THE EFFECT OF CREDIT MANAGEMENT ON THE FINANCIAL PERFORMANCE OF REGULATED SACCOs WITHIN KIAMBU COUNTY

BY

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DECLARATION

I declare that this is my original work and has not been presented for an award in any other university or institution of higher learning.

Signature.. Date...22/11/2021.............

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This research project has been submitted for examination with my approval as the University of Nairobi, Faculty of Business and Management Sciences Supervisor.

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DEDICATION

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LIST OF ABBREVIATIONS AND ACRONYMS

EPS	Earnings per Share
NPL	Non-Performing Loan
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
SACCO	Savings and Credit Cooperative
SACCOs	Savings and Credit Cooperatives
SASRA	SACCO Societies Regulatory Authority

ABSTRACT

Credit management is a critical management function in mitigating credit risk that contributes significantly to the economic well-being of companies in many industries, more so in the financial sector. While SACCOs have faced challenges for a variety of reasons over the years, the major cause of their serious financial problems remains lax credit standards for counterparties and borrowers. Adequate credit management in SACCOs is essential for their survival and development. The objective of the study was to determine the effect of credit management on the performance of SACCOs. Specifically, the study sought to establish the effect of credit risk environment, credit granting process, credit information management, bad debts, write off procedures and provisions on the financial performance of regulated SACCOs within Kiambu County. The study was anchored on the information asymmetry theory and transaction cost theory. Descriptive research design was adopted in this study. The study population was 55 SACCOs in Kiambu County that are regulated by SASRA. A structured questionnaire was applied to gather primary data whereas secondary data was gathered using a data collection sheet. The analysis of data entailed applying both descriptive analysis and inferential analysis techniques. Frequencies, means, percentages and standard deviations were the descriptive analysis measures that were developed. The study also applied multiple linear regression to assess the influence of the predictor variables (credit risk environment, credit granting process, credit information management and bad debts, write off procedures and provisions) on the financial performance of regulated SACCOs in Kiambu County. The study findings indicated that credit risk environment, credit granting process, credit information management and bad debts, write off procedures and provisions had a significant and positive effect on the financial performance of the SACCOs. The study recommends to senior management in SACCOs to have formal and well-defined processes for approving new loans. Moreover, the study recommends to senior management in the SACCOs to always ensure that employees in the credit management departments have access to the information they need to perform their duties. Lastly, the study recommends to SACCOs' external auditors, top management and SASRA to ensure that the SACCOs have a very clear policy and process of aging and writing off debts and adequate reserves and provisions for bad debts.

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CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Credit management is a critical management function in mitigating credit risk that contributes significantly to the economic well-being of companies in many industries, more so in the financial sector. Any organization's existence will be determined by how fast money is collected and how long clients take to settle their obligations to the entity (Waldron, 2021). Organizations must address both the risk contained on individual transactions or credit and the overall credit risk of their portfolio for them to achieve their performance objectives. Credit management is a key element of a complete risk management strategy and is important to the long-term performance of any organization.

Savings and credit cooperatives being part of the players in the financial sector providing credit to their members are also exposed to credit risk. In addition to providing loans and investment financial services, SACCOs are also mandated to protect members' money and other assets (Ikua, 2015). Credit generation is the primary source of revenue for SACCOs. SACCOs, however, face significant risks as a result of these credit transactions. There is an inherent risk of members failing to meet their contractual obligations, which might threaten the smooth operation of a SACCO's business and financial performance. Credit risk management seeks to optimize a SACCO's risk-adjusted rate of return by keeping their exposure to credit risk within allowable limits.

This study was anchored on the transaction cost theory and the asymmetric information theory. The transaction cost theory by Schwartz (1974) contends that there are three kinds

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of transaction costs which are search and information costs, enforcement and policing costs and bargaining costs. This theory is applicable in this study since to enhance financial performance, SACCOs must seek cost advantages. This can be attained by having an efficient credit risk environment, credit granting process and credit information management which are vital in reducing collection costs and bad debts. This can therefore influence financial performance of SACCOs. Asymmetric information theory by Akerlof (1970) posits that in economic contracts, one party usually has better and more knowledge than the other. In loan contracts, the borrowers usually have more information about themselves than what they share with the lender. The lender, therefore needs to engage in credit management to reduce the risk that emanates from this information asymmetry.

This study was conducted amongst SACCOs in Kiambu County which is located in the former central province of Kenya. Kiambu Town is the capital, while Thika is the biggest town in the county. according to the Kenya National Bureau of Statistics (2019) Kiambu County has a population of 2,417,735. Nairobi's continuous expansion Northwards has resulted in Kiambu County being 40% rural and 60% urban. Kiambu County has many SACCOs in various sectors including agriculture, transport, education, health, trade and commerce among others. These SACCOs were the subject of this study.

1.1.1 Credit Management

Credit management is the process of reducing losses by ensuring the appropriateness of a financial institution's capital and provisions for loan losses at any given time, a process

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that has proven difficult for many financial institutions. In the financial sector, credit risk is the most essential aspect of risk management. Berrios (2013) stated that the purpose of credit management is to prevent a financial firm from incurring unacceptably large losses from its loan advances, and thus optimizing the institution's risk-adjusted rate of return. According to Rehman et al. (2019), credit management in the financial sector involves the steps of credit risk identification, measurement, monitoring, control and evaluation. It entails recognizing probable credit risk factors, monitoring activities that could be influenced by the recognized risks, assessing consequences of identified threats, and putting control mechanisms in place to avoid or minimize the negative impacts.

Effective credit management entails the implementation of credit management strategies by top management, which is ultimately responsible for approving and revising the credit policies and credit risk strategy of the institution. Besides, it entails having clear and proper procedures in credit risk management, communicating all policies and procedures throughout the firm and ensuring that any employee involved in management of credit is aware of them. Besides, credit management entails having strategies and policies that clearly define the allocation and scope of an entity's credit facilities, as well as the management of the credit portfolio; how loans are generated, assessed, monitored, and collected. Besides, credit management involves maintaining an appropriate credit administration unit, which includes measuring and monitoring controls and processes regarding credit risk. Kibui (2014) noted that in small and medium lenders, credit management practices include having a complete credit application, assessing creditworthiness, establishing reasonable credit terms and limits, using clearly worded

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contracts, developing and sticking to debt collection policies and having adequate provision for doubtful debts. In this study, credit management was operationalized through evaluation of credit risk environment, credit granting process, credit information management and bad debts, write off procedures and provisions.

1.1.2 Financial Performance of SACCOs

SACCOs continue to be one of the most vital players in the Kenyan financial sector, with a more extensive and deeper reach than other financial institutions (Mulinge, 2019). In Kenya, SACCOs emerged in the 1970s, primarily in major urban centers, with the primary goal of mobilizing savings from member and aiding them to obtain loans. Some deposit taking SACCOs function similarly to small commercial banks, providing financial services to clientele that was previously unbanked (Kule et al., 2020). These organizations have been critical in mobilizing domestic financial resources for overall economic growth and poverty reduction (Kibui, 2014). SACCOs, like other entities are searching for ways to enhance their financial performance and improve their sustainability. According to the Kenya Union of Savings and Credit Cooperatives (2020), the cut throat competition due to the development of new technologies and changes in industry structure have made it vital for SACCOs to reduce their operating costs and improve their financial performance.

SACCOs' financial performance can be evaluated in relation to the return on investment and total surplus. Common profitability indicators include earnings per share (EPS), return on equity (ROE) and return on total assets (ROA). ROA shows the SACCO's

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ability in producing surplus with its existing assets (Kibui, 2014). Return on equity (ROE) measures the surplus divided by the SACCO members' equity (Ikua, 2015). Earnings per share (EPS) is the amount of surplus in Kenya Shillings earned for each member's share. ROA was used in this study as the measure of financial performance of SACCOs.

1.1.3 Credit Management and Financial Performance

Credit management is one of the influencers of financial performance since high default rates result in lower liquidity levels, reduced cash flows, and financial hardship, thus early detection of probable loan default is critical (Martin et al., 2019). Failure to recognize potential default, having ineffective credit risk environment, failure to monitor and control credit risk and underestimating the contribution of current customers to bad debts, and spending a lot of resources and time on credit evaluations that are unrelated to reducing credit defaults can adversely affect the performance of the organization.

Credit management has an impact on the financial performance of the firm since the greater the quantity of accounts receivables and the longer they have been unpaid, the higher the financing expenses of keeping them up to date (Odawo et al., 2019). If these receivables are not collected on time and a company's cash requirements are urgent, it may be forced to borrow, with the interest charge paid as the opportunity cost. Credit management, according to Kule et al. (2020) has a significant influence on the success or failure of all organizations, more so the organizations in the financial sector that engage in lending business. This is because the quality of loan choices, and therefore the quality

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of risky assets, has a significant impact on returns, bad debt and provisions for bad debts which are critical for financial performance.

1.1.4 Regulated SACCOs in Kiambu County

Kiambu County, located in the previous central province of Kenya has Kiambu Town is its capital, while Thika is its biggest town. The Kenya National Bureau of Statistics (2019)that Kiambu County has a population of 2,417,735. Nairobi's continuous expansion Northwards has resulted in Kiambu County being 40% rural and 60% urban. Kiambu County has 55 SACCOs regulated by SASRA (SASRA, 2020). These are SACCOs that are licensed to take deposits from their members and offer front office service activity (FOSA). FOSA allow indicates s SACCO members to have an inexpensive and easy savings channel for deposits, cash transfers, and withdrawals (A. Juma, 2021).

Kiambu County being 40% rural and 60% urban, has SACCOs that depict rural properties and others that depict urban properties (A. Juma, 2021). The regulated SACCOs are therefore distributed in the various economic sectors of the county. Kiambu County has many SACCOs in various sectors including agriculture, transport (motorcycles, tricycles and motor vehicles), education, health, manufacturing, trade and commerce among others. According to Juma (2021), some of the regulated deposit taking SACCOs in the county such as Unaitas, Tai and K-Unity, have branches outside Kiambu County.

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1.2 Research Problem

Financial institutions may collapse due to flaws in their internal credit management procedures. An effective credit management system decreases the capital that is tied to borrowers and therefore ensures that the financial institution has an efficient cash flow (Alobari et al., 2018). To manage credit risk effectively, the institution should have appropriate credit management procedures. An organization's credit management strategies may increase its liquidity, performance, and profitability (Rehman et al., 2019). In order to achieve stability, financial performance, and sustainability, management should maintain an equilibrium between providing credit and ensuring that credit risks are optimally managed to have bad or doubtful debts below the set maximum.

While SACCOs have faced challenges for a variety of reasons over the years, the major source of their grave financial difficulties remains lax credit standards for counterparties and borrowers (Mulinge, 2019). Adequate credit management in SACCOs is essential for their survival and development. The problem of credit risk is of greater concern in the case of SACCOs due to the higher levels of perceived risk arising from the nature of their customer base and business environment in which they operate. In 2019, the provisions for non-performing loans (NPL's) as a proportion of SACCOs' total expenses were 5.59 percent compared to the 2018 figure of 3.62 percent (Kenya Union of Savings and Credit Cooperatives, 2020). With effective credit management, SACCOs can maintain this rate within acceptable levels.

There have been numerous studies on performance of SACCOs and their credit management processes but the divergence and convergence in these studies leave some gaps that need to be explored. Ikua (2015) evaluated the effect of credit management on SACCOs' profitability in the Nairobi's hospitality sector. The findings indicated that the credit risk management techniques that SACCOs relied on were inadequate to lessen loan losses in a competitive and dynamic environment. Besides, the study determined that SACCOs lacked effective credit risk environments and adequate credit risk control and monitoring mechanisms. This study left some contextual gaps as it was conducted on SACCOs in one sector while the current study sought to include SACCOs from all sectors. Mulinge (2019) investigated how profitability of deposit taking SACCOs in Kenya was influenced by credit risk management. Findings from the study determined that credit recovery, credit risk monitoring and credit risk appraisal had a significantly influenced profitability. This study did not include management of bad debts and bad debts provisions which are critical in credit management. Kule et al. (2020) conducted a study in Uganda and determined that adequate client appraisal, credit policy and conditions and terms had a significant influence on the profitability of SACCOs. This study did not include credit risk environment, credit information management and bad debts write off procedures and provisions which were considered in this study. The current study sought to fill these gaps and to answer the question; what is the effect of credit management on the financial performance of regulated SACCOs within Kiambu County?

1.3 Research Objectives

The objective of the study was to determine the effect of credit management on the performance of SACCOs. Specifically, the study sought to;

i) Establish the effect of credit risk environment on the financial performance of regulated SACCOs within Kiambu County.

ii) Determine the effect of credit granting process on the financial performance of regulated SACCOs within Kiambu County.

iii) Establish the effect of credit information management on financial performance of regulated SACCOs within Kiambu County.

iv) Determine the effect of bad debts, write off procedures and provisions on the financial performance of regulated SACCOs within Kiambu County.

1.4 Value of the Study

The study's findings shall be of value in providing evidence that can be useful for policy making, development of theories and practice. The findings will be useful to government and its regulatory authorities such as SACCO Societies Regulatory Authority (SASRA) to improve policies and regulations regarding credit management in SACCOs. Besides, the state department of cooperatives in the Ministry of Industrialization, Trade and Enterprise Development can use the findings to design interventions aimed at improving credit management in SACCOs for their sustainability growth and development.

From a theoretical standpoint, the research shall provide a vital addition to the extant literature on the subject. Besides, organizations in other economic sectors may also

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benefit greatly from the study findings because the findings will assist entities that engage in lending in reviewing their credit management strategies, practices, and policies in order to come up with better policies, procedures and processes for managing credit risk.

The study findings will also be valuable for practice as they will educate management on the efficacy and efficiency of various credit management policies and procedures and will also recommend ways to enhance them. The findings from the study will also be largely important to the management of SACCOs in Kenya because they will provide insights into how financial performance is influenced by credit management. This will enhance their understanding as they pursue the ultimate goal of ensuring sustainability and growth of SACCOs while providing maximum benefit to members.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

The theoretical review, the factors influencing financial performance of SACCOs, and the review of empirical studies on the study subject are provided in this chapter. Besides, the chapter offers a summary of the literature reviewed and a review of the research gaps that justified the current study.

2.2 Theoretical Review

This section provides the two main theories that the study was anchored upon. For each theory, its proponents, its key propositions and how they inform the current study's relationships among the variables is provided.

2.2.1 Information Asymmetry Theory

Akerlof (1970) is the proponent of the information asymmetry theory which indicates that information asymmetry occurs when sellers or providers of products or services have a better understanding of their products or services than buyers. It refers to a situation in which all stakeholders engaged in a contract are unaware of critical facts. In the financial market, information asymmetry is inherent in the lending transaction since the lender has lesser information about the risks of the borrower than the borrower has (Noor et al., 2018). Perceived information asymmetry, according to Onuora and Ifeacho (2017), causes two difficulties for banks, adverse selection and moral hazard.

Committing resources to assessment and monitoring of borrowers when lending for relatively modest sums is not cost effective and hence SACCOs may have a tough time overcoming these issues. This is due to the fact that SACCOs may lack access to the data required to evaluate credit applications and monitor borrowers. When evaluating loan applications, SACCOs confront an information imbalance (Kule et al., 2020). The information needed to evaluate the borrower's capacity, risk as well as character, is either unavailable, too expensive, or impossible to understand. The SACCO faces two kinds of risks emanating from this; the risk of adverse selection that arises when the SACCO lends to borrowers that fail to pay later, or do not lend to borrowers that would be able to repay (Kipkirui & Omagwa, 2018). This theory links credit information management and management of bad debts and provisions to financial performance. When the SACCO effectively collects, analyzes and uses credit information, it is expected to enhance its financial performance. This is also expected to reduce bad debts and provisions, which in return will lead to improved financial performance.

2.2.2 Transaction Cost Theory

The transaction cost theory was originally proposed by Schwartz (1974) and it contends that there are three kinds of transaction costs which are search and information costs, enforcement and policing costs and bargaining costs. The information and search costs are those associated with the search of appropriate information regarding the transaction in question, meeting with the parties involved, and setting the environment necessary to actualize the transaction (Mulinge, 2019). Bargaining costs are incurred in entering into

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an economic agreement while enforcement and policing costs are incurred when the transaction or contract has been entered into.

To enhance financial performance, SACCOs must seek cost advantages. One of the main source of cost advantage is for lenders to get quicker and at a cheaper cost, the information on customers, in the regular course of business (Muriuki, 2017). Moreover, lenders can have a cost advantage by following an effective credit granting process and having an effective environment that ensures a robust credit risk management. This theory informs the study by linking credit risk environment, credit granting process and credit information management as vital in reducing collection costs and bad debts. This can therefore influence financial performance of SACCOs.

2.3 Determinants of Financial Performance of SACCOs

Credit management practices are vital in the financial performance of SACCOs. Some of the vital credit management practices include setting an effective credit risk environment, having a clear credit granting process, credit information management and management of collections, bad debts and provisions. It is the role of top management to facilitate the establishment of an effective atmosphere for credit risk management. Credit granting process entails having a well-established and clear procedure for lending while credit information management ensures that the SACCO has an effective system to capture and analyze data on the loan book. Bad debts, write off procedures and provisions entail having effective procedures to monitor the quality of the loan book and adequate provisions. Though these credit management practices are hypothesized to influence

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financial performance of SACCO, there are other aspects that can influence profitability of SACCOs. These include corporate governance, management efficiency, and size of membership.

2.3.1 Corporate Governance

Accountability, openness, and credibility are all aspects of corporate governance, as is the capacity to set up effective channels for disclosing information in a way that promotes excellent company performance (Omwenga, 2017). Corporate governance takes place inside the business, and its performance is largely dependent on the shareholders, the board of directors, and the corporate executives. When a SACCO observes effective corporate governance mechanisms, it can be able to influence its financial performance effectively. Some of the aspects of corporate governance that could influence financial performance of SACCOs include CEO duality, board accountability, board size, board transparency and stewardship (Rehman et al., 2019).

2.3.2 Management Efficiency

Management efficiency is the output of the organizations' management in relation to resources available to them (Barus et al., 2017). Management efficiency can be indicated by the effectiveness of the management in managing liquidity, asset quality, and their capacity to invest in information technology. Moreover, the efficiency of management can be indicated by growth sustainability, resource mobilization, income growth, and efficiency in the management of costs. The financial performance of a SACCO is determined by how well financial management choices are made. Management efficiency

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in managing finances entails resource mobilization, the use of those resources, working capital management, application of resources in investment projects, management of capital structure, and dividend payout policies (Njenga & Jagongo, 2019).

2.3.3 Size of SACCO Membership

Membership of the SACCO is another element that influences SACCO's financial performance (Mmari & Thinyane, 2019). This means that a SACCO with many members can amass significantly higher income and capital, and as a result, advance more loans to members than a SACCO with fewer members. Additionally, SACCO's vast membership base guarantees constant and regular income flow, and as a result, increases its financial performance. Mulinge (2019) observed that SACCOs that had a good reputation and those that observed effective corporate governance had been able to improve the SACCO's membership through attraction of new members and improved membership retention. Moreover, such SACCOs had improved membership which means a robust capital base than SACCOs with fewer members.

2.4 Empirical Studies

This section provides a review of empirical studies on how the financial performance of organizations is influenced by credit management. The section is divided into global and local studies.

2.4.1 Global Studies

A study in Bangladesh by Noor et al. (2018) examined how financial performance of commercial banks in the country was influenced by credit management. The study used

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secondary data (2011 – 2015) which assessed the effect of asset quality (NPLs) on profitability. Twenty commercial banks were the study's population. The study applied panel data regression analysis technique and assessed for cointegration amongst the variables. Financial performance in the study was measured by means of ROE and ROA. The findings determined that the level of NPLs had a significant influence on profitability. This study was conducted in a different context to Kenya and was on commercial banks rather than SACCOs. Besides, the study only considered non-performing loans and left the other credit management components such as credit granting process and credit risk environment. The study therefore, left some contextual and conceptual gaps.

A study in Somalia by Omar et al. (2018) had the objective of assessing the influence of customer evaluation, collection policies and credit risk control on profitability of telecommunication businesses in Garowe. The research was conducted using questionnaires that were administered to employees in 15 telecommunication companies. Multiple linear regression was conducted to analyze the data which enabled the study to answer the research questions. From the study findings, it was determined that credit risk control and customer evaluation significantly influenced company profitability. The research also established that collection strategies, had a significant and positive effect on financial performance of telecommunication companies. The focus of the study was telecommunication companies and the findings may not be generalizable to SACCOs due to the contextual differences.

In Nigeria, Onuora and Ifeacho (2017) assessed how the financial performance of manufacturing companies listed on the Nigerian stock exchange was influenced by credit management. The study objectives sought to determine whether profitability of the studied firms was influenced by credit management practices such as credit policy, liquidity management, and debtor turnover. The secondary information was collected from financial reports of the companies for 2010 to 2014 period. The study hypotheses were tested using pooled multiple regression. The findings from the study indicated that liquidity management and credit policy have a significant negative influence ROA. However, debtor turnover had a significant positive influence. The study however did not consider credit risk environment, credit granting process, credit information management and bad debts, write off procedures and provisions which were included in this study.

A study conducted in Rwanda on commercial banks by Kagoyire and Shukla (2016) investigated how profitability of banks is influenced by credit management. The study adopted a case study approach where all 57 Equity Bank employees from the credit department were picked as respondents and were given questionnaires to respond to. Inferential and descriptive analysis techniques were utilized to analyze the primary data. Collection strategy, client assessment, and credit environment all had an influence on Equity Bank's profitability, according to the findings of the study. This study only focused on one institution while the current study focused on 55 regulated SACCOs.

In a study on Jordanian commercial banks from 2005 to 2013, Alshatti (2015) assessed the influence of credit risk management on profitability. The study sample was 13

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commercial banks in Jordan. The study collected secondary data that was analyzed using multiple regression. The study applied ROE and ROA to measure financial performance. The study findings determined that profitability of commercial banks in Jordan was significantly influenced by credit risk management. Specifically, the study determined that financial performance of the commercial banks was significantly influenced by NPLs as a proportion of gross loans and provision for loan losses. This study was conducted in the commercial banking sector which is different from the SACCO sector that was the subject of the current study.

2.4.2 Local Studies

In Kisumu County, Olweny (2019) conducted a study whose objective was to assess how profitability of SACCOs in the county was affected by credit management practices. The study population was 120 SACCO employees and the study sample was 72. Questionnaires were applied in the study to gather data. The study applied multiple linear regression and descriptive analysis to analyze the primary data collected. Study results established that the SACCOs' profitability was positively influenced by credit management practices. The study, however, only considered collection practices and reminder systems as credit management practices while excluding credit information management and credit granting process which were included in this study.

Kipkirui and Omagwa (2018) assessed the association between profitability of MFIs in Kenya and credit management practices. Specifically, the study examined how profitability of MFIs in Nairobi, Kenya was affected by collection policy, client appraisal,

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credit risk environment, and credit terms. From a population of 165 employees from MFIs, data was gathered using a questionnaire. The study used multiple regression analysis to answer the research questions. Findings from the study indicated that credit risk control, client appraisal, collection policy, and terms of credit significantly influenced profitability of the studied MFIs. This study, however, was on MFIs and not SACCOs which were the target of this study.

In Nakuru Kenya, Juma et al. (2018) assessed how financial performance of SACCOs was influenced by the prevalent credit management practices in the entities. The study's specific objectives were to evaluate the impact of debt recovery and credit standards on the profitability of deposit-taking SACCOs. The study's target population was 220 workers from 35 SACCOs in Nakuru Town. The research utilized a sample of 74 employees. Employees were asked to fill out questionnaires, which provided the data. The regression findings revealed that debt recovery and credit standards significantly influenced the SACCOs' profitability. This study did not consider credit risk environment and credit information management thus leaving conceptual gaps.

A study by Ikua (2015) had the objective of assessing how profitability of SACCOs in the hospitality sector of Nairobi was affected by their credit management techniques. The study had a population of 67 SACCOs and used a sample of 10 SACCOs. Data was collected using a questionnaire. In data analysis, the study applied chi-square test of association. The study's findings established that SACCOs have relied heavily on specific practices of managing credit risk which were insufficient in reducing NPLs in a

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competitive and dynamic lending atmosphere. The studies also determined that SACCOs lacked effective procedures for managing and controlling credit risk, and had deficient credit environment which resulted in late discovery and determination of NPLs and defaulted loans. Though the study linked the credit management practices to non-performing loans, it did not link them to financial performance.

Gatuhu (2013) examined how profitability of microfinance institutions in Kenya was influenced by their credit management practices. The study's population was 59 MFIs who were members of the association of MFIs. The investigation was carried out using a census study. A questionnaire was used to gather data. The study tested the study hypotheses using multiple linear regression. Study findings depicted that collection policy, client appraisal, and credit risk control, all significantly affected the profitability of MFIs in Kenya. However, this study was conducted on MFIs and not on SACCOs thus leaving a contextual gap.

2.5 Conceptual Framework

The study's conceptual framework is displayed in Figure 2.1. It provides the hypothesized link between the independent variables, control variables and dependent variable.

Independent Variables   **Dependent Variable**

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┌─────────────────────────────┐
│ Credit Risk environment     │
│  • Credit risk policy review│
│  • Credit risk policy execution │
│  • Training on credit risk  │
│    management               │
└─────────────────────────────┘

┌─────────────────────────────┐
│ Credit Granting Process     │
│  • Credit granting criteria │
│  • Credit limits            │
│  • Loan renewal process     │
└─────────────────────────────┘

┌─────────────────────────────┐
│ Credit Information Management │
│  • Information management system │
│  • Regularity of updates    │
│  • Access to information     │
└─────────────────────────────┘

┌─────────────────────────────┐
│ Bad Debts, Write Off Procedures │
│ And Provisions              │
│  • Loan quality monitoring   │
│  • Adequacy of reserves      │
│  • Debt collection process   │
└─────────────────────────────┘
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┌─────────────────────────────┐
│ Financial Performance       │
│  • Return on assets (Net    │
│    surplus/Total assets)    │
└─────────────────────────────┘

┌─────────────────────────────┐
│ Control variables           │
│  • Age of SACCO             │
│  • SACCO Membership         │
└─────────────────────────────┘
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Figure 2.1: Conceptual Framework

2.6 Summary of Literature Review

This chapter provides a review of various global, regional and local studies on how a firm's profitability is affected by credit management practices. The reviewed empirical studies indicated that various methodological, contextual and conceptual gaps which justifies the current study. The study by Noor et al. (2018), for example was conducted in Bangladesh and assessed the influence of credit management on financial performance of commercial banks. This study was conducted in a different context to Kenya and was on

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commercial banks rather than SACCOs. Besides, the study only considered non-performing loans and left the other credit management components such as credit granting process and credit risk environment. The study therefore, leaves some contextual and conceptual gaps. Moreover, the study by Onuora and Ifeacho (2017) assessed how profitability of manufacturing companies was influenced by credit management. The study however did not consider credit risk environment, credit granting process, credit information management and bad debts, write off procedures and provisions which were included in the current study. Besides, a study by Ikua (2015) had the objective of assessing the influence of credit management techniques on the profitability of SACCOs in Nairobi's hospitality sector. Though the study linked the credit management practices to profitability, it did not include credit information management which is a critical component of credit risk management, thus leaving a conceptual gap. This study hence sought to bridge these knowledge gaps.

CHAPTER THREE: RESEARCH METHODOLOGY

3.0 Introduction

The chapter discusses the methodology that was adopted to conduct this study. The chapter encompasses the research design, the study population, and the data collection process. Besides, the data analysis process is provided in the chapter.

3.1 Research Design

This study applied a descriptive research design. Saunders et al. (2019) observed that descriptive design not only provides an account of a phenomenon and its characteristics, but it can also enable a study to establish relationships. This approach was therefore suitable for this study as it enabled the study to provide an account of credit management practices such as credit risk environment, credit granting process, credit information management and bad debts, write off procedures and provisions amongst SACCOs in Kiambu County. The design also enabled the research to examine how financial performance of regulated SACCOs in Kiambu County is influenced by credit management practices.

3.2 Population

The study population was 55 SACCOs in Kiambu County that were regulated by SASRA (SASRA, 2020). These are SACCOs that are licensed to take deposits from their members and offer FOSA services (Juma, 2021). The SACCOs targeted in the study were SACCOs in all sectors including SACCOs in agriculture, transport (motorcycles, tricycles and motor vehicles), education, health, hospitality, manufacturing, trade and commerce. The study adopted a census approach.

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3.3 Data Collection

A questionnaire (Appendix I) was applied to gather primary data whereas a data collection sheet was used to gather secondary data (Appendix II). The questionnaire was designed to collect primary data on credit risk environment, credit granting process, credit information management and bad debts, write off procedures and provisions while the data collection sheet was used to collect secondary data on the SACCOs' financial performance (ROA). The questionnaire was administered to credit managers of each SACCO. The credit managers were the units of observation while the SACCOs were the unit of analysis. Credit managers were selected as the respondents since they are the ones who have in-depth knowledge of the credit management practices by the respective SACCOs.

The administration of the questionnaires was done through the drop-and-pick-later method. The questionnaires were printed and administered to the credit managers in their places of work in the SACCO offices in Kiambu County. The researcher then agreed with each of the credit managers on the date to collect the filled questionnaires. Follow-up was then conducted and the filled questionnaires collected and filed for analysis. In administering the questionnaires, COVID-19 health guidelines from the Ministry of Health and Kiambu County Government were observed. Regarding secondary data, the study collected data on profits/surplus and total assets which was used to compute ROA for the SACCOs. Data for five years (2016-2020) was collected. An average of the ROA

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for the five years was computed and matched with the collected primary data for each SACCO.

3.5 Data Analysis

The analysis of data entailed applying both descriptive analysis and inferential analysis techniques. The frequencies, Ms, percentages and standard deviations are the descriptive analysis measures that were developed. These were conducted both on the general information as well as on the questions appertaining to the independent variables. This was conducted to provide an account of the prevalence of the credit management practices in the SACCOs. Moreover, measures were developed for the secondary data collected to provide an account of financial performance of the SACCOs. The secondary data collected was data on net surplus or deficit and the total assets owned by the SACCO. These were used to compute the return on assets for each of the SACCOs. This data was then matched to the data collected for each SACCO through the questionnaires for further analysis.

The study also applied multiple linear regression to assess the influence of the predictor variables (credit risk environment, credit granting process, credit information management and bad debts, write off procedures and provisions) on financial performance of regulated SACCOs in Kiambu County. The model enabled the study to conduct the f and t tests at 5% significance level to assess the statistical significance of the independent variables in influencing the dependent variable. The analytical model that was used is:

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + \varepsilon$$

In the model, Y denotes financial performance of SACCOs (ROA), β_i denotes the coefficients of the independent variables, and α denotes the constant term. X_1 denotes credit risk environment, X_2 denotes credit granting process, X_3 denotes credit information management and X_4 denotes bad debts, write off procedures and provisions. Moreover, X_5 denotes age in years of the SACCOs, while X_6 denotes SACCO membership which were control variables in the study. Further, ε denotes the error term. Table 3.1 provides an explanation of the variables and how they were measured.

Table 3.1: Variable Operationalization and Measurement

Variable	Description	Measurement
Financial performance	Profitability	Profit or surplus/ Total assets
Credit risk environment	Practice of top management of establishing an effective atmosphere for credit risk management	Likert scale questions
Credit granting process	Having a well-established and clear procedure for lending	Likert scale questions
Credit information management	Having an effective system to capture and analyse data on the loan book	Likert scale questions
Bad debts, write off procedures and provisions	Having effective procedures to monitor quality of the loan book and adequate provisions	Likert scale questions
Age of SACCO	Number of years the SACCO has been in operation	Ratio scale
SACCO membership	Number of active members the SACCO has	Ratio scale

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

The process undertaken in data analysis, the study results and the discussion of the results is provided in this chapter. First, the chapter presents the study's response rate, the results of the reliability and validity test of the questionnaire and the descriptive statistics of the study variables. Further, the results of the correlation analysis, and the multiple regression analysis and hypotheses testing are provided. Lastly the chapter provides the discussion of the research findings relative to the reviewed empirical and theoretical literature.

4.2 Response Rate

The study had targeted a population of 55 SACCOs in Kiambu County that are regulated by SASRA. Questionnaires were issued to the credit managers in their offices in the selected SACCOs. The questionnaires that were collected by the researcher were 49 which was a response rate of 89.1%. Based on the recommendation by Saunders et al. (2019) that a response rate of above 60% for a paper based questionnaire survey is adequate, the response rate of 89.1% in this study was considered adequate for analysis.

4.3 Demographic and General Information

The study collected various demographic and general information relating to the SACCOs that formed the sample of the study. This included information on the respondents' highest level of education, the number of years they had worked in the SACCOs, the period they had served in their positions at the time of the study, and the

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period that the SACCOs has been operational. Concerning the level of education attained by the respondents, findings are presented in Table 4.1.

Table 4.1: Highest Level of Education of Respondents

Education level	Frequency	Percent
College diploma	14	28.6
Undergraduate degree	27	57.1
Master's degree	8	16.3
Total	49	100.0

The findings provided in Table 4.1 show that 28.6% of the respondents had diplomas, 57.1% of the respondents had undergraduate degrees while only 16.3% had master's degrees. This information indicates that the targeted respondents from the regulated SACCOs all had at a minimum tertiary level of education.

Concerning the period of service to the SACCOs by the respondents, the study results are provided in Table 4.2.

Table 4.2: Years Worked in the SACCO

Number of years	Frequency	Percent
Less than 5 years	9	18.4
5 to 10 years	13	26.5
11 to 15 years	19	38.8
Above 15 years	8	16.3
Total	49	100.0

The results summarized in Table 4.2 show that 38.8% of the study respondents had served their SACCOs for 11 to 15 years while 16.3 percent had worked in the SACCOs for over 15 years. Besides, the study findings indicate that 18.4% had served in the

SACCOs for below 5 years while those who had worked in the SACCOs for 5 to 10 years were 26.5%.

The study also collected data on the period that the respondents had served in the positions they occupied during the study. The results are summarized in Table 4.3 and they indicated that 51% had served in their current positions for less than 5 years. Those who had served in their current positions for more than 15 years were 4.1%. The study also determined that 30.6% had worked in the SACCOs for 5 – 10 years while 14.3% had worked in the SACCOs for 11 to 15 years.

Table 4.3: Years Served in Current Position in the SACCO

Number of years	Frequency	Percent
Less than 5 years	25	51.0
5 to 10 years	15	30.6
11 to 15 years	7	14.3
Above 15 years	2	4.1
Total	**49**	**100.0**

The study also collected data on the age of the SACCO with the number of years that the SACCO has been operational being the measure used. The results are displayed in Table 4.4. The results indicated that 49% of the SACCOs were aged between 10 and 20 years while only 10.2% were aged over 30 years. Those who were aged between 21 and 30 years were 22.4% while 18.4 had been operational for less than 10 years.

Table 4.4: Years of Operation of the SACCO

Years of operation of the SACCO	Frequency	Percent
Less than 10 years	9	18.4
10 to 20 years	24	49.0
21 to 30 years	11	22.4
Over 30 years	5	10.2

Total		49	100.0

4.4 Data Validity and Reliability

The study assessed the validity and reliability of the questionnaire and data collection sheet to certify that the collected data was reliable and useful for the study. Content, construct and face validity of the questionnaire was tested through expert reviews while Cronbach alpha tested reliability. The findings of the reliability test are provided in Table 4.5.

Table 4.5: Reliability of Questionnaire

Variable	No. of items	Cronbach alpha
Credit risk environment	6	0.817
Credit granting process	6	0.823
Credit information management	5	0.911
Bad debts, write off procedures and provisions	6	0.886

The results presented in Table 4.5 indicate that all the Cronbach alpha coefficients were above 0.7 indicating reliability. The credit information management variable had the highest score of 0.911 while credit risk environment had the least score of 0.817. However, the results of the reliability and validity tests indicated that the questionnaire was appropriate for data collection.

4.5 Descriptive Statistics

This section provides the descriptive statistics of credit environment, credit granting process, credit information management and bad debts write off procedures and provisions are provided in this section. Thereafter, descriptive statistics for age of SACCO, membership size and financial performance are provided.

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4.5.1 Credit Risk Environment

The study provided respondents with statements on credit risk environment and then requested them to indicate the extent that those statements applied in their SACCOs. A five-point rating scale was provided. Means (M) and standard deviations (SD) regarding statements on credit environment are summarized in Table 4.6.

Table 4.6: Credit Risk Environment in the SACCOs

Statements on Credit Risk Environment in the SACCOs	M	Std. Deviation
The board of directors in this SACCO approve and regularly review the credit risk policies and strategy of the SACCO	4.22	.846
Top management in this SACCO effectively implement the credit risk strategy and policies approved by the board	3.92	.905
The SACCO identifies and manages credit risk for all the loan products in its portfolio	4.04	.872
All employees in the credit department are well trained and knowledgeable to perform their responsibilities effectively	3.94	.876
The SACCO's board always ensures that top management are capable of managing credit risk emanating from the credit operations of the SACCO	3.96	.815
The SACCO ensures that its remuneration policy is always in line with credit risk policies and strategies	3.86	.957

The results provided in Table 4.6 show that the study respondents agreed to all the provided statements regarding credit risk environment. Specifically, respondents agreed that the board of directors in the SACCOs approved and regularly reviewed the credit risk policies and strategy of the SACCOs (M = 4.22, SD = 0.846) and also agreed that the SACCOs identify and manage credit risk for all the loan products in their portfolio (M = 4.04, SD = 0.872). Besides, respondents also agreed that the SACCOs' board always ensures that top management are capable of managing credit risk emanating from the

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credit operations of the SACCOs (M = 3.96, SD = 0.815) and also agreed that all employees in the credit department are well trained and knowledgeable to perform their responsibilities effectively (M = 3.94, SD = 0.876). Further, the findings show that respondents agreed that top management in the SACCOs effectively implement the credit risk policies and strategy approved by the boards (M = 3.92, SD = 0.905) and further agreed that the SACCOs ensure that their remuneration policies are always in line with credit risk policies and strategies (M = 3.86, SD = 0.957).

4.5.2 Credit Granting Process

To assess credit granting process in the SACCOs, the study provided respondents with statements on credit granting process and then requested the respondents to indicate the extent that those statements applied in their SACCOs. A five-point rating scale was provided (1-5). Means (M) and standard deviations (SD) from the analysis of the responses are provided in Table 4.7.

Table 4.7: Credit Granting Process in the SACCOs

Statements on Credit Granting Process	M	Std. Deviation
This SACCO operates within an effective and clear credit-granting criteria	4.16	.778
The SACCO has well-known clear credit limits both at the group and individual lending level	4.40	.677
The SACCO has a clear and well-established criteria for renewal, amendment, and re-financing of existing loans	3.92	.934
The SACCO has a clear and well-defined process for approving new loans	4.31	.918
All approvals of loans in this SACCO are conducted on an arm's-length basis	4.18	.858
The credit granting process has been well communicated to all employees in the credit department in this SACCO	4.23	.738

The findings displayed in Table 4.6 show that the study participants agreed to all the provided statements on credit granting process. The findings further indicate that respondents agreed that the SACCOs have established clear credit limits both at the individual and group lending level (M = 4.40, SD = 0.677) and also agreed that the SACCOs have a clear and well-defined process for approving new loans (M = 4.31, SD = 0.918). Furthermore, respondents agreed that the credit granting process has been well communicated to all employees in the credit department in the SACCOs (M = 4.23, SD = 0.738) and further agreed that all approvals of loans in the SACCOs are conducted on an arm's-length basis (M = 4.18, SD = 0.858). Additionally, the findings show that respondents agreed that the SACCOs operate within an effective and clear credit-granting criteria (M = 4.16, SD = 0.778) and further agreed that the SACCOs have clear and well-established criteria for renewal, amendment, and re-financing of existing loans (M = 3.92, SD = 0.934).

4.5.3 Credit Information Management

The study provided respondents with statements on credit information management and then requested them to indicate the extent that those statements applied in their SACCOs. A five-point rating scale was provided (1-5). Means (M) and standard deviations (SD) from the analysis of the responses are provided in Table 4.8.

Table 4.8: Credit Information Management in the SACCOs

Statements on Credit Information Management	M	Std. Deviation
The SACCO conducts monthly review and reconciliation of accounts and reports for accuracy	4.27	.908

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The SACCO has an elaborate system to capture, analyze and store information on the loan portfolios of the SACCO	3.90	.984
The credit information in this SACCO is continually updated to ensure that it remains current	4.35	.779
Employees in the credit management department in this SACCO have access to the information they need to perform their duties	4.39	.866
The SACCO's employees utilize the available credit information in making decisions	4.14	.979

The findings summarized in Table 4.8 show that the study respondents agreed to all the provided statements regarding credit information management. Specifically, respondents agreed that employees in the credit management department in the SACCOs have access to the information they need to perform their duties (M = 4.39, SD = 0.866) and also agreed that the credit information in the SACCOs is continually updated to ensure that it remains current (M = 4.35, SD = 0.779). Besides, respondents also agreed that the SACCOs conducted monthly review and reconciliation of accounts and reports for accuracy (M = 4.27, SD = 0.908) and also agreed that the SACCOs' employees utilize the available credit information in making decisions (M = 4.14, SD = 0.979). Further, the findings show that respondents agreed that the SACCOs have an elaborate system to capture, analyze and store information on the loan portfolios of the SACCOs (M = 3.90, SD = 0.984).

4.5.4 Bad Debts, Write Off Procedures and Provisions

Regarding bad debts, write off procedures and provisions in the SACCOs, the study provided respondents with statements and then requested them to indicate the extent that those practices on bad debts, write off procedures and provisions applied in their

SACCOs. A five-point rating scale was provided (1-5). Means (M) and standard deviations (SD) from the analysis of the responses are provided in Table 4.9.

Table 4.9: Bad Debts, Write Off Procedures and Provisions in the SACCOs

Statements on Bad Debts, Write Off Procedures and Provisions	M	Std. Deviation
The SACCO has an effective system for monitoring the overall quality and composition of the loan portfolio	3.90	.918
The SACCO regularly monitors to ensure that it has adequate reserves and provisions for bad debts	3.82	.858
The SACCO has an effective system for monitoring the condition of individual loans	3.98	.707
The SACCO has a very clear policy and process of aging and writing off debts	3.87	.882
The SACCO has an effective process of debt collection	4.35	.779
The SACCO has a mix of manual and automated methods of contacting borrowers based on the prior history, loan size and other risk factors	3.90	.965

The results summarized in Table 4.9 show that the study respondents agreed to all the provided statements regarding bad debts, write off procedures and provisions. Specifically, respondents agreed that the SACCOs have an effective process of debt collection (M = 4.35, SD = 0.779) and also agreed that the SACCOs have an effective system for monitoring the condition of individual loans (M = 3.98, SD = 0.707). Besides, respondents also agreed that the SACCOs have an effective system for monitoring the overall quality and composition of the loan portfolio (M = 3.90, SD = 0.918) and also agreed that the SACCOs have a mix of manual and automated methods of contacting borrowers based on their prior history, loan size and other risk factors (M = 3.90, SD = 0.965). Further, the findings show that study participants agreed that the SACCOs have a very clear policy and process of aging and writing off debts (M = 3.87, SD = 0.882) and

further agreed that the SACCOs regularly monitor to ensure that they have adequate reserves and provisions for bad debts (M = 3.82, SD = 0.858).

4.5.5 Descriptive Statistics for all Study Variables

The study conducted a descriptive analysis of all the study variables. To have a single measure for the independent variables, a mean of the independent variable components (items) was computed. The study results are provided in Table 4.10.

Table 4.10: Descriptive Statistics for all Study Variables

Variable	M Statistic	Std. Deviation Statistic	Skewness Statistic	Kurtosis Statistic
Credit risk environment	3.8914	.86546	-.867	-.414
Credit granting process	3.8980	.93718	-.745	-.309
Credit information management	4.1139	.91844	-.296	-.869
Bad debts, write off procedures and provisions	3.7551	.77810	1.018	1.117
Number of members	8179.59	21408.915	6.323	42.295
ROA	2.7912%	1.15248%	1.320	2.816

The findings summarized in Table 4.10 show that the mean of credit risk environment was 3.8914 while credit granting process had a mean of 3.898. Additionally, credit information management had a mean of 4.11 whereas bad debts, write off procedures and provisions had a mean of 3.76. Further, the mean of SACCO membership was 8,180 indicating that on average, each of the SACCOs had 8,180 members. The financial performance of the SACCOs (ROA) had a mena of 2.79% and a standard deviation of 1.15%. The skewness and kurtosis statistics indicated that all the variables were normally distributed except number of members.

4.6 Correlation Analysis

The data was subjected to a correlation analysis to determine the association between financial performance of the SACCOs and all the independent and control variables. Besides, the correlation analysis was used to assess the multi-collinearity of the independent variables. Table 4.11 displays the findings.

Table 4.11: Correlation Analysis

Variables		1	2	3	4	5	6	7
1. Age of SACCO	Pearson Correlation	1						
	Sig. (2-tailed)							
	N	49						
2. Membership Size	Pearson Correlation	.455**	1					
	Sig. (2-tailed)	.001						
	N	49	49					
3. Credit Environment	Pearson Correlation	.724**	.610**	1				
	Sig. (2-tailed)	.000	.000					
	N	49	49	49				
4. Credit Granting Process	Pearson Correlation	.679**	.479**	.521**	1			
	Sig. (2-tailed)	.000	.001	.000				
	N	49	49	49	49			
5. Credit Information Mgt	Pearson Correlation	.588**	.618**	.616**	.621**	1		
	Sig. (2-tailed)	.000	.000	.000	.000			
	N	49	49	49	49	49		
6. Bad Debts Procedures	Pearson Correlation	.075	.333*	.130	.121	.007	1	
	Sig. (2-tailed)	.606	.019	.374	.408	.960		
	N	49	49	49	49	49	49	
7. Financial Performance	Pearson Correlation	.250	.329*	.794**	.764**	.800**	.242	1
	Sig. (2-tailed)	.069	.028	.000	.000	.000	.094	
	N	49	49	49	49	49	49	49

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

The findings displayed in Table 4.11 show that age of the SACCOs did not have a significant association with the SACCOs' financial performance (r = 0.250, p = 0.069).

Besides, bad debts, write off procedures and provisions did not also have a significant association with the SACCOs' financial performance (r = 0.242, p = 0.094). However, membership size of the SACCOs had a moderate, positive and significant association with the SACCOs' financial performance (r = 0.329, p = 0.028). Further, the findings indicated that credit environment (r = 0.794, p < 0.05), credit granting process (r = 0.764, p < 0.05) and credit information management (r = 0.800, p < 0.05) all had a strong and significant positive association with the SACCOs' financial performance.

To preclude multicollinearity for reliable regression analysis, the study applied the variance inflation factor (VIF) to examine multicollinearity. The findings of the multicollinearity tests are displayed in Table 4.12.

Table 4.12: Test of Multicollinearity

Variable	Collinearity Statistics	
	Tolerance	VIF
Credit Environment	.362	2.761
Credit Granting Process	.449	2.228
Credit Information Management	.405	2.470
Bad Debts Procedures	.806	1.241
Age of SACCO	.343	2.913
Membership Size	.440	2.271

The results presented in Table 4.12 show that all the independent and control variables had VIF values of below 5. According to Saunders et al. (2019), VIF values of below 5 is an indication that there was no multicollinearity. This hence implies that the variables were appropriate to be fitted in a regression model. The following section provides the results of the fitted regression model.

4.7 Regression Analysis and Hypotheses Testing

This subpart presents the analysis, and results of the fitted regression model. The independent variables in the study were bad debts, write-off procedures, and provisions, credit granting process, credit information management, and credit environment while the control variables were age of the SACCOs in years and their membership size. Financial performance which was measured using ROA was the dependent variable. To standardize the variables, logarithm to base ten of membership size was used. The results of the regression model summary are summarized in Table 4.13.

Table 4.13: Regression Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.944	.892	.876	.22718

a. Predictors: (Constant), Membership Size, Bad Debts Procedures, Age of SACCO, Credit Granting Process, Credit Information Mgt, Credit Environment

The findings summarized in Table 4.13 show that the linear relationship (r = 0.944) between financial performance of the SACCOs and the independent variables was 0.944 which indicates a strong linear association. Besides, the findings indicate that the four independent variables (bad debts, write-off procedures, and provisions, credit granting process, credit information management, and credit environment) together with the two control variables (age of the SACCOs in years and their membership size) could explain 89.2% of the variation in the SACCOs' financial performance (r squared = 0.892). This implies that 10.8% of the variation in financial performance of the SACCOs could be described by other factors that were excluded in the model and the error term. The findings of the analysis of the variance of the regression model are summarized in Table 4.14.

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Table 4.14: Analysis of Variance of the Regression Model

Model	Sum of Squares	df	M Square	F	Sig.
1 Regression	17.864	6	2.977	57.686	.000[b]
Residual	2.168	42	.052		
Total	20.031	48			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Membership Size, Bad Debts Procedures, Age of SACCO, Credit Granting Process, Credit Information Management, Credit Environment

The findings provided in Table 4.14 show that the model was statistically significant and a good fit for the data (F = 57.686, p < 0.05). This shows that the model has some predictive power and at least one of the control and independent variables had a significant coefficient. To assess the significance of the various variables in the model, the t test was conducted and the findings provided in Table 4.15.

Table 4.15: Significance of Regression Model Coefficients

	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	.714	.468		1.527	.134
Credit Environment	.339	.102	.279	3.312	.002
Credit Granting Process	.172	.048	.270	3.567	.001
Credit Information Management	.274	.072	.302	3.781	.000
Bad Debts Procedures	.148	.073	.115	2.035	.048
Age of SACCO	.068	.055	.108	1.247	.219
Membership Size	.160	.079	.155	2.031	.049

The findings provided in Table 4.15 shows that the member size of the SACCO had a significant positive influence on financial performance of the SACCOs (β = 0.160, p =

0.049). This implies that SACCOs with large member numbers were expected to outperform their counterparts with smaller member size. Besides, the findings indicated that age of the SACCO (in years) did not have a significant influence on the SACCOs' financial performance.

Regarding the effect of the credit environment, the study findings (Table 4.15) indicated that credit environment of the SACCOs significantly and positively influenced the SACCOs' financial performance ($\beta = 0.339$, $p < 0.05$). These findings indicate that improvement in credit environment of the SACCOs by one unit would lead to an improvement of 0.339 in the SACCOs' financial performance and vice versa. The findings also indicated that SACCOs with better credit environment were expected to outperform their counterparts with poor credit environment.

The study finding summarized in Table 4.15 indicated that credit granting process of the SACCOs significantly and positively influenced the SACCOs' financial performance ($\beta = 0.172$, $p < 0.05$). These findings indicate that improvement in credit granting process of the SACCOs by one unit would lead to an improvement of 0.172 in the SACCOs' financial performance and vice versa. The findings also indicated that SACCOs with better credit granting process were expected to outperform their counterparts with poor credit granting process.

Regarding the effect of credit information management, the study findings (Table 4.15) indicated that credit information management of the SACCOs significantly and positively

influenced the SACCOs' financial performance ($\beta = 0.274$, $p < 0.05$). These findings indicate that improvement in credit information management of the SACCOs by one unit would result to an increase of 0.274 in the financial performance of the SACCOs and vice versa. The findings also indicated that SACCOs with better credit information management process were expected to outperform their counterparts with poor practices regarding credit information management.

Regarding the effect of bad debts, write off procedures and provisions, the study findings (Table 4.15) indicated that bad debts, write off procedures and provisions of the SACCOs significantly and positively influenced the SACCOs' financial performance ($\beta = 0.148$, $p < 0.05$). These findings indicate that improvement in bad debts, write off procedures and provisions of the SACCOs by one unit would result to an increase of 0.148 on the SACCOs' financial performance and vice versa. The findings also indicated that SACCOs with better practices regarding bad debts, write off procedures and provisions were expected to outperform their counterparts with poor practices regarding bad debts, write off procedures and provisions.

4.8 Discussion of Research Findings

The study determined that credit environment of the SACCOs significantly and positively influenced the SACCOs' financial performance ($\beta = 0.339$, $p < 0.05$). These findings support the transaction cost theory by Schwartz (1974) which contends that by incurring costs that improve the credit risk environment, financial institutions reduce the cost incurred by lending to bad risks and also enhance the repayment probability, thus

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improving their bottom-line. The findings from this study, however, disagree with the findings by Onuora and Ifeacho (2017) that credit management practices such as credit environment and policy have a significant negative influence on performance.

The study finding indicated that credit granting process of the SACCOs significantly and positively influenced the SACCOs' financial performance ($\beta = 0.172$, $p < 0.05$). These findings relate to the information asymmetry theory by Akerlof (1970) that due to information asymmetry in the lending transaction, financial institutions result to adopting effective credit granting processes to reduce the information asymmetry and only lend to the borrowers that meet the criteria provided. The study findings also concur with the findings by Kagoyire and Shukla (2016) that profitability of banks is influenced by client assessment, and credit risk management.

Regarding the effect of credit information management, the study findings indicated that credit information management of the SACCOs significantly and positively influenced the SACCOs' financial performance ($\beta = 0.274$, $p < 0.05$). These study findings support the information asymmetry theory by Akerlof (1970) which indicates that financial institutions result to information management to bridge the information asymmetry gap between them and their borrowers. This enables them to reduce adverse selection in their lending and hence having favorable effect on their financial performance.

Regarding the effect of bad debts, write off procedures and provisions, the study findings indicated that bad debts, write off procedures and provisions of the SACCOs significantly

and positively influenced the SACCOs' financial performance ($\beta = 0.148$, $p < 0.05$). These study findings support the transaction cost theory by Schwartz (1974) which indicates that when firms incur monitoring and collection costs, they reduce the risks of bad debts, thus improving their financial performance. The findings from this study also agree with the findings by Noor et al. (2018) that bad debts, NPLs and provisions significantly influenced profitability. Moreover, the study results agree with the findings by Omar et al. (2018) that collection strategies positively and significantly affected financial performance. The findings also concur with the findings by Alshatti (2015) that practices relating to provisions, write off and level of bad debts influenced financial performance.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter comprises the summary, conclusion and recommendations made in the study. Besides, the chapter also mentions the limitations of the study and suggestions for further research

5.2 Summary of Findings

The study determined that credit environment of SACCOs significantly and positively influenced the SACCOs' financial performance ($\beta = 0.339$, $p < 0.05$). Moreover, the study found that the board of directors in the SACCOs approved and regularly reviewed the credit risk policies and strategy of SACCOs, and that the SACCOs identified and managed credit risk for all their loan products in their portfolio. Further, the study found that the SACCOs' board of directors always ensured that top management are capable of managing credit risk emanating from the credit operations of the SACCOs and that all employees in the credit departments of the SACCOs were well trained and knowledgeable to perform their responsibilities effectively. Besides, the study established that senior management in the SACCOs effectively implemented credit risk policies and strategy approved by the boards and that the SACCOs ensured that their remuneration policies are always in line with credit risk policies and strategies.

The study findings indicated that the credit granting process of the SACCOs had a significant positive influence on financial performance of the SACCOs ($\beta = 0.172$, $p < 0.05$). The findings also indicated that the SACCOs had established clear credit limits

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both at the individual and group lending level, and that they had a clear and well-defined process for approving new loans. Moreover, the study found that the credit granting process had been well communicated to all employees in the credit department in the SACCOs and that all approvals of loans in the SACCOs were conducted on an arm's-length basis. Additionally, the findings showed that the SACCOs operated within an effective and clear credit-granting criteria, and had clear and well-established criteria for renewal, amendment, and re-financing of existing loans.

The study findings further indicated that credit information management of the SACCOs had a significant positive influence on financial performance of the SACCOs (β = 0.274, $p < 0.05$). The findings also indicated that employees in the credit management departments in the SACCOs had access to the information they needed to perform their duties and that the credit information in the SACCOs was continually updated to ensure that it remained current. Besides, the study determined that the SACCOs conducted monthly reconciliation and review of reports and accounts for accuracy, and that the SACCOs' employees utilized the available credit information in making decisions. Further, the findings showed that the SACCOs had elaborate systems to capture, analyze and store information on their loan portfolios.

The study determined that bad debts, write off procedures and provisions of the SACCOs had a significant positive influence on financial performance of the SACCOs (β = 0.148, $p < 0.05$). The findings also indicated that the SACCOs had effective processes of debt collection and also had effective systems for monitoring the condition of individual loans.

Besides, the study established that the SACCOs had effective systems for monitoring the overall quality and composition of the loan portfolio, had a mix of manual and automated methods of contacting borrowers based on their prior history, loan size and other risk factors and had very clear policies and processes of aging and writing off debts. Additionally, the findings showed that the SACCOs regularly monitored their borrowers and loan portfolios to ensure that they had adequate reserves and provisions for bad debts.

5.3 Conclusion

Based on the findings derived from the study, the following conclusions were made. First, the study concludes that credit environment of SACCOs is vital for financial performance . The study also concludes that having an effective credit granting process in the SACCOs is essential for the financial performance of the SACCOs. Besides, the study concludes that effective credit information management in SACCOs is indispensable for the SACCO's financial performance. Lastly, the study concludes that having effective bad debts, write off procedures and provisions in SACCOs is instrumental for the financial performance of the SACCO.

5.4 Recommendations

Based on the conclusions made, the study provides the following recommendations. First, since the study concludes that credit environment of the SACCOs is vital for the financial performance of SACCOs, SACCOs should enhance their credit risk environments. This can be operationalized through adoption of a formal credit risk policy and strategy that is regularly reviewed. Besides, the regulatory authorities such as SASRA should ensure that

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SACCOs have competent boards. Moreover, the study recommends to the board in the SACCOs to ensure that top management in the SACCOs have the capacity to manage the credit risks emanating from the credit operations of the SACCOs.

Regarding the credit granting process in the SACCOs, the study recommends to senior management in SACCOs to have a formal and well-defined process for approving new loans. Moreover, top management in the SACCOs should ensure that procedures for credit granting should be formally and clearly communicated to all employees in the credit department in the SACCOs.

Concerning credit information management, the study recommends to senior management in the SACCOs to always ensure that employees in the credit management departments have access to information that they need to perform their duties. Besides, the study recommends to top management in SACCOs to ensure and oversee continuous update of credit information. The study also recommends to the management of SACCOs, its auditors and SASRA to ensure that SACCOs conduct monthly reconciliation and review of reports and accounts for accuracy.

Regarding bad debts, write off procedures and provisions, the study recommends to the SACCOs' external auditors, top management and SASRA to ensure that SACCOs have a very clear policy and process of aging and writing off debts, adequate reserves and provisions for bad debts. The management should also ensure that their SACCOs have an effective process for debt collection.

5.5 Limitations of the Study

This study provides evidence regarding the effect of credit management on the financial performance of regulated SACCOs within Kiambu County. However, the study has some limitations which should always be considered when applying or generalizing the study findings. First, the study only focused on SACCOs in Kiambu County and did not include SACCOs from other counties in Kenya. Therefore, the findings may not be readily generalizable to other SACCOs operating in counties with material contextual differences to Kiambu County.

Secondly, the study only focused on SACCOs. Since credit management is vital for all companies and mostly for companies in the financial sector, the findings may not be generalizable to other firms in the financial services sector such as commercial banks and microfinance institutions. Moreover, the study only considered four credit management components (credit environment, credit granting process, credit information management and bad debts write off procedures and provisions). The study did not include other critical components of credit management such as credit risk assessment, credit monitoring, and client management.

5.6 Suggestions for Further Research

Though this research offered information on the impact of credit management on the financial performance of Kiambu County's regulated SACCOs, there are several areas that still remain and should be explored. To begin with, the research only considered

SACCOs in Kiambu County and excluded SACCOs from other Kenyan counties. The study therefore suggests for a study to investigate how credit management affects financial performance of SACCOs in other counties in Kenya that are dissimilar to Kiambu County.

Because credit management is important for all businesses, particularly for those in the financial services industry, the study recommends conduct of research in other financial services organizations such as commercial banks and microfinance institutions. Furthermore, since the research only included four aspects of credit management (credit environment, credit granting process, credit information management and bad debts write off procedures and provisions), a further study should be conducted that will incorporate other important aspects of credit management, such as credit risk assessment, credit monitoring, and customer management, and determine how they influence financial performance of SACCOs.

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APPENDICES
APPENDIX I: QUESTIONNAIRE

PART A: GENERAL INFORMATION

1. What is the highest level of education you have attained?

   Doctorate   [ ]   Master's Degree   [ ]

   Undergraduate degree   [ ]   College Diploma   [ ]

   College Certificate   [ ]

2. What is the name of this SACCO? _____

3. How many years have you worked in this SACCO?

   Less than 5 years   [ ]   5 to 10 years   [ ]

   11 to 15 years   [ ]   above 15 years   [ ]

4. How many years have this SACCO been operational?

   Less than 10 years   [ ]   10 to 20 years   [ ]

   21 to 30 years   [ ]   Over 30 years   [ ]

5. How many years have you served in your current position?

   Below 2 years   [ ]   2 to 5 years   [ ]

   6 to 8 years   [ ]   9 to 11 years   [ ]

   More than 11 years   [ ]

6. Which sector does this SACCO serve? _____

7. How many active members does the SACCO have? _____

PART B: CREDIT RISK ENVIRONMENT

For the statements on credit risk environment provided in the table below, kindly indicate the extent of your agreement to the statements in relation to this SACCO. Kindly use the following key.

Key: | 1-Strongly Disagree | 2-Disagree | 3-Neutral | 4-Agree | 5-Strongly Agree

	Statement	1	2	3	4	5
1	The board of directors in this SACCO approve and regularly review					

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		1	2	3	4	5
	the credit risk policies and strategy of the SACCO					
2	Top management in this SACCO effectively implement the credit risk policies and strategy approved by the board					
3	The SACCO identifies and manages credit risk for all the loan products in its portfolio					
4	All employees in the credit departments are well trained and knowledgeable to perform their responsibilities effectively					
5	The SACCO's board always ensure that top management are capable of managing credit risk emanating from the credit operations of the SACCO					
6	The SACCO ensures that its remuneration policy is always in line with credit risk policies and strategies					

PART C: CREDIT GRANTING PROCESS

For the statements on credit granting process provided in the table below, kindly indicate the extent of your agreement to the statements in relation to this SACCO. Kindly use the following key.

Key: | 1-Strongly Disagree | 2-Disagree | 3-Neutral | 4-Agree | 5-Strongly Agree

	Statement	1	2	3	4	5
1	This SACCO operates within an effective and clear credit-granting criteria					
2	The SACCO has established clear credit limits both at the individual and group lending level					
3	The SACCO has a clear and well-established criterial for renewal, amendment, and re-financing of existing loans					
4	The SACCO has a clear and well-defined process for approving new loans					
5	All approvals of loans in this SACCO are conducted on an arm's-length basis					

6	The credit granting process has been well communicated to all employees in the credit department in this SACCO					

PART D: CREDIT INFORMATION MANAGEMENT

For the statements on credit information management provided in the table below, kindly indicate the extent of your agreement to the statements in relation to this SACCO. Kindly use the following key.

Key: | 1-Strongly Disagree | 2-Disagree | 3-Neutral | 4-Agree | 5-Strongly Agree

	Statement	1	2	3	4	5
1	The organization conducts monthly reconciliation and review of reports and accounts for accuracy					
2	The SACCO has an elaborate system to capture, analyze and store information on the loan portfolios of the SACCO					
3	The credit information in this SACCO is continually updated to ensure that it remains current					
4	Employees in the credit management department in this SACCO have access to the information they need to perform their duties					
5	The SACCO's employees utilize the available credit information in making decisions					

PART E: BAD DEBTS, WRITE OFF PROCEDURES AND PROVISIONS

For the statements on management of bad debts, write-off procedures and provisions provided in the table below, kindly indicate the extent of your agreement to the statements in relation to this SACCO. Kindly use the following key.

Key: | 1-Strongly Disagree | 2-Disagree | 3-Neutral | 4-Agree | 5-Strongly Agree

		1	2	3	4	5
1.	The SACCO has an effective system for monitoring the overall quality and composition of the loan portfolio					

2	The SACCO regularly monitors to ensure that it has adequate reserves and provisions for bad debts					
3.	The SACCO has an effective system for monitoring the condition of individual loans					
4.	The SACCO has a very clear policy and process of aging and writing off debts					
5.	The SACCO has an effective process of debt collection					
6.	The SACCO has a mix of manual and automated methods of contacting borrowers based on the prior history, loan size and other risk factors					

* Thank you for your input*

APPENDIX II: SECONDARY DATA COLLECTION SHEET

Measure	2016	2017	2018	2019	2020
Net profit/ Surplus / deficit					
Total assets					

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THE EFFECT OF CREDIT MANAGEMENT ON THE FINANCIAL PERFORMANCE OF REGULATED SACCOs WITHIN KIAMBU COUNTY

by Francis Muku

THE EFFECT OF CREDIT MANAGEMENT ON THE FINANCIAL PERFORMANCE OF REGULATED SACCOs WITHIN KIAMBU COUNTY

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