

**EFFECT OF CREDIT RISK MANAGEMENT PRACTICES ON FINANCIAL
PERFORMANCE OF MICRO-FINANCE ORGANIZATIONS IN KENYA**

BY

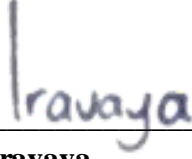
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DECLARATION

This research project is my own creation and has not been presented for any assessment or academic award to any institution of higher learning.

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

I dedicate this project to my mother, Ms. Nganyi, my siblings Victor and Lene-Prudence for both the financial and moral support they accorded me throughout this work.

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ABBREVIATIONS AND ACRONYMS

CRB: Credit Reference Bureau

GDP: Gross Domestic Product

MFI: Micro Finance Institution

NPLR: Non Performing Loans

NSE: Nairobi Securities Exchange

NWC: Net Working Capital

ROA: Return on Assets

ROE: Return on Equity

ABSTRACT

The escalating rate of credit risks owing to the soaring rate of none performing loans incurred by the MFIs. This nature of a drift weakens the financial steadiness, financial feasibility, and sustainability of the MFIs. However, there is still lacuna of evidence on whether credit risk management practices such as, credit risks analysis, credit risks identification and credit risks monitoring influence financial performance of MFIs firms. The purpose of the present study sought to assess the influence of Credit Risks Management approaches on fiscal performance of Micro-Finance Organizations in Kenya. This study was guide by modern portfolio theory, liquid risk theory and value at risk theory and used descriptive study design. The study population consisted of 54 registered MFIs in Kenya from which all the 54 risk managers and 54 finance officers were involved in the study through census sampling approach. This study used secondary and primary type of data. For secondary data, yearly report of financial records was obtained from the MFIs finance department, while primary data was sourced through issuance of questionnaires to the 54 risk managers and 54 finance officers. The data was descriptively in form of mean, frequencies and percentages, as well as regression analysis. It was found that risk identification and credit risk analyses process was a very significant component of credit risk management practices. It was also found that risk monitoring was equally useful in making sure that risk management approaches are within suitable risk monitoring and that this practice helps the MFIs in discovering mistakes at their early stage of occurrence. There was a positive and significant association between credit risk management practices and MFI financial performance. The study recommended that tougher measures should be employed in management of credit risks to increase positive financial performance of the MFIs. The MFI management should equally spearhead the adoption and application of credit risks management practices that are viable and practical, such as suitable credit risk environment; working under appropriate credit granting procedures; upholding a suitable credit administration which constitute identification, analysis and monitoring processes as well as sufficient controls over credit risks.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The economic crunch which was experienced in Kenya in 2007 and 2008 as a result of post-election violence, escalated financial credit crisis, and this made most of the financial organizations to focus more on credit risk management practices. As a result, supervisory entities initiated more transparency and accountability approaches to guide these organizations. This necessitated the financial organizations especially the micro finance institution (MFIs) in to have an inclusive information on their client borrowers and credit risk management practices (Lybeck, 2011). Kairu (2009) describes micro-financing as the practice of giving financial services to those public who do not have bank accounts or with meagre-income earners. Similarly, it is described as the maintainable exercise of giving those financial services to low income earners in the society. These financial organizations provide financial credit facilities to meagre income earners, which is a group that is thought to be highly risky with regards to susceptibility to credit risks. Hence, credit risks is described as the prospect of loss due to borrower's inability to fulfil his or her financial obligations such as loan or any other credit facility (HKIB, 2012).

The study is informed by modern portfolio theory, value at risk theory and liquid risk theory. Modern portfolio theory is a model that helps financial organizations and business ventures in building their asset capital base. Markowitz measured risk susceptibility and illustrated that decreasing quantitatively the risk through variation of portfolios would increase return on investment (ROI) for businesses. It takes into account how variation of monetary products lessens credit risks therefore enhancing financial performance of the MFIs. On Liquidity Risk Theory, Acerbi and Scandolo (2007) argues that it is an ultimate pointer that results in eruption of credit risks. Any organization ought to be in a place to categorise as well as classify the liquidity risks in which they are exposed to. In the context of MFIs, the liquidity expectations

alongside liquidity sources depends extensively with the organization's cash flows, operations, product portfolio, and also the status of their balance sheets. Thus, it is expected of any organization in lending business to assess its liquidity status to evade a reducing impact on its earnings and asset capital. This theory therefore, helps in quantifying the risks emanating from portfolios at risk and non-performing loans and ultimately influencing the financial strength and MFI performance. Based on the theory of value at risk, the model is adopted in effort to approximate the possibility of loan losses with respect to the numerical assessments of previous value variations and irregularity. Financial organizations coupled with investment business firms habitually utilise VaR given that it has the capacity to quantify risks as they take place. It is vital concern for business organizations especially when they are making trading decisions (Kaplanski and Levy, 2013). Assessment of Value at Risk can be done through three parameters namely, the likelihood of sum loss, the sum of possible loss and period of time. In the present study, the theory helps in numerically measuring credit risk emanating from portfolios at risk and non-performing loans with respect to financial strength of loaning firms. This theory similarly helps in finding out the prudent risk indicators influencing different portfolios of MFIs.

Based on the existing theoretical and empirical literature, credit risk management practices persist to be a weighty issue among the financial lending organizations especially among the microfinance organizations in Kenya. Proper management of credit risks by MFIs to a large extent influence their success given that these lending institutions produce their earnings and proceeds from interest charged on loans awarded. The current report from the Central Bank Yearly Supervision (2020) reveals an increasing rate of credit risks incurred by MFIs owing to the rising rate of non-performing loans (NPLs) in these lending institutions. Consequently, this worrying drift undermines the viability and the sustainability of the microfinance lending institutions. The present study therefore assess how management practices of credit risks

influence MFI financial performance.

1.1.1 Credit Risk Management Practices

Credit risks management can be described as practical recognising, assessment, evaluation, monitoring and regulation of risks emanating from the likelihood of failing to make loan repayments (Coyle, 2000). In the present world of business, risk management and control is an integral component of sound management practices in a lending institution. Haneef, et al., (2012) also defines credit risk management as the systematic usage of management guidelines and policies, processes, and practices to the work of identifying, assessing and analysing risks in a commercial institution.

This therefore implies that financial steadiness and profitability of a lending organization is mainly hinged on the credit management approaches designed by that organization while meagre financial performance is associated with a weak credit management practices (Ötoker-Robe & Podpiera, 2010). The initial step towards management of credit risk is making sure that the lending officers of the organization adhere to the laid down lending guidelines, policies and standards. The next step is the financial organization should guarantee that their guidelines on credits and policies controls other kinds of credit risk like evergreen loans, syndicate loans, among others and that there is less of individual or personal lending. An organization's management should guarantee a well laid down rules and targets based on loan portfolio mix that are involved in the annual planning at the beginning of every year. Therefore, the observing a loan portfolio ought to be continual to ensure that the present financial performance of a financial organizations fits with the anticipated prospects, and the strength of risk is within acceptable and bearable confines.

Basel Committee on Banking Supervision (2015) illustrates that a good and inclusive management programs of credit risks should take care of four key areas namely, creating a

suitable credit risks environment, working through a good credit disbursement processes; sustaining an apt credit management, assessment, measurement and monitoring approaches and guaranteeing satisfactory controls and regulations of credit risks. Particular management approaches might nonetheless vary among financial institutions based on the nature of their credit activities.

Financial organizations generally should be more sensitivity on the provisions that helps in determining, recognizing and managing credit risks. Moreover, these financial institutions should make sure that their financial assets is adequate to take care of and manage these credit risks and also guarantee superior payment for the risks suffered. Globally, the Banking Supervision committee provides the premises that guides the financial organizations when adopting sustainable and proper credit management approaches. Though majority of the global credit principles accords are adoptable in most of the lending business, it is prudent to use them in every activity that involves credit risks. The main source of capital growth of MFI is the credit portfolio and hence the strength of this portfolio depends on predictable income and ability of the organization to increase its accessibility to existing clients (Ledgerwood, Earne and Nelson, 2013). Although there are various practices in credit management among the MFIs, the current study will use credit risks identification, credit risks analysis and credit risks monitoring by the MFIs in Kenya.

1.1.2 Financial Performance

Financial performance implies assessment of the results and achievements of firms' strategies, frameworks and procedures in fiscal terms. In most cases, the outcomes are shown by institution's profitability, investments return, return on assets and value addition. According to Turyahebya (2013) it is the potential of the firm to work proficiently and generate profits, which in so doing, the makes the organizations to stay afloat, grow and respond to the prospects and

economic hurdles.

Many financial organizations tend to evaluate their financial strength and performance through profit ratios of the organizations. These profitability ratios are major indicators of meaningful credit evaluation and analysis in majority of financial institutions such as MFIs, given that they are associated with the outcome that are hinged on the management performance of the organization (Gibson, 2012).

In assessing the profitability of an organization, most financial organizations use financial ratios to capture the level of return on equity and that on assets (Aduda, and Kalunda, 2012). High amount of ROE ought to be reduced to a minimum of between 14% and 29%, while for return on assets ought to be slightly above 1%. ROE is vital financial indicator in determining profit performance. Moreover, ROE estimates the proficiency of MFIs elucidating level at which MFIs invest their incomes to get their revenues. As explained by Öttker-Robe & Podpiera (2010), measurement of Return on Equity is by computing a company's net twelve-monthly revenue and stockholder equity after deduction of tax.

ROE increase may show that firm's revenue is rising without unavoidably accumulating supplementary capital. Therefore, increase on equity return and return on assets designates that the firm is stable in terms of fiscal strength. Larger return ratios of either ROE or ROA shows increased proceeds for a MFI and its ability extend and be flexible to shocks, thus indications to good response to risks (Öttker-Robe & Podpiera, 2010). The present study will therefore measure financial performance of MFIs through ROE.

1.1.3 Credit Risks Management Practices and Financial Performance

According to Gregory (2010) making appropriate assessment of the extent of credit risks is usually very problematic, temporarily the evidence on non-payment as well as the renaissance rates are not extensive. A study undertaken by Onuko, et al., (2015) on how credit risk management approaches affect the loaning quality of commercial firms in Kenya made a

conclusion that management approaches of credit risks influence the amount of nonperforming resources which in turn affect the loan portfolio quality of the organization, hence influence the overall financial performance of the institution.

Similarly, Haneef, *et al.*, (2012) looked into how credit risks management methods impact the quantity of none-performing loans, and the finally the performance of the financial institutions. The conclusion were that weak or lack of proper risk management practices increased non-performing loans which subsequently negatively influence the profitability of the financial institutions in the lending business.

Based on the prevailing association between management practices of credit risks and financial performance of the lending institutions, there is hence need for these organizations in the lending industry to adopt suitable credit risk management techniques to lessen occurrence of loan defaults or delinquencies to increase loan performance owing to the fact that studies done in the past have established that prudent and appropriate credit risk management practices forms a crucial component of good financial performance of lending firms such as MFIs.

1.1.4 Microfinance Institutions in Kenya

Muriuki, Maru, and Namusonge, (2015) illustrates that Kenya is documented as one of the forefront African republics that champions the vital roles played by MFIs in fighting poverty hence more energies have been focused on promoting and developing MFI sector. Kenya Micro-finance has progressed into diverse formats that comes in form of either formal, semiformal or informal as explained by (Muriuki, Maru, and Namusonge, 2015). When talking of the formal arrangement, these institutions includes commercial fiscal firms, deposit taking microfinance firms and credit only MFIs. On the other hand, semi-formal institutions are in the form of either co-operative societies or NGOs, while informal settings involves those financial institutions that are Accruing Saving and Credit groups and rating Savings and Credit groups.

Ayele (2015) also documents that microfinance sector has progressed and developed into economic platform that helps mostly SMEs. Many MFIs have come in handy to assist the low income earners and SMEs that shy away from accessing the credit facilities from the macro institutions such as commercial banks. These MFIs are; Credit only MFIs, commercial institutions with only MFI services, MFI lenders and SACCOs.

The chief aim of AMFI is to augment and support growth of Micro-finance firms by promoting viable and proficient amenities. AMFI report (2020) showed that in reference to MFIs, the loan portfolio has not performed very well for the last three years and this could attributed to increasing inflation rate that has continued to grapple the county. The report similarly indicated that the profit performance of the MFI sector has been dismal due to low uptake of the credit facilities occasioned by costly lending rates that is also associated with high-risk exposure. Likewise, operations self-sufficiency has declined especially in 2020 due to the Covid 19 pandemic that adversely affected the whole world economically and the decrease explained the reason for decreased performance in amount of deposits in MFIs. Additionally, complex operating costs commanded reduced levels of efficacy and profitability.

1.2 Research Problem

Proper managing of credit risks is the exercise of preventing financial losses related to credit risks with the sole aim of increasing firm's risk adjusted return rate and understanding the sufficiency of financial institution's capital credit loss reserves at a particular point of time. Gitman (1997) indicated that the probability of evasion of payment of loan increases as firm loan measures are overlooked. Societies should subsequently and accordingly guarantee that management of receivables is not just practical, but also correspondingly feasible. These kinds of deferrals on money collection from obligated folks as they grow have higher avoidances, caused terrible financial issues, and affecting customer relations.

Contextually, the asset quality also known as portfolio quality still forms a vital measure of MFIs' financial performance. Up to date, MFIs has continued to increase their products based on deposits provisions, issuing of insurance among many more products. This implies that loaning portfolio is still seen as a chief component of a microfinance asset base. Therefore, asset quality is still a major measurement of a MFI financial viability. Effectiveness and practicability if various methods or practices of managing credit risks undertaken by the MFIs greatly controls the success of the MFIs given that these institutions obtain their proceeds from interest charged on loans disbursed. A report by Central Bank Yearly Supervision (2020) reveals an escalating rate of credit risks owing to the soaring rate of none performing loans incurred by the MFIs. This nature of a drift weakens the financial steadiness, financial feasibility, and sustainability of the MFIs. However, there is still lacuna of evidence on whether credit risk management practices such as, credit risks analysis, credit risks identification and credit risks monitoring influence financial performance of MFIs firms in Kenya.

Many studies have tried to link management of credit risks and financial performance of the lending institutions. For instance, Al-Tamimi (2019) carried out a study on the extent at which UAE commercial financial institutions utilise risk management approaches to manage various kinds of risks, Gizaw, Kebede & Selvaraj (2019) also assessed the effects of credit risk on the level of profitability of financial institutions in Ethiopia and Magnifique (2019) examined the association between management or administration of credit risks and financial performance of Rwandan financial organizations'.

Although many studies on management practices of credit risks and how they influence the fiscal performance of the MFIs, these studies have contextual gaps because most of them have been carried out in countries outside Kenya. Besides, these studies are most based on the macro finance institutions such as commercial banks and not within the context of MFIs. Therefore,

there is scanty of information on how various practices in managing credit risks influence the financial performance of the Kenyan MFIs. This study therefore assessed how credit risk management practices influence performance in terms of finance, of MFIs as measured through their profitability ratios such as ROE and ROA. The study question of this research therefore was that what is the effect of credit risk management practices on financial performance of micro-finance organizations in Kenya?

1.3 Objective of the Study

To assess the effects of Credit Risk Management practices on Financial Performance of Micro-Finance Organizations in Kenya

1.4 Value of the Study

The present study findings will be useful to innumerable to many stakeholders in the world of commerce. To begin with, this research will be helpful to micro-finance organizations especially the administrators as it emphasizes on credit risk management that is the core foundation of commerce for many financial institutions in Kenya. Another important value of this study is that, it will also contribute immensely in the world of commerce by aiding management of MFIs to make well informed choices when controlling and managing their credits.

The study will help researchers and academicians with providing source of knowledge that will be very important whenever they will be researching on the risks control and management. The research will similarly assist the ministry of trade and finance to derive good rules that will aid MFIs management. By doing this, it will lead to better-quality economy in aspects of business investments, capita income and employment. Lastly, policy architects will be advantaged by gaining statistics and material on effect of performance of credit risk management.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section provides previous literature done both theoretically and empirically to establish the nature of association between credit risk management and financial performance among the MFIs. The section also underscores different theories and their relevance to the present study.

2.2 Theoretical Review

The theory can be described as the premise on which the entire research is founded. This study will be guided by modern portfolio theory, liquid risk theory and value at risk theory. Hence, a theoretical model describes crucial attributes that are vital to the research questions and subsequently demonstrate the relationships between these variables.

2.2.1 Portfolio Theory

This theory is also known as modern portfolio model and was postulated by Markowitz Harry in 1952. This theory is largely applicable in banking industry especially by the MFIs and commercial banks. Majority of the MFIs use this model to manage exposure that comes with market dynamics. These models allow the investors to assess the anticipated risks alongside financial proceeds from their investments (Wong, 2013).

Modern portfolio theory is a modified model that has proved to be a prudent idea that helps monetary organizations and business ventures in growing their asset base or portfolios. Markowitz in quantifying risk exposure illustrated that decreasing the risks through portfolio variation would increase return on investment (ROI). The theory permits investors to approximate the anticipated risk and also the projected profits through application of a mathematical assessment of their total capital investment. Markowitz (1952) also demonstrated that the concept of merging up assets helps the business ventures in designing efficient portfolios with varying potential returns. The theory therefore recommends that exposure of

the business ventures to various risks can be averted by merging securities of varied values. Therefore, it can be concluded that diversifying the portfolios lessens the likelihood of exposure to risks if securities are merged, and the values of these securities change contrariwise with regards to each other.

However, one of the main criticism of MPT is that it doesn't consider the real world situation, given that all the assessment measures applied by MPT when quantifying risk exposure are with respect to the projected values, or math demonstrations on the anticipation instead of the prevailing or existing circumstances.

Modern portfolio theory therefore assist in assessing the correlation between portfolio exposed to risks and financial performance of financial institutions. It takes into account how variation of financial products lessens credit risks therefore enhancing financial performance of the financial institutions. Other theories that will informs the topic of the study includes value at risk theory and liquidity risks theory.

2.2.2 Liquidity Risk Theory

The model was first proposed by Keynes when working on the theory of money, employment and interest in 1936. He highlighted on the establishment of interest rate through the supply and demand for finances. The theory explains that when an organization is unable to attract finances through the sale of its assets in the market, then the said organization is said to be susceptible to liquidity risk. The risk is a serious exposure that comes first before any persistent market risk.

Acerbi and Scandolo (2007) argues that it is an ultimate pointer that results in eruption of credit risks, and it's commonly explained as the approach that alters remote loss into extensive failures of financial organizations. Furthermore, any financial organization ought to be in a position to classify the liquidity risks in which they are susceptible to. In the perspective of

MFIs, their cash liquidity expectations and liquidity sources depends extensively with the organization's cash flows, operations, product portfolio, and also the status of their balance sheets. Thus, it is expected of any monetary organization to assess its cash liquidity status to evade a reducing impact on its returns and asset capital.

However, one of the criticism of this model is its presumption of an upward trajectory gradient yield curve that may not be real with a stagnant or recessionary economy. The presumptions works well with a toss in scenarios where there is yield curve showing a flattened or inverse shape. Hence, the theory has its own weaknesses based on its presumptions. Based on the present study, this theory informs the study from the premise that it assists in measuring and quantifying the risks emanating from portfolios at risk and non-performing loans and ultimately influencing the financial strength of the MFIs. The theory also helps in identifying the significant variations in organization revenues and asset capital influencing the general stability of the MFIs.

2.2.3 Value at Risk Theory

This theory was proposed by JP Morgan in 1983 to help in quantifying the financial loss a monetary institution such as banks and MFIs is likely to incur from its portfolio of assets like securities, and bonds when markets plummet. This theory is adopted in effort to approximate the possibility of portfolio losses with respect to the numerical investigations of previous price variations and irregularity. Financial organizations coupled with investment business firms habitually utilize VaR given that it has the capacity to quantify risks as they take place. It is vital concern for business organizations especially when they are making trading choices (Kaplanski & Levy, 2013). Three parameters that can be used to assess Value at Risk are, the likelihood of sum loss, the sum of possible loss and period of time. Teething

However, the biggest criticism of this philosophy is that it does not recognise huge losses above

the threshold. Moreover, two dissimilar loan portfolios may have similar VaR, but have totally dissimilar anticipated levels of loss. VaR computation do not reveal the tail figure of distributions that is nonconformity to the normal distribution. The application of this theory to the present study is from the premise that the model helps in numerically measuring credit risk emanating from portfolios at risk and non-performing loans in reference to financial strength of MFIs. The theory similarly helps in finding out the prudent risk indicators influencing different portfolios of MFIs.

2.3 Determinants of MFI Financial Performance

The potential of Microfinance institutions to make profits can be determined by both external factors and internal predictors. Internal determinants within the context of credit risk management approaches by the MFIs may entail credit risks identification, credit risks analysis and credit monitoring (Rahman & Mazlan, 2014).

2.3.1 Credit Risk Identification

Risk identification practices are strategies that are designed to examine risks that are possibly intending to halt an organization program and ventures from attaining its objectives. A business firm should possess the ability to moderate its risks upon the knowledge of the risks. Therefore, it is expected that a business firm should come up with instruments and methodologies that will aid in recognizing the risks that are likely to occur. It is very imperative to identify the risks that are likely to occur within a business organization and assess their magnitude to impede their happenings.

With importance on MFIs, this signifies that business organizations requires to design a better credit risks management approaches that stress on the differentiating evidence of existing and possible risks that are prone to occur during their credit disbursement practices (Tanui, Wanyoike & Ngahu, 2015). In any business organization, the risk management team has the

obligation of finding out probable occurrence or future variations that might negatively influence the organization's credit portfolio and the financial organizations' ability to endure through its developments (Gakure et al., 2012; Mutua, 2015).

Williams (2007) similarly argues that financial organizations carrying out risk identification must commence with having the knowledge on where these challenges emanate and acquaint themselves with the challenges themselves. He further illustrates that the choice of the identification technique for differentiating risks may be determined by culture, practice and consistency. Moreover, risk identification approaches are modified by formats or designs for identifying the challenge, occasion or issue. Gakure et al., (2012) also realised that the methodologies used for identifying risks are habitually used by business organizations to amplify the likelihood of identifying and knowing every risks. Mbeba (2007) explains that majority of financial institutions adopts credit risk management approaches given that the strategy assist them in reducing loan defaults. This is normally accomplished by coming up with a robust systems to help in capturing promptly the loan defaulters through the support of a well organised credit committee who scrutinise clients that are granted loans. Besides, the approaches similarly helps that the guidelines that govern the requirements for disbursing credit facilities, for example, the prerequisite that shares accrue should be more than three times the saved shares and must also be more than third of the basic salary retirement period of the worker also being put into considerations.

2.3.2 Credit Risk Analysis

Credit risk analysis is basically an evaluation and scrutiny of credit risks associated with a particular activity or incident. Its application is traced in various businesses that are susceptible to risks and could be both quantitatively and qualitatively measured. Ideally, risk analysis constitute a risk management. Kalui and Kiawa (2015) explained that the analysis entails

outcome acknowledgement, establishing the possibility of the consequences and estimation of the scale of outcomes. Similarly, Tanui *et al.*, (2015) opined they opined that credit risk analysis is mainly focused on generating loans with bigger profitability that do not subject the lender to more risk.

Ngwa (2010) also echoed these statement when he also illustrated that the key aim of risk appraisal is to assist the business administration to recognize the content and magnitude of the risk and circumstances that could make the firm to realise losses or profits. The rule of the thumb is that credit risk is characteristically measured based on the strength of the effect, possibility of occurrence and prevention approaches put in place (Gray and Larson, 2006). It is vital in assisting the financial organization to identify the probability that the risk may occur, and upon occurrence, the influence it is possibly going to have in the financial organization and methods of mitigation or controlled.

Hassan Al-Tamimi and Mohammed (2007) also acknowledged that risk assessment and analysis are integral approaches in predicting the risk management methodologies used by most of the UAE financial institutions. Similarly, Bank of America (2015) illustrated that majority of investment business organizations had decided to utilise normal, societal and administrative factors in the entire business decision making practices basically due to the fact that these institutions had recognised that these ESG elements increases an investment management's capacity to carry out credit analysis and implement risk management assessment very efficiently. ESG associated criteria assist in widening conventional financial analysis through augmenting investors' capacity to assess credit risks that can't be revealed or evidenced in the balance sheet, although have influence on profitability of financial lending firms. Similarly, Yegon, Sang and Cheruiyot (2014) argues that the effect of financial risk management and regulation on a firm's level of profitability is greatly influenced by leadership and fiscal

decision making.

2.3.3 Credit Risk Monitoring

Risk monitoring is the practice of following up with the decisions and activities in risk management with the aim of establishing risk reduction with respect to particular hazard that is certain. A preparation is made for the exercises organised at monitoring the risk. Through this method, to guarantee that the risk monitoring approaches accomplish the expected objectives and missions of the firms, monitoring should be the integral part of credit management so that outcomes attained are in line with the drafted aims and objectives of the firm and when the risk outcomes are unanticipated then reorganization should be carried out instantly. This implies that financial organizations should make sure that they have complete and robust approaches and well-structured information systems that helps in assessing and mitigating loan risks (Eastern Caribbean Central Bank, 2009).

These credit risk management methodologies and approaches should have an inclusive criteria for identifying and reporting current and probable risks. Besides, the approaches should guarantee that the susceptibility of the firm to a risk are sufficiently reviewed, well examined and the appropriate corrective action are taken. The report by World Bank (2016) similarly supported risk observation and monitoring by insisting that it allows risk experts in lending industry to promptly detect the risks, thereby enabling them to come up with measures that are effective in recognizing possible activities to mitigate risks.

2.4 Empirical Literature Review

Adam (2020) conducted a study on 100 gold producing business firms in United States from which 36 business organizations were sampled for empirical data. The study obtained financial data on quarterly terms i.e first three months of 2017 all through to second last three months of 2019 to capture the risk management approaches carried out by these business organizations,

inclusive of the financial amount that these firms anticipated in future production. The study used Black-Scholes model for the analysis and found limited effect of risk management on equity exposure to gold prices variants.

Al-Tamimi (2019) carried out a study on the extent at which UAE commercial financial institutions utilise risk management approaches to manage various kinds of risks. The study sampled 86 commercial banks, from which 86 bank managers were interviewed with questionnaires and quantitative data analysed through descriptive statistics. The study established that majority of UAE commercial banks mostly faced credit risk. It was also found that periodic assessment exercises carried out by branch managers and bank administrations and proper financial record analysis were key approaches for risk identification. The major techniques used were determining standards and credit worthiness examination. Moreover, most of the UAE commercial banks were readily willing to adopt and use a more technical and sophisticated approaches in risk management and routed for adoption of conservative credit policy.

Similarly, Gizaw, Kebede & Selvaraj (2019) also assessed the effects of credit risk on the level of profitability of financial institutions in Ethiopia. The main purpose of the study was to evaluate how credit risk influenced the level of profitability among the Ethiopian commercial financial institutions. The study obtained data from 8 commercial banks for a duration of 2014-2017, through yearly financial reports of various banks in Ethiopia. The study also used both descriptive statistics approach and regression analytical methodologies. The study found that loan loss requirements, nonperforming loans, credit risks and insufficient capital influenced to a greater extent the profitability of commercial banks in Ethiopia.

Magnifique (2019) examined the association that existed between management of credit risks and financial performance among the financial entities in Rwanda. Four main goals guided the study in assessing the identification, assessment and analysis of risk susceptibility, credit

performing approaches and their influence on organisations performance. Descriptive plan guided the study, which sampled 11 commercial financial organizations for the study. Questionnaire were used to collect quantitative data for analysis. Through descriptive statistics, the study found that three chief components of credit management significantly predicted the banks financial performance, while risk monitoring did not have an effect at all. Identification of credit risk elucidated the productivity of the financial organisations in Rwanda, while measuring, analysis and valuation of the credit risks predicted their financial performance.

Murage (2021) investigated the type of correlation that exist between credit risk and liquidity of Kenyan MFIs. Secondary data was got from CBK in Kenya, where 5 DTMs that have been in operational between 2014-2017 were sampled. Through descriptive and regression analysis, debt-equity ratio and credit risk correlated positively with organization liquidity for the MFIs. Moreover, ratio of portfolio to asset, working expenses ratio and Portfolio Risk all negatively correlated with liquidity of an organization. Finally, the research found that waning credit portfolio quality, inflated operational expenditures may pose a lasting influence on the firm's earnings and hence unfavourably affect the liquidity of the organization.

Korir (2020) conducted a study to assess management methods of credit risks influence monetary performance of MFIs in Nairobi, Kenya. Descriptive design was utilised and quantitative data were gathered from the 36 sampled MFIs at the time. The study found that DT-microfinance organizations used various strategies in management of credit risks and these strategies included request for collateral, and assessing credit history of the debtor as performance of risk analysis in effort to manage exposure of the business to credit risks. The study similarly, found a positive connexion between management of credit risks and MFIs' financial performance.

Kisala (2019) conducted a on the nature of correlation that is present between credit risks'

management approaches and loan performance among the MFIs' in Kenya. The study utilised a descriptive plan and also involved comprehensive analysis risk management and its association with loan performance. The study also sampled out nine MFIs from which primary data and secondary data were collected with a financial annual reports (2016-2018). The profitability of the MFIs were measured by ROE while credit risk management was measured by NPL ratios. Credit risks management correlated significantly and positively with the loan performance. It was also found that none performing loans negatively correlated with the ROE of MFIs. This implies that practices or approaches for managing credit risks significantly correlated with how MFIs performed financially.

2.5 Conceptual Model

The model in figure 2.1 illustrates the nature of correlation or association that exist between credit risks management approaches and practices and MFIs' finance performance in Kenya. According to the model, the independent variables are shown by credit risk management indicators while dependent variable is shown by MFIs' financial performance. The study assessed how identification of credit risks, monitoring of credit risk and analysis techniques of credit risks as credit risk management practices influence MFIs monetary performance. On the other hand, indicators of MFI perform financially are Profitability ratios such as ROA

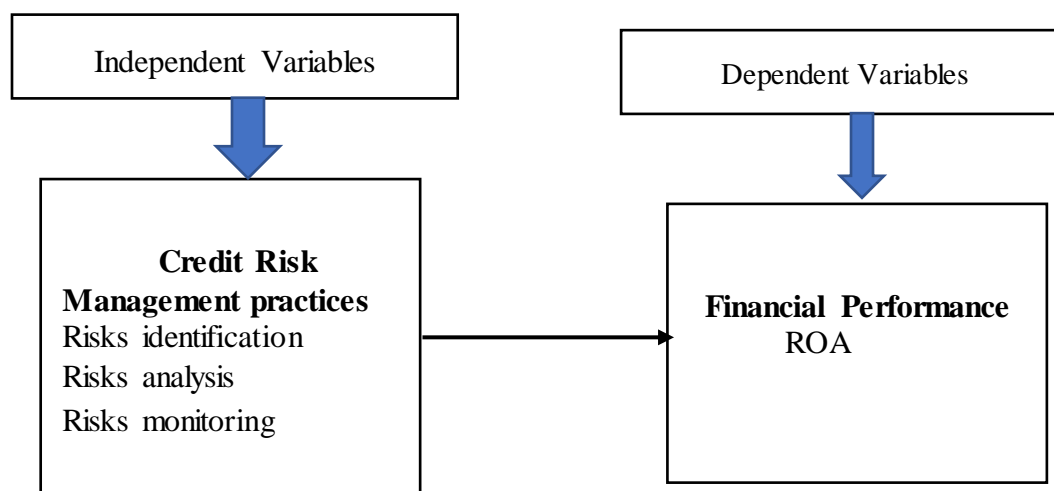


Fig. 2.1 Conceptual model for the variables

2.6 Summary of Literature Review

The study have highlighted both theoretical and review of past studies (empirical literature). The theories that guide the study are Portfolio Theory, Liquidity Risk Theory and Value at Risk Theory. The proponents, tenets and how these theories informs the study have been described in the study. The empirical reviews underscores how different scholars underpin the effects of credit risks management approaches on finance performance of different organizations, thereby critically creating knowledge gaps in these studies. Most of the previous studies conducted either locally or globally mainly focus on how commercial banks manage their credit risks, with little attention on MFIs. Moreover, the reviewed empirical studies have used different methodologies hence giving inconsistent findings which may not be generalised in the present study. Some of the reviewed studies have also been done in areas outside Kenya hence creating contextual gaps and their findings cannot be applied for the present study. The present study will fill these gaps in literature by assessing how credit risk management practices influence MFIs' financial performance in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

In this section, research methodology that guides the present study is highlighted. As such, an illustration of methodologies and study design that was used is provided. According to Saunders, *et al.*, (2019) explains that study approaches and techniques helps in data collection and appropriate analysis. Hence, this section provides into details the study design, study population, sample sizes, data collection approaches and analysis. It also highlights on the measurement of variables, models.

3.2 Research Design

Descriptive study design guided the study. Mitchell & Jolley (2012) describe this design as a mode of research where both quantitative and qualitative kind of data is gathered and analyzed in a descriptive manner to show how a particular phenomenon is trending and correlate the trend with various factors at that particular time. This design is chosen for the present study given that it helps in making generalization of the research findings for the main population. Another reason for the preference of this design is also lies in the premise that in business transaction, the association is usually unclear and hence, it is indispensable to get informed on the kind of relationships that is being studied, to clearly comprehend and manage the research variables, of which in the present scenario, the credit risks management practices (independent variable) and financial performance of MFIs (dependent variable).

3.3 Target Population

According to Ngechu (2004), target population is the specific group of persons, subjects or elements from which the study obtains its data. This implies that this group of people or elements share similar characteristics. The study population consisted of 54 registered MFIs in Kenya (AMFI report, 2020 & CBK, 2020). From which all the 54 risk managers and 54 finance officers were involved in the study through census sampling approach.

Table 3.1 Target Population

MFI category	Population
MFIs that does not take deposits	30
MFIs that takes Deposits	24
Total	54

Source; AMFI, 2020; CBK, 2020

3.4 Data Collection

The study used secondary and primary type of data source. For secondary data, yearly report of financial records was obtained from the MFIs finance department, while primary data was sourced through administration of questionnaires to the selected study respondents. Secondary data was collected on the profitability ratio of the MFIs such as ROA. Secondary data of the audited financial records warranties reliability, validity, and enhance accuracy of the data collected. On the other hand, questionnaires collected quantitative data on management approaches of credit risks used by the 54 registered MFIs in Kenya.

3.5 Diagnostic Test

Diagnostic test takes into account various kinds of bias that are likely to occur in a study. Creswell (2014) defines diagnostic accuracy as the degree at which a test properly shows the “true” existence or absence of the bias in data.

3.5.1 Multicollinearity

The current study used the correlation coefficients together with predictors of variance inflation to assess the presence of multi-collinearity. As Kothari, (2004) asserts, multicollinearity is a circumstance in which independent variables relate with one another to a greater extend, therefore causing interference with the coefficients and making the interpretation and comprehension of the study findings difficult, hence invalidating the significance of the tests. On the other hand, VIF reveals the extent at which standard errors increases as a consequent of multicollinearity. The coefficients are then checked whether it exceeds or are less than 0.8 and in case of VIF, the value is must be at least 5. This observation is also supported by Gujarati

(2003) who also explains that the available of multicollinearity among the variables were realised when the independent variables have their coefficients exceeding 0.8 threshold, or VIF recording more than 5 as the point of reference. However, should the assumptions aforementioned in multicollinearity fails, the study either eliminated highly related independent variables or linearly group all the independent variables like adding them altogether or carry out an analysis intended for extremely related variables like carrying out partial least squares regression analysis or principal components analysis.

3.5.2 Normality Test

In assessing the normality of the data set, the test was carried out to establish whether independent variables and their respective regression coefficients showed nonskewness. Normal distribution ought not to be excessively flat (platykurtic) or too steep (leptokurtic). It should also not be negatively or positively skewed and in case of absence of non-normality of the data with the estimators, interference may be witnessed in efficiency and statistical tests thereby rendering the data invalid (Green, 2008). High skewness and kurtosis of the values shows the likeliness of abnormality in data spread. Kerlinger, (2011) similarly illuminates that when the value of skewness exceeds 3, and the value of kurtosis exceeds 10, then the data may be rendered abnormal. This test is based on the premise that data was normally distributed. This test is based on the premise that data was normally distributed. However, if this assumption fails, then the study transformed the data to conform with normality, by using either box-cox transformation or checking the for the outliers. In box-cox transformation approach, the researcher used power transform method where she took the square roots and the logarithms of the observations to make the data normal. Alternatively, the study scrutinized the entire data to check for the outliers and make corrections for the data to be normally distributed.

3.6 Significance Test

A *t*-test is a statistical assessment used to carry out a comparison between the actual mean and

the populace mean. It can also be described as the baseline mean, with respect to standard deviation. In the present study, regression analysis used t-statistic, at a 5% significance level.

3.6.1 F-tests

F-test is utilized in any statistical work to illustrate how the data are distributed (F-distribution) as guided by valueless hypotheses. Normally it is applied when correlating statistical designs that fit very well in the data set, so as to pick out the model that fits very well with the study sampled population. In the context of the present study, the F-test statistical analysis checked whether all predictors variables (credit risk management practices) of financial performance fits very well with the financial performance, in which the F value was computed through at 95% confidence level.

3.7 Data Analysis

The study used SPSS version 24 as a platform to analyze the data. Quantitative data was analysed through descriptive statistics as well as multiple linear regression analysis. This helped in establishing the nature of association that exist between credit risk management practices and MFIs' financial trend.

3.7.1 Empirical model

Therefore, the overall econometric model was:

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

Y = MFIs' Financial Performance

X1 = Credit risk identification

X2 = Credit risk monitoring

X3 = Credit risk analysis

e = Error of prediction

β_0 = Constant. Value of dependent variable; MFI financial performance, holding all the independent attributes constant at zero. β_1 , β_2 , β_3 , represent regression coefficients of independent variables, denoting how they vary with the dependent variable for every change

in the independent variable.

3.8: Operationalization of Variables

In this section, the study underscore how the variables (independent predictors and dependent variables) are operationalized within the context of the present study. Therefore, the variables, how they are operationalized and the measurements are as given in Table 3.2

Table 3.2: Operationalization of the Variables

Variable	Variable type	Operationalization	Measurement
Risks Identification	Independent Variables	<ul style="list-style-type: none"> ▪ Identification of potential risk ▪ Type of risks 	Nominal
Risks monitoring	Independent Variables	<ul style="list-style-type: none"> ▪ Monitoring system for credits 	Nominal
Credit risks analysis	Independent Variables	<ul style="list-style-type: none"> ▪ Magnitude of risk ▪ Probability of occurrence ▪ Identification of risk 	Nominal
Financial Performance of MFIs	Dependent Variable	<ul style="list-style-type: none"> ▪ Profitability ▪ Return on equity 	Ratio scale Ratio scale

CHAPTER FOUR

DATA ANALYSIS AND INTERPRETATIONS

4.1 Introduction

This section underscores the study findings, presenting the information on the respondents, as well as both descriptive and inferential statistical analysis of the study objective. The population targeted for the study was 108 respondents (54 risk managers and 54 finance officers) out of which a collective 92 questionnaires were duly filled and returned for analysis, hence the study achieving 85.1% response return rate. This response return rate was suitable for the study and concurs with the recommendation of the Mugenda and Mugenda (2003) who points that a response rate of 60% and above is sufficient for meaningful data analysis. Therefore, the return rate of the current study was sufficient and satisfactory enough to draw conclusions for the study.

4.2 Respondents background

This section provides a presentation of study respondents' background information is provided. These information was crucial in comprehending and categorizing various responses with respect to their demographic information. The gathered background information are; gender, their age, level of education and amount of time spent so far working in the microfinance organization. Table 1.1 shows the response.

Table 4.1 Demographic Information

		Freq.	Percentages
Gender	Male	62	67.39
	Female	30	32.61
Response by age	25-34	17	18.48
	35-44	64	69.57
	45-54	11	11.96
Highest Level of Education	Diploma	22	23.91
	Degree	68	73.91
	Masters/PhD	10	10.87
Duration in the Organization in years	1-5	8	8.70
	6-10	34	36.96
	11-15	31	33.70
	16-20	12	13.04
	Above 21 years	7	7.60

Table 4.1 depicts that most of the study participants were of male gender at 67.29%, while female respondents were 32.71%. This shows that most of the MFIs organizations were male dominated as male employees outweighed their female counterparts. However, the gender representation met two third gender rule, making the study not to suffer from gender unfairness.

Based on Age, the study found that most of the respondents at 69.57% were between the age of 35 to 44 years, 18.48% were between 25 to 34 years, while the remaining 11.95% of were between the age of 45 to 54 years. None of the respondents indicated age above 55 years. This shows that the study respondents were finely distributed across age.

On level of education, it was found that majority of the respondents at 73.91% had bachelor degree level of education, 23.91% had diploma level of education and only 10.87% had Master/PhD level of education. This was an indication that most of the MFI employee that participated in this study had good level of education and were knowledgeable enough to give information on how management practices of credit risks influence the financial performance

of MFIs organizations.

When probed on the duration they had spent in the organization, the study found that 36.96% had spent between 6 to 10 years, 33.70% had spent between 11-15 years, while 13.04% indicated 16-20 years. Only 8.70% and 7.60% indicated 1-5 years and above 21 years respectively. This shows that majority at cumulatively 91.3% of the study participants had been in the MFI organization sufficiently long to give reliable information.

4.3 Descriptive Analysis of Credit Risk Management Practices in MFIs

This section provides a descriptive analysis results for credit risk management practices adopted by MFIs organizations. It therefore highlights credit risk identification, risk analysis and risk monitoring in MFIs. The results were as shown in subsequent tables.

4.3.1 Credit Risk Identification

First, respondents were probed on the extent at which credit risk identification was a process in managing credit risk. The results were as depicted in Table 4.2.

Table 4.2 Extent of Risk Identification in managing Credit Risks

	Frequency	Percentages
No extent	2	2.17
A little extent	4	4.35
Moderate Extent	9	9.78
Great Extent	33	35.87
A very great extent	44	47.83

The study found that almost half of the respondents at 47.83% considered credit risk identification as an approach to a very great extent in managing credit risks, 35.87% indicated to a great extent, 9.78% indicated to a moderate extent, while 4.35% indicated that risk identification was a process to a little extent. Only 2.17% indicated that identification process was for no extent at all for risk management. This shows that almost all the respondents confirmed that risk identification was a process in credit management for good financial

performance of the MFIs organizations.

4.3.2 Extent of Focusing on Types of Risks

As part of credit risk identification, respondents were probed on the extent at which their organizations pay attention on the kinds of risks as part of risk identification process, in the scale of 1 to 4.

Table 4.3 Extent of Focusing on Types of Risks

Types of risks	GE	ME	LE	NEAL	Mean	SD
Interest rate risks	51(55.43%)	24(26.09%)	12(13.04%)	5(5.44%)	3.31	0.95
Foreign Exchange Risks	64(69.57%)	17(18.48%)	8(8.70%)	3(3.25%)	3.54	0.96
Other risks	57(61.96%)	19(20.65%)	9(9.78%)	7(7.61%)	3.67	0.97

Key

NEAL=; No Extent at All

LE=; Least Extent

ME =; Moderate Extent

GE= Great Extent

Majority of the respondents at 55.43% indicated that their organization focuses to a great extent on the interest rate risk, 26.09% showed that it was to a moderate extent, 13.04% indicated least extent while 5.43% indicated no extent at all. Overall, with a mean of 3.31 and SD of 0.85, the study reveals that majority of the MFIs focuses on interest rate risk to large extent when identifying the risks. It was also found that most of the study respondents at 69.57% indicated that their organization focuses on foreign exchange risks to great extent, 18.48% indicated to a moderately extent, 8.70% least extent while 3.26% indicated no extent at all.

Generally, with a mean of (3.54±0.96) most of the respondents confirmed that their organizations focused to a great extent on foreign exchanged risks as risk identification process.

It was also found that majority of the respondents at 61.96% indicated their organization

focused on other risks to a great extent when identifying risks, 20.65% showed moderate extent, 9.78% mentioned least extent, while only 7.61% indicated that there was no extent at all. It therefore shows that with (Mean 3.67±0.97) most of the respondents confirmed that majority of the MFIs focused on other risks to a large extent when identifying credit risks.

4.3.3 Extent of Involvement of Auditors

As part of credit risk identification, respondents also probed on the extent at which auditors are involved in risks identification process, in the scale of 1- 5, in which 5 rated to a very large extent and 1 was no extent at all. Table 4.4 illustrates the response

Table 4.4 Extent of Involvement of Auditors

Statement	5	4	3	2	1	MEAN	SDEV
The auditor initiates the process of evaluating inherent risk by producing anticipated balances of account	41 (44.6%)	27 (29.2%)	11 (12.0%)	10 (10.9%)	3 (3.3%)	4.01	0.84
The auditor pinpoints the variations that have taken place in the organization and its surroundings	39 (42.4%)	30 (32.6%)	16 (17.4%)	6 (6.5%)	1 (1.1%)	4.09	0.88
The auditor establish how the variations in the organization should interrelate with historic patterns to produce the projected balances of account	36 (39.1%)	32 (34.8%)	14 (15.2%)	6 (6.5%)	4 (4.4%)	3.98	0.98

Key

1= No Extent at All

2=Least Extent

3=Moderate Extent

4= Great Extent

5= Very Great Extent

The study found that most of the respondents at 41(44.6%) indicated that to a very great extent, auditors of their organization initiates the essential risk evaluation practices by producing projections of balances of accounts 27(29.3%) indicated that this was done by the auditors to a great extent, 11(12.0%) showed that it was to a moderate extent, 10(10.9%) indicated to a least extent as only 3(3.3%) indicated no extent at all. This shows that with a mean of (Mean 4.01 ± 0.84) to a high extent, auditors start the essential process of risk evaluation by producing projected balances of accounts.

The study further found that most of the respondents at 39(42.4) agreed that to a very great extent auditor identifies variations that have taken place in the organization or its surroundings, 30(32.6%) indicated that identification of the variations was done to a great extent, 16(17.4%) confirmed that to a moderate extent, with only 6(6.5%) indicating to a least extent. Only 1(1.1%) indicated that identification of the changes was done to no extent at all. This shows that with a mean of (Mean 4.09 ± 0.88) to a high extent, company auditors were identifying variations that had taken place in the organization to find out the nature of the credit risks.

It was also found that most of the respondents at 36(39.1%) confirmed that to a very large extent, the auditors find out how the variations should interrelate with historic patterns to generate anticipated balance of account, 32(34.8%) indicated that the auditors does this process to a great extent, 14(15.2%) confirmed that to a moderate extent, while 6(6.5%) indicated to a least extent. Only 4(4.3%) indicated to no extent at all for their auditors in determining how the variations should interrelate with the past trends to give out the expected account results. This shows that with a mean of (Mean 3.98 ± 0.98) to a high extent, the auditors find out how the variations should interrelate with historic patterns to generate anticipated balance of account.

4.3.4 Significance of Risk Identification

Respondents were also probed on their reactions to the following statement related to significance of risks identification in microfinance firms. For the purpose of computing mean and standard deviation, the likert scale was from 1 to 5, where 5= Strongly Agree and 1 was strongly disagree. Table 4.5 shows the outcome

Table 4.5 Significance of Risk Identification

Statements	SA	A	N	D	SD	MEAN	SDEV
It is very crucial as it guarantees risk management role is established entirely in the whole organization	49 (53.30%)	33 (35.90%)	7 (7.60%)	2 (2.20%)	1 (1.00%)	4.08	0.99
Risk identification assist in sorting out risks based on their severity	45 (48.90%)	32 (34.80%)	11 (12.00%)	3 (3.30%)	1 (1.00%)	4.27	0.88
Risk identification aids the organization to come up with risk management framework that would assist in appropriate resource allocation	39 (42.40%)	36 (39.10%)	9 (9.80%)	6 (6.50%)	2 (2.20%)	4.13	0.84

The study found that majority of the respondents at 49(53.30%) strongly agreed with the statement that risk identification is very essential in an organization because is guarantees risks management function that is established entirely in the whole organization, 33(35.90%) agreed with the statement, while 7(7.60%) remained neutral. Only 3(3.30%) of the respondents cumulatively disagreed with the statement. This shows that risk identification plays an integral function in risk management of an organization as shown by Mean 4.08± SD 0.99.

The study also established that risk identification aids the organization in sorting out risks based on their level of severity and importance. This was justified by majority of the respondents at 45(48.90%) who strongly agreed with the statement, 32(64.80%) agreed with the statement, while 11(12.00%) were undecided or remained neutral. Cumulatively, only 4(4.40%) disputed the statement. This shows that risk identification was very helpful to the organization in sorting out risks with respect to their

importance as shown by Mean $4.27 \pm$ SD 0.88

The findings also reveals that most of the study participants at 39(42.40%) strongly supported the statement that risk identification when practiced in an organization helps in crafting risk management models that would also be helpful in resource allocation. Another 36(39.10%) also agreed with this statement, while 9(9.80%) remained undecided or neutral on the statement. Only 8(8.70%) disagreed with the statement. This implies that with a Mean of $4.27 \pm$ SD 0.88, it is generally acknowledged that risk identification also helps in coming up with good risk management framework.

4.4 Risk Analysis Practices

In establishing how micro finance organizations practice risk analysis as part of risk management practices, respondents were asked to show their level of agreement with the following statements related to risks analysis practices and financial performance of microfinance firms. For the purpose of computing mean and standard deviation, the likert scale was from 1 to 5, where 5= Strongly Agree and 1 was strongly disagree. Table 4.6 shows the outcome

Table 4.6 Risk Analysis Practice

Statement	SA	A	N	D	SD	MEAN	STDEV
Risk analysis and assessment entails determining the outcomes	51 (55.4%)	23 (25.0%)	10 (10.9%)	5 (5.4%)	3 (3.3%)	4.24	0.88
Risk analyses and conducting assessment entails approximation of the quantity of the consequences	47 (51.1%)	27 (29.3%)	13 (14.1%)	3 (3.3%)	2 (2.2%)	4.24	0.87
Risk analysis and carrying out assessment entails the likelihood of obtaining risk consequences	54 (58.7%)	24 (26.1%)	10 (10.9%)	3 (3.3%)	1 (1.1%)	4.38	0.84
Risk analysis is an inclusive approach of quantifying risks and suggesting mitigation approach	46 (50.0%)	31 (33.7%)	12 (13.0%)	1 (1.1%)	2 (2.2%)	4.28	0.91

The findings expose that most of the respondents at 51(55.4%) vehemently agreed with the statement that risk analysis practices and assessment approaches constitutes determining the outcomes results of the risks, 23(25.0%) agreed to the statement while 10(10.9%) remained neutral on the statement. Cumulatively only 8(8.9%) disagreed with the statement. The Mean 4.24 ± 0.88 shows an overall acknowledgement that risk analysis approaches and assessment methods helped in determining the risk consequences.

The study also found that risk analysis practices and assessment methodologies in place comprises of approximation of the level or quantity of risk consequences, as strongly supported by most of the respondents at 47(51.1%). Another 27(29.3%) agreed with the statement, while 13(14.1%) were neutral. Only 3(3.3%) and 2(2.2%) disagreed and strongly disagreed respectively. Generally, (Mean 4.24 ± 0.87) risk analysis methods and assessment practices in place helps the MFI firms to approximate the magnitude of the risk outcome.

From the study findings, it was also found that risks analysis practices and assessment methods may also reveals the possibility of the risk outcome. This statement was strongly supported by majority of the respondents at 54(58.7%), 24(26.1%) agreed, while 10(10.9%) were undecided on the statement. Only 3(3.3%) and 1(1.1%) of the respondents disagreed and strongly disagreed respectively. This shows with a mean of 4.38 ± 0.84 that practicing risk analysis and assessment by the MFIs would help them in establish the likelihood of the outcome.

Majority of the respondents at 46(50.0%) strongly agreed with the statement that risk analysis practices is an inclusive approach that also helps in quantifying risks as well as suggesting mitigation measures to be adopted. Another 31(33.7%) agreed with the statement, while 12(13.0%) remained neutral. On the other hand, only 3(3.3%) cumulatively disputed the statement. This generally shows that with a mean of 4.28 ± 0.91 most of the respondents agreed that risk analysis practices within MFIs was a comprehensive approach that quantify risks and suggest mitigation measures.

4.5 Risk Monitoring Practices

In establishing how micro finance organizations practice risk monitoring as part of credit risk management practices, respondents were asked to indicate their level of agreement with the following statements related to risks monitoring practices and financial performance of microfinance firms. For the purpose of computing mean and standard deviation, the Likert scale was from 1 to 5, where 5= Strongly Agree and 1 was strongly disagree. Table 4.7 shows the outcome

Table 4.7 Risk Monitoring Practices

Statement	SA	A	N	D	SD	Mean	StDev
Monitoring methods are effective in management of risks	46 (50.0%)	27 (29.3%)	9 (9.8%)	6 (6.5%)	4 (4.4%)	4.14	0.89
Monitoring of risks can be applied to ensure that risk management approaches are done according to appropriate risk monitoring practices	48 (52.2%)	31 (33.7%)	11 (12.0%)	1 (1.1%)	1 (1.0%)	4.35	0.84
Risk monitoring aids the MFI management to reveal mistakes at early stage	53 (57.6%)	25 (27.2%)	10 (10.9%)	3 (3.3%)	1 (1.0%)	4.37	0.81
Risk monitoring feedback helps the shareholders in assessing the MFI status and get informed on their financial decisions.	44 (47.8%)	33 (35.9%)	12 (13.0%)	1 (1.1%)	2 (2.2%)	4.26	0.86

The study found that half of the respondents at 46(50.0%) strongly agreed with the statement that risk monitoring methods are effective in management of risks, 27(29.3%) just agreed with the statement, 9(9.8%) were undecided on the statement while only 10(10.8%) generally disagreed with the statement. This shows that with a mean of 4.14 ± 0.89 most of the MFIs practicing risk monitoring manage effectively their credit risks.

Most of the respondents at 48(52.2%) strongly agreed with the statement that monitoring of risks can be utilized to ensure that risk management approaches are in accord with apt risk monitoring procedures, 31(33.7%) agreed, while 11(12.0%) were neutral. Only 2(2.2%) disagreed with the statement. A mean response of 4.35 ± 0.84 shows that overall, risk monitoring can be utilized to ensure that risk management approaches are in accord with apt risk monitoring.

It was also found that most of the respondents at 53(57.6%) were strongly in support with the statement that risk monitoring aids the MFI management to reveal mistakes at early stage,

25(27.2%) also agreed with the statement, 10(10.9%) were neutral while cumulatively only a total of 4(4.4%) disagreed with the statement. Meaning, risk monitoring aids the MFI management in revealing mistakes at early stage as supported by majority of the respondents (Mean 4.37 ± 0.81)

Most of the respondents at 44(47.8%) also strongly supported the statement that risk monitoring report helps the business owners to evaluate the MFI status and get informed on their financial decisions, 33(35.9%) also agreed with the statement while 12(13.0%) remained neutral. Only 1(1.1%) and 2(2.2%) of the respondents disagreed and strongly disagreed respectively. With a mean response of 4.26 ± 0.86 , it clearly shows that most of the respondents were in support of the statement

4.6 Types of Risks in MFIs

Respondents were also asked to mention some of the common risks witnessed in MFIs. Table shows the response

Table 4.8 Types of Risks in MFIs

Statement	Frequency	Percentages
Interest rate risks	61	66.3
Foreign exchange risk	69	75.0
Credit risks	85	92.4
Liquidity risks	77	83.7
Market rate risks	68	73.9

The study established that credit risks were the most common type of risks in MFIs as indicated by 85(92.4%) of the respondents, 77(83.7%) mentioned liquidity risks, 68(73.9%) indicated market rate risks, 61(66.3%) interest rate risks, while 69(75.0%) mentioned foreign exchange risks. This shows that MFIs experience different types of risk to a significant magnitude, hence appropriate risks management practices would highly influence their financial performance.

4.7 Financial Performance of the Micro-Finance Institutions

The dependent variable for the study was MFI financial performance. Therefore, the study sought to illustrate the MFIs performance as at 31st December 2020. Therefore, the MFI financial performance was established by computing the Return on assets (ROA) ratio. This ratio exhibit the percentage profit that an MFI earns with respect to its total assets (overall resources). Table 4.9 depicts the results.

Table 4.9 MFIs Financial Performance as at 31st December 2020

Name of Micro Finance	ROA	Name of Micro Finance	ROA
AAR Credit Services	0.111	Molyn Credit Ltd	0.159
ADOK TIMO	0.442	Musoni Kenya Ltd	0.372
Agakhan Foundation	0.313	Nationwide Credit Kenya Ltd	0.152
Biashara Factors	0.252	Ngao Credit Ltd	-0.018
BIMAS	0.878	OIKOCREDIT	0.244
Blue Limited	0.242	One Africa Capital Ltd	0.174
Canyon Rural Credit Ltd	0.524	Opportunity Kenya	0.109
Eclof Kenya	0.262	Pamoja Women Development Programme	0.586
Faulu Kenya DTM	0.091	Platinum Credit Limited	0.129
Focus Capital Limited	0.224	Progressive Credit	0.191
Fort Credit Limited	0.113	Rafiki Deposit taking Microfinance Ltd	0.182
Fountain Credit Services Ltd	0.303	Remu DTM Ltd	0.163
Fusion Capital Ltd	0.327	Renewable Energy Technology Assistance Programme (RETAP)	0.351
Greenland Fedha Ltd	0.221	Samchi Credit Limited	0.241
Hela Capital Limited	0.413	Select Management Services Ltd	0.660
Indo Africa Finance	-0.048	SISDO	0.132
Jitegemea Credit Scheme	0.217	SMEP DTM	0.142
Juhudi Kilimo Co.Ltd	0.392	Springboard Capital	0.187
KADET	0.627	Taifa Options Microfinance	0.286
KEEF-Kenya Entrepreneurship Empowerment Foundation	0.282	U&I Microfinance Ltd	0.491
Kenya Women Finance Trust-DTM	0.094	Rosky Credit Limited	0.027
K-rep Development Agency	0.465	Uwezo DTM Ltd	0.167
Letshego	0.106	Women Enterprise Fund	0.192
Micro Africa Ltd	0.682	Women Enterprise Solutions	0.149
Microcredit Programme	0.149	Yehu Microfinance Trust	0.348
Microensure Advisory Services	0.097	Youth Initiatives – Kenya (YIKE)	0.183
Milango Financial Services	0.488		
Mini Savings & Loans Ltd	0.161		

Return on assets commonly known as ROA is a vital financial ratio which assess the profitability amount earned by a business firm for every shilling of its assets. The ratio illustrates the firm's capacity to produce profits prior to leverage, rather than by utilizing any leverage. Therefore, high values of ROA indicated that the firm is more profitable. According to the findings in Table 4.9 MFI firms such as KADET, BIMAS, Canyon Rural Credit Ltd and Milango Financial Services registered higher ROA as compared to most of the MFIs. Mean

results were as illustrated in Table 4.10 .

Table 4.10 ROA Mean

MFI financial performance	N	Modal	Lowest	Mean	StDev
ROA	54	0.878	-0.048	0.267	0.187

Table 4.10 shows that of the 54 MFIs whose ROA were studied, the minimum ROA was -0.048 while the maximum was 0.878. The study found a mean of 0.267 ± 0.187 .

4.8 Results of Regression Analysis

Multiple regression approach was utilized to determine the correlation that exists between credit risk management practices as indicated by risks identification, risks analysis and risk monitoring and, MFIs financial performance

Table 4.11 Model Summary

Model	R	R ²	Adjusted R ²	Standard Error of Estimate
1	0.844(a)	0.712	0.694	0.254

a Predictors: (Constant), Risks (identification, analysis and monitoring)

The value of R and R square are sometimes referred to as coefficient of determination, they show the extent at which credit risk management practices explain or justify the MFIs financial performance. In the model summary table, the R² value was 0.712. This means that that, risks management practices explains up to 71.2% with the MFI performance and other than risks management practices, there are also other determinants of MFI financial performance.

Table 4.12 Finding of ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.719	3	2.931	43.746	0.000
	Residual	3.702	89	0.067		
	Total	16.421	92			

This study utilized the ANOVA to assess the significance of using regression model of approach out of which an f-significance value 43.746; $p < 0.001$ was found. It therefore implies that that this regression model has over 95% confidence level and thus management practices of credit risks significantly predict how MFI perform financially. Results on the beta

coefficients and significance were determined and summarized as shown in Table 4.13

Table 4.13 Coefficients Output

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	14.326	0.185		77.02	0.534
Risk identification	0.577	0.067	0.558	8.485	0.000
Risk analysis	0.352	0.054	0.339	6.519	0.008
Risks monitoring	0.457	0.043	0.357	10.628	0.000

a. Dependent Variable: MFI Financial Performance

The co-efficient values shown in Table 4.13 shows a positive significant relationship between MFI financial performance and the three credit risks management practices- risk identification, risk analysis and risks monitoring. Therefore the regression equation was as shown:

$$Y = 14.116 + 0.577X_1 + 0.352X_2 + 0.457X_3$$

Table 4.13 shows that risks identification ($\beta=.577$, $t>1.96$; $p<0.05$) portrayed the highest significant effect on financial performance of MFIs in Kenya followed by Risks monitoring ($\beta=.457$, $t>1.96$; $p<0.05$) then Risks monitoring ($\beta=.352$, $t>1.96$; $p<0.05$). Thus, the credit risks management practices covered in this study had significant and positive contribution towards financial performance of the MFIs in Kenya.

4.9 Interpretation of the Findings

The study found that risk identification was a process in credit risks management that had good overall financial performance of the MFIs firms depicted by most of the respondents. This shows that MFIs that have well-structured and effective risk identification practices were likely to register good financial performance. Similarly, Gakure et al., (2012) in their study also realized that the methodologies used for identifying risks were habitually used by business organizations to intensify the likelihood of identifying and knowing every risks for good financial results. Mbeba (2007) also explains that majority of financial institutions adopts credit risk identification to assist

them in reducing loan defaults and increase profitability of the organization. This is normally accomplished by coming up with a robust systems to help in capturing promptly the loan defaulters through the support of a well organised credit committee who scrutinise clients that are granted loans.

The study also found that risk analysis methods and assessment practices in place helps the MFI firms to approximate the magnitude of the risk outcome, establish the likelihood of the outcome and that this practice was a comprehensive approach that quantify risks and suggest mitigation measures. These findings concur with that of Kalui and Kiawa (2015) explained that the analysis entails outcome acknowledgement, establishing the possibility of the consequences and estimation of the scale of outcomes. Similarly, Tanui *et al.*, (2015) opined they opined that credit risk analysis is mainly focused on generating loans with bigger profitability that do not subject the lender to more risk. Ngwa (2010) also echoed these statement when he also illustrated that the key aim of risk appraisal is to assist the business administration to recognize the content and magnitude of the risk and circumstances that could make the firm to realize losses or profits.

On risk monitoring, it was found that majority of the MFIs practicing risk monitoring manage effectively their credit risks, and that risk monitoring can be utilized to ensure that risk management approaches are in accord with apt risk monitoring. It also found that risk monitoring aids the MFI management in revealing mistakes at early stage. This finding was also supported by World Bank (2016) which similarly supported risk observation and monitoring by insisting that it allows risk experts in lending industry to promptly detect the risks, thereby enabling them to come up with measures that are effective in recognizing possible activities to mitigate risks.

Multiple regression approach was utilized to determine the correlation that exists between credit risk management practices as indicated by risks identification, risks analysis and risk monitoring and, MFIs

financial performance. The co-efficient values from regression analysis shows a positive significant relationship between MFI financial performance and the three credit risks management practices- risk identification, risk analysis and risks monitoring. These findings were in agreement with that of Magnifique (2019) who upon examining the association that existed between management of credit risks and financial performance among the financial entities in Rwanda and found that three chief components of credit management significantly predicted the banks financial performance, while risk monitoring did not have an effect at all. Identification of credit risk elucidated the productivity of the financial organisations in Rwanda, while measuring, analysis and valuation of the credit risks predicted their financial performance. Similarly, Korir (2020) conducted a study to assess management methods of credit risks influence monetary performance of MFIs in Nairobi and found a positive correlation between management of credit risks and MFIs' financial performance.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The section gives a summary of the analyzed findings with conclusions and recommendations drawing relevant implications of the results. Limitations and areas that require further research are also provided in this chapter.

5.2 Summary

The present research was set out to assess how credit risks management practices influence financial performance of MFIs in Kenya. From descriptive statistics, the study found that on average, that of the 54 MFIs who's ROA were studied, the minimum ROA was -0.048 while the maximum was 0.878. The study found a mean of 0.267 ± 0.187 . The study also found that based on risk identification, almost all the MFIs practiced risk identification as part of their credit risks management. The study also found that in most cases, to a high extent, auditors start the essential risk evaluation process by producing anticipated account balances, company auditors were identifying variations that had taken place in the organization to find out the nature of the credit risks and also to high extent, the auditors find out how the variations should interrelate with historic patterns to generate anticipated balance of account. It was also found that risk identification plays an integral function in risk management of an organization and that risk identification was very helpful to the organization in sorting out risks with respect to their importance and also helps in coming up with good risk management framework.

On Risks Analysis, the study found that risk analysis approaches and assessment methods helped in determining the risk consequences, helps the MFI firms to approximate the magnitude of the risk outcome and that practicing risk analysis and assessment by the MFIs would help them in establish the likelihood of the outcome. The study also found that risk analysis practices within MFIs was a comprehensive approach that quantify risks and suggest mitigation

measures.

On Risk Monitoring, most of the MFIs practicing risk monitoring manage effectively their credit risks and that monitoring of risks can be utilized to ensure that management of risk approaches are in accord with apt risk monitoring. The study similarly found that risk monitoring aids the MFI management in revealing mistakes at initial stages.

Regression analysis also reveals a positive significant relation between MFI financial performance and the three credit risks management practices- risk identification, risk analysis and risks monitoring. Therefore the regression equation was; $Y = 14.116 + 0.577X_1 + 0.352X_2 + 0.457X_3$. It also shows that risks identification ($\beta=.577$, $t>1.96$; $p<0.05$) posted comparatively the highest significant influence the dependent variable (MFI fiscal performance) followed by Risks monitoring ($\beta=.457$, $t>1.96$; $p<0.05$) then Risks monitoring ($\beta=.352$, $t>1.96$; $p<0.05$). Thus, the credit risks management practices covered in this study had significant and positive contribution towards MFI fiscal performance.

5.3 Conclusions

The study recognizes the critical function played by credit risk management practices through identification, risks analysis and risks monitoring, on financial performance of MFIs in Kenya. The study concludes that financial auditors were engaged in risk identification practices for a number of motives. They initiate the essential risk evaluation process by producing prospects of account balances; also they pinpoint the variations that have taken place in the firm and similarly determine how the variations should interrelate with historic patterns yield expected account balance.

The study similarly recognized the integral role of risk identification in management of credit risks. It draws a conclusion that risk identification guarantees that risk management function is recognised in the entire operation given that it assists in sorting out risks based on their level

of importance and severity hence helps the MFI's management in developing risk management strategies for efficient allocation of resources. This consequently assists the MFI management in coming up with measures to control the risks and enhances efficiency of the MFI services. The study also concludes that risk monitoring was equally useful in making sure that risk management approaches are within proper risk monitoring and that this practice helps the MFIs in discovering mistakes at their early stage of occurrence. It can therefore be concluded that a positive and statistical significant correlation exists between credit risk management practices and MFI financial performance. This means that rise in risk identification process, risk analysis process and risks monitoring process would help lessening credit risks and increase the MFIs profitability.

5.4 Recommendations for Policy and Practice

It is suggested that tougher measures ought to be employed in management of credit risks to increase positive financial performance of the MFIs. The MFI management should equally spearhead the adoption and application of credit risks management practices that are viable and practical.

Proper credit risks management practices entails coming up with suitable credit risk environment; working under appropriate credit granting procedures; upholding a suitable credit administration which constitute proper identification, suitable analysis and proper monitoring processes as well as sufficient controls of credit risks. Therefore, it needs top MFI management to guarantee proper and clear framework in the management of credit risks, meaning, all guidelines and frameworks should be adequately communicated in the entire organization for sufficient implementation.

5.5 Limitations of the Study

This study was limited to two variables that is credit risks management practices that was

measured through only three indicators (risks identification, risks analysis and risks monitoring) and financial performance of MFIs measured through ROA. The study was limited to only MFIs and not the entire financial institutions and more specifically, the study was constrained to only 54 MFI firms in Kenya.

5.6 Areas for Further Research

Future studies should be conducted to include also macro financial institutions such as commercial banks to find out also how they manage their credit risks before the generalization of the study findings is done.

Aside from use of ROA as a parameter for MFI financial performance, future studies should adopt other indicators like ROE or ROI.

Another study should also be done on factors influencing optimal credit risk management practices among the MFIs in Kenya.

References

- 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.
- Al-Tamimi, H. A., (2019). Banks' Risk Management: A Comparison Study of UAE National and Foreign Banks. *The Journal of Risk Finance*, 8(4), 394-409.
- AMFI (2020). Annual Report on the Microfinance Sector in Kenya. 2ed.
- 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
- 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.
- Gibson, C. (2012). *Financial Reporting and Analysis* (13th ed.). Mason, Ohio: Cengage Learning
- Gitau, R. N. (2010). The effect of Credit Management on the Financial Performance of Microfinance Institutions in Kenya. Unpublished MBA Dissertation, University of Nairobi, Nairobi.
- Gitman, L. J. (1997). *Principles of management finance* (8th ed.)
- Gizaw, N., Kebede, T., and Selvaraj, P., (2019) Determinants and Value of Enterprise Risk Management: Empirical Evidence From the Literature. *Risk Management and Insurance Review*, 18: 29–53.
- Gregory, J. (2010). *Counterparty Credit Risk: The new challenge for global financial markets*. Chichester, West Sussex: John Wiley & Sons.
- Al-Tamimi, H., and Mohammed, P (2007) A Merton Model Of Credit Risks With Jumps. *Journal of Statistics Applications and Probability*
- HKIB, H. (2012). *Credit Risk Management*. Hoboken: John Wiley & Sons
- Kairu, P. K. (2009). *Credit Management*. Nairobi: Focus Publishers Ltd.
- 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.
- 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). The effect of credit risk management practices on loan performance in microfinance institutions in Nairobi, Kenya, unpublished MBA project, University of Nairobi.
- Korir, S. (2020). 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
- Lybeck, J. (2011). A Global History of the Financial Crash of 2007–10. UK: Cambridge University Press.
- Magnifique, J. U. (2019) The Effect of Credit Risk Management on The Financial Performance of Commercial Banks in Rwanda, unpublished MBA project, University of Nairobi
- Mitchell, M., & Jolley, J. (2012). Research design explained (8th ed.). New York: Cengage Learning
- Murage, C.W (2021). The Effect of Credit Risk on Corporate Liquidity of Deposit Taking Microfinance Institutions in Kenya, unpublished MBA project, University of Nairobi
- 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.
- Ngwa, E (2010) Credit Risk Management in Banks as Participants in Financial Markets “A Qualitative Study of the Perception of Bank Managers in Sweden (Umeå Region)”. Published Masters Thesis, Umea University
- 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), 155-138.
- 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.
- Tanui, J.K., Wanyoike, D. M. & Ngahu, S. (2015). Assessment of Credit Risk Management Practices on Financial Performance among Deposit Taking Saccos in Nakuru East Sub County, Kenya. *International Journal in Management and Social Science*, 3(5), 602-610
- Turyahebwa. A (2013) Financial Performance in the Selected Microfinance Institutions In Uganda (unpublished master’s thesis) Kampala International University, West campus, Sollenberg

APPENDICES

Appendix I: Questionnaire

SECTION A: Demographic Information

1. Gender of the respondents _____
2. Age bracket in years _____
3. Highest level of education attained? _____
4. Current position in the firm?
 - Managing Director []
 - Branch Manager []
 - Credit Manager []
 - Others (please specify.....)
5. Duration in the organization in years?
 - 1-5 []
 - 6-10 []
 - 11-15 []
 - 16-20 []
 - Above 21 years []

SECTION B: RISK IDENTIFICATION

1. Kindly indicate the extent at which the organization you are working for take risk identification as an effective process or practice in credit risk management?

A very great extent Great extent Moderate extent Little extent
 No extent at all

2. In management of credit risks, both foreign exchange risks and interest rate risks dominate financial department. Based on this statement, kindly indicate the extent at which your firm focuses on these risks types, using a scale of 1 to 4 in which 4 demotes a great extent, while 1 is no extent at all

Risk identification	1	2	3	4
Foreign exchange risk				
Interest rate risk				
Other risks, kindly specify				

3. Kindly provide the extent at which you agree with the following using a scale of 1 to 5 where 5 denotes to a great extent while 1 is no extent at all.

Involvement of auditors in risk identification	1	2	3	4	5
The auditor begins the inherent risk evaluation procedure by creating projections of accounts balances					
The auditor pinpoints variations that have happened in the firm or its environs					
The auditor establishes how the variations should interact with historic patterns to give or generate projected balance in the account					

4. Kindly show the extent you agree with the following statement in a scale of 1 to 5 where 1 shows strongly agree, 2 shows Agree, 3 shows Neutral response, 4 shows Disagree and 5 shows strongly disagree.

Importance of risk identification in credit risk management	1	2	3	4	5
It is very crucial as it guarantees that risk management role is entirely recognized in the whole organization					
Risk identification assist in sorting out risks based on their severity					
Risk identification aids the organization to come up with risk management framework that would assist in appropriate resource allocation					
It is very crucial as it guarantees risk management role is established entirely in the whole organization					

SECTION C: RISK ANALYSIS

Risk analysis is an inclusive risk management approach applied for various risks emanating from financing transactions. Kindly show your extent of agreement with the following statement related to risk analysis? Strongly agree () Agree () Neutral () Disagree () strongly disagree ()

Statement	1	2	3	4	5
Analysis of risks and their assessment entails determining the outcomes					
Risk analyses and conducting assessment entails approximation of the quantity of the outcome results					
Analysis of risks and carrying out assessment entails the likelihood of obtaining risk consequences					
Risk analysis is an inclusive approach of quantifying risks and suggesting mitigation approach					

SECTION E: RISK MONITORING

5. Efficient management practices of credit risks needs a proper review and reporting structure that ensure effective identification and assessment of risks and that suitable controls are in place. Kindly indicate your level of agreement with the following statement within the perspective of risk monitoring as a practice of credit risk management?

Strongly agree () Agree () Neutral ()
 Disagree () Strongly disagree ()

Statement	1	2	3	4	5
Monitoring methods are effective in management of risks					
Monitoring of risks can be used to ensure that risk management approaches are in accord with apt risk monitoring					
Risk monitoring aids the MFI management to reveal mistakes at early stage					

6. In what degree of extent does your organization consider these types of risks when working on its profitability? The scale of 1 to 5 shows that 5 is to a great extent and 1 is to no extent.

Types of risks monitored	1	2	3	4	5
Foreign exchange risk					
Interest rate risks					
Credit risks					
Liquidity risks					
Market rate risks					
Interest rate risks					

Appendix 2 Data Collection Sheet

Use the table below to indicate the level of financial performance arising in your MFI for the last 5 years.

Particulars	Year				
	2016	2017	2018	2019	2020
Operating Income (Millions)					
Operating Expenses (Millions)					
Total Capital(Millions)					
Non-performing Assets Provisions					
Gross Advances (Millions)					
Total Assets (Millions)					
Net Profits (Millions)					
Annual value of premiums					
Annual Interest on loan advances					
Ratio of non-performing loans					
Liquidity Ratio					
ROE					