

**RISK REDUCTION PRACTICES ON FINANCIAL COMPETITIVENESS OF
SAVINGS AND CREDIT CO-OPERATIVE SOCIETIES IN KIRINYAGA
COUNTY, KENYA**

HANIEL KINYUA MUCHIRI

**A Research Report Submitted to the Department of Co-operative and
Community Development in Partial Fulfillment of the Requirement for the
Award of Master Degree in Co-operative Management of Co-operative
University of Kenya**

August 2021

DECLARATION

This report is my original work and has not been presented for a degree in any other University. No part of this research report should be reproduced without authority from the author or/ and the Co-operative University of Kenya.

Haniel Kinyua Muchiri

MCM 03/0011/1/2015



21st August 2021

Signature

Date

We confirm that the candidate did the work in this report under our supervision as the appointed University Supervisors.

Dr. Michael O. Ngala



23rd August 2021

Signature

Date

**School of Business and Economics
The Cooperative University of Kenya**

Dr.Emma Anyika



23rd August 2021

Signature

Date

**Department of Computing and Mathematics
The Cooperative University of Kenya**

DEDICATION

This research report is dedicated to my wife Poline and children Qdelqeen and Clifton for their emotional support during the study process. I sincerely appreciate your support especially the constant prayers offered. Indeed, I attest they are the cause of completing this study. May the Lord bless Mightily.

ACKNOWLEDGEMENTS

First and foremost, I thank God for his grace, provision and seeing me through the report. Individually my special gratitude goes to my supervisor Dr.Ngala and Dr. Emma Anyika for their academic guidance throughout development of this report. I would like to acknowledge all the MCM students, colleagues, friends and my family, especially for their moral and material support towards completion of this report.

Appreciation goes to the MCM lecturers for their commitment towards the success of the students. I also acknowledge the librarians who tirelessly served us even during the weekends and the Lord bless the work of your hands. Lastly but not the least I recognize the Management of the various SACCOs in Kirinyaga County who volunteered with loads of information, may you succeed in the endeavors of your organizations’.

TABLE OF CONTENTS

DECLARATION	ii
DEDICATION	iii
ACKNOWLEDGEMENTS	iv
TABLE OF CONTENTS	v
LIST OF TABLES	viii
LIST OF FIGURES	ix
ABBREVIATIONS AND ACRONYMS	x
ABSTRACT.....	xii
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study	1
1.1.1 Risk Management	2
1.1.2 Financial Competitiveness	3
1.1.3 SACCOs in Kenya	5
1.2 Statement of the Problem.....	6
1.3 Purpose of the Study	7
1.4 Objectives of the Study	7
1.5 Research Hypothesis	7
1.6 Significance of the Study	7
1.7 Scope of the Study	8
1.8 Limitations of the Study.....	8
1.9 Delimitations of the Study	9
CHAPTER TWO: LITERATURE REVIEW	10
2.1 Introduction.....	10
2.2 Theoretical Review	10
2.3 Empirical Literature Review	13
2.4 Research Gap	18

2.5	Conceptual Framework.....	19
CHAPTER THREE: RESEARCH METHODOLOGY		20
3.1	Introduction.....	20
3.2	Research Design.....	20
3.3	Target Population.....	21
3.4	Sample Size and Sampling Methodology	21
3.5	Research Instruments	22
3.6	Data collection procedures.....	22
3.7	Validity and Reliability of the Instruments.....	23
3.8	Data Analysis and Presentation	23
3.9	Ethical Consideration.....	27
CHAPTER FOUR: DATA ANALYSIS, PRESENTATION AND DISCUSSIONS		28
4.1	Introduction	28
4.2	Demographic Characteristics of Respondents	28
4.3	Descriptive Analysis	31
4.4	Test for Reliability and Validity	36
4.5	Correlation Analysis	36
4.6	Regression Analysis Assumptions.....	39
4.7	Regression Analysis	42
4.8	Multiple Regression Analysis.....	47
CHAPTER FIVE: SUMMARY, CONCLUSIONS ANDRECOMMENDATIONS		
5.1	Introduction	51
5.2	Summary of Findings	51
5.3	Conclusions	52
5.4	Recommendations	53
5.5	Suggestion for further study.....	55
	References.....	56

APPENDICES	62
Appendix 1: Introductory Letter	62
Appendix 2: Questionnaire	63
Appendix 3: NACOSTI License	67

LIST OF TABLES

Table 3.1: Target Population Distribution	22
Table 3.2: Operationalization of variables	25
Table 4.1: Position Held in the SACCO... ..	28
Table 4.2: Length of Service in the SACCO	28
Table 4.3: Number of Years SACCO has been in Operation.	29
Table 4.4: Presence of Risk Management Policy	29
Table 4.5: Implementation of Risk Management Policy	30
Table 4.6: Risk Prevention Practices Statistics	31
Table 4.7: Risk Detection Practices Statistics.....	32
Table 4.8: Risk Control Practices Statistics	33
Table 4.9: Financial Competitiveness.....	34
Table 4.10: Reliability Test.....	35
Table 4.11: Correlational Analysis	37
Table 4.12: Shapiro-Wilk Test for Normality.....	38
Table 4.13: Autocorrelation Test.	38
Table 4.14: Multicollinearity Test	39
Table 4.15: Risk Prevention Practices	41
Table 4.16: Risk Detection Practices	42
Table 4.17: Risk Control Practices... ..	44
Table 4.18: Multiple Regression Model... ..	46

LIST OF FIGURES

Figure 2.1: Conceptual Framework	20
Figure 4.1: P-P Plot	40

ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
CRB	Credit Reference Bureau
CBK	Central Bank of Kenya
GOK	Government of Kenya
NACOSTI	National Commission on Science, Technology and Innovation
NPL	Non-Performing Loans
PEARLS	Protection, Effective financial structure, Asset Quality, Rate of Return, Liquidity and Signs of Growth
SACCOS	Savings and Credit Cooperative Society.
SPSS	Statistical Packages for Social Sciences
SASRA	SACCOs Societies Regulatory Authority
TOL	Tolerance
VIF	Valence Inflation Factor
WB	World Bank

OPERATIONAL DEFINITION OF TERMS

Financial Competitiveness: Involves the extent to which an enterprise can maximize its value based on knowledge and innovation and effectively integrates the ability of the financial capability for sustainable competitive advantage.

Risk Control Practices: these are a set of methods that SACCOs utilize to evaluate potential losses that may arise through their undertakings. Through the evaluation process, SACCOs are informed of actions they can take to reduce or eliminate the losses.

Risk Detection Practices: Is a method utilized by risk management practitioners to identify threats to the organization and neutralize them before they cause disruption to the system.

Risk Management Practices: The practice of identifying the potential risk, analyzing them and taking precautionary steps to reduce the risk.

Risk Prevention Practices: They include all techniques and management practices that help to prevent unnecessary or foreseeable risks

Deposit Taking SACCOs: It's a financial institution registered under Cooperative Societies Act No. 12 of 1997, and which holds a valid license issued under the SACCOs Societies Act of 2008 by SASRA.

ABSTRACT

Despite the existence of SASRA regulation, many SACCOs are still experiencing challenges due to the inability to manage various risks more efficiently. High costs of operation, non-performing loans and changes in interest rates are some of the aspects which have contributed to the deteriorating financial performance of SACCOs in Kirinyaga County. To overcome the challenges facing SACCOs this study sought to investigate risk reduction practices adopted by SACCOs in Kirinyaga County to enhance financial competitiveness. This study was based on the financial theory, Credit Risk Management theory and the Stewardship theory. The specific objectives of this study were: to determine the risk prevention practices employed by SACCOs, to investigate the risk detection practices employed by SACCOs and to determine the risk control practices employed by the SACCOs in Kirinyaga County. The study adopted descriptive research design in order to assess the problem under investigation. The study adopted a census approach to collect information from 23 SACCOs operating in Kirinyaga County. Primary data was collected from the top management of the SACCOs using questionnaires. Data collected was analyzed using the Statistical Package for Social Sciences (SPSS version 21) software. The response rate of the administered questionnaires stood at 75%. The descriptive statistics utilized in this study were mean, percentages and standard deviations whereas the inferential statistics included; ANOVA, multivariate and bi-variate regression and Pearson Correlation. The study established a positive and significant relationship between the independent variables; risk prevention practices, risk detection practices and risk control practices and the dependent variable financial competitiveness of SACCOs within Kirinyaga County. The coefficient of determination was at 83.1 %, an indicator that the three explanatory variables explained more than eighty percent of variance in the financial competitiveness of SACCOs in Kirinyaga County. The p-value and regression coefficients generated after running the regression model were as follows; for risk prevention practices ($\beta= 0.471$, $p= 0.012$), risk detection practices ($\beta= 0.251$, $p=0.037$) and risk control practices ($\beta= 0.376$, $p= 0.003$). The study concluded that risk prevention practices, risk detection practices and risk control are important in influencing the financial competitiveness of SACCOs. This study therefore, recommends the implementation of risk management strategies in all the SACCOs in order to improve their financial competitiveness. The findings of this study are of benefit to the practitioners' in the co-operative sector, policymakers and researchers in the field of risk management.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Tremendous development has been witnessed in the business world since 1940. The concept of risk management has gradually gained popularity across sectors ranging from the insurance sector to the financial sector (Parvaneh, 2014). With uncertainties in business, competitive organizations around the world are striving to develop risk management models that will enhance their financial competitiveness. Since 1990s, commercial organizations, mainly SACCOs have dedicated their effort to minimize risks associated with their business, thus enhanced the competitiveness of their firms in terms of profits, diversification, customer loyalty and employee satisfaction (Liangrong, 2013).

Business enterprises operating in the 21st century is not exempted from unpredictable changes caused by change in political, economic, social, technological, ecological and legal policies (Linda & Niswah, 2016). With increased competition, changes in consumer needs, influence of globalization and labour market dynamics, both profit and non-profit oriented firms have to develop frameworks of minimizing risks associated with business ventures (Barrese, 2015). Organizations operating in developed and developing countries of the world are continuously reviewing their risk management strategies to enhance their competitiveness (Ballantyne & Ryan, 2013).

Since organizations are environmentally dependent, numerous negative threats are experienced that influence the financial position of an enterprise (Kashif & Lai, 2015). Risk being an inherent and unavoidable aspect of any competitive enterprise, many organizations have gone through radical changes intended to minimize losses and maximize profits (Kraus & Lehner, 2013). SACCOs, being one of the organizations that are established based on common economic objectives, chances of failure are high if proper mechanisms of dealing with risks are not put in place (Chen & Pan, 2012). Since SACCOs engage in credit facilities, it is recommendable that management needs to analyze the business environment and develop policies that will minimize risks associated with customer information and changing trends of the economy (Frigo, Anderson & Richard, 2011).

Organizations that are not cautious on risk management are likely to experience losses and endanger investments and savings of SACCO's members and depositors (Liao, 2012). For SACCOs to enhance financial competitiveness, managers should have an in-depth understanding of risks associated with the kind of business their organizations are doing, measure the effect of the risks on the overall productivity of the firm and develop control mechanisms (Charyya, 2008). Organizations and especially SACCOs operating in both developed and developing countries of the world should have a comprehensive risk management policy with prudent guidelines intended to maintain and improve financial competitiveness (Ikenhout, 2015). Pooser and Tobin (2012) suggest that despite risk management models developed by firms internally, the enacted laws should be supplemented with SASRA regulation to manage risks more effectively and efficiently. The principles of risk management are always based on sound systems, resource mobilization, decision making, accountability and distribution of knowledge (SASRA, 2015).

1.1.1 Risk Management

Scholars have proposed numerous arguments concerning the meaning of risk management. For instance, risk management is defined as a process by which firms analyze a situation for a potential threat, identify appropriate measures, and prioritize to control the adverse effect of uncertainties (Parvaneh 2014). Pooser and Tobin (2012) suggest that risk management is a chronological process that an organization can put in place to alleviate negative consequences. He argues that companies should foster intelligent approaches in detecting risks in the systems. To gain financial competitiveness, SACCOs should weigh and review their policies to mitigate risks associated with their business models.

Regulatory guidelines that are adopted by SACCOs are likely to mitigate financial risks if implemented effectively. With effective implementation of SASRA guidelines, SACCOs are expected to enhance their financial competitiveness in terms of capital and earnings. Internal and external influences like stiff competition, technology, and change in regulations and poor management can subject SACCOs to financial constraints, thus affecting the overall financial performance of the SACCOs. The ability of the SACCOs to engage competent employees and consult financial risk experts can result to improved financial performance of SACCOs. Proactive risk management approach should be the driving force of every SACCO's strategy in the changing

business environment. Appropriate identification, measurement, monitoring and controlling mechanisms can enhance financial competitiveness among SACCOs operating in developing and developed countries.

Maina *et al.*, (2016) avers that SACCOs operating in the changing business environment may vary based on the circumstances. Furthermore, SACCOs can adopt multiple approaches to mitigate financial risks like non-performing loans and non-compliance of customers to set regulations and standards. Miller (2003) also argues that risk management practices adopted by SACCOs may differ. By extension, SACCOs should redefine their risk management strategies to survive. Ajupov (2019) asserts that the risk management process comprises four steps: identification of potential losses, evaluation of possible losses, and selection of appropriate risk management methods for treating loss exposures and implementing and administering the risk management program.

Liao (2010) argues that risk management is the human activity that integrates recognition of risk, risk assessment, developing strategies to manage it and mitigation of risk using managerial resources. Leon (2014) also suggests that an effective risk management process can provide SACCOs with the capability of reducing its risk exposure and prepare for survival after any unexpected crisis. Ikenhout (2015) proposes that competitive SACCOs need to develop strategic risk management models to mitigate credit, liquidity, interest rates and compliance risks. For any SACCOs to meet its shareholder expectations, the representatives or employees should be creative by developing risk models to enhance their financial position (Beasley 2006).

1.1.2 Financial Competitiveness

Financial competitiveness deals more with maximizing enterprise value through prudent resources management. It integrates resources capacity of the enterprise to enhance core competitiveness in product or service, which in turn increases the business value. Kagonia (2017) suggest that competition in financial competitiveness can be divided into two stages, the development of financial capability and access to financial resources. Therefore, financial competition is a competition that is based on knowledge, innovation ability and effectively integrating the ability of financial power in order to benefit from sustainable competitive advantage (Nganga, 2017). A study by Nganga (2017) on the main variables affecting SACCOs financial competitiveness include

financial power, market share, human capital, international-exchange activities and the use of technology.

According to Teoh and Rajendran (2015), financial competitiveness of a firm is a way of ensuring that resources available are used in the most efficient and effective manner. The essence is financial competitiveness ideology is the extent to which a firm can maximum return on the capital employed in the business. From the perspective of SACCOs, managers must understand the performance of SACCOs in terms of financial and non-financial perspectives. Production of financial statements at the right time and timely analysis of information are critical indicators of measuring the financial competitiveness of the SACCOs. Pooser and Tobin (2012) avert those standards of measuring the financial competitiveness of a SACCOs can range from; asset base, liabilities, the performance of the loan books, corporate governance, quality of staff and regulations in the industry.

According to SASRA (2015), SACCO's regulations are meant to improve the competitiveness of SACCOs by setting financial and operating standards equal to the deposit taking business conducted by SACCOs. It's ultimately expected to drive efficiency and enhance the level of savings in the SACCOs societies as envisaged in the financial sector strategy in vision 2030. SACCOs regulations and performance relate in that the laws are meant to set specific requirements on the tools used to measure performance (PEARLS), leading to a direct relationship. Frigo (2011) argue that while there have been several reform initiatives in SACCOs subsector in the past, the introduction of a SACCOs Societies Act of 2008 is a recognition of the unique financial intermediation function that SACCOs play in the economy.

Operational regulations and performance standards are specific and prescriptive, not to make SACCOs non-competitive and stifle their growth but to ensure that they operate and grow within a framework that promotes sound financial and business management practices (Robichech, 2001). According to the Central Bank of Kenya (2015), the financial competitive of SACCOs has continued to be measured through non-conventional models such as social/cultural changes on members and the extent of financial outreach. Through government intervention by legislation, SACCOs have become more structured and hence adoption of more conventional ways of measuring

their profitability, return on assets and return on equity by adopting appropriate financial risk management models.

1.1.3 Savings and Credit Cooperative Societies in Kenya

According to SASRA (2018), the management of Co-operative Societies in Kenya is governed by the Co-operative Societies Act Cap 490 No. 12 of 1997 and its subsequent amendment in 2004. Co-operative Societies Act cap 490 principally deals with registration, incorporation and general supervision of all co-operative societies, including deposit taking and non-deposit taking SACCOs. However, Cooperative Societies Act does not provide a legal framework for prudential supervision of SACCOs. The legal frame work for the supervision of SACCOs is founded in SACCOs Societies Act No 14 of 2008, which provides a legal mechanism for prudential regulations for SACCOs in line with international best practices of financial regulation and supervision of deposit-taking financial institutions. By 2018 there were about 24,000 registered co-operative societies and unions in Kenya both active and dormant with a membership of over fourteen million. The establishment of SACCO societies was due to a desire to accord low and middle-income cadre people/employees an opportunity to save and borrow at more favorable terms than commercial banks (GOK, 2016). Social motivation to form co-operative arises from a fundamental need to join a co-operative to survive. Members who face similar conditions of poverty see the need to form co-operatives without which they risk marginalization as individuals. SACCOs have grown tremendously and currently, their membership stands at 4.97 million both individual and corporate members (SACCO's supervision report 2018). The 174 Deposit Taking SACCOs with FOSAs, which were SASRA licensed by 2018, have diversified into specialized banks like activities which include deposit-taking, saving facilities, debit card business and money transfers, both local and international.

With the commencement of the implementation of the third medium-term (2018-2022) of vision 2030 Economic blueprint, which emphasizes the need to leverage on SACCOs to mobilize savings for economic development, risk management and proper regulation would be vital in achieving this objective. Langat (2011) asserts that Kenya being one of the developing countries in the world, tremendous economic changes have been witnessed. Activities of SACCOs have contributed significantly to Social economic developments thus reduced poverty levels. With increased interest rates, majority of the

Kenyan population have shifted from Commercial Banks to SACCOs due the favorable conditions. Although several SACCOs are performing well financially, it is evident that some challenges are experienced due to high risks associated with the management of business portfolios.

Kirinyaga County is one of the Counties that has seen a sporadic growth of SACCOs in Kenya. The County has more than 20 SACCOs that are regulated by SASRA thus offering this study an opportunity to have an in-depth look on the risk prevention and control strategies implementation in the Cooperative sector and their effect on the financial competitiveness of the SACCOs.

1.2 Statement of the Problem

According to the Central Bank of Kenya Report (2015), the majority (72%) of SACCOs operating in Kenya are experiencing deteriorating financial competitiveness due to risk management issues. It was revealed that stiff competition and the influence of technology were some of the aspects that have contributed to decreased profits among SACCOs. Kiptoo (2015) also established that inability of the SACCOs to predict business uncertainties were associated with lack of appropriate risk management models to mitigate financial risks. Langat (2011) also concurs that SACCOs operating in Kenya are more likely to be financially competitive by developing risk management strategies to minimize cases of loan default and non-compliance of SACCOs to set regulations and standards by the Central Bank of Kenya. SASRA Supervision report (2018) also revealed that non-performing loans among Deposit taking SACCOs increased to 5.27 billion in the year 2018 from 4.92 billion in the year 2017 due to lack of appropriate risk management strategies among other reasons.

It is observed that SACCOs in Kenya are not financially competitive. Issues of managing credit risks, high default cases among borrowers and non-fulfillment of obligations from customers have remained an uphill task among SACCOs in Kenya, necessitating them to develop risk management practices. By extension, from the findings of previous studies, it's noted that little has been done concerning risk management practices and financial competitiveness among SACCOs in Kenya. It is observed that conceptual and contextual gaps are evident from previous empirical studies. For instance, a study conducted by Kiptoo (2015) was limited to SACCOs in Nairobi; a study by Chen and Pan (2012) was confined to SACCOs in Taiwan; a study

by Ballantyne and Ryan (2013) was confined to manufacturing firms and a study by Lagat (2011) was concerned with different variables like internal audit, communication and technology. Therefore, it is against this background that this study will seek to evaluate risk management practices and financial competitiveness of savings and credit co-operative societies in Kirinyaga County, Kenya.

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study is to establish the effect of risk reduction practices on financial competitiveness of SACCOs in Kirinyaga County.

1.3.2 Specific Objectives

The specific objectives of the study were:

- i. To determine the effect of risk prevention practices on financial competitiveness of SACCOs in Kirinyaga County.
- ii. To establish the effect of risk detection practices on financial competitiveness of SACCOs in Kirinyaga County.
- iii. To determine the effect of risk control practices on financial competitiveness of SACCOs in Kirinyaga County.

1.4 Research Hypothesis

The study strived to test the following null and their alternative hypotheses:

- i. **H₀₁**: There is no significant effect of Risk prevention practices on financial competitiveness.
H_{a1}: Risk prevention practices have an effect on the financial competitiveness of SACCOs in Kirinyaga County.
- ii. **H₀₂**: There is no significant effect of Risk detection practices on financial competitiveness.
H_{a2}: Risk detection practices have an effect on the financial competitiveness of SACCOs in Kirinyaga County.
- iii. **H₀₃**: There is on significant effect of risk control practices on financial competitiveness.

H_{a2}: Risk control practices have an effect on the financial competitiveness of SACCOs in Kirinyaga County.

1.5 Significance of the Study

The findings of this study may be beneficial to various stakeholders: Firstly, the findings of the study may help top management of the SACCOs on how to deal and reduce financial risk and the ultimate goal of ensuring growth and sustainable income and maximum benefit to the members.

Secondly, the findings may be of use to the Government in dealing with financial distress in SACCOs. They may be able to know whether regulating the co-operatives is instilling confidence and security in the sector to amass deposits for investment and financial inclusion, which is Kenya's financial strategy. The study may greatly support the implementation of Vision 2030 especially the economic and financial pillars. When levels of risks are well managed the SACCOs are in a position to consolidate and mobilize resources for onward lending to the government to be used in solving market failure problems. The study results could be adopted by Kirinyaga County government as a learning template of how to oversight SACCOs on risk management practices. Kirinyaga County is an agricultural rich county that SACCOs usually established by horticultural farmers and thus the survival of these entities is vital for their failure would have a disastrous effect on many livelihoods while their survival would contribute toward economic development and rise in the living standards of the populace.

Thirdly, the findings may help depositors with essential information needed when making deposit decisions. It is expected that the research findings may shed more light on how the SACCOs are utilizing members' deposits.

Fourthly, the findings may help the academic researchers in enhancing the literature of their research. Scholars and researchers who would like to carry out more studies on financial risk management are likely to find the study beneficial.

1.6 Scope of the Study

This study focused on SACCOs licensed to operate in Kirinyaga County to evaluate the effect of risk management practices on their financial competitiveness. The variables of the study were to examine the risk prevention practices employed by SACCOs, to

establish the risk detection practices employed by SACCOs and to determine the risk control practices employed by SACCOs in Kirinyaga County. The respondents of the study were senior managers of SACCOs operating in Kirinyaga County, Kenya. The study was planned to be undertaken within a period of six months.

1.7 Limitations of the Study

Some of the limitations of the study that were encountered included geographical, respondent perceptions on the topic and data availability. Firstly, focusing on SACCOs in Kirinyaga County and leaving out other SACCOs operating in the other 46 Counties was a limitation of the study. Therefore, this challenge was minimized by the researcher recommending other studies to be carried out in other Counties to establish the problem under investigation.

Secondly, it was anticipated by the researcher that some respondents may withhold crucial information due to sensitivity and perceptions of the topic. This challenge was minimized by assuring the respondents on the confidentiality of the information given.

Finally, accessing valid data posed a challenge to some extent because most of the empirical studies may be biased and the information may result in inaccurate conclusions and recommendations. This challenge was overcome by cautiously selecting information from authoritative sources that included international journal articles and related empirical studies carried out locally.

1.8 Delimitations of the Study

Findings from this study enhance knowledge in related studies that will be conducted by other researchers ranging from hypotheses testing, theoretical review and research methodologies. The objectives of the study were appropriate because it explored the reasons behind failure of SACCOs in Kenya. Kirinyaga County was preferred as the appropriate area of study due to significant increase of SACCOs in the region compared to other Counties that are less competitive.

Theories of the study were appropriate since they formed a foundation of the arguments concerning the risk detection, prevention and control practices problem under investigation. The research design adopted was descriptive because it gave the respondents the opportunity of expressing their views and opinions without manipulation. The instrument of data collection was structured questionnaire that

provided an opportunity for respondents to give independent views concerning the problem without interference from the researcher.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter outlines the theoretical review, empirical review, summary of research gaps and conceptual framework of the study. This chapter focused on establishing the relationship between the independent and dependent variables. The past studies conducted on risk management practices were reviewed in order to establish gaps and looked into ways in which those gaps could be filled through this study. In addition, this chapter focused on reviewing the financial theory, stewardship theory, and the credit risk management theory and expounding their connection to the study variables. There after the conceptual framework was developed to present the nature of relationship between the study variables.

2.2 Theoretical Literature Review.

The theories that were adopted to inform this study included; Financial Theory, Credit Risk Management Theory and Stewardship Theory.

2.2.1 Financial Theory

The financial theory was developed in the 1950s and the major proponents of the theory were Markowitz and Modigliani and Miller. Financial theory suggests that risk management helps in smoothening the variability of the firm value (Chen& Pan, 2012). This theory proposes that risks should be redistributed to those better equipped to handle them. Industrial companies are unlikely to have a comparative advantage in bearing foreign-exchange risk, interest-rate risk or commodity risk. Risk can also be redistributed by hedging: buying and selling derivatives thus decreasing the variance of the expected value of the firm.

Tarasi *et al.* (2013) identifies three major costs associated with higher variability in cash flow: Higher expected bankruptcy costs, higher expected payments to stakeholders and higher expected tax payments. If risk management can smooth variability on expected payments to stakeholders thus this automatically increases the firm value. As for tax payments, risk management works in the simple way as to manage taxable income so to ensure that the largest possible proportion of corporate income falls within the optimal

period in the business cycle (Okello, 2014). This theory applies to the current financial organization and helps to stamp out differences in an organization by smoothening risk management to achieve firms' value. If followed, it reduces the risk and controls the indicator of fraud.

2.2.2 Credit Risk Management Theory

The major proponent of Credit risk management theory was Moody (2003). He argued that that credit risk management theory explains the process a bank puts in place to control its financial exposures to risk. Credit is the provision of goods and services to a person or entity on agreed terms and conditions where the payments are to be made later with or without interest. During the contract period, not all debtors will repay their dues as and when they fall due. When the debtor does not pay their debts on the due date, the lender is exposed to credit risks, which may in turn lead to default. Credit risk is therefore the investor's risk of loss, financial or otherwise, arising from a borrower who does not pay his or her dues as agreed in the contractual terms (Ajupov, 2019).

The process of risk management comprises the fundamental steps of risk identification, risk analysis and assessment, risk audit monitoring, and risk treatment or control. Whereas a risk in simple terms can be measured using standard deviation, some risks may be difficult to measure, requiring more complex methods of risk measurement. Good risk management is not only a defensive mechanism but also an offensive weapon for commercial banks and this is heavily dependent on the quality of leadership and governance (Giambona *et al.*, 2018).

A SACCOs exists not only to accept deposits but also to grant credit facilities, therefore inevitably exposed to credit risk. Credit risk is by far the most significant risk faced by banks and the success of their business depends on accurate measurement and efficient management of this risk to a greater extent than any other risks. According to Chen and Pan (2012), credit risk is the degree of value fluctuations in debt instruments and derivatives due to changes in the underlying credit quality of borrowers and counterparties.

Ajupov (2019) defines credit risk as losses from the refusal or inability of credit customers to pay what is owed in full and on time. Credit risk is the exposure faced by banks when a borrower (customer) defaults in honoring debt obligations on the due date

or at maturity. This risk, interchangeably called 'counterparty risk' is capable of putting the bank in distress if not adequately managed. Credit risk management maximizes bank's risk-adjusted rate of return by maintaining credit risk exposure within the acceptable limit to provide a framework for understanding the impact of credit risk management on banks' profitability (Ajupov, 2019).

Giambona *et al.* (2018) opined that credit risk management is in two-fold, which includes the realization that after losses have occurred, the losses become unbearable and the developments in the field of financing commercial paper, securitization, and other nonbank competition which pushed banks to find viable loan borrowers. The main source of credit risk includes limited institutional capacity, inappropriate credit policies, volatile interest rates, poor management, inappropriate laws, low capital and liquidity levels, direct lending, massive licensing of banks, poor loan underwriting, laxity in credit assessment, poor lending practices, government interference and inadequate supervision by the central bank. An increase in bank credit risk gradually leads to liquidity and solvency problems. Credit risk may increase if the SACCOs lends to borrowers; it does not have adequate knowledge about (Maina *et al.* 2016). The risk control practices that a financial organization put in place to control the firm's exposure to risk guide the application of this theory.

2.2.3 Stewardship Theory

According to Davis *et al.* (1997), the philosophy of stewardship theory is grounded on protecting and maximizing shareholder's wealth. When managers of an organization formulate effective risk management strategies, the firm is likely to maximize profits that will improve dividends gained by shareholders at a given period of time. The theory emphasizes on the role of management being as stewards of assimilating their goals as part of the organization (Davis *et al.*, 1997). The stewardship perspective advocates that stewards are contented and driven to perform when the organizational attains its objectives

The theory recognizes the value of effective governance structures that promote the spirit of empowerment among workers by organizations. With empowerment, employees are likely to dedicate their effort to maximizing organizational productivity. (Donaldson & Davis, 1991). It stresses on the position of the employee to act more autonomously so that the shareholders' returns are maximized. Indeed, this can

minimize the costs aimed at monitoring and controlling employee behavior (Contraffato, 2014). Madison (2014) assert that in order to protect their reputations as decision-makers in organizations, managers are inclined to operate the firm to maximize financial performance as well as shareholders' profits. In this sense, it is believed that the firm's performance can directly impact perceptions of their individual performance (Madison, 2014)

This theory is applicable to this study based on the assumption that it is the responsibility of managers and directors of SACCOs to develop strategies that will enhance shareholder value. Policies of diversification, new product development and operational efficiency are internal initiatives implemented by shareholder representatives to maximize shareholder value through dividends. Therefore, policies formulated by commercial banks will enhance shareholder value based on profits and dividends. The flexibility of the policies will enable the firms to align their practices to the changing business environment for the benefit of the shareholder. This theory emphasizes on the roles of management are contented and driven to perform when the organization attains its objectives. On the other hand, management being a steward of the shareholders, must embrace full management functions to achieve the goals of the organization.

2.3 Empirical Literature Review

The study investigates whether risk prevention practices, risk detection practices and risk control practices affect the financial competitiveness of SACCOs in Kirinyaga County. Liao (2011) argues that risk management is the human activity that integrates recognition of risk, risk assessment, developing strategies to manage it and mitigation of risk using managerial resources. Leon (2014) also suggests that an effective risk management process can provide SACCOs with the capability of reducing its risk exposure and prepare for survival after any unexpected crisis. Ikenhout (2015) proposes that competitive SACCOs need to develop strategic risk management models that will mitigate strategic, credit, liquidity, interest rates and compliance risks. For any SACCOs to meet its shareholder expectations, the representatives or employees should be creative by developing risk models that will enhance their financial position (Maina *et al.*, 2016).

Muteti (2014) established that there was a positive relationship between capital

management risk, bank deposits, bank size and financial competitiveness of commercial banks in Kenya. Further, it was noted that there is need for the management, of commercial banks in Kenya to maintain the liquidity level at a safe level as it was found that liquidity risk negatively affects the financial performance and also the competitiveness of commercial banks in Kenya. The management of commercial banks in Kenya should hedge against foreign exchange risk and interest rate risk as it was found that interest rate risk and foreign exchange negatively affects the financial performance of the commercial bank in Kenya. However, the findings of the study were confined to Commercial Banks operating in Kenya and failed to focus on risk management in deposit-taking SACCOs in Kenya.

2.3.1 Risk Prevention Practices and Financial Competitiveness

Nyagah (2014) also revealed that event identification, risk assessment, objective setting, and information communication had negative effects on the financial performance of a firm while risk response, internal environment, and control activities had positive effects on the financial performance of a firm. However, the findings of the study were confined to pension management firms in Kenya but not SACCOs. On the other hand, Odhiambo (2012) observed that credit risk is the potential that a borrower fails to meet the obligations on agreed terms. There is always scope for the borrower to default from his commitments for one or the other reason resulting in crystallization of credit risk to the SACCOS. These losses could take the form of outright default or alternatively, losses from changes in portfolio value arising from actual or perceived deterioration in credit quality that is short of default. However, the findings of the study were limited to corporate governance in SACCOs and failed to address risk management issues.

Nkuru (2015) noted that liquidity risk is the potential for loss to an institution arising from either its inability to meet its obligations or to fund increases in assets as they fall due without incurring unacceptable cost or losses. He further argues that deposits or contributions generally have a much shorter contractual maturity than loans and liquidity management need to provide a cushion to cover anticipated deposit withdrawals. Firms should track the impact of pre-payment of loans & premature closure of deposits so as to realistically estimate the cash flow profile. However, the findings of this study were limited to SACCOs in the Agricultural sector in Meru County and concentrated on issues that affected the growth of SACCOs and ignored

risk management.

Hamdu and Adriana (2016) revealed the better the organization understands its inherent risks the greater confidence it will develop in order to pursue opportunities. The effectiveness of risk management improves accountability among stakeholders, thereby enhancing the effectiveness of corporate governance and strategic competitive advantages. Integrating risk management activities and documentation of the risk management process could have a greater contribution to the identification of business opportunities and facilitates the distribution of knowledge and best practices. Ultimately, integrated and effective risk management is expected to lead to sustainable resource allocation to improve the performance of the organization. However, it was observed that the study was too general since it focused on companies but not SACCOs in Kenya.

Mang'ana, Nyaboga, Momanyi and Makone (2015) revealed that poor risk management could jeopardize the company's relationship with its stakeholders. The company's day to day operations are related to its customers, suppliers and other partners. They all are external and the company has little control over them. The failure in risk management could severely affect the perception of these important elements. This results in higher contractual costs with its stakeholders. Suppliers and customers may engage in a negative bargaining process in every transaction that could ultimately increase transaction costs with them. Companies need to give appropriate concern for improving the risk management system in order to satisfy their counterparts such as customers and suppliers thereby, a fair and win-win commercial engagement could be reached with all company's counterparts.

2.3.2 Risk Detection Practices and Financial Competitiveness

Mohammed and Knapkova (2016) argued that the stability in earning also motivates major shareholders to invest more in the company, believing stability in earning would mean a lesser likelihood of bankruptcy and would result in higher expected future dividends and capital gain. Furthermore, major shareholders could lose their confidence and thus fail to provide a long-term commitment to the company if the company does not manage its risk properly and shows bankruptcy risk indicators. The company's specific assets are the immediate sources to finance the company's profitable projects. Hence, inappropriate management of risk could divert this asset and could result in the

loss of potential future opportunities

Girangwa, Rono and Mose (2019) established that effective risk management is expected to persuade the company's own shareholders to invest more in the company's specific assets. The resource could be utilized in improving production line and technological advancement that could directly and/or indirectly boosts the company's performance. On the other hand, the proper management of risk also persuades the company's customers, employees, suppliers and other stakeholders to invest more in the company's specific assets. This investment is valuable and a foundation for the company's growth and enhancing competitive advantage.

Omasete (2014) indicated that firms that adopt risk management practices in their operations had a strong effect on their financial performance compared to firms that did not adopt risk management practices. Moreover, He established that firms should apply multifaceted approaches to mitigate liquidity and credit risks in the long run. For companies to be competitive, management of risk exposure and conduction of proper analysis to avoid losses is necessary. However, it is noted that this study was confined to Insurance companies in Kenya but not Deposit-taking SACCOs. In addition, Moronya, Onditi and Nyagol (2016) identified that risk is inherent in every business, but organizations that embed the right risk management strategies into business planning and performance management are more likely to achieve their strategic and operational objectives. However, it is noted that the findings of the study were confined to SACCOs in Kisii County that is a different context from this study.

Wambui (2013) points out that risk management framework is important for SACCOs and other money lending institutions in Kenya. In conjunction with the underlying frameworks, the basic risk management process that is generally accepted is the practice of identifying, analyzing, measuring, and defining the desired risk level through risk control and risk transfer. Active risk management can decrease the probability of default as well as lower the cost in case of distress. Furthermore, the study revealed that there are risk management policy and procedures instituted by the SACCOs which includes having the policy of diversifying investment across different sectors, ensuring good corporate governance, regulating financial management, adhering to internal financial guidelines, constituting risk management committee, having an internal audit on procedures, taking legal action on defaulters and limiting the amount of fund disposal.

2.3.3 Risk Control Practices and Financial Competitiveness

According to Omasete (2014), Risk management has emerged as a new paradigm for managing the portfolio of risks that face organizations, and policymakers continue to focus on mechanisms to improve corporate governance and risk management. Despite these developments, there is little research on factors associated with the implementation of Risk Management. The management of credit risk includes measurement through credit rating/ scoring, quantification through estimate of expected loan losses, pricing on a scientific basis and controlling through effective loan review mechanism and portfolio management. In general, companies hardly publish any comprehensive information about their existing risk management system or plans.

Makori, Munene and Muturi (2013) also concur that common risk avoidance practices include the standardization of process, contracts and procedures and construction of portfolios. This should be practiced simultaneously with the implementation of incentive-compatible contracts with the institution's management. This enables the firm to manage risks that have a negative effect on its performance. Their study further noted that risk management processes is correlated with sustainable improvements in a firm's performance as the efficiency of risk management is expected to significantly influence its financial performance. However, the study was limited to the challenges of SACCOs and failed to address risk management issues in SACCOs.

Hoyt and Liebenberg (2011) established that poor risk management could jeopardize the company's relationship with its stakeholders. The company's day to day operations is related to its customers, suppliers and other partners. They all are external and the company has little control over them. The failure in risk management could severely affect the perception of these important elements. This results in higher contractual costs with its stakeholders. Suppliers and customers may engage in a negative bargaining process in every transaction that could ultimately increase transaction costs with them. Pagach and Warr (2011) concurs that companies need to give appropriate concern for improving risk management systems in order to satisfy their counterparts,

such as customers and suppliers; thereby, a fair and win-win commercial engagement could be reached with all company's counterparts.

Obure and Muturi (2016) aver that regardless of the difference in the argument, effective risk management minimizes the probability of bankruptcy and reduces the cost of acquiring capital. Effective risk management is expected to stabilize earnings. A stable earning keeps the organization to be prompt enough to repay claims timely which are an indication of a lower company and market risk. This makes it easy for the company to access borrowing at a lesser interest rate. Lower volatility of earning may create higher external demand on the company's shares. Potential investors may be encouraged to invest in the company's projects due to the promising facts of less volatility in earning.

2.4 Research Gap

There are limited empirical studies carried out locally and internationally on the effect of risk management practices on SACCOs competitiveness by; Gyamfi (2012); Muteti (2014); Obure and Muturi (2016); Nyagah (2014); Odhiambo (2012); Nkuru (2015); Hamdu and Adriana (2016); Hoyt and Liebenberg (2011); Pagach and Warr, (2011); Obure and Muturi (2016); Mang'ana, Nyaboga, Momanyi and Makone (2015); Măzăreanu (2007); Gordon, Loeb and Tseng (2009); Omasete (2014); Moronya, Onditi and Nyagol (2016); Wambui (2013); Makori, Munene and Muturi (2013) Muteti (2014) among others clearly indicate that conceptual, contextual and methodological gaps are evident in this area. Firstly, some studies carried out focused on different variables ranging from board characteristics, communication, internal control, technology and training but they failed to address variables of this study. On the other hand, some studies conducted focused on different contexts like Turkey, United States, Nigeria, Uganda and Counties in Kenya but failed to address the context of this study that is Kirinyaga County. In addition, some studies were confined to microfinance, banking and insurance sectors. Thirdly, some studies adopted different research analysis methods like cluster analysis, discriminant analysis and factor analysis but failed to adopt regression analysis. Therefore, on this background, the researcher identified this area as deserving attention since none of the studies highlighted addressed the issues in these areas.

2.5 Conceptual Framework

The Fig 2.1 below presents the relationship between independent and dependent variables. The direction of effect of the risk management factors applied in SACCOs is explicitly indicated in the figure below. The independent variables are; risk prevention practices, risk detection and risk control practices. The independent variables are assumed to influence the competitiveness of SACCOs which is the dependent variable as indicated in the conceptual framework.

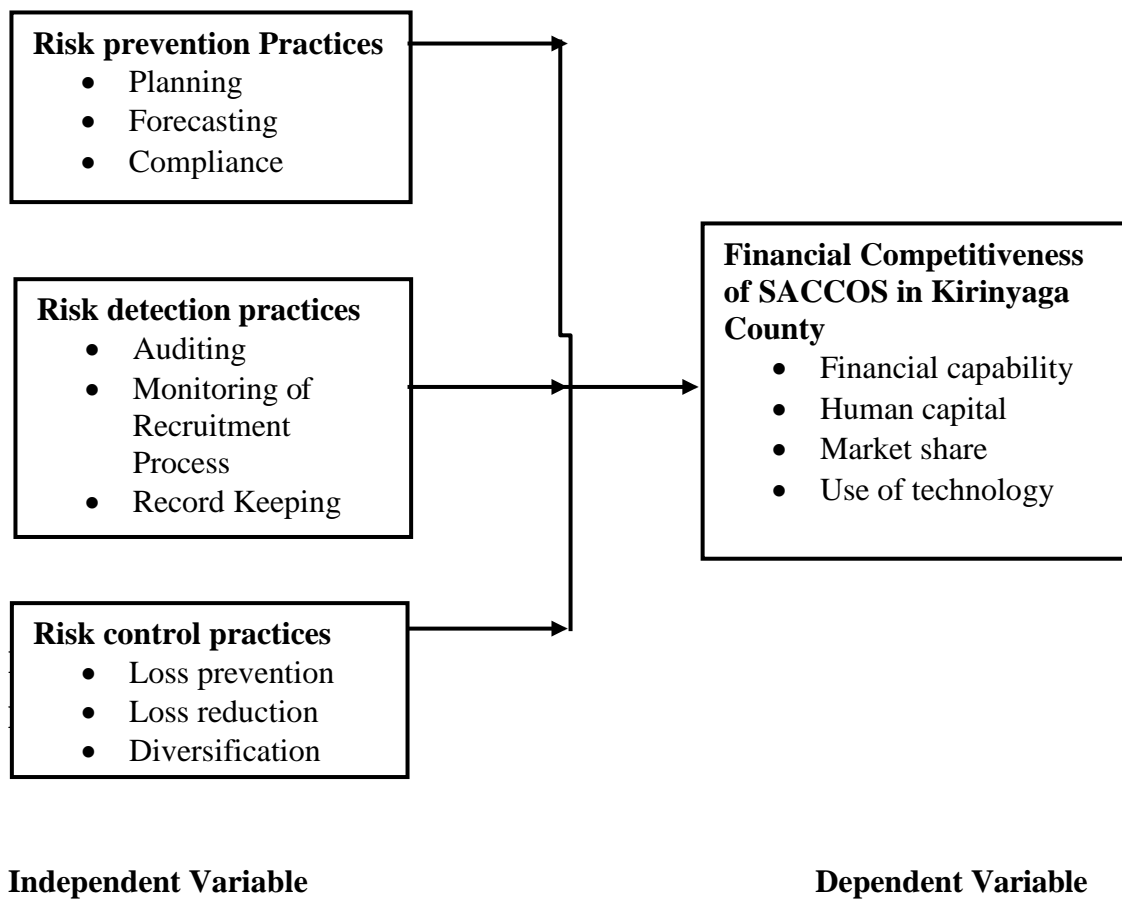


Figure 2.1 Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the research methodology that was adopted to analyze data collected on the influence of risk management practices on financial competitiveness of savings and credit cooperative societies in Kirinyaga County. This chapter explores the research design that gives basis to the conduct of this study. The target population and the sampling methodology that were utilized to define the right number of representative respondents from the employees of the SACCOs in the County were discussed and defined. The chapter also interrogates the research instruments, nature of data to be collected and procedures of collecting it. There were two models that were used to analyze the data; the bivariate regression analysis for specific objectives and the multiple regression analysis for the general objective.

3.2 Research Design

According to Silva (2017) a research design is an arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedures. The descriptive research design provides the interconnectivity between the study's theories of; credit management, financial and stewardship theories, and the objectives of the study. This enables deductive reasoning when putting the problem under investigation into perspective. The descriptive research design not only enables the description of the phenomena of interaction between the variables under study but also how they influence the competitiveness of the SACCOs in Kirinyaga County. Descriptive research design enables the study to explore the risk management practices and their influence to the organization's competitiveness in their natural setting without manipulating them. Therefore, this study adopted a descriptive research design to evaluate the effect of risk management practices on financial competitiveness of SACCOs within Kirinyaga County, Kenya. The descriptive research design was appropriate because views, opinions and ideas of respondents were collected and recorded without manipulation to enhance the accuracy of the research findings (Kumar, 2019). To enable the generation of each independent variable effect on the dependent variable the study adopted hypotheses testing. This affords the study the capability to establish the size of effect for each of the independent variables.

3.3 Target Population

Kothari and Guarav (2016) regards a population as a group of individuals' objects or items with common observable characteristics. Therefore, a census approach was adopted in this study where data was collected from all SACCOs operating in Kirinyaga. According to Kothari (2016), a census is a procedure of systematically acquiring and recording information about the members of a given population. Information from every member of the population was sought to establish the problem under investigation. The census approach was preferred because of the limited number of SACCOs operating in Kirinyaga County. The target population which acted as the unit of analysis was the 23 SACCOs operating in Kirinyaga County while the unit of observation was the top management of the 23 SACCOs. The top management includes the Chief Executive Officers, Finance Managers, Credits Manager, Marketing Managers and the Operational Managers as presented in Table 3.1

Table 3.1 Respondents Distribution

Category of Management	Target Per Sacco	No. of SACCOs	Target Population
CEOs	1	23	23
Finance Managers	1	23	23
Credit Managers	1	23	23
Marketing Managers	1	23	23
Operational Managers	1	23	23
Total	5		115

3.4 Sample Size and Sampling Methodology

The size of the target population determines the sampling methodology to be utilized to ensure good representation. When the target population is as small as the one for the SACCOs in Kirinyaga County it is advisable to make use of census as advised by

Cooper and Schindler (2014). An ample sample size or population enables the study results to be generalized and also to make inferences. Therefore, this study targets all the SACCOs numbering 23 operating in Kirinyaga County. The respondents were selected from the CEOs, Financial Managers, Credit Managers, Marketing Managers and Operational Managers. The total population to be considered for this study was 115 as presented above.

3.5 Research Instruments

Primary data was collected from respondents by the use of questionnaires as the main instrument of data collection. In this study, questionnaires were used to collect data from employees of SACCOs operating in Kirinyaga County. Respondents of the study were 115 personnel from top management. Questionnaires were administered to respondents by the researcher using drop and pick later method. Sekaran (2011) suggests that questionnaires are preferred in scientific studies due to their ability to capture respondent opinions in a structured manner and in written form for future reference.

Kumar (2019) argues that questionnaires assists in the translation of the research objectives into the research hypothesis, which will motivate the respondents to provide the information being sought. They also enable the respondents to answer questions freely and frankly, even on sensitive issues, because they are not required to reveal their identity, this increases the likelihood of getting accurate information. Questionnaires also offer uniformity in answering questions allowing a great degree of comparison because the items are framed in the same format.

3.6 Data collection procedures

Data was collected from primary data. Questionnaires were administered to respondents by the researcher using drop and pick later method and others were sent through email. The respondents were allowed to answer questions freely and frankly, even on sensitive issues, because they are not required to reveal their identity, this increases the likelihood of getting accurate information. The questionnaires collected were coded and analyzed to get the required information.

3.7 Validity and Reliability of the Instruments

3.7.1 Validity Test

According to Kothari and Guarav (2016), validity is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study. It is the degree to which a test measures what it is intended to measure. According to Cooper and Schindler (2014) validity is the degree by which the sample of test items represents the content the test is designed to measure. Content validity was employed by this study as a measure of the degree to which data collected using a particular instrument represents a specific domain or content of a particular concept. Kothari and Guarav (2016) contends that the usual procedure in assessing the content validity of a measure is to use a professional or expert in a particular field. Therefore, this study used financial experts' opinions and Lecturers to test items of the instruments.

3.7.2 Reliability Test

Cooper and Schindler (2014) propose that reliability involves the consistency of measurement. Reliability is increased by including many similar items on a measure, by testing a diverse sample of individuals and by using uniform testing procedures. The researcher selected a pilot group of five respondents of the total target population so as to test the reliability of the research instrument. This represented all the classes of respondents included in the study. One of the advantages of conducting this piloting study was to give advice and warnings about where the main research project might fail. The aim was to correct inconsistencies arising from the instruments, which was to ensure that they measure what was intended. Kumar (2019) suggest that the reliability of the instrument was tested using Cronbach's alpha method. The method was appropriate since it measured the internal consistency of the instrument using coefficients. A coefficient of 0.7 or more implied that there is a high degree of data reliability.

3.8 Data Analysis and Presentation

To analyze the data, the Statistical Package for Social Sciences (SPSS version 21) software was used. The data collected in the research was edited, coded, classified on the basis of similarity and then tabulated. Descriptive statistics were used to analyze data and explain the findings in the form of mean, standard deviation and percentages.

To permit quantitative analysis, data was converted into numerical codes representing attributes or measurement of variables. Each variable was measured on a scale of 1-5 and results were represented quantitatively. Qualitative statements were analyzed using the content analysis method, where key themes of the published content were reviewed to make deductive arguments concerning the problem under investigation. To establish the statistical relationship between variables, a multiple regression model was adopted. The regression model adopted was of the form;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where; Y= Financial Competitiveness of SACCOs Kirinyaga County.

β_0 = Y intercept

β_1 to β_3 = Regression coefficients

X_1 = Risk Prevention Practices

X_2 = Risk Detection Practices

X_3 = Risk Control Practices

ε = Error term

Besides the study utilizing a multiple linear regression model it will make use of simple regression models for testing each of the three-null hypothesis in the study.

- i. **H₀₁**: There is no significant effect of Risk prevention practices on financial competitiveness.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where; Y= Financial Competitiveness of SACCOs Kirinyaga County.

β_0 = Y intercept

β_1 = Regression coefficient

X_1 = Risk Prevention Practices

ε = Error term

- ii. **H₀₂**: There is no significant effect of Risk detection practices on financial competitiveness.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where; Y= Financial Competitiveness of SACCOs Kirinyaga County.

β_0 = Y intercept

β_1 = Regression coefficient

X_1 = Risk Detection Practices

ε = Error term

- iii. **H₀₃**: There is on significant effect of risk control practices on financial competitiveness.

$$Y = \beta_0 + \beta_1 X_1 + \varepsilon$$

Where; Y= Financial Competitiveness of SACCOs Kirinyaga County.

β_0 = Y intercept

β_1 = Regression coefficient

X_1 = Risk Control Practices

ε = Error term

The Table 3.2 below represents the operationalization of the study variables;

Table 3.2 Operationalization of variables

Variable	Indicator	Measurement	Author
Risk Prevention Practices	<ul style="list-style-type: none"> • Planning • Forecasting • Compliance 	Five-point Likert type scale	Kenhout & Adriano (2016), Kiptoo (2015)
Risk Detection Practices	<ul style="list-style-type: none"> • Auditing • Monitoring Recruitment process • Record Keeping 	Five-point Likert type scale	Lagat (2011) Muteti (2014)
Risk Control Practices	<ul style="list-style-type: none"> • Loss prevention • Loss reduction • Diversification 	Five-point Likert type scale	Moronya <i>et al.</i> (2016)
Financial competitiveness	<ul style="list-style-type: none"> • Financial capability • Human capital • Market share • Use of technology 	Five-point Likert type scale	Kiptoo (2015), Gyamfi (2012)

3.8.1 Normality

The main assumption of normality is related to the distribution of the error term. If the error term is normally distributed with a mean of zero and a constant variance, it is concluded that normality exists. Normality as a necessary condition for data analysis, the study used the Shapiro-Wilk statistics.

3.8.2 Autocorrelation

The cross-correlation of a signal with itself at a different point in time is called autocorrelation. For this research Durbin-Watson test was used as an autocorrelation test. Durbin-Watson test gives a result in the range of 0 and 4, where values close to 2 suggest less autocorrelation and values close to 0 or 4 indicate greater positive or negative autocorrelation respectively.

3.8.3 Multicollinearity

The problem of multicollinearity exists when there is a non-linear relationship among explanatory variables of the regression model. The existence of such a relationship makes it difficult to separate the independent effect of each explanatory variable.

Multicollinearity can be checked using two methods; the variance inflation factor (VIF) and tolerance (TOL) methods. In this research, the existence of multicollinearity was tested through the use of the variance inflation factor (VIF), where VIF of the variables more than 10 indicates high multicollinearity. The problem of multicollinearity can be addressed by dropping the highly collinear variable to make the other variable statistically significant (Gujarati and Porter, 2013).

3.9 Ethical Consideration

Before data analysis, the researcher sought permission from the management of SACCOs operating in Kirinyaga County and the Cooperative University of Kenya before data collection. Research permit was also sought from the NACOSTI (National Commission for Science, Technology and Innovation) where the questionnaire was taken through an ethical review and test. Responsibility to the respondents included voluntary participation and informed consent prior to participation. To ensure the participants were not prejudiced, simple language and statements were used to describe the aim of the research and its procedures. Responsibility to the profession included accuracy in analysis, presentation and reporting of the study findings. Confidentiality and anonymity of the respondents was guaranteed. As noted by Kothari and Guarav (2016) it is appropriate to seek permission from relevant stakeholder before data collection in any scientific research for objectivity purposes.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND DISCUSSIONS

4.1 Introduction

The data analysis chapter encompasses the demographic analysis, reliability tests of the study instruments and regression analysis. The tests of association between the independent and dependent variables was conducted at this stage. This established the association between the variables. The size of effects was established by running the regression model as directed in chapter three. The collected data was first coded the tabulated through entry to the SPSS which was the data analytical tool that helped in carrying out the descriptive and inferential statistical tests. The summary of data analysis was carried out at the end of the chapter.

4.2 Demographic Characteristics of Respondents

The descriptive statistics like mean, median, kurtosis and skewness were carried out at this section. These measures of centeredness and variability help in describing the dispersion of the data items from one another.

4.2.1 Response Rate

The filled questionnaires that could be utilized in data analysis were 87 which represented a 75 percent response rate. According to Kumar (2019) the response rate should be more than 50 per cent and thus this study response was suitable for both descriptive and inferential data analysis.

Table 4.1 Respondent Analysis

Category	Population	Frequency	Percent
CEO	23	18	20.7
Financial Manager	23	18	20.7
Credit Managers	23	19	21.8
Marketing Managers	23	16	18.4
Operational Managers	23	16	18.4
Total	115	87	100.0

4.2.2 Managerial Position in the SACCO

The study explored the nature of managerial positions occupied by the respondents. Table 4.1 depicts the distribution of the managerial positions occupied by the respondents. Revealing the managerial position helps in understanding the nature of the organizational structure and capability of management in managing risks in organizations.

Tale 4.1 Position Held in the SACCO

	Frequency	Percent
CEO	18	20.7
Financial Manager	18	20.7
Credit Managers	19	21.8
Marketing Managers	16	18.4
Operational Managers	16	18.4
Total	87	100.0

From Table 4.1 the majority of the respondents were credit managers. They were followed closely by the CEOs and the financial managers whose response rate was 20.7 per cent of the total respondents. The marketing managers and operational managers tied at 18.4 per cent. The respondents represented in this study are key in the implementation of risk management practices within an organization.

4.2.3 Length of Service in the SACCO

The study wanted to establish the number of years that the respondent had worked with the SACCO. This served as an indicator of the respondents of whether they have interacted with any of the risk management practices implemented in the organization. The results are depicted in the Table 4.2

Table 4.2 Length of Service in the SACCO

	Frequency	Percent
1-3	10	11.5
4-6	28	32.2
Valid 7-9	24	27.6
>10	25	28.7
Total	87	100.0

From Table 4.2 the majority of the respondents had served their respective SACCOs for a period of between 4-6 years represented by 32.2 per cent. This was followed closely by those who had served the SACCO for more than 10 years which stood at 28.7 per cent. There were 27.6 per cent of the respondents who had served in the

SACCOs for a period between 7-9 years while the least number of years served in the SACCOs was 1-3 years which was represented by 11.5 per cent.

4.2.4 Number of Years SACCO has been in Operation

The study wanted to establish the number of years that the SACCOs had been in operation. The Table 4.3 depicts the number of years the SACCOs have been operating.

Table 4.3 Number of Years SACCO has been in Operation

		Frequency	Percent
Valid	2-5	6	6.9
	6-10	29	33.3
	11-15	18	20.7
	16-20	4	4.6
	>20	30	34.5
	Total	87	100.0

As indicated from Table 4.3 the majority of the SACCOs had been in operation for a period of more than 20 years and represented 34.5 per cent of all the SACCOs under consideration. This indicated that there was a higher chance for the majority of SACCOs to have implemented a range of risk management practices. The second cluster of SACCOs are those that had been in operation for a period of 6-10 years which were represented by 33.3 per cent. This was followed by those who had been in operation for a period between 11-15 years at 20.7 per cent. The least per cent was found to represent the SACCOs who had been in operation for a period of 2-5 years representing 6.9 per cent only.

4.2.5 Presence of Risk Management Policy

The study wanted to establish whether the SACCOs had developed a risk management policy. This is presented in Table 4.4

Table 4.4 Presence of Risk Management Policy

		Frequency	Percent
Valid	Yes	49	56.3
	No	38	43.7
	Total	87	100.0

From Table 4.4 we realise that majority of the SACCOs had developed a risk management policy for their organizations. The results of the study indicated that 56.3 per cent of all the SACCOs that had a risk management policy. The results of the study indicated that the SACCOs were well aware of the need of having a risk management policy.

4.2.6 Risk Management Policy Implemented to Minimize Financial Loss

The implementation of risk management policy is as important as any other policy in the SACCO. This study was therefore interested in establishing the status of risk management policy implementation. The results of the analysis are depicted in Table 4.5

Table 4.5 Implementation of Risk Management Policy

	Frequency	Percent
Valid Yes	45	51.7
No	42	48.3
Total	87	100.0

From Table 4.5 there is evidence that 51.7 per cent of the SACCOs have been implementing risk management policies to minimize instances of financial losses. There are other SACCOs that is 48.3 per cent who do not implement risk management policies for minimizing financial losses.

4.3 Descriptive Analysis

The following section presents description of the various descriptive analysis undertaken in this study. The descriptive analysis is conducted on the risk prevention practices, risk detection practices, risk control practices and financial competitiveness variables. The descriptive statistics that will be reviewed in this section include mean, standard deviation, kurtosis and skewness.

4.3.1 Risk Prevention Practices

The study sought to assess the descriptive statistics for risk prevention practices carried out by SACCOs in Kirinyaga County. The respondents were asked to indicate the extent of their agreement with various items focusing on the relationship between risk prevention practices and financial competitiveness of the SACCOs. From the responses the descriptive measures of mean, standard deviation, kurtosis and skewness were used in interpreting the nature of the relationship between the two variables. The results are presented in Table 4.6

Table 4.6 Risk Prevention Practices

Statement	—	Mean	Std. Deviation	Skewness	Kurtosis	
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
Managers of my SACCO are sensitive on preventing financial risks	2.9885	1.09432	.296	.258	-.426	.511
My SACCO always complies with set regulations by SASRA	3.0345	1.07236	.278	.258	-.408	.511
My SACCO conducts customer surveys to minimize risks	2.8391	1.03287	.266	.258	-.615	.511
My SACCO has integrated technology in managing customer information	2.8506	1.10526	-.014	.258	-.936	.511
My SACCO has developed strategies to curb intense competition	2.8506	1.01762	-.099	.258	-.576	.511

As from the Table 4.6 “My SACCO always complies with set regulations by SASRA” had the highest mean at 3.03 while the element “My SACCO conducts customer surveys to minimize risks” had the lowest mean value. In terms of dispersion, the element with the highest variability was “Managers of my SACCO are sensitive on preventing financial risks” at standard deviation value of 1.09 while “My SACCO has developed strategies to curb intense competition” had the lowest variation value of 1.01. Majority of the elements were negatively skewed except the elements “My SACCO has developed strategies to curb intense competition” and the element “My SACCO has integrated technology in managing customer information”. In terms of kurtosis the element with the highest value was “Managers of my SACCO are sensitive on preventing financial risks” with a value of -0.426.

The results of the study are consistent with those of Nyaga (2014) who established that continuous implementation of strategies for minimizing risks are vital in improving the financial competitiveness of SACCOs. Nyaga (2014) study established the need to conduct risk identification processes as well as conducting surveys as a method of preventing losses occurring from unattended or unknown risks. The findings of this study are consistent of those of Nkuru (2015) who established that risk prevention

strategies implemented in an organization is one way of enhancing the performance of the SACCO.

4.3.2 Risk Detection Practices

The study sought to assess the descriptive statistics of risk detection practices in Kirinyaga County SACCOS. The respondents were kindly requested to state their extent of agreement with statements focusing on risk detection practices. The results of the analysis is as depicted in Table 4.7 below

Table 4.7 Risk Detection Practices

Statement	<u>Mean</u>	<u>Std. Deviation</u>	<u>Skewness</u>	<u>Kurtosis</u>
	Statistic	Statistic	Std. Error	Statistic
My SACCO has internal mechanisms of detecting financial risks	2.8391	1.16013	.322	-.746
My SACCO engages Internal auditors to detect financial risks	2.8046	1.19922	.263	-.815
My SACCO can detect risk from annual profits	3.0000	1.21999	-.079	-.901
My SACCO detects risk by number of membership	3.0575	.99249	-.044	-.330
My SACCO detects risk using dividends earned by shareholders	2.7471	1.12289	-.036	-.789

As from the Table 4.7 above “My SACCO detects risk by number of membership” had the highest mean at 3.05 while the element “My SACCO detects risk using dividends earned by shareholders” had the lowest mean value of 2.74. In terms of dispersion, the element with the highest variability was “My SACCO can detect risk from annual profits” at standard deviation value of 1.22 while “My SACCO detects risk by number of memberships” had the lowest variation value of .99. Majority of the elements were negatively skewed except the elements “My SACCO has internal mechanisms of detecting financial risks” and the element “My SACCO engages internal auditors to detect financial risks”. In terms of kurtosis the element with the highest value was “My SACCO detects risk by number of memberships” with a value of -0.330

The results of this study are consistent with those of Girangwe *et al* (2019) who established that effective detection practices within an organization enhances its

financial performance. It is through the implementation of risk assessment and risk detection strategies that organizations are in a position to enhance their risk management practices thus improving the financial performance.

4.3.3 Risk Control Practices

The study sought to establish the descriptive statistics of the risk control practices elements being undertaken by the Kirinyaga SACCOS. In establishing the statistics the measures of central tendency and dispersion were taken into consideration. The results of the descriptive analysis are depicted in Table 4.8

Table 4.8 Risk Control Practices

Statement	<u>Mean</u>	<u>Std. Deviation</u>		<u>Skewness</u>		<u>Kurtosis</u>	
	<u>Statistic</u>	<u>Statistic</u>	<u>Statistic</u>	<u>Std. Error</u>	<u>Statistic</u>	<u>Std. Error</u>	
My SACCO has a risk management system.	2.5172	1.20909	.120	.258	-1.147	.511	
My SACCO always trains employees on the changing trends in risk management	2.6092	.99249	.347	.258	-.295	.511	
My SACCO has internal control mechanisms of analyzing business trends	2.8391	1.10888	.065	.258	-.829	.511	
My SACCO review always review its financial policies to minimize risks	2.7931	.98993	.283	.258	-.130	.511	
My SACCO conducts periodical audits to determine areas of risk	2.9885	1.11537	-.131	.258	-.802	.511	

From the Table 4.8 above “My SACCO conducts periodical audits to determine areas of risk” had the highest mean at 2.99 while the element “My SACCO has a risk management system.” had the lowest mean value of 2.52. In terms of dispersion, the element with the highest variability was “My SACCO has a risk management system.” at standard deviation value of 1.21 while “My SACCO review always review its financial policies to minimize risks” had the lowest variation value of .99. Majority of the elements were positively skewed except the element “My SACCO conducts periodical audits to determine areas of risk”. When kurtosis is examined the element with the highest value was “My SACCO review always review its financial policies to minimize risks” with a value of -0.130.

The results of this study are similar to those of Makori *et al.* (2013) who established that risk avoidance tactics are vital in enhancing the performance of SACCOs. This is concurred to by Obure and Momanyi (2016) results of their study on SACCOs in Kisii County where they established that risk control strategies are a requisite for good performance of the organization.

4.3.4 Financial Competitiveness

The study sought to establish the descriptive statistics for the financial competitiveness of the SACCOs operating in Kirinyaga County. The analysis explored descriptive measures like mean, standard deviation, skewness and Kurtosis. The Table 4.9 depicts these descriptive statistics.

Table 4.8 Financial Competitiveness

Statement	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
My SACCO has enough capital reserves for implementing projects and attending to emergencies	3.0920	.94785	-.019	.258	-.102	.511
My SACCO is competitive because of highly skilled human capital	3.0920	1.04138	.192	.258	-.960	.511
My SACCO has the biggest market share in the market	2.8276	.99073	-.084	.258	-.375	.511
My SACCO derives its competitive advantage from the adoption of information technology	3.0115	.92125	-.023	.258	-.597	.511

The descriptive analysis of the financial competitiveness as depicted from Table 4.9 indicated that the element with the highest mean to be “My SACCO is competitive because of highly skilled human capital” at 3.09 while the element “My SACCO has the biggest market share in the market” had the lowest mean value of 2.83. The element with the highest value of dispersion was “My SACCO is competitive because of highly skilled human capital” at standard deviation value of 1.04 while “My SACCO derives its competitive advantage from the adoption of information technology” had the lowest variation value of .92. Majority of the elements were negatively skewed except the element “My SACCO is competitive because of highly skilled human capital”. When kurtosis is examined the element with the highest value was “My SACCO has enough

capital reserves for implementing projects and attending to emergencies” with a value of -0.102.

4.4 Test for Reliability and Validity

To measure the degree of consistency of the research instrument the study adopted the Cronbach Alpha constant. According to Cooper and Schindler (2014) the Cronbach Alpha lies between 0 and 1, and a value greater than 0.5 is acceptable. The test for reliability is vital in establishing whether the structure of the questionnaire was in line with the problem statement or issues that the study wants to establish. The Table 4.10 indicates the Cronbach Alpha values established

Table 4.10 Reliability Test

Construct	Number of Items	Cronbach’s alpha
Risk Prevention Practices	5	0.825
Risk Prevention Practices	5	0.853
Risk Prevention Practices	5	0.905
Financial Competitiveness	4	0.778
Overall Items and their Reliability	19	0.947

The validity of the study was ensured through co-opting of risk management experts in the design of the questionnaires. Experts from the academia and the industry were consulted during the development of the study design and establishment of the research questions as well as in structuring the research instrument. This ensured that the study focused on the problem it was designed to solve.

4.5 Correlation Analysis

The correlation analysis helps the study to establish the measure of association between the variables. The measure of association among the independent variables or between the independent variables and the dependent variable. This study made use of the Pearson’s correlation coefficient as a measure of association between the variables. The extent of association is given by a measure (r) which ranks between -1 and +1 with the values of $r=+1$ and $r = -1$ indicating either a strong negative relationship or a strong

positive relationship between the variables (Kumar, 2019). When the value of association is zero it is an indicator that no association exists between the two variables.

In this study the independent variables of the study included; risk prevention practices, risk detection practices and the risk control practices. The independent variables were correlated with the dependent variable, financial competitiveness.

4.5.1 The Relationship between Risk Prevention Practices and Financial Competitiveness

The relationship between risk prevention practices and financial competitiveness was computed utilizing the Pearson Correlation Coefficient. This returned a coefficient of ($r = 0.74$, $p = 0.006$). The results indicate that there is a strong positive relationship between risk prevention practices and financial competitiveness. This is an indicator that if risk prevention practices are improved the financial competitiveness of the SACCOs in Kirinyaga County are bound to increase.

It is noted that the results of strong association between risk prevention and financial competitiveness of SACCOs are similar to those of Mang'ana, Nyaboga, Momanyi and Makone (2015) established in a study conducted in SACCOs in Kenya. This study imputes that SACCOs must be in the forefront of implementing systems that can not only detect risks but also prevent their occurrence and it's only through this that their financial competitiveness can be realized. As imputed by Nyaga (2014) and also results of this study where integration of technology as a strategy of prevention of risks is established to be an important influencer of financial competitiveness of SACCOs there is need to refocus the SACCOs systems in order to meet the SASRA's requirements on risk prevention and control

4.5.2 The Relationship between Risk Detection Practices and Financial Competitiveness

The relationship between risk detection practices and financial competitiveness was computed utilizing the Pearson Correlation Coefficient. This returned a coefficient of ($r = 0.64$, $p = 0.031$). The results indicate that there is a strong positive relationship between risk prevention practices and financial competitiveness. This is an indicator that if risk detection practices are improved the financial competitiveness of the SACCOs in Kirinyaga County are bound to increase.

This is also similar to a study conducted by Moronya, Onditi and Nyagol (2016) in a study involving SACCOs in Kisii County. The study established a strong relationship between risk assessment and detection and the performance of SACCOs. This was confirmation of the results of the study conducted by Wambui (2013) who established a strong relationship between risk identification and detection strategies on the performance of SACCOs. The results of these studies do tally with this study where emphasis is given on utilization of internal auditors in institution risk detection programs and activities in the SACCOs.

4.5.2 The Relationship between Risk Control Practices and Financial Competitiveness

The relationship between risk control practices and financial competitiveness was computed utilizing the Pearson Correlation Coefficient. This returned a coefficient of ($r = 0.57$, $p = 0.000$). The results indicate that there is a strong positive relationship between risk control practices and financial competitiveness. This is an indicator that if risk control practices are improved the financial competitiveness of the SACCOs in Kirinyaga County are bound to increase.

The results were similar to those established by Ondu (2016) who established that there was a strong association between risk control practices and financial performance of SACCOs. These two studies found a common ground in the risk control practices like the presence of risk management system and conducting periodical audits to determine and control risks. This was also indicated in the results of the study by Kemunto, Kisavi and Momanyi (2020) who found that risk management practices like risk control, internal risk control systems had a strong and positive association with financial competitiveness of SACCOs located in Western Kenya. Therefore, the results of the studies is indicative of the pertinent roles that risk control practices play in improving the financial competitiveness of SACCOs. This therefore, is an indicator of why the study by Kemunto *et al.*, (2020) implores the SACCOs to invest more on risk control systems for assured improved financial performance.

Table 4.11 Correlation Analysis

Factor		Risk Prevention Practices	Risk Detection Practices	Risk Control Practices	Financial Competitiveness
Risk Prevention Practices	Pearson Correlation	1			
	Sig. (2-tailed)				
Risk Detection Practices	N	87			
	Pearson Correlation	.65**	1		
Risk Control Practices	Sig. (2-tailed)	.000			
	N	87	87		
Financial Competitiveness	Pearson Correlation	0.66**	0.72**	1	
	Sig. (2-tailed)	0.00	0.00		
ness	N	87	87	87	
	Pearson Correlation	.74**	.64**	0.57**	1
ness	Sig. (2-tailed)	.006	.031	0.00	
	N	87	87	87	87

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

4.6 Regression Analysis Assumptions

In chapter three there are various tests that have been describe that help in establishing the suitability of the data for regression analysis. In the present study the test for normality, autocorrelation and heterogeneity are going to be carried out for they are important in determining the behavior between the independent variables and the dependent variables.

4.6.1 Normality Test

Shapiro-Wilk test assesses whether data is normally distributed against null hypothesis (H_0) that the sample does not follow a normal distribution. Table 4.12 depicts the results of the Shapiro-Wilk test on financial competitiveness, risk detection practices, risk prevention practices and risk control practices.

Table 4.12 Shapiro-Wilk Test for Normality

Shapiro-Wilk		
Variables	Statistic	Sig.
Risk Prevention Practices	.956	0.333
Risk Detection Practices	.896	0.721
Risk Control Practices	.867	0.232
Financial Competitiveness	.901	0.068

According to Frost (2017) for research data to be linearly fitted the dependent variable must be normally distributed. The study's dependent variable was financial competitiveness of SACCOs registered and operating in Kirinyaga County. The test for normality was carried out using Shapiro-Wilk test. According to Razali and Wah (2011) probability values greater than 0.05 at 95% confidence are an indicator that the sample follows a normal distribution.

4.6.2 Autocorrelation

The cross-correlation of a signal with itself at a different point in time is called autocorrelation. For this research Durbin-Watson test was used as an autocorrelation test. Durbin-Watson test gives a result in the range of 0 and 4, where values close to 2 suggest less autocorrelation and values close to 0 or 4 indicate greater positive or negative autocorrelation respectively. From the Table 4.13 the value of Durbin-Watson Test is close to 2 thus an indicator of less autocorrelation. This implies that the probability of an independent variable predicting itself is very minimal.

Table 4.13 Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.912 ^a	.831	.817	.53641	1.938

4.6.3 Multicollinearity

The problem of multicollinearity exists when there is a non-linear relationship among explanatory variables of the regression model. Multicollinearity can be checked using two methods; the variance inflation factor (VIF) and tolerance (TOL) methods. In this research, the existence of multicollinearity was tested through the use of the variance inflation factor (VIF), where VIF of the variables more than 10 indicates high multicollinearity. The VIF statistics are less than 10 thus indicating that there is no high correlation between the independent variables.

Table 4.14 Multicollinearity Test

Variables	Collinearity Statistics	
	Tolerance	VIF
Risk Prevention Practices	.310	3.229
Risk Detection Practices	.291	3.437
Risk Detection Practices	.257	4.001

4.6.4 Test for Homogeneity of Variance

The homogeneity test is carried out to ascertain that the variance of the error term/residuals is zero and does not depend on the independent variable. The study utilized the normal P-P plots.

Fig 4.1 P-P Plot

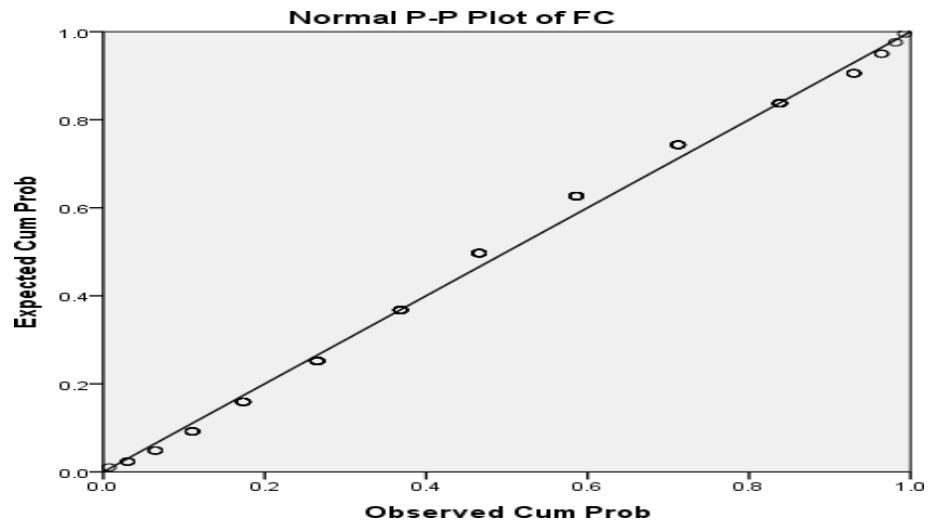


Figure 4.1 above indicates that the residuals have equal variance. This implies that the assumption of homogeneity is respected within the data.

4.7 Regression Analysis and Test of Hypotheses

The regression analysis was carried out to establish the size of effect and whether there exists a statistical significance association between the independent variables (risk prevention practices, risk detection practices and risk control practices) and the dependent variable (financial competitiveness). According to Foley (2018) regression analysis allows the examination of the relationship between two or more variables under consideration. The categorical data collected from the respondents is compiled and scored for each of the variables and a mean generated. The mean score is then utilized to run the regression. The results of the regression analysis are represented in tables that depict the coefficient of determination, the ANOVA and beta coefficients (size of effects)

4.7.1 Regression Analysis between Risk Prevention Practices against Financial Competitiveness

The study's first objective was to determine the effect of risk prevention practices on financial competitiveness of SACCOs in Kirinyaga County. Regression analysis was carried out to determine the statistical relationship between risk prevention practices and financial competitiveness.

Table 4.15 Risk Prevention Practices

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.932 ^a	.868	.846	.54572

a. Predictors: (Constant), Risk Prevention Practices

Table 4.15 below represents the regression model on risk prevention practices against financial competitiveness. As presented in the table, the R and R² values are provided. The R² value referred to as the coefficient of determination. The R² value indicates how much of the total variation in the dependent variable, financial competitiveness can be explained by risk prevention practices. In this regression, 86.8% in the dependent variable can be explained by risk prevention practices instituted by the organizations.

ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	17.330	1	17.330	46.151	.000 ^b
	Residual	31.917	85	.375		
	Total	49.247	86			

a. Dependent Variable: Financial Competitiveness

b. Predictors: (Constant), Risk Preventive Practices

Analysis of Variance (ANOVA) was also established for the relationship between risk prevention practices and financial competitiveness. This represents how well the independent variable predicts the dependent variable. The value of F (46.151, 0.000) is significant and less than 0.001, which indicates that the regression equation is a good fit for the risk management data.

Coefficients^a

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.406	.245		5.748	.000
	Risk Prevention	.549	.081	.593	6.793	.000

a. Dependent Variable: Financial Competitiveness

From the Table 4.15 it was realized that ($\beta = 0.000$ $P < 0.001$) thus showing that the relationship between risk prevention practices and financial competitiveness was significant and positive. Therefore, H_{01} of the study was rejected which states that there was no significance effect of risk prevention practices on the financial competitiveness

of deposit taking SACCOs within Kirinyaga County, Kenya; hence the null hypothesis is rejected. Therefore, the study settled on the alternative hypotheses which indicates that risk prevention practices have significance effect on the financial competitiveness of deposit taking SACCOs in Kirinyaga County.

The beta coefficients for risk prevention practices against financial competitiveness was as determined below. The p-value was 0.000 which is less than 0.05, hence risk prevention practices contributes statistically significantly to the model. The study therefore, concludes that risk prevention practices have a significant effect on financial competitiveness and thus has a significant positive relationship with the competitiveness of the organization.

The results of this study are similar to those of Jaber (2020) who established that risk prevention and mitigation practices had the most influence in the competitiveness of the insurance sector in Jordan. The study by Jaber (2020) was conducted on the 120 insurance managers working in the insurance industry. Similar results had been established in the study by Katili (2015) whose context of the study was on risk management practices in the Hospitality Industry within Nairobi County. The study established that risk assessment as one of the strategies employed in risk prevention practices contributed towards the financial performance of the Hospitality industry hence competitiveness of the industry.

4.7.2 Regression Analysis on Risk Detection Practices against Financial Competitiveness

The study's second objective was to investigate the effect of risk detection practices on financial competitiveness of SACCOs in Kirinyaga County. Regression analysis was carried out to determine the statistical relationship of risk detection practices against financial competitiveness.

Table 4.16 below represents the regression model on risk detection practices against financial competitiveness. As presented in the table, the R and R² values are provided. The R² value referred to as the coefficient of determination. The R² value indicates how much of the total variation in the dependent variable, financial competitiveness can be explained by risk detection practices. For this case, 63.6% in the dependent variable can be explained by risk detection practices instituted by the organizations. The value

of F is significant and less than $p = 0.001$ which indicates that the regression equation is a good fit for the risk management data. The beta coefficients for risk detection practices against financial competitiveness was as determined below. The p-value was 0.000 which is less than 0.05, hence risk detection practices contributes statistically significantly to the model. The study therefore, concludes that risk detection practices have significant effect on financial competitiveness of the SACCOs.

Table 4.16 Risk Detection Regression Model

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.798 ^a	.636	.627	.5472

a. Predictors: (Constant), RD

ANOVA^a						
Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	22.012	1	22.012	68.701	.000 ^b
	Residual	27.235	85	.320		
	Total	49.247	86			

a. Dependent Variable: Financial Competitiveness

b. Predictors: (Constant), Risk Detection

Coefficients^a						
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.392	.204		6.822	.000
	Risk Detection	.559	.067	.669	8.289	.000

a. Dependent Variable: Financial Competitiveness

From the Table 4.16 it was realized that ($\beta = 0.000$ $P < 0.001$) thus showing that the relationship between risk detection practices and financial competitiveness was significant and positive. Therefore, H_{02} of the study was rejected which states that there was no significance effect of risk detection practices on the financial competitiveness of deposit taking SACCOs within Kirinyaga County, Kenya; hence the null hypothesis is rejected. Therefore, the alternative hypothesis that states that there is a significance

effect of risk reduction on financial competitiveness of deposit taking SACCOs within Kirinyaga County is settled on.

One unit change in risk detection will lead to 0.559 unit increase in financial competitiveness. The results of this study conform to those of Kakiya, Rono and Mose (2020) who established that risk detection strategies have an impact on the performance of organizations. The study was conducted in the state corporations and established that the presence of risk expertise and risk management policy in the corporation were vital for their competitiveness. The study goes ahead to advise organizations to implore ways of infusing risk management practices in all the organizational processes. The study by Yang, Ishtiaq and Anwar (2018) insists that risk detection practices should be prioritized within organization to enable them to gain financial competitiveness in the market.

4.7.3 Regression Analysis on Risk Control Practices against Financial Competitiveness

The study's third objective was to determine the effect of risk control practices on financial competitiveness of SACCOs in Kirinyaga County. Regression analysis was carried out to determine the statistical relationship of risk control practices on financial competitiveness.

Table 4.17 represents the regression model on risk control practices against financial competitiveness. As presented in the table, the R and R² values are provided. The R² value is referred to as the coefficient of determination. The R² value indicates how much of the total variation in the dependent variable, financial competitiveness can be explained by risk detection practices. In this case, 95.2% variation in the dependent variable can be explained by risk control practices instituted by the organizations.

The value of F (80.366) is significant and at $p < 0.001$ which indicates that the regression equation is a good fit for the risk management data. The beta coefficients for risk control practices against financial competitiveness was as determined. The p-value was 0.000 which is less than 0.05, hence risk control practices contributes statistically significantly to the model. The study therefore, concludes that risk detection practices have significant effect on financial competitiveness of the SACCOs.

Table 4.17 Risk Control Practices Regression Model

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.962 ^a	.952	.941	2.269	

a. Predictors: (Constant), Risk Control Practices

Table 4.17B ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	23.934	1	23.934	80.366	.000 ^b
	Residual	25.314	85	.298		
	Total	49.247	86			

a. Dependent Variable: Financial Competitiveness

b. Predictors: (Constant), Risk Control Practices

Table 4.17 C Coefficients^a

Model		Unstandardized		Standardized	t	Sig.
		Coefficients		Coefficients		
		B	Std. Error	Beta		
1	(Constant)	1.438	.184		7.799	.000
	Risk Control	.570	.064	.697	8.965	.000

a. Dependent Variable: Financial Competitiveness

From the Table 4.17 it was realized that ($\beta = 0.000$ $P < 0.001$) which indicates that the relationship between risk control practices and financial competitiveness was significant and positive. Therefore, H_{03} of the study was rejected which states that there was no significance effect of risk control practices on the financial competitiveness of deposit taking SACCOs within Kirinyaga County, Kenya; hence the null hypothesis is rejected. Therefore, the study settled on the alternative hypothesis which states that Risk control practices have a significant effect on the financial competitiveness of deposit taking SACCOs within Kirinyaga County.

4.8 Multiple Regression Analysis

The study further examined the relationship between the independent variables and the dependent variables. All the independent variables (risk prevention practices, risk detection practices and risk control practices) were associated against the dependent variable (financial competitiveness) through multiple linear regression.

The study made use of the model below to establish the relationship between risk management practices and financial competitiveness of SACCOs in Kirinyaga County.

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Where; Y= Financial Competitiveness of SACCOs Kirinyaga County.

β_0 = Y intercept

β_1 to β_3 = Regression coefficients

X_1 = Risk Prevention Practices

X_2 = Risk Detection Practices

X_3 = Risk Control Practices

ε = Error term

The results of the multiple linear regression indicate that the values of R and R² are 0.912 and 0.831 respectively. The coefficient of determination R², therefore signifies that 83.1% of the total variation in the dependent variable financial competitiveness could be explained by the independent variables; risk prevention practices, risk detection practices, risk control practices. There is a remainder of 16.9% of variance in the dependent variable that could not be explained by the independent variables present. This means therefore that there are other factors that this study did not take into consideration. According to Frost (2017), R² is a measure of goodness of fit and the higher the value the better for the model and it's represented in a scale of 0-100%. A value of, more than 80% is recommended as a good measure of goodness of fit.

As indicated in Table 4.18 the Analysis of Variance (ANOVA) has been applied to test the statistical significance of the regression model. From the analysis it was established that F (29.384, p<0.001), this indicates that our p-value is less than 0.05 thus our model is statistically significant. Since the F-Value is statistically significant it can be concluded that the coefficients of the independent variables are greater than zero. Therefore, more than one independent variable has an effect on the dependent variable. The independent variable risk prevention practices have a beta coefficient value of 0.471, which is greater than zero, and a p-value of 0.012 which is less than 0.05. This indicates that risk prevention practices have a statistically significant positive effect on financial competitiveness of SACCOs in Kirinyaga County. On the other hand, risk detection practices had a beta coefficient of 0.251, and a p-value of 0.037 which is less than 0.05

indicating a statistically significant value. Therefore, this means that risk detection practices have statistically significant effect on financial competitiveness. Additionally, risk control practices had a beta coefficient of 0.376, and a p-value of 0.003 which is less than 0.05, this is an indicator that risk control practices effect on financial competitiveness of SACCOs was statistically significant.

Risk control practices are vital for the competitiveness of organizations as established by Hameeda and Al Ajmi (2012) in their study of Islamic Banks in Bahrain. They established that risk control practices like risk monitoring and risk evaluation influenced the financial performance of Banks. These results were similar to those of Jaber (2020) who established that risk control practices were significantly related to the performance of Jordanian Insurance Companies. Similar results had been established by Kinyua (2010) in his study of risk management practices of Kenyan Insurance companies.

Table 4.18 Multiple Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.912 ^a	.831	.817	.53641	1.938

Table 4.18b ANOVA^a

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	25.365	3	8.455	29.384	.000 ^b
	Residual	23.882	83	.288		
	Total	49.247	86			

a. Dependent Variable: Financial Competitiveness

b. Predictors: (Constant), Risk Control Practices, Risk Prevention Practices, Risk Detection Practices

Table 4.18C Coefficients^a

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	Collinearity Statistics	
	B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.275	.218		5.850	.000	
	Risk Prevention Practices	.471	.127	.710	3.272	.012	.310 3.229
	Risk Detection Practices	.251	.118	.300	2.118	.037	.291 3.437
	Risk Control Practices	.376	.123	.459	3.046	.003	.257 3.891

a. Dependent Variable: FC

From the multiple regression analysis and when the model is substituted from the results above it was found that $Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \varepsilon$ thus results to:

$$Y = 1.275 + 0.471X_1 + 0.251X_2 + 0.376X_3 + \varepsilon$$

From the regression model developed above and the results of Table 4.18 it's established that the constant of the model is equivalent to 1.275 units. This shows that even without implementing risk management practices the organizational competitiveness is assured to improve by 1.275 units. This can be improved with the implementation of the risk management practices as indicated in Table 4.18. From the model, the coefficient value of 0.471 units is the predicted value of risk prevention practices when all the other independent variables are held at a constant. That is a unit increase in risk prevention practices will result to a 0.471 units improvement on the financial competitiveness of SACCOs. It was also established from the model that the coefficient for risk detection is 0.25, this indicates that for a unitary increase in risk detection practices will result to a 0.25 increase in financial competitiveness when all other independent variables are held at a constant. This is replicated in the third independent variable in the model as it has a coefficient value of 0.376. This indicates that for any unit increase in risk control practices there is bound to be an improvement equivalent to 0.376 in the financial competitiveness of Deposit Taking SACCOs in Kirinyaga County.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The chapter deals with summary of the study's findings. The results generated in the data analysis chapter are summarized in this chapter, conclusions and recommendations are also discussed. The chapter focuses on the study's objectives and as well availing policy directions as proposed in the significance of the study. The chapter concludes with suggestions for further study.

5.2 Summary of Findings

The study's general objective was to investigate the effect of risk management practices on financial competitiveness of SACCOs in Kirinyaga County. The specific objectives of the study included: To determine the effect of risk prevention practices on financial competitiveness of SACCOs in Kirinyaga County; To investigate the effect of risk detection practices on financial competitiveness of SACCOs in Kirinyaga County; and to determine the effect of risk control practices on financial competitiveness of SACCOs in Kirinyaga County.

The literature reviewed indicated a strong link between the risk management practices and organizational financial competitiveness. The literature also indicated that the management need to implement risk detection systems to enable them forestall any unmitigated risks leading to organizational loss. The literature review also established that the management has to agree on the best risk prevention practices that the organization is supposed to implement. This ensures focus on the risk management practices and procedures for maximum protection of the organizational assets. The summary of major findings has been carried out as per each of the study's variable.

5.2.1 Risk Prevention Practices and Financial Competitiveness

The research study examined the effect of risk prevention practices on the financial competitiveness of SACCOs in Kirinyaga County. It was established that the risk prevention practices had a positive association with financial competitiveness. The regression coefficient of Risk Prevention Practices stood at 0.471 which was statistically significant as its p-value was less than 0.05. This, therefore, indicated that

a unit increase in Risk Prevention Practices would result to a 0.471 increase in financial competitiveness of SACCOs in Kirinyaga County.

5.2.2 Risk Detection Practices and Financial Competitiveness

The research study examined the effect of risk detection practices on the financial competitiveness of SACCOs in Kirinyaga County. It was established that the risk detection practices had a positive association with financial competitiveness. The regression coefficient of Risk Detection Practices stood at 0.251 which was statistically significant as its p-value was less than 0.05. This therefore, indicated that a unit increase in Risk Detection Practices would result to a 0.251 increase in financial competitiveness of SACCOs in Kirinyaga County.

5.2.3 Risk Control Practices and Financial Competitiveness

The research study examined the effect of risk control practices on the financial competitiveness of SACCOs in Kirinyaga County. It was established that the risk control practices had a positive relationship with financial competitiveness. This, therefore, indicated that a unit increase in Risk Control Practices would result to a 0.376 increase in financial competitiveness of SACCOs in Kirinyaga County.

5.3 Conclusions

In light of the results of data analysis the study concludes that risk prevention practices, risk detection practices and risk control practices have significant effect on the financial competitiveness of SACCOs in Kirinyaga County.

5.3.1 Risk Prevention Practices

The study concludes that risk prevention practices is a major determinant of financial competitiveness of SACCOs in Kirinyaga County. As the multiple regression results revealed, risk prevention practices had a significant effect of 0.471 on financial competitiveness. It therefore indicates that risk prevention practices factors including planning, forecasting and strategy if well implemented contributes to financial competitiveness of the SACCOs. The ability of the organization to implement risk preventive strategies is able to forestall any kind of losses that may arise in the SACCOs.

5.3.2 Risk Detection Practices

This study concludes that risk detection practices determines the financial competitiveness of SACCOs. The SACCOs usually face challenges when it comes to sourcing risk detection systems. Failure to avoid losses and lack of sharing information by the SACCOs management is bound to affect the shareholders' value. Results from the multiple linear regression shows that risk detection practices had an effect of 0.251 on financial competitiveness on SACCOs in Kirinyaga County. This implies that increasing the level of risk detection by a unit would increase the financial competitiveness of SACCOs by 0.251. Therefore, risk detection practices and transparency have a positive effect on the financial competitiveness of SACCOs.

5.3.3 Risk Control Practices

This study concludes that risk control practices determines the financial competitiveness of SACCOs. The SACCOs usually face challenges when it comes to implementation of risk control systems. Failure to handle loss prevention, and loss reduction in the SACCOs is bound to affect the shareholders' value. Results from the multiple linear regression shows that risk control practices had an effect of 0.376 on financial competitiveness of SACCOs in Kirinyaga County. This implies that increasing the level of risk control practices by a unit would increase the financial competitiveness of SACCOs by 0.251. Therefore, risk control practices, loss prevention, loss reduction and product diversification have a positive effect on the financial competitiveness of SACCOs.

5.4 Recommendations

Based on the summary of findings and the conclusions generated above the study makes the following recommendations that are pertinent in risk management and financial competitiveness of SACCOs in Kirinyaga County.

5.4.1 Risk Prevention Practices

The risk prevention practices applied in the course of running an organization is very vital for its financial competitiveness. In terms of practice the management of SACCOs should be able to plan ahead and institute the right strategic measures for the success of the SACCOs projects. It is also in line to carry out forecast of future scenarios in the event certain occurrences in the external environment may affect the organization. The

policy aspects within the risk prevention practices should be reviewed to compel each of the SACCOs to have a risk prevention strategy that guides the SACCOs functions. In terms of policy a risk management policy or plan should be instituted in the SACCOs. This would guide in implementation of risk prevention practices. This helps the SACCOs to undertake risk mitigation measures to stem any kind of losses that may occur.

The study results do concur with the theoretical perspective of the financial theory that imputes that risks should be distributed to those cost centers that are able to manage them. In addition, this study recommends the extension of the theory to include the perspectives of processes that may result to various risks in their application processes within the organization.

5.4.2 Risk Detection Practices

The financial competitiveness of SACCOs is usually hampered by lack or ignorance of risk detection practices. Therefore, in terms of organizational practices the study recommends that the management of the SACCOs to be sharing information among the employees and where possible to install risk detection systems that are even able to forecast the future state of the organizational competitiveness. The policy implemented by the organization should take into consideration risk detection practices like risk identification processes. The policy should be written and having articulate methodology or process for risk detection. The study recommends that the SACCOs should be transparent when it comes to sharing pertinent information that is geared towards detection and mitigation of risks.

The theoretical perspective in this case is cognizant with the credit theory that focuses on the ability of portfolios to repay their credit. The study recommends that management of financial organizations to be aware of the implications of credit theory especially in the presence of information asymmetry.

5.4.3 Risk Control Practices

The financial competitiveness of SACCOs in Kirinyaga may be hampered by lack of good risk control practices. Thus, in terms of practice the study therefore recommends that there is need for the SACCOs to diversify their products in order to spread their risks this would enable the SACCOs to recoup losses maybe experienced in one

portfolio to another. The management of the SACCOs should identify and develop products that solve their client's problems and thus reduce chances of loss making. There is need to implement loss reduction strategies such that shareholders of the SACCOs may have higher returns.

5.5 Suggestions for Further Studies

This study is a turning point for extensive research in the sector of SACCOs risk management and financial competitiveness due to the failure to accept the null hypotheses. A study should be conducted on other internal and external risk management practices and their effects on financial competitiveness of SACCOs in Kirinyaga County in order to learn and establish the extent of risks, risk actors and the role they play in risk management practices in firms. Finally, further research should also be conducted and extended to other Savings, Credit and Cooperative Societies within the neighboring counties to establish whether the SACCOs in the region face similar challenges in implementing risk management practices.

REFERENCES

- Ajupov, A., Anna, S., Syrotiuk, S., & Alexey, K. (2019). The risk management theory in modern economic conditions. *International Science Conference SPbWOSCE-2018 "Business Technologies for Sustainable Urban Development, V. (110), 1-7*
- Anderson, D. (2005). *Corporate Survival: The Critical Importance of Sustainability Risk Management*. Universe, Lincoln
- Anderson, J., & Burberg, M. (2015). *Testing for normality of censored data*. Uppsala University, Department of Statistics.
- Agustina, L., & Baroroh, N. (2016). *The Relationship between Enterprise Risk Management (ERM) and Firm Value Mediated Through the Financial*.
- Altman, G., (2003). *The Essentials of Risk Management*. McGraw-Hill, USA.
- Ballantyne, R. (2013). An Empirical Investigation into the Association between Enterprise Risk Management and Firm Financial Performance. *An Unpublished Master's Thesis Submitted to, Lawrence Technological University*
- Barrese, J., Stephen, G., David, M., & Walker, P. (2015). Enterprise Risk Management Sophistication and Firm Risk, *World Risk and Insurance Economics Congress; Munich, Germany*
- Carol, A. & Geoffrey, R. (2008). *Integrating sustainability reporting into management practices*. Australia, Victoria Publishers.
- Charyya, M. (2008). *In Measuring the Benefits of Enterprise Risk Management in Insurance: An Integration of Economic Value Added and Balanced Score Card Approaches*, Working paper for the Society of Actuaries.
- Central Bank of Kenya (2015). *Economic Survey of SACCOs in Kenya*. Free Press
- Chen, K. & Pan, C. (2012). An Empirical Study of Credit Risk Efficiency of Banking Industry in Taiwan. *Journal of Chinese Management Review*, Vol. 15(1),1-16.
- Contrafatto, M. (2014). Stewardship Theory: Approaches and Perspectives Accountability and Social Accounting for Social and Non-Profit Organizations, *Advances in Public Interest Accounting, Vol. 17(1)*, 177-196
- Cooper, R. & Schindler, S. (2014). *Business Research Methods*, 7th Ed., New York: Irwin/McGraw Hill.

- Frigo, M., Anderson, R. (2011). What Is Strategic Risk Management, *Strategic Finance -Montvale-* 92, Vol. 1(1), 21-22?
- Gall, D., Gall, P., & Borg, R. (2006). *Educational Research: An Introduction* (8th Ed.). New York: Longman.
- Giambona, E., Graham, J., Harvey, R., Bodnar, G. (2018). The Theory and Practice of Corporate Risk Management: Evidence from the Field. *Financial Management* 47, 783-832.
- Girangwa, K., Rono, L., & Mose, J. (2019, December 11). The Influence of Enterprise Risk Management Practices on Organizational Performance: Evidence from Kenyan State Corporations. *Journal of Accounting, Business and Finance Research*, 8(1), 11-20.
- Gyamfi D. (2012). Assessing the Effectiveness of Credit Risk Management Techniques of Microfinance Firms in Accra'. *Journal of Science and Technology*, 32 (1): 96- 103.
- Global Corporate and Specialty SE (2016). *Top10 Global Business Risks for 2016*, München, Germany.
- Hameeda, H. & Al-Ajmi, Jasim. (2012). Risk management practices of conventional and Islamic banks in Bahrain. *Journal of Risk Finance*,
- Hamdu, K. & Adriana, K. (2016). The Impact of Total Risk Management on Company's Performance. *International Conference Paper* Vol. 220 271 – 277
- Hoyt, R.& Liebenberg, P. (2011). The Value of Enterprise Risk Management. *Journal of Risk and Insurance*, Vol.78 (4), 795-822
- Ikenhout, L. (2015). Risk Management and Performance in Insurance Companies. An *Unpublished Master Thesis in Management and Governance Submitted to University of Twente*,
- Jaber, A. (2020). The impact of risk management practices on the organizational performance: Field Study of Jordanian Insurance Companies. *An unpublished MBA Thesis Submitted to Business Faculty University of Middle East, Jordan*
- Kakiya, G., Rono, L. & Mose, J. (2020). The Influence of Enterprise Risk Management Practices on Organizational Performance: Evidence from Kenyan State Corporations. *Journal of Accounting, Business and Finance Research*. 8. 11-20.

- Kashif, S., & Lai, W. (2015). Conceptual Framework for Enterprise Risk Management performance measure through Economic Value Added, *Global Business & Management Research*; Vol. 7 (2), 25-56
- Kaliti, G. (2015). The effect of risk management practices on the performance of firms in the Hospitality Industry in Nairobi County, Kenya. *An unpublished MBA Thesis Submitted to School of Business, University of Nairobi, Nairobi.*
- Kaye, L. (2014). Why Sustainability is Integral to Enterprise Risk Management, <http://www.triplepundit.com/2014/10/sustainability-integral-enterprise-risk-management/> accessed 10.02.2016
- Kemunto, *et al.*, (2020). "Effect of Credit Risk Management on Financial Performance of Deposit Taking Savings and Credit Cooperative Societies in Western Kenya", Kenya." *IOSR Journal of Business and Management (IOSR-JBM)*, 22(9), pp. 30-35.
- Kinyua, M. (2010). The Assessment of risk as a component of Corporate Strategy in Selected Life Insurance firms in Kenya, *Unpublished MBA Project: University of Nairobi*, 1-351
- Kiptoo, H. (2015). Credit Risk Management Strategies on Performance of SACCOs in Nairobi County. *An Unpublished MBA Thesis Submitted to School of Business, Kenyatta University.*
- Kraus, V., & Lehner, M. (2013). The nexus of enterprise risk management and value creation: Connecting the Dots and Finding the Blind Spots, *Journal of Finance and Risk Perspectives*, Vol. 1, No. 1, pp. 230-261
- Krishnaswami, O. (2003). *Methodology of Research in Social Science*. Mumbai: Himalaya publishing House.
- Kothari, C & Gaurav, G. (2016). *Research Methodology: Methods and Techniques*. (3rd Ed.). New Delhi, New Age International.
- Kumar, R. (2019). *Research Methodology: A Step-by- Step Guide*. (5th Ed.). Thousand Oaks, California, Sage.
- Lagat, M. (2011). The effect of credit risk management practices on lending portfolio among SACCOs in Kenya. *An Unpublished MBA Thesis Submitted to School of Business, Kenyatta University, Nairobi*

- Laisasikorn, K., & Rompho, N.(2014). A Study of the Relationship Between a Successful Enterprise Risk Management System, a Performance Measurement System and the Financial Performance of Thai Listed Companies, *Journal of Applied Business & Economics*; Vol. 16 (2), 81-96.
- Leon, K. (2014). Why Sustainability is Integral to Enterprise Risk Management, <http://www.triplepundit.com/2014/10/sustainability-integral-enterprise-riskmanagemen>, accessed 10.02.2016
- Liangrong, Z. (2013). *Sustainability Risk Management*, In: Idowu, S.O., Capaldi, N., Zu, L., Das Gupta, A (Eds.) (2013).*Encyclopedia of Corporate Social Responsibility*. Springer-Verlag, Berlin
- Liao, Shin-Wie (2012). Does ERM (Enterprise Risk Management) Help Firm's Performance in Times of Crisis?*An Unpublished Masters Research Project in International Finance, Submitted to Amsterdam Business School, Amsterdam University, Amsterdam*
- Madison, K.J. (2014). *Agency Theory and Stewardship Theory Integrated, Expanded, and Bounded by Context: An Empirical Investigation of Structure, Behaviour, and Performance within Family Firms*. University of Tennessee.
- Maina, J., Kinyariro, D., Muturi, H., Muriithi, J. (2016). Credit Information Sharing and Level of Loan Default in Deposit Taking Sacco's in Meru County, Kenya. *International Journal of Economics, Commerce and Management*. 4(4) 604 – 617
- Makori, J.,Munene, C. & Muturi, W. (2013). Challenges Facing Deposit Taking SACCOs. Regulatory Compliance in Kenya. *Interdisciplinary Journal of Contemporary Research in Business*, Vol. 4(12), 13-28
- Mang'ana, M., Nyaboga, Y., Momanyi, C., & Makone, S. (2015). Extent to which SACCOs Have Invested in Information Technology to Achieve Sustainable Competitive Advantage Over Their Rivals in Kenya. *International Journal of Innovative Research and Development*, Vol. 4 (2), 1-14.
- Miller, P., (2003). *Understanding and Managing Risk Attitude*, Gower Publishers, New Jersey.
- Mohammed, H., & Knápková, A. (2016). The impact of total risk management on company's performance. *Procedia-Social Behavioral Science*, 220, 271–277. [https:// doi.org/10.1016/j.sbspro.2016.05.499](https://doi.org/10.1016/j.sbspro.2016.05.499)

- Moronya, A.S. Onditi, A. & Nyagol, M. (2016). Effect of credit risk management practices on the financial performance of SACCOs in Kisii County. *International Journal of Economics, Commerce and Management*, Vol. 11(1), 1-15
- Muteti, S.R. (2014). Relationship between financial risk management and financial performance of commercial banks in Kenya. *An Unpublished MBA Thesis Submitted to School of Business, University of Nairobi, Nairobi*
- Nyagah, K. B. (2014). The effect of enterprise risk management on financial performance of pension fund management firms in Kenya. *An Unpublished MBA Thesis Submitted to School of Business, University of Nairobi, 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*, Vol. 4(1):34-45
- Obure, H. R. & Muturi W. (2016). Effect of internal factors on performance of SACCOs in Kenya: a case of Kisii County. *International Journal of Economics, Commerce and Management*, Vol. 3 (1), 1-15
- Odhiambo, O. (2012). Corporate Governance problems of SACCOs. *International Journal of Academic Research in Business and Social Sciences*, Vol. 2(11), 435-423
- Okello, A. Managing income tax compliance through self-assessment. International Monetary Fund Working Paper <https://www.imf.org/external/pubs/ft/wp/2014/wp1441.pdf>
- Olando C., Jagongo A. and Mbewa M. (2013). The contribution of SACCOs Financial Stewardship to Growth of SACCOs in Kenya. *International Journal of Humanities and Social Science*, Vol. 3 (17), 23-32
- Omasete, C.A (2014). The effect of risk management on financial performance of insurance companies in Kenya. *An Unpublished MBA Thesis Submitted to School of Business University of Nairobi, Nairobi.*
- Ondu, P. (2016). Risk management practices and performance of SACCOs in Nakuru County. *An Unpublished MBA Research Project Submitted to School of Business Kenyatta University, Nairobi.*
- Pandey, I. M. (2004). *Financial Management: 7th edition*, Ram Print Graph, Delhi.
- Pagach, D. & Warr, R. (2011). The characteristics of firms that hire chief risk officer. *Journal of Risk and Insurance*, Vol.78 (1), 1-17

- Parvaneh, S., & Siti, R. (2014). A Proposed Model of the Relationship between Enterprise Risk Management and Firm Performance, *IJIPM: International Journal of Information Processing and Management*, Vol. 5 (2), 70-80
- Pooser, M. & Tobin, J. (2012). ERM Determinants, Use, and Effects on the Firm, *American Risk and Insurance Association Annual Meeting, Minneapolis, MN*
- Baxter, R., Jean, B., Hoitash, R., & Yezegel, A. (2013). Enterprise Risk Management Program Quality: Determinants, Value Relevance, and the Financial Crisis, *Contemporary Accounting Research Journal*, Vol. 30 (4), 45-56
- SASRA Annual Report (2015). *Performance of SACCOs in Kenya*. Nairobi, Free Press Ltd
- Saunders, M., Lewis, D. & Thornhill, H. (2009). *Research Methods for Business Students*. South Africa: Pearson Education.
- Sekaran, U. (2011). *Research Methods for Business: A Skill Building Approach*, Southern Illinois University, New York.
- Silva, C. (2017). Research Design - The New Perspective of Research Methodology. *British Journal of Education, Society & Behavioral Science*, 19 (2), 1-12.
- Tarasi, O., Bolton, N., Gustafsson, A., & Walker, B. (2013). Relationship characteristics and cash flow variability implications for satisfaction, loyalty, and customer portfolio management. *Journal of Service Research*, 16(2), 121–137.
- Ping A.T, Muthuveloor (2015). The Impact of Enterprise Risk Management on Firm Performance: Evidence from Malaysia, *Asian Social Science*, Vol. 11 (22), 149-159
- Wambui, N. M. (2013). Relationship between risk management practices and financial performance of SASRA regulated SACCOs in Nairobi. *An Unpublished MBA Thesis Submitted to University of Nairobi, Nairobi*.

APPENDICES

Appendix 1: Introductory Letter

COOPERATIVE UNIVERSITY OF KENYA

Dear Respondent,

REF: MCM RESEARCH STUDY

I am a student pursuing a Master Degree at Cooperative University of Kenya. In partial fulfilment of the requirements to the award of the Master's Degree in co-operative management, I am required to carry out a study on "Effect of Risk Management Practices and Financial Competitiveness of Savings and Credit Co-operative Societies in Kirinyaga County, Kenya"

The choice is based on your strategic importance in the achievement of organizational goals according to vision 2030 of Kenya hence improved performance of the organization in terms of efficiency and effectiveness. I kindly request your assistance by availing time to respond to the questionnaire. A copy of the final report will be made available to you at your request. The information given will be treated with utmost confidentiality for the purpose of this study only.

Regards

Haniel K. Muchiri

Appendix 2: Questionnaire

Kindly fill the questionnaire by checking the appropriate check boxes. Where there are open ended questions please do fill the blank spaces as indicated.

PART I: DEMOGRAPHIC CHARACTERISTICS

Please tick [] the appropriate box as provided.

1. **What position do you hold in your SACCOs (Optional)..... ?**

2. **How long have you worked with your SACCOs?**
 - a) 1-3 years
 - b) 4-6 years
 - c) 7-9 years
 - d) 10 and above years

3. **How long has your SACCOs operated in Kirinyaga**
 - a) Below 1year
 - b) 2-5 years
 - c) 6-10 years
 - d) 11-15 year
 - e) 16-19 years
 - f) 20 and above years

PART II: RISK MANAGEMENT PRACTICES

4. **Does your SACCOs have risk management policies?**
Yes No

5. **Does risk management practices in place implemented to minimize financial losses?**
Yes No

PART 3: RISK MANAGEMENT PRACTICES

Section A: Risk Prevention Practices

Indicate the extent of your agreement with the following statements relating to the level of risk exposure on financial competitiveness of SACCOs (scale 1= Not at all, 2=To some extent, 3= To a moderate extent, 4= To a great extent, 5= To a very great extent).

Statements	1 Not at all	2 To some extent	3 Moderat e Extent	4 Great Extent	5 A very great extent
Managers of my SACCO are sensitive on preventing financial risks through forecasting					
My SACCO always complies with set regulations by SASRA					
My SACCO conducts customer surveys to minimize risks					
My SACCO has adopted an integrated technology in managing customer information					
My SACCO has developed planning strategies to curb intense competition					

How else does your SACCOs prevent financial risks?

Section B: Risk Detection Practices

Indicate the extent of agreement with the following statements relating to the level of risk exposure on financial competitiveness of SACCOs (scale 1= Not at all, 2=To some extent, 3= To a moderate extent, 4= To a great extent, 5= To a very great extent).

Statements	1 Not at all	2 To some extent	3 Moderate Extent	4 Great Extent	5 A very great extent
My SACCO has internal mechanisms of detecting financial risks					
My SACCO engages Internal auditors to detect financial risks					
My SACCO can detect risk from annual profits					
My SACCO detects risk by number of membership					
My SACCO detects risk using dividends earned by shareholders					

How else does your SACCOs detect financial risks?

Section C: Risk Control Practices

Indicate extent of agreement with the following statements relating to the level of risk exposure on financial competitiveness of SACCOs (scale 1= Not at all, 2=To some extent, 3= To a moderate extent, 4= To a great extent, 5= To a very great extent).

Statements	1 Not at all	2 To Some extent	3 To Moderate Extent	4 To a Great Extent	5 A very great extent
My SACCO has a risk management system.					
My SACCO always trains employees on the changing trends in risk management					

My SACCO has internal control mechanisms of analyzing business trends					
My SACCO review always review its financial policies to minimize risks					
My SACCO conducts periodical audits to determine areas of risk					

How else does your SACCO control financial risks?

Section D: Financial Competitiveness of SACCOs

Indicate your level of agreement with the following statements relating to the level of financial competitiveness of SACCOs (scale 1= Not at all, 2=To some extent, 3= To a moderate extent, 4= To a great extent, 5= To a very great extent).

Statements	1 Not all	2 at some extent	To 3 Moderate Extent	4 Great Extent	5 A very great extent
My SACCO has enough capital reserves for implementing projects and attending to emergencies					
My SACCO is competitive because of highly skilled human capital					
My SACCO has the biggest market share in the market					
My SACCO derives its competitive advantage from the adoption of information technology					

How else is your SACCO Competitive?

Thank you for your Cooperation



REPUBLIC OF KENYA



NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 332287

Date of Issue: 11/November/2020

RESEARCH LICENSE

This is to Certify that Mr. Haniel Muchiri of The Co-operative University of Kenya, has been licensed to conduct research in Meru on the topic: TO EXAMINE RISK MANAGEMENT PRACTICES EFFECT ON FINANCIAL COMPETITIVENESS OF SAVINGS AND CREDIT CO-OPERATIVE SOCIETIES IN KIRINYAGA COUNTY, KENYA for the period ending : 11/November/2021.

License No: BAHAMAS ABS/P/20/7585

332287

Applicant Identification Number

Walter Wambui

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.