE DEGREE OF MASTER OF BUSINESS
ADMINISTRATION IN THE UNIVERSITY OF EMBU**

MARCH, 2022

DECLARATION

This research project is my original work and has not been presented for a degree in any other University.

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

Julius Kimia Nyerere

D530/1242/2018

School of Business and Economics,

University of Embu.

This research project has been submitted for examination with our approval as the University Supervisors.

Signature..... Date

Dr. Duncan Mugambi Njeru

Department of Business and Economics,

University of Embu.

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

Dr. David Muchangi Mugo

Department of Mathematics, Computing and Information Technology

University of Embu.

DEDICATION

I dedicate this work to my loving family, to my father Mr. Joseph Nyerere, my mother Anastacia Nyerere, my brothers Daniel and William, and my sisters Winnie and Angeline for their continued support through the entire journey of my master's degree.

ACKNOWLEDGEMENT

I thank the Almighty God for the gift of life, strength, knowledge, and guidance during my studies and through the entire process. I wish to express my sincere gratitude to my supervisors, Dr. Duncan Mugambi and Dr. David Muchangi Mugo, for their availability and readiness to offer guidance and wise counsel throughout the entire journey. Your efforts are highly appreciated. Special thanks to my father Mr. Joseph Nyerere for the support he has given me both monetary and guidance/ encouragement when things seemed tough. God bless you all!

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENT	iv
LIST OF TABLES	viii
LIST OF FIGURES	ix
ABBREVIATIONS AND ACRONYMS	x
DEFINITION OF TERMS	xi
ABSTRACT	xii
CHAPTER ONE	1
INTRODUCTION	1
1.1 Background of the Study	1
1.1.1 Risk-Based Internal Auditing	2
1.1.2 Financial Performance	3
1.1.3 The Sacco Sub-Sector in Kenya	3
1.2 Statement of the Problem	5
1.3 Objectives	5
1.3.1 General Objective	5
1.3.2 Specific Objectives	5
1.4 Research Hypotheses	6
1.5 Scope of the Study	6
1.6 Significance of the Study	6
CHAPTER TWO	8
LITERATURE REVIEW	8
2.1 Introduction	8
2.2 Theoretical Review	8
2.2.1 Audit Theory	8
2.2.2 Fraud Triangle Theory	9
2.2.3 Policeman Theory	10
2.3 Empirical Review	11
2.3.1 Risk Maturity	11

2.3.2 Audit Assignment	12
2.3.3 Risk-Based Internal Auditing Planning.....	12
2.3.4 Corporate Governance.....	13
2.4 Conceptual Framework	14
2.5 Summary of Reviewed Literature	16
2.6 Research Gaps.....	16
CHAPTER THREE.....	18
METHODOLOGY	18
3.1 Introduction.....	18
3.2 Research Design.....	18
3.3 Population of the Study	18
3.4 Sampling Technique and Sample Size	18
3.5 Data collection instrument	19
3.6 Data Collection Procedure.....	19
3.7 Measurement and Operationalization of Variables.....	20
3.8 Pretesting of Research Instruments.....	21
3.8.1 Validity Test	21
3.8.2 Reliability of the Instrument.....	21
3.9 Data processing and analysis	22
3.9.1 Empirical Models.....	23
3.9.1.1 Effect of Risk-Based Internal Audit on Financial Performance of DT-SACCOs.....	23
3.9.1.2 Moderating Effect of Corporate Governance.....	23
3.10 Research Ethical Considerations.....	24
CHAPTER FOUR	25
RESULTS, INTERPRETATION, AND DISCUSSIONS.....	25
4.1.1 Response Rate.....	25
4.2 Demographic Characteristics	26
4.3 Risk Maturity	28
4.4 Audit Assignment.....	29
4.4 Risk-Based Audit Planning.....	30

4.5 Summary of Risk-Based Internal Audit Indicators.....	31
4.6 Corporate Governance.....	31
4.7 Performance of Deposit-Taking SACCOs	32
4.8 Regression Analysis	33
4.8.1. Diagnostic Tests.....	34
4.8.1.1 Normality Test	34
4.8.1.2 Homoscedasticity Test.....	35
4.8.1.3 Multi-collinearity Tests	35
4.8.1.4 Kaiser-Meyer-Olkin Test.....	36
4.8.2.1 Discussion of the direct regression model results	40
CHAPTER FIVE	46
SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS.....	46
5.1. Introduction.....	46
5.2 Summary.....	46
5.3 Conclusion	47
5.4. Contribution of the Study	48
5.5 Policy Implications and Recommendations.....	48
5.6 Areas for Further Research	49
REFERENCES	50
APPENDICES	54
APPENDIX I: QUESTIONNAIRE COVER LETTER	54
APPENDIX II: RESEARCH QUESTIONNAIRE	55
APPENDIX III: SECONDARY DATA COLLECTION SHEET	59
APPENDIX IV: UNIVERSITY RESEARCH AUTHORIZATION.....	60
APPENDIX V: NACOSTI RESEARCH AUTHORIZATION.....	61
APPENDIX VI: POPULATION OF STUDY.....	62
APPENDIX VII: SUMMARY OF EMPIRICAL LITERATURE REVIEW.....	64

LIST OF TABLES

Table 3.1: Measurement and operationalization of variables	20
Table 3.2: Reliability Test Results	22
Table 4.1: Response Rate	25
Table 4.2: Gender	26
Table 4.3: Age	26
Table 4.4: Highest Level of Education	27
Table 4.5: Professional Course Certification	27
Table 4.6: Number of Years Worked	28
Table 4.7: Extent of Implementation of Risk Maturity	28
Table 4.8: Extent of Implementation of Audit Assignment	29
Table 4.9: Extent of Implementation of Risk-Based Audit Planning	30
Table 4.10: Summary for risk maturity, audit assignment, and risk-based audit planning	31
Table 4.11: Corporate Governance	31
Table 4.12: Performance of Deposit-Taking SACCOs	32
Table 4.13: Tests of Normality	33
Table 4.14: Homoscedasticity Test	35
Table 4.15: Multicollinearity Diagnostics	36
Table 4.16: KMO Test for Sample Adequacy	36
Table 4.17: Summary Results of Regression Model	37
Table 4.18: Anova Results for Model Significance	38
Table 4.19: Regression Coefficients	39
Table 4.20: Summary Results of Moderation Regression Model	41
Table 4.21: Anova Results for Model Significance	42
Table 4.22: Regression Coefficients	42
Table 4.23: Summary of Hypotheses Testing	44

LIST OF FIGURES

Figure 2.1: Fraud Triangle Theory (Wikipedia,2010)	9
Figure 2.2: Conceptual Framework	15

ABBREVIATIONS AND ACRONYMS

ACCA	:	Association of chartered certified accountants
DT- SACCO	:	Deposit-Taking Savings and Credit Cooperative Society
FOSA	:	Front Office Services Activities
GAAPs	:	Generally Accepted Accounting Principles
IFRS	:	International Financial Reporting Standards
IIA	:	Institute of Internal Auditors.
ISA	:	International Standards on Auditing
KPMG	:	Klynveld Peat Marwick Goerdeler
NACOSTI:		National Commission for Science, Technology, and Innovation.
RBA	:	Risk-Based Audit
RBIA	:	Risk-Based Internal Audit
ROA	:	Return on Assets
ROE	:	Return on Equity
ROI	:	Return on Investment
SACCO	:	Savings and Credit Cooperative Society
SASRA	:	SACCO Societies Regulatory Authority
WOCCU	:	World Council of Credit Unions.

DEFINITION OF TERMS

Audit assignment	The processes that help assure part of the risk management framework including on the mitigation of individual or group risks.
Corporate governance	Refers to the system in which firms are directed and controlled
Financial performance	A subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. The term is also used as a general measure of a firm's overall financial health over a given period. It also refers to the process of measuring the results of a firm's policies and operations in monetary terms
Risk-based audit planning	Refers to how regularly the internal auditing department plans for audits for the assessment of risks and their management in the organization to give assurance to the board.
Risk-based internal auditing	A methodology that links internal auditing to an organization's overall risk management framework and allows internal audit to assure the board that risk management processes are managing risks effectively concerning the potential avenues of risk
Risk maturity	Refers to the measure adopted by firms for their enhancement of the understanding of their overall risk position as well as the benefits accrued from risk management initiative.

ABSTRACT

Through a risk-based internal audit (RBIA), companies can use internal audit capabilities to improve management and control of risks. It also improves the accountability and accuracy of financial statements. This study focused on the deposit-taking savings and credit cooperatives (DT-SACCOs) in Nairobi Metropolis, Kenya. Some DT-SACCOs today are faced with the challenges of auditing in their operations despite having an audit department in place. A risk-based internal audit helps an organization in the identification of high-risk areas which helps in giving priorities to such areas. This enables the improvement of the financial performance and provision of high-quality reports by the company. This study focused on the effect of risk-based internal audit on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya. The study used a descriptive research design and was anchored on three theories namely: fraud triangle theory, audit theory, and risk management theory. The research conducted a census of 43 DT-SACCOs in Nairobi Metropolis, Kenya, and collected primary data from respondents consisting of one audit manager per DT-SACCO. Secondary data was also collected to validate data on financial performance. Regression models were used to test hypotheses where risk assignment and risk-based audit planning proved affirmative to having a statistically significance effect on the financial performance of DT-SACCOs. The research established that corporate governance has a controlling effect on the association between risk-based audit and financial performance of DT-SACCOs. This research has contributed to the existing theoretical and empirical literature on risk-based internal audit and will inform the practice by helping the managers understand its importance and incorporate it into their firms. The findings will also encourage the regulatory body (SASRA) to be able to incorporate RBIA as a critical requirement for all DT-SACCOs.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Different continents name SACCOs differently. Some have named them credit unions since they offer credit to their members but here in Africa, they are called SACCOs. More than 85,000 credit unions operate in 118 countries worldwide. SACCOs provide community-based financial services and give people access to high-quality, affordable financial services (van Rijn, 2018). Over 274 million members, mostly dependent on low incomes, rely on SACCO to create opportunities, building family homes, and educating their children. Unlike credit unions in the world, SACCOs in Africa emphasize savings before credit. In Africa, there are over 39,000 credit unions with over 35 million members according to the World Council Statistical Report (2018). In Kenya, there are 7,301 credit unions with a total membership of over 7 million members. There are 163 SACCOs licensed by SASRA to undertake deposits from its customers in Kenya, SASRA (2020).

SACCOs are growing fast to respond to the client's needs and also due to the development of workplace SACCOs in Kenya. This has brought about the challenges associated with financial management which affect the financial performance of the SACCOs (Nkuru, 2015). Unlike banks and other lending institutions in Kenya, SACCOs have been providing credit facilities to all classes of citizens since the credit limit for the members of the SACCOs is dependent on their savings. Members, therefore, want a surety of the safeguard of their funds hence the issue of financial management comes into place. An increasing number of Kenyan SACCOs are whirling under the weight of mismanagement, fraud, and unscrupulous loans. Some DT-SACCOs in Kenya, have failed due to mismanagement and fraud by board and officials (Karimi, 2018).

Management should focus on business risks not visible by DT-SACCO in Kenya and the processes that control those risks. The high-risk area should be given more time for appreciation and client control. In addition to focusing on risk levels, risk-based methods help assess the financial reporting process and customer business activities to build value (Kariuki, 2017). This knowledge can be gained through how clients manage their

processes, internal and external environments. This enables them to plan an audit database that includes the most operative arrangement of tests that respond to each client's specific needs (Hesborn, Moronya, Michael & Nyagol, 2016). Despite the failure of some DT-SACCOs in Kenya, this is not due to the simplicity of the model, but also the adoption of weaker management styles, including SACCOs management mistakes, corporate governance, and internal audit models.

1.1.1 Risk-Based Internal Auditing

The institute of internal auditors (IIA) defines risk-based internal audit (RBIA) as a method of connecting internal audit to the establishment's general risk supervision structure (Ciobu, 2017). This allows internal audits to convince the board that the risk management process effectively manages the risks associated with potential risk instruments. Risk-based audits adhere to the specified format and are more effective than existing methods thanks to their existing methods.

RBIA enables the auditors to design their audit format and encourage them to brainstorm more on the strategies to employ on their audit because they are aware of the processes and the organization enabling them to study the organization better by identifying potential loopholes that could create an alert for potential risks in the firm (Drogalas & Siopi, 2017). Although firms have a strategic plan that they use for planning for their future prosperity, it can be a difficult task to adhere to them due to diverse influences that distress the firm both internally and externally. An audit comes in place to secure the firm from facing such challenges by ensuring that the organization complies with the set standards and also identifies potential threats, therefore, enabling easy mitigation.

RBIA approach focuses more on key areas of highest risk to a firm and then uses different strategies such as business objectives or controls to examine the sufficiency of the evidence to the area under study. Risk-based auditors must identify the audit activities which include: initiation, preparation, conducting, and reporting the results derived from the audit to the relevant stakeholders in the firm. This helps to assure that the financial statements provided reflect correct and unbiased opinions of the company's position (De Aquino, Carlos, Sigolo & Miklos, 2010).

Certain factors affect the prosperity of risk-based audit approaches in the organizations which include the following: audit maturity, risk assignment, and risk-based audit annual planning (Alemayehu & vom Brocke, 2010). The risk-based audit focuses on internal risks emanating within the firm and developing strategies on how to overcome and not on the financial transactions of the firm which could be easily manipulated to a point of no recognition (Esi, 2012).

1.1.2 Financial Performance

Refers to the practice of financially quantifying the outcomes of a company's strategies and processes (Mampira, 2018). It's used to quantify the general economic condition of a company for a period and comparability across industries or similar companies. A company's primary financial indicator is the return on assets (ROA), which determines the profitability of an asset and indicates how well the company is using the asset. Return on equity (ROE) indicates how management is effectively using the company's assets to generate profits, and return on investment (ROI) is the efficiency of investments made by the company. In addition to gross sales, operating revenue, operating profit, and operating cash flow can also be used. Investors and other stakeholders may examine the financial statements and inquire about margin increases and reductions in debt (Esi, 2012). Performance in the public sector is determined by comparing the actual annual results of a large budget. The resultant surplus or deficit provides cumulative information about the financial performance of the public entity (Kasiva, 2012). Unlike other businesses in the marketplace whereby firms make profits through the sale of a good to their clients, SACCOs make profits through investing of client's funds in activities that generate income for the SACCO and provide a surplus for the shareholders. The surplus of funds in a SACCO is related to the output per unit cost of that output which gives efficiency with which the SACCO is run.

1.1.3 The Sacco Sub-Sector in Kenya

The DT-SACCOs are regulated by SASRA in Kenya, which is responsible for the licensing, setting rules, and regulations that govern the SACCO sub-sector. The statutory state legal entity established under the Kenya Law SACCO Association Act (Cap 490B) was fully operational by the announcement of the SACCO Association (Deposit SACCO Business) as of June 8, 2010. There are 163 DT-SACCOs licensed by SASRA to take

deposits from their customers in Kenya (SASRA, 2020). Due to the simplicity of the Kenyan SACCO model, SACCO is popular with all households regardless of the socio-economic situation (SASRA, 2020).

The Kenya SACCO sub-sector is an important player in the achievement of Vision 2030 of organizing funds to meet the investment requirements of Kenya (Ndung'u, Otieno, Owino & Thugge, 2011). Kenya's SACCO sub-sector was accredited at the World Credit Cooperatives conference in 2013 in Canada and ranks first as the world's fast-expanding SACCO sector. Despite some SACCOs failing in Kenya, it is not due to the simplicity of this model, but rather due to SACCO management mistakes and the adoption of weak management styles, including the internal audit model (SASRA, 2020).

According to a study conducted by SASRA (2019), it revealed that there exists a total population of slightly over 4.97 million persons as well as corporate or institutional membership among the deposit-taking SACCOs. The growth and development of Front Office Services Activities (FOSA), which provides quasi-bank services, is evident that SACCOs are responding to its membership and market needs. Drafts of the 2010 SACCO Social Laws and Regulations set a four-year implementation period for SASRA to operate the FOSA at the start of the June 2010 Act and to license all appropriate SACCOs. SASRA also recognizes that compliance violations by individual SACCOs are unavoidable, and the legal framework provides a mechanism to address such events to comply with the policy. The mechanisms include the issuance of administrative directives, compliance with the law, conditional license, or revoking of license altogether.

In 2019, a new law was created to protect the amount saved by SACCO members based on poor cash management and fraud cases, which will allow SACCO directors to be screened to remove criminal civil servants in their departments (SASRA, 2019). It also aims to establish an investigation department to investigate irregular activities of deposit-handling institutions. This will ensure that the SACCOs will be compliant and therefore risk management will be considered hence this will be able to assure the SACCO members of the security of their investments and deposits.

1.2 Statement of the Problem

Today, some DT-SACCOs are facing performance issues despite integrating appreciation for their practices because they are unable to provide sufficient information about the company's situations (Jagongo & Mbewa,2013). Risk-based internal audit helps organizations identify high-risk areas of the company, prioritizes these areas, and results in high-quality reports that help improve the company's financial performance (Jagongo & Mbewa, 2013). An increasing number of Kenyan SACCOs are whirling under the weight of mismanagement, fraud, and unscrupulous loans. Some DT-SACCOs in Kenya have failed due to mismanagement and fraud by the board and officials (Karimi, 2018). Notwithstanding the presence of the audit department in those DT-SACCOs, if they could have adopted a risk-based approach of auditing and have strong corporate governance maybe the fraud could not have occurred. Despite the presence of Risk-Based Internal Audit in DT-SACCOs some have failed to perform well which prompted this study. Although DT-SACCOs have a risk-based internal audit, there are insufficient data to determine the impact on DT-SACCO's financial performance. Therefore, in this research, we pursued to explicate the impact of RBIA on the performance of DT-SACCOs. The research also sought to establish the moderating effect on the relationship between risk-based internal audit and financial performance of DT-SACCOs in the Nairobi Metropolis of Kenya.

1.3 Objectives

1.3.1 General Objective

The general objective of the study was to determine the effect of risk-based internal audit and corporate governance on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.

1.3.2 Specific Objectives

- i. To determine the effect of risk maturity on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.
- ii. To determine the effect of audit assignment on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.
- iii. To determine the effect of risk-based audit planning on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.

- iv. To evaluate the moderating effect of corporate governance on the association amongst risk-based internal audit and financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.

1.4 Research Hypotheses

- H₀₁:** There is no significant effect of risk maturity on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.
- H₀₂:** Audit assignment does not have a significant effect on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.
- H₀₃:** Risk-based audit planning does not significantly affect the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.
- H₀₄:** There is no moderating effect of corporate governance on the association amongst risk-based internal audit and financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.

1.5 Scope of the Study

This study covered only 43 DT-SACCOs licensed by SASRA within Nairobi Metropolis. Nairobi Metropolis was considered as it had the highest concentration of DT-SACCOs and those spread across several sectors such as formal employment, transport, and informal sectors. Additionally, DT-SACCOs in Nairobi Metropolis are accessible and deemed to have incorporated risk-based internal audits. From each DT-SACCO, responses were only limited to one respondent per SACCO where only 43 audit managers from the 43 DT-SACCOs participated in the study. The three indicators considered for RBIA were risk maturity, risk assignment, and risk-based audit planning. The performance of DT-SACCOs was only limited to financial performance where only three ratios (ROA, ROE and, ROI) were investigated. Corporate governance was the only mitigating variable considered concerning risk-based internal audit and DT-SACCO's financial performance.

1.6 Significance of the Study

The research remains of great significance towards policy developers, SACCO administrators, and investigators. The research has policy suggestions and endorsements that policy makers can use to formulate policies aimed at deterring DT-SACCO's fraud, establishing good corporate governance, and realizing improvements in financial performance. To academia, discoveries in this study have both theoretical and

methodological contributions. Theoretically, this study shows how to fix patterns or relationships between study variables by applying three theories: police theory, fraud triangle theory, and audit theory to one study. Methodologically, this study has demonstrated the effectiveness of using a descriptive study design. Finally, this study provides practical assistance to the audit department for auditing departments to conduct risk-based internal audits and uncover specific aspects they should focus on.

1.7 Limitation of the Study

This survey was only based on DT-SACCOs, which operate from the Nairobi Metropolis, the findings can only be generalized within this area. Some audit managers were reluctant to respond to the questionnaires for fear of unknown although the issue was overcome by assuring the respondents that the questionnaires were only aimed at obtaining responses for academic purposes only.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter entails a hypothetical assessment of the significant philosophies that supported this research. Additionally, an empirical analysis of previous studies on RBIA is presented. This research was grounded on the triangle theory of fraud, the audit theory, and the police theories, which are closely related to this study and have helped to build the connection between the research variables. This chapter also drew a conceptual framework to provide insight into the relationships between variables. The conceptual framework features the liberated variables of risk maturity, audit assignment, RBIA planning against a dependent variable (financial performance of DT-SACCOs).

2.2 Theoretical Review

This research used three theories to explain the concepts between variables. The theories include audit theory, fraud triangle theory, and policeman philosophy.

2.2.1 Audit Theory

This theory initiated by Mautz and Sharaf in 1961, argues that audit knowledge can be expressed in the form of a pie chart. The circular chart in the center has the most important types of knowledge, mathematics, and logic. The philosophical basis is to verify the core and draw out strengths at the starting point of knowledge. It shows the level and nature of the knowledge and methodology of gratitude, as well as an important part of the field of gratitude. The approach to auditing adopted by auditors represents the theory of auditing. Audit theory exists to demonstrate the need for an audit of a company and reveals new methods or laws on how to conduct audit procedures and activities.

This theory reveals the changing role of audit and the need for new changes in the future. The concept is fundamental for inferring. Founders must be aware of the opportunities and restrictions of the development and evaluation of relevant, harmonious, risk-based audits related to this goal. The field of audit shows a field of knowledge that grows outwardly and contiguously in its philosophical basis, conceptual structure, concept and practice, and application. This theory was essential for this study as it explained new changes in the role of audit and the need for new changes in the future. This theory relates to the variables of

an audit assignment and audit planning as it explains the need for the auditors to keep on learning about the changes that happen.

2.2.2 Fraud Triangle Theory

The Fraud Triangle Theory was advanced in 1953 by an US criminologist Donald Cressey to explain the factors that lead to fraud and other unethical behavior. It provides a framework for firms to analyze their vulnerability to fraud and unethical behavior. It uses three factors to expound how fraud can be committed in an organization: Pressure-this comes from the surrounding of the individual committing the crime for instance money problems, alcohol or drug addiction, opportunity-this involves the presence of an opportunity to commit fraud, and rationalization-this involves the justification of unethical act to be ethical (Cressey, 1953). Cressey (1953) believed that for a crime to be committed the mentioned factors must be present in the organization. The figure below explains the fraud triangle theory factors.

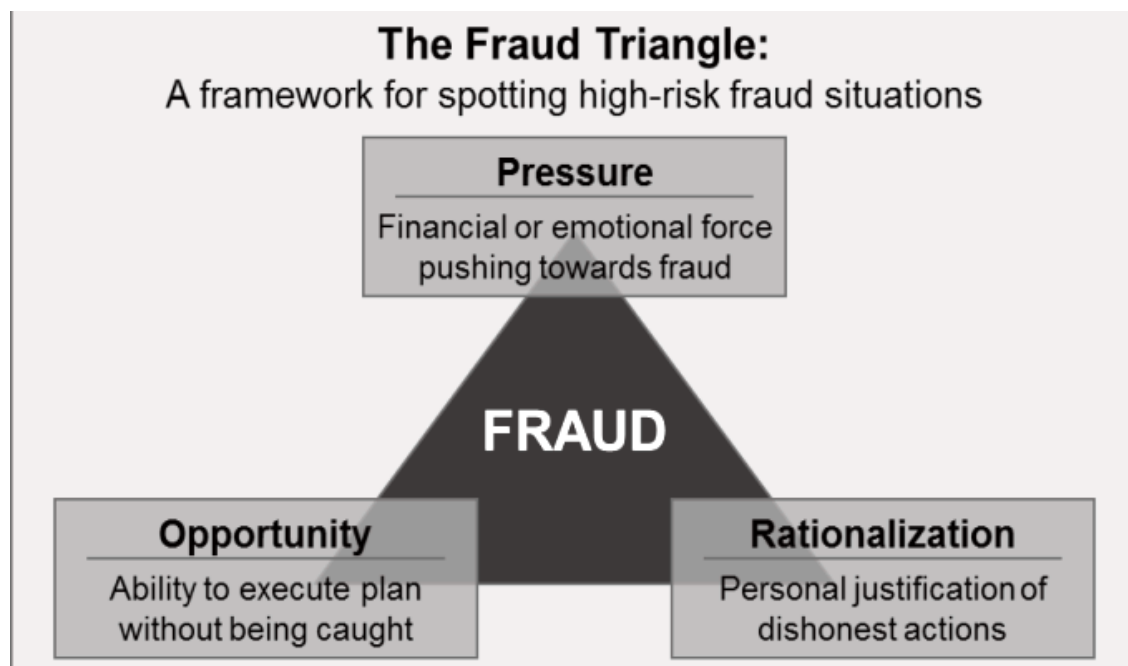


Figure 2.1: Fraud Triangle Theory (Wikipedia,2010)

Despite the weaknesses of this theory in the explanation of the factors present for a crime to take place, there exist many factors in an organization that creates avenues for crimes to be committed in an organization. Technological advances and the continued development of a global business environment provide improved tools for enactment and channels and

additional challenges, as well as sabotage, detection, and investigation of employee fraud. Organizations are increasingly demanding external auditors and forensic accountants to play an important role in helping prevent and detect employee fraud (Sujeewa, Azam, Isuri, Gamlath & Mohd, 2018).

This theory was best suited for this study as it is concerned with risk which potentially leads to crime/fraud in organizations. This theory explains the relationship between the research variables and their contribution to fraud, which leads to negative consequences for the organization. The variables that this theory relates to are: audit assignment- as this is the people involved in the provision of reports on the state of affairs of the firm and have an opportunity and also pressure to commit fraud in the firms and justify their unethical acts, risk maturity- this is involved with the determination, assessment, management and monitoring of risks.

2.2.3 Policeman Theory

Policeman theory was advanced by Dutch professor Theodore Limperg in the late 1920s (Salehi, 2011). According to the theory, the auditor is responsible for the revealing and preclusion of fraud. However, the main focus of recent auditors is to provide reasonable assurance and integrity of financial statements. This is also a challenge to the organization as there is the inability to shift the focus of this theory to the detection of frauds in an organization because the board and management are interested in knowing if the financial statements tabled reflecting truthful and impartial opinions about the company. Despite the weaknesses of the policeman theory, it best explains the need for auditors in the firms to presume their role in the organization and act as “policemen” in the prevention of the occurrence of fraud. This is evident because some of the SACCOs today are failing due to the lack of oversight by internal auditors who are responsible for advising the management and giving a verdict on the state of affairs of the firm. This theory relates to all independent variables in the study.

2.3 Empirical Review

2.3.1 Risk Maturity

Risk maturity is the measure adopted by firms for their enhancement of the understanding of their overall risk position as well as the benefits accrued from risk management initiatives. Risk maturity is underpinned by four key pillars: culture, people, process, and application. For this study, four sub-variables of risk maturity which also form the process of risk maturity: risk determination, risk assessment, risk management, and risk monitoring were investigated.

In a study conducted on risk management, a maturity model based on ISO 31000 provided an assessment tool for organizations to use to get their current risk maturity level (Wieczorek-Kosmala, 2014). Therefore, that research focused on a maturity model as opposed to this study which looked at the key sub-variables of risk maturity. Most firms do not take into consideration of their risk maturity levels which affects the implementation of risk management standards. Surveys conducted on the perspective of risk-based internal audits provided to companies or banks have shown that an organization's audit plan can be created by assessing the maturity of the risks (Danescu & Sandru, 2010). The study also outlined the steps for practical implementation. Although this study based its approach on the assessment of risk maturity, the current study captured all the sub-variables of risk maturity to repudiate the same.

Risk monitoring involves the tracing and tracking of risk management execution practices and the continued establishment of new ways to manage new risks. Risk monitoring is a crucial process of risk maturity. A study conducted on the role of credit referral agencies in Kenya's credit access uses risk monitoring to ensure that risk management practices are consistent and help banks better manage their levels of risk (Gaitho, 2013). In this study, the goal was to confirm the fact that risk monitoring impacts DT-SACCO's performance. Research conducted on the impact of credit administration risk processes on un-paid mortgages of money-making in Kenyan banks has demonstrated that risk management is paramount for moral management practices, and also that insufficient credit risk

administration can increase the level of non-performing loans (Jaldesa, 2013). This study shows that risk management is crucial as an aspect of risk maturity.

2.3.2 Audit Assignment

Assignment of individual auditors assures part of the risk management framework, including individual or group risk reduction. According to the Association of Chartered Certified Accountants (ACCA), through internal audit reports, the efficiency of control for risk management, a balanced overview for key effective control, agreed measures address areas of improvement that can be identified in the audit. Research on the impact of RBIA arranged towards streamlining SACCO deposit operations in Nairobi County, Kenya, has a positive impact on operational efficiency through increased profitability, business sales, and volume (Riungu, 2018). This study could have looked at individual assurance audits as a key component for increased operational efficiency. The focus of this study was on the evaluation of individual audit assignments for DT-SACCO's financial performance.

A study conducted on the business consulting services and performance of Kenya KMPG SMEs 100 showed that consulting is an important part of any business to improve the performance of its enterprises (Mungai, 2012). Audit assignment and consulting are interlinked in that the individual assignments carried by auditors to enable them to group risks and set up an audit universe enables them to be able to report to stakeholders hence providing consulting services.

Another study was conducted on the impact of risk credit administration processes on the cost-effectiveness of DT-SACCOs in Nairobi County, Kenya (Makori, 2015). An affirmative association was shown between the variables that were studied. Some variables of the research such as credit monitoring, debt collection practices, and credit appraisal activities are somehow related to this variable under study which helped determine its effect on financial performance in DT-SACCOs.

2.3.3 Risk-Based Internal Auditing Planning

Most of the organizations do not take into consideration the planning of the audits. Proper planning enables the management to accomplish the audits for some time and therefore ensuring efficiency (Njeri, 2013). In most cases, the firms do not plan for the number of

audits they would like to conduct in a given period but the management always has a strategic plan in which the audit is stipulated. By regularly scheduling audits, management can make informed decisions based on available information so that, if necessary, information is available when the audit is conducted.

Kasiva's (2012) study of the influence of RBIA on the economic wellbeing of Kenyan money-making commercials concluded that there is a need to strengthen risk administration, risk-based organization, internal auditing standards, and internal examination. This shows that risk-based audit planning should be encouraged in all firms to improve the effectiveness of the firm, improving the financial performance of the firms. By planning regular audits, businesses can spot risks timely and focus on uncertain areas, improving accountability and clarity improving corporate performance (Kasiva, 2012).

Risk-based audit plans help organizations develop audit plans to the extent that they integrate a business, business process, risk, and control-focused understanding of risk dependencies and interdependencies (Pickett, 2006). As the auditors have to provide a truthful and impartial view of the situation, they also have a choice to plan for regular audits as the management requires them to make decisions about the firm. Many firms are faced with the challenges of planning for their audit due to the unavailability of resources and the capacity to do so and therefore, there was a need to establish how often the SACCOs plan for their audits.

2.3.4 Corporate Governance

Corporate governance means a system in which a company directs and controls (Magiri, 2014). SACCOs are under the ownership of members who at an annual general meeting (AGM) elect officials. The officials are responsible for running the organization through committees, each of which has a role in the management of SACCO. To introduce an effective RBIA, DT-SACCO's governance must embrace corporate governance and welcome it to become part of the company's processes. Poor governance results in SACCO's failure which might lead to misappropriation and mismanagement of the members' funds. According to Odera, (2012), problems arise in SACCOs due to lack of clear and proper segregation of duties, unqualified personnel in management, and

inadequate managerial competitiveness. For this reason, this research tried to establish the mitigating result of corporate governance on RBIA and DT-SACCO's financial performance.

2.4 Conceptual Framework

The conceptual arrangement shows an interconnection structure by showing graphical representation of the independent and reliant variables and how the liberated variables can affect the reliant variable (Nalzaró, 2012; Adom, Dickson, Samuel, Kofi, Abass & Kissi, 2016). It outlines the avenue of research and gives it a firm rationale for the structure in theory (Adom *et al.*, 2016). The conceptual framework will represent a diagrammatic view of how: risk maturity, audit assignment, and audit planning affect the performance of firms under the moderating effect of corporate governance. Nalzaró (2012), argued that a conceptual framework consists of specific concepts derived from empirical observation and intuition which are also positioned within a consistent and chronological scheme. Risk maturity involves the study of some sub-variables: determination, assessment, management, and monitoring of risk. Assessment assignment features group risks and how individual auditors set up the audit universe. Audit planning seeks to establish the intervals of audits and strategic plans on audits and their effect on performance. The ultimate driving force of a company is its management, this study attempted to find how corporate governance affects RBIA and DT-SACCO's financial performance, since all factors are influenced by the company's management.

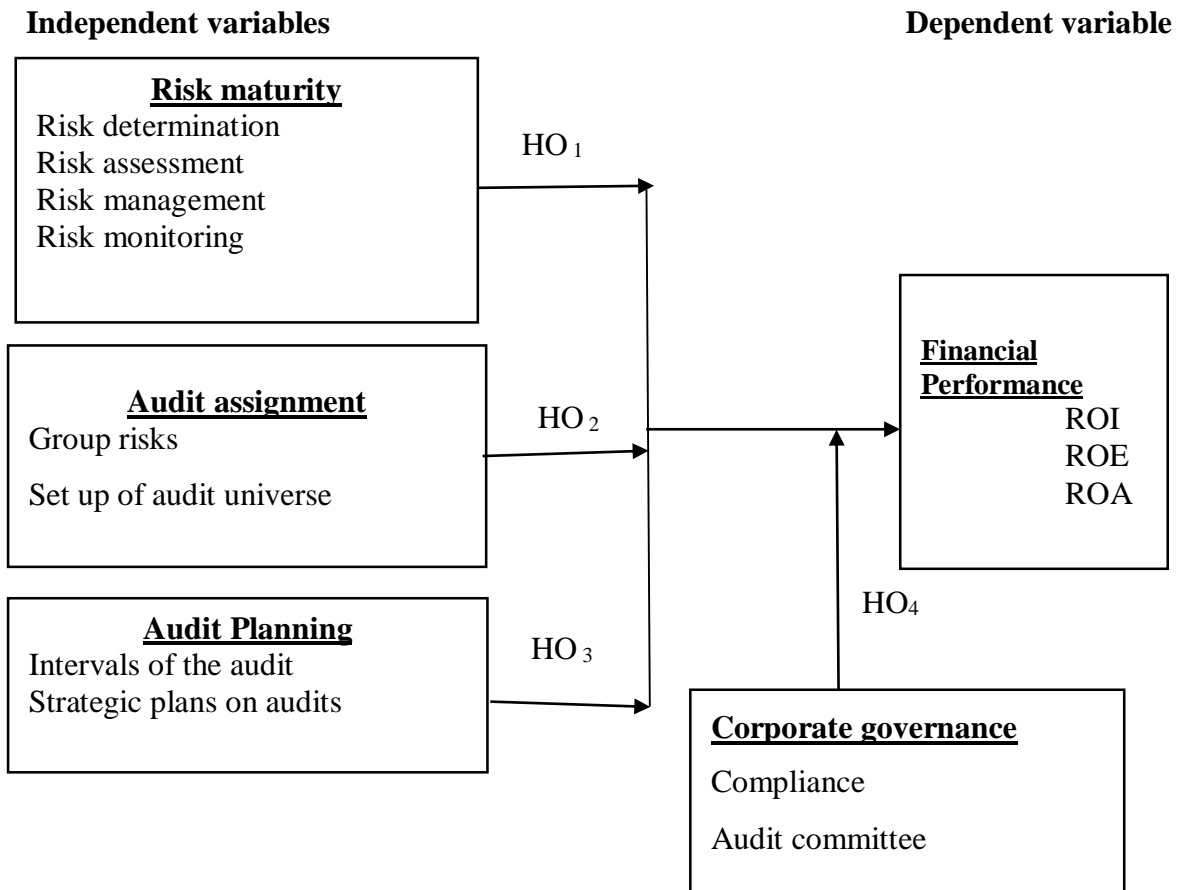


Figure 2.2: Conceptual Framework

2.5 Summary of Reviewed Literature

In this research, three theories that anchored the research were investigated. They include audit theory, policeman theory, and fraud triangle theory. The theories are risk-oriented as they were able to explain the variables under the study. This study had three independent variables risk maturity, audit assignment, and audit planning. The study also employed a moderating variable of corporate governance. It also employed the use of hypotheses which are educated guesses whereby the researcher used logic and scientific findings to prove or disapprove assumptions. The conceptual framework was developed to determine the associations that exist amongst the liberated variables and reliant variables. The conceptual framework can be adapted or adopted in other research work in the future.

2.6 Research Gaps

In 2016, the influence of risk-based auditing on the economic wellbeing of public enterprises in the State Department for Labour of the Kenya East African Community was investigated (Muraguri, 2016). The study established a positive relationship between the variables studied. The study employed a descriptive research design with a biased sampling method as opposed to this current study which employed a descriptive research design anchored on a scientific sampling procedure. Marete in 2014 did a study that focused on commercial state corporations having employed descriptive survey research and established a positive relationship between the variables under study (Marete *et al.*, 2014). However, this study was anchored on different theories hence forming a basis of the theoretical gap.

In 2013, Njeri conducted an examination on the impact of risk-based audits on the financial wellbeing of deposit-taking microfinance establishments in Kenya (Njeri, 2013). The study found a good relationship between the variables studied, however, it employed a correlation research design and tackled risk-based audit in general without mentioning whether it's internal or external.

In 2012 Kasiva scrutinized the influence of risk-based audits on the performance of the Kenyan funding segment (Kasiva, 2012). This study established a positive effect on the variables studied. However, the researchers used a correlation research design as opposed

to the current study where the context is different. Risk maturity assessments enable an organization's audit planning, according to studies on the perspective of the RBIA provided to businesses and banks (Danescu & Sandru, 2010). The research did not focus on the key elements of risk-based internal audit as considered by the current research.

A study conducted on the role of credit referral agencies in Kenya's credit access used risk monitoring to ensure that risk management practices are consistent and help banks better manage their levels of risk (Gaitho, 2013). The research tackled credit as an external risk factor to firms while the current study emphasized risks among DT-SACCOs.

An investigation on the impact of credit risk administration processes on bad debt of money-making banks in Kenya has demonstrated that risk administration is paramount for a good management process and that insufficient credit risk administration can increase the level of bad debts (Jaldesa, 2013). This research despite having mentioned credit risk management practices it needed also to incorporate an audit factor in it.

An investigation on the impact of RBIA on streamlining SACCO deposit operations in Nairobi County, Kenya, had a positive impact on operational efficiency through increased profitability, business sales, and volume (Riungu, 2018). Compared to the variables used in this study, this study used different variables, thus lacking the use of core variables for risk-based internal auditing.

CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the examination scheme and approach used. This chapter introduces the target respondents, sampling technique and research sample size, data collection tool, pre-testing, and data analysis.

3.2 Research Design

There are numerous designs however, this research used a descriptive survey to realize the superlative outcomes (Sekaran & Bougie, 2009). Descriptive design enables the collection of data to test the propositions or retort to enquiries on the research topic (Cooper & Schindler, 2014). The descriptive design of the research is a controlled method that includes detecting and recitation the behavior of one or more subjects without affecting it in any way (Cooper & Schindler, 2014), so it is dependable with the goal of this research because the investigator cannot control the investigation variables (independent variables, moderating variable, and dependent variable).

3.3 Population of the Study

As of January 2021, the accessible number of DT-SACCOs in Kenya was 175, which were licensed by SASRA (SASRA, 2021). The objective population for this study was 43 DT-SACCOs in the Nairobi Metropolitan area of Kenya, as shown in Appendix VI. The study employed the use of one respondent (audit manager) from each DT-SACCO. Due to the number of SACCOs in Nairobi Metropolis, a census approach was adopted indicating that all the 43 DT-SACCOs were included in the study. According to Gupta (2008), research that collects too much data is a waste.

3.4 Sampling Technique and Sample Size

This research used a census approach of 43 DT-SACCOs in the Nairobi Metropolis, so there was no sampling. For most studies, a sample size of 30 to 500 is adequate (Gupta, 2008). Therefore, having 43 DT-SACCOs was adequate to elicit inferences.

Nairobi's DT-SACCOs were selected since they had adopted and had integrated risk-based internal audits.

3.5 Data collection instrument

This research used first-hand facts obtained via structured self-filling questionnaires. According to Gall, Borg, and Gall (1996), questionnaires are most suitable for collecting data from surveys where they save time for data collection. Cooper and Schindler (2014) asserted that data collected from the questionnaire is easier to analyze descriptive and inferential statistics. The questionnaire included the use of closed-ended questions that used the Likert scale to indicate the extent to which variables affected SACCO's performance. The Likert scale had a 5-point scale of measurement: a very great extent, a great extent, a moderate extent, a little extent, and no extent. The respondents were requested to specify the degree to which independent variables affected the dependent variable. The research respondents involved the audit managers of the DT-SACCOs who were purposively sampled as they were deemed competent on RBIA and could therefore provide adequate, quality, and credible information needed for this study. The questionnaires involved the use of a drop and pick procedure for the gathering of data required for the research and also an emailed-based questionnaire to back up the data collected. To validate the primary statistics, secondary statistics were also obtained using the supplementary data collection sheet in Appendix III. This data covered five years (2015, 2016, 2017, 2018, and 2019) and included annual data on ROA, ROE, and ROI.

3.6 Data Collection Procedure

The investigator commenced the exercise of statistics collection by first obtaining a research permit from NACOSTI, together with an approval letter from the Board of Postgraduate Studies, University of Embu. The questionnaires were sent by the researcher to the study area for data collection using a drop and pick method. This is after conducting a preliminary investigation to determine the validity and reliability of the investigation tool. To strengthen the data collection, the researchers took the time to establish a relationship with the audit manager, while affirming that the obtained data will only be used for scholastic determinations only. Thereafter, the researcher visited SASRA's Nairobi office to collect secondary data used only to verify the original data obtained using questionnaires. Secondary data came from the licensed DT-SACCOs published financial reports submitted to the SASRA as required by the law governing DT-SACCOs.

3.7 Measurement and Operationalization of Variables

Table 3.1: Measurement and operationalization of variables

Variable	Sub-variable (s)	Nature	Levels of Measurement (5 Point Likert Scale)
Financial Performance of SACCOs (Y)	ROA	Dependent Variable	Ordinal
	ROE		Ordinal
	ROI		Ordinal
Audit Maturity (X ₁)	Risk determination	Independent	Ordinal
	Risk assessment		Ordinal
	Risk management		Ordinal
	Risk monitoring		Ordinal
Audit assignment (X ₂)	Group risks	Independent	Ordinal
	Set up of audit universe		Ordinal
Risk-based Audit Plan (X ₃)	Intervals of the audit	Independent	Ordinal
	Strategic plans on audits		Ordinal
Corporate Governance (P)	Compliance	Moderating Variable	Ordinal
	Audit committee		Ordinal

Source: Author (2021)

3.8 Pretesting of Research Instruments

As recommended by Mugenda in 2003, a preliminary study was conducted to pretest the survey using 15 Deposit-Taking SACCOs to establish the consistency, accuracy, and strength of the tool. Piloting the questionnaire enabled the elimination of any inconsistencies in the wording and formatting of the questions. From the pre-test, repeated questions were eliminated. Issues of incomplete and unclear questions were also resolved through the pre-test. Data from the pilot study was also important in evaluating the reliability of the questionnaire before actual administration took place.

3.8.1 Validity Test

The questionnaire was checked for face, content, construct, and internal validity. Face validity was ensured by getting input from five lecturers in the School of Business and Economics who were expected to give feedback on the various items included in the questionnaire. Content validity was ensured by getting feedback from two experts who were familiar with a risk-based internal audit where they validated that key components of the risk-based internal audit were incorporated in the instrument. Content validity was also enhanced by adopting established measurement scales that are documented in the literature on risk-based audits. Hypothesis soundness was achieved by confining the hypothesis to the concept of a variable and ensuring that the sub-variables were in the same concept. This was to ensure that each measurement was properly evaluated for the composition it was envisioned to evaluate. The internal soundness of the questionnaire was certified by adequately covering all variables in the survey.

3.8.2 Reliability of the Instrument

Cooper and Schindler (2014) recommend testing the reliability of questionnaires to ensure that the meter consistently measures what is intended. Consistency relates to the estimation of the degree to which measurements are free from random or unstable errors. Cronbach's alpha factor was used to ensure the consistency of the survey. The value of Cronbach's alpha coefficient ranges from zero (zero means no internal consistency) to 1 (1 means complete internal consistency between questionnaire elements). According to George and Mallery 2003, a decision can be generated by following the general rule to determine the consistency of measurement instruments: 0.9 exceptional, 0.8 worthy, 0.7 satisfactory, 0.6

uncertain, 0.5 underprivileged, and less than 0.5 objectionable. Following Sekaran's (2003) recommendation, a coefficient of 0.70 was used to govern the dependability of the instrument. From the 15 questionnaires filled during the pilot study, a reliability test was conducted generating the results given below.

Table 3.2: Reliability Test Results

Measures	No of Objects	Cronbach's coefficient	Observations
Risk maturity	4	0.78	Consistent
Risk assignment	2	0.76	Consistent
Risk-based audit planning	4	0.79	Consistent
Corporate governance	4	0.73	Consistent
Financial Performance	3	0.79	Consistent
Overall Instrument Reliability	17	0.77	Consistent

The Cronbach's alpha values for the risk maturity, risk assignment, and risk-based audit planning were 0.78, 0.76, and 0.79 respectively. Corporate governance indicated a Cronbach's alpha value of 0.73. Finally, the dependent variable (financial performance) had a Cronbach alpha value of 0.79. Consequently, the study variables satisfied the requirement for internal reliability and were therefore included in the final version of the questionnaire used for actual data collection. The overall instrument reliability was also evaluated whereby a coefficient of 0.77 was obtained indicating that the instrument was reliable for purposes of collecting data required to draw inferences on the hypotheses.

3.9 Data processing and analysis

Upon receiving all the questionnaires, preparation of data including data cleaning coding and entry was done as proposed by Saunders, Lewis, and Thornhill (2007). Data cleaning was done to remove incomplete, erroneous, and irrelevant responses whereas data coding was done to provide succinct representation in the statistical software. The analysis proceeded in two stages, in the first stage frequencies, percentages, means, and standard deviations were generated. The second phase involved running two regression models (direct regression model and moderating regression model) to generate inferential statistics

used to test hypotheses to conclude as per the specific objectives. Regression models generated coefficients, t-statistics, and the corresponding p-values. Hosmer and Stanley (2000) emphasize that regression methods are becoming an essential component of data analysis involved in explaining the association amongst a reaction variable and one or more expounding variables. To run the model, the composite indices of the variables were calculated using the arithmetic mean. ANOVA is integrated into analysis tests and was used to define if the analysis worked to account for different relationships. If the p-value is superior to 0.05, it means that the liberated variables does not predict the reliant variable and therefore the model is not working. Although, a p-value below the assurance level of 0.05 means that the model works, thus instituting an important relationship between variables in the research. In the case of hypothesis testing, the insignificant proposition was overruled if the p-value was below 0.05. Otherwise, it has not been rejected. The coefficient of determination (R^2) was used to quantify the disparity in the reliant variable explained by the liberated variable.

3.9.1 Empirical Models

3.9.1.1 Effect of Risk-Based Internal Audit on Financial Performance of DT-SACCOs

To test the first three hypotheses, the study used multiple linear regression with an emphasis on risk maturity, audit assignment, and risk-based audit planning. In 2002 and 2014 according to Faraway and Brooks respectively, the model is selected when the dependent variable has more than one continuous independent variable. The equation shown below was used:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \quad \dots\dots\dots \text{Equation 3.1}$$

Whereby Y= Financial Performance of DT-SACCO, X_1 = Risk Maturity, X_2 = Audit Assignment, X_3 = Risk-based audit planning, ε = error term, β_0 = constant term, β_1 - β_3 = coefficients of the independent variables

3.9.1.2 Moderating Effect of Corporate Governance

To investigate the moderating outcome of corporate governance on risk-based internal audit and its relationship to DT-SACCO's financial performance, the composite index representing all the three independent variables (risk maturity, risk assignment, and risk-based audit planning) interacted with corporate governance following the

recommendations by Aiken and West (1991). Therefore, moderating effect was based on the model shown below as recommended by Aiken and West (1991).

$$Y = \beta_0 + \beta_1 X_i + \beta_2 P + \beta_3 X_i P + \epsilon \quad \dots\dots\dots \text{Equation 3.2}$$

Where, X_i = Composite index representing the three independent variables (risk maturity, risk assignment, and risk-based audit planning), P = Corporate Governance, $X_i P$ = Interaction variable (X_i interacted with corporate governance), β_0 = Constant term, β_1 = Coefficient of the independent variables, β_2 = Coefficient measuring the direct outcome of corporate governance on the performance of DT-SACCOS, β_3 = Coefficient measuring the moderating outcome of corporate governance on the association amongst RBIA and financial performance of DT-SACCOS.

Equation 3.2 showed the interaction of the liberated variable and the moderating variable, denoted as ($X_i P$). If β_3 has a non-zero value (value less than 0.05, null hypothesis is rejected), null hypothesis is accepted.

3.10 Research Ethical Considerations

To solve ethical issues, the researcher took several steps. First, the researcher obtained a letter of authorization from the Board of Postgraduate Studies (BPS) of Embu University. Secondly, a research permit was obtained from NACOSTI. Thirdly, prior consent was paramount before the commencement of data collection through the respondents' voluntary acceptance. In addition, the interviewees were informed about their rights and how the information obtained will be used for investigation determinations only. Finally, throughout the collection of data, the researcher ensured not to access or request for information that shows the respondent's name, phone number, address, or other identifying characteristics.

CHAPTER FOUR
RESULTS, INTERPRETATION, AND DISCUSSIONS

4.1 Introduction

This section emphasis on data analysis, interpretation, and presentation. This chapter covers demographic characteristics, the descriptive statistics of the three independent variables (risk maturity, audit assignment, and risk-based audit planning), moderating variable (corporate governance), and dependent variable (financial performance of DT-SACCOs). The chapter also presents inferential statistics aimed at addressing the four hypotheses stipulated in chapter one.

4.1.1 Response Rate

The research acquired responses from a sample of 43 DT-SACCOs in the Metropolitan City of Nairobi. Therefore, 43 questionnaires were issued for each deposit-taking SACCO whose respondents were audit managers. After confirming the inclusiveness and non-response cases of survey forms, 41 surveys were properly filled signifying a response rate of 95.34%. One questionnaire was not returned while one questionnaire was disqualified due to incompleteness and inconsistencies. Table 4.1 exemplifies the summary of the response rate.

Table 4.1: Response Rate

Responses	Frequency	Percentage
Managed questionnaires	43	100
Unanswered Questionnaires	1	2.33
Disqualified questionnaires	1	2.33
Returned and correctly filled questionnaires	41	95.34

Source: Survey Data (2021)

According to Babbie (2004), Mugenda and Mugenda (2003) and Saunders et al. (2007), a 50% response rate is satisfactory, a 60% is respectable, and a 70% is reputable. The response rate of 95.34% witnessed in this investigation was therefore reputable and was adequate to drawing inferences on the variables under investigation including testing of the stipulated hypotheses.

4.2 Demographic Characteristics

The items in Part A of the questionnaire were used to investigate the demographic features of the people who participated in the research. Survey outcomes are listed in this section by gender, age, the highest level of education, professional course certification, and the number of years of work.

Table 4.2: Gender

	Frequency	Percentage
Female	10	24.4
Male	31	75.6
Total	41	100.0

Source: Survey Data (2021)

According to the outcomes in Table 4.2, 24.4% of the respondents are women, while 75.6% are men. This means that in most SACCOs, gender balance is still an audit management issue, which can be further investigated.

The research also tried to derive the age of the respondents who participated in the study. The outcomes are displayed in Table 4.3.

Table 4.3: Age

	Frequency	Percentage
21-30	2	4.9
31-40	12	29.3
41-50	16	39.0
Above 50	11	26.8
Total	41	100.0

Source: Survey Data (2021)

According to Table 4.3, the most of respondents were between the ages of 41 and 50 years (39%), and those between the ages of 31 and 40 years were 29.3%. While 26.8% of respondents were 50 years and older, only 4.9% were aged 21 to 30 years. The low number of respondents between 21 and 30 years implies that the selection of audit managers by SACCO Boards is mostly determined by experience which relates well with age.

The study also required finding the highest education level for the respondents who contributed in the study. Table 4.4 summarizes the results of the education level standards.

Table 4.4: Highest Level of Education

	Frequency	Percentage
College	15	36.6
University	26	63.4
Total	41	100.0

Source: Survey Data (2021)

From Table 4.4, 63.4% of the respondents had acquired University Education as their highest qualification while 36.6% had acquired only a college education. This implies that most audit managers working in the DT-SACCOs are University graduates.

The research also required to find out the qualifications of the specialized courses held by the respondents. The findings are listed in Table 4.5

Table 4.5: Professional Course Certification

	Frequency	Percentage
ATD	4	9.8
CIFA	13	31.7
CPA	24	58.5
Total	41	100.0

Source: Survey Data (2021)

According to Table 4.5, most respondents possessed a certified public accountant (CPA) certification (58.5%) while only a few possessed an accounting technician diploma (ATD) certification. The respondents who possessed certified investment and financial analysis (CIFA) certification were 31.7%. This finding implies that CPA remains a popular certification within the community of auditors working in DT-SACCOs.

The survey also required respondents to disclose how long they had worked for DT-SACCOs. The findings are summarized in Table 4.6.

Table 4.6: Number of Years Worked

Years	Frequency	Percentage
2-5	5	12.2
6-9	17	41.5
Above 9	19	46.3
Total	41	100.0

Source: Survey Data (2021)

According to Table 4.6, most respondents had worked in their DT-SACCOs for more than 9 years (46.3%), while only 12.2% had worked for 2-5 years. Between 6 and 9 years, respondents accounted for 41.5% of all respondents. The discoveries in Table 4.6 specify that most audit managers are appointed from experienced employees who have stayed longer in the DT-SACCOs.

4.3 Risk Maturity

In this investigation, determination of how far the Deposit-Taking SACCOs' risk maturity had progressed was determined. Descriptive statistics for risk levels are presented in Table 4.7.

Table 4.7: Extent of Implementation of Risk Maturity

	N	Minimum	Maximum	Mean	Std. Deviation
To what extent is the DT-SACCO concerned with risk determination?	41	1.00	4.00	2.6585	.72835
To what extent is the DT-SACCO concerned with risk assessment?	41	1.00	4.00	2.7073	.74980
To what extent is the DT-SACCO concerned with risk management?	41	1.00	4.00	2.7317	.70797
To what extent is the DT-SACCO concerned with risk monitoring?	41	1.00	4.00	2.7805	.75869

Source: Survey Data (2021)

According to Table 4.7, most interviewees agreed with a moderate level (mean = 2.66, standard deviation = 0.73) that DT-SACCOs were concerned with risk determination. Further, most respondents approved to a moderate extent that the DT-SACCOs were concerned with risk assessment (mean = 2.71, standard deviation = 0.75) while the majority agreed to a moderate extent that DT-SACCOs were concerned with risk management (mean=2.73, standard deviation = 0.71). Lastly, when asked the extent of risk monitoring, most of the respondents approved to a moderate extent (mean = 2.78, standard deviation = 0.76). Comparing the three aspects of risk maturity, it is clear that DT-SACCOs were doing slightly better in risk monitoring compared to risk determination and risk assessment.

4.4 Audit Assignment

The study targeted to determine the scope of the audit tasks and their influence on the financial performance of DT-SACCOs. Table 4.8 shows the extent of implementation of audit assignment in the DT-SACCOs.

Table 4.8: Extent of Implementation of Audit Assignment

	N	Minimum	Maximum	Mean	Std. Deviation
To what extent does the DT-SACCO group risk?	41	1.00	5.00	3.5366	1.07465
To what extent does the DT-SACCO concerned with setting up an audit universe?	41	2.00	5.00	3.5122	.89783

Source: Survey Data (2021)

Table 4.8, shows that most interviewees strongly approved (mean = 3.54, standard deviation = 1.07) that risk sharing is carried out in their DT-SACCO to a large extent. In addition, most interviewees strongly agreed (mean = 3.51, standard deviation = 0.90) that their DT-SACCOs focused on establishing the scope of the audit. Based on the two aspects investigated concerning audit assignment, the majority of the respondents observed that grouping of risks was implemented to a larger extent compared with the setting up of an audit universe.

4.4 Risk-Based Audit Planning

The study required to find out the scope of implementation of a risk-based audit plan and its impact on performance DT-SACCO's. Table 4.9 displays the extent of enactment of risk-based audit planning in the studied DT-SACCOs.

Table 4.9: Extent of Implementation of Risk-Based Audit Planning

	N	Minimum	Maximum	Mean	Std. Deviation
To what extent does the DT-SACCO have the intervals of its audits?	41	1.00	5.00	3.5610	.94997
To what extent does the firm plan for strategic audits for the firm?	41	2.00	5.00	3.5610	1.00122
To what extent does the management encourage the conducting of risk-based audits?	41	2.00	5.00	3.5610	1.00122
To what extent is the activeness of the audit committee on risk-based planning?	41	2.00	5.00	3.7073	1.05461

Source: Survey Data (2021)

According to Table 4.9, most of the interviewees agreed to a great extent (mean = 3.56, standard deviation = 0.95) that their DT-SACCOs had intervals in their audits. Additionally, most of the interviewees agreed to a great extent (mean=3.56, standard deviation = 1.00) that strategic audits were planned. Concerning management encouragement of risk-based audits, most of the interviewees agreed to a great extent (mean = 3.56, standard deviation = 1.00) which indicated that the management of DT-SACCOs encouraged conducting of risk-based audits. Finally, most of the interviewees agreed to a great extent (mean = 3.70, standard deviation = 1.05) that the audit committee was active on the issue of risk-based planning.

4.5 Summary of Risk-Based Internal Audit Indicators

The study also investigated the three components of risk-based internal audits to establish their levels of incorporation within DT-SACCOs.

Table 4.10: Summary for risk maturity, audit assignment, and risk-based audit planning

Descriptive Statistics					
Independent variables	N	Minimum	Maximum	Mean	Std. Deviation
Risk Maturity	41	1.00	4.00	2.7154	.62165
Audit Assignment	41	1.50	5.00	3.5244	.92838
Risk-based audit planning	41	1.75	5.00	3.5976	.92005

Source: Survey Data (2021)

Summarizing the three aspects, i.e. risk maturity, audit assignment, and risk-based audit planning, it is clear as depicted by the tables above that audit assignment and risk-based audit planning were implemented to a larger extent compared to risk maturity. Table 4.10 best represents the average score for each of the three aspects based on composite indexes generate using the arithmetic means.

4.6 Corporate Governance

This study sought to determine the moderating effect of corporate governance on RBIA and performance of DT-SACCOs'. Table 4.11 presents descriptive statistics regarding corporate governance.

Table 4.11: Corporate Governance

	N	Minimu m	Maximu m	Mean	Std. Deviation
To what extent does information transparency issued by the DT-SACCO ensure compliance by the management?	41	1.00	5.00	3.6098	.99695
To what extent are the rights of related parties protected by the DT-SACCO management?	41	2.00	5.00	3.7317	1.02529
To what extent does the management ensure that employee rights and care are a priority?	41	1.00	5.00	3.5122	.97780
To what extent does the management take into consideration the rights and advice from the board of directors?	41	1.00	5.00	3.6098	.99695

Source: Survey Data (2021)

Table 4.11 indicates that majority of respondents to a great extent agreed (mean=3.61, standard deviation = 0.99) that information transparency issued by the DT-SACCOs ensured compliance by the management. Additionally, the respondents mostly approved to a great extent (mean=3.73, standard deviation = 1.03) agreed that the rights of related parties are protected by the DT-SACCO management. Further, greatest of the respondents agreed to a great extent (mean=3.51, standard deviation = 0.99) that the management took into consideration the rights and advice from the board of directors.

4.7 Performance of Deposit-Taking SACCOs

The researcher required to investigate how SACCOs were performing concerning return on assets, return on equity and return on investments as affected by the three independent variables namely risk maturity, risk assignment, and risk-based audit planning. The data was collected using items in Part F of the questionnaire. The data was validated through

the collection of secondary data. Table 4.12 depicts the descriptive statistics about the performance of sampled DT-SACCOs.

Table 4.12: Performance of Deposit-Taking SACCOs

	N	Minimum	Maximum	Mean	Std. Deviation
To what extent has the above factors improved the return on asset (ROA) of the DT-SACCO?	41	1.00	5.00	3.6341	1.06668
To what extent has the above factors improved the return on equity (ROE) of the DT-SACCO?	41	2.00	5.00	3.7561	.99450
To what extent has the above factors improved the return on investment (ROI) of the DT-SACCO?	41	1.00	5.00	3.7561	1.13535

Source: Survey Data (2021)

According to Table 4.12, majority of the respondents approved to a great extent (mean = 3.63, standard deviation = 1.07) that as a result of the implementation of risk maturity, audit assignment, and risk-based audit planning the return of assets had been improved. Concerning return on equity, majority of the respondents approved to a great extent (mean = 3.76, standard deviation = 0.99) that implementation of risk maturity, audit assignment, and risk-based audit planning had improved return on equity. Finally, most of the respondents agreed that due to the implementation of risk maturity, audit assignment, and risk-based audit planning the return on investment of the DT-SACCOs had improved to a great extent (mean= 3.76, standard deviation = 1.14). Based on the outcomes of the three indicators of the performance assessment, it can be seen that DT-SACCO had an ROE and ROI ratio advantage as a result of the implementation of risk-level audit assignments and risk-based audit plans compared to the total return on assets.

4.8 Regression Analysis

In line with the recommendation of Faraway (2002), Jackson (2009), and Brooks (2014), multiple linear regression analysis was used to test hypotheses. Diagnostic tests were

carried out before testing the hypotheses to confirm data quality fitting the regression models.

4.8.1. Diagnostic Tests

Diagnostic tests for normality, multi-collinearity, and homoscedasticity (homogeneity of variance) as recommended by Greene (2002) were conducted. Field (2009) also recommended (KMO) Kaiser-Meyer-Olkin test to measure sampling sufficiency and therefore this KMO test was also conducted.

4.8.1.1 Normality Test

Normality test was conducted as recommended by Sekaran (2013) on the quantitative data using the Kolmogorov-Smirnov test. The null hypothesis for the Kolmogorov-Smirnov test was that statistics demonstrating a given variable isn't from a non-normally dispersed population. The results of the normality test based on Kolmogorov-Smirnov statistics are contained in Table 4.13.

Table 4.13: Tests of Normality

Variables	Kolmogorov-Smirnov statistic		
	Statistic	Df	Sig.
Risk Maturity	0.200	41	.056
Audit Assignment	0.135	41	.079
Risk Based Audit Planning	0.108	41	.200*
Corporate Governance	0.099	41	.200*
DT-SACCOs Financial Performance	0.195	41	.067

Source: Survey Data (2021)

According to Table 4.13, all the variables (risk maturity, audit assignment, risk-based audit planning) had significance values of 0.056, 0.079, and 0.2 respectively. Additionally, corporate governance and DT-SACCOs financial performance had significant values of 0.2 and 0.067, respectively. Based on the criterion suggested by Norusis (2007), therefore it can be decided the variables came from an ordinary population as their significance values were above 0.05.

4.8.1.2 Homoscedasticity Test

As recommended by Brooks (2014), the homoscedasticity test was steered to ensure that the ordinary least square method used in multiple linear regression analysis did not generate coefficients likely to lead to biased results while testing hypotheses. In line with the recommendation of Brooks (2014), Levene statistic was used for this test. Homoscedasticity is aimed at avoiding heteroscedasticity by assuming that the inconsistency of the reliant variable is roughly equivalent at all levels of the liberated variables. The outcomes of the homoscedasticity test were given in Table 4.14.

Table 4.14: Homoscedasticity Test

Homoscedasticity Test					Conclusion
	Levene Statistic	df1	df2	Sig.	
DT-SACCOs financial performance	0.512	3	41	0.613	P>0.05, therefore equal variance

Source: Survey Data (2021)

Table 4.14 shows Levene statistic for the dependent variable (DT-SACCOs financial performance) was 0.613 which is above 0.05 indicating that the homoscedasticity assumption was satisfied. Warner (2018) noted that the violation of the assumption occurs when the p-value associated with the Levene statistic is below 0.05 and that's when data is declared heteroscedastic. With the assumption of homoscedasticity holding, regression analysis could be applied for further hypotheses testing (Warner, 2018).

4.8.1.3 Multi-collinearity Tests

To ensure that the expounding variables were not interrelated with one another as suggested by Brooks (2014), a multi-collinearity test was conducted. When explanatory variables are strongly correlated with one another, misleading results will occur when you run a regression equation to determine the connection amongst the explanatory variables and the reliant variable (Brooks, 2014). Having connected variables intended to measure different

conceptions in one multiple regression model frequently to measure the same hypothetical conceptions and therefore it would be repetitive to include all of them in a study. Table 4.15 shows the outcomes of multi-collinearity diagnostics for the three liberated variables considered in this study.

Table 4.15: Multi-collinearity Diagnostics

Dependent Variable: DT-SACCO Financial Performance	Multi-collinearity Statistics	
	Tolerance Value	VIF
Risk Maturity	0.605	1.653
Audit Assignment	0.404	2.473
Risk-Based Audit Planning	0.485	2.062

Source: Survey Data (2021)

Risk maturity, audit assignment, and risk-based audit planning had tolerance values of 0.605, 0.404 and, 0.485 correspondingly which were at a level higher than the satisfactory limit of 0.1 suggested by Menard (1995). With regard to VIF values for the three independent (1.653, 2.473, and 2.062) all of these values were all less than 10, the value recommended by Kutner, Nachtsheim, and Neter (2004). Therefore, both VIF and tolerance values indicated that the three independent variables (risk maturity, audit assignment, and risk-based audit planning) were not correlated with each other, hence each liberated variable could be used in the regression equation as data was free from multi-collinearity problems.

4.8.1.4 Kaiser-Meyer-Olkin Test

KMO assessment for calculating sample adequacy was conducted to subject the obtained data to inferential indicators in line with the recommendation of Field (2009) which asserts that for statistics to be accepted as satisfactory and appropriate for arithmetical investigation and in particular testing of hypotheses, the KMO value should be superior to 0.5. The KMO test outcomes acquired from the study were illustrated as follows.

Table 4.16: KMO Test for Sample Adequacy

KMO	KMO Statistic	Deductions
	0.659	Significant

Source: Survey Data (2021)

For the 43 observations used in this study, the KMO value of 0.66 was obtained proving superior to the 0.5 as endorsed by Field (2009), indicating that the statistics were satisfactory for inferential arithmetical investigation and further hypotheses testing.

4.8.2: Regression Model

To test the first three hypotheses: Audit maturity doesn't have a substantial outcome on the DT-SACCOs performance in Nairobi Metropolis, Kenya; Risk assignment doesn't have a substantial effect on the performance of DT-SACCOs in Nairobi Metropolis, Kenya; A risk-based audit planning doesn't significantly affect the performance of DT-SACCOs in Nairobi Metropolis, Kenya, linear regression model below was run:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \epsilon$$

Where: Y = Financial performance (ROI, ROA and ROE), X₁ = Risk maturity, X₂ = Audit assignment, X₃ = Risk-based audit planning, ϵ = Error term, α = Constant term.

Tables 4.17, 4.18, and 4.19 summarized the findings.

Table 4.17: Summary Results of Regression Model

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.922 ^a	.850	.837	.41284
a. Predictors: (Constant), Risk Maturity, Audit Assignment, Risk-based audit planning				

Source: Survey Data (2021)

Table 4.17, demonstrates that R² was 0.85 and adjusted R² was 0.84. This indicated that the three independent variables (risk maturity, risk assignment, and risk-based audit planning) explained 83.7% of variations of performance of DT-SACCOs in Nairobi Metropolis, Kenya. Additionally, it can be concluded that 16.3% of other factors outside the model explained the changes in DT-SACCO's performance.

Table 4.18: Anova Results for Model Significance

ANOVA ^a						
Model Significance		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	35.596	3	11.865	69.617	.000 ^b
	Residual	6.306	37	.170		
	Total	41.902	40			
a. Performance						
b. Predictors: (Constant), Risk Maturity, Audit Assignment, Risk-based audit planning						

Source: Survey Data (2021)

The ANOVA test was used to verify the arithmetical implication of a general regression model to determine whether it is sufficient for hypothesis testing. Mokaya (2013) pointed out that the Anova test which is inbuilt within the multiple regression analysis is a tool that can define if the model works in predicting the effect of the liberated variables on the reliant variable. ANOVA is based on F-statistic and its p-value. A p-value superior to 0.05, means that there is no liberated variable to predict the reliant variable, suggesting that the model is not working. However, if the p-value is inferior to 0.05 (significance level), it means that the model works to establish an important connection between the variables studied. Table 4.18, shows overall model was statistically substantial ($F_{(3,37)} = 69.61, p=0.00$) implying that the study's independent variables (Risk Maturity, Audit Assignment, Risk-based audit planning) worked in explaining the variations in the reliant variable. The conclusion is that

the model can be relied on for testing the three hypotheses associated with the three independent variables.

Table 4.19: Regression Coefficients

Coefficients						
Regression Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	.370	.331		1.117	.271
	Risk Maturity	.229	.116	.139	1.975	.056
	Audit Assignment	.356	.167	.323	2.136	.039
	Risk-based audit planning	.615	.167	.552	3.688	.001
a. Dependent Variable: Performance						

Source: Survey Data (2021)

Table 4.19 demonstrates the regression coefficients, audit assignment (p-value =0.04) and risk-based audit planning (p-value =0.00) were statistically substantial in improving the performance of DT-SACCOs as evidenced by the fact that their p-values are less than 0.05 used in this study. On the other hand, risk maturity (p-value of 0.06) was established to be insignificant as its value was greater than 0.05 used in this research. Considering only the two significant variables, the above table of regression coefficients can be summarized using the empirical model shown below:

$$\text{Performance} = 0.37 + 0.36(\text{audit assignment}) + 0.62 (\text{risk-based audit planning})$$

The above model implies that for each unit increase in audit assignment in the Deposit-Taking SACCOs, their financial performance rises by 0.36 units, while for each unit rise in risk-based audit planning, financial performance increases by 0.62 units.

4.8.2.1 Discussion of the direct regression model results

In the regression analysis outcomes shown in Table 4.19, the audit assignment coefficient was 0.36 with a p-value of 0.04. The null proposition was overruled because the p-value of the coefficient was less than the significance value of 0.05. Therefore, a conclusion was made that there was a statistically significant positive effect of risk allocation on the financial performance of the Nairobi Metropolis Deposit-Taking SACCO ($\beta = 0.36$, $t = 2.14$, $p\text{-value} = 0.04$). This shows that a change in the DT-SACCO audit assignment unit will increase financial performance by 0.36. This finding of this study concurs with those of Riungu (2018) who established a positive influence of audit assignment on the operational efficiency of firms through increased profitability, business turnover, and volume of sales. The finding is also consistent with that of Makori (2015) who proved that the profitability of firms improved significantly as a result of risk-assignment, credit monitoring, debt collection practices, and credit appraisal activities.

Table 4.19 shows regression analysis outcomes, the audit assignment coefficient was 0.36 and the p-value was 0.04. The p-value of the coefficient was smaller than the significance value (5%), and the null hypothesis was rejected. Therefore, it was concluded that there was a statistically significant positive effect of audit assignment on the financial performance of DT-SACCOs in Nairobi Metropolis ($\beta = 0.36$, $t = 2.14$, $p\text{-value} = 0.04$). This indicates that a unit rise in risk-based audit planning in DT-SACCOs causes a 0.62 rise in their financial performance. The outcomes of this study are reinforced by Njeri (2013) who showed that risk-based audit planning enhanced the efficiency of organizations. Further, the findings are supported by Kasiva (2012) who found that risk administration, risk-based audit scheduling, internal auditing standards, and internal auditing enhances the financial performance of organizations. The findings of a study by Kasiva (2012) suggest that regular audit plans improve the financial performance of companies because they allow companies to spot risks timely and focus on areas with a high risk that lead to accountability and transparency which are also in line with the outcomes of this investigation.

The results from the study established that the risk maturity did not have a statistically significant result on the performance of DT-SACCOs ($\beta = 0.23$, p -value = 0.06) because the p -value is greater than 0.05. However, this can be explained by the low level of implementation of the risk maturity, as shown in the descriptive statistics included in Table 4.7. However, Danescu and Sandru (2010) had noted that risk maturity enables the creation of an audit plan in an organization which could positively impact the financial performance of firms. Therefore, this study suggests the continuous assessment of risk maturity and further investigation into the effect of risk maturity to establish whether full implementation is likely to enhance financial performance in the DT-SACCOs sub-sector.

4.8.3 Moderating Effect Regression Model

To analyze the controlling effect of corporate governance on the association amongst risk maturity, audit assignment and risk-based audit planning and performance of DT-SACCOs in Nairobi Metropolis, Kenya, the liberated variables interacted with the moderating variable (corporate governance) in line with the recommendation by Aiken and West (1991) as shown in the model below

$$Y = \beta_0 + \beta_1 X_i + \beta_2 P + \beta_3 X_i P + \epsilon$$

Where, P = Corporate Governance, β_0 = Constant term, X_i = Composite index representing the three independent variables (risk maturity, risk assignment, and risk-based audit planning), $X_i P$ = Interaction variable (X_i interacted with corporate governance), β_1 = Coefficient of the independent variables, β_2 = Coefficient measuring the influence of corporate governance on the performance of DT-SACCOs, β_3 = Coefficient measuring the controlling effect of corporate governance on the connection amongst risk maturity, risk assignment & risk-based audit planning and performance of DT-SACCOs

In the model, β_3 indicated the result of the controlling variable (corporate governance) on the relationship between risk maturity, risk assignment & risk-based audit planning, and financial performance of DT-SACCOs. If β_3 was statistically different from zero (an insignificant proposition is not accepted if the p -value is not equal to 0.05), it was resolved that there is a substantial controlling effect of corporate governance on the connection

amongst risk maturity, risk assignment & risk-based audit planning, and performance of DT-SACCOs.

Table 4.20: Summary Results of Moderation Regression Model

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.944 ^a	.892	.883	.35024
a. Predictors: (Constant), XiP, Corporate Governance, Xi				

Source: Survey Data (2021)

Table 4.20, demonstrates that R^2 was 0.89 and adjusted R^2 was 0.88. This shows that interaction variables (risk-based internal auditing and corporate governance), corporate governance, and risk-based internal auditing account for 88.3% of DT-SACCO variability in the Nairobi Metropolis, Kenya. Also, 11.7% of the variation in DT-SACCOs' performance can be concluded as clarified by additional influences outside this adjusted regression model.

Table 4.21: Anova Results for Model Significance

ANOVA^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	37.364	3	12.455	101.529	.000 ^b
	Residual	4.539	37	.123		
	Total	41.902	40			
a. Dependent Variable: Performance						
b. Predictors: (Constant), XiP, Corporate Governance, Xi						

Source: Survey Data (2021)

Table 4.21, demonstrates that the model is statistically substantial ($F_{(3,37)} = 101.53$, $p = 0.00$) and the independent variables (XiP, corporate governance, and Xi) of the investigation helps to expound the disparity in the reliant variable (Deposit-Taking SACCOs' performance variable). The conclusion is that the model can be trusted to test the fourth hypothesis concerning the controlling result of corporate governance on the

connection between risk-based internal auditing and Nairobi Metropolis DT-SACCO's performance.

Table 4.22: Regression Coefficients

Coefficients						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.172	.502		2.336	.025
	X _i	.045	.294	.032	.155	.878
	Corporate Governance	.045	.074	.043	.613	.543
	X _i P	.181	.043	.886	4.230	.000
a. Dependent Variable: Performance						

Source: Survey Data (2021)

In line with the recommendation by Aiken and West (1991), the coefficient of the interaction variable (risk-based audit *corporate governance) represented in the above model by X_iP was used to test the controlling outcome of corporate governance on the connection amongst risk-based audit and performance of DT-SACCOs. The coefficient of the interaction was 0.18 with an accompanying p-value of 0.00 which was not equal to 0.05 value used in this study. Consequently, the study resolved that corporate governance had a statistically significant controlling outcome on the connection amongst risk-based internal audit and performance of DT-SACCOs. This is summarized by the empirical model shown below:

$$\text{Performance} = 1.17 + 0.18 (\text{risk-based audit} * \text{corporate governance})$$

Corporate governance based on the regression model needs to be improved as it positively adjusts the connection amongst risk-based internal audits and performance of DT-SACCO's. Enhancing corporate governance results in prudent decisions aimed at enhancing how risk-based audit planning is implemented to enhance the financial performance of DT-SACCOs. Odera (2012) advocates clear and proper segregation of

duties, hiring qualified personnel in management, and having managerial competitiveness to enhance corporate governance.

4.8.4: Summary of Hypotheses Testing

The study aimed at testing four hypotheses. Table 4.23 provides a summary of the hypothesis testing results.

Table 4.23: Summary of Hypotheses Testing

Objective	Hypothesis	Results	Remarks on Hypothesis
To describe the influence of risk maturity on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.	H₀₁: There is no substantial influence of risk maturity on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.	$\beta=0.023$ t-value=2.0 p-value=0.06	Accept H ₀₁
To describe the influence of audit assignment on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.	H₀₂: Risk assignment doesn't have a substantial influence on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.	$\beta=0.36$ t-value=2.14 p-value=0.04	Reject H ₀₂
To determine the effect of risk-based audit planning on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.	H₀₃: Risk-based audit planning doesn't significantly affect the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.	$\beta=0.62$ t-value=3.69 p-value=0.00	Reject H ₀₃

<p>To evaluate the moderating effect of corporate governance on the connection amongst risk-based internal audit and financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.</p>	<p>H₀₄: There is no controlling influence of corporate governance on the connection amongst risk-based internal audit and financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.</p>	<p>$\beta=0.18$ t-value=4.23 p-value=0.00</p>	<p>Reject H₀₄</p>
---	--	--	------------------------------

Source: Survey Data (2021)

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1. Introduction

This chapter offers summary, conclusion, and recommendations for the project that was conducted to investigate the effect of RBIA on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya. The chapter shows how the study contributes to the research knowledge and suggestions of the study to strategy areas and exercise.

5.2 Summary

Through a risk-based internal audit, an internal audit can convince the board that the risk management process effectively manages the risks associated with potential risk instruments. It focuses more on the areas of highest risk to a firm and then uses different strategies such as business objectives or controls to examine the sufficiency of the evidence to the area under study. Risk-based auditors must identify the audit activities which include: initiation, preparation, conducting, and reporting the results derived from the audit to the relevant stakeholders in the firm. DT-SACCOs continue to face multitudes of challenges that affect their financial performance. Despite the presence of Risk-Based Internal Audit in DT-SACCOs, there is a dearth of literature confirming its effect on the financial performance of these DT-SACCOs. Therefore, this project sought to inaugurate the impact of risk-based internal auditing on the financial performance of DT-SACCOs. The study also sought to establish the moderating effect of corporate governance on risk-based internal audit and its relationship to the financial performance of Nairobi Metropolis DT-SACCO. The project was pinned by the following objectives: to determine the effect of risk maturity on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya; to determine the effect of audit assignment on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya; to determine the effect of risk-based audit planning on the financial performance of DT-SACCOs in Nairobi Metropolis, Kenya; to evaluate the moderating effect of corporate governance on the association between RBIA and financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.

The study was based on a descriptive research design and an objective population of the 43 DT-SACCOs in Nairobi Metropolis, Kenya. The project used a census survey approach where 43 DT-SACCOs were included in the study with one respondent (audit manager) being purposively selected from each DT-SACCO. The questionnaire collected primary data while secondary data was collected only for validation purposes. Mean, standard deviation from frequency distribution tables were used to describe outlines in the collected data. Linear regression analysis was applied to quantifiable data to generate constants and equivalent t-statistics and p-values for hypothesis testing. From the hypotheses testing risk assignment and risk-based audit planning had a positive statistical effect whereas risk-maturity was found to be statistically insignificant. Finally, corporate governance was found to have a positive moderating effect on the association amongst risk-based internal audit and financial performance of DT-SACCOs in Nairobi Metropolis, Kenya.

5.3 Conclusion

This research clearly shows that risk-based auditing and corporate governance play an important role in improving DT-SACCO's financial performance. The research, therefore, concluded that risk assignment is a very paramount component of risk-based internal audit that should be implemented. Secondly, RBA planning has been shown to statistically influence the financial performance of DT-SACCOs and should be encouraged so as to strengthen the internal controls of the firm and be able to give assurance to SACCO members on their investment and deposits. Another conclusion from this study is that risk maturity should be enhanced within Deposit-Taking SACCOs followed by further empirical studies to ascertain its effect/impact on the financial performance of DT-SACCOs. Three of the objectives were attained as they had a statistical significant effect on the financial performance of DT-SACCOs. Finally, the research resolved that corporate governance is key if the risk-based internal audit has to produce the desired result of enhancing financial performance for DT-SACCOs because it's a component of management which greatly influences the key decisions which are made.

5.4. Contribution of the Study

The research makes several theoretical, methodological, and practical contributions to both the body of knowledge of DT-SACCOs performance and the area of risk-based internal audit. Overall, this study builds on existing knowledge of how risk-based internal audits can improve an organization's performance. Theoretically, the study has demonstrated how policeman theory, fraud triangle theory, and audit theory can be applied in one study to anchor the patterns or relationships among the study variables. Methodologically, the study has demonstrated the efficacy of using a descriptive research design to enhance the study findings. Further, the conceptual framework developed in this study can be used in the study of RBIA in other financial institutions. Finally, the study provides practical contributions to audit departments as they implement risk-based internal audits and it has unearthed specific aspects to focus on.

5.5 Policy Implications and Recommendations

Based on study findings, several recommendations were formulated. Firstly, risk assignment should be enhanced in the audit departments within DT-SACCOs by both SACCO's management and practitioners in the audit department. Secondly, risk-based audit planning must be encouraged within the audit departments. The audit managers must therefore ensure adequate resources are availed by lobbying from DT-SACCOs' Management and Boards to ensure this is properly done. Finally, corporate governance must be enhanced by the Boards of Management to ensure issues of fraud do not arise by systematically supporting the full implementation of risk-based internal audits. Recommendation arising from the conduct of risk-based internal audit must be implemented through bringing together both Boards of Management and Audit Departments within DT-SACCOs to fill all loopholes that negatively affect the financial performance of DT-SACCOs. The SACCO Boards of Management must therefore act deliberately to institute measures aimed at promoting corporate governance and enhance the incorporation of the RBIA with the ultimate goal of enhancing the financial performance of DT-SACCOs.

5.6 Areas for Further Research

This research employed a cross-sectional data that could not represent long-term relationships with risk-based internal audit and financial performance. Future studies should use longitudinal data to establish this relationship and to validate the results of this study. Following the R^2 recorded in the regression models, it came out that there were key variables outside the range of this study that weren't evaluated. Future studies can look at other variables such as risk monitoring to enhance the study findings. The study only considered corporate governance as the only moderating variable likely to influence the connection concerning RBIA and DT-SACCOs performance. Future studies can focus on other moderating variables particularly government policies to determine their role towards the enactment of risk-based internal auditing and by extension performance of DT-SACCOs. Finally, the research was contextualized in Nairobi Metropolis only and due to contextual issues, future studies should be conducted to authenticate the results of the study in other DT-SACCOs in other regions.

REFERENCES

- Adom, D., Adu-Gyamfi, S., Agyekum, K., Ayarkwa, J., Dwumah, P., Abass, K., Kissi, E., & Osei-Poku, P. (2016). Theoretical and conceptual framework: Mandatory ingredients of a quality research. *Journal of Education and Human Development*, 5(3), 158–172.
- Aiken, L. S., & West, S. G. (1991). *Multiple Regression: Testing and interpreting interactions*. Newbury Park, CA: Sage.
- Alemayehu, W., & vom Brocke, J. (2010). Sustainability performance measurement—the case of Ethiopian airlines. *International Conference on Business Process Management*, 467–478.
- Babbie, E. R. (2004). *The practice of social research*. 10th Edition. Belmont, CA: Thomson/Wadsworth
- Brooks, C. (2014). *Introductory Econometrics to Finance*. Cambridge University Press
- Ciobu, S. (2017). Development of integrated framework for internal control of informational system in the banks of Republic of Moldova. *Competitivitatea Și Inovarea În Economia Cunoașterii*, 3, 52–58.
- Cooper, D. R. & Schindler, P.S. (2014). *Business Research Methods*, 12th edition, McGraw-Hill: New York
- Cressey, D. R. (1953). *Other people's money; a study of the social psychology of embezzlement*.
- Danescu, T., & Sandru, R. (2010). Risk Based Internal Audit: Perspectives Offered To Corporations And Banks. *Annales Universitatis Apulensis-Series Oeconomica*, 12(1).
- De Aquino, C. E., Lopes da Silva, W., Sigolo, N., & Vasarhelyi, M. A. (2010). Six steps to an effective continuous audit process. *Internal Auditor*, 1–5.
- Drogalas, G., & Siopi, S. (2017). Risk management and internal audit: Evidence from Greece. *Risk Governance & Control: Financial Markets & Institutions*, 7(3), 104–110.
- Esi, L. S. (2012). *Determinants Of Adoption Of Risk Based Audit In Public Sector In Kenya*. Department Of Business Administration, School Of Business, University of Nairobi.

- Faraway, J. (2002). *Practical Regression and Anova using R*. Retrieved on Wednesday 17th April, 2015, <http://cran.r-project.org/doc/contrib/Faraway-PRA.pdf>.
- Field, A. P. (2009). *Discovering statistics using SPSS*, 3rd Edition. London: Sage publications.
- Gaitho, N. W. (2013). Role of credit reference bureaus on credit access in Kenya: A survey of commercial banks in Kenya. *European Scientific Journal*, 9(13).
- Gall, M. D., Borg, W. R. & Gall, J. P. (1996). *Educational Research (6th ed)*. White Plains, NY: Longman Publishers USA.
- Gay, L. R. & Airasian, P. (2000). *Educational Research: Competencies for analysis and application*, 6th Edition, New Jersey: Prentice-Hall Inc
- George, D. & Mallery, P. (2003). *SPSS for Windows Step By Step: A Simple Guide and Reference*. 4th ed. Boston, Allyn & Bacon.
- Greene, W. H. (2002). *Econometric Analysis*, 5th Edition. Prentice Hall, Upper Saddle River, New Jersey 07458
- Gupta, S.G. (2008). *Statistical Methods*. NewDelhi: Sultan and Sons Educational Publisher
- Hair, J., Money, A., Samouel, P. & Babin, B. (2003). *Essentials of Business Research Methods*. Wiley
- Hesborn, M. A., Onditi, A., & Nyagol, M. O. (2016). *Effect of credit risk management practices on the financial performance of SACCOs in Kisii County*.
- Hosmer, D. & Stanley L. (2000). *Applied Logistic Regression*, 2nd Edition, Wiley, New York, United States of America.
- Jagongo, A., & Mbewa, M. O. (n.d.). *The Contribution of Sacco Financial Stewardship to Growth of Saccos in Kenya*.
- Jaldesa, F. B. (2013). *Effects of credit risk management practices on nonperforming Loans in commercial banks in Kenya*. University of Nairobi.
- Karimi, L. (2018). *Print Media Coverage Of Savings And Credit Co-Operative Societies Issues In Kenya*. University of Nairobi.
- Kariuki, N. W. (2017). Effect of credit risk management practices on financial performance of deposit taking savings and credit cooperatives in Kenya. *IOSR Journal of Business and Management*, 19(04), 63–69.
- Kasiva, M. V. (2012). The impact of risk based audit on financial performance in

- commercial banks in Kenya. *Unpublished Thesis, University of Nairobi.*
- Kothari, R. (2001). *Research Methodology: Methods and Techniques*, 2nd edition. Wishwa Prakasham, New Delhi.
- Kutner, M. H., Nachtsheim, C. J. & Neter, J. (2004). *Applied Linear Regression Models*, 4th Edition, McGraw-Hill Irwin
- Magiri, S. M. (2014). *Risk Managemet in Savings and Credit Cooperative Societies*. United States International University-Africa.
- Makori, O. G. (2015). *Effects of credit risk management practices on profitability of deposit taking sacco's in Nairobi county*. The Management University of Africa.
- Mampra, M. J. (2018). *The Effect of Transformational and Transactional Leadership Styles on the Financial Performance of an Organisation*.
- Marete, J. M., Gommans, H. P., & George, G. E. (2014). An evaluation of e-banking services on customer satisfaction: Case of National bank of Kenya. *European Journal of Business and Management*, 6(22), 54–67.
- Mautz, R. K., & Sharaf, H. A. (1961). *The philosophy of auditing* (Issue 6). American Accounting Association.
- Menard, S. (1995). *Applied Logistic Regression Analysis: Sage University Series on Quantitative Applications in the Social Sciences*. Thousand Oaks, CA: Sage.
- Mokaya, S.K.O (2013). The effect of corporate entrepreneurship on the performance of the edible oil manufacturing firms in Kenya. *PhD Thesis*, Kenyatta University
- Mugenda, O. & Mugenda, A. (2003). *Research methods, quantitative and qualitative approaches*, Nairobi Acts Press
- Mungai, G. W. (2012). *Business consultancy services and performance of KPMG top 100 small and medium enterprises in Kenya*.
- Muraguri, I. N. (2016). *Effects Of Risk-based Audit On Financial Performance Of State Owned Corporations In The Ministry Of East African Community, Labour And Social Protection In Kenya*. Kca University.
- Nalzar, L. M. (2012). Methods of data collection. Retrieved November, 24, 2017.
- Ndung'u, N., Thugge, K., & Otieno, O. (2011). Unlocking the future potential for Kenya: The Vision 2030. *Office of the Prime Minister Ministry of State for Planning, National Development and Vision, 2030*.

- Njeri, K. (2013). Effect of Risk Based Audit on Financial Performance of Deposit Taking Microfinance Institutions in Kenya. *Unpublished Master of Business Administration Thesis: University of Nairobi.*
- Nkuru, F. G. (2015). Factors Affecting Growth of Saccos Within The Agricultural Sector in Kenya, a case of Meru Farmers SACCOs. *Global Journal of Commerce & Management Perspective*, 4(1), 34–45.
- Norusis, M. (2007). *SPSS 15.0 Guide to Data Analysis*. Prentice Hall
- Odera, O. (2012). Corporate governance problems of savings, credit and cooperative societies. *International Journal of Academic Research in Business and Social Sciences*, 2(11), 89.
- Pickett, K. H. S. (2006). *Audit planning: a risk-based approach*. John Wiley & Sons.
- Riungu, C. (2018). *The Impact of Risk Based Internal Audit on Operational Efficiency of Deposit Taking Saccos in Nairobi County, Kenya*. University of Nairobi.
- Salehi, M. (2011). Audit expectation gap: Concept, nature and trace. *African Journal of Business Management*, 5(21), 8376–8392.
- Saunders, M., Lewis, P. & Thornhill, A. (2007). *Research methods for business students*, 5th edition, Great Britain, Prentice Hall
- Sekaran, U. (2003). *Research methods for business – A skill building approach*, 4th edition, Australia, John Wiley and Sons, Inc.
- Sekaran, U. & Bougie, R. (2009). *Research Methods for Business: A Skill Building Approach*, 5th edition, John Wiley & Sons Ltd., United Kingdom
- Sujeewa, G. M. M., Ab Yajid, M. S., Khatibi, A., Azam, S. M. F., & Dharmaratne, I. (2018). The new fraud triangle Theory-Integrating ethical values of employees. *International Journal of Business, Economics and Law*, 5, 16.
- Van Rijn, J. (2018). *The effect of membership expansion on credit union risk and returns*. University of Wisconsin, Agricultural and Applied Economics.
- Warner, R. M. (2008). *Applied Statistics: From Bivariate through Multivariate Techniques*. Thousand Oaks, CA: Sage
- Wieczorek-Kosmala, M. (2014). Risk management practices from risk maturity models perspective. *Journal for East European Management Studies*, 133–159.

APPENDICES

APPENDIX I: QUESTIONNAIRE COVER LETTER

Nyerere Julius Kimia
Business and Economics Department,
University of Embu,
P.O BOX 6 – 060100, Embu
Tel: +254715081557
Email: juliuskimia2@gmail.com

Dear Sir/Madam,

Re: Questionnaire on Risk-Based Internal Audit, Corporate Governance and Financial Performance of Deposit-Taking Cooperatives in Nairobi Metropolis, Kenya

I am an MBA student at the University of Embu. As a requirement for my studies, am expected to undertake a final project. I have chosen to undertake a project on risk-based internal audit and corporate governance on financial performance of Deposit-Taking cooperatives societies in Nairobi Metropolis, Kenya. The study has already been authorized by the Board of Postgraduate Studies, University of Embu and also NACOSTI.

I would appreciate it if you could take 20 minutes out of your busy schedule to complete this questionnaire. I want to reassure you that the statistics gathered by this questionnaire will only be used for academic reasons. If you want a print of the final piece, please email me using the information provided above.

If you have any questions or have any difficulties while filling out the questionnaire, please contact us.

Sincerely Yours,

Nyerere Julius

APPENDIX II: RESEARCH QUESTIONNAIRE

Kindly answer the following questions honestly and correctly as possible to enhance the quality of data collected

SACCO NAME.....

PART A: DEMOGRAPHICS

Please indicate with (✓) appropriately.

- 1. Gender Male
- Female
- 2. Age bracket 21-30
- 31-40
- 41-50
- Above 50
- 3. Highest level of education
- Secondary
- University
- College
- 4. Professional course certification
- CPA
- ATD
- CIFA
- Other specify
- 5. Years worked in the firm
- Less than 1 year
- 6-9 years
- 2-5 years
- above 9 years

PART B: RISK MATURITY

This section is concerned with the examination of the effect of risk maturity on the financial performance in the DT-SACCO. Please kindly indicate with a (✓) on the questions provided below. The choices given are: very great extent-5; great extent-4; moderate extent-3; little extent-2; no extent-1.

Statement	1	2	3	4	5

To what extent is the DT-SACCO concerned with risk determination?					
To what extent is the DT-SACCO concerned with risk management?					
To what extent is the DT-SACCO concerned with risk assessment?					
To what extent is the DT-SACCO concerned with risk monitoring?					

PART C: AUDIT ASSIGNMENT

This section is concerned with the establishment of the effect of audit assignment on the financial performance in DT-SACCO. Please kindly indicate with a (✓) on the questions provided below. The choices given are: very great extent-5; great extent-4; moderate extent-3; little extent-2; no extent-1.

Statement	1	2	3	4	5
To what extent does the DT-SACCO group risks?					
To what extent does the DT-SACCO concerned with the setting up an audit universe?					

PART D: RISK-BASED AUDIT PLANNING

This section is concerned with the determination of the effect of risk-based audit planning on the financial performance of DT-SACCOs. Please kindly indicate with a (✓) on the questions provided below. The choices given are: very great extent-5; great extent-4; moderate extent-3; little extent-2; no extent-1.

Statement	1	2	3	4	5
To what extent does the DT-SACCO have the intervals of its audits?					
To what extent does the firm plan for strategic audits for the firm?					
To what extent does the management encourage the conducting of risk-based audits?					
To what extent is the activeness of the audit committee concerning the issue of risk-based planning?					

PART E: CORPORATE GOVERNANCE

This section is concerned with the determination of corporate governance as an influence risk maturity, audit assignment, audit planning and financial performance of DT-SACCOs. Please kindly indicate with a (✓) on the questions provided below. The choices given are: very great extent-5; great extent-4; moderate extent-3; little extent-2; no extent-1.

Statement	1	2	3	4	5
To what extent does information transparency issued by the DT-SACCO ensure compliance by the management?					
To what extent does the rights of related parties are protected by the DT-SACCO management?					
To what extent does the management ensure that employee rights and care are a priority?					
To what extent does the management take into consideration the rights and advice from the board of directors?					

PART F: FINANCIAL PERFORMANCE

This section is concerned with the review of financial performance of DT-SACCOs in respect to the effects of audit capacity, risk management and audit planning. Please kindly

indicate with a (✓) on the questions provided below. The choices given are: very great extent-5; great extent-4; moderate extent-3; little extent-2; no extent-1.

Statement	1	2	3	4	5
To what extent has the above factors affected the return on asset (ROA) of the DT-SACCO?					
To what extent has the above factors affected the return on equity (ROE) of the DT-SACCO?					
To what extent has the above factors affected the return on investment (ROI) of the DT-SACCO?					

Thank you for your responses

APPENDIX III: SECONDARY DATA COLLECTION SHEET

This secondary data collection sheet is concerned with the review of the financial statements of the DT-SACCOS under study to establish the trend of the changes of ROA, ROE and ROI over the years.

Name of DT-SACCO.....

Year that the DT-SACCO was operationalized.....

Number of branches.....

Item	2015	2016	2017	2018	2019
ROA					
ROE					
ROI					

APPENDIX IV: UNIVERSITY RESEARCH AUTHORIZATION



UNIVERSITY OF EMBU

OFFICE OF THE DIRECTOR BOARD OF POSTGRADUATE STUDIES

Tel: 0727933950, 0788199505
Website: www.embu.ac.ke

P.O. Box 6-60100, Embu
E-mail: dir.bps@embu.ac.ke

Our Ref: D530/1242/2018

Your Ref:

Date: 16th March 2021

Julius Kiria Nyerere

%,

Department of Business and Economics

Dear Mr. Nyerere,

RE: APPROVAL OF RESEARCH PROPOSAL

This is to inform you that the Board of Postgraduate Studies, at its meeting of 3rd February 2021, approved your research proposal for MBA Degree entitled "Risk-based internal audit, corporate governance and financial performance of deposit taking sacco in Nairobi Metropolis, Kenya". Attached is a copy of the approval.

You may now proceed with your data collection subject to obtaining a research permit from NACOSTI.

As you embark on your data collection, please note that you are required to:

- i. Consult your supervisor(s) at least once a month.
- ii. Submit to the Board of Postgraduate Studies at least two (2) duly completed Postgraduate Progress Report Forms through the Chairman of Department and Dean of School every three (3) months.
- iii. Give a minimum of two (2) seminar presentations before submission of project.
- iv. Publish at least one (1) paper before the project report/project is submitted for examination.
- v. Adhere to the University Plagiarism Policy and the prescribed similarity levels.
- vi. Obtain other permits, permission or clearance such as ERC, IBC, KWS if required.

The Progress Report Forms, research project/project submission checklist and other important postgraduate documents are available at the University's website under Board of Postgraduate Studies webpage <http://bps.embu.ac.ke/> as downloads.

Thank you.


Prof. Nancy Budambula
DIRECTOR, BOARD OF POSTGRADUATE STUDIES
NB/lw



Copies to:

1. DVC (ARE)
2. Registrar, ARE
3. Dean, SBE
4. CoD, BE
5. Supervisors: Dr. Duncan Njeru & Dr. David Mugo








ISO 27001:2013 Certified

Knowledge Transforms



ISO 9001:2015 Certified

APPENDIX V: NACOSTI RESEARCH AUTHORIZATION

 REPUBLIC OF KENYA	 NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
Ref No: 260998	Date of Issue: 12/May/2021
RESEARCH LICENSE	
	
This is to Certify that Mr.. Julius Kinia Nyerere of University of Embu, has been Eecensed to conduct research in Nairobi on the topic: RISK- BASED INTERNAL AUDIT, CORPORATE GOVERNANCE AND FINANCIAL PERFORMANCE OF DEPOSIT TAKING SACCOS IN NAIROBI METROPOLIS, KENYA for the period ending : 12/May/2022.	
License No: NACOSTLP/21/11461	
260998 Applicant Identification Number	 Director General NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION
	Verification QR Code 
NOTE: This is a computer generated License. To verify the authenticity of this document, Scan the QR Code using QR scanner application.	

APPENDIX VI: POPULATION OF STUDY

1. Afya Sacco Society Ltd
2. Airports Sacco Society Ltd
3. Ardhi Sacco Society Ltd
4. Asili Sacco Society Ltd
5. Chai Sacco Society Ltd
6. Chuna Sacco Society Ltd
7. Comoco Sacco Society Ltd
8. Elimu Sacco Society Ltd
9. Fundilima Sacco Society Ltd
10. Harambee Sacco Society Ltd
11. Hazina Sacco Society Ltd
12. Jamii Sacco Society Ltd
13. Kencream Sacco Society Ltd
14. Kenpipe Sacco Society Ltd
15. Kenversity Sacco Society Ltd
16. Kenya Bankers Sacco Society Ltd
17. Kenya Police Sacco Society Ltd
18. Kingdom Sacco Society Ltd
19. Magereza Sacco Society Ltd
20. Maisha Bora Sacco Society Ltd
21. Mwalimu National Sacco Society Ltd
22. Mwito Sacco Society Ltd
23. Nacico Sacco Society Ltd
24. Nafaka Sacco Society Ltd
25. Nassefu Sacco Society Ltd
26. Nation Sacco Society Ltd
27. Nyati Sacco Society Ltd
28. Safaricom Sacco Society Ltd
29. Sheria Sacco Society Ltd
30. Shirika Sacco Society Ltd

31. Shoppers Sacco Society Ltd
32. Stima Sacco Society Ltd
33. Taqwa Sacco Society Ltd
34. Tembo Sacco Society Ltd
35. Ufanisi Sacco Society Ltd
36. Ukristo Na Ufanisi Wa Anglicana Sacco Society Ltd
37. Ukulima Sacco Society Ltd
38. Unaitas Sacco Society Ltd
39. United Nations Sacco Society Ltd
40. Wanaanga Sacco Society Ltd
41. Wanandege Sacco Society Ltd
42. Waumini Sacco Society Ltd
43. Ushuru Sacco Society Ltd

Source: List of licensed SACCOs as of 2021 pdf in Nairobi, Kenya. (www.sasra.go.ke)

APPENDIX VII: SUMMARY OF EMPIRICAL LITERATURE REVIEW

Researcher	Emphasis of the Study	Methodology Used	Results	Knowledge Gap	Emphasis of Current Study
Muraguri 2016	State-owned corporation	Descriptive research	The variables under study had a positive effect on performance	Methodology used	It will focus on the use of longitudinal design
Marete 2014	Commercial state corporations	Descriptive survey research	The study found out there existed a positive relationship of the variables under study	Theoretical background	Use of risk-based theories to explain the relationship
Kezia 2013	Deposit-Taking micro finance institutions	Correlation research design	The study found out that the factors under study have a great influence on the financial performance	Contextual gap	Use of more current data on risk-based approach in today's Kenyan economy.

Mutua 2012	Commercial banks	Correlation research design	The study established a positive effect of the variables that were an understudy	Methodology used	Use of both primary and secondary data and the use of a more relevant methodology
---------------	---------------------	-----------------------------------	--	---------------------	---