

**EFFECT OF CREDIT POLICY ON FINANCIAL PERFORMANCE OF
DEPOSIT TAKING SAVINGS AND CREDIT COOPERATIVE
ORGANIZATIONS IN KENYA**

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DECLARATION

This research project is my original work and has not been presented to any other institution for any award.

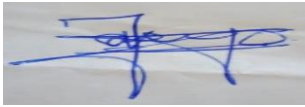
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DEDICATION

I dedicate this project to my late mother Margaret Oucho and brother John Oucho for taking me to school and helping me understand the value of education.

ACKNOWLEDGEMENT

I acknowledge the most-high God for good health and wisdom in writing this research report. I highly appreciate the support, guidance and motivation from my able Supervisor Dr. Ogilo in writing this project. My sincere appreciation to family members for the sacrifices during the time of my studies and the Research process.

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ABBREVIATIONS AND ACRONYMS

ANOVA	Analysis of Variance
CAR	Capital Adequacy Ratio
CRB	Credit Reference Bureau
DT	Deposit Taking
EPS	Earnings per Share
GDP	Gross Domestic Product
MDTI	Micro Deposit Taking Institutions
MFI	Microfinance Institution
NPL	Non-Performing Loans
ROA	Return on Assets
ROE	Return on Equity
SACCO	Savings and Credit Cooperative Organization
SASRA	Sacco Societies Regulatory Authority

ABSTRACT

The study sought to determine the effect of credit policy on financial performance of deposit taking Savings and Credit Cooperative Organizations in Kenya. Key determinants of SACCO financial performance reviewed in this study were credit collection, loan policy, credit monitoring and insider trading. The study methodology comprised of a descriptive research design and a target population of 175 SACCOs registered under SASRA. The study adopted all SACCOs in the study through a census method. Data collected was analyzed using descriptive and inferential statistics through multi-linear regression model. Model assumptions were tested for significance and although its correlation was weak. Secondly, credit collection had a positive and significant influence and a weak positive correlation. Furthermore, credit monitoring had a positive and significant influence its correlation was weak but positive. Finally, insider trading had a positive and significant effect on productivity. The study made recommendations to DT-SACCO managers to review their credit collection policies and adopt best practices through benchmarking from commercial banks. Furthermore, it is recommended that, DT-SACCO managers should enhance the adoption of Artificial Intelligence Technologies that can effectively analyze client credit scores to minimize the rise of non-performing loans and other financial losses that the DT-SACCOs may face in the future. Finally, the study made suggestions for further studies to be done to look at the remaining 53.9% factors affecting financial performance and another study to explain how differences in SACCO financial strength, management skills and compliance to financial regulations dictate the formulation and implementation of credit policies.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

The management of credit risk in financial institutions is a key function to ensure that loan portfolio is well maintained and borrowers at minimum point fail to repay their loans which allows the financial institution to offer more credit to new clients (Mamari, Al- Ghassani & Ahmed, 2022). Poor credit policy can lead to collapse of a financial institution as loaning and interest rates form a large part of income sources for financial institutions. Financial performance is the magnitude at which a firm has achieved or will achieve its financial objectives. Every financial organization has in place a set of rules and regulations on how credit is offered and recovered from clients, however, the application of such rules vary from one organization to the other (Mohamed, Njuguna & Maende, 2022). With time the practices have been reframed to fit in the current business environment. Most financial institutions relax their credit management measures to attract more clients to the portfolio and this has been cited as a major contributor to financial improvement (Orichom & Omeke, 2021).

The study was based on the transactional theory accredited to Schwartz in 1974, the theory is set on the belief that providers of financial instruments have an advantage of creditors in understanding the credit worthiness before deciding whether to extend credit or not (Ochieng,2021). The second theory was the credit risk theory by Robert Melton in (1974) based on the assumptions that risk if credit facilities happens in the processes adopted by management in development and advancing of credit to its clients. The information asymmetry theory championed by George A. Akerlof (1970) maintains that most market customers use real time data to understand market trends, this means that the buyers use the average market information while the sellers have specific commodity information knowledge.

Over the past decades, the Savings and Credit Cooperative Organization sector has recorded an increased growth in Kenya and major economies in Africa and beyond. The growth has been necessitated by need to pool resources for personal and institutional growth especially by people working in the same sector or individuals with common interest (Sacco Societies Regulatory Authority, 2018). Savings and Credit Cooperative Organizations have been approved by many individuals as an alternative to commercial banks due to low interest rates charged and less

collateral requirements for those accessing credit. In Kenya, complete risk management has been designed by Deposit Taking- Savings and Credit Cooperative Organizations as a requirement by Sacco Societies Regulatory Authority to achieve their financial goal and minimize losses. The past five years have witnessed a massive growth in SACCO membership across the country, with recorded numbers surpassing the set projection of 4 million by 2020 (SASRA, 2020). The uptake of financial services from Savings and Credit Cooperative Organizations had widened financial provision and provided a unique service that commercial banks lack (Kaari, Gregory & Agnes, 2019).

1.1.1 Credit Policy

Strategies and decisions adopted by management to ensure that credit levels in firms are acceptable at all the time. Such strategies include, credit rating assessment, monitoring, invoicing, customer management and risk mitigation (Paul & Musiega, 2020). The common credit policy in financial institutions include, complete credit application through which a client provides a financial institution with all required information regarding his/her creditworthiness, assessing of credit worthiness that involves examination of loan payment record and levels of income, setting credit limits and terms, a practice that allows managers to categorize credit items and specific terms to those who qualify for such instruments, contracting clients, the practice entails signing loan forms and legal documents that align to the agreement and terms of credit; updating and reviewing of credit terms to ensure financial institution overcome challenges faced earlier and optimize on the experience gained and lastly debt follow-up policies that help financial institutions recover money from defaulters (Hermes, 2021).

There are two common methods used in measuring credit risk, one is based on absolute position in credit risk and the other based on expected rate of default on credit claims (Alfatlah, Othman, Basiruddin & Almagtome, 2022). In the first approach, the financial institution extends a credit facility to a borrower and monitors their pay before and determine whether they are able to pay or not, by end of the financial year the manager assess the exposure of the firm to defaults and adopts strategies to recover unpaid money. In the second approach, a financial institution assesses the ability of a borrower using available tools in order to find their capability to repay and probability that the borrower will default on payment (Saghir & Tabassam, 2020). For this study credit policy was measured through, collaterals, guarantors, policies, compliance, delinquency management, portfolio monitoring and compliance assessment.

1.1.2 Financial Performance

Organization financial position is determined by two major factors, financial institutions related factors and the macro-economic factors (Mwaniki, 2018). Better financial position of a firm can be realized with increased returns from investments, minimal wastages, tax relief and increased sales over a given financial year (Njenga & Jagongo, 2019). Good financial performance can determine the competitive edge of a firm in a sector such as the financial sector which has many new players coming into the foray every year. Financial performance highly dependent on client monthly deposits, savings, shares traded and interest earned from loan facilities advanced to its clients (Otwoko, Maina, & Kwasira, 2021).

To determine the financial performance of an organization, simply looking at the earnings per share is not quite enough (Al-Rahahleh, Bhatti & Mismam, 2019). It is also important to know how efficiently a firm is using its assets and equity to generate profits. At the end of every financial year, firm accountants and finance officials prepare financial statements that reflect the financial position of a firm. The most notable measures used in organization to assess financial performance are Return on assets, Return on Equity, Return on Investments and Net interest margins. The study used ROA, this measure gave a clear financial position of DT-SACCOs targeted in this study in relation to adoption and implementation of effective budget control measures.

1.1.3 Credit Policy and Financial Performance

Organizations in the financial sector across the world have adopted and implemented credit risk measures and trained their employees on best credit management practices with the goal of minimizing loan defaults (Ngugi & Han, 2022). It is a responsibility of an institution to ensure that credit appraisal and approval processes are strengthened and are above board. There must be a credit policy which stipulates this and every management staff involved in credit risk management must understand the policy (Orichom & Omeke, 2021).

Poor credit score for individual customers acts as a hindrance to the profitability of financial institutions as they lose a percentage of their finances in form of bad debts. To reduce the number of non-performing loans, the adoption of sound credit policy in line with Basel principles becomes a must do affair for finance managers in order to protect their businesses from massive losses (Nyerere, 2022). The sources of finances for SACCO can be diverse based on strategies adopted by managers and creativity of the employee workforce, however, most SACCOs rely on interest

from credit facilities offered every end month. This income from loans helps financial institutions meet their daily operations, financial needs and also extend credit to other borrowers (Ekinici & Poyraz, 2019).

1.1.4 Deposit Taking Savings and Credit Cooperative Organizations in Kenya

Credit policies have been adopted by DT-SACCO managers as an avoidance strategy that ensures that care is taken and business activities are properly evaluated beforehand and threats eliminate or negative consequences significantly minimized (Yilmaz, 2022). The growth of the DT-SACCO sector has been enabled by an improved legal environment through enactment of a number of Acts of parliament such as SACCOs Act of 1997 that was amended in the year 2004 that removed restrictions in registration of DT-SACCO by low income earners such as Boda boda and other small scale traders. The inclusion of Public transport operators and Boda boda operators have been cited as a great move in streamlining of public support and a positive way of improving their living standards through undertaking of projects for their members (Ouko & Atheru, 2022).

Deposit-Taking Savings and Credit Cooperative Organization like other business operate under a legal framework as stated in the SACCO Act 2010 which also established a regulation monitoring board (SASRA, 2021). This board is in charge of registration, supervision and monitoring of Savings and credit activities across the country. For many years the SACCO board has steered the growth of the sector and is acknowledged for the tremendous growth witnessed in the past decades. Poor credit policies in DT-SACCOs led to myriad of challenges in their operations such as rise in non-repayment of loans, lack of capital, insufficient funds to meet their daily operations, reduced funds to loan clients and poor dividends to shareholders (Paudel, 2022). The enactment of rules and set up of SASRA was aimed at helping DT-SACCOs overcome these challenges, hence need to investigate how adoption of rules and credit policy has helped DT-SACCOs in managing their financial performance.

1.2 Statement of the Problem

Adoption and effective management of sound credit risk management has been found to be very crucial in the success of organizations (Nyerere, 2022). Managers in financial institution can use risk management strategies to minimize risk and adjust risk rate of return hence avoid adverse effect of customer's inability to repay interest and the loan. Managers in financial institutions have failed to maximize its benefit as the practice is recurrent and has persistently posed a challenge in managing new risks (Yilmaz, 2022). Managers have also not succeeded in capitalizing their

experiences to shape their current risk management practices hence fail to overcome credit risks prevailing in the business environment leading to a huge number of non-performing loans (Aduda & Obondy, 2021). The concepts of credit collection, loan policy, credit monitoring and insider lending still need a better explanation in their application in financial institutions.

The SACCO industry in Kenya is faced with the challenge of client low deposit and non-repayment of loans that has negatively affected their financial positions over the years SASRA (2020). For well-established SACCOs, managers have managed to control their loss making by diversifying the investment portfolios that has created new streams of revenue. SACCOs that heavily depend on client deposit and loan interest payment have been adversely affected by poor economic conditions in the country which led to SACCOs recording decreased profits for the past five years (Lorna, 2018). Buro (2019) established that in Garissa SACCOs had a credit monitoring policy which positively influenced its financial performance. Analysis on the relationship between budget controls and financial performance have reported varied findings, there still lacks a common measure that financial managers can adopt to assess the role played by credit policy measures in enhancing the financial performance of SACCOs (Paudel, 2022).

Globally, several research works were carried out to look into the practice in various sectors of the economy. Chikama and Mutua (2018) analyzed the relationship between credit policies and financial productivity of SACCO in western region of Kenya, the relationship was established to be positive, however, the study scope does not present all SACCOs in Kenya. Samuel (2019) examined the influence of credit policy on productivity of SACCOs in Uganda. The study reported a positive and significant relationship, however, the study was not done in Kenya. Dunyoh, Moses, Ankamah, and Kosipa (2022) examined the influence of credit risk and bank productivity in Ghana. The study reported a negative relationship between credit risk, however, it does not address how credit policy influences financial performance. In a study on SACCOs by Gweyi (2018) in Kenya, it was established that SACCOs were weak on credit risk monitoring and failed to monitor cash flows of borrowers. Studies reviewed have failed to explain how credit policy affects financial performance. Furthermore, key financial performance determinants such as credit collection, monitoring, policy and insider trading were not comprehensively reviewed in previous studies. Findings proved that credit policies in deposit taking SACCOs influence financial performance.

1.3 Research Objective

The study determined the effect of credit policy on financial performance of deposit taking Savings and Credit Cooperative Organizations in Kenya.

1.4 Value of the Study

Results guided national government officials and County Government officials in credit policy making to boost the DT-SACCOs. In an attempt to address the challenges affecting the performance of cooperative societies across the country, policy makers understand the extent to which such policy issues are affecting DT-SACCOs.

The study was of importance to DT-SACCOs managers avoiding huge losses that have been mostly occasioned by poor credit risk management practices. The findings were of importance to managers in Deposit Taking Savings and Credit Cooperative Organizations partners like financiers, insurance companies who insure loans and the members of the SACCO who have invested their funds in the DT-SACCOs expecting dividends at the end of financial year.

University students and scholars use the findings of this research as a source of reference in the understanding risk factors affecting the performance, growth and sustainability of DT-SACCOs across the country. The study gave a direct description of the key variables understand and how they relate to financial performance, hence, scholars easily understand the weak areas in credit policies and carry further comprehensive studies.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter entails the study theoretical review, determinants of performance, Empirical review, Conceptual framework, Summaries and Research gaps.

2.2 Theoretical Review

The study theoretical framework entailed a Transactional cost theory, Credit risk theory and Information asymmetry theory.

2.2.1 Transactional Cost Theory

Theory was founded by Schwartz in the year 1974 and it is based on the assumption that credit providers have an advantage over their clients in most financial transactions (Ochieng', 2021). This happens at the onset of a client establishing a contact with a financial institution where officials seek to understand the background of a client and determine their credit worthiness, their levels of income or even their relationships with other financial institutions. A client previous relationship with a bank especially on loan defaults can be an important consideration as to whether to offer credit to a client or not (Mamet, 2018). With all these advantage that financial institution has, it becomes easy to minimize the non-performing loans portfolio and writing off bad debts at every end of financial year.

This theory has been adopted by managers across industries because it is helpful in minimizing losses and upholds key credit policy such as monitoring and evaluation (Orichom & Omeke, 2021). Proponents of the theory believe the theory as loss preventive mechanism which can help financial institutions avoid poor financial performance. The theory also advocates for good financial management and fairness in handling of clients and clients with record are treated fairly as compared to the ones with poor credit rating (Nдалu, 2018). SACCOs have an advantage in dealing with clients especially for low income categories with unstable sources of income when deciding the kind of product to offer to them having in mind their ability to consume and repay borrowed finances.

Although the theory is important to financial institutions it has been found to be weak in its applications and has been criticized over a number of reasons (Agaba, Francis, Tamwesigire, and Eton, 2022). One, the theory gives too much advantage to the financial institution at the

disadvantage of the client. In addition, the assumptions of the theory focus on too much control of processes and ignoring the key aspect of human actions that might cost a financial institution. For example, a buyer who presents a collateral to the financial institution and awarded a huge loan for the first time, may end up misusing the funds and fail to repay the loan as agreed (Dunyoh et al, 2022). Even though the financial institution may recover by selling the asset, the client will be more poor at the end of the transaction (Alfatlah, Othman, Basiruddin & Almagtome, 2022). Furthermore, the assumption of the theory make the transaction process seem based on hierarchy of approvals which does not happen most of the time as clients prefer a hybrid system of transacting business. Assumptions aided Deposit-Taking SACCOs carry out comprehensive background check of loan applicants before extending credit facilities and effectively monitor their payment patterns hence protect Deposit- Taking SACCOs from suffering loses.

2.2.2 Credit Risk Theory

The credit risk theory was championed by Robert Melton in 1974 in his default theory, the central credit risk theory (Matama, 2022). It asserts that the circumstances resulting to the occurrence of risks originates from the asset changes in the firm. Loss in a firm asset can be due to the inability of members who have been granted credit facilities and have not paid back completely or in time as expected. The failure of clients to repay borrowed money can be as a result of harsh economic environment characterized by inflation, unemployment, unfavorable government policies, sickness or family commitments such as medical bills and payment of school fees. Managers of financial institutions may have a challenge in recovering the cash extended to clients when clients become bankrupt (Msuya, 2020).

In the context of this study, Savings and Credit Cooperative Organizations and other financial institutions employ this theory in their planning and determination of the credit worthiness of a borrower in that, an application of a big loan from the financial institution attracts higher interest rates if the payment period is short (Aduda & Obondy, 2021). Proponents of the theory believe that credit risk negatively affect the productivity of financial institutions. As the risk rises, the chances of repayment go low which leads to an increase in non-performing loans portfolio and reduced profit margins (Riasi, 2018). With this in mind, the DT-SACCOs therefore use other means like reference checks with Credit Reference Bureau.

The most notable limitation of the theory is that it fails to consider the multiplicity of processes in checking the ability to repay borrowed funds by clients (Yilmaz, 2022). Clients level of

understanding and access of information varies depending on individual and institutional factors such as loan requirements and processes set out by the organization. The theory also gives too much power to the financial institution in determining the credit worthiness of a client which has led to exploitation of borrowers through under valuing of client's properties (Musyoka, 2021). Lastly, it is an impossibility that clients can be honest to provide all information that a financial institution needs to get the correct credit worthiness, some clients give false information by quoting collaterals that they do not own to gain credit then fail to repay their loans which financial institutions cannot recover. The theory was therefore adopted to explain importance of credit monitoring in DT-SACCOs.

2.2.3 Information Asymmetry Theory

Akerlof, Spence and Stiglitz in 1980 founded the asymmetric information theory which is based on the disparity of information that a client and a credit provider may have regarding a transaction (Katula & Kiriinya, 2018). According to the theory proponents, a situation of confusion or misunderstanding as a result of lack of information or provision of wrong information by one of the parties can lead to huge losses especially on the part of the credit provider as they may be unable to know the credit worthiness of the borrower (Tahir & Memon, 2016). The state of relationship between the borrower and the credit provider heavily relies on the information available and the level of understanding between the two parties.

The financial market is always imperfect as none of the parties for instance creditor and borrower may have the right information at any given time (Bwoma, Muturi & Mogwambo, 2017). Proponents of the theory believe it is the duty of the creditor to monitor the behavior and conduct of individual through surveys so as to have a better understanding of their target market. Still managers may not have the right information about individuals, however, such activities can help in clustering clients and be in a position to decide whether to extend a loan or not. With the development of technology in areas such as social media, a SACCO officer can easily obtain a large amount of information from individual's accounts based on information posted, shared and close friends or families that can easily be traced (Tahir & Memon, 2016).

The theory of information asymmetric has limitations in its application to the business world. Borrowers are tech savvy today and can use a number of platforms to retrieve good and bad information about a financial institution before making a decision unlike the eras of analogue

where individuals only heard about a creditor from its sales team (Ekinici & Poyraz, 2019). It is also impossible to have a perfect market hence managers cannot wait for such a moment to make the right decision, they need to scan the environment and ensure they have a trustworthy relationship where they can freely obtain and share information with their clients. Assumptions of the theory stressed the importance of understanding credit scoring and the limit of the loan that a borrower can be given.

2.3 Determinants of Financial performance

The key determinants DT-SACCO financial performance discussed in this study included; Credit collection, Credit monitoring, Loan policy and Insider lending.

2.3.1 Credit Collection

The practice of debt collection is concerned with procedure and guidelines of recovering unpaid credit or delayed payments that clients ought to have done. These procedures are common in financial institutions such as commercial banks and Savings and Credit Cooperative Organizations, shylocks and any other form of firms dealing with credit (Omar, 2019). At the time of applying for credit, clients always indicate the assets they have as collateral they have that financial institutions can possess as a way to recover loans. However, in SACCOs managers mostly use client's savings, shares to recovers credit or guarantors may pay for the person they guaranteed on their own financial arrangements.

Credit recovery is procedural and credit officers are required to follow the law when a client defaults on their payment. First, a credit officer needs to serve a notice to defaulter after elapse of payment period as per organization guidelines (Wanjiru & Jagongo, 2022). If the client fails to clear the loan, then the credit officer can engage a collection agent to enforce repayment or engage a lawyer who can take the matter to court and seek permission to auction client properties. It is advisable that the court processes should be the last resort as loyal clients may flee to competitors and lead to loss of market share (Yilmaz, 2022). The organization may also lose a lot of money through legal fees especially when the judgement takes long to be delivered or a client decides to appeal every court decision.

2.3.2 Loan Policy

Loan policies adopted by financial institutions act as guiding principal in assessment, issuance and recovery of borrowed finances (Zulfikar, Lukviarman, Suhardjanto, Ismail, Astuti, & Meutia,

2020) Managers adopt guidelines, rules and regulations in their loan policies that guide their staff in transacting with clients to ensure that the best interest of all parties engaged are taken care of. In SACCOs, such policies are formulated by a credit committee that is mandated to plan, monitor and evaluate all loan operations across the organization. The effectiveness of credit committees in SACCOs cannot be underestimated as evidence point to a huge contribution of their actions in improved profitability of SACCOs.

The content of a credit policy may vary from one financial institution to another, however, the common items found in it includes; the amount of interest to be charged for each loan product, the minimum and maximum amount of loan that an individual can borrow for each loan category, the security that an individual should produce and its worthiness to act as a collateral and the period to which the loan must be repaid (Zogning, 2017). The guiding principles of extending or denying an individual credit are contained on the policy, however, in most organization the final decision may depend on the factors at hand (Rehman & Anwar, 2019). Credit policy has been found to be effective but manipulated by greedy SACCO employees to extend loan to credit unworthy clients either deliberately or as a result of misinterpretation which has caused huge losses to SACCOs (Paul & Musiega, 2020).

2.3.3 Credit Monitoring

One of the key activities of credit management process which allows credit officials track and analyze the whole process to identify any mistakes and take corrective measures that go a long way in preventing losses (Riasi, 2018). Through monitoring, credit officers can identify crucial information that a borrower failed to give out and even on their part a step that they did not adequately address (Kariuki, 2017). As previously acknowledged, the market has imperfect information and clients cannot repay loans as agreed in a contract hence there is need for monitoring to ensure that non-repayment of loans is highly discouraged (Ekinici & Poyraz, 2019). Monitoring controls that meet best standards can help a financial institution adopt well to changes in both internal and external business environments that may have an effect on both the client and the SACCO (Rukundo, 2018).

2.3.4 Insider Lending

Insider lending is defined as loans and advances issued to persons inside the organization, these are individuals with close association to the financial institution and have influence and control (Aduda & Obondy, 2021). While giving such advances, financial institution managers and Board

of Directors may bend some laws, policies and overlook at the processes thereby leading the organization to loss of funds or depriving the institution with funds to advance to other clients. Excess insider lending can lead to high losses which jeopardize the objectives of a financial organization. Insider lending comprises of loans issued to employees and directors (Gadzo, Kportorgbi & Gatsi, 2019).

Insider trading can be both illegal and unethical but still happens in many organizations due to conflict of interest by individuals given the mandate to protect the resources of an organization (Ekinici & Poyraz, 2019). The most effective measure that has reduced this malpractice is extensive surveillance that ensures that all activities and processes are tracked and managers make sure that members of staff conduct themselves with the interest of the organization in mind. Insider trading mostly affect shareholders who end up losing their savings and dividends at the end of every financial year. To the financial institutions, they also incur losses and investor trust which may lead to collapse of a business entity.

2.4 Empirical Review

Mamari, Hamdan, Ghassani, and Ahmed (2022) assessed the extent to which risk management affects productivity of financial institutions such as commercial banks, microfinance institutions, SACCOs and Foreign exchange bureaus in Muscat. The study adopted Structural Equation Modelling and Least Square models to look into how study variables relate. It was established that the management of risks in the banks had a positive relation with return on equity. The study concluded that management of risk affects general financial productivity of banks in Muscat. The research recommended for adoption of upgraded information systems in order to enhance efficiency in banking operations.

Dunyoh et al. (2022) examined the effect of credit risk practices on financial performance of financial institutions in Ghana. The methodology adopted by the study comprised of a survey research design and a target population of 10 rural commercial banks. Data obtained by the researcher was analyzed using a STRATA model and findings presented through descriptive summaries, tables and figures. The study revealed that risk management practices not effectively implemented had no positive influence on productivity of commercial banks.

Berko, Dankwah and Boahene (2021) assessed the effect of credit management practices on the operational performance of DT-SACCOs in Ghana municipality of Sunyani located in Bono region of the country. The research design adopted by the study was descriptive in nature, the sampling

approach was purposive and the study settled on a sample of 57 employees from all targeted firms in Bono region. Data adopted was analyzed and revealed that credit risk positively influence the performance of SACCOs in Ghana. It was further established that financial policies in the external environment caused a negative relationship on the variables. It was therefore recommended that managers of financial institutions adopt radical measures that ensure effective management of risk related measures to uphold firm sustainability and profitability.

A study by Ewool and Quartey (2021) examined impact of institutional risk on the profitability of microfinance institutions in Kumasi, Ghana. The study data was primary based and the questionnaire used in the study was set on a 5 Likert scale to ensure responses given by study participants were structured and objective. The study adopted a descriptive research design and a stratified sampling design. The research found an average impact of financial performance of microfinance institutions in Kumasi as a result of exposure to credit risk. The study suggested for the improvement on how managers act on the risk management processes in their organizations.

Orichom and Omeke (2021) examined the effect credit risk on financial institutions profitability. Data was collected in a total of 61 financial institutions key departments. The approach used by the study was a cross sectional and the sampling frameworks comprised of key departments in the microfinance. It was concluded that credit management practices such as appraisal, monitoring and mitigation have a significant contribution on the performance of organization.

Yeasin (2021) investigated the effect of credit risk on commercial bank performance in Bangladesh. Researcher used a descriptive approach and data obtained from secondary sources such as financial statements and other performance reports covering a duration 10 years from the year 2010 as reported by six targeted commercial banks in the state. Data obtained was subjected to regression analysis and the findings revealed that NPL, capital adequacy ratio negatively related with financial performance at the commercial banks in Bangladesh.

Samuel (2019) undertook an investigation on the relationship between credit policy and productivity of Savings and Credit Cooperative Organizations in Amoru Village Uganda. The study relied on a descriptive research design to look into the relationship between study variables. The researcher considered the design appropriate as it eliminated biasness in reporting of findings and gave a true state of affairs of the phenomenon under study. Analysis of the study was done on descriptive and inferential statistics and reported a positive and significant relationship between

credit policy and performance of Savings and Credit Cooperative Organizations in Amoru Village Uganda.

Gweyi (2018) determined the relationship between finance related risks and financial performance of SACCOs operating in Kenya. The study used a descriptive approach on 164 targeted SACCOs. Study information was extracted from accounting reports over a five-year period ending 2016. The analysis of data obtained was done using panel data models and STRATA. The study reported a positive relationship between study variables in the targeted SACCOs. The study suggested that managers adopt a clear policy for managing credit in SACCOs that have a direct bearing on all processes of credit management practices to ensure that the negative impact is minimized or eliminated.

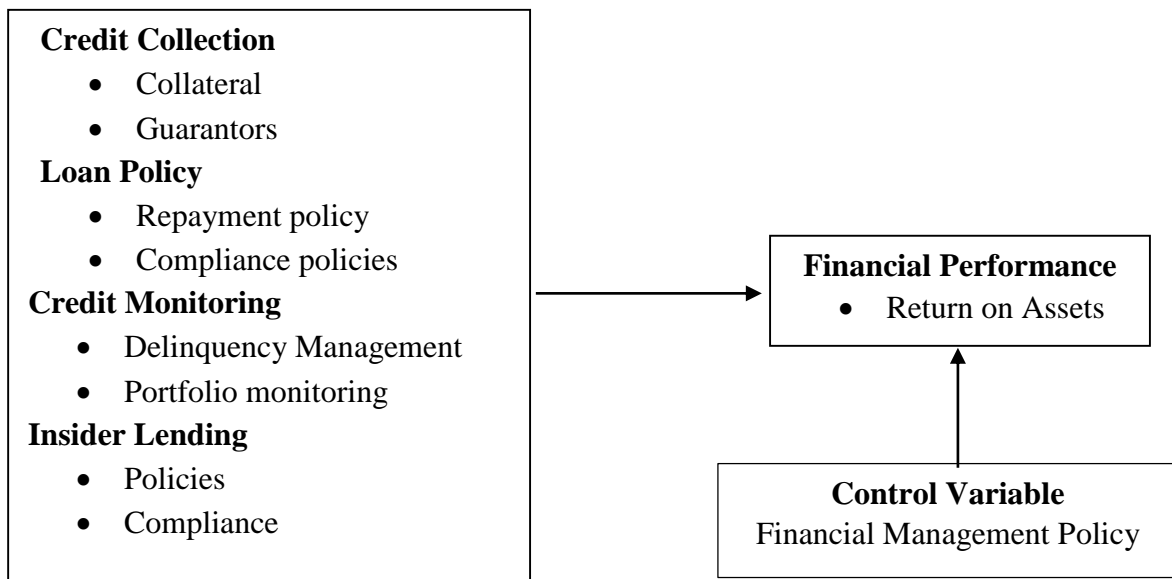
2.5 Summary of Literature review and Research Gaps

A thorough and extensive review of theory assumptions, concepts and a wide range of literature relating to study variables, however, conceptual and contextual gaps still existed. Berko, Dankwah and Boahene (2021) assessed the effect of risk related to credit on DT-SACCOs performance in Ghana and established a positive and significant effect. A contextual gap is presented by the research because it was done in Ghana and on savings and loans, the study also did not address credit management practices in Kenyan SACCOs. A study by Ewool and Quartey (2021) researched organizational risk factors and how it affects productivity of microfinances in the metro plan of Kumasi, Ghana, again the study did not address credit management practices in Kenyan SACCOs.

Remarkable from the reviews, scholars have used varied methods in conducting their studies, there is need to find the best methodology that can yield reliable results. In addition, various studies have arrived at a direct correlation linking the two variables while others have construed an indirect correlation between them. This lack of consensus on the nature of how credit risk management affects a firm's performance creates a conceptual gap and therefore justified further research to fill the research gaps identified. Finally, the reviews given were not clear on whether Credit scoring, Loan policy, Credit monitoring or Insider lending collectively lead to poor or better financial performance. These indicators were used in this study as they were more appropriate in measuring growth or decline in financial performance of deposit taking SACCOs.

2.6 Conceptual Framework

A credit risk management plan comprising of credit scoring, loan policies, credit monitoring and insider lending control helps the management of SACCO determine possible events or future changes that could adversely affect the ability of the SACCO to withstand changes (Ekinici & Poyraz, 2019). The relationship between the dependent variable, independent variable and control variable was illustrated in the conceptual framework below.



Independent Variable

Dependent Variable

Figure 2.1: Conceptual Framework

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter covered the Research design, Target population, Data collection, Analysis and presentation, Diagnostic tests, Test for significance, Operationalization of variables and Test of significance.

3.2 Research Design

This is defined as a guideline for conducting data collection, analysis and reporting of findings (Zikmund, Babin, Carr & Griffin, 2010). The study adopted a descriptive research design to look into the relationship between credit risk management and financial performance of SACCOs. The approach adopted was appropriate for the study in giving a detailed description of study relationships and also enabled researcher eliminate biasness in reporting study findings.

3.3 Target Population

This relates to the cases or individuals sharing similar observable attributes that a study seeks to engage in a study (Flick, 2015). This therefore implies that the SACCOs which have been listed here for this study shares similar attributes. A total of 175 SACCOs registered under SASRA as at December 2021 and currently in operation in Kenya were targeted for this study (see appendix I; of list of SACCOs). The study used all the 175 registered SACCOs in Kenya.

3.3 Data Collection

Secondary data sources such as SACCO financial reports for the past ten financial years published in newspapers or the company websites from the year 2017 to 2021 were highly relied in this study. The ten-year period was considered sufficient for determining the relationship between the study variables and data to be captured in this time frame was comprehensive enough to aid in coming up with a reflective conclusion.

3.5 Data Analysis

Once data was collected from the sourced, processing was done and refined data fed into SPSS program that aided computation of descriptive and inferential statistics. The researcher conducted data processing and analysis with utmost care to ensure that only measurable data was keyed in so

that accuracy was accomplished. Regression model employed carried multiple variables, the choice was supported by the fact that each individual relationship of the independent variables was assessed in addition to overall relationship between the key variables.

3.5.1 Analytical Model

The study adopted a multiple linear regression model for the analysis of Correlation, Analysis of Variance, Model summary and Regression co-efficient. The model that the study adopted was illustrated below:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where **Y**= Financial Performance.

α = Y intercept / constant of the regression equation

$\beta_1 \beta_2 \beta_3 \beta_4$ = Beta coefficients,

X₁ = Loan Policy

X₂ = Credit Collection

X₃ = Credit monitoring

X₄ = Insider lending

X₅ = Financial Management Policy,

ε was the error term assumed to have a zero mean and constant variance with a Gaussian distribution.

3.5.2 Significance Tests

Significance was tested using test-retest on all study variables. To be able to ascertain the fitness of the model, F-test and Analysis of Variance was adopted in this study to ensure that the model above gave values that were relied upon by the researcher in arriving at the conclusions. These were then given the percentage level of significance for the study.

3.6 Regression Diagnostics

This sections reviewed the diagnostic that were conducted for this study, they include; Auto-correlation tests, Normality tests, Multi-collinearity test and Homoscedasticity Test.

3.6.1 Autocorrelation Test

This was a test of degree of correlation between study variables, Durbin-Watson was used to test conduct the test. The test was checked on a range of 0-4 and the research made a conclusion of non-auto correlation if values had an average range of 2.

3.6.2 Normality Test

The model adopted was based on the assumption that residual values were normally distributed. Normality was tested using Shapiro-Wilk's test. Once the plotting was complete the study observed the line connecting the residuals and if a straight diagonal line was obtained, it was then concluded that the distribution of residuals was normal.

3.6.3 Multi-collinearity Test

The model adopted was based on the assumption that study variables do not directly relate with one another. Failure of the variables to meet this condition leads to multi-collinearity of study variables. The study adopted VIF to test this assumption, based on a general rule of thumb, VIF values greater than 5 would indicate potential multi-collinearity.

3.6.4 Homoscedasticity Test

The model adopted was based on the assumption that regression residuals had constant variance at every point in the linear model. When this was not the case, the residuals were said to suffer from heteroscedasticity. This assumption was tested using Koenker Test.

3.7 Operationalization of the Variable

Table 3.1: Operationalization of the Variables

Variable	Definition	Measure	Supporting Literature
Financial performance	The extent to which a firm has achieved financial objectives	$\frac{\text{Net income Average}}{\text{Total assets}}$	Al-Rahahleh, Ishaq Bhatti & Najuna (2019)
Credit Collection	Practise Concerned with recovering unpaid loan	Collection Effectiveness Index	Bala & Ajayi (2021)
Loan Policy	Laid down procedures to be adhered to while processing credit	$\frac{\text{Capital}}{\text{Weighted risk asset}}$	Gadzo, Kportorgbi, & Gatsi (2019)
Credit Monitoring	Measures taken to ensure that the credit is put into intended use	$\frac{\text{Balance of default receivables}}{\text{Balance of receivables}}$	Gauchan & Upadhyaya (2020)
Insider Lending	These are loans and advances issued to persons inside the organization	$\frac{\text{Total Debt}}{\text{Total Assets}}$	Mamari, Al Ghassani, & Ahmed (2022)
Financial Management Policy	Establishment and maintenance of effective internal control systems that regulate financial transactions	$\frac{\text{Revenue - Cost}}{\text{Revenue}}$	Ekinici & Poyraz (2019)

CHAPTER FOUR

ANALYSIS, INTERPRETATION AND PRESENTATION

4.1 Introduction

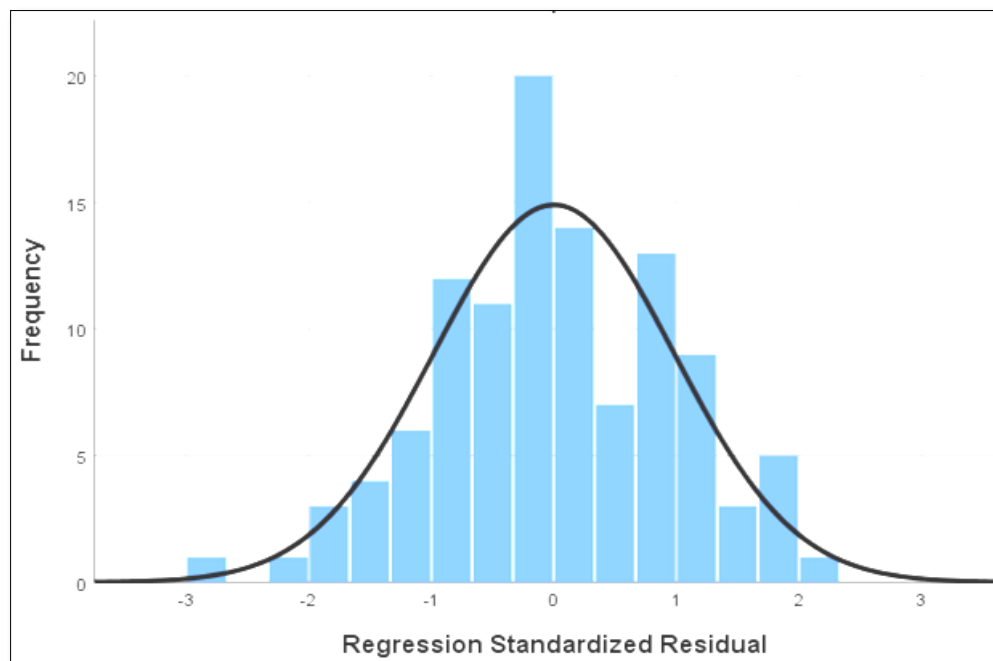
This chapter covers the results for diagnostic tests, trend analysis, descriptive statistics, correlational analysis, Model summary, Analysis of variance, Regression Co-efficient and summary of findings.

4.2 Diagnostic Tests

Regression tests were conducted to check on assumptions relating to Auto-correlation tests, Normality tests, Multi-collinearity test and Homoscedasticity Test. The results for these test are as illustrated in the figures and tables below.

4.2.1 Normality Test

The model adopted was based on the assumption that residual values were normally distributed as shown below.



Source: Research Data (2022)

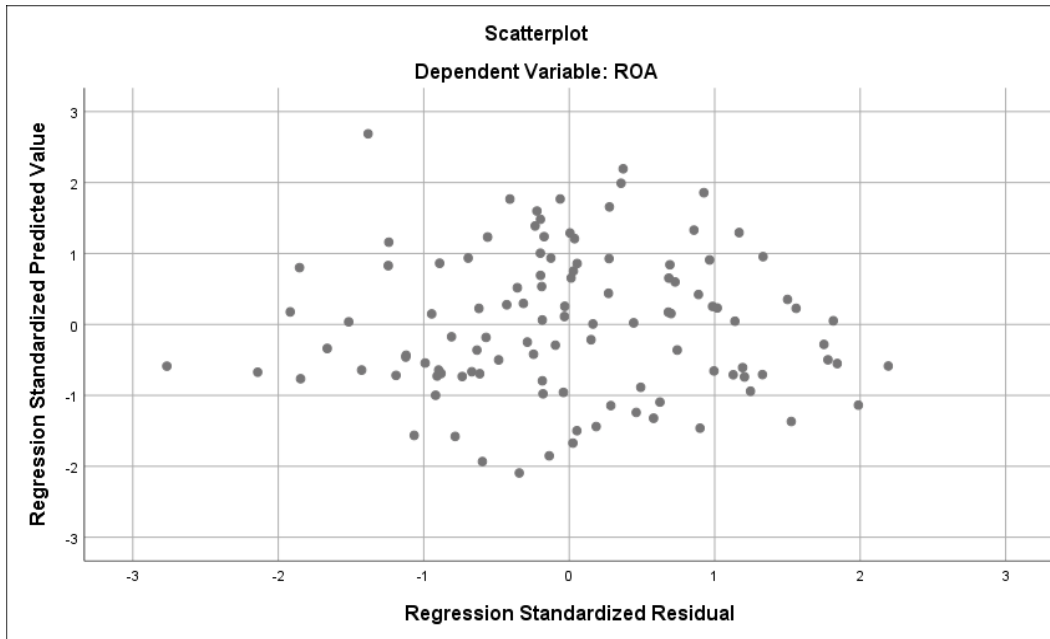
Figure 4.1: Histogram

The assumptions of normality of residuals was assessed using a histogram. Findings prove that the assumption was met, the histogram has bell shaped curve typical of a normal variate constant

variance an indication that this model is free from biases inherent in models that do not meet the normality requirement.

4.2.2 Homoscedasticity Test

The model adopted was based on the assumption that regression residuals had constant variance at every point in the linear model. This assumption was tested using Koenker Test.



Source: Research Data (2022)

Figure 4.2: Homoscedasticity Test

Findings revealed that there is no apparent pattern across the range of the DV thus indicating the constant variance assumption is met. This is an indication that the model is fit for inferences. From the plot in figure 4.2 it is also seen that the residuals are distributed evenly below and above the regression line ($y=0$ line) thus the linearity assumption is met. This implies that the IV and the DV data can adequately be modeled using linear model. In this regard, it is therefore being appropriate to use a linear model.

4.2.3 Auto-Correlation Tests

This is a test of degree of correlation between study variables, Durbin-Watson was used to conduct the test. The test was checked on a range of 0-4.

Table 4.1: Auto-correlation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.696 ^a	.484	.461	.486	2.081

a. Predictors: (Constant)

Source: Research Data (2022)

Auto-correlation was tested using Durbin- Watson test. The assumption assumed that the errors from the regression were independent. In this study, the DW statistic was 2.08 indicating no autocorrelation. To this end, the model diagnostic results showed that the fundamental model assumptions were met and therefore the model had the required econometric properties to predict ROA from credit policy in SACCOs in Kenya.

4.3 Descriptive statistics

Descriptive statistical analysis was carried out on credit collection, loan policy, credit monitoring and insider lending. Focus of the analysis was on mean scores and standard deviations to gauge how each individual factor influenced financial performance of deposit taking SACCOs in Kenya.

Table 4.2: Descriptive statistics

Variable	N	Mean	Std. Deviation
Loan policy	175	.5198	.2728
Credit collection	175	.2078	.1019
Credit monitoring	175	.4158	.2182
Insider	175	.588	.187
Financial management	175	.1663	.087
Return on Asset	175	.624	.221

Source: Research data (2022)

As illustrated in table 4.2 above; Loan Policy efficiency ratio was calculated from the company's capital to the weighted risks of the company as a ratio. The results show that the loan policy is concerned with credit decisions including the purpose of Loan, Collateral, Credit Reference Bureau, CRB rating and Loan pricing among others. The loaning policy ratio is 0.5198 with a

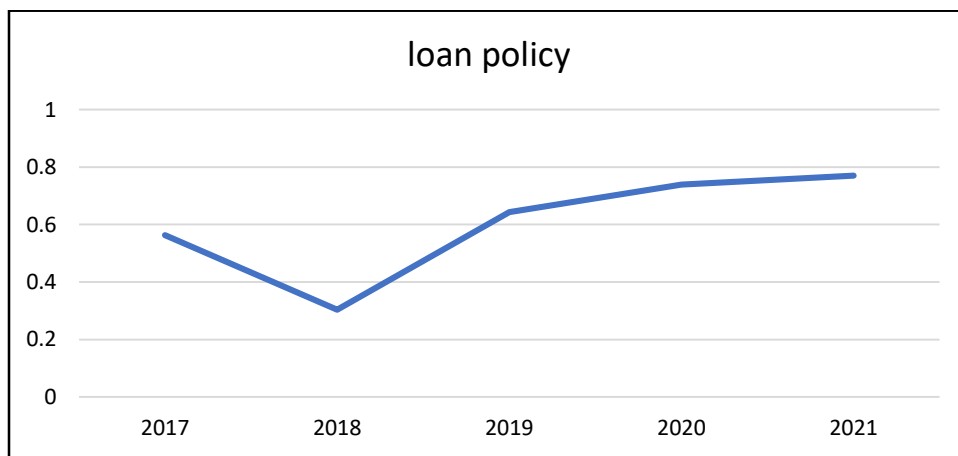
standard deviation of 0.2728. Credit collection efficiency was calculated through a credit collection index. The higher the index, the better was the credit collection efficiency of the company. Results showed that, in the five-year period, the overall credit collection index for the SACCOs in Kenya, was at an average of 0.2078 (SD=.1019). On average, the results showed that, Credit monitoring efficiency ratio for the SACCOs in Kenya was 0.4158 (SD= 0.2182). A credit monitoring tracks changes in borrower behavior in order to notify consumers of potential fraud, as well as changes to their creditworthiness. On average, during the 5-year period, Insider lending recorded a 0.588 point (SD=.187) and financial management recorded 0.1663, (SD=.087).

4.4. Trend analysis

The study conducted a trend analysis of credit collection, loan policy, credit monitoring and insider lending to understand the behavior of the variables over the year period at deposit taking SACCOs in Kenya.

4.4.1 Loan policy

Trends analysis was done to understand the effectiveness of DT-SACCO loan policies for the period 2017 to 2021. Figure 4.3, shows the trend.



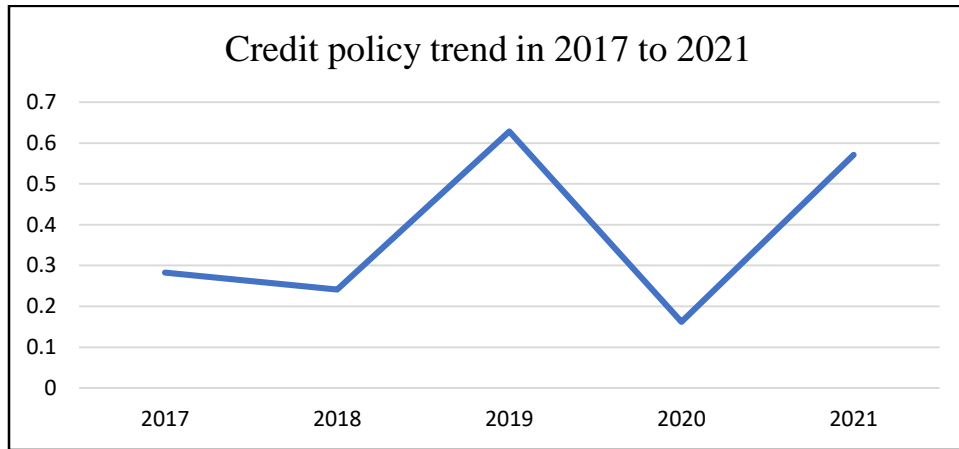
Source: Research data (2022)

Figure 4.3: Loan policy

As shown in figure 4.3 above, effectiveness loan policies in deposit taking SACCOs was less from 2017 to 2018, however, there has been an improved progress over the years to 2021. The efficiency of loan policy ranged between 0.4 and 0.6 in the five-year period. This was as a result of continuous review and training of key players in the industry.

4.4.2: Credit collection

Trends analysis was done to understand the effectiveness of DT-SACCO credit policies for the period 2017 to 2021. Figure 4.4, shows the trend.



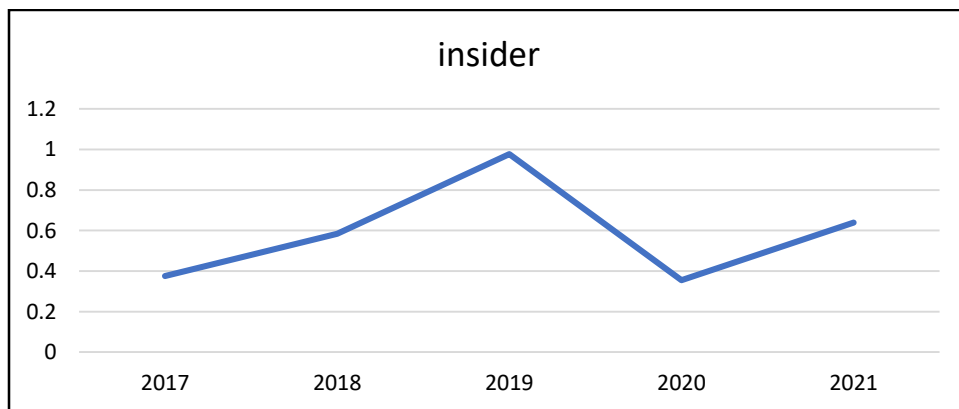
Source: Research data (2022)

Figure 4.4: Credit collection

As shown in figure 4.4, credit policy in deposit taking SACCOs has been fluctuating over the years, 2020 had the lowest score as compared to 2019 where the credit policy had a score of 0.6. The nature of the trend was attributed to government efforts to manage inflation levels in the country through regulations on borrowing from internal and external markets.

4.4.3 Insider Trading

Trend analysis was done to understand Insider trading in DT-SACCO for the period 2017 to 2021. Figure 4.5, shows the trend.



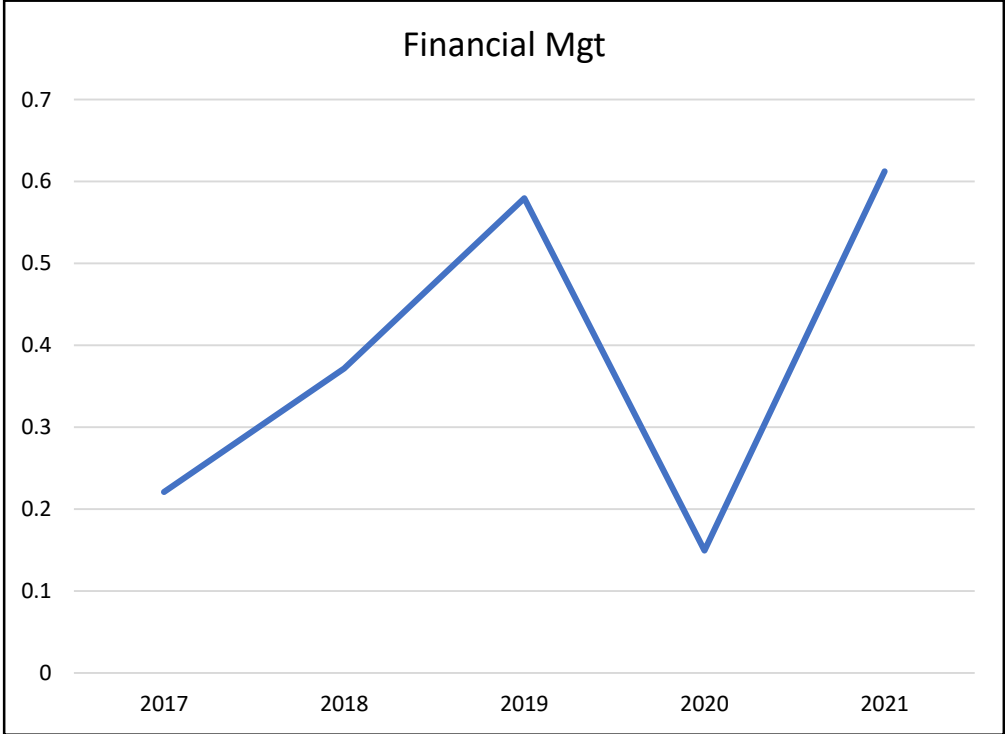
Source: Research data (2022)

Figure 4.5: Insider trading

As shown in figure 4.5 above; insider trading recorded a continuous growth from 2017 to 2019 before recording a significant drop towards the year 2020 then gained momentum towards the year 2021.

4.4.4 Financial Management

Trend analysis was done to understand financial management practices in deposit taking Savings and Credit Cooperative Organizations in Kenya between 2017 and 2021.



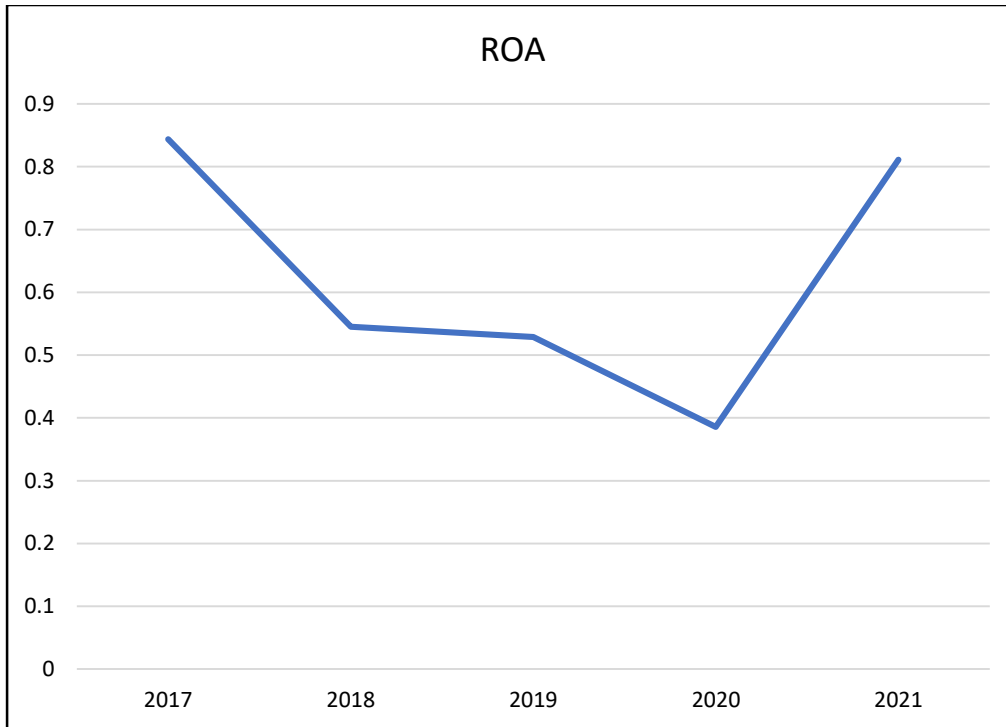
Source: Research data (2022)

Figure 4.6: Financial Management

As shown in figure 4.6 above; financial management practices recorded a continuous growth from 2017 to 2019 before recording a significant drop towards the year 2020 then gained momentum towards the year 2021.

4.4.5 Financial Performance

Trend analysis was done to check the financial performance positions of deposit taking Savings and Credit Cooperative Organizations in Kenya over the five-year period between 2017 and 2021.



Source: Research Data (2022)

Figure 4.7: Financial Performance

Trend analysis revealed that performance in 2017 was the best with a score of 0.85, from that point financial performance significantly dropped to a low point of 0.38 in a 3-year period. From the start of 2020, financial performance in deposit taking SACCO significantly improved to a point slightly below the highest performance of 2017.

4.5 Correlational Analysis

Correlation analysis looked into the relationship between study independent variables and the dependent variable. Findings obtained are as illustrated in the table below;

Table 4.3: Correlational Analysis

		ROA	CC	LP	CM	IL	FMP
ROA	Pearson Correlation	1					
	Sig. (2-tailed)						
CC	Pearson Correlation	.211*	1				
	Sig. (2-tailed)	.023					
LP	Pearson Correlation	.400**	.433**	1			
	Sig. (2-tailed)	.000	.000				
CM	Pearson Correlation	.236*	.476**	.362**	1		
	Sig. (2-tailed)	.010	.000	.000			
IL	Pearson Correlation	.183*	.357**	.357**	.566**	1	
	Sig. (2-tailed)	.048	.000	.000	.000		
FMP	Pearson Correlation	.211*	.350**	.329**	.469**	.680**	1
	Sig. (2-tailed)	.022	.000	.000	.000	.000	

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

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

c. Listwise N=175

Source: Research data (2022)

Key:

CC = Credit Collection

LP = Loan Policy

CM = Credit Monitoring

IL = Insider Lending

FMP =Financial Management Policy

As shown in table 4.3, The correlation between ROA and credit collection index is a weak positive and significant ($r=.211$, $p=.023$); the correlation between loan policy and ROA is a moderate positive and significant ($r= .400$, $p=000$); the correlation between credit monitoring and ROA is a weak positive and significant ($r=.236$, $p=.010$) and the correlation between Insider lending and

ROA is weak positive and significant (.183, $p=.048$). Independent variables were all found to be all positive with performance as measured by Return on Assets, ROA. The positive correlation observed between the IVs and ROA means that the IVS moves in the same direction as the ROA. This implies that lending policies are one of the true parameters of measuring SACCO's Return On Assets.

4.6 Model Summary

The output results have model summary are presented in the table below to prove the fitness of the regression model in the study.

Table 4.4: Model summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.696 ^a	.484	.461	.486

a. Predictors: (Constant)

Model summary results show the proportion of the predicted value explained by the model predictors. The adjusted R-square is .461 indicating that the five lending policies together explain 46.1% of ROA variations.

4.7 Analysis of Variance

ANOVA results were used to assess the model fitness in explaining the relationship between study dependent and independent variables.

Table 4.5: ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	24.606	5	4.932	31.819	.000 ^b
	Residual	26.180	169	0.155		
	Total	50.786	174			

a Dependent Variable: ROA, Predictors: (Constant), X₁, X₂, X₃, X₄, X₅

Source: Research data (2022)

The ANOVA results in table 4.5 shows a significant F value ($F=20.865$, $p<.001$). This is an indication that the lending policy data and ROA data fitted well in multiple linear model with ROA as the DV and lending policy indicators as predictor variables.

4.8 Regression Analysis

In multiple regression analysis, the regression coefficient results show the contribution of each predictor and its significance in the model to the target variable. Findings are as shown below.

Table 4.6: Regression Analysis

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
	1.080	.321		3.365	.001
Credit Collection	.185	.050	.055	3.68	.000
Loan Policy	.360	.076	.078	4.755	.000
Credit Monitoring	.125	.056	.037	2.25	.003
Insider Lending	.355	.087	.073	4.095	.000
Financial Management Policy	.565	.081	.587	6.946	.000

a. Dependent Variable: ROA

Source: Research Data (2022)

Key:

CC = Credit Collection

LP = Loan Policy

CM = Credit Monitoring

IL = Insider Lending

FMP = Financial Management Policy

Findings reveal that all predictors of ROA are positive and significant an indication that the lending policies in SACCOs in Kenya. Based on the magnitude of the unstandardized regression coefficients, financial management policies have strongest contribution to ROA ($\beta=.565$, $p<.000$). This is an indication that Financial management activities must be well understood and adhered to. As presented in the table above; Credit collection ($\beta=.185$, $p<.000$), Loan policy ($\beta=.360$, $p=.000$), Credit monitoring ($\beta=.125$, $p<.003$), Insider lending policies ($\beta=.355$, $p<.000$) are key

performance indicators (KPIs) in SAACOs in Kenya. It is important to clarify and prioritize the roles, authority, and responsibilities for essential financial management activities and decisions. The functional form of the performance model as measured by ROA from credit policy dimensions is;

$$\text{ROA} = 1.080 + .185 \text{ Credit Collection} + .360 \text{ Loan policy} + .125 \text{ Credit Monitoring} + .355 \text{ Insider Lending}$$

4.9 Discussion of Findings

Diagnostic tests for data collected from 175 DT-SACCOs in Kenya was conducted to test model assumptions. The tests proved that data was normally distributed as histogram obtained was bell shaped typical for a normal variate. Furthermore, tests proved that data had constant variance, non-existent of autocorrelation in variables and the model was found to be linear as regression model residuals were established to be evenly distributed.

Loan policy descriptive statistics with a mean of 0.5198 and SD of 0.2728 revealed that loan policy had the second highest effect on performance. Trend analysis on loan policy revealed a significant development over the past 3 years. Correlational analysis gave ($r = .400$, $p = 0.000$) which prove that loan policy has a moderate positively relation with financial performance. Finally, regression analysis had ($\beta = .360$, $p = .000$) which proved that loan policy is positively and significantly related to performance. Similar findings were established by Samuel (2019) who undertook an investigation on the relationship between credit policy and productivity of Savings and Credit Cooperative Organizations in Amoru Village Uganda. The study reported a positive and significant relationship between credit policy and performance of Savings and Credit Cooperative Organizations in Amoru Village Uganda.

Credit collection descriptive statistics with a mean of .2078 and SD of .1019 revealed that Credit collection had the fourth highest effect on performance. Trend analysis on Credit collection revealed a fluctuating trend over the past 5 years. Correlational analysis gave ($r = .211$, $p = .023$) which prove that Credit collection has a weak positive relation with financial performance. Finally, regression analysis had ($\beta = .185$, $p < .000$) which proved that Credit collection is positively and significantly related to performance. Similar findings were established by Berko, Dankwah and Boahene (2021) whom investigated the relationship between the management of credit risk on savings and loans on firms operating in Ghana municipality of Sunyani located in Bono region of the country. The study revealed that credit risk positively influences the performance of SACCOs

in Ghana. It was further established that financial policies in the external environment caused a negative relationship on the variables.

Credit monitoring descriptive statistics with a mean of .4158 and SD of .2182 revealed that Credit monitoring had the third highest effect on performance. Correlational analysis gave ($r=.236$, $p=.010$) which prove that Credit monitoring has a weak positive relation with financial performance. Finally, regression analysis had ($\beta=.125$, $p<.003$) which proved that Credit monitoring is positively and significantly related to performance. Similar findings were established by Buro (2019) whom established that adoption of credit monitoring practices by SACCO managers led to a positive and significant improvement on financial performance for SACCOs in Garissa County.

Insider trading descriptive statistics with a mean of .588 and SD of .187 revealed that insider trading had the highest effect on performance. Trend analysis on insider trading revealed insider trading was on the rise in the first three financial years. Correlational analysis gave ($.183$, $p=.048$) which prove that insider trading has a weak positive relation with financial performance. Finally, regression analysis had ($\beta=.355$, $p<.000$) which proved that insider trading is positively and significantly related to performance. Similar findings were established by Chikama and Mutua (2018) whom conducted a study to determine the effect of credit policies on financial productivity of SACCOs in the county of Kakamega. The findings of the study established a strong positive relationship between credit policy and financial productivity of Savings and Credit Cooperative Organizations in the county of Kakamega.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter covered the summary of research findings, conclusion of the study, recommendations and suggestion for further studies.

5.2 Summary of Research Findings

Loan policy was established to positively and significantly influence on financial performance of DT-SACCOs. Inferential analysis established a weak positive correlation between loan policy and financial performance, furthermore, regression analysis revealed a positive significant relationship between loan policy and financial performance of DT-SACCOs in Kenya. Similar findings were established by Samuel (2019) who undertook an investigation on the relationship between credit policy and productivity of Savings and Credit Cooperative Organizations in Amoru Village Uganda. The study reported a positive and significant relationship between credit policy and financial performance of Savings and Credit Cooperative Organizations in Amoru Village Uganda.

Credit collection was established to positively and significantly influence on financial performance of DT-SACCOs. Inferential analysis established a weak positive correlation between credit collection and financial performance, furthermore, regression analysis revealed a positive significant relationship between credit collection and financial performance of DT-SACCOs in Kenya. Similar findings were established by Berko, Dankwah and Boahene (2021) whom investigated the relationship between the management of credit risk on savings and loans on firms operating in Ghana municipality of Sunyani located in Bono region of the country. The study revealed that credit risk positively influences SACCO productivity. Financial policies from the external environment were found to negatively influence productivity.

Credit monitoring was established to positively and significantly influence on financial performance of DT-SACCOs. Inferential analysis established a weak positive correlation between credit monitoring and financial performance, furthermore, regression analysis revealed a positive significant relationship between credit monitoring and financial performance of deposit taking DT-SACCOs in Kenya. Similar findings were established by Buro (2019) who established that adoption of credit monitoring practices by SACCO managers led to a positive and significant improvement on financial performance.

Insider trading was established to positively and significantly influence on financial performance of DT-SACCOs in Kenya. Inferential analysis established a weak positive correlation between Insider trading and financial performance, furthermore, regression analysis revealed a positive significant relationship between insider trading and financial performance of DT-SACCOs in Kenya. Similar findings were established by Chikama and Mutua (2018) whom established a strong positive relationship between credit policy and financial productivity of Savings and Credit Cooperative Organizations in the county of Kakamega.

5.3 Conclusion

Based on findings, the study made the following conclusions: Loan policy positively and significantly influences financial productivity of DT-SACCOs, although its correlation with financial performance is weak. Secondly, it is concluded that credit collection has a positive and significant influence, when correlated with other variables the relationship was below average and negative.

Furthermore, the study concluded that, credit monitoring has a positive and significant influence on financial performance of deposit taking Savings and Credit Cooperative Organizations in Kenya, its correlation with financial performance is weak but positive. Finally, the study concluded that insider trading has a positive and significant influence on financial performance of deposit taking Savings and Credit Cooperative organizations in Kenya. However, the study established a weak positive correlation between insider trading and financial performance.

5.4 Recommendations

The study established a fluctuating trend of credit collection with sharp declines over the years which significantly weakened the financial position of DT-SACCOs in Kenya. Its recommended in this study that; DT managers review their credit collection policies and adopt best practices through benchmarking from commercial banks. Furthermore, it's recommended that, DT-SACCO managers should enhance the adoption of Artificial Intelligence technologies that can effectively analyze client credit scores to minimize the rise of non-performing loans and other financial losses that the DT-SACCOs may face in the future.

5.5 Suggestions for Further Studies

As illustrated through the model summary, the study only covered 46.1% of the factors affecting productivity of targeted Savings and Credit Cooperative Organizations. Therefore, further studies should be done to look at the remaining 53.9% factors affecting financial performance. The

SACCOs targeted had varied capacities in terms of financial strength, management skills and compliance to financial regulations in the country. There is need for studies to be able to explain how these difference dictate the formulation and implementation of credit policies and their influence on financial performance.

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APPENDICES

Appendix I: List of Deposit Taking Savings and Credit Cooperative Organizations in Kenya

1. 2NK Sacco Society Ltd
2. Acumen Sacco Society Ltd
3. Afya Sacco Society Ltd
4. Agro-Chem Sacco Society Ltd
5. Ainabkoi Sacco Society Ltd
6. Airports Sacco Society Ltd
7. Amica Sacco Society Ltd
8. Ammar Sacco Society Ltd
9. Ardhi Sacco Society Ltd
10. Asili Sacco Society Ltd
11. Azima Sacco Society Ltd
12. Bandari Sacco Society Ltd
13. Baraka Sacco Society Ltd
14. Baraton University Sacco Society Ltd
15. Biashara SACCO Society Ltd
16. Biashara Tosha Sacco Society Ltd
17. Bi-High Sacco Society Ltd
18. Bingwa Sacco Society Ltd
19. Boresha Sacco Society Ltd
20. Capital Sacco Society Ltd
21. Centenary Sacco Society Ltd
22. Chai Sacco Society Ltd
23. Chuna Sacco Society Ltd

24. Comoco Sacco Society Ltd
25. Cosmopolitan Sacco Society Ltd
26. County Sacco Society Ltd
27. Daima Sacco Society Ltd
28. Dhabiti Sacco Society Ltd
29. Dimkes Sacco Society Ltd
30. Dumisha Sacco Society Ltd
31. Eco-Pillar Sacco Society Ltd
32. Egerton Sacco Society Ltd
33. Elimu Sacco Society Ltd
34. Enea Sacco Society Ltd
35. Faridi Sacco Society Ltd
36. Fariji Sacco Society Ltd
37. Fortitude Sacco Society Ltd
38. Fortune Sacco Society Ltd
39. Fundilima Sacco Society Ltd
40. GDC Sacco Society Ltd
41. Golden Pillar Sacco Society Ltd
42. Good Faith Sacco Society Ltd
43. Goodhope Sacco Society Ltd
44. Goodway Sacco Society Ltd
45. Gusii Mwalimu Sacco Society Ltd
46. Harambee Sacco Society Ltd
47. Hazina Sacco Society Ltd
48. Ilkisonko Sacco Society Ltd

49. Imarika Sacco Society Ltd
50. Imarisha Sacco Society Ltd
51. Invest and Grow (IG) Sacco Society Ltd
52. Jacaranda Sacco Society Ltd
53. Jamii Sacco Society Ltd
54. Jitegemee Sacco Society Ltd
55. Joinas Sacco Society Ltd
56. Jumuika Sacco Society Ltd
57. Kencream Sacco Society Ltd
58. Kenpipe Sacco Society Ltd
59. Kenversity Sacco Society Ltd
60. Kenya Achievas Sacco Society Ltd
61. Kenya Bankers Sacco Society Ltd
62. Kenya Highlands Sacco Society Ltd
63. Kenya Midland Sacco Society Ltd
64. Kenya Police Sacco Society Ltd
65. Kimbilio Daima Sacco Society Ltd
66. Kimisitu Sacco Society Ltd
67. Kingdom Sacco Society Ltd
68. Kipsigis Edis Sacco Society Ltd
69. Kite Sacco Society Ltd
70. Kitui Teachers Sacco Society Ltd
71. Kolenge Tea Sacco Society Ltd
72. Koru Sacco Society Ltd
73. K-Pillar Sacco Society Ltd

74. K-Unity Sacco Society Ltd
75. Kwetu Sacco Society Ltd
76. Lainisha Sacco Society Ltd
77. Lamu Teachers Sacco Society Ltd
78. Lengo Sacco Society Ltd
79. Mafanikio Sacco Society Ltd
80. Magadi Sacco Society Ltd
81. Magereza Sacco Society Ltd
82. Maisha Bora Sacco Society Ltd
83. Mentor Sacco Society Ltd
84. Metropolitan National Sacco Society Ltd
85. MMH Sacco Society Ltd
86. Mombasa Port Sacco Society Ltd
87. Mudete Factory Tea Growers Sacco Society Ltd
88. Muki Sacco Society Ltd
89. Mwalimu National Sacco Society Ltd
90. Mwietheri Sacco Society Ltd
91. Mwito Sacco Society Ltd
92. Nacico Sacco Society Ltd
93. Nafaka Sacco Society Ltd
94. Nandi Farmers Sacco
95. Nanyuki Equator Sacco Society Ltd
96. Nation Sacco Society Ltd
97. Nawiri Sacco Society Ltd
98. Ndege Chai Sacco Society Ltd

99. Ndosha Sacco Society Ltd
100. New Forties Sacco Society Ltd
101. Nexus Sacco Society Ltd
102. Ng'arisha Sacco Society Ltd
103. Noble Sacco Society Ltd
104. NRS Sacco Society Ltd
105. NSSF Sacco Society Ltd
106. Nufaika Sacco Society Ltd
107. Nyala Vision Sacco Society Ltd
108. Nyambene Arimi Sacco Society Ltd
109. Nyamira Tea Farmers Sacco Society Ltd
110. Nyati Sacco Society Ltd
111. Ollin Sacco Society Ltd
112. Orient Sacco Society Ltd
113. Patnas Sacco Society Ltd
114. Prime Time Sacco
115. PUAN Sacco Society Ltd
116. Qwetu Sacco Society Ltd
117. Rachuonyo Teachers Sacco Society Ltd
118. Safaricom Sacco Society Ltd
119. Sheria Sacco Society Ltd
120. Shirika Deposit Taking Sacco Society Ltd
121. Shoppers Sacco Society Ltd
122. Simba Chai Sacco Society Ltd
123. Siraji Sacco Society Ltd

124. Skyline Sacco Society Ltd
125. Smart Champions Sacco Society Ltd
126. Smart-Life Sacco Society Ltd
127. Solution Sacco Society Ltd
128. Sotico Sacco Society Ltd
129. Southern Star Sacco Society Ltd
130. Stake Kenya Sacco Society Ltd
131. Stawisha Sacco Society Ltd
132. Stima Sacco Society Ltd
133. Suluhu Sacco Society Ltd
134. Supa Sacco Society Ltd
135. Tabasamu Sacco Society Ltd
136. Tabasuri Sacco Society Ltd
137. TAI Sacco Society Ltd
138. Taifa Sacco Society Ltd
139. Taqwa Sacco Society Ltd
140. Taraji Sacco Society Ltd
141. Telepost Sacco Society Ltd
142. Tembo Sacco Society Ltd
143. Tenhos Sacco Society Ltd
144. Thamani Sacco Society Ltd
145. The Apple Sacco Society Ltd
146. Times-U Sacco Society Ltd
147. Tower Sacco Society Ltd
148. Trans- Elite County Sacco Society Ltd

149. Trans Nation Sacco Society Ltd
150. Trans-Counties Sacco Society Ltd
151. Trans-National Times Sacco Society Ltd
152. Uchongaji Sacco Society Ltd
153. Ufanisi Sacco Society Ltd
154. Ukristo Na Ufanisi Wa Anglicana Sacco Society Ltd
155. Ukulima Saco Society Ltd
156. Unaitas Sacco Society Ltd
157. Uni-County Sacco Society Ltd
158. Unison Sacco Society Ltd
159. United Nations Sacco Society Ltd
160. Universal Traders Sacco Society Ltd
161. Ushuru Sacco Society Ltd
162. Vihiga County Farmers Sacco Society Ltd
163. Viktas Sacco Society Ltd
164. Vision Africa Sacco Society Ltd
165. Vision Point Sacco Society Ltd
166. Wakenya Pamoja Sacco Society Ltd
167. Wakulima Commercial Sacco Society Ltd
168. Wana-anga Sacco Society Ltd
169. Wananchi Sacco Society Ltd
170. Wanandegge Sacco Society Ltd
171. Washa Sacco Society Ltd
172. Waumini Sacco Society Ltd
173. Wevarsity Sacco Society Ltd

174. Winas Sacco Society Ltd

175. Yetu Sacco Society Ltd

APPENDIX II: DATA COLLECTION SHEET

Year	Net income Average/ Total assets	Collection Effectiveness Index	Capital/ Weighted risk asset	Balance of default receivables / Balance of receivables	Total Debt/ Total Assets	ROA
2017						
2018						
2019						
2020						
2021						