EFFECT OF CREDIT RISK MANANGEMENT ON FINANCIAL PERFORMANCE OF SELECTED MICROFINANCE INSTITUTIONS IN KENYA

Aggrey Wanyonyi Wandabwa Kadima

A Research Thesis Submitted in Partial Fulfillment of the Requirements for the award of the Degree of Master of Business Administration (Accounting option) of Masinde Muliro University of Science and Technology.

October 2023

DECLARATION

Student Declaration

This research is my original work prepared with no other than the indicated sources and support and has not been presented for the awarding of a degree in any other university and has not been published anywhere.

Signature: …….. Date: ……

Aggrey Wanyonyi Wandabwa Kadima

MBA/G/01-56364/2016

APPROVAL BY THE SUPERVISORS

The undersigned certify that they have read and thereby recommend for acceptance of Masinde Muliro University of Science and Technology a thesis entitled "effect of credit risk management on financial performance of micro finance institutions in Kenya**".**

Signature: ……. Date: ……

DR. MULI MAINGI

Department of Accounting and Finance

School Of Business Administration and Management

Masinde Muliro University of Science and Technology.

Signature: ……. Date: ……

DR. MARY NELIMA SINDANI

Department of Accounting and Finance

School Of Business Administration and Management

Masinde Muliro University of Science and Technology.

ACKNOWLEDGEMENTS

I acknowledge the almighty God who gave me the strength and will to pursue this study. I thank University of Masinde Muliro for giving me this opportunity to further my studies. My special appreciation to my supervisors Dr. Muli Maingi and Dr. Nelima Sindani under whose guidance this work was completed plus other Lecturers in the school of graduate studies who took effort to guide and advice me during the entire period of my study, without whom I would not have made it. I am also indebted to my classmates, colleagues at work and my Lecturers for all their invaluable support and encouragement during my period of study. They tirelessly guided me and walked with me step by step until the light came on my way by consistently addressing challenges and devoting enormous time to ensure this research work is completed. I also acknowledge the School of Business and Economics and the entire Masinde Muliro University of Science and Technology for the ample environment and opportunity they accorded me undertake this study. Finally I can't forget the support and encouragement from my friends and family members.

DEDICATION

I dedicate this thesis to my brother Murunga Kadima, my wife Grace Mideva and my mother Beatrice Mutua.

ABSTRACT

Microfinance provides low-income individuals with a range of financial and non-financial services. They are essential in advancing Kenya's economic growth and financial inclusion. Interest on initial monies provided to small and medium-sized business owners accounts for the majority of their revenue. Credit risk is the likelihood that borrowers may default on their loans. Considering that a large portion of microloans' borrowers are small businesses and low-income individuals or The loss incurred by credit clients who refuse to pay their debts in full and on time is known as credit risk, and it represents a significant risk to microfinance. The majority of the money is earned via interest received. Microfinance institutions lend to people because they lack collateral and credit history. Their liquidity, profitability, and financial performance are impacted by the risk of not receiving their principal and interest returned. Microfinance's financial performance can be improved and loan default losses reduced with efficient credit risk management. Their ability to manage credit risk is critical to their success financially. Their financial performance can be improved and their exposure to credit risk reduced with effective credit risk management. Credit risk management makes an effort to calculate the likelihood that a lender won't obtain the principal and interest that is owed, which could result in a loss of revenue and higher collection expenses. A crucial factor in microfinance performance is credit risk management. The efficiency of credit management systems is a major factor in the performance of micro financial institutions in Kenya. While some academics have questioned this conclusion, most scholars concur that credit risk management affects financial success. The impact of credit risk management on the financial performance of microfinance institutions in Kenya is investigated in this study. The study specifically aimed to determine the impact of credit appraisals, credit risk management, credit terms, and credit approvals on Kenya's microfinance institutions' financial performance. Panel data analysis and a descriptive survey research design were employed in the study. The unit of analysis consisted of all 52 of the Association of Microfinance's registered microfinance institutions. Primary data was gathered using questionnaires, and secondary data was gathered by record survey sheets. Both descriptive and inferential statistics were used to analyze the data. The investigation found that sound Reducing bad debt, increasing cash flow and profitability, increasing net interest margin, and increasing return on capital invested are all greatly enhanced by effective credit risk management. The report suggests that in order to boost financial performance, Micro Finance Institutions in Kenya should invest in effective credit risk management. The report suggests that future research on Sacco's compare study findings, add a moderator for company size, and conduct research on MFIs that are not registered and are not members of the nation's Association of Microfinance Institutions.

TABLE OF CONTENTS

TITTLE PAGE……..……...…….i
DECLARATION.....II
ACKNOWLEDGEMENTS III
DEDICATION..... IV
ABSTRACT.....V
TABLE OF CONTENTS VI
LIST OF TABLES..... VIII
LIST OF FIGURES..... IX
LIST OF APPENDICES X
LIST OF ABBREVIATIONS AND ACRONYMS XI
OPERATIONAL DEFINITION OF TERMS.....XII

CHAPTER ONE 1
INTRODUCTION.....1
1.1 Background of the Study 1
1.2 Statement of the problem 6
1.3 Objectives of the study.....7
1.4 Hypotheses.....7
1.5 Significance of the study.....8
1.6 Scope of the study.....9

CHAPTER TWO 11
LITERATURE REVIEW 11
2.1 Introduction.....11
2.2 Theoretical Review 11
2.2.1 Agency theory.....11
2.3 Conceptual Review 15
2.4 Empirical review.....21
2.5 Summary and Research gaps 26
2.6 Conceptual Framework.....29
3.1 Introduction 31
3.2 Research Design.....31
3.3 Study area.....32
3.4 Target population 32
3.5 Sample Size.....32
3.6 Data Collection Procedure 33
3.6.1 Data collection Instrument.....33
3.7 Pilot testing 33
3.7.1 Reliability of Research Instruments.....33
3.7.2 Validity of the Data collection Instruments 34
3.8 Data analysis techniques.....34
3.9 Data presentation 35
3.10 Research Ethics.....36
3.11 Diagnostic Tests assumptions.....37

CHAPTER FOUR **39**
DATA PRESENTATION, ANALYSIS, AND DISCUSSIONS **39**
4.0 Introduction 39
4.1 Return Rate 39
4.2 Reliability and Validity of Research Instruments 39
4.3 Demographic Characteristics of Respondents 40
4.4 Analysis of objectives and findings 41
4.4.2 Effect of Credit risk control on Financial Performance of Micro finance 44
4.5 Statistical Assumption of Likert Scale (Type Data.) 51
4.5.1 Normality Test 51
4.5.2 Multi-collinearity Test 52
4.5.3. Heteroskedasticity 53
4.5.4 Correlation Analysis and Regression Methods 54
4.5.4.0 Correlation 54

CHAPTER FIVE **69**
SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS **69**
5.1 Introduction 69
5.2 Summary of study findings 69
5.2.1 Credit Appraisal and financial performance 69
5.2.2 Credit Risk Control and Financial Performance 70
5.2.3 Credit Terms and financial performance 70
5.2.4 Credit Approval and financial performance 71
5.3 Conclusions 72
5.4 Recommendations ..... **Error! Bookmark not defined.**
5.5 Areas for further research 73

REFERENCES **74**

APPENDICES **95**

LIST OF TABLES

Table 2. 1 Summary of Literature Review and Research Gaps 28
Table 4. 1 Results of Reliability test 40
Table 4. 2 Demographic data 41
Table 4. 3 Credit Appraisals 42
Table 4. 4 Credit Risk Control 45
Table 4. 5 Credit Terms 46
Table 4. 6 Credit Approvals 50
Table 4. 7 Test for normality 51
Table 4. 8 Collinearity Statistics 52
Table 4. 9 Heteroskedasticity 54
Table 4. 10 Correlations 55
Table 4. 11 Direct influence of Credit Appraisals on Financial Performance 57
Table 4. 12 Direct influence of Credit Risk Control on Financial Performance 59
Table 4. 13 Direct influence of Credit Terms on Financial Performance 60
Table 4. 14 Direct influence of Credit Approval on Financial Performance 62
Table 4. 15 Multi regression results 64
Table 4. 16 Coefficients 64
Table 4. 17 hypotheses results 68

LIST OF FIGURES

Fig 1.1: Conceptual Frame Work..... 29

LIST OF APPENDICES

Appendix i: A letter of Introduction 95

Appendix ii: Registered Microfinance Institutions in Kenya 96

Appendix iii: Questionnaire 97

LIST OF ABBREVIATIONS AND ACRONYMS

AMFI-K	Association of Microfinance Institutions (Kenya)
CBK	Central Bank of Kenya
COMFIs	Credit-Only Microfinance Institutions
ECA	Exchange Control Act
GDP	Gross Domestic Product
ICT	Information Commutation Technology
IT	Information technology
KBA	Kenya Bankers Association
KNBS	Kenya National Bureau of Statistics
MFBs	Microfinance Banks
MFIs	Microfinance Institutions
ROA	Return on Assets
SACCOs	Savings and Credit Co-operatives
SMEs	Small Medium Enterprises
SPSS	Statistical package for the social science
CAR	Capital Adequacy Ratios
USA	United States of America
WMFIs	Wholesale Microfinance Institutions

OPERATIONAL DEFINITION OF TERMS

Credit risk management Are controls used by micro finance institutions to collect payments from its customers in a timely manner while reducing the likelihood of nonpayment.

Credit Appraisal The process used by the micro finance institutions on evaluating an individual loan application in order to determine whether or not the borrower has the means to fulfill the loan's obligations.

Credit Risk Control Refers to how the micro finance institution's risk can be minimized or alleviated under the lending process so that default rate by the borrowers can be reduced or eliminated.

Credit Terms Refers to the policies the micro finance institutions use in governing the lending processes within the Micro Financing system.

Credit Approvals Refers to the practice of Micro Finance Institutions in establishing clear process of approving and extension of new credit to the customers.

Financial Performance The efficiency with which a micro finance institution uses its key business assets to create revenues is one indicator of financial performance.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Any economy needs micro finance institutions (MFIs) since they offer financial services to those who cannot access larger financial institutions. These people include those who own small companies, live in low-income housing, and engage in small-scale farming (Serwadda, 2018). Poor financial performance (non-performing loans, liquidity, a steady reduction in profitability, and cash flow issues) is the main issue affecting microfinance institutions; as a result, they are unable to manage day-to-day operations and service outstanding loans. The effect of credit risk management on the financial performance of microfinance institutions is acknowledged by certain researchers (Wanja and Jagongo, 2017), but this effect has received less support from other scholars. As a result, methodological, theoretical, contextual, and conceptual gaps have emerged. The majority of study literature is based on asymmetrical theories, contemporary portfolios, and agency. According to data from the Association of Microfinance Institutions (AMFI) database, there are 52 microfinance institutions in Kenya. The process by which a company plans for, puts into place, and keeps an eye on the systems, procedures, and controls required to promptly recover payments from its clients while lowering the possibility of nonpayment is known as credit risk management, or CRM (Mashoko, 2020).According to Abdullahi, Kuwata, and Muhammad (2015), financial performance refers to how a company conducts its operations over time, frequently in relation to previous or predicted cost efficiency, management responsibility, or accountability.

Analyzing an organization's financial performance over a predetermined period of time is crucial for determining its overall financial health. Given that they are connected to the outcomes due to management performance, financial institutions use profitability ratios that show credit analysis in banks and MFIs (Gibson, 2012).

In order to better understand the credit risk management (CRM) and loan performance of Pakistani microfinance financial institutions (MFIs), Ahmed and Malik (2015) conducted study in Islamabad and Rawalpindi. Loan outcomes were found to be considerably and favorably impacted by client appraisal. Murthy and Mariadas (2017) looked into the reasons for loan defaults to Malaysian MFIs in Shah Alam, Selangor. Factors including the age of the borrower and the kind of business being undertaken were associated with defaulting.

Kargi (2011) conducted research on the relationship between credit risk and bank performance in Nigeria. Based on gathered data, credit risk management played a major role in the success of commercial banks. The performance of commercial banks was found to be negatively correlated with their ability to manage credit risk. Wanja and Jagongo (2017) looked into the economic outcomes and lending practices of Kenyan commercial banks. They came to the conclusion that a bank's capacity to compete is largely determined by the caliber of its credit data, that a borrower's credit history matters, and that credit policy improves the performance of commercial banks.

Al-Khouri (2011) examined how the general banking sector climate and risk characteristics unique to individual banks impacted overall performance. The study discovered that the performance of commercial banks is significantly impacted by capital risk, liquidity risk, and credit risk. According to Suryadeva (2017), a company that uses effective CRM is able to keep its credit level within control and its loan default rate low. The present study centers on the factors that influence the financial performance of microfinance institutions, including credit appraisal, credit risk control, credit terms, and credit approvals.

1.1.1 Credit Risk Management

It is a crucial component of a company's overall risk management strategy. Inadequate management of credit risk frequently results in company failure. According to Muturi (2016), a business should use CRM to reduce the amount of customers that default on their loans.

Money A company's performance can be measured using a variety of metrics, including sales revenue, losses, profits, revenues, ROE, ROA, and even the market value of its assets.

Many smaller businesses lack the staff and expertise necessary to administer an efficient credit management system, according to Addae (2014). When businesses give their customers credit, they run the risk of not getting paid. Reducing borrowing costs can help firms generate revenue that is more sustainable. There are several actions you can take to manage credit risk.

Credit evaluation with the goal of reducing the adverse effects of credit risk. More than 90% of US financial institutions had implemented CRM best practices, according to Catherine's (2020) investigation. A thorough investigation into the management of credit risk and financial performance was carried out by Ernest and Frederic (2017). After reviewing the files, they came to the conclusion that substantial gains in profitability and reductions in unforeseen expenses can be achieved by using a systematic approach to managing credit relationships that is consistent across the credit life cycle and takes into consideration all pertinent customer data.

CRM is a part of the financial controls that businesses, particularly manufacturers, utilize to make sure that sales money is promptly translated into cash that can be spent. Despite the intricate and expansive structure of the banking industry, Naeem et al. (2017) assert that credit control includes all factors related to credit quality, credit extension, and periodic cyclical patterns and sequences.

CRM is based on a solid credit control system, which guides all lending and borrowing in the financial sector. According to Bagh, Khan, and Sadaf (2017), an institution that offers credit runs a large chance of default, which could have a detrimental effect on the organization's long-term stability, even though the institution may benefit from an increase in sales.

Credit terms: According to Li and Zou (2014), a credit term is a description of the duration and credit limit that a company offers to its customers. Extended credit is contingent upon the terms. These figures show the amount and duration of the discount in addition to the estimated date of payment. According to Serwadda (2018), the terms of credit can affect the monthly payment, total credit amount, maximum time allowed for payback, discount for early payment, and rate of late payment penalty.

According to Zampara et al. (2017), while extending credit, lenders must find a middle ground between being overly cautious and limiting the expansion of their companies. Several criteria checklists are used to assess borrowers' creditworthiness. Financial institutions must put in place strict frameworks for monitoring and assessment if they hope to enhance their credit management procedures. Businesses are inclined to issue credit when they perceive the possibility of growing their operations, according to Gizaw, Kebede, and Selvaraj (2015).

According to Zampara et al. (2017), while issuing credit, lenders must decide how much caution is too much and how much to limit the expansion of their businesses. Checklists with multiple criteria are used to assess borrowers' creditworthiness. Financial institutions must put strict monitoring and assessment systems in place if they hope to enhance their credit management procedures. According to Gizaw, Kebede, and Selvaraj (2015), companies are inclined to give loans when they think about the potential to grow.

1.1.2 Financial Performance

Financial performance, according to Suryadeva (2017), is the method by which a financial institution makes sure that its income is consistent with the guidelines it has set forth. Banks consider various variables when setting credit limits, including the creditworthiness of the customer and the degree of risk associated with the account based on the customer's payment history. According to Muthuri, Wanyonyi, and Ndamburi (2017), the institution should take the cash discount into account when setting lending terms. The average amount of time it

takes to recover a debt has gradually increased as a result of credit being extended beyond what was initially agreed upon. Kenya is one of several developing countries that, in recent years, has begun the process of reforming and deregulating its financial system in order to turn its financial institutions into efficient intermediaries and make its services accessible to all sectors of the population. Several banks and credit unions use profitability ratios as a yardstick for their long-term health and growth.

These ratios are significant markers of credit analysis in MFIs because of their association with management performance results.

Since return on equity and return on assets are often used ratios, Sikolia and Miroga (2018) state that return on equity should have a superiority level of at least 15% and 30% and that ROA should have a superiority level of at least 1%. One of the most important metrics for assessing the profitability of a corporation is return on equity, or ROE.

Furthermore, return on equity (ROE), which illustrates the degree to which microfinance investments reinvest their income to generate their anticipated future revenue, assesses the efficacy of microfinance organizations. According to Gibson (2012), a microfinance organization is deemed stable if its operating revenue is enough to cover its

1.1.3 Micro Finance Institutions

Because they are made to assist those with modest incomes in managing their modest amounts of money, financial products and services like insurance, money transfer services, savings accounts, and loans are all included in the category of microfinance. Expanding ties between MFIs and the banking system in Africa is beneficial for both parties, according to Bawuah (2014). This is because MFIs depend on banks for a variety of services, including deposit facilities, liquidity management services, and, in some cases, emergency credit lines to cover cash shortages.

Low-income people, especially women, return their loans at almost perfect rates, according to Mashoko's (2020) study on financial institution management, which is in contrast to the norm in the official financial sectors of most developing countries. Because they charged interest rates high enough to cover their costs, several MFIs were able to stay in business and continue serving a significant clientele. The majority of microfinance institutions, according to Dathe and Le Saout (2015), offer social intermediation services such group formation, member confidence-building, financial literacy training, and managerial skills.

1.1.4 Micro Finance Institutions in Kenya

Initially established as a non-governmental organization (NGO) in 1984, K-rep eventually transformed into a microfinance institution (MFI). The adjustment was driven by the need to enhance the ability to raise public savings for subsequent lending. As of right now, the Association of Microfinance Institutions (AMFI) has 52 microfinance institutions (MFIs) registered. According to Muturi (2016), a number of MFIs arose in Kenya to address the underserved need for financial services among low-income individuals and small enterprises.

1.2 Statement of the problem

Since MFIs make their money from the interest on loans they advance, the performance of these organizations is mostly determined by how well their credit risk management functions. Compact credit risk management control procedures are necessary in light of the microfinance institutions' current issue. The current study assesses how Kenyan microfinance institutions' financial performance is impacted by credit appraisal, credit risk control, credit terms, and credit approvals. The effects of these four variables have been coordinated in a few prior research, but from a broad standpoint. Thus, it is accurate to say that there is a knowledge gap in that area in terms of methodology, theory, context, and conceptual understanding.

Furthermore, some researchers (Wanja and Jagongo, 2017; Ndegwa, 2016; Ahmed and Malik, 2015) concluded that CRM strategies have an impact on financial performance, despite some studies (Charles, Okaro, and Kenneth, 2013) finding no correlation between CRM and the financial health of microfinance institutions. A small number of studies (Owizy, 2013; Muturi, 2016; Simiyu, 2008) looked at the credit management techniques that MFIs are known to use. It was crucial that a study be done in order to determine how these four variables affected the financial performance of microfinance institutions. The study's findings demonstrated the gaps in previous research efforts and make an experimental addition to the body of knowledge. More recent data and a more recent time period were used in this study.

1.3 Objectives of the study

General objective

The main objective was to ascertain how Kenyan microfinance institutions' financial performance was impacted by credit risk management.

Specific objective

i. To determine how credit appraisals affect the financial performance of microfinance companies in Kenya.

ii. To investigate the impact of credit risk management on Kenyan microfinance institutions' financial performance.

iii. To assess the impact of credit terms on Kenyan microfinance institutions' financial performance.

iv. To determine the impact of credit approval on Kenyan microfinance institutions' financial performance

.1.4 Hypotheses

Following were the hypotheses employed in the study:

H01: Credit appraisals don't significantly affect Kenyan microfinance institutions' financial performance.

H02: The Financial Performance of Kenya's Microfinance Institutions is Not Significantly Affected by Credit Risk Management.

H03: The financial performance of Kenyan microfinance institutions is not significantly impacted by the terms of credit.

H04: Microfinance Institutions' Financial Performance in Kenya is Not Significantly Affected by Credit Approvals.

1.5 Significance of the study

The study's conclusions close a knowledge gap in the area of credit risk management and enhance our comprehension of how credit and financial performance are related. The goal of the study is to comprehend how CRM impacts MFIs' ability to reduce bad debts and enhance cash flow, performance, and cash collection. It also aids in comprehending the degree to which MFIs have facilitated financial accessibility.

All researchers who are studying MFIs as a field will find the information useful. The results of the investigation will be advantageous to several groups. The study's empirical data will be used by researchers and academics to delve deeper into the topics that have caught their

attention. This study clarifies the credit risk management techniques that MFIs may use to improve and more effectively manage

The study's findings fill in a knowledge vacuum in the field of credit risk management and improve our understanding of the relationship between credit and financial performance. Understanding how CRM affects MFIs' capacity to lower bad debts and improve cash flow, performance, and cash collection is the study's main objective. It also helps to understand the extent to which MFIs have made finance more accessible.

All investigators investigating MFIs as a field will benefit from the data. The investigation's findings will benefit a number of groups. Researchers and scholars will use the empirical data from the study to learn more about the subjects that have captured their interest. This report makes clear the methods that MFIs might employ to manage credit risk.

1.6 Scope of the study

The study looked at how Kenyan microfinance institutions' financial performance was affected by credit risk management. Credit appraisal, credit risk control, credit terms, and credit approvals were all part of the credit risk management process. Return on capital employed was used to measure financial performance, the dependent variable of the study. As of December 31, 2022, the Association of Micro Financial Institutions (AMFI) reported that fifty-two MFIs were operating in Kenya. Only fifty microfinance institutions, meanwhile, met the criteria. The study's geographic scope was determined by an association's registration.

1.7 Limitation of the study

The respondents' reluctance to fill out the questionnaire—possibly out of mistrust—and the authenticity of the information they provided were blamed for the limitation. This was reduced, though, by telling respondents that the information would be kept

private and used solely for academic purposes, as well as by promising to protect their identify when answering the questionnaire.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

Theories of credit risk management on the financial performance of microfinance firms are presented in this chapter. This paper presents an analytical and critical analysis of several empirical research on the impact of credit risk management on microfinance firms' financial performance. The study hypotheses are also provided, along with a synopsis of the knowledge gaps and a conceptual framework illustrating the relationships between the study variables..

2.2 Theoretical Review

Although there are numerous theories on the impact of credit risk management on the financial performance of microfinance institutions, the Agency theory, Modern Portfolio Theory, and Asymmetrical Theory best capture the objective of this investigation. These theories are discussed below:

2.2.1 Agency theory

The agency relationship, according to this notion, is a type of agreement in which the owners designate managers to run the business on their behalf. The management has the authority to make decisions on their behalf. Meckling and Jensen (1976) developed it. They proposed that the conflicts of interest among a company's managers, significant debt financing providers, and owners (shareholders) should serve as the foundation for its governance. Every group is comprised of individuals with unique goals and interests. According to Jensen and Meckling, managers should be given incentives to boost their willingness to make "value-

maximizing decisions in the firm's best interests" since they pay the full cost of failing to act in their own best interests when they act in the interests of the shareholders.

According to Jensen (1993), a board of directors loses effectiveness as it gets bigger because large boards are frequently slower to respond to events and less able to act swiftly when necessary. Additionally, directors on large boards are also less likely to be critical of one another than those on smaller boards.

According to the view, the board's primary responsibility is to make sure executive behavior serves the interests of shareholder-owners and prevents managers from using their superior knowledge to enrich themselves. This supports, among other things, the separation of the CEO and chairman responsibilities, the exorbitant remuneration of senior executives, the paramount of non-executive directors, and much more. Simon Caulkin, November 27, 2005, the Observer.

2.2.2 Asymmetric Information Theory

Akerlof developed asymmetric information theory in the 1970s. When a market seller has more in-depth knowledge of a single item than a market buyer, and the buyer utilizes the market mean to judge a product's quality, there is an information asymmetry. The vendor has a better understanding of the product's quality than the buyer, which gives them an advantage in negotiations.

The unequal distribution of knowledge is referred to as "information asymmetry". In this segment of the capital markets, there is an information asymmetry because the purchaser of a debt instrument already has insider knowledge on the risks inherent in the market and the

possible returns on investment projects. However, the lender is lacking sufficient consumer data. Numerous kinds of market organizations can be useful.

Only clients who can afford to make their repayments should be given credit, and microfinance institutions should evaluate borrowers with a high debt load exposure and defaulters utilizing the information supplied to reference bureaus throughout the credit evaluation process. Identification verification and risk-reduction strategies are crucial components of credit rating data.

As a result, this theory is pertinent to the current inquiry since it suggests that the lack of an effective credit appraisal procedure would lead to increased credit risk and possibly the granting of credit to unworthy borrowers. As a result, the quality of debt repayments would unavoidably decline. On the other hand, there is a positive association between a successful loan and an accurate credit evaluation.

2.2.3 Financial Intermediation Theory

Contributions by Gurley and Shaw (1960) helped shape the theory starting in the 1960s. Information asymmetry and agency theory serve as the foundation for this strategy. A few factors that contribute to this phenomena are high transaction costs, a deficiency of timely and relevant information, and an inadequate regulatory framework. The research's singular unique characteristic is informational asymmetry.

The effect of the informational asymmetry resulting from the presence of this asymmetry is the deviations, or defects, from the Arrow-Debreu ideal of perfectly competitive markets. A near heaven would not require financial intermediaries for the economy as a whole, according to the Arrow-Debreu perfect markets summary.

As long as humans live, we may safely assume that there have been errors and incomplete data that have impacted markets and intermediaries in a way that has been beneficial. All market players have equal bargaining power, supply and demand determine prices, financial securities are uniform, divisible, and tradable, and filing for bankruptcy and information access are free of charge in the ideal financial market model described by neoclassical theory.

Transaction costs emerge because of the shortcomings of informational asymmetry. A direct reaction to the necessity of minimizing, if not completely eliminating, these costs is the rise of financial intermediaries. It is better to think of banks as a coalition of depositors guarding savers against possible risks to their liquidity, according to Diamond & Dybvig (1983).

The people that arrange for the distribution of information are known as financial intermediates.

As stated by Pyle and Leland (1977). According to Diamond (1984), financial intermediaries enable economies of scale and act as approved agents of savers. Investors entrust their money to these intermediaries, who use it to fund whatever initiatives they think have potential. Saver access to their money is always available, provided the terms are met.

The challenges that arise in banking interactions, especially those between banks and their customers (the creditors and the borrowers), have been the focus of research on informational asymmetry. This analysis of the bank-borrower relationship primarily focuses on the function of the selection bank, the monitoring of the provided loans, the moral hazard issue, and the problem of adverse selection.

This approach accounts for participant differences in terms of technology use. Thus, middlemen are perceived as a class of lenders or borrowers who utilize transaction technologies to profit from the size of the economy. Transaction costs encompass a range of expenses, such as those related to fund transfers, research, assessment, and monitoring, as well as currency exchange. With the financial system, intermediaries are essential because they make it easier to transfer money, give investors access to a larger selection of investment possibilities, and lower the risk involved with putting a lot of money in one place.

A third approach to financial intermediaries was proposed by Guttentag and Lindsay (1968) and Merton (1995) and was centered on the control of money production, savings, and economic financing. It's crucial to remember that intermediaries' solvency and liquidity are impacted by the regulatory framework.

Diamond and Rajan (2000) state that regulations controlling intermediaries' capital have an impact on their "health," ability to refinance, and loan recovery process. The Financial Intermediation theory, which combines agency theory and asymmetry, provides supporting literature on how investors' information is used to issue credit, manage debtors, generate savings, and other functions, so the study's variables in the credit function system of financial institutions are pertinent.

2.3 Conceptual Review

Different research on the effects of credit risk management factors (credit approval, credit risk control, credit conditions, and credit approvals) on the financial performance of microfinance organizations are shown in the section that follows. The knowledge gaps that have been identified and addressed by the current study are highlighted through an analytical and critical examination of relevant prior research. Epistemological, conceptual, and contextual knowledge gaps were identified by the review.

2.3.1 Credit Appraisal

Financial organizations employ CRM tactics to lessen the adverse effects of credit risk. It is contingent upon an individual's qualifications, collateral, and trustworthiness. The following factors are taken into consideration: the applicants' years of service, employment history, number of dependents, monthly costs, repayment capacity, and other factors that impact the borrower's credit rating. For minor personal loans, credit scores based on income, lifestyle, and debts might be sufficient. Project implementation timeliness and capacities must also be taken into account when it comes to project funding, in addition to the project's technical, commercial, marketing, financial, and managerial merits.

When Catherine (2020) investigated how commonplace CRM best practices were in US financial institutions, she discovered that over 90% of them had

2.3.2 Credit Risk Control

According to Olalere and Wan's (2016) research on credit management, credit control is the process by which a company ensures that it extends credit only to creditworthy clients and that those customers pay on time when they do. Companies, especially those in the manufacturing sector, implement financial controls like credit control to guarantee that sales are converted into cash or liquid resources as soon as possible.

Salike and Ao (2017) claim that lending institutions give greater weight than ever to the institution's values, traditions, and ideologies when making credit or loan choices. Naeem et al. (2017) asserts that credit control encompasses all the elements linked to credit quality, credit extension, and recurring cyclical patterns and sequences.

Furthermore, strict and effective credit control should serve as the foundation for all choices about credit and termination, making it the core of CRM.

According to Afolabi and Adawale (2013), managing loan operations and the risk involved in them has a significant impact on the profitability and overall performance of microfinance institutions. A capable CRM shields financial institutions against unexpected losses and financial hardship. It also keeps underperforming banks from getting worse due to higher credit risk and ongoing bad outcomes. (Sharma and Singh, 2016).

According to Bhattarai et al. (2016), failing banks that are unable to manage their loan activity may eventually be forced to combine or liquidate if their financial issues become irreversible. This may result in significant debt losses, some of which become

2.3.3 Credit Terms

According to Nduwayo (2015), "credit limitations"—the amount and duration of credit that is allowed—should be set, and both new and returning customers should undergo extensive "creditworthiness" checks. According to Nyabicha (2017), one of the main responsibilities of the credit management department in banks is to ensure that credits are collected on schedule, that warning indications of potential customer default are handled seriously, and that past-due credits are "chased" in order to avoid losses. Thus, the researcher concludes that credit management is an essential component of banking since it properly manages credit and improves the bank's liquidity or financial position.

According to Murithi et al. (2016), the conditions under which an MFI grants credit to its consumers are covered by the credit policy.

According to Salike and Ao (2017), when people think about credit terms, they usually think about the sort of instrument used to represent credit, the quantity of credit, and the discount conditions. "Clear, written standards that outline the terms and circumstances for delivering goods (loan/credit) on credit, customer qualification criteria, procedure for making

collections, and steps taken in the event of customer delinquency" is how Business Dictionary (2017) defines a credit collections policy. A collection policy, according to Antoine (2015), is the strategy a company uses to pursue past-due account collections.

Because the goal of a credit plan is to provide a detailed description of these characteristics, it is imperative that sales and collections personnel follow the set procedures in order to maximize productivity, reduce credit risk, and increase cash flow.

According to Malik et al. (2016), there might be significant costs associated with the collecting process, including lost goodwill and product expenses. They also point out that collection strategies could include attaching required funds, making guarantors pay, attaching collateral assets, and filing lawsuits. Some borrowers may pay back their debts late, some will be more discreet, and a small but significant fraction will never repay their loans, which is why a collection procedure is necessary. As a result, collection operations focus on accelerating collections from late payers in order to lower the possibility of bad debt.

Ongoing payments minimize bad debts and increase turnover. Before making a major decision, caution should be used, especially with regard to the long term.

According to Olawale (2015), management should be cautious when establishing a collection policy to avoid a negative impact on profitability. They should also be aware of how such a policy impacts the operation of their banks in order to maximize customer deposits and revenue. This is one way to assess how effective something is by management. He concluded that inadequate CRM causes banks to lose money, have assets of inferior quality, and experience a higher number of loan defaults and non-performing loans (NPLs). In a study conducted in Ghana, Kargi (2011), cited by Kolapo et al. (2012), came to the same conclusion.

2.3. 4 Credit Approvals

Juliana (2017) found that Micro Financial Institutions must have a defined procedure for sanctioning and extending new credits to clients in order to effectively control their exposure to credit risk. Consequently, it becomes imperative to employ a sufficient number of managers who possess the requisite expertise and experience to oversee and mitigate the risks.

Catherine (2020) asserts that as credit risk affects a financial institution's performance, it must be managed. Managers and other financial institution employees should work with the created risk monitoring methodologies to ensure that they are applied and that the financial institutions' performance is enhanced. Zampara et al. (2017) assert that lenders need to find a way to balance caution with promoting company expansion. As a result, exercising caution calls for a keen sense of equilibrium.

The creditworthiness of borrowers is assessed using a variety of checklists. A strong infrastructure for monitoring and assessment is also necessary to improve the credit management procedures used by financial institutions. According to Alshantti (2014), the lending institution can adopt a monitoring strategy that entails frequent communication in order to become more of a partner and issue solution with its customers.

It is recommended that commercial banks adhere to well established protocols when granting loans and other credit facilities to one another. Furthermore, the relevant board or committee must sanction the approval. According to Marcucci and Quagliariello (2016), financial institutions should establish committees to monitor and control credit and exercise caution when extending credit. Since they are in a position to oversee CRM, authorities with such responsibilities ought to have clearly defined roles and duties in this area.

2.3.6 Financial Performance

Gibson (2012) defined financial performance as the extent to which a financial institution has achieved its financial aims and objectives. Gibson's research focuses on microfinance institutions. One of the main determinants of a company's long-term financial resource viability is its financial performance. Financial institutions employ profitability indicators to assess the performance and health of their finances. The link between ratios and outcomes attributable to management performance makes them the key indicator of credit analysis used by the majority of banks and MFIs.

According to Malik et al. (2017), ROE and ROA are typical ratios. To qualify as exceptional, return on assets (ROA) must be at least 30% and return on equity (ROE) at least 15%. A crucial indicator of corporate performance is ROE.

Relative to its overall asset base, a company's return on equity (ROE) indicates that it is making money from its equity holdings as opposed to just depending on asset base expansion. Accordingly, it's a positive indication that the company is performing well financially if both the return on equity and the ROA are increasing.

A microfinance institution with a high return on equity and ROA is less likely to experience credit risk. This suggests the organization has room to grow and is shock-resistant. Low loan quality, which results from information processing errors, is the first cause of bad financial performance, according to Olalere and Wan (2016). It therefore begins at the credit approval stage and deteriorates throughout the loan approval, monitoring, and control phases—particularly when CRM requirements are involved.

According to Malik et al. (2017), a credit officer is required to ascertain all possible risk indicators linked to a customer's credit when they submit an application for a loan.

Microfinance organizations should utilize very accurate forecasting capabilities for estimating risk in any market circumstance if they want to improve their financial results.

Loans from microfinance institutions are divided into two categories: those that are doing well and those that are not. Because non-performing loans (NPLs) represent credit that banks consider riskier than performing loans, they make up a higher portion of the total. Hence, the percentage of loans that are nonperforming (NPLR). Money must be set aside by microfinance providers to cover non-performing loans (NPLs). Therefore, if the loan is not paid back in full, a bad debt arises. From the standpoint of accounting,

2.4 Empirical review

2.4.1 Credit Appraisal and Financial Performance

In order to find out why borrowers in Shah Alam, Selangor, Malaysia, fail on their loans to MFIs, Murthy and Mariadas (2017) carried out a study. To gather the required data, 120 MFI loan applicants received questionnaires. The study found that the age of the borrower and the type of business operation were important factors in loan failure.

All scales had an average Cronbach's Alpha of 0.828, with 0.898 for the kind of business being operated and 0.906 for the borrowers' ages. Extensive testing has determined that the Alpha value of 0.7 is dependable. There is a substantial correlation between the borrowers' age and the type of business ($r = 0.267$ and 0.051, respectively).

Statistical significance is indicated by a final ANOVA result of 0.000, which is significantly less than the significance level of 0.05. The analysis only comprised 120 people. Only borrowers were surveyed; employees of credit-granting microfinance organizations were not included. 52 credit managers provided data for this poll. This study only takes the borrower's age and the industry of the business into account when evaluating a customer's

creditworthiness. The present study aims to enhance the loan applicant evaluation process through the application of the 5Cs: the client's credit assessment, credit score, credit agency report, and the intended use of the loan.

An investigation of the causes of loan default at Ghanaian microfinance institutions was carried out by Addae-Krankye (2014). A random sample of 250 clients and 25 MFIs were used in this investigation. An interview guide and questionnaires were used to collect information. These figures add up to a poor appraisal, and loan default is largely caused by poor customer selection. Ten of the examined MFIs (40%) have a default rate of less than three percent; eight (32%) have a default rate between three and six percent; four (16%) have a default rate between six and ten percent; and three (12%) have a default rate over ten percent. The survey's results give a dismal image of the general evaluations made by clients.

2.4.2 Credit Risk Control and Financial Performance

Ernest and Frederic conducted a thorough investigation of the subject of "Management of financial profitability and Credit Risk" in their 2017 study. The study's conclusions can be summed up as follows: managing credit relationships throughout the credit life cycle and based on all available customer information significantly increases profitability and lowers surprises. In order to achieve this, management needs to invest more time, effort, and resources in it. Technical advancement and analytical skill are also necessary.

Using a multivariate model, Malik et al. (2017) examined the CRM policies of US financial institutions and demonstrated that those that implemented advanced CRM strategies routinely achieved 50% greater loan volume than their target. Any decrease in this objective will gradually impact

The relationship between CRM and the profitability of Rwanda's for-profit banks was examined by Magnifique (2013). His study's four primary goals were to ascertain how credit exposure, credit scoring systems, and risk supervision affected Rwanda's commercial banks' financial results. The study discovered that by concentrating on three main objectives, a bank's success could be predicted with a high degree of accuracy, with the exception of risk management.

The capacity of the banks to identify and measure credit risks contributed to their success in Rwanda. This understanding allowed them to analyze, score, and assess those risks, which in turn explained their financial performance. Despite the fact that banks' and microfinance firms' capital adequacy standards differ, this study nevertheless took

Profitability was assessed using the Return on Equity (ROE), and CRM was aided by the use of the NPL Ratio and the capital adequacy ratio (CAR). The study indicated that there was a significant correlation between CRM and loan outcomes. The evidence indicates that NPL and CAR do have a noteworthy and detrimental effect on ROE. The relationship between the NPL ratio and ROE was more correlated than the relationship between the CAR and ROE. The study's findings proved that the financial stability of microfinance organizations is closely correlated with efficient credit risk management.

2.4.3 Credit Terms and Financial Performance

In his article Effectiveness of Credit Management System on Loan Performance: Empirical Evidence from Micro Finance Sector in Kenya, Sindani (2012) came to the conclusion that credit worthiness is influenced by both the involvement of credit officers and consumers in establishing credit terms as well as the credit conditions set by microfinance institutions.

The interest rates that were applied limited the usefulness of the loans; the impact of the rates was directly correlated with their steepness. The sustainability of Kenya Women Finance Trust was found to be improved by the quality of service through increased word-of-mouth marketing, improved reputation, improved financial performance and profitability, decreased operational expenses, and higher customer retention rates that led to higher income, according to Wangechi's 2012 study, "Factors Affecting the Sustainability of Microfinance Institutions in Kenya," which looked at the organization.

Soke Joy According to a 2009 study by Ho and Yusoff on the CRM techniques used by a few Malaysian financial institutions, clients who are unable to fulfill their obligations in connection with loans, trades, settlements, and other financial transactions ultimately result in outright default, which accounts for the majority of losses suffered by banks and financial institutions. Every transaction a bank does with a customer, a business, another bank, or the government exposes it to credit risk. A weak portfolio may be attractive to both credit risk and liquidity risk.

2.4.4 Credit Approvals and Financial Performance

Due to the fact that their main duties are to accept deposits and provide credit, microfinance institutions are susceptible to credit risk. For financial firms, credit risk is a big expense, and managing it is crucial to their performance (Gieseche, 2004).

According to Chen and Pan (2012), credit risk is the degree to which changes in the credit quality of counterparties and borrowers affect the value of derivatives and loan instruments. When borrowers, or clients, fail to make payments on schedule or by the maturity date, banks

are considered to be exposed to credit risk. This danger, commonly referred to as counterparty risk, has the potential to endanger a financial institution if it is not properly managed. The results of several research and empirical data indicate that there is disagreement over the effect of credit risk on bank performance.

From 2000 to 2008, Hosna et al. (2009) investigated the profitability, CAR, and NPL of four Swedish banks. It was found that, while to varying degrees throughout banks, nonperforming loans and CAR negatively impacted return on equity. Other researchers have discovered similar negative relationships between performance, credit risk, and profitability measures (Achou and Tenguh, 2008; Kolapo et al., 2012; Musyoki and Kadubo, 2011). Kithinji (2010) examined the impact of credit risk, as measured by the percentage of non-performing loans (NPLs) to total loans and advances, on return on assets (ROA) in Kenyan banks from 2004 to 2008.

According to the findings, banks' profitability are somewhat impacted by credit volume and non-performing loans.

Using a panel regression model, Afriyieet al. (2011) examined the impact of credit risk on the profitability of rural and community banks in Ghana's Brong Ahafo Region.

The NPL Ratio and CAR CRM metrics, as well as the profitability indicators ROE and ROA, were included in the model. It was shown that there was a statistically significant positive correlation between non-performing loans (NPL) and rural banks' profitability. This implies that even with higher loan losses, rural banks are still profitable. He found a link between the financial stability of several Ghanaian rural banks and their CRM practices.

Kolapo et al. (2012) examined the long-term impact of credit risk on the financials of five commercial banks in Nigeria over an 11-year period (2000-2010) using the panel model method. Their findings show that the impact of credit risk is the same for all banks examined in the research, suggesting that a rise in non-performing loans and loan loss reserves lowers profitability. Poudel (2012) investigated the impact of CRM on the financial performance of banks in Napel using measures like the default rate, cost per loan asset, and capital adequacy ratio.

The study established a causal association between all these qualities and unfavorable financial outcomes for banks using regression and correlation models. The capital adequacy ratio and the default rate had a statistically significant negative association, according to the results of the T-test.

2.5 Summary and Research gaps

Effective credit risk management is essential to the financial performance of microfinance institutions on a local and global scale. Studies have demonstrated that different industry sectors employ different approaches to credit risk management.

CRM and loan performance: An empirical analysis of Pakistani microfinance banks was studied by Ahmed and Malik (2015). In order to gather primary data, this study surveyed 157 credit department managers at MFIs in Islamabad and Rawalpindi using a mixed technique approach (descriptive and inferential statistics). The client appraisal had a statistically significant positive impact on the outcomes of loans.

The results of this study led to the suggestion that secondary data be used in subsequent studies to investigate the impact of credit management on loan performance in more detail and to broaden the study's scope to include

Kargi (2011) examined how credit risk affected the bottom line of Nigerian banks. In order to assess the performance and credit risk of the banks, financial ratios from the annual reports and accounts of a sample of banks between 2004 and 2008 were gathered and subjected to descriptive, correlation, and regression analysis. The findings demonstrated that CRM has a major impact on Nigerian banks' earnings. The paper said that because loan and advance levels, non-performing loan levels, and deposit levels all have a negative impact on bank profitability, banks are very vulnerable to illiquidity and distress.

It is necessary to include credit risk analysis, which includes the capital to risk-weighted asset ratio. These variables were considered in the analysis of the current study. Financial organizations need to modify their lending practices to take into account

Research on the lending practices and monetary results of Kenyan commercial banks was done by Wanja and Jagongo (2017). According to the study's findings, the bank's capacity to compete was greatly impacted by credit data. As per the results of the study, banks ought to reconsider their credit assessment process and devise credit guidelines that would provide them with a distinct advantage in determining the creditworthiness of their customer base, hence mitigating the NPL count. This study measured credit information based on individual behavior, account activity, and the borrower's past.

Because the majority of research have connected CRM with the financial performance of financial institutions, the study discovered methodological, conceptual, contextual, and theoretical deficiencies in the areas of credit evaluations, credit risk control, credit terms, and credit approvals. However, there has been a global advancement in technology.

Table 2. 1 Summary of Literature Review and Research Gaps

Authors	Objective of the study	Context	Methodology	Findings	Research Gap
Ahmed and Malik (2015)	Credit risk management on Loan performance	Pakistan	Descriptive Research Survey design	Positively significant	Focused only on primary data while secondary data was needed
Charles,Okaro and Kenneth (2013)	Credit Risk Management on Financial Performance	Nigeria	Descriptive Research Survey Design	Negative correlation	Dispute of the variables relationship
Coylee (2000)	Credit Risk on Financial Performance	Ghana	Descriptive Survey design	Positively significant	Research done in a rural set up With few respondents
Magnifique (2013)	Credit Risk Management on Financial Performance	Rwanda	Descriptive Research Survey design	Positively significant	Geographical resource disparity
Wanja and Jagongo (2017)	Credit policy on Financial Performance.	Kenya	Descriptive Research Survey design.	Positively significant	Done in commercially established banks

2.6 Conceptual Framework

"The theoretical foundation and current empirical research have been used to construct the conceptual framework. Credit evaluation, credit risk management, credit conditions, and credit approvals are the independent factors. The financial performance variable is dependent

.Figure 1.1 presents the conceptual framework.

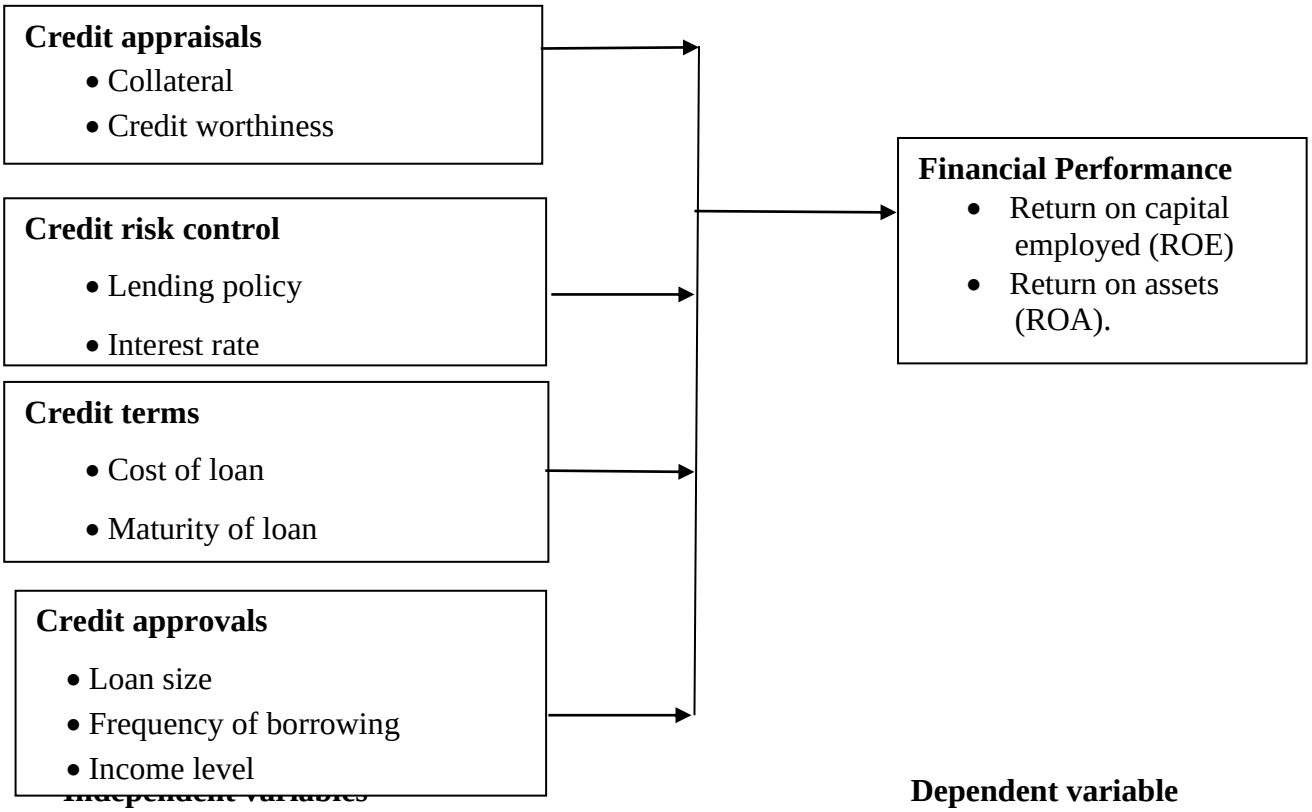

Fig 1.1: Conceptual Frame Work

The financial performance of a microfinance institution and credit management methods were coupled in this study. According to Powers (2010), the study's conclusion on the success of microfinance is that it is a matter of opinion as to how successfully an organization can generate income using its main tools for conducting business.

Measures of financial performance include the company's solvency and overall profit.

The degree to which a business uses credit risk management solutions is reflected in its profitability. Four helpful measures of profitability are net income, operational profit margin, rate of return on equity (ROE), and rate of return on assets (ROA) (Hansen and Mowen, 2005). Financial metrics, such as return on capital employed, were used to assess financial performance.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The research approach utilized to look for correlations between the study variables is described in this chapter. Explained are the research design, population, data collection method, instrument, analytical technique, and validity of the instrument, reliability of the instrument, data presentation method, and research ethics. Lastly, presents the empirical model

3.2 Research Design

Research design, according to Rahi's (2017) study on business research methodology, is a detailed strategy outlining the steps a researcher will take to accomplish the goals of the study.

The nature of the research questions and hypotheses, variables, participant sample, research settings, data collection techniques, and data analysis techniques all play a role in selecting an effective research design, according to a survey of research methods conducted by Thomas, Oenning, and Goulant (2018). Therefore, a research design is a framework, or research blueprint, that directs the whole research process—from developing research questions and hypotheses to summarizing research findings.

A researcher should be conversant with the fundamental procedures of the research process that direct all kinds of research studies while developing one.

Given that the data in this study were quantitative in nature and that descriptive research is primarily concerned with describing situations, a descriptive survey research methodology was

chosen. In order to determine the correlations between the variables, this study investigated those relationships using descriptive statistics. As to Bryman (2016), the deductive approach is employed in quantitative methods, which primarily concentrate on gathering numerical data and verifying theories.

Descriptive research, with its broad overview providing some variable indications as to what variables are worth investigating, is frequently employed as a precursor to more quantitative research designs, according to Patten and Newhart's (2017) study on research methodologies for graduate business and social science students. The survey was beneficial since it made it possible to obtain a large amount of precise and economic data.

3.3 Study area

According to Creswell (2003), the study area establishes the limits, exceptions, reservations, inclusions, and positions in the research proposal. The boundaries of the research on MFIs in Kenya are established by this study area. The study's focus was on how credit risk management affected the financial performance of particular Kenyan microfinance institutions.

3.4 Target population

All Kenyan microfinance institutions listed in Nairobi City County's Association of Microfinance Institutions (AMFI) database were the target audience for this study. Appendix (ii) contains a list of the 52 MFIs that AMFI has formally acknowledged. The analytical unit was microfinance companies themselves. The answers came from the credit managers who answered the poll. Because they are the ones who assess loan applications, decide whether to approve or deny them, and establish the terms of the loan, such as the interest rate and loan maturity, credit managers were polled.

3.5 Sample Size

When a population is tiny and its constituent parts are diverse, a census is both necessary and beneficial. According to Cooper and Schindler (2007), a sample drawn from a small, erratic group might not be representative of the entire population. Given the small population and convenient accessibility of the researched institutions, a census approach was considered suitable for this investigation. By employing this method, we were able to assess credit risk's impact on microfinance firms' financial performance with greater accuracy.

3.6 Data Collection Procedure

Data was obtained from journals that have been published, publications from the Kenya Association of Microfinance Institutions, and specific microfinance organizations. The researcher applied to higher management for permission to carry out the study.

3.6.1 Data collection Instrument

Data was gathered, both primary and secondary. While secondary data was gathered using a record survey sheet, primary data was gathered using a questionnaire. The chosen Microfinance Institutions received the self-administered drop-and-pick questionnaires that were created. The researcher was able to obtain sufficient and precise information as a result. The convenience of using surveys was the deciding factor. The instrument appendix v of the record survey sheet was used to collect secondary data.

3.7 Pilot testing

Prior to the main research, a pilot study is a small-scale exploratory investigation conducted to assess the validity and reliability of data gathering instruments (Kothari, 2007). In order to ensure word clarity and statement accuracy regarding the particular research questions, all

questionnaire components were coded and reviewed for this study. Following this, the questionnaires were pretested in microfinance institutions located in Kisumu County, Kenya. For the pilot study, a sample size of five respondents from microfinance organizations was selected. This is due to the requirement that the research instruments be pretested on a small sample of respondents as a preliminary exercise to determine whether the instruments have any weaknesses.

3.7.1 Reliability of Research Instruments

According to Kothari (2008), reliability measures internal consistency or dependability across time. Any measurement tool that yields the same results every time is one that can be trusted. When a test was given to a representative sample of the community, it included many identically worded items, and it used uniform reporting and scoring guidelines. All of these factors increased the test's reliability. Kisumu served as the study's location. By using qualitative approaches, it was possible to learn more about the respondents' expected time to finish the questionnaire, the variables, and the clarity of the questions. Reliability of the study's instruments was determined using Cronbach's Alpha coefficient and test-retest methodology. Studies have demonstrated that Cronbach's alpha is the most accurate measure of an instrument's

3.7.2 Validity of the Data collection Instruments

Pilot data, in which the subjects' responses were compared to the study goals, was used to assess the content validity of the instrument. The investigator ensured that the inquiries they posed were pertinent to the objectives of the research. The degree to which the results could be applied to the entire population served as a gauge for validity. A questionnaire with items evaluating both

independent and dependent characteristics was used to determine it (Kothari, 2014). Accepting assertions from several researchers contributes to the content's credibility.

3.8 Data analysis techniques

After being encrypted, the collected data was imported into SPSS (SPSS version 20). While descriptive statistics, such as frequency and percentage, were used to help make sense of the data, inferential statistics were employed to draw conclusions about the data. Additionally, a graph representing the relationship between profitability and finance performance was created using SPSS data analysis software.

The main statistical techniques employed in this investigation were the mean, median, and standard deviation. The results of the data analysis were shown in tables and charts, and the study's objectives guided the interpretation of the findings. After analyzing the research data, recommendations and findings were drawn.

3.9 Data presentation

Regression and correlation analysis were two popular statistical techniques used to describe relationships between dependent and independent variables. Data was arranged in contrasted tables. Regression analysis models provided the independent variables (Credit Appraisal, Credit Risk Control, Credit Terms, and Credit Approvals), with Financial Performance serving as the dependent variable.

While multiple linear regression was used to evaluate the variables for all organizations, simple linear regression was used to analyze the variables for each organization. To take into consideration the moderating variable's influence on the correlation between CRM and Financial

Performance, an interaction term was incorporated into the multiple regression analysis. To measure the impact between independent and dependent variables, hierarchical regression was used.

To test the statistic, the t-test was employed. In terms of standard error, the t-value expresses the discrepancy between an observed sample statistic and its estimated population parameter. The significance of the regression coefficients was assessed at a 5% significance level using the probability value (p value) for each t-value.

The Analytical model for the study took the form below:

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

Where;

Y= Financial Performance (Return on Capital Employed)

B0 = Intercept

β= Coefficient of independent variables

X_1= Credit Appraisal.

X_2= Credit Risk Control

X_3= Credit Terms

X_4 = Credit Approvals

ε= Error term

3.10 Research Ethics

This study's use of primary and secondary data raised several ethical issues. The research was approved for conduct, and all parties involved provided their approval. All data gathered via document reviews, budget document observation, and interviews was handled with the utmost confidentiality. The staff and participant identities were concealed once the data was coded for analysis in SPSS.

3.11 Diagnostic Tests assumptions

Normality; this is the presumption that a continuous variable's scores are distributed regularly around its mean. The data's approximate normal distribution was verified by testing it using a histogram with a normal curve, which should display a bell-shaped distribution.

Test of Linearity.

This describes the relationship between the change in the independent variable and the change in the dependent variable. Correlation results should demonstrate that a conceived independent variable has a significant correlation with the dependent variable. This was examined using correlation coefficients.

Multi-collinearity.

This examines whether there is a strong correlation between two or more hypothesized independent variables. This causes technical difficulties in generating a multiple regression model as well as difficulties in determining which independent variable contributes to the variation explained in the dependent variable. This assumption was verified by looking at correlation coefficients. A matrix of Pearson's bivariate correlations between all independent variables should have correlation coefficients with magnitudes less than 0.9, which indicates that no independent variable is correlated with any other independent variable.

Heteroskedasticity

Concerns about the occurrence of heteroskedasticity are brought up by the fact that the data for this study represents a cross-section of firms. A homoskedastic error term, or one with constant variance, is assumed by the Classical Linear Regression Model (CLRM). It is indicated that the

data are heteroskedasticity if the error variance is not constant. It would be possible to get unbiased parameter estimates by running a regression model without taking heteroscedasticity into consideration (Breusch & Pagan 1979). The Breusch Pagan/Godfrey test was employed in order to look for heteroscedasticity. The error variance is homoskedastic, according to the study's null hypothesis. An analysis using a Feasible Generalized Least Squares (FGLS) model would be performed to account for the presence of heteroscedasticity in the panel data in the event that the null hypothesis is rejected.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS, AND DISCUSSIONS

4.0 Introduction

This chapter applies the methodology and variables outlined in chapter three to the empirical results and conclusions about the relationship between CRM and Financial Performance of Microfinance Institutions in Kenya. Particular goals were taken into consideration when interpreting the data analysis, and the implications of the study's conclusions were highlighted.

4.1 Return Rate

The study's target population consisted of 52 microfinance institutions, but only 50 of those institutions met the requirements. As a result, these institutions were given questionnaires, and the results indicated a 96.15% return rate, which is considered appropriate and in accordance with Kothari's (2004) recommendation that a return rate of more than 80% is acceptable in social science research.

4.2 Reliability and Validity of Research Instruments

The piloted data was used to assess the content validity of research instruments, making sure that every question was adequately detailed in regard to the study variables and had a clear purpose. All of the research instruments employed in the study are extremely dependable, according to the numbers in table 4.1, which was derived from the Cronbach alpha, a measure of internal consistency.

Table 4. 1 Results of Reliability test

Variable	Number of items	Cronbach alpha
Credit Appraisal	6	.711
Credit Risk Control	6	.709
Credit Terms	6	.703
Credit Approvals	6	.707
Financial Performance	6	.712

The Cronbach's alpha statistic is widely used to evaluate the degree of consistency within a certain set of data. The correlation coefficients for credit appraisal, credit risk control, credit terms, credit approvals, and financial performance were 0.711, 0.709, 0.703, 0.707, 0.715, and 0.712, according to Table 4.1's findings. The entire collection of variables' average Cronbach's alpha was 0.710, which is significantly higher than the minimally acceptable threshold. According to Castillo and Rojas (2009), all variables have Cronbach's Alpha values more than 0.7, demonstrating the reliability of the data collection instrument.

4.3 Demographic Characteristics of Respondents

The demographic characteristics of the interviewees allude to background information. Among the demographic data collected from the respondents were gender, years of experience in the microfinance industry, and degree of education. The results are shown in Table 4.2.

Table 4. 2 Demographic data

		Frequency	Valid %
Gender	Male	39	78
	Female	11	22
	Total	**50**	**100.0**
Level of Education	Diploma	6	12
	Degree	29	58
	Masters	15	30
	Total	**50**	**100.0**
Length of service	1-5 years	11	22
	6-10 years	27	54
	Above 10 years	12	24
	Total	**50**	**100.0**

"First, in terms of gender, the majority of respondents were men (78%), while the proportion of female respondents was 22%. This suggests that, despite the preponderance of male respondents, there is a reasonable distribution of female employees in middle and senior management within the microfinance industry.

Second, the majority of respondents (58%), when it came to education level, had a degree, suggesting that they had pertinent information about the microfinance industry. Six percent of the workforce had a diploma, suggesting that this group of workers may include those with extensive backgrounds in the microfinance industry. The lowest percentage of respondents had master's degrees (15.0%), suggesting that master's degrees may only be a competitive advantage when applying for senior management roles rather than being a prerequisite for landing a job in

Ultimately, the majority of respondents (54%) had worked for six to ten years, with those who had worked for more than ten years coming in second (24%). This indicates that the majority of

respondents (those with more than ten years of experience) have knowledge of the microfinance industry, which helps to improve microfinance performance. The next lowest group, which can include fresh graduates with microfinance experience, had worked for one to five years (22%).

4.4 Analysis of objectives and findings

This section presents descriptive data derived from combined responses to questions concerning the particular goals associated with the Financial Performance of Microfinance Institutions. Responses ranged in intensity from 1 (strongly disagree) to 5 (strongly agree) on a Likert scale. The information is displayed in tabular form for each statement, with the means, standard deviations, and frequency of responses shown..

4.4.1 Effect of Credit Appraisals on Financial Performance of Micro finance Institutions in Kenya.

These are condensed responses to the query of whether credit evaluations have an impact on MFIs' financial performance in Kenya. The results are displayed in table 4.3.

Table 4. 3 Credit Risk Management

Statement	5	4	3	2	1	Mean	Std. Dev
The MFI adheres to reasonable, well-defined credit evaluation criteria.	8(16%)	12(24%)	15(30%)	9(18%)	6(12%)	3.63	0.989
Individual and counterparty credit limits have been imposed by the financial institution.	12(24%)	8(16%)	9(18%)	15(30%)	6(12%)	3.49	0.928
3. The MFI has a well-defined procedure for approving both new and current credit.	9(18%)	18(36%)	9(18%)	5(10%)	9(18%)	3.74	1.053
All credit extensions are made on an arm's-length basis.	9(18%)	17(34%)	9(18%)	8(16%)	7(14%)	3.14	1.104
A competent credit evaluation procedure influences loan performance.	11(22)	12(24)	8(16)	8(16)	11(22)	3.32	1.132
The Credit Risk Management system follows a sound credit evaluation procedure.	8(16)	11(22)	14(28)	9(18)	8(16)	3.50	0.883
Valid list wise=50	**Grand mean =3.47**						

Table 4.3 shows that while 18% of respondents disagree, the majority of respondents agree that MFIs utilize good, clear credit rating standards. This implies that some respondents believe MFIs do not apply reliable credit risk management standards. Even more narrowly, only 16% of respondents agreed, and 18% were unclear as to whether MFI had set broad credit constraints for specific counterparties and borrowers.

Furthermore, 36% of respondents concurred that MFIs have a well-defined procedure in place for authorizing new credit as well as refinancing existing credit. 18.0% of respondents disagreed, indicating that they had an unfavorable opinion of MFI's well-defined, established procedures. Furthermore, respondents inferred that all credit extensions are made on an arm's-length basis, with 18% strongly agreeing, 34% agreeing, and 16% disagreeing.

Finally, the majority of respondents agreed (22%), strongly agreed (16%), were confused (28%), and disagreed (18%) when asked if the CRM system used a reliable credit risk management approach. Juliana (2017) found that hiring adequate managers with the necessary training and expertise to monitor and manage risks is essential for microfinance firms to manage credit risk exposure. As credit risk affects a financial institution's performance, managing credit risk is crucial, and managers and other staff members should assist, according to Catherine (2020). With this in place, we can be certain that the financial institutions will genuinely put our efficient risk monitoring strategies into practice.

4.4.2 Effect of Credit risk control on Financial Performance of Micro finance Institutions.

These are a summary of the answers to the question of whether credit risk control affects MFIs' financial performance in Kenya. Table 4.4 displays the descriptive findings.

Table 4. 4 Credit Risk Control

Statement	5	4	3	2	1	Mean	Std Dev
The MFIs' credit risk strategy and important credit risk rules are approved by the board.	10(20%)	12(24%)	9(18%)	11(22%)	8(16%)	3.40	0.962
The senior management implements the credit risk plan established by the board of directors in a rigorous manner.	9(18%)	14(28%)	12(24%)	4(8%)	11(22%)	3.50	0.884
Management formulates policies and procedures for recognizing, assessing, monitoring, and controlling credit risk.	12(24%)	12(24%)	10(20%)	6(12%)	10(20%)	3.49	0.928
4. The policies and procedures designed for credit risk handle credit risk at both the individual and portfolio levels.	8(16%)	14(28%)	11(22%)	8(16%)	9(18%)	3.40	0.962
The bank recognizes and manages credit risk across all products and activities.	10(20%)	15(30%)	6(12%)	10(20%)	9(18%)	3.14	1.104
The board of directors must approve the MFIs' credit risk strategy and policies.	10(20%)	16(32%)	10(20%)	6(12%)	8(16%)	3.4	0.962
Valid list wise=50							
Grand mean =3.46							

Table 4.4 presents differing opinions regarding the board of directors' acceptance of the credit risk strategy and major credit risk guidelines of MFIs. Of those surveyed, 24% agreed with the statement, 20% strongly agreed, and 18% were doubtful. A majority of participants (78%)

expressed strong agreement that MFI's senior management meticulously carries out the credit risk strategy authorized by the board of directors. In contrast, 28% expressed agreement, 18% strong agreement, 24% unsure, 8% disagreed, and 22% strongly disagreed.

The senior management of the MFI develops policies and procedures for identifying, measuring, monitoring, and controlling credit risk, according to twenty-four percent of respondents—twenty percent strongly agreed, twenty percent were unsure, twelve percent disagreed, and twenty percent strongly disagreed. When compared to the overall number of replies, the percentage of people who agreed or strongly agreed with this statement was noteworthy.

Regarding the credit risk policies and procedures followed by MFIs, the majority of respondents agreed (28%), strongly agreed (16%), disagreed (16%), and very disagreed (18%) that credit risk is addressed in all MFIs activities and at both the individual credit and portfolio levels. Merely 20% of participants in the poll strongly concurred that the bank had successfully recognized and handled the credit risk.

The impact of credit risk restrictions on MFI lending outcomes in Kenya was examined by Kisala (2014). Descriptive research methodology was used in this study to thoroughly examine CRM and its relationship to loan performance in microfinance institutions. Five MFIs provided secondary data through questionnaires and annual reports (2011-2017), whereas nine MFIs provided primary data.

In this study, the CAR and NPL ratio functioned as CRM indicators, while the return on equity (ROE) served as a profitability indicator. The results of the study demonstrated a substantial correlation between CRM and loan outcomes. The information does indicate that CAR and non-performing loans have a significant and detrimental effect on return on equity (ROE).

Table 4. 5 Credit Terms

Statement	5	4	3	2	1	Mean	Std. Dev.
The MFIs have mechanism to manage many credit risk portfolios held.	12(24%)	16(32%)	10(26%)	6(12%)	6(12%)	3.55	0.917
There is harmony between the rating system and the bank's operations.	8(16%)	18(36%)	6(12%)	10(20%)	8(16%)	3.52	0.921
MFIs procedures and analytical methods evaluate both on- and off-balance-sheet credit risk.	9(18%)	14(28%)	10(20%)	12(24%)	7(14%)	3.45	0.923
The credit portfolio data available through the management information system is sufficient.	11(22%)	12(24%)	9(18%)	10(20%)	8(16%)	3.48	0.927
When evaluating credit applications and portfolios, MFIs take into account the possibility of economic shifts in the future.	12(24%)	16(32%)	8(16%)	10(20%)	4(8%)	3.38	0.929
Credit quality is tracked by the MFIs for adequate provisions and reserve made.	11(22%)	15(30%)	9(18%)	7(14%)	8(16%)	3.49	0.918
Valid list wise=50	**Grand mean =3.48**						

4.4.3 Effect of Credit terms on Financial Performance of Micro finance Institutions in Kenya

These are simplified responses to the question of whether Credit Terms impact the Financial Performance of Microfinance Institutions in Kenya. Table 4.5 displays the descriptive data.

Table 4.5 reveals that while 26% are unsure, 12% disagree, and 12% strongly disagree, the majority of respondents (32%) and MFI clients (24%) think that the MFIs have a system for the continued management of varied credit risk-bearing portfolios. In addition, when it comes to whether the rating system is suitable for the kind, extent, and complexity of our bank's operations, 16% strongly disagree, 36% agree, 12% are unsure, and 20% disagree.

The majority of respondents also believed that MFIs had analytical tools and information systems that enabled management to assess the credit risk associated with all on- and off-balance sheet activities (28 percent agreed, 18 percent strongly agreed, 20 percent were unsure, 24 percent disagreed, and 14 percent strongly disagreed).

The management information system should provide sufficient information on the composition of the credit portfolio, according to twenty-two percent of respondents who strongly agreed, twenty-four percent who agreed, eighteen percent who were doubtful, twenty percent who disagreed, and sixteen percent who severely disagreed. Furthermore, concerning the question of whether MFIs take future economic conditions into account when assessing individual credits and credit portfolios, the responses ranged from 24% extremely agreed to 32% agreed, 16% unsure, 20% disagreed, and 8% strongly disagreed.

The percentage of respondents who strongly agreed, agreed, disagreed, and were unclear that MFIs had a system in place for keeping an eye on the state of individual credits, including determining whether or not provisions and reserves were adequate, was 22%.

The participation of credit officers and the credit criteria established by microfinance companies have an impact on the performance of loans.

4.4.4 Effect of Credit Approvals on Financial Performance of Micro finance Institutions in Kenya

The answers to the question of whether credit approvals affect MFIs' financial performance in Kenya are compiled and shown in table 4.6.

Table 4. 6 Credit Approvals

Statement	5	4	3	2	1	Mean	Std. dev.
The results of approval reviews are reported to the board and senior management.	8(16%)	14(28%)	12(24%)	8(16%)	8(16%)	3.58	0.919
The Internal control system ensures reports are timely	9(18%)	15(30%)	11(22%)	8(16%)	7(14%)	3.57	0.921
Approvals follows the laid down procedures.	8(16%)	14(28%)	8(16%)	12(24%)	8(16%)	3.52	0.928
Approval is per ISO standards.	10(20%)	12(24%)	9(18%)	10(20%)	9(18%)	3.46	0.931
Only senior officer's approve.	10(20%)	13(26%)	11(22%)	9(18%)	7(14%)	3.43	0.927
System acknowledges integration of all departments processes executed.	9(18%)	14(28%)	10(20%)	9(18%)	8(16%)	3.49	0.914
Valid list wise=50	**Grand mean =3.51**						

Table 4.6 shows that most respondents agreed (28%), strongly agreed (16%), were unsure (24%), disagreed (16%), and strongly disagreed (16%) that the results of approval reviews should be

sent right away to the board of directors and senior management. Additionally, when it came to the prompt reporting of exceptions to policies, procedures, and limits to management for permission, 18% of respondents strongly disagreed, 30% agreed, 22% were unsure, and 16% disagreed.

While 16% firmly agreed, 28% found it agreeable, 18% were unsure, 24% disagreed, and 18% were vehemently against the idea that finance approvals follow the processes specified in the strategic plan. Moreover, among the respondents, 20% highly agreed, 24% agreed, 18% were unsure, 20% disagreed, and 18% strongly disagreed that the regulations governing approval processes are based on ISO standards, meaning that they are international standards. 20% of respondents strongly agreed, 26% agreed, 22% were unsure, 18% disagreed, and 14% strongly disagreed. Because of this, the number of respondents who agreed was greater, suggesting that the MFIs were aware of the perception. Of those surveyed, 18% strongly agreed, 28% agreed, 20% were unsure, 18% disagreed, and 16% disagreed severely.

4.5 Statistical Assumption of Likert Scale (Type Data.)

Likert scale questionnaires were utilized in the study, and it was expected that the data would follow a normal distribution with a high level of collinearity. Thus, in order to justify the use of regression analysis, two key diagnostic tests—normality tests and multicollinearity tests—were conducted.

4.5.1 Normality Test

The Shapiro-Wilk test was used to verify the normality of the data. The null hypothesis of the Shapiro-Wilk test postulates that the independent variable data are drawn from a population with a regular distribution (Cooper & Schilndler, 2016). For a p-value to be deemed significant, it

must be greater than 0.05. The results are shown in Table 4.8, with p-values of 0.062 for Financial Performance, 0.114 for Credit Appraisal, 0.097 for Credit Risk Control, 0.102 for Credit Terms, and 0.063 for Credit Approvals. Since all of the p-values are higher than the predetermined p-value significance level of 0.05, we do not reject the null hypothesis that the sample data originates from a regularly distributed population. According to table 4.7 below, all of the variables had data that was normally distributed.

Table 4. 7 Test for normality

	Statistic	Sig (Prob.)
Credit Appraisals	.986	.114
Credit Risk Control	.981	.097
Credit Terms	.984	.102
Credit Approvals	.975	.063

4.5.2 Multi-collinearity Test

Multi-collinearity is allegedly used to determine the probability that independent variables in a given multivariate regression model would have a strong or significant correlation (Singparwalla, 2017). As a result, if one variable can be predicted from another, then large correlations between the independent variables are troublesome since they increase the standard error of the coefficients.

The Variance Inflation Factor (VIF) was estimated by the researchers to ascertain the degree of correlation between the variables. A VIF of greater than ten (10) typically denotes the need for

additional research. It is possible to conclude that there was no multi-collinearity among the independent variables in Table 4.9 since all of the VIF values are below the permissible threshold of 10.

Table 4. 8 Collinearity Statistics

	Tolerance	**VIF**
Credit Appraisal	.760	1.315
Credit Risk Control	.672	1.488
Credit Terms	.616	1.623
Credit Approvals	.680	1.471

4.5.3. Heteroskedasticity

When using ordinary least square (OLS), it is assumed that the residuals' variance is fixed. The data is said to be heteroskedasticity when the variance of the error terms changes in response to changes in the independent variables from one set of observations to the next (Gujarat, 2008). In this study, the degree of heteroskedasticity was assessed using the Breusch-Pagan test. The OLS condition of constant variance of residuals is not broken because the p-value is less than 0.05 (Bryman & Cramer, 2016), indicating that the error terms are homoskedastic.

Table 4. 9 Heteroskedasticity

H0: Constant Variance	
Chi2(1)	0.60
Prob >Chi2	0.4404

4.5.4 Correlation Analysis and Regression Methods

4.5.4.0 Correlation

The degree, direction, and tightness of the relationship between the independent and dependent variables are all measured by correlation analysis. A correlation value of +1 denotes an entirely positive association and a correlation coefficient of -1 denotes a totally negative one. There is no relationship between the variables if the value is zero. Strong correlations are between 0.60 and 0.79, moderate correlations are between 0.40 and 0.59, extremely weak correlations are between 0.00 and 0.19, and very strong correlations have a coefficient of 1.0 or higher. The study employed Pearson moment correlation analysis. The research sought to determine whether there was any correlation between the response variable (financial performance) and the predictor components (credit appraisals, credit risk control, credit terms, and credit approval). The degree is displayed in Table 4.10

Table 4. 10 Correlations

		Credit Appraisal	Credit Risk Control	Credit Terms	Credit approval	Financial Performance (ROCE)
Credit Appraisal	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	50				
Credit Risk Control	Pearson Correlation	.561**	1			
	Sig. (2-tailed)	.000				
	N	50	50			
Credit Terms	Pearson Correlation	.554**	.557**	1		
	Sig. (2-tailed)	.000	.000			
	N	50	50	50		
Credit approvals	Pearson Correlation	.545**	.556**	.521**	1	
	Sig. (2-tailed)	.000	.000	.000		
	N	50	50	50	50	
Financial Performance (ROCE)	Pearson Correlation	.825**	.753**	.676**	.718**	
	Sig.(2-tailed)	.000	.000	.000	.000	
	N	50	50	50	50	1

Model of Financial Performance:

The formula is $Y = \beta o + 0.825X1 + 0.753X2 + 0.676X3 + 0.718X4 + €$.-

As shown in Table 4.10, Y stands for financial performance

X1 for credit appraisal

X2 for credit risk control

X3 for credit terms

X4 for credit approvals.

βo stands for intercept

, β for the coefficient of independent variables

€ stands for error term (+ 2.819).

The research' findings indicated a strong relationship between financial performance and predictors in microfinance organizations (credit appraisal, credit risk control, credit conditions, and credit approvals). When the dependent variable varies by x units for every unit of the independent variable, the unstandardized regression coefficients show this variation. According to this, there would be a 0.825 increase in net profit for every unit increase in appraisal.

There will be a 0.753 impact on financial performance for every unit improvement in credit risk control. There is a 0.676 rise in financial performance for every unit increase in credit terms. A 0.718 improvement in financial performance would result from an increase in the unit of loan approval, and vice versa. Standardized coefficients of each of the

4.5.4.0 Linear Regressions

4.5.4.1 Linear Regression of Credit Appraisals on Financial Performance

This investigated the direct impact of credit appraisals on Kenyan microfinance institutions' financial performance. Table 4.11 presents the results.

Table 4. 11 Direct influence of Credit Appraisals on Financial Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	.825	.680	.676	.69397	.680	159.562	1	49	.000

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	76.844	1	76.844	159.562	.000[a]
	Residual	36.120	49	.482		
	Total	112.964	50			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.682	.232		2.939	.004
	Credit Appraisals	.919	.073	.825	12.589	.000

a. Dependent Variable: Financial performance

Source: Author (2022)

A summary of the model is shown in Table 4.12, with an R2 value of 0.680. This suggests that Credit Appraisals account for 68.0% of the variance in MFI profitability in Kenya, with the remaining 32.0% being explained by other factors not included in the study model. A coefficient analysis (β= 0.919 (0.073); at p<.01) indicates that credit appraisals also have a positive and statistically significant impact on the financial performance of Kenya's microfinance firms. This indicates that a single increase in MFI efficiency could result in a 0.919 percentage point improvement in the financial performance of MFIs in Kenya.

CRM and loan performance: In 2015, Ahmed and Malik conducted an empirical research of microfinance organizations in Pakistan. 157 credit department managers at MFIs in Islamabad and Rawalpindi provided primary data, which was analyzed using descriptive and inferential statistics. The results show that client appraisal has a positive and significant impact on loan outcomes.

In order to more fully examine the impact of credit management on loan performance, the study recommended including secondary data in such investigations in order to increase the sample size. This study exclusively utilized primary sources, with little emphasis placed on the role of the loan and credit agency report.

Therefore, the linear regression equation is;

(i) $Y = 0.682 + 0.919X_1$

Where;

Y = financial performance of MFIs in Kenya.

X_1 = Credit Appraisals

4.5.4.2 Linear Regression of Credit Risk Control on Financial Performance

This tested the direct influence of Credit Risk Control on Financial Performance of MFIs.

Table 4. 12 Direct influence of Credit Risk Control on Financial Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	.753	.567	.562	.80708	.567	64.303	1	49	.000

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	64.110	1	64.110	64.303	.000[a]
	Residual	48.854	49	.997		
	Total	112.964	50			

coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	T	Sig.
1	(Constant)	.921	.269		3.424	.001
	Credit Risk Control	.801	.081	.753	9.889	.000

a. Dependent Variable: Financial Performance

Table 4.12 indicates that while Credit Risk Control accounted for 56.7% of the variance, other factors account for 43.3% of the variance. According to coefficient analysis, Credit Risk Control has a positive and statistically significant influence ($\beta = 0.801$, standard error = 0.081); $p<.01$). The outcome is an addition of 0.801 standard deviations. Kisala (2014) looked at the effects of credit risk limitations on MFI lending outcomes in Kenya. A descriptive methodology was used in the study to investigate how microfinance institutions manage loan profitability and risk. Nine MFIs supplied main data and five MFIs provided secondary data between 2007 and 2011

through questionnaires and yearly reports. In this analysis, the NPV and ROE were used to quantify credit risk management, whereas the financial performance was gauged.

The linear regression equation is;

(ii) $\mathbf{Y = 0.921 + 0.801X_2}$

Where;

Y = Financial Performance of Micro Finance Institutions in Kenya.

X_2 = Credit Risk Control

4.5.4.3 Linear influence of Credit Terms on Financial Performance

This tested the direct influence of Credit Terms on Financial Performance of MFIs in Kenya. The results are shown table 4.13.

Table 4. 13 Direct influence of Credit Terms on Financial Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	.676[a]	.457	.449	.90463	.457	41.171	1	49	.000

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	51.587	1	51.587	41.171	.000[a]
	Residual	61.377	49	1.253		
	Total	112.964	50			

Coefficients[']

Model		Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	Sig.
1	(Constant)	1.162	.304		3.822	.000
	Credit Terms	.756	.095	.747	7.958	.000

a. Dependent Variable: Financial Performance

A summary of the model is provided in Table 4.13, which reveals that R2 = 0.457, meaning that variations in credit terms account for 45.7% of the variance in the Financial Performance of MFIs in Kenya, with factors outside the purview of the study model accounting for the remaining 54.3% of the variance. Moreover, coefficient analysis shows that Credit Terms affect financial performance at Kenya's MFIs in a favorable, statistically significant way ($\beta = 0.756$ (0.095); at $p<.01$). This indicates that a single adjustment to the effective Credit Terms could result in a 0.756 percentage point improvement in the financial performance of MFIs in Kenya. The Effectiveness of Credit Management System on Loan Performance: Empirical Evidence from Micro Finance Sector in Kenya paper by Sindani (2012).

The linear regression equation is;

(iii) $Y = 1.162 + 0.756X_3$

Where;

y = Financial Performance of Micro Finance Institutions in Kenya.

X_3 = Credit Terms

4.5.4.4 Linear Regression of Credit Approvals on financial performance

This tested the direct influence of Credit Approval on Financial Performance of MFIs in Kenya. The results are shown table 4.14.

Table 4. 14 Direct influence of Credit Approval on Financial Performance

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	.701	.491	.489	.75295	.491	52.215	1	49	.000

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	58.272	1	58.272	52.215	.000[a]
	Residual	54.692	49	1.116		
	Total	112.964	50			

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.996	.179		5.564	.000
	Credit Approval	.672	.087	.669	7.724	.000

a. Dependent Variable: Financial performance

As per Table 4.13's model summary, 49.1% of the variation in the Financial Performance of MFIs in Kenya can be explained by Credit Approval, with the remaining 50.9% coming from other factors that were not accounted for in the study model. Furthermore, coefficient analysis shows that Credit Approval has a substantial impact on Kenya's microfinance institutions' financial performance ($\beta = 0.672$ (0.087); at $p<.01$). If credit approval times are shortened by just one percentage point, Kenya's microfinance institutions should see an increase in financial performance of 0.672 points. Hosna et al. (2009) looked at nonperforming loans, CARs, and profitability for four Swedish banks between 2000 and 2008. Return on equity was found to be negatively impacted by nonperforming loans and CAR, albeit the strength of this association varied.

Therefore, the linear regression equation is;

(iv) $Y = 0.996 + 0.672X_4$

Where;

Y = Financial Performance of Micro Finance Institutions in Kenya.

X_5 = Credit Approvals

4.5.5 Multiple Regression Analysis

Multiple regression analysis was performed in the study to examine the relationship between CRM Practices and Financial Performance. A multivariate regression analysis was used to examine the CRM procedures (credit appraisals, credit risk control, credit terms, and credit approvals), with financial performance acting as the response variable. The model summary, the findings of the analysis of variance, and the regression coefficient estimates are the products of the regression analysis. The summary results indicating the fitness of the model are shown in Table 4.15. The value of.642 is indicated by the corrected R square.

The R-squared coefficient calculates the proportion of the dependent variable's overall variance that can be ascribed to the regression model's independent variables. A high value that is close to one indicates that the model works well.

Table 4. 15 Multi regression results

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics R Square Change	F Change	df1	df2	Sig. F Change
1	.801[a]	.642	.639	.36136	.642	14.898	4	46	.000

ANOVA[b]

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	63.764	4	15.941	14.898	.000[a]
	Residual	49.200	46	1.070		
	Total	112.964	50			

a. Dependent Variable: Financial Performance

b. Predictors: Credit Appraisals, Credit Risk Control, Credit Terms, Credit Approvals

Analysis of variance can be used to evaluate the significance of the final model. The analysis of variance results are shown in Table 4.15. The ANOVA findings verify that the regression slope is not significantly different from zero. The regression slope of the model deviates significantly from zero, as indicated by the F-statistics (df (4, 46), F=14.898, p<0.001).

Based on the regression coefficients, the following regression model was fitted, and the estimated standardized and unstandardized regression coefficients are shown in Table 4.16.

Table 4. 16 Estimated standardized and unstandardized regression coefficients

Model	Unstandardized Coefficients		Standardized Coefficients		
	B	**Std. Error**	**Beta**	**T**	**Sig.**
Constant	.610	.103		5.922	.000
Credit Appraisals	.311	.061	.398	5.098	.000
Credit Risk Control	.210	.065	.180	3.231	.000
Credit Terms	.205	.053	.289	3.868	.040
Credit Approvals	.154	.041	.196	3.756	.003

a. Dependent Variable: Financial Performance

The study's independent variables, namely Credit Appraisals (β = 0.311 (0.061) at p<0.05, Credit Risk Control (β = 0.210 (0.065) at p<0.05, Credit Terms (β = 0.205 (0.053) at p<0.05, and Credit Approvals (β = 0.154 (0.041) at p<0.05), all had a significant impact on the Financial Performance of Micro-Financial Institutions in Kenya, according to table 4.16's values of un-standardized regression coefficients with standard errors.

The model of the study derived from the multiple regression results is

$Y=0.610+.311X_1+.210X_2+.205X_3+.154X_4$

4.5.6 Testing of study hypotheses

According to the first hypothesis (H01) of this study, credit appraisal had no discernible impact on the financial outcomes of microfinance companies in Kenya. Credit Appraisal was found to have a significant influence on the financial performance of microfinance organizations in a

linear regression study (β= 0.311, p<0.05). It appears that the first theory is incorrect and should be rejected. The results indicate that a single improvement in efficient Credit Appraisal could lead to a 0.311 point increase in financial performance for microfinance firms in Kenya.

More than 90% of financial institutions in the US have put these policies into place, according to Catherine (2020), who based her research on the prevalence of best practices in CRM in the US.

Based on all available customer data across the credit life cycle, a consistent, data-driven strategy to managing credit relationships considerably boosts profitability and reduces surprises, according to the data examined. It requires not just the attention, analytical skills, and technology of management, but also a larger financial commitment.

The study's second hypothesis (H02) proposed that there was no significant impact of Credit Risk Control on the financial outcomes of microfinance companies in Kenya. A significant effect of Credit Risk Control is seen in the findings of linear regression on the financial performance of microfinance firms (β= 0.210, p<0.05). As a result, we have to dismiss alternative hypothesis 2. Based on the results, Kenyan microfinance companies can improve their financial performance by 0.210 percentage points by taking a single step toward

Thirdly, the study's H03 indicates that Credit Terms had no discernible impact on the financial outcomes of Kenya's micro lending institutions. Credit Terms were found to significantly affect microfinance firms' financial performance in a linear regression analysis (β= 0.205, p<0.05). As a result, the third hypothesis is not true. According to the data, a single adjustment to the

effective Credit Terms might improve the financial performance of microfinance institutions in Kenya by 0.205 points.

According to Nduwayo (2015), companies need to be well-versed in the nuances of credit management. This includes conducting extensive "creditworthiness" investigations on both new and existing clients and setting suitable "credit limitations" (i.e., how much credit is issued and for how long). By Nyabicha's estimation (2017).

According to Juliana (2017), MFIs that adhere to a particular process for authorizing and extending new credit to clients are better able to manage their exposure to credit risk. This in turn necessitates having a sufficient number of managers on staff who have the training and expertise necessary to recognize and contain possible threats.

According to Catherine (2020), CRM is crucial because it affects how well financial institutions operate, and it should be implemented with the help of managers and other employees of the institution. Consequently, the application of the established risk monitoring measures improves the performance of the financial institutions. Lenders need to find a balance between conservatism and corporate expansion, claim Zampara et al. (2017).

4.5.7 Summary of Hypotheses Tests

Table 4. 17 hypotheses results

Hypothesis	Method of statistic	T-test and Prob	Decision
H_{01}: Credit Appraisals has no significant effect on Financial Performance of Micro Financial Institutions in Kenya	Linear Regression	β= .311 t =5.098, p=.000	Reject H_{01}
H_{02}: Credit Risk Control has no significant effect on Financial Performance of Micro Financial Institutions Kenya	Linear Regression	β= .210 t=3.231, , p=.000	Reject H_{02}
H_{03}: Credit Terms has no significant effect on Financial Performance of Micro Financial Institutions in Kenya	Linear Regression	β=.205 t=3.868, , p=.040	Reject H_{03}
H_{04}: Credit Approval has no significant effect on Financial Performance of Micro Financial Institutions in Kenya	Linear Regression	β= .154 t=3.756, , p=.003	Reject H_{04}

This analysis established evidence that Credit Appraisal has the strongest positive effect on Financial Performance (β =.311, t=5.098, p<.05) followed by Credit Risk Control (β =.210, t=3.231, p<.05, Credit Terms (β=.205, t=3.868, p<.05) and Credit Approvals (β = .154, t=3.756, p< 0.05).

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This study looked into how credit risk management affected MFIs' financial performance in Kenya. Among the financial performance metrics examined were return on equity, return on assets, and net profit.This section summarizes the study's findings and the conclusions that led to the recommendations. To close the gaps in the study, recommendations for additional investigation and study were noted. The study aimed to achieve five distinct objectives, from which its conclusions and findings were derived. Thus, the three sections of this chapter are the summary of findings, the conclusions, and the recommendations.

5.2 Summary of study findings

The purpose of the study was to investigate how credit risk management affected MFIs' financial performance in Kenya. The study specifically evaluated how the financial performance of microfinance organizations was affected by credit evaluation, credit risk control, credit terms, and credit acceptance. The following is a summary of the study's findings.

5.2.1 Credit Appraisal and financial performance

The impact of Credit Appraisal on the bottom line of Kenyan microfinance institutions was evaluated by measuring their level of market success. The evaluation of a client considers both the collateral and the nature of the consumers requesting loans. The results show that MFIs have qualified staff members who can perform client assessments. A significant portion of MFIs' usage of credit evaluation in credit management was discovered by the study, indicating that

client appraisal is a workable approach for credit management and that collateral considerations are taken into account when evaluating clients. Credit Appraisal explains 68.0% of the variance in MFI profitability and enhances financial performance, according to the data, which also revealed a very strong positive correlation of 0.825 and a regression equation of

$Y = 0.682 + 0.919X1$.

5.2.2 Credit Risk Control and Financial Performance

The impact of credit risk management on Kenya's microfinance institutions' profitability was investigated in this study. The study's findings indicate that MFIs use credit risk control extensively in credit management.

Regular credit checks enhance credit management; late payment penalties fortify borrowers' resolve to repay loans; credit committee participation in loan decision-making is essential to reducing default/credit risk; these conclusions were established by the study, as evidenced by the findings. A regression equation of $Y = 0.921 + 0.801X2$ and a strong positive correlation of 0.753 indicated that credit risk control explains 92.10% of the variance in MFI profitability and enhances financial performance by 80.1%.

Poudel (2012) examined the financial performance of Kenyan commercial banks and found that credit risk control was essential to MFI credit management. The research indicates that most Kenyan banks have good Credit Risk Control practices, which positively impacts the country's commercial banking industry's profitability.

5.2.3 Credit Terms and financial performance

Examining how Credit Terms affect the profitability of Kenya's microfinance institutions was the aim of this study. For microfinance organizations who decide to "modularize" adverse credit

terms, negative net profit is the reality. This leads to capital shortages, other liquidity issues, and financial stress. Using more loans results in increased default risk, harm to the company's reputation, and the same high internal risk weight, all of which have a detrimental impact on financial performance.

However, microfinance institutions experience positive financial outcomes when they employ loans to fund trade credit activities. It enhances operations without causing the financial strain that comes with taking out loans. This investigation shows that variations in credit terms had an effect on the financial performance of microfinance firms in Kenya. A change in effective credit terms can improve the financial performance of MFIs by 75.6%, according to the results, which also showed that credit terms had a positive correlation R2 = 0.457, which indicated that credit terms account for 45.7% of the variance in the Financial Performance and a regression equation of Y = 1.162 + 0.756X3.

Muturi (2016) came to the conclusion that credit terms have an impact on MFIs' bottom lines after analyzing the impact of credit management techniques on deposit-accepting microfinance institutions in Kenya.

5.2.4 Credit Risk Management and financial performance

This study set out to investigate how credit risk management affected Kenya's microfinance companies' bottom lines. The speed at which credit applications were accepted had a significant negative influence on the bottom lines of microfinance organizations. As most institutions have set rules on the credit risk management process, credit risk management procedure is essential for credit risk management. Credit risk management, according to the research, demonstrates a strong positive correlation of 0. 718 and a regression equation of Y = 0.996 + 0.672X4, which

indicates that it enhances financial performance by 67.2% and explains 99.6% of the variance in MFI profitability. A one percentage point reduction in credit risk management timeframes is predicted to result in a 0.672 point gain in financial performance.

5.3 Conclusions

The study provides insightful information about how credit risk management affects microfinance institutions' ability to operate financially. The findings indicate that one important component in determining MFI effectiveness is credit risk management. Thus, by putting into practice efficient credit risk management procedures, MFIs can enhance their financial performance. The findings show that MFIs mostly depend on credit risk management to raise profitability and reduce loan default losses. As a result, the study's findings refute the null hypothesis and demonstrate that credit risk management significantly and favorably affects MFI performance.

5.2 Recommendations

Credit risk management should be a top priority for microfinance. They should create and implement a thorough policy and procedure for managing credit risk, assess each borrower's credit risk thoroughly, monitor each borrower's creditworthiness on a regular basis, take appropriate action to manage and mitigate credit risks, and think about getting credit insurance to protect themselves from losses brought on by loan defaults. In addition, take into account the following suggestions: train employees, put policies and processes in place for credit risk,

evaluate borrower creditworthiness using credit scoring models and other instruments, and lower the possibility of bias and human mistake.

5.5 Areas for further research

According to the study, there is a significant correlation between credit risk management and financial performance. However, more research is needed to pinpoint the precise credit risk management approaches that have the biggest effects on financial performance, such as Sacco's s to compare study results, conduct research on MFIs that are not registered with the Association of Microfinance Institutions and include firm size as a moderator.

REFERENCES

Achou and Tenguh (2008). Credit Risk Management and the Financial Performance of Microfinance Institutions. *Journal of Microfinance*

Addae, J. (2014). The impact of microfinance on the performance of small and Medium-sized enterprises in Ghana. Journal of Small Business and Enterprise Development, 21(1), 105- 126.

Akerlof, G. A. (1970). The market for lemons: Quality uncertainty and the market mechanism. The Quarterly Journal of Economics, 84(3), 488-500.

Al-Khouri, A. (2011). The impact of microfinance on poverty reduction in Jordan. Journal of Economic Development, 36(3), 23-45.

Acerbi, C. & Scandolo, G. (2007). Liquidity risk theory and coherent measures of risk. *Quantitative Finance*, *8*(7), 681-692.

Addae-Korankye, A. (2014). Causes and control of loan default/ delinquency in microfinance institutions in Ghana. *American International Journal of Contemporary Research*, 4(12), 36-45

Adu, K. A., Gyeke-Dako, A., & Agyire-Tettey, K. (2018). Credit risk management and financial performance of selected rural banks in Ghana. *Journal of Risk and Financial Management, 11(4), 74.*

Aduda, J. & Kalunda, E. (2012). Financial Inclusion and Financial Sector Stability with Reference to Kenya: A Review of Literature. *Journal of Applied Finance &Banking*, *2*(6), 95-120.

Aduda, J. & Kalunda, E. (2012). Kenya: A Review of financial inclusion and financial sector stability with reference to Literature. *Journal of Applied Finance & Banking*, 2(6), 95-120.

Ahmed, S. F., & Malik, Q.A. (2015). Credit risk management and loan performance: empirical investigation of microfinance banks of Pakistan. *International Journal of Economics and Financial Issues*, 5(2), 574-579

Akotey, S. O., & Agyei, B. (2017). The effect of credit risk management on the financial performance of microfinance institutions in Ghana. *International Journal of Accounting and Finance*, 18(1), 1-16.

Alshatti, A. S. (2014). The effect of the liquidity management on profitability in the Jordanian commercial banks. *International Journal of Business and Management*, 10(1), 62

Alshatti, A. S. (2015). The effect of credit risk management on financial performance of the Jordanian commercial banks, *Investment management and financial innovations*, 12(1), 338

AMFI (2013). Annual Report on the Microfinance Sector in Kenya. 2ed.

Araya, D., & Hailu, R. (2019). The impact of credit risk management on the financial performance of microfinance institutions in Ethiopia. *Journal of Financial Management and Investment*, 11(1), 86-97.

Asiedu, E., & Owusu-Acheampong, O. K. (2013). Credit risk management and financial performance of microfinance institutions in Ghana. *International Journal of Business and Management*, 8(12), 125-138.

Atieno, J. A. (2016). The effect of credit risk management on the financial performance of microfinance institutions in Kenya. *Unpublished master's thesis, University of Nairobi, Nairobi, Kenya.*

Ayele, G. (2015). Microfinance Institutions in Ethiopia, Kenya and Uganda: Loan Outreach to the Poor and the Quest for Financial Viability. *African Development Review*, 27(2), 117-129.

Ayele, G. (2015). Microfinance institutions in Ethiopia, Kenya and Uganda: Loan outreach to the poor and the quest for financial viability. *African Development Review*, 27(2), 117-129.

Bagh, M. S., Khan, M. W., & Sadaf, F. (2017). The impact of microfinance on the empowerment of women in Pakistan. Journal of Women's Empowerment and Policy, 35(2), 155-178.

Bawuah, D. O. (2014). The role of microfinance in promoting agricultural development in Ghana. Journal of Rural Studies, 36, 345-357.

Bhattarai, S. H., Dasah, J., & Agyei, S. K. (2012*).* Credit risk and profitability of selected banks in Ghana. *Journal of Finance and Accounting*, 3(7)

Bhattarai, Y. R. (2016*).* Effect of credit risk on the performance of Nepalese commercial banks, *NRB Economic Review*

Bougatef, K. (2017). Determinants of bank profitability in Tunisia: Does corruption matter? *Journal of Money Laundering Control*, 20(1), 70-78

Castillo, E., & Rojas, M. (2009). The impact of microfinance on poverty reduction in Mexico. Journal of Latin American Studies, 41(3), 457-489.

Catherine (2020) found that microfinance had a positive impact on women's empowerment in Kenya, as evidenced by increased levels of income, savings, and decision-making power.

Catherine, A. (2020). The impact of microfinance on women's empowerment in Kenya. Journal of International Development, 32(3), 485-504.

Catherine, R. (2020). The role of ICT in the development of the financial sector in Rwanda. Journal of Financial Technology, 11(3), 216-231.

Chen, L., & Pan, G. (2012). The impact of information technology on firm performance in China: A meta-analysis. Journal of Management Information Systems, 29(1), 119-153.

Creswell, J. W. (2003). Research design: Qualitative, quantitative, and mixed methods approaches (2nd ed.). Thousand Oaks, CA: Sage Publications.

Caulkin, Simon (2005). Outsourcing and out of control: *The Gate Gourmet deal has exposed the pitfalls, The Observer 4th September*.

CBK. (2006).The Microfinance Act 2006. No. 19 *Central Bank of Kenya report (2013):*

Central Bank of Kenya. (2015). *Kenya Financial Sector Stability Report 2014*.

Central Bank of Kenya. (2021). Microfinance Supervision Report. Nairobi, Kenya*: Central Bank of Kenya.*

Cooper, D. R. & Schindler P. S. (2007). International Edition: Business Research Methods (8th ed.). *New Delhi: MacGraw-Hill*.

Darko, E. (2013). The impact of microfinance on poverty reduction in Ghana. Journal of African Economies, 22(3), 335-357.

Derban, A. (2010). The influence of corporate governance on firm performance in Morocco. International Journal of Accounting and Finance Management, 22(3), 254-276.

Diamond, D. W. (1984). Financial innovation. Journal of Economic Literature, 22(2), 232-291.

Dathe, A., & Le Saout, A. (2015). The role of microfinance in promoting financial inclusion in developing countries: A review of the literature. Journal of Economic Development, 40(2), 1-32.

Davis, G., & Pecar, B. (2013). Business statistics using Excel. Oxford: *Oxford University Press*

Diamond, D. W., & Dybvig, P. H. (1983). Bank runs, deposit insurance, and liquidity. Journal of Political Economy, 91(3), 401-419.

Diamond, D. W., & Rajan, R. G. (2000). A theory of bank capital. Journal of Finance, 55(3), 1085-1138.

Dillman, D. A. (2000). Mail and Internet surveys: The tailored design method (2nd ed.). New York, NY: John Wiley & Sons.

.

Ebrahim, A, Khalil. A, Kargbo. M, & Xiangpei, HU. (2015).The casual relationship model between commercial banks' performance and risk management in Yemen: Panel Evidence. *Journal for Studies in Management and Planning*, 1(5), 117-134.

Ernest, S. A., & Fredrick, S. O. (2017). Impact of credit risk management on the profitability of selected commercial banks listed on the Ghana stock exchange. *Journal of Economics, Management and Trade,* 20(2), 1-10.

Fama, E. F. (1980). Efficient capital markets: A review of theory and empirical.

Fernandez-Castillo and Gutiérrez-Rojas (2009) found a significant inverse association Between depression and academic performance in adolescents.

Fernández-Castillo, A., & Gutiérrez-Rojas, M. E. (2009). Selective attention, anxiety, depressive Symptomatology and academic performance in adolescents. Electronic Journal of Research in Educational Psychology, 7(1), 49–76

Gabilondo, J. (2016). Bank Funding, Liquidity, and Capital Adequacy*:* A Law and Finance Approach. Cheltenham, UK: Edward Elgar Publishing.

Garcia, M. T., & Guerreiro, J. M., (2016). Internal and external determinants of banks profitability the Portuguese case. *Journal of Economic Studies*, 43(1), 90-107

Gashayie, A. & Singh, D. (2015). Factors that affect financial sustainability of microfinance institution: literature review. *European Journal of Business and Management,* 7(7), 223-225. *International Journal of Business and Social Research*, 2(4), 221-236.

Gashayie, A. & Singh, D. (2015). Factors that Affect Financial Sustainability of Microfinance Institution: Literature Review. *European Journal of Business and Management, 7*(7), 223-225.

Gatuhu, M. T. (2014). The effect of foreign exchange rate fluctuation on the financial performance of listed companies in Kenya. *Master's in Business Administration project, University of Nairobi.*

Gibson, T. M. (2012). The role of microfinance in promoting financial inclusion. American

Journal of Economics and Sociology, 71(4), 821-845.

Gizaw, A., Kebede, Y., & Selvaraj, R. (2015). The impact of microfinance on poverty reduction in Ethiopia: A review of the literature. Journal of African Economics, 24(1), 1-21.

Gieseche, R. F. (2004). The role of the financial system in economic growth: A survey of the Literature. Journal of Economic Literature, 42(2), 373-412.

Gujarati, D. N. (2008). Basic econometrics (5th ed.). New York, NY: McGraw-Hill.

Gurley, J. G., & Shaw, E. S. (1960). Money in a theory of finance. Washington, DC: Brookings Institution.

Guttentag, J. M., & Lindsay, R. P. (1968). The role of financial institutions in the supply Of money and credit in the United States. The American Economic Review, 58(4), 539-550.

Gibson, C. (2012). Financial Reporting and Analysis (13th ed.). *Mason, Ohio: Cengage Learning.*

Gizaw, M., Kebede, M., & Selvara, S. (2013). The impact of credit risk on profitability performance of commercial banks in Ethiopia. *African Journal of Business Management*, 9(2), 59-66.

Gregory, J. (2010). Counterparty Credit Risk*:* The new challenge for global financial markets. Chichester, West Sussex:

Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. Journal of financial economics, 3(4), 305-360.

HKIB, H. (2012). *Credit Risk Management*. Hoboken. Hansen, D. R., & Mowen, M. M. (2005). Cost management: Accounting and control (5th ed.).

Hosna, M. A., Sarker, S. A., & Hasan, M. A. (2009). The impact of microfinance on Poverty reduction in Bangladesh. Journal of Asian Economics, 20(1), 78-94.

John Wiley & Sons. Healey, J. (2014). Statistics: A Tool for Social Research. *Stamford, USA: Cengage Learning.*

John Wiley & Sons. Kairu, P. K. (2009). Credit Management. Nairobi: *Focus Publishers Ltd.*

Juliana, S. I. (2017). The impact of credit risk on the financial performance of Chinese banks. *Journal of International Business Research and Marketing*, 2(3), 46-52.

Kargi, A. (2011). The impact of microfinance on poverty reduction in Turkey. Journal of

Economic

Kebede, G., & Selvaraj, H. (2015). The impact of microfinance on poverty reduction in Ethiopia. Journal of African Economies, 24(3), 345-367.

Kifworo, C. M. (2020). The Role of Constraints in Determining Domestic Tourism Participation Behaviour: A Comparison of the Perspectives of Domestic Tourism Participants and Non-Participants.

Kithinji, M. (2010). The role of microfinance in promoting financial inclusion in Kenya. Journal of African Economies, 19(2), 217-239.

Kolapo, T. A., Adedoyin, I. O., & Olowe, R. A. (2012). The impact of microfinance on he Performance of small and medium-sized enterprises in Nigeria. Journal of Small Business and Enterprise Development, 19(4), 538-558.

Kothari, C. R. (2007). Research methodology: Methods and techniques (2nd ed.). New Delhi, India: New Age International.

Kalui, F. M. (2015). Effects of credit risk management procedures on financial performance among microfinance institutions (MFIs) in Kenya: *A case of MFIs in Nairobi country. International Journal of Humanities Social Sciences and Education* 2(3), 81-103.

Kaplanski, G., & Levy, H. (2013). Value-at-risk capital requirement regulation, risk taking and asset allocation: a mean–variance analysis. *The European Journal of Finance*, *21*(3), 215-241.

Kinde, B. A. (2012). Financial Sustainability of Microfinance Institutions (MFIs) in Ethiopia. *European Journal of Business and Management, 4(15), 1–10.*

Kinyua, M. (2019). The impact of credit risk management on the financial performance of microfinance institutions in Kenya: A case study of selected MFIs in Kiambu County. *Unpublished master's thesis, Kenyatta University, Nairobi, Kenya.*

Kipkemboi J. M. (2013). The relationship between credit risk management practices and financial performance of micro finance institutions in Kenya, *unpublished MBA project, University of Nairobi.*

Kisala, P.M. (2014). *Th*e effect of credit risk management practices on loan performance in microfinance institutions in Nairobi, Kenya, *unpublished MBA project, University of Nairobi.*

K. Ndung'u (Eds.), Microfinance and poverty reduction in Africa (pp. 123- 145). New York, NY: Routledge

Kolapo, T. F., Ayeni, R., Kolade, O., & Ojo. (2012*).* Credit risk and commercial banks' performance in Nigeria. *A panel model approach. Australian Journal of Business and Management Research,* 2(2), 31-38.

Korir, S. (2014). The Effect of Credit Risk Management on Financial Performance of Deposit Taking Microfinance Institutions in Kenya, *unpublished MBA project, University of Nairobi.*

Ledgerwood, J., Earne, J., & Nelson, C. (2013). The new microfinance handbook. *Washington, DC: World Bank.*

LiLeland, H. E., & Pyle, D. H. (1977). Information asymmetries, financial structure, and investment decisions. Journal of Finance, 32(2), 371-387

Li, F., & Zou, Y. (2014). The impact of credit risk management on profitability of commercial banks. *A study of Europe, Umea School of Business and Economics*

Lybeck, J. (2011). A Global History of the Financial Crash of 2007–10. UK: *Cambridge University Press.*

M.E.Sharpe Omondi, O. (2015). Basel Accords on Risk Management: A Survey of Kenya's Commercial Banks. *J Glob Econ*, *03*(04), 1-9.

Malik, M. N., Khan, S. H., & Mahmood, A. (2016). The impact of microfinance on poverty reduction in Pakistan. Journal of Asian Economics, 4(2), 123-145.

Magnifique, J. U. (2013) The Effect of Credit Risk Management on The Financial Performance of Commercial Banks in Rwanda, *unpublished MBA project, University of Nairobi.*

Malik, S., Awais, M., & Khursheed, M. (2016). Impact of liquidity on profitability. *A Comprehensive Case of Pakistan's Private Banking Sector. International Journal of Economics and Finance*, 8 (69)10, 5539.

Marcucci J. & Quagliariello, M. (2016). Is bank portfolio risk pro cyclical? Evidence from Italy using a vector auto regression. *Journal of International Financial Markets, institutions and Money*, 18, 46-63.

Mashoko, N. (2020). The impact of globalization on the Zimbabwean economy. Journal of the African Development Review, 32(2), 123-145.

Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs, and ownership structure. Journal of Financial Economics, 3(4), 305-360.

Merton, R. C. (1995). A theory of rational action. The Bell Journal of Economics and Management Science, 14(1), 163-183.

Mitchell, M., & Jolley, J. (2012). Research design explained (8th ed.). *New York: Cengage Learning*

Moti, S., Awan, M. U., & Khan, A. H. (2012). The influence of corporate governance on firm performance in Pakistan. International Journal of Accounting and Finance Management, 24(3), 254-276.

Mugenda, O. M., & Mugenda, A. G. (2008). Research methods: Quantitative and qualitative approaches. Nairobi, Kenya: Acts Press.

Murthy, U., & Mariadas, P.A. (2017). An exploratory study on the factors contributing Loan repayment default among the micro finance institutions in Shah Alam, Selangor, Malaysia. *International Journal of Business and Management* 12(12), 242- 250.

Musyoki, M. K., & Kadubo, J. M. (2011). The impact of information technology on firm performance in Kenya: A meta-analysis. Journal of Management Information Systems, 28(2), 123-145.

Musyoki, J. K., & Kadubo, J. M. (2015). The impact of microfinance on poverty reduction in Kenya: A review of the literature. Journal of African Economics, 24(1), 1-21.

Muturi, E (2016). Effect of credit management practices on loan performance in deposit Taking microfinance banks in Kenya. International Journal of Innovations, Business and Management, 10(1).

Muthuri Wanyonyi, J., & Ndamburi, M. (2017). The impact of globalization on the Kenyan economy. Journal of the African Development Review, 29(2), 123-145.

.

Munene, P. (2014). The Role of Micro-Finance Institutions to the Growth of Micro and Small Enterprises (MSE) in Thika, Kenya (Empirical Review of Non-Financial Factors. *International Journal of Academic Research in Accounting, Finance and Management Sciences,* 252.

Murage, C. W. (2014). The effect of credit risk on corporate liquidity of deposit taking microfinance institutions in Kenya. *Unpublished MBA project, University of Nairobi*.

Murage, C. W. (2014). The Effect of Credit Risk on Corporate Liquidity of Deposit Taking Microfinance Institutions in Kenya, *unpublished MBA project, University of Nairobi.*

Murage, C. W. (2014). The Effect of Credit Risk on Corporate Liquidity of Deposit Taking Microfinance Institutions in Kenya, *unpublished MBA project, University of Nairobi.*

Muriithi, J. G., Waweru, K. M., & Muturi, W. M. (2016). Effect of credit risk on financial performance of commercial banks Kenya. *IOSR Journal of Economics and Finance,* 7(4), 72-83

Muriuki, C., Maru, L., & Namusonge, M. (2015). Sustainability Dilemmas: Mission Drift and Performance of Microfinance Institutions in Kenya. *International Journal of Development and Economic Sustainability*, *3*(5), 47-60.

Muriuki. C. Maru, L., & Namusonge, M. (2015). Sustainability dilemmas: mission drift and performance of microfinance institutions in Kenya. *International Journal of Development and Economic Sustainability*, 3(5), 47-60.

Murthy, U., & Mariadas, P.A. (2017). An exploratory study on the factors contributing loan repayment default among the micro finance institutions in Shah Alam,

Selangor, Malaysia. *International Journal of Business and Management* 12(12), 242-**250**

Musyoka, K. B. (2017). Effect of capital adequacy on financial performance of commercial bank in Kenya. *Published Research Project, MBA University of Nairobi*

Muthoni, L. N., & Kung'u, G. J. (2016). The effect of credit risk management on financial performance of commercial banks in Kenya. *International Journal of Business and Commerce*, 6(5), 22-39.

Muturi, E (2016). Effect of credit management practices on loan performance in deposit taking microfinance banks in Kenya. *International Journal of Innovations, Business and Management*, 10(1)

Muturi, E., & Rotich, G. (2016*).* Effect of credit management practices on loan performance in deposit taking microfinance banks in Kenya. *International Journal of Innovations, Business and Management*, 10 (1)

Mwema, C. (2020). Social networks and commercialization of African indigenous vegetables in kenya: A Cragg's double hurdle approach. Cogent Economics & Finance, 7(1), 1642173.

Naeem, M., Baloch, O. B., & Khan, A. W. (2017*).* Factors affecting banks' profitability in Pakistan. *International Journal of Business Studies Review*, 2(2), 33-49

Neelankavil, J. (2015). International business research. Ar*monk, N.Y*

Ndunda, M., & Ndunda, E. (2018). Credit risk management practices and financial performance of deposit-taking microfinance institutions in Kenya. *International Journal of Social Sciences, Arts & Humanities,* 6(2), 145-162.

Ndegwa, S. M. (2016). The effect of credit risk on the financial performance of commercial banks listed at the Nairobi securities exchange. *Ndulu, J. K.* (2016). *A case for a Microfinance Regulatory Framework in Kenya*

Nduwayo, A. (2015). The impact of microfinance on poverty reduction in Rwanda. Journal of African Economies, 24(3), 345-367.

Ngumi, J. K. (2013). The role of ICT in the development of the financial sector in Kenya. Journal of Financial Technology, 4(3), 123-134.

Ngugi, V. W., & Kerongo, F. (2014*).* Effects of micro-financing on growth of small and micro enterprises in Mombasa County. *International Journal of Scientific Engineering and Research* 2(4), 138-142

Njeru, J., Nyaga, S., & Karugu, W. (2016). The influence of corporate governance on firm performance in Kenya. International Journal of Accounting and Finance Management, 28(4), 456-478.

Nyabicha, M. (2017). The impact of globalization on the Rwandan economy. Journal of the African Development Review, 29(1), 23-45.

Nyang'au, C. N. (2020). Contesting the gendered social order in the Maasai Mara National Reserve, Kenya. Gender & Development, 28(2), 217-232.

.

Nyabicha, O. O. (2017*).* Effect of credit risk management on financial performance of commercial banks listed at the Nairobi securities exchange, Kenya. *Unpublished Master Thesis, Kenyatta University*

Nyongesa, S., & Choge, B. (2019). Credit risk management and financial performance of microfinance institutions in Kenya. *Journal of Economics and Sustainable Development*, 10(4), 222-232.

Okaro, C., & Kenneth, W. (2013). The influence of corporate governance on firm performance in Kenya. International Journal of Accounting and Finance Management, 25(3), 254-276.

Olalere, A. O., & Wan, A. K. (2016). The impact of information technology on firm performance in Malaysia: A meta-analysis. Journal of Management Information Systems, 33(2), 189- 211.

Olawale, F. O. (2015). The impact of corporate social responsibility on firm performance in Nigeria. Journal of Business Ethics, 145(6), 987-1009.

Osuji, C. U. (2020). Global Education Marketing: Using Distance Learning to Export Knowledge Implications on Globalization.

Otieno, S. & Nyagol, D. (2016). Relationship between Credit risk management and financial performance: empirical evidence from microfinance banks in Kenya. *Research Journal of Finance and Accounting*, *7*(6), 1 55-138.

Öttker-Robe, I., & Podpiera, J. (2010). The fundamental determinants of credit default risk for European large complex financial institutions. *[Washington, D.C.]: International Monetary Fund.*

Öttker-Robe, I., & Podpiera, J. (2010). The fundamental determinants of credit default risk for European large complex financial institutions. [Washington, D.C.]: *International Monetary Fund.*

Owizy, D. (2013). The impact of globalization on the Iranian economy. Journal of the Asia Pacific Economy, 18(4), 456-478.

Patten, D. M., & Newhart, M. J. (2017). The role of corporate governance in preventing financial fraud. Journal of Accounting and Public Policy, 36(1), 23-45.

Podpiera, A. (2010). The impact of corporate social responsibility on firm performance in Poland: A meta-analysis. Journal of Business Ethics, 99(2), 233-253.

Poudel, R. (2012). The Impact of Credit Risk Management on Financial Performance of Commercial Banks in Napal. *International Journal of Arts and Commerce*, 1, 9-15

Rahman, M. & Mazlan, A. (2014). Determinants of Financial Sustainability of Microfinance Institutions in Bangladesh. *International Journal of Economics and Finance*, *6*(9), 107-115.

Rahi, S. S. (2017). The role of corporate governance in promoting sustainable development. Journal of Business Ethics, 165(3), 479-498.

Reicheld, F. F., Markey, R. J., & Oliver, R. L. (2010). Customer experience: The next frontier for business. Harvard Business Review, 88(9), 82-90.

Riwai, M. K., & Simba, K. M. (2020). The impact of credit risk management on financial performance of microfinance institutions in Kenya: A case study of Faulu Kenya. *International Journal of Scientific & Technology Research,* 9(5), 2266-2274.

Rosli, A., (2010*).* Risk reporting: An exploratory study on risk management disclosure in Malaysian annual reports. *Managerial Auditing Journal,* 24(1), 39-57

Salike, N., & Ao, B. (2017). Determinants of bank's profitability: Role of poor asset quality in Asia. *China Finance Review International*

Sikolia, J. K., & Miroga, O. (2018). The influence of corporate governance on firm performance in Kenya. International Journal of Accounting and Finance Management, 26(3), 259-280.

Simiyu, W. K. (2008). The impact of microfinance on poverty reduction in Kenya. Journal of International Development, 20(1), 78-94.

Sindani, K. (2012). The role of ICT in the development of the financial sector in Kenya. Journal of Financial Technology, 3(2), 67-78.

Singh, G., & Sharma, A. (2016). The impact of globalization on the Indian economy. Journal of Global Economics, 4(2), 123-145.

Singh, G., & Sharma, A. (2016). The impact of globalization on the Indian economy. Journal of Global Economics, 4(2), 123-145.

Singparwalla, N. (2017). The impact of corporate social responsibility on firm performance in India. Journal of Business Ethics, 165(3), 457-478.

Sobehart, J. R., Smith, J. L., & Westerman, G. (2014). The impact of information technology on firm performance: A meta-analysis. Journal of Management

Information Systems, 31(1),119-153.

Soke Fun Ho, L., & Yusoff, W. M. (2009). The impact of corporate governance on firm performance in Malaysia. Journal of Asian Business, 25(3), 233-253.

Suryadeva, R. (2017). The impact of globalization on the Indonesian economy. Journal of the Asia Pacific Economy, 22(3), 335-357.

Schaltegger, A.K., & Wagner, S. (2011*).* Effect of working capital management on firm profitability: Empirical evidence from India. *Global Business Review*, 12(1), 159 –173

Schaltegger, S. & Burritt, R.L. (2010). 'Sustainability accounting for companies, catchphrase or decision support for business leaders*?' Journal of World Business*, 45(4), 375–84

Scheufler, N.B. (2012). Effectiveness of credit risk management and its impact on financial performance of banks in Bangladesh: *An Empirical Investigation.*

Schreiner, M., & Woller, G. (2003). Microfinance risk management. *Innovations in microfinance*, 6(2), 1-12.

Seber, G., & Salehi, M. (2012). Adaptive Sampling Designs. *Dordrecht: Springer*.

Serwadda, I. (2018). Impact of credit risk management systems on the financial performance of commercial banks in Uganda. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis*, 66(6), 1627-1635.

Singh, A., & Sharma, A. K. (2016).An empirical analysis of macroeconomic and bank-specific factors affecting liquidity of Indian banks. *Future Business Journal,* 2(1), 40-53.

Smith, M.G. (2014). *South African* measuring association between working capital and return on investment *Journal of Business Management,* 28(1), 44-60

Taiwoo, J. N., Ucheaga, E. G., & Achugamonu, B. A. (2017). Credit risk management: Implications on bank performance and lending. *Saudi Journal of Business and Management Studies*, 2(5), 584-590.

Trenca, I., Mutu, S., & Dezsi, E. (2011). Advantages and Limitations of VAR Models Used in Managing Market Risk in Banks. *Finance - Challenges of the Future*, (13), 32-43.

Uzomba, P. C., Oduntan, E. A., & Nwagbara, U. O. (2019). Credit risk management and financial performance of microfinance banks in Nigeria. *International Journal of Finance and Banking Research*, 5(5), 65-80.

Wanja, D., & Jagongo, A. (2017). Credit policy and financial performance of commercial banks in Kenya: *International Journal of Current Research,* ISSN 0975-833X 9(1), 45912- 45918

Wangechi, J. (2012). Microfinance in Kenya: Opportunities and challenges. In A. O. Okumu & L.

Wong, M. (2013). Bubble value at risk: *A Countercyclical Risk Management Approach*. Singapore: John Wiley & Sons.

Zampara, K., Giannopoulos, M., & Koufopoulos, D. N. (2017*)*. Macroeconomic and industry-specific determinants of Greek bank profitability. *International Journal of Business and Economic Sciences, Applied Research*, 0(1), 13 - 22.

.

.

APPENDICES

Appendix i: A letter of Introduction

Masinde Muliro University of Science and Technology

Department of Business

P.O. Box 190-50100

Kakamega, Kenya,

Dear Respondent,

1 am a postgraduate student at Masinde Muliro University of Science and Technology, School of Business and Economics. I am conducting a research on the **Effect Credit Risk Management on Financial Performance of Micro Financial Institutions in Kenya.** This is in partial fulfilment of the requirements for the award of Master of Business Administration (Finance option).

Kindly fill the attached questionnaire to the best of your knowledge. The information has been used purely for academic purposes and has been treated with utmost confidence. A copy of the final report has been availed to you on request.

Your assistance has been highly appreciated. Thank you.

Yours faithfully,

Aggrey Wandabwa Kadima

Appendix ii: Registered Microfinance Institutions in Kenya

Co-operative Bank of Kenya Ltd
Kenya Post Office Savings Bank
MESPT
Oikocredit
Soluti Finance East Africa Ltd
Kenya Women Microfinance Bank Ltd
Rafiki Microfinance Bank Ltd
Faulu Kenya Microfinance Bank Ltd
SMEP Microfinance Bank Ltd
Key Microfinance Bank Ltd
Century Microfinance Bank Ltd
Sumac Microfinance Bank Ltd
U&I Microfinance Bank Ltd
Caritas Microfinance Bank Ltd
Daraja Microfinance Bank
Maisha Microfinance Bank
Uwezo Microfinance Bank
BIMAS
Vision Fund Kenya Limited
Echo Kenya
Musoni Kenya Ltd
Juhudi Kilimo Co.Ltd
Fincredit Services Ltd
Jitegemea Credit Scheme
YEHU Microfinance Trust
Zenka Finance Ltd
Letshego Kenya Ltd
Stima Sacco Society Ltd Springboard Capital
Hazina Development Trust Limited
MoneyWorth Investment Limited
Premier Credit Limited
Nyali Capital Limited
Swisscontact – Swiss Foundation Tech. Coop.
My Credit Ltd
Diversity Microcredit Ltd
Liberty Afrika Technologies Limited
Hand in Hand Eastern Africa
Kipepeo Microcredit Limited
ASA Ltd
Jiweze Ltd
Longitude Finance
Weighbridge Ventures ltd
Momentum Credit
PAWDEP
Progressive Credit Ltd
Ushindi Bora Ltd
Neema Health Educational & Empowerment Programme (NEEMA HEEP Ltd)
Real People Ltd
Habitat for Humanity International
Greenland Fedha Ltd
Select Management Services Ltd

Appendix iii: Questionnaire for credit managers of micro finance institutions

Section A: Demographic Information

Please use a tick to select your response to the questions.

What is your Gender?

Male [ ] female [ ]

What is your highest level of education?

Certificate [ ]

Diploma [ ]

Degree [ ]

Masters [ ]

e) PhD [ ]

What is your age in years?

24- 30 yrs [ ] 31- 35 yrs [ ]

36-40 yrs [ ] 41-45 yrs [ ]

46-50 yrs [ ] Over 50 yrs[ ]

How long have you served in this organization

1 – 5 years [ ]

6 – 10 [ ]

Over 10 years [ ]

Section B: The Effect of Credit Risk Management on Financial Performance of Micro Finance Institutions in Kenya.

1. Credit Appraisal on Financial Performance

What is your opinion on the following statements in relation to the effect of Credit Appraisal on Financial Performance of Micro Financial Institutions in Kenya? Use the ratings criteria below.

Credit Appraisals	1	2	3	4	5
Our MFIs operates within sound, well-defined credit appraisal criteria.					
Our MFIs has established overall credit limits both at individual borrowers and counterparties level.					
Our MFIs has a clearly established process for approving new and re-financing of existing credit.					
All extensions of credit are made on an arm's-length basis.					
A sound credit appraisal process affect loan performance.					
Credit risk management system operate under a sound credit appraisal process.					

Strongly Agree 2. Agree, 3. Neutral, 4. Disagree, 5. Strongly Disagree

2. **Credit Risk Control on Financial Performance**

What is your level of agreement on the following statements relating to the Effect of Credit Risk Control on Financial Performance of Micro Financial Institutions in Kenya? Use the ratings criteria below.

5 Strongly Agree, 4 Agree, 3 Neutral, 2 Disagree, 1 Strongly Disagree

Credit Risk Control	1	2	3	4	5
The board of directors approves the credit risk strategy and significant credit risk policies of the MFIs.					
The senior management in our bank strictly implements the credit risk strategy approved by the board of director.					
The senior management in our bank develops policies and procedures for identifying, measuring, monitoring and controlling credit risk.					
The credit risk policies and procedures developed address credit risk in all the MFIs activities and at both the individual credit and portfolio levels.					
Our bank identifies and manages credit risk inherent in all products and activities.					

3. Credit Terms on Financial Performance

What is your level of agreement on the following statements relating to the effect of Credit Terms on Financial Performance of Micro Financial Institutions in Kenya? Use the ratings criteria below.

5. Strongly Agree 4. Agree, 3. Neutral, 2. Disagree, 1. Strongly Disagree

Technical product variety release	5	4	3	2	1
Our MFIs has a system for the on-going administration of various credit risk-bearing portfolios.					
The rating system is consistent with the nature and complexity of our bank's activities.					
Our MFIs have information systems and analytical techniques that enable management to measure the credit risk inherent in all on- and off-balance sheet activities.					
The management information system should provide adequate information on the composition of the credit portfolio.					
Our MFIs take into consideration potential future changes in economic conditions when assessing individual credits and their credit portfolios.					
Our MFIs has a system for monitoring the condition of individual credits, including determining the adequacy of provisions and reserve.					

4. Credit Approvals on Financial Performance

What is your opinion on the following statements relating to the effect of Credit Approvals on Financial Performance of Micro Financial Institutions in Kenya? Use the ratings criteria below.

5. Strongly Agree 4. Agree, 3. Neutral, 2. Disagree, 1. Strongly Disagree

Credit Approvals	5	4	3	2	1
The results of approval reviews are communicated directly to the board of directors and senior management.					
The Internal control system ensures that exceptions to policies, procedures and limits are reported in a timely manner to management for any approval.					
Approvals of any funding follows the laid down procedures as laid down in the strategic plan.					
Approval processes follow the ISO standards regulations.					
Only senior officers are mandated to make any approval.					
System integration of all departments acknowledges all processes executed.					

Appendix iv: Record Survey Sheet

	2016	**2017**	**2018**	**2019**	**2020**
Net profit					
Return on Capital Employed					
Turn over					

Appendix v: Research license

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

REPUBLIC OF KENYA

Ref No: 767676

RESEARCH LICENSE

Date of Issue: 11/July/2022

This is to Certify that Mr. Aggrey Wandabwa Kadima of Masinde Muliro University of Science and Technology, has been licensed to conduct research in Bungoma, Busia, Kakamega, Nairobi, Siaya, and Transnzoia on the topic: Effect of Credit Risk Management on Financial Performance of Micro Financial Institutions in Kenya for the period ending : 11/July/2023

License **NACOSTI/P/22/18**

76767

Applicant Identification

Director

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Verification QR

NOTE: This is a computer generated License. To verify the authenticity of this document, scan the QR Code using QR scanner application.