EFFECTS OF CREDIT RISK MITIGATION STRATEGIES ON PROFITABILITY OF MICROFINANCE INSTITUTIONS IN NAKURU TOWN

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DECLARATION AND APPROVAL

This research project is my original work and has not been presented for a degree in any other university.

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APPROVAL

This research projecthas been presented for examination with our approval as the university supervisors.

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LIST OF ABBREVIATIONS

AMFI: Association of Microfinance Institutions

CAR: Capital Adequacy Ratio

CBK: Central Financial institution of Kenya

GDP: Gross Domestic Product

HKIB: Hong Kong Institute of Financial institutioners

IR: Interest Rate

MFIs: Microfinance Institutions

MPT: Modern Portfolio Theory

NPLNon-Performing Loans

PAR: Portfolio at Risk

ROA: Return on Assets

ROE: Return on Equity

SPSS: Statistical Package for Social Sciences

ABSTRACT

Credit risk is on an increasing rate and is becoming an area of concern to many people and institutions in the lending business globally. This kind of exposure leads to instability and poor financial performance of microfinance institutions. Microfinance institutions are exposed to credit risk and therefore it is important for them to come up with mitigation strategies. The current study sought to find out the effects of credit risk mitigation strategies on the profitability of microfinance institutions in Nakuru town. The objectives of the study were to determine the role of loan appraisal procedures, debt recovery policies, credit risk monitoring and diversification of credit products on the profitability of microfinance institutions in Nakuru town. The study used a sample size of 75 respondents who were drawn from selected microfinance institutions in Nakuru town. The target population for the study was 500 respondents drawn from various microfinance institutions in Nakuru town. The sample size comprised of respondents drawn from various microfinance institutions drawn in Nakuru.Questionnaires were the main data collection tool that was used. Data was analyzed using the Statistical Package for Social Sciences (SPSS) and was presented in form of frequency tables, charts and graphs. The results revealed that credit risk monitoring was negatively correlated with profitability. However, this correlation was not statistically significant hence the null hypothesis 3 was retained and concluded that there was no evidence based on the sample to suggest that credit risk monitoring as associated with profitability. This is in agreement of the findings from a study carried out by Saunders, (2012) in the United States, the findings indicated that debt recovery policies largely affected the profitability of microfinance institutions. He looked at various microfinance institutions in the country and also investigated the policies that were being used in debt collection. The results revealed that credit risk monitoring was negatively correlated with profitability. The results revealed that credit risk monitoring was negatively correlated with profitability.

Key Terms: *Credit Risk, Debt Recovery, Diversification, Loan appraisal*

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Financial institutionsarepertinenttoeconomicgrowththroughthefinancialservices they provide.Their interventionrolecanbesaidto beacatalystforeconomicgrowth. Theefficientandeffective performanceof thefinancial institutions overtimeisan indexoffinancialstability inany nation. The extenttowhichafinancial institution extendsitsoperationtothe publicforproductiveactivitiesacceleratesthe paceofa nation's economicgrowthandits long-termsustainability(Kolapo,Ayeni&Oke,2012).In the21stcentury businessenvironmentisaddedmultifacetedand intricatethanever. Themajority of businesses have to trade with uncertainties and qualms in every dimension of theiroperations. Withoutadoubt,inthepresent-day'sunpredictableandexplosiveatmosphereallthefinancial institutionsarein

frontofaheftyrisklike:creditrisk,liquidityrisk,operationalrisk,marketrisk,foreignexchange risk,andinterestraterisk,along withothersrisks, whichmaypossibly intimidate thesurvivaland successofthe financial institution's Corporate Performance.

Risk is an inevitable phenomenon which has lived with mankind since time immemorial. In our domestic and especially in our business life, we find ourselves in situations where risk taking becomes the solution to our break through. Nevertheless, one should find a way to minimize or manage this risk in order not to affect the expected result from a given investment. In the financial sector, risk mitigation is seen as one of the most essential internal itineraries upon which decisions are made by financial institutions. (Aureliju,Jinkens, Mahmud & Briggs 2014).

Carey (2001) disclosed that the most essential issue in the managing of an economy is the mitigation of risk. This is not different from what happens in the financial institutioning industry. In the aspect of financial institutioning, credit risk is given much attention due to the characteristics of their borrowers and the kind of businesses they invest into. The financial institution theory identifies six popular categories of risk which are related with credit guidelines of financial institutions. They include credit risk (risk of repayment), interest risk, portfolio risk, operating risk, credit deficiency risk, and trade union risk (Muhammad, 2014). Analyses have shown that, credit risk is the main risk that causes the collapse of a financial institution. (Sinkey, 1992)

Over the years, financial institutions have encountered hitches from different sources. The chief causes of these challenges are the careless ways of scrutinizing borrowers and counterparties, improper management of portfolios, and ignoring the economic indicators of the country or other situations that can result to decline in the credit level of a financial institution's counterparties.

1.1.2 Microfinance Institutions in Kenya

As illustrated by Aduda and Kalunda (2012), Kenya is known as one of the African countries at the forefront in the discovery of the significance of MFIs as a poverty eradication tool thus more efforts have been directed in the development and promotion of the MFI sector. Microfinance industry in Kenya has evolved and is carried out in diverse institutional forms, which include the semi-formal, formal and non-formal providers (Muriuki, Maru, &Namusonge, 2015). The formal institutions include commercial financial institutions; Credit only MFIS, Deposit taking microfinance financial institutions, semi-formal include co-operative societies, NGOs. Further, in-formal financial institutions include Rating Savings and Credit Association (ROSCAs), and Accumulating Saving and Credit Associations (ASCAs). (Ayele, 2015) financial institutions, Credit only MFIs, Commercial Financial institutions focusing on microfinance, Developmental Institutions, Insurance Companies (micro-insurance), financial institutionsand Wholesale MFI lenders. The establishment and registration of Association of Microfinance Institutions (AMFI) in 1999 under the Societies Act was to operate as an oversight association for the MFIs doing business in Kenya. AMFI's major objective is to promote expansion and progress of Microfinance institutions by encouraging well-organized as well as efficient presentation of services.

In relation to the performance of MFIs, AMFI report (2013) indicated a gross portfolio increase in 2012 because of the increase of interest rates on loans in the perspective of elevated inflation. The report also indicates that profitability and sustainability levels of the sector dropped dramatically because of high operating costs that resulted from expensive lending rates and high-risk exposure. In addition, Operations self-sufficiency (OSS) decreased in the year 2012 and the decrease was because of decreased performance of the Deposit taking microfinance as their Operations self-sufficiency dropped from 114% to 104% as of December 2011. Further, higher operating costs led to decreased levels of efficiency and profitability. The funding costs increased to 8.6% while operating costs shot up to 26.7%. In terms of operational costs associated with staffing ration increased to 53.3 percent as more MFI operation called for more field staff. This shows that on overall, the

operational self-sufficiency and sustainability of microfinance institutions in Kenya have been decreasing over the years (AMFI, 2013).

1.2 Statement ofthe problem

Sound credit mitigation policy is a prerequisite for a financial institution's stability and continuing profitability, while deteriorating credit quality is the most frequent cause of poor financial performance and condition. According to Gitman (1997), the probability of bad debts increases as credit standards are relaxed. Firms must therefore ensure that the management of receivables is efficient and effective. Such delay on collecting cash from debtors as they fall due has serious financial problems, increased bad debts which affect customer relations. If payment is made late, then profitability is eroded and if payment is not made at all, then a total loss is incurred. On that basis, it is simply good business to put credit management at the front end by managing it strategically.

As with any financial institution, the biggest risk is lending money and not getting it back. Credit risk is a particular concern for MFIs because most micro lending is unsecured (i.e., traditional collateral is not often used to secure microloans Craig Churchill and Dan Coster (2001). The people covered are those who cannot avail credit from financial institutions and such other financial institutions due to the lack of the ability to provide guarantee or security against the money borrowed. Many financial institutions do not extend credit to these kinds of people due to the high default risk for repayment of interest and in some cases the principle amount itself. Therefore these institutions required to design sound credit management that entails the identification of existing and potential risks inherent in lending activities.

Matu (2008) carried out a study on sustainability and profitability of financial institutions and noted that efficiency and effectiveness were the main challenges facing Kenya on service delivery, Orua (2009) did a study on the relationship between capital structure and financial performance of financial institutions in Kenya, Gitau (2010) did a study on assessment of strategies necessary for sustainable competitive advantage in the financial industry in Kenya with specific focus to Faulu Kenya.

Achou and Tenguh (2008) also conduct research on financial institution performance and credit risk management found that there is a significant relationship between financial institutions performance (in terms of profitability) and credit risk management (in terms of

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loan performance). The purpose of this study was to understand the effect of credit management on their financial performance.

There have been attempts in the past to study financial institutions and Micro lending but much focus has been on the impact of MFIs in poverty alleviation, especially in Kenya but much less has been done to investigate the effect of credit mitigation strategies on financial position of financial institutions in Kenya, therefore this research addresses that gap.

1.3 Objectives of the study

1.3.1 General Objective

The general objective of this study was to investigate the role of credit risk mitigation strategies on profitability of micro-finance institutions in Nakuru town.

1.3.2 Specific Objectives

i.   To determine the role of loan appraisal procedures on profitability of microfinance institutions in Nakuru town

ii. To assess the role of debt recovery policies on the profitability of microfinance institutions in Nakuru town.

iii. To examine the role of credit risk monitoring on the profitability microfinance institutions in Nakuru town.

iv. To establish the role of diversification of credit products on the profitability of microfinance institutions in Nakuru town.

1.4 Research Hypothesis

$H_{01:}$ There is no clear link between loan appraisal procedures and the profitability of microfinance institutions in Nakuru town

$H_{02:}$ There is no clear link between debt recovery policiesand the profitability of microfinance institutions in Nakuru town

$H_{03:}$ There is no clear link between credit risk monitoring and the profitability ofmicrofinance institutions in Nakuru town

$H_{04:}$ There is no clear link between diversification of credit products and the profitability of microfinance institutions in Nakuru town

1.5 Significance of the Study

The study is expected to make contribution to knowledge in the following areas: Provision of information about credit risk management in the Kenyan financial institutioning sector, Provision of a fundamental material for scholarly discourse in management science relating to corporate risk mitigation policies, assisting in providing information on the impact of risk management on the profitability of Kenyan financial institutioning sector. The study will also provide background information to other researchers and scholars who may want to carry out further research on the role of credit risk mitigation policies on the performance of commercial financial institutions in Kenya. This study will facilitate individual researchers to identify gaps in the current research work and carry out further research in those areas.

1.6 The scope of the Study

The current study sought to find out the effects of credit risk mitigation strategies on profitability of microfinance institutions. The study will be carried out in Nakuru town and therefore will cover microfinance institutions within Nakuru town. The study will mainly focus on the four objectives which are loan appraisal procedures, debt recovery policies, credit risk monitoring and diversification of credit products and their effect on the profitability of microfinance institutions.

1.7 Limitation of the Study

Financial institutions are normally very busy, competitive and restrictive. The major limiting factors of this research work are time constraint and cooperation by the staff in giving internal information needed for the study. The researcherhowever deployed adequate ethical considerations to ensure outmost confidentiality of the information given by the institutionsand explain the purpose of the study.

1.8 Operational definition of terms

Credit risk monitoring: A credit risk is the risk of default on a debt that may arise from a borrower failing to make required payments. Credit risk monitoring refers to how institutions manage and look out for these types of risks. (Lybeck, 2011)

Credit risk: Credit risk refers to the risk that a borrower may not repay a loan and that the lender may lose the principal of the loan or the interest associated with it (Dickens, 2013).

Debt recovery policies: Policies that are used to make people or companies pay the money that they owe to other people or companies, when they have not paid back the debt at the time that was arranged.

Microfinance institutions: A financial institution specializing in financial institutioning services for low-income groups or individuals. A microfinance institution provides account services to small-balance accounts that would not normally be accepted by traditional financial institutions, and offers transaction services for amounts that may be smaller than the average transaction fees charged by mainstream financial institutions.(Wong, 2013)

Mitigation: The action of reducing the severity, seriousness, or painfulness of something (Investopedia, 2016).

Profitability: The ability to earn a profit in a business or in an organization. In this study, profitability will be measured using return on Equity.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

Thischapter summarizesthe informationfromthe availableliterature inthe same fieldof study.Itreviews theoriesofcreditmanagementaswellasempiricalstudies oncredit management andfinancial performance in Kenyaand in other countries.

2.2. TheoreticalReview

Theories on credit risk mitigation and the profitability of microfinance institutions are discussed below. The theories are the Credit Management Theory, the Adverse Selection Theory, theory of Information Assymetry and the adverse selection theory. All these theories are discussed in relation to the study.

2.2.1 Credit Management Theory

Woolcock (2000) proposed the Credit management theory which states that the markets for credit or loans are highly shaped by the financial institutions (who are lenders) strategies for potential borrowers screening and by addressing the opportunistic behavior which is encouraged by the nature of loan contracts. Accordingly, lenders usually increase credit pricing to a level that they expect returns to be maximized. This often excludes small, risky and costly borrowers.The consumption of credit tends to be inversely related to both the interest rates and the required collateral. Microfinance institutions tend to apply the credit management theory taking advantage of the opportunistic behavior presented by potential borrowers. Consumption of credit is collated to the collateral requirements and a variable interest rate pricing policy might be utilized by individual financial institutions (Tanui, Wanyoike &Ngahu, 2015).

2.2.2 Theory of Information Asymmetry

Information asymmetry theory was proposed by Akerlof in 1970. Akerlof's (1970) argued that in markets, buyer usually use market statistic to determine the goods value. Therefore, the clients only see an average of an entire market whereas the seller uses a more intimate knowledge of a particular item. The argument put across by Akerlof is that information asymmetry gives the seller a great opportunity to sell his/her products or services of less than the average market quality (Parrenas, 2005). The average quality ofa product or a service in a market will then decrease and so will the size of the market. There is available

information for each agent. However, there is a strong information asymmetry between the managers and the investors of the firm (Akkizidis&Khandelwal, 2008).

This theory explains a condition where all parties in an undertaking are not aware of the available relevant information (Eppy, 2005). Stiglitz (2001) indicates competitive behavior in such markets involves inter-temporal linkages. The theory points out two problems associated with the perceived information asymmetry for to financial institution. That is the adverse selection and moral hazard. The theory affirms that, if commercial financial institutions can exchange their client's information especially on clients' creditworthiness, which can lower loan repayment rate (Weinberg, 2006).

A reduction in information asymmetry between clients and lenders, credit reference bureaus will be able to develop credit risk management practices such credit rating and thus financial institutions extend loans to creditworthy borrowers resulting in higher aggregate lending and low default rates.

2.2.3The Adverse Selection Theory

The adverse selection theory emanated from Stiglitz and Weiss (1981). Karlan and Zinman, (2004) notes that the adverse selection occurs when client's or borrowers of the financial institutionhave features or characteristics which are not observable by the financial institution when lending and these unobservable features have the potential of leading loan repayment default hence affecting the financial institution's profitability negatively. The theory assumes that: lenders will be unable to distinguish between financial institutions loan clients of different risk degrees and that all the contracts of the financial institution loans offered to borrowers are all subject to a limited liability (Berhanu, 2005).

The adverse selection theory describes the situation of a financial institution that cannot distinguish the safe borrowers from risky. In this theory, the financial institution which is the lender in this case has inadequate information about the loan customers. Riskier loan clients ought to be charged a higher rate of interest so as to act as a compensation for an increased default risk than the safer loan clients whose changes of defaulting are very low. Accordingly, safer loan clients ought to be charged a little bit less provided they can be identified accurately from the rest of loan clients or borrowers. Since financial institutions as the lender does not have complete borrowers risk profile information, as such, high average interest rates are normally passed on to all loan clients without considering differences in

their risk profile (Armendariz&Morduch, 2010). To mitigate adverse selection problems, credit providers take their loan applicants through an elaborate screening procedure before granting a loan however, this has been able to reduce loan default in commercial financial institutions.

2.2.4Portfolio Theory

The Portfolio Theory often described as modern portfolio theory. For a long time financial institutions have been faced with credit defaults. Having been pioneered by Harry Markowitz in 1952, the Modern portfolio theory is widely used in the financial institutioning sector as well as the MFIs. Most of the MFIs are using the value at risk along with portfolio at risk to handle exposure brought about by interest rate and market dynamics.

This theory lets investors assess the expected risk and return in their investment portfolios (Wong, 2013). MPT is a refined investment approach that has turned out to be concept financial institutions and investors build their asset portfolios. Markowitz quantified exposure and demonstrated quantitatively the reduction of risk by portfolio diversification thus increasing return on investment for investors. Modern Portfolio Theory allows investors to project the risk exposure that they face as well as the expected return by using a statistical measure for their asset portfolios. Markowitz (1952) illustrated on how to merge assets to come up with efficiently diversified portfolios. This theory established that most investors were unsuccessful in accounting appropriately the lofty correlation between security incomes. The theory suggests that a portfolio's exposure can be abridged and the projected rate of return amplified, whilst securities with divergent value actions are pooled together. Markowitz concluded that diversification decreases exposure if securities are pooled together, and the prices of these securities shift inversely, or at dissimilar period, in regards to each other.

This theory helps in examining the relationship between Portfolio at risk and financial stability and performance. It considers how diversification of financial products minimizes credit risk hence improving on financial performance.Margrabe (2007) hypothesizes that despite the fact that credit chance remains the biggest hazard confronting most business monetary organizations, the act of applying present day portfolio hypothesis to credit chance has slacked. Kairu (2009), claims that organizations perceive how credit focuses can unfavorably affect budgetary execution. Thus, various organizations are currently seeking after quantitative ways to deal with credit hazard estimation. This industry is likewise gaining critical ground toward creating apparatuses that measure credit hazard in a portfolio

setting. They are additionally utilizing credit subsidiaries to exchange chance effectively while safeguarding client connections. Portfolio quality proportions and profitability markers have been adjusted. The mix of these advancements has incomprehensibly quickened advance in overseeing credit chance in a portfolio setting.

Traditionally, organizations have taken an asset-by-asset approach to mitigation of credit risk. While each company's method varies, in general this approach involves periodically evaluating the quality of creditexposures, applying a credit risk rating, and aggregating the results of this analysis to identify a portfolio's expected losses. The foundation of asset-by-asset approach is a sound credit review and internal credit risk rating system. This system enables management to identify changes in individual credits, or portfolio trends in a timely manner. Based on the changes identified, credit identification, credit review, and credit risk rating system management can make necessary modifications to portfolio strategies or increase the supervision of credits in a timely manner. While the asset-by-asset approach is a critical component to managing credit risk, it does not provide a complete view of portfolio credit risk, where the term risk refers to the possibility that actual losses exceed expected losses. Therefore, to gain greater insight into credit risk, companies increasingly look to complement the asset-by-asset approach with a quantitative portfolio review using a credit model (Mason & Roger, 1998). Companies increasingly attempt to address the inability of the asset-by-asset approach to measure unexpected losses sufficiently by pursuing a portfolio approach. One weakness with the asset-by-asset approach is that it has difficulty identifying and measuring concentration.Concentration risk refers to additional portfolio risk resulting from increased exposure to credit extension, or to a group of correlated creditors (Richardson, 2002).

2.3 Empirical Review

2.2.1 Introduction

According to Kithinji (2010); micro-finance institutions have approved decisions that are not well examined, there has been cases of loan defaults and non performing loans, massive extension of credit and directed lending.Policies to minimize on the negative effects have focused on mergers in financial institutions, better financial institutioning practices but stringent lending, review of laws to be in line with the global standards, well capitalized financial institutions which are expected to be profitable, liquid financial institutions that are

able to meet the demands of their depositors, and maintenance of required cash levels with the central financial institution which means less cash is available for lending.

This has led to reduced interest income for the financial institutions and by extension reduction in profits, the financial institutions also concentrate highly on collateral as the main security for loans which at times makes the financial institutions assume other forms of mitigating risk. Donald et al (1996) defines Credit risk simply as the potential that a financial institution borrower or counterpart will fail to meet its obligations in accordance with agreed terms. The goal of credit risk management is to maximize a financial institution's risk-adjusted rate of return by maintaining credit risk exposure within acceptable parameters.

Financial institutions need to manage the credit risk inherent in the entire portfolio as well as the risk in individual credits or transactions, i.e. consider the relationships between credit risk and other risks. The effective management of credit risk is a critical component of a comprehensive approach to risk management and essential to the long-term success of any financial institutioning organization.

According to Nelson and Schwedt (2006), the financial institutioning industry has made strides in managing credit risk. Until the early 1990s, the analysis of credit risk was generally limited to reviews of individual loans, and financial institutions kept most loans on their books to maturity. Today, credit risk management encompasses both loans reviews and portfolio analysis. Moreover, the development of new technologies for buying and selling risks has allowed many financial institutions to move away from the traditional book and hold lending practice in favor of a more active strategy that seeks the best mix of assets in light of the prevailing credit environment, market conditions, and business opportunities. Much more so than in the past, financial institutions today are able to manage and control obligor and portfolio concentrations, maturities, and loan sizes, and to address and even eliminate problem assets before they create losses. Many financial institutions also stress test their portfolios on a business line basis to help inform their overall management.

2.2.2 Risk Identification

Risk identification is vital for effective mitigation of credit risk. In order to manage credit risks effectively, management of financial institution have to know what risks face the financial institution. The important thing during risk identification is not to miss any risks out and this can be done through establishing an appropriate credit risk environment

(Kromschroder& Luck, 1998). This is the responsibility of the board of directors who should approve and periodically (at least annually) review the credit risk strategy and significant credit risk policies of the financial institution.

The strategy should reflect the financial institution's tolerance for risk and the level of profitability the financial institution expects to achieve for incurring credit risk. Inspection by branch managers and financial statement analysis are themain methods used in risk identification. The main techniques used in risk management are establishingstandards, credit worthiness analysis, risk rating and collateral. Senior management of a financial institution is responsible for implementing the credit risk strategy approved by the board of directors. This includes ensuring that the financial institution's credit-granting activities conform to the established strategy, that written procedures are developed and implemented, and that loan approval and review responsibilities are clearly and properly assigned.

Senior management must also ensure that there is a periodic independent internal assessment of the financial institutions credit-granting and management functions.The main function of the risk manager is to monitor; measure and control credit risk. The Risk Manager's duty includes identification of possible events or future changes that could have a negative impact on the institution's credit portfolio and the financial institution's ability to withstand the changes. Effective risk management requires a reporting and review structure to ensure that risks are effectively identified and assessed and that appropriate controls and responses are in place.

Risk monitoring can be used to make sure that risk management practices are in line and proper, risk monitoring also helps financial institution management to discover mistake at early stage, (Al- Tamimi& Al-Mazrooei, 2007). Monitoring is the last step in the corporate risk management process, (Pausenberger&Nassauer, 2002). According to Parrenas (2005), the shareholders of the institutions can use their rights to demand information in order to judge the efficiency of the risk management system. The director's report enables the shareholders to assess the status of the corporation knowledgeably and thoroughly.

In many firms, fancy value-risk models, are up and running. But, in many more cases, they are still in the implementation phase. In the interim, simple ad hoc limits and close monitoring substitute for elaborate real time systems. While this may be completely satisfactory for institutions that have little trading activity and work primarily on behalf of

clients, the absence of adequate trading systems elsewhere in the industry is a bit distressing. There are three stages in the credit risk monitoring process, namely; the simple risk control of the business avoiding being over concentrated in any one sector, estimating the probability of defaulting and assessing recovery, the link between economic capital and return. Clearly financial institutions would like to set minimum rates of return they expect to earn on their portfolios after provisioning. The link between economic profit and risk is the next stage in advancing the practice of credit risk management and risk management is used as a strategic management tool to align RAROC (Risk Adjustment Returns on Capital) with ROE (Return on Equity). Each financial institution must understand what drives the share price of the financial institution and thus must understand the link between economic capital, intellectual property owners IPOs (Intellectual Property Owners) and ROE.

Clear established process for approving new credits and extending the existing credits has been observed to be very important while managing Credit Risks infinancial institutions, says Heffernan (1996). Further, monitoring of borrowers is very important as current and potential exposures change with both the passage of time and the movements in the underlying variables, says Mwisho(2001). According to Derbanet al.(2005), Monitoring involves, among others, frequent contact with borrowers, creating an environmentthat the financial institution can be seen as a solver of problems and trusted adviser; develop the culture of being supportive to borrowers whenever they are recognized to be in difficulties and are striving to deal with the situation; monitoring the flow of borrower's business through the financial institution's account; regular review of the borrower's reports as well as an on-site visit; updating borrowers credit files and periodically reviewing theborrowers rating assigned at the time the credit was granted. Financial institutions must have in place writtenguidelines on the credit approval process and the approval authorities of individuals or committees as wellas the basis of those decisions. Approval authorities should be sanctioned by the board of directors.

Approval authorities will cover new credit approvals, renewals of existing credits, and changes in terms and conditions of previously approved credits, particularly credit restructuring, all of which should be fully documented and recorded. Prudent credit practice requires that persons empowered with the credit approval authority should not also have the customer relationship responsibility. Approval authorities of individuals should be commensurate to their positions within management ranks as well as their expertise, says Mwisho (2001).

2.2.2.1 Relationship between credit risk and profitability

The underlying causes of the global financial crisis are reflected on both of the main financial decisions: investment and financing. On the investment or asset side, security investors' apparent overreliance on credit ratings led them to make poor choices and buy overvalued assets, consisting of mortgage-backed securities. On the financing or liability side, financial institutions as sellers of these securities, backed by cash collections from mortgage loans, suffered losses due to excessive risk taking by lending money to people with insufficient ability to repay (Gurriá, 2008).

This increase in financial institution's liabilities or leverage, if large and lasting enough, will trigger a financial crisis. This trend has been observed in periods of financial crises, such as the second quarter of 1987, the third quarter of 1998, and, most recently, the third quarter of 2008. This is complicated by having long-term assets in balance sheets, such as mortgage loans, being financed by short-term liabilities. Consequently, financial institutions are obliged to pay cash before asset driven cash collections occur, increasing their illiquidity (Adrian & Shin, 2009).Financial institution liquidity management involves a tradeoff between the cost of attaining higher liquidity and the cost of inefficient allocation of such liquidity.

Providing financial services across borders helps to transfer liquidity to those locations where it is scarce, but at the cost of probable inefficient fund allocation. These inefficiencies may arise from not having enough cash to finance the maximum possible number of positive net present value, thereby, resulting in lessened opportunities for shareholder value creation (Dietrich & Vollmer, 2010). An important source for financial institution liquidity is the timely collection of loans and their corresponding interest income. This implies minimizing default loan rates. By the summer of 2008, high default loan rates seriously affected loancollections, and this lessened financial institutions' ability to lend, and, thus, increasing the cost of borrowing. Whilethis phenomenon largely occurred in the United States, the fact that the mortgage-backed securities were sold in other markets caused a domino effect which pulled down the global economy through its effect on European financial institutions (Gurriá, 2008). The 2008 global financial crisis is the major turmoil affecting financial markets since the 1990's when individual countries, such as Argentina, Brazil, Russia, Thailand, Turkey, and the East Asia region faced financial problems (Diamond &Rajan, 2009; Lewis, Kay, Kelso, &Larson, 2010). Brunnermeier (2009) mentions the sharp decrease in housing prices and the resulting increase in mortgage loan defaults in 2007 as the major cause of a liquidity

crisis that became a global crisis in 2008. During the period before the years leading to the most recent financial crisis, the United States faced a rising trend in financial institutioning consolidation, or decrease in number of financial institutions (Heiney, 2010).

According to Heiney (2010), during the years 2000 to 2005, there was an increase in ROA and a decrease in ROE for financial institutions in the United States. According to the results of a survey made to financial institution senior managers, the three risk factors that most contributed to the financial crisis were inappropriate risk governance, weak risk culture, and ineffective incentive and remuneration policies (Hashagen, Harman, Conover, & Sharma, 2009).Risk governance is necessary for limiting excessive risk taking, while financial institutions should develop a strong risk culture through the encouragement of an assessment, measurement, and mitigation mindset of financial institution employees, at all levels, in the organizational hierarchy. In addition, incentive and remuneration policies should reward managers with strong performance, based on attainment of longterm goals and financial institution shareholder wealth maximization.

If proper behavior is rewarded, it willbeinthemanagers'best interest to not make decisions causing financial institution risk to rise to intolerable levels, resulting indecreased share values when lacking high enough returns (Junarsin&Ismiyanti, 2009). Diminishedshareholder value would be an adverse effect of the separation of ownership (shareholders) and control(managers) that gives rise to agency problems (Gong, 2011).

In a study about chief executive officer compensation and tenure in United States commercial financial institutions, there was a positive relationship between both, compensation and tenure, and financial performance (Crumley, 2008). Gong (2011) used two different shareholder value measures – one based on change of market capitalization; another one, on cumulative abnormal stock returns estimated through the CapitalAsset Pricing Model. Assessing the cumulative changes in shareholder value over average chiefexecutive officer tenure, the study's findings showed a positive relationship between chief executiveofficer compensation and shareholder value and between tenure and shareholder value (Gong, 2011). These results are consistent with those of Crumley (2008).

Not having financial institution manager goals aligned with shareholder goals is commonly known as the agencyproblem. This occurs due to managers, acting as agents, to represent the interests of shareholders, whoare the principals. The agency problem is larger when ownership is diffuse or a large number ofshareholders contribute a relatively small share to

financial institution capital. Higher costs of monitoring agents'actions result in higher moral hazard, the likelihood of poor financial decision making with the objectiveof improving the managers' wealth, at the expense of shareholders (Junarsin&Ismiyanti, 2009).

Using Hong Kong during the East Asia 1997-1998 crisis as an example of firms' reactions under financialdifficulties, Leung and Horwitz (2010) found a positive relationship between ownership of shares bycompany insiders and financial performance. The resulting merge of ownership and control, throughshareholder-managers (company insiders), could contribute to enhanced performance by having managers benefit from decisions yielding increased shareholder value. Consequently, agency costs would bediminished. Shareholder value depends on several factors including, among others, profitability andliquidity. While financial institution profitability, by itself, does not necessarily lead to increased shareholder values,continued unprofitability will, at one time or another, impair liquidity in such a way as to decrease sharevalues. The total debt to equity ratio is one of the determinants of financial institution profitability. For lower debt toequity ratios, higher debt financing may motivate managerial behavior resulting in decreased agency costsand, consequently, higher profitability. However, if debt levels reach a high enough level, implying thatequity financing is too low, there is no incentive for managers to act for shareholders' benefit and therewill also be increased costs related to debt financing, due to higher likelihood of financial institutionruptcy. At theseexcessive debt levels, total debt to equity may be negatively related to profitability (Paolo, 2011).

However, the findings of several studies suggest a positive relationship between higher debt levels andcredit risk and a positive or insignificant relationship between higher debt levels and profitability. Usinga regulatory asset risk based measure for credit risk and an indirect measure for debt to equity (based onequity to risk based assets, where higher equity is equivalent to lower debt levels), Salah and Fedhila(2012) found a negative relationship between equity levels and credit risk. Corcoran (2010) obtainedsimilar results. Furthermore, Hsieh and Lee, (2010) uncovered a negative association between equity toassets and profitability. In turn, Gill, Biger, and Mathur (2011) found no significant relationship betweenlong-term debt to total assets and profitability for a group of companies in service industries. Debt andequity are the two main sources of capital for financing investment and operating activities.

Thus, a negative relationship between equity and credit risk implies that higher debt levels are associatedwith higher credit risk. Higher credit risk may lead to lower profitability due to a greater likelihood ofuncollectible amounts owed by financial institution clients. In regards to corporate governance, financial institutions should have asystem of rules, procedures, and regulations to ensure that agency costs, or costs of minimizing theagency problem and, consequently, moral hazard, are as low as possible, as a way to maintain andincrease shareholder value.If proper corporate governance systems are in place, they help to reduce therisk of future crises. However, Goddard, Molyneux, and Wilson (2009) claim that governmentintervention to aid in the financial stability of troubled financial institutions send the wrong signal by allowing forimprudent behavior to occur, in the expectation that, ultimately, the government will approve financial aidto financial institutions if they fail. Examples of government financial aid include the recapitalization of financial institutions and the purchase of impaired assets to improve liquidity in the financial institutioning system (Goddard, Molyneux, & Wilson, 2009). These measures are implemented with the goal of achieving financial system stabilization in times of financial crisis. Lessons learned from successful corporate governance practices during financial crises should serve to identify the characteristics that make financial institutions more resilient, or capable of withstandingthem. Contrary to financial institutions in Germany, Netherlands, United Kingdom, and United States, Australian financial institutionsdid not have to be rescued or "bailed-out" by their respective governments in order to maintain a stablefinancial institutioning system. Through these bail-outs, governments provided additional capital to finance financial institution assetsand operations and prevent them from becoming insolvent and financial institutionrupt.

In the extreme case of Iceland, it was necessary to nationalize financial institutions which implied full transfer of controlto the government (Hawtrey, 2009).One outstanding feature of the Australian financial institutioning system was the lowlevel of nonperforming loans, which are those with payments in arrears. It did not face the great liquidityproblems that arose elsewhere, and even though financial institution share prices declined due to the crisis, thesedecreases were not as large as those of their counterparts' in other countries (Hawtrey, 2009).

Hawtrey (2009) argues that there are several explanations for this resilience. All of them have a commontheme: better financial institution corporate governance. One explanation for financial institution resilience is a higher loan quality dueto responsible lending practices. This, in turn, is a result of boards of directors and executives' prudencein lending decisions

and avoidance of low quality debt securities. The predominance of the lower riskintermediation model (acceptance of deposits and approval of loans) over the higher risk securitization model (approval of mortgage loans and sale of securities backed by loan collections) has beenadvantageous to Australia. The stress on lending growth in relation to securitization allowed for higherlong-term profitability. This benefit was complemented by a greater emphasis on prime lending – lowrisk financial institution borrowers – as opposed to subprime lending – high risk borrowers (Hawtrey, 2009).

Even though prime lending has lower credit or default risk, Australian financial institutions were better prepared byensuring higher provision or reserve for loan losses, which, in turn, was greater than impaired loans (thosewith a high likelihood of default). Another strength related to financial institution capital (funds provided byshareholders and financial institution operations instead of depositors and other creditors) being superior to minimumamounts, based on asset risk (Hawtrey, 2009). Diversity and stability of sources of funds is essential toensure their availability at not too high costs. This entailed not depending mostly on short-term and localsources, but relying more on long-term and global sources, when compared to financial institutions in other countries(Hawtrey, 2009).Australian financial institutions also resisted the temptation to focus on a short-term instead of a long-termhorizon.

Alongertermfocusavoidsthesearchforrapidearningsandshareprices'growthfueledbyhighriskdec isionmaking.Properriskmanagementwasalsoenhancedbyhighqualityoffinancial institutionsupervisionthrougheffectivenessoffinancialsystemregulation(Hawtrey,2009).Policy recommendationshavebeenmadetoimprovefinancial institutioningsystemresilience. First, there should berisk management reforms. Corporate governance risk management reforms must ensure that excessiverisk taking does not occur, business transactions are fair for involved parties, and consumers are well protected. There must also be greater transparency and accountability among corporate boards andsupervision of financial securities, particular those of an innovative complex nature (Araneta, CalderonKabigting,Hapitan,Lim,Romagos,&WeeSit,2009).

AccordingtoareportbytheWorldFinancial   institution,financial institutiongovernance'sfailuresinfourareaswereresponsibleforthefinancialcrisis. Theseareasareriskgovernance;remunerationandincentivestructures;boardcomposition,qualific ations,andindependence;andshareholderengagement(The World Financial institution Group,2010).The definition for risk governance is "board and management oversight of risk

and the attendantconfiguration of internal systems for identifying, measuring, managing, and reporting risk (The WorldFinancial institution Group, 2010: 2)". Risk governance problems arose out of risk information not being timely received by board of directors. There was also an absence of adequate planning for liquidity and funding, on the part of managers. Consequently, managers were also unaware of rising risks to be able to take prompt action before severe declines in asset values and unavailability of market sources of funds (The WorldFinancial institution Group, 2010). Incentive structures were ineffective due to short-term rewards in the form of bonuses being paid for dealings in risky securities. These structures should instead have alignedmanagerial goals with multi period stability, in mind. This would motivate managerial behavior focusingon long term results rather than short-term self-profits from bonuses, obtained by bearing too much risk(The World Financial institution Group, 2010).

Regarding board composition, there were not enough executive board members. Consequently, the chiefexecutive officers were powerful enough to enable them to not be held accountable for poor decisionmaking. This problem is compounded when the chief executive officer is also the chairman of the boardof directors, as usually occurs in major public financial institutions from the United States. In addition,lack of technical risk management expertise, skills, and experience of unqualified directors cancomplicate this matter. While the presence of nonexecutive directors is necessary to improve boardindependence, chief executive officers' terms were often longer than those of nonexecutive directors. Therelatively high turnover of this group of directors may serve to reinforce the power of chief executiveofficers with the ensuing high likelihood of adverse consequences of too much power being in the handsof a single person (The World Financial institution Group, 2010). Shareholder engagement was not active enough toprevent these excesses. Shareholder activism, particularly that of large institutional investors, requiresthat they exercise their voting rights and monitor managers and board members to reward them for good governance practices (The World Financial institution Group, 2010).

2.2.2.2 Credit Risk Management

Credit risk management is defined as identification, measurement, monitoring and control of risk arising from the possibility of default in loan repayments (Early, 1996: Coyle, 2000). Credit extended to borrowers may be at the risk of default such that whereas financial institutions extend credit on the understanding that borrowers will repay their loans, some borrowers usually default and as a result, financial institutions income decrease due to the

need to provision for the loans. Where commercial financial institutions do not have an indication of what proportion of their borrowers will default, earnings will vary thus exposing the financial institutions to an additional risk of variability of their profits. Every financial institution bears a degree of risk when the institution lends to business and consumers and hence experiences some loan losses when certain borrowers fail to repay their loans as agreed. Principally, the credit risk of a financial institutionis the possibility of loss arising from non-repayment of interest and the principle, or both, or non-realization of securities on the loans.

Risks exposed to commercial financial institutions threaten a crisis not only in the financial institutions but to the financial market as a whole and credit risk is one of the threats to soundness of commercialfinancial institutions. To minimize credit risk, financial institutions are encouraged to use the "know your customer" principle as expounded by the Basel Committee on Financial institutioningSupervision (Kunt-Demirguc and Detragiache, 1997; Parry. 1999: Kane and Rice, 1998). Subjective decision-making by the management of financial institutions may lead to extending credit to business enterprises they own or with which they are affiliated, to personal friends, to persons with a reputation for non-financial acumen or to meet a personal agenda, such as cultivating special relationship with celebrities or well connected individuals. A solution to this may be the use of tested lending techniques and especially quantitative ones, which filter out subjectivity (Griffith and Persuad. 2002).

The key principles in credit risk management are: firstly, establishment of a clear structure, allocation of responsibility and accountability, processes have to be prioritized and disciplined, responsibilities should be clearly communicated and accountability assigned thereto (Lindergren, 1987). According to Demirguc-Khunt and Huizinga (1999), the overwhelming concern on financial institution credit risk management is two-fold. First, the Newtonian reaction against financial institution losses, a realization that after the losses have occurred that the losses are unbearable. Secondly, recent development in the field of financing commercial paper, securitization, and other non-financial institution competition have pushed financial institutions to find viable loan borrowers. This has seen large and stable companies shifting to open market sources of finance like bond market. Organizing and managing the lending function in a highly professional manner and doing so pro-actively can minimize whatever the degree of risk assumed losses. Financial institutions can tap increasingly sophisticated measuring techniques in approaching risk management issues (Gill, 1989).

Cooper et al. (2003) found that changes in credit risks may reflect changes in the health of a financial institution's loan portfolio which may in turn affect the financial institution's performance. Duca and McLaughlin (1990) found that the variation in financial institution profitability are largely attributable to variations in credit risk, since increased exposure to credit risk is normally associated with decreased firm profitability. Further research by Miller and Noulas (1997) found that there is a negative relationship between the credit risk and financial institution profitability, meaning that the more the financial institutions were exposed to high-risks loans, the higher the accumulation of non- performing loans and. therefore, the lower the profitability.

2.2.2.3 Financial Performance

Financial performance is a subjective measure of how well a financial institution can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. Generally, the financial performance of financial institutions and other financial institutions has been measured using a combination of financial ratios analysis, benchmarking, measuring performance against budget or a mix of these methodologies (Avkiran, 1995).

Financial institutions, as the critical part of financial system, play an important role in contributing to a country's economic development. If the financial institutioning industry does not perform well, the effect to the economy could be huge and broad. From their empirical findings, Demirguc- Kunt and Detragiache (1999) suggested that financial institution profitability is an important predictor of financial crises. Therefore, the study of the determinants of the financial institution profitability becomes an important issue which could help financial institutions understand the current conditions of the financial institutioning industry they are involved in and the critical factors they should consider in making decisions and creating new policies either for recovery or improvement. Studies on performance of financial institutioning institutions are plenty. Results of these studies strongly suggest that financial institution profitability determinants vary across countries and also among regions of the world (e.g. Doliente, 2003).

In accordance with the study of Waymond (2007), profitability ratios are often used in a high esteem as the indicators of credit analysis in financial institutions, since profitability is

associated with the results of management performance. ROE and ROA are the most commonly used ratios, and the quality level of ROE is between 15% and 30%, for ROA is at least 1%. ROE as an important indicator to measure the profitability of the financial institutions has been discussed extensively in the prior studies. Foong (2008) indicated that the efficiency of financial institutions can be measured by using the ROE which illustrates to what extent financial institutions use reinvested income to generate future profits. According to Riksfinancial institution's Financial Stability Report (2002), the measurement of connecting profit to shareholder's equity is normally used to define the profitability in the financial institutions.

Furthermore, the paper "Why Return on Equity is a Useful Criterion for Equity Selection" (Jensen Investment Management. 2008) mentioned that ROE provides a very useful gauge of profit generating efficiency because it measures how much earnings a company can get on the equity capital. ROE is defined as the company's annual net income after tax divided by shareholder's equity. NI is the amount of earnings after paying all expenses and taxes. Equity represents the capital invested in the company plus the retained earnings. Essentially. ROE indicates the amount of earnings generated from equity. The increased ROE may hint that the profit is growing without pouring new capital into the company. A steadily rising ROE also refers that the shareholders are given more each year for their investment. All in all, the higher ROE is better both for the company and the shareholders. (Jensen Investment Management, 2008). In addition, ROE takes the retained earnings from the previous periods into account and tells the investors how efficiently the capital is reinvested.

The study of Joetta (2007) presented the purpose of ROE as the measurement of the amount of profit generated by the equity in the firm. It is also mentioned that the ROE is an indicator of the efficiency to generate profit from equity. This capability is connected to how well the assets are utilized to produce the profits as well. The effectiveness of assets utilization is significantly tied to the amount of assets that the company generates for each dollar of equity.

2.2.2.4 Effect of Credit Risk Management on Financial Performance
Lymon and Carles (1978) defined credit risk management as a process of decision making which involves minimizing losses from both bad debts and costs of debt operation while maximizing the value of credit sales. Also Pandey (1995) defines Credit Risk Management to involve the process of making decisions relating to the investment of funds. Such decisions should be carefully analyzed as they are characterized by an element of uncertainty. Bessis

(1998) defines financial performance as a management initiative to upgrade the accuracy and timeliness of financial information to meet required standards while supporting day to day operations. Lymon and Carles (1978) also defined it as the operational strength of a firm in relation to its revenue and expenditure as revealed by its financial statements. In any organization especially commercial financial institutions, financial performance is affected by credit risk.

The role of financial institution remains central in financing economic activity and its effectiveness could exert positive impact on overall economy as a sound and profitable financial institutioning sector is better able to withstand negative shocks and contribute to the stability of the financial system (Athanasoglou et al, 2005). Therefore, the determinants of financial institution performance have attracted the interest of academic research as well as of financial institution management, financial markets and financial institution supervisors since the knowledge of the internal and external determinants of financial institutions profits and margins is essential for various parties.

Achou and Tenguh (2008) shows that there is a significant relationship between financial institution performance (in terms of return on asset) and credit risk management (in terms of loan performance). Better credit risk management results in better financial institution performance. Thus, it is of crucial importance that financial institutions practice prudent credit risk management and safeguarding the assets of the financial institutions and protect the investors' interests.

According to Van Horne (1995), the firm's credit policies are the chief influences on the level of debtors, measuring the manager's position to invest optimally in its debtors and be able to trade profitably with increased revenue. Pandley (1995) pointed out that credit policy defines a firms' performance, meaning that once a firm adopts an optimal credit policy, it will be able to maximize its investment revenue in debtors and this improves and promotes its financial standing and performance therefore a good credit policy decision is positively related to high financial performance.

2.3.1 The effects of credit risk mitigation strategies on profitability

Many scholars use the Return of Assets (ROA) or Return on Equity (ROE) as a measure of MFIs or financial institutions' profitability (Rosenberg 2009; Ogboi and Unuafe 2013; Aemiro and Mekonnen 2012; Naveen et al 2012). Moreover, they use

Non Performing Loans (NPL) ratio as the measure of credits risks management. The ROE is obtained by dividing net income (after taxes and excluding any grants or donations) by average equity over a certain period of time while ROA is calculated by dividing net income (after taxes and excluding any grants or donations) by average assets over a certain period of time (Rosenberg 2009; Mata 2010). Most authors argue that ROA/ROE and NPL are strongly correlated in many cases the negative relationship between ROA/ROE and NPL ratio is revealed. However, some few scholars revealed the positive correlation between ROA and credits risks management where most of authors focused their studies on financial institutions.

For instance, in Pakistan, a study conducted by Ariffin and Kassim (2013) revealed the positive and strong correlations between ROA and all risk management practices in Malaysian Islamic financial institutions while Kaaya and Pastory (2013) found out that negative correlation between financial institution performance and credits risks management in Tanzania, among many scholars who noted the same. Hence theoretically if NPL affects financial institutions' profitability, they can affect Financial Institutions' profitability too. Global economic crises also might have negative impacts on MFIs profitability.

In another study, Aemiro and Mekonnen (2012) studied the financial performance of Amhara Credit and Saving Institution (ACSI) in Ethiopian MFIs during the 2007- 2009 financial crisis and they revealed that when the gross loan portfolio declined by 15.73% in the year 2009, also ROA and ROE declined due to loss of financial revenue. Moreover, the portfolio at risk rose during 2008 and 2009 indicating deterioration of portfolio quality. Similarly, Seibel and Thac (2012) assessed the impacts of 2008 global economic crises on how the rural People's Credit Funds (PCFs) and the Central People's Credit Fund (CCF) in Vietnam. Their study revealed that from 2007 to 2008 ROE for both PCFs and CCF declined because people worried about the future. The study revealed that ROE for CCF fell from 14% to 11% because they applied conservative provisioning policy and they also experienced stronger competition which forced them to lower their deposit interest rates and this automatically decreased the earnings. However, the study noted that members honored their repayment obligations and the overdue ratios were constant at a level near zero.

High costs of operation and high loans interest rates might affect profitability of MFIs and sometimes increase default risks for loans. Roberts (2013) found out that a stronger for-profit orientation corresponds with higher interest rates for MFI clients. However, this does not contribute to greater profitability and therefore sustainability of MFIs because the stronger profit orientation is also associated with higher MFI costs. Krahnen and Schmidt (2008) affirmed that handling a larger credit portfolio also produces additional costs of credit unions which have to be covered by a corresponding increase in interest income, implying that large credit portfolio might lower rural Financial Institutions' profitability. Also large portfolio poses high risk of credits default.

Kinde (2012) revealed that MFIs profitability in Ethiopia is associated with higher loan sizes. The larger loans were associated with higher cost efficiency and hence profitability. Mata (2010) used the return on equity (ROE) and the return on assets (ROA) to assess the managerial performance and 225MFIs' profitability from Latin America and the Caribbean. The study revealed large differences in managerial performances where ROA and ROE ranged from -36% to 25% and -226% to 64% while the average ROA and ROE were 3.24% and 1.14% respectively.

Few studies focus partially the influence of credits risk management on the performance or profitability of Financial Institutions in East Africa. For instance, Odhiambo (2012) studied how the governance problem affects the Financial Institutions in Kenya and he found out that board members' face the problem of the conflict of interests where some members are interested by low interest loans than the financial viability or profitability of the Financial Institutions.

The study revealed that someFinancial Institutions' members may seek posts in the board or credit committee by promising that will issue cheap loans after being elected and this might pose higher risk of credits' default. Matumo et al (2013) assessed how front office services activities influence the profitability of Financial Institutions in Kenya and they found out that Financial Institutions in Kenya improved their ROA from 13.6%, to 25.3% after allowing non members to operate savings accounts in Financial Institutions.

The study affirmed that front office operations activities promoted the volume of Financial Institutions' transactions, thus improved the revenue of the Financial

Institutions in Kenya. It is assumed that the revenues for those Financial Institutions improved because of the effective credit risks management techniques.

2.3.2 Debt Recovery policies and profitability

Credit Policy can be viewed as written guidelines that set the terms and conditions for supplying goods on credit, customer qualification criteria, procedure for making collections, and steps to be taken in case of customer delinquency. This term can also be refers to as collection policy. It is also the guidelines that spell out how to decide which customers are sold on open account, the exact payment terms, the limits set on outstanding balances and how to deal with delinquent accounts.

A company's credit policy refers to the actions taken by a business to grant, monitor, and collect the cash for outstanding accounts receivable (Maysami, 2010). The credit policy of a typical organization contains the following variables: collection policy, cash discount, credit period and credit standard, while Miller (2008), classified it as credit limits, credit term, deposits, customer information and documentation. And each of the components of a company's credit policy is used as a tool for monitoring account receivables which is the outcome of credit sales; it covers from the kind of customers that credit may be extended to when actual collections would be made.

In a study carried out by Saunders, (2012) in the United States, the findings indicated that debt recovery policies largely affected the profitability of microfinance institutions. He looked at various microfinance institutions in the country and also investigated the policies that were being used in debt collection.

Pandey (2004), bad debt losses arise when the firm is unable to collect its accounts receivable. The size of bad debt losses depends on the quality of accounts accepted by the firm. In the words of Uchegbu (2001), it is wise to discourage bad debts and efforts should be made to encourage discount more importantly cash discount.

Donald and Penne (1987), debtors or accounts receivable in a firm are claims held against others in the operating circle. Trade debtors are further classified into trade debtors and non-trade debtors. The amount which is owed by customers for goods and services sold in the course of carrying on a business is termed trade debtors while on the other hand any amount owed by customers arising from a variety of transitions that

are oral or written promises to pay other than goods at a later date is called non-trade debtors.

The recent economic crisis has focused attention on risk management, but managing risk is all about achieving objectives (Woods, Kajüter, and Linsley, 2008; Vander Stede, 2009). Senior managers in particular, are expected to build sustainable performances: create value at acceptable risk levels over time (Calandro and Lane, 2006). To this end, they should be clearly aware of the multiple sources and types of risks (CIMA, 2007).A stronger focus on risk in performance reports addressed to senior managers can address such expectation. Incorporating risk into performance management processes can foster a better understanding of the overall organizational risk exposure and improve business results.

2.3.3Loan Appraisal Procedures and Profitability

Threesourcesofcostadvantagewereclassifiedby PetersenandRajan(1997)asfollows: informationacquisition,controllingthebuyerandsalvaging valuefromexisting assets.The firstsourceofcostadvantagecanbeexplainedby thefactthatsellerscangetinformation aboutbuyersfaster andatlowercostbecauseitisobtainedinthenormalcourse ofbusiness. Thatis,thefrequencyandtheamountofthebuyer's ordersgivesuppliersanideaofthe client'ssituation;thebuyer'srejectionofdiscountsforearlypaymentmayservetoalertthe supplierofa weakeningin thecredit-worthiness ofthebuyer, and sellersusuallyvisit customers moreoften than financial institutions do.

Theglobaleconomicmeltdowncausedby thesubprimemortgagecrisis intheUSin2007 and its adverseeffectonfinancialmarketsandparticipantsinthefinancialindustryworldwidehastriggered a capitalmanagementcrisisin mostfinancial institutions, especiallythe commercialfinancial institutions. Inmarket- based countrieswherecapitalmarketdominates economicactivities,financial institutionshavesuffereda severe shockintheircapitalandliquiditystatusduetotheunanticipateddownturninthefinancialmarket andacreditcrunch experiencein the financial industry. Thismadeanumberof financial institutionsgoilliquid and someevencloseddownoperations (Omotola,Roya&Safoura2012).Itis acommonpractice that profit-maximisingfirms,including financial institutions,consideroperationalmiscalculation whichcould beasa result of macroeconomic risks, such as the effect of interest rates, inflation or even business cyclicality.

Further,microeconomicriskslikenewcompetitivethreatsare inevitableandshouldbedealtwith adequately.Financial institution-wideissuessuchas technological failures,commercial inefficiency ofasupplieror customer,politicalmanipulation,X-inefficiencyandnaturaldisasterarepossible risksfacedby financial institutions and otherfinancial institutions. In addition,the debacle in financialand non-financialsectorasa result ofthecontagioussubprimecrisis indicatesastrong need for riskmanagement.According toPyle (1997), financialmisadventure is not reallya newphenomenon but the rapidityofeconomic downturn caused bythis hasnecessitatedtheneedfor integratingan efficientriskmanagementsystem.

Thepastfewdecadeshas witnessedgrowing interestofexpertsinthefield.Whilesomewritershave institutedanargumentofwhatkindof riskmanagementmodelshouldbeadoptedby deposit taking financial institutions, othershavesuggestedmore stringent regulatory options.Risk management involvesriskidentification,riskmeasurement(andquantification),andmitigation.However,apoint to notehere isthe perception ofwhat constitutesrisktoafirmmaydifferfrominstitutionto institution,time totime, and industryto industry.

2.3.3.1 The 5 C's Model of Client Appraisal

Microfinance Institutions use the 5Cs model of credit to evaluate a customer as a potential borrower (Abedi,2000). The 5Cs help MFIs to increase loan performance, as they get to know their customers better. These 5Csare: character, capacity, collateral, capital and condition.

Character basically is a tool that provides weighting values for various characteristics of a credit applicant and thetotal weighted score of the applicant is used to estimate his credit worthiness (Myers and Forgy, 2005). This is thepersonal impression the client makes on the potential lender.

The factors that influence a client can be categorized into personal, cultural, social and economic factors (Ouma,1996). The psychological factor is based on a man's inner worth rather than on his tangible evidences ofaccomplishment. MFI's consider this factor by observing and learning about the individual. In most cases it is notconsidered on first application of credit by an applicant but from the second time. Under social factors, lifestyleis the way a person lives. This includes patterns of social relations (membership groups), consumption andentertainment. A lifestyle typically also reflects an individual's

attitudes, values or worldview. Reference groupsin most cases have indirect influence on a person's credibility. MFI's try to identify the reference groups of theirtarget as they influence a client's credibility. Personal factors include age, life cycle stage, occupation, income oreconomic situation, personality and self-concept. Under life cycle stage for example older families with maturechildren are not likely to default since it's easier to attach collateral on their assets since they are settled unlike theunsettled young couples.

The MFI's will consider the cash flow from the business, the timing of the repayment, and the successfulrepayment of the loan. Anthony (2006) defines cash flow as the cash a borrower has to pay his debt. Cash flowhelps the MFI's to determine if the borrower has the ability to repay the debt. The analysis of cash flow can bevery technical. It may include more than simply comparing income and expenses. MFI's determines cash flow byexamining existing cash flow statements (if available) and reasonable projections for the future (ratios Orlando (1990) posits that lenders review the borrower's business plan and financial statements, they have achecklist of items to look at one of the being the number of financial ratios that the financial statements reveal.

These ratios are guidelines to assist lenders determine whether the borrower will be able to service currentexpenses plus pay for the additional expense of a new loan. Collateral is any asset that customers have to pledgeagainst debt (Lawrence & Charles, 1995). Collateral represents assets that the company pledges as alternativerepayment source of loan. Most collateral is in form of hard assets such as real estate and office or manufacturingequipment. Alternatively accounts receivable and inventory can be pledged as collateral. Lenders of short termfunds prefer collateral that has duration closely matched to the short term loan

According to Weston and Eugene (1966), Capital is measured by the general financial position of the borrower asindicated by a financial ratio analysis, with special emphasis on tangible net worth of the borrower's business. Thus, capital is the money a borrower has personally invested in the business and is an indication of how muchthe borrower has at risk should the business fail. Condition refers to the borrower's sensitivity to external forcessuch as interest rates, inflation rates, business cycles as well as competitive pressures. The conditions focus on theborrower's vulnerability.

2.3.4Debt Recovery Policies and Profitability
Risk ispartoflife.Avoiding allriskwouldresultin noachievement,noprogressandofcourse,no reward.Ordinarily,risk isassociatedwith   the   likelihoodofa   negativeoutcome.However,in

management,risk isthechancethataninvestment'sactualreturnwillbedifferentthanexpected.A fundamental idea infinanceis the relationship betweenriskand return on investment. It implies future uncertainty about deviation from expected earnings or expectedoutcome and measures the uncertainty thatan investoriswilling to taketorealizeagainfrom aninvestment.Therearedifferent typesofrisks:liquidity risk,sovereignrisk,insurance risk,business risk,defaultriskandsoon(The Economic Times, 2015).

From theabove,itcould benoted thattherearedifferentdefinitionsof risk foreachofseveral applications.The widelyinconsistent andambiguous useofthe word is oneof severalcurrent criticismsofthemethodstomanagerisk(Douglas, 2009).TheISO31000(2009)/ISOGuide73 definitionof risk isthe'effectofuncertainty onobjectives'.Inthisdefinition,uncertainties include events(whichmayornothappen)anduncertaintiescausedbyalackofinformationorambiguity. Thisdefinitionalso includesbothnegativeandpositiveimpactsonobjectives.TheISO 31000:2009 covers information securitymanagementmeasurements, generally known assecuritymetrics.

The standardisintendedtohelporganizationsmeasure,reporton andsystematically improvethe effectivenessof their information security managementsystems.Itimprovesguidanceon the developmentand useofmeasuresandmeasurement inorder toassess the effectivenessofan implementedinformationsecuritymanagementsystem (ISMS)andcontrolsorgroupsofcontrols,as specified in ISO/IEC 27001. This would include policy, information security riskmanagement, controlobjectives,controls,processesandprocedures,andsupporttheprocessofitrevision,helping todeterminewhetherany oftheISMSprocessesorcontrolsneed tobe changedor improved.The Standard has the following keysections: information security measurementoverview,management responsibilities,measures andmeasurementdevelopment,measurementoperations,data analysisand measurement result reporting, information security measurement program evaluation and improvement.

The InstituteofRisk Managementdefines risk asthecombinationof probabilityofaneventand itsconsequence.Consequencescould rangefrom negativetopositive.All organizationshaveobjectivesatstrategic, tacticalandoperationallevelsandanything thatmakes achievingtheseobjectivesuncertainistermedasrisk.Riskisalsodefinedintermsofprobabilityof aneventanditsconsequences.Cohen(1982)positsthat risk issimply mixing courageandcommon sense.Inanotherdefinition,risk is regardedas future issues thatcanbeavoidedormitigated, rather thanpresentproblemsthatmustbeimmediately addressed.Thesimplefactisthatrisk isalwaysa probability issue.Possibility isabinary condition– eithersomething ispossible,or

it'snot:100 percentor0percent.Probability reflectsthecontinuumbetweenabsolutecertainty andimpossibility. The key thing to keep inmind is thatestablishing probabilities is not thesamethingas foretelling the future.OHSAS(OccupationalHealth&Safety Advisory Services)definesrisk astheproductof the probability ofahazardresulting inanadverseevent, timestheseverity oftheevent (Sifuna, 2011).

2.3.5Credit risk monitoring and profitability

Riskmanagementisasystematicprocessofunderstanding,evaluating andaddressing risksto maximizethechancesofobjectivesbeing achievedandensuring organizations,individualsand communitiesaresustainable.Italsoenablestheorganization tobeawareofnewpossibilities.In effect, riskmanagementrequiresaninformedunderstanding ofrelevant risks,an assessmentoftheir relativepriorityandarigorousapproachtomonitoringandcontrollingthem.Itisindeedthepractice ofidentifyingpotentialrisksinadvance,analyzing them andtakingprecautionarystepstoreduceor curbtherisk.Infinanceandbusinessterm,whenanorganizationmakesaninvestmentdecision, it exposesitselftoanumberoffinancialrisks. Thequantum ofsuch risksdependsonthetypeof financialinstrument.Thefinancialrisksmightbeinformofhighinflation,volatilityincapital markets,recessionandfinancial institutionruptcy andsoon.Inordertominimizeandcontroltheexposureof investment tosuchrisks, financial institutionmanagers and investorsresorttothe practiceof'risk management' (Tsevisani, 2007).

Tsevisani(2007)holdstheviewthattheinteractionbetweenhumanfactorsandtangibleaspectsof riskhighlightstheneed tofocusclosely onhumanfactorsasoneofthemaindriversforrisk management:achangedriverthatcomesfirstofallfrom theneedtoknowhow humansperform in changingenvironments andin the faceofrisks.

Risk mitigationstrategiesaremeasuresemployedby lending institutionstoavoid orminimizetheadverse effect ofrisk. This includes theidentification,analysis,assessment,controlandavoidance,minimization or eliminationof unacceptable risks. As a strategy, an organization mayuse riskassumption, risk avoidance,risk retention,risk transferorany otherstrategy (orcombinationof strategies)ineffective management of future events. Thereforea sound riskmanagement framework is crucial for commercialfinancial institutionstoenhancetheirprofitabilityandguaranteesurvival.Thekeyprinciplesincredit risk mitigationprocessaresequencedasfollows:establishmentof aclear structure,allocationof

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responsibility,prioritizedprocesses,disciplineandresponsibilitiesshouldbeclearlycommunicate d and accountabilityassigned.

2.3.5.1 Credit Policy

Credit Policy can be viewed as written guidelines that set the terms and conditions forsupplying goods on credit, customer qualification criteria, procedure for making collections,and steps to be taken in case of customer delinquency. This term can also be refers to ascollection policy. It is also the guidelines that spell out how to decide which customers aresold on open account, the exact payment terms, the limits set on outstanding balances andhow to deal with delinquent accounts.

Lawrence (2003), the objective of managing accounts receivable is to collect receivablewithout losing sales from high-pressure collection techniques. Accomplishing this objectiveencompasses; credit selection and standard which involve the application of technique fordetermining which customer should receive credit. This process involve evaluating thecustomer's creditworthiness and comparing it to the firm's credit standard, its minimumrequirements for extending credit to customers and credit monitoring which involves ongoingreview of the firm's account receivable to determine whether customers are paying accordingto the stated credit terms. Slow payments are costly to a firm's investment in accountreceivable.

Debtor management means the process of decisions relating to the investment in businessdebtors. In credit selling, it is certain that we have to pay the cost of getting money fromdebtors and to take some risk of loss due to bad debts. To minimize the loss due to notreceiving money from debtors is the main aim of debtor management.

Economic conditions and firms credit policies are the chief influence on the level of a firm'saccount receivable (James, 2002). The trade-off between increase in the market share throughcredit sales and the collectability of the account receivable affects firm's liquidity and itseventual profitability. A firm may report large profit and still suffer liquidity problem if bulkof its transactions are in account receivable and collection policy in not effective. Credit andcollection policies encompasses the quality of accounts accepted, the credit period extended,the cash discount given, certain special terms and the level of collection expenditure. In eachcase, the credit decision involves a trade-off between the additional profitability and the costresulting from a change in any of these elements.

Receivable management begins with the decision of whether of whether or not to grant credit.Where goods are sold on credit, a monitoring system is important, because without it,receivable will built up to excessive levels, cash flow (liquidity) will decline and bad debtswill offset the profit on sales. Corrective action is often needed and the only way to knowwhether the situation is getting out of hand is to set up and then follow a good receivablecontrol system (Eugene, 1992).

Eugene, (1992), states that optimal credit policy, hence the optimal level of accountsreceivable, depends on the firm's own unique operating conditions. A firm with excesscapacity and low variable production cost should extend credit more liberally and carry ahigher level of receivable than a firm operating at full capacity on slim profit margin.

2.3.6Diversification of credit products and profitability

Loansandadvancescanbearrangedfromfinancial institutionsinkeepingwiththeflexibility inbusiness operations.Tradersmayborrowmoney forday todayfinancialneedsavailingofthefacility of cashcredit,financial institutionoverdraftanddiscountingofbills.Theamountraisedasloanmay berepaid within a short period to suit the convenience of the borrower. Thus business maybe run efficiently withborrowedfundsfromfinancial institutionsforfinancing its.loansandadvancesworkingcapital requirementsare utilizedformaking paymentofcurrentliabilities,wageandsalariesof employees,andalsothetaxliabilityofbusiness.Loansandadvancesfromfinancial institutionsarefoundtobe economicalfor traders andbusinessmen,becausefinancial institutionschargea reasonablerateofintereston suchloans/advances (Khrawish, 2011).

2.4Summary of Literature Review

Generally,fromalmostallsurveysreviewed in the literature, itis evident that creditrisk mitigation is essential in optimizing the performance of micro financial institutions. In addition,effectivecreditriskmitigationinvolvesestablishing anappropriatecreditrisk environment,operatingunderasoundcreditgranting process,maintainingappropriate credit administrationthatinvolvesthe identification,analysisandmonitoringprocessaswellas adequatecontrols overcreditrisk.

According to Parrenas (2005), organizations have long viewed the problem of risk mitigation as the need to control risks which make upmost, if not all, of their risk exposure, credit, interest rate, foreign exchange and liquidity risk. While they recognize counterparty and legal risks, they view them as less central to their concerns. Where counterparty risk is significant, it is evaluated using standard credit risk procedures, and often within the credit department itself.

2.5 Research Gap

Magnifique (2013) evaluated the link of credit risk management in regards to financial performance of profit-making financial institutions in Rwanda. His research had four key goals in ascertaining the identification, analysis, and assessment of credit exposure, credit-scoring method, and risk supervision and their effect on commercial financial institutions financial performance in Rwanda. A descriptive research design was used in carrying out this research with a sample size of eleven commercial financial institutions. Using a questionnaire, primary data was collected for analysis. The findings of the study indicated that three key objectives played a major function in predicting the financial institutions financial performance except for risk monitoring. Credit risk identification explained the productivity of these financial institutions in Rwanda while scoring, analysis as well as assessment of credit risk explained the financial performance. However, this study took into account the correlation of credit risk management in regards to the monetary performance of financial institutions only, whose capital adequacy requirements are different from that of Microfinance institutions. Secondly, the study was carried out in Rwanda whereas the objective of this research is to evaluate the effects of credit risk management in MFIs on profitability within the Kenyan context.

Kisala (2014) examined the relationship that exists between credit risk management on the loan performance of MFIs in Kenya. The researcher used a descriptive research design that involving an exhaustively analysis of credit risk management and its relationship with loan performance in micro finance institutions. A sample size of nine MFIs was used, however, both primary data and secondary data was collected from 5 microfinance institutions through questionnaires and annual reports (2007-2011). The researcher used ROE as a profitability indicator while CAR and NPL ratio as credit risk management pointers. The findings of the study pointed out that there is a major correlation involving credit risk management and loan performance. The findings of the research indicated that NPL and CAR do have a negative and comparatively significant effect on ROE. NPL ratio had a greater effect on ROE as compared to CAR. The study instituted that there is a correlation between credit risk

management and microfinance institutions financial performance. This study however, focused on exclusively on deposit taking microfinance institutions only leaving out the non-deposit taking MFIs. Therefore, this study aims at focusing on both deposit and non-deposit taking MFIs with an aim of filling this research gap.

Korir (2014) assessed the outcome of credit risk management on the fiscal performance of DTMs that are licensed by the Central Financial institution. The researcher used a descriptive research design in his study that drawn in an exhaustively analysis of credit risk management and financial performance as the major variables. A sample size of nine Microfinances was used, however, both primary data and secondary data was collected from 6 microfinance institutions through questionnaires and annual reports (2011 - 2014). Return on asset (ROA) model was used as a profitability indicator while Default rate, cost per loan asset, and bad debt cost as credit risk management indicators. Using multiple regression analysis the key finding of the study was that cost per loan asset, and bad debt cost and default rate are major credit risk management indicators that have an inverse effect on financial performance of DTMs. This study however, focused exclusively on DTMs leaving out the non-deposit taking MFIs. Therefore, this study focuses on both deposit and non-deposit taking MFIs with an aim of filling this research gap.

2.6 Conceptual Framework

The framework spells out the correlation involving the loan appraisal procedures (independent variable), debt recovery policies (independent variable), credit risk monitoring (independent variable), Diversification of credit products (independent variable) and profitability (Dependent variable).

Credit Risk Mitigation Strategies   **Profitability**

Loan appraisal procedures

- Credit history of borrower

- Screening of clients

Debt recovery policies

- Penalties upon default

- CRB listing

Profitability of Microfinance Institutions

- Amount of profit gained

- Return on Equity

Credit risk monitoring

- Contact with borrowers

- Monitoring borrower cashflows

Diversification of credit products

- Credit products offered

- Common credit products among

Government Policies

Policies governing the operation of microfinance institutions

Regulations

Regulations for microfinance institutions

Independent Variable   Intervening VariableDependent Variable

Source: Researcher (2017)

Figure 2.1: Conceptual Framework

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the overall methodology of the study. It covers the research design, the population of the study, the sampling design, data collection methods, the overall research procedure, and data analysis methods that was adopted for purposes of this study

3.2 Research Design

Explanatory research design was used. Explanatory research design involves measuring a set of variables as they exist naturally (Saunders, Lewis &Thornhill, 2011). It attempts to answer immediate questions about a current state of affairs (Matthews &Kostelis, 2011). It is designed to provide in-depth information about the characteristics of subjects within a particular field of study (Houser, 2011). It emphasizes on producing data based on real world observation through a purposeful and structured approach (Denscombe, 2003).

3.3 Target Population

A population is the total set of subjects about which the researcher wishes to make some inferences (Cooper & Schindler, 2005). The population of the study will be the management and staff members of microfinance institutions within Nakuru town. The population is most appropriate for the study as the study will mainly be carried out in microfinance institutions.

3.4 Sampling Frame

A sampling frame is an objective list of population subjects from which the sample is drawn (Denscombe, 2007). In this study, the sampling frame includedfinancial and credit managers in microfinance institutions in Nakuru town. These are the people who had relevant information on the topic under study.

3.5 Sample Size and Sampling Technique

Simple random sampling method was used in the current study. The choice of this method is to ensure fair representation of the study findings since all the departments was represented in the sample selected. Samples, representative of the relative proportions of departmental population to the total population, were picked at random from each of the departments.

The current study drew the sample size from microfinance institutions in Nakuru. The sample size comprised of managers and also employees mostly those in the finance departments. All

the managers of these institutions were targeted to participate in the study. All employees will also be targeted. Stratified sampling will be applied to divide the population into various strata that is managers and employees. Simple random sampling will then be applied in order to obtain a sample size. The formula below will be used to calculate the sample size that will be used for the current study.

$$n= \frac{N\ c^2}{C^2 + (N\text{-}1)\ e^2}$$

Where; n = sample size

N = population total

C = coefficient of variation

E = margin of error

A total of 17 microfinance institutions were targeted for this study. Each of the institutions have 1 manager so a total of 17 managers were targeted to participate in the study. There are approximately 500 employees in these financial institutions. Out of these populations, the researcher will further group them according to departments and will focus on those that work in the finance departments. There are approximately 300 employees working in the finance departments.The researcher used 17 microfinance institutions from Nakuru town and from each institution respondents were selected to take part in the study. Using the formula above a sample size of 75 respondents was obtained to participate in the study.

3.6 Data Collection Methods

This study used primary sources of data. The data was collected using a questionnaire containing both structured and unstructured questions. Saunders et al. (2009) defines a questionnaire as the general term including all data collection techniques in which each person is asked to answer the same set of questions in a predetermined order. Structured and unstructured questionnaires involve the use of both open and closed end questions. Denscombe (2003) suggests that questionnaires are at their most productive when used in large numbers, when relatively brief and uncontroversial, when the social climate is open enough to allow full and honest answers and when there is need for data in a standardized form. In this study, Likert Scale was used to structure the questions in the questionnaire.

3.7 Data Collection procedure

The researcher sought the views of the management and staff of microfinance institutions. A preliminary pilot study was conducted in order to assure the researcher that the research

methodology is valid for the study and would lead to the successful realization of the research objectives. Corrective action was taken where necessary. Respondents were issued with questionnaires and they were requested to fill them. The researcher then collected the questionnaires for analysis.

3.8 Data Analysis Techniques

AccordingtoMarshallandRossman(1999), data analysisistheprocessofbringing order structureandinterpretation tothemassofcollecteddata.Itinvolvesthecoding,editingand cleaning ofdatainpreparationforprocessing.Thecompletedquestionnaires werereceived, checkedforcompletenessandeditedforcorrectness;Descriptivestatisticswereusedtoanalyze thedatainthisstudyand also the Statistical Package for Social Sciences(SPSS) were used.

Thequalitativedatageneratedfromthestudy guidewill becategorizedinthemesinaccordance withresearchobjectivesandreportedinnarrativeformalongwithquantitativedata. Quantitative datawasanalyzedthroughtheuseoffrequencydistributionandpercentages.Thefindingswerepres entedinform offrequencydistributiontables,barchartsandpie charts.Thedatawassummarizedaccordingtothespecificobjectives.

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.0 Introduction

This chapter dealt with data analysis, presentation of the findings. A questionnaire was used as the instrument for data collection. The aim of the study was to be to investigate the role of credit risk mitigation strategies on profitability of micro-finance institutions in Nakuru town. The study comprised of a sample size of 75 respondents. After the questionnaires were filled, data was analyzed, coded, summarized, and presented in form of percentages, tables, charts and graphs using SPSS version 20.

4.1 Background Information

4.1.1 Gender of the Respondents

The researcher sought to find out the gender distribution of respondents who participated in the study. The figure below shows the results.
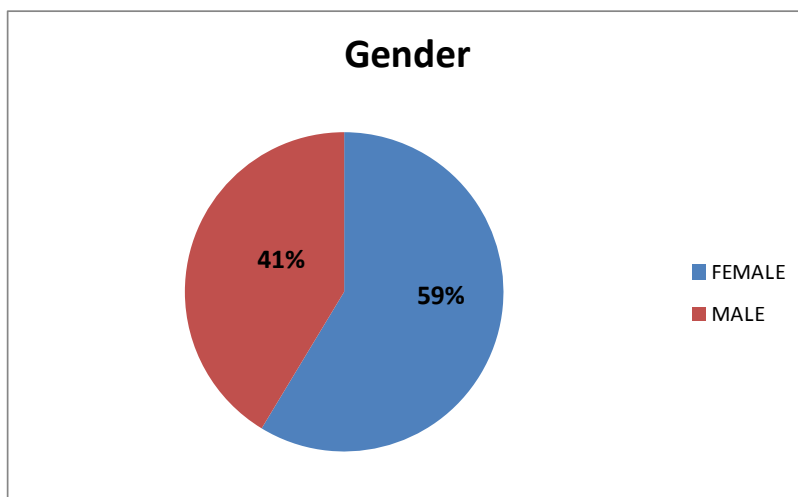
Figure 4.1: Gender of the Respondents

The gender distribution among respondent showed that majority 59% were female while 41% were female.

4.1.2 Age of Respondents

An analysis was made to determine the age bracket of the respondent who participated in the study. The study revealed that 17% of the respondents were between 21 and 30 years, 20% were between 31 and 40 years , 28% between 41 and 50 years, 25% were between 51 and 60years while 9% were above 60 years.

Table 1: Cross Tabulationof Gender and age of respondents

		Between 21 & 30	Between 31 & 40 Years	Between 41 & 50 Years	Between 51 & 60 Years	Above 60 Years	Total
Gender	Male	5	6	11	7	2	**31**
	Female	8	9	10	12	5	**44**
Total		**13**	**15**	**21**	**19**	**7**	**75**
					Chi-square 17.424, df=4,p=0.001		

Source: Research data, 2017

From the cross tabulation results in Table 1, chi-square has a value of 17.424 with significance of 0.001. Cross tabulations was used to examine relationships within data that may not be readily apparent. From this analysis, we can conclude that females are more likely than males to believe that age influences profitability.

4.1.3 Level of Education

Furthermore, the researcher was also interested in finding out the highest education level attained by the respondents which yielded the following results.According to the study results, respondents with primary education accounted for (4%) while those with secondary education accounted for (9%). In the same vein, the majority (61%) had attained college education while 25% were university graduates. This implied that the credit institutions employed highly educated individuals.

Table 1: Cross tabulation of Gender and Level of Education

		Primary	Secondary	College	University	Total
Gender	Male	1	4	18	8	**31**
	Female	2	3	28	11	**44**
Total		**3**	**7**	**46**	**19**	**75**
				Chi-square 9.174, df=4,p=0.001		

Source: Research data, 2017

Cross tabulation results of gender and level of education revealed that majority of female respondents (37%) had college education compared with male respondents at about(24%).majority of female respondents (14%) had University degrees compared with (11%) of the male. From the cross tabulation results in Table 3, chi-square has a value of 9.174 with significance of 0.001. Chi-square test was used to determine whether or not the Female were associated with higher education levels than their counterparts.

4.2 1.1 Loan Appraisal Procedure

The researcher was interested to determine the loan appraisal procedures carried out by the institutions. The table below reveals the responses to the likert scale on loan appraisal.

Table 2: Loan Appraisal Procedure

Statement	0 Freq (%)	1 Freq (%)	2 Freq (%)	3 Freq (%)	4 Freq (%)	χ^2	P-Value
Review of credit history of the member or borrower	-	24(18)	27(20)	17(12)	42(25)	1.384	.239
Analysis of credit risk based decisions	-	8(6)	15(11)	33(25)	44(33)	1.084	.298
Screening of clients before advancing credit	-	(11)1	(13)10	(46)34	(40)30	.029	0.865
Credit risk information sharing	-	(12)8	(18)14	(40)30	(31)23	2.386	0.122
Weighing and prioritizing risk events and clients	-	10(10)	20(15)	27(20)	40(30)	1.612	.204

Key: 1= 0= Not at all, 1= To a little extent, 2= To a moderate extent, 3= To a great extent, 4=To a very great extent. Freq = frequency, % = percent.

When asked to what extent review of credit history of the member or borrower is done, 42% said to a very great extent, 27% said to a moderate extent, 24% to a little extent and 17% said to a great extent. On analysis of credit risk based decisions, 44% to a very great extent, 33% to a great extent and less than 20% to a moderate extent. Screening of clients before advancing credit,46% to a great extent, 40% said a very great extent, while 13% said to a moderate extent. On credit risk information sharing, 40% said to a very great extent, 31% to a great extent, less than 20% said to a moderate extent and to a very little extent.

The Pearson chi-square correlation coefficient was used to determine whether there was an association between the two variables (gender and likert scale questions). The general position (null hypothesis) is that there is no difference between the expected observations and the actual observations. For the statements on loan appraisal procedure, the results revealed p values greater than .05 for all the statements. The decision therefore was to fail to reject the null hypothesis and concluded that there is no statistically significant evidence to suggest that

gender is likely to result change the opinion on the statements on loan appraisal procedure since all had p-values greater than alpha level of .05.

4.2.2.2 Challenges determining which clients are viable for loans

The respondents were asked to comment on whether there were challenges in determining clients that qualify for loans. The figure below shows the results
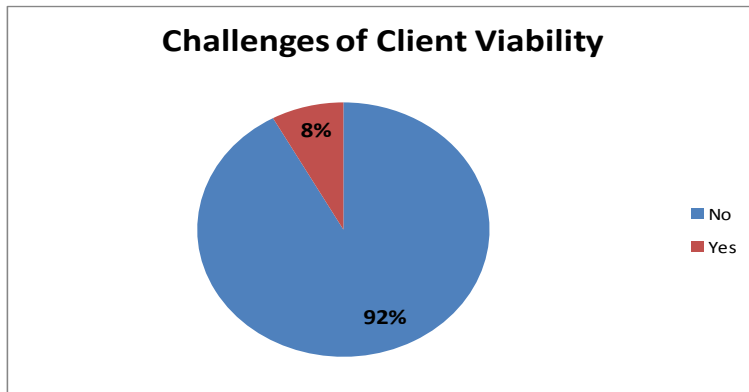
Figure 2.3: Challenges of Client Viability

The results revealed that the majority (92%) did not have challenges determining which clients are viable for loans and which are not while 8% said yes. According to the study, the main challenges faced by the respondents were failure to disclose full personal information by the clients and

4.2.2.3 Effectiveness of Strategies on Loan Appraisal

The researcher sought to determine how effective loan appraisal strategies were done. The figure below reveals the results.
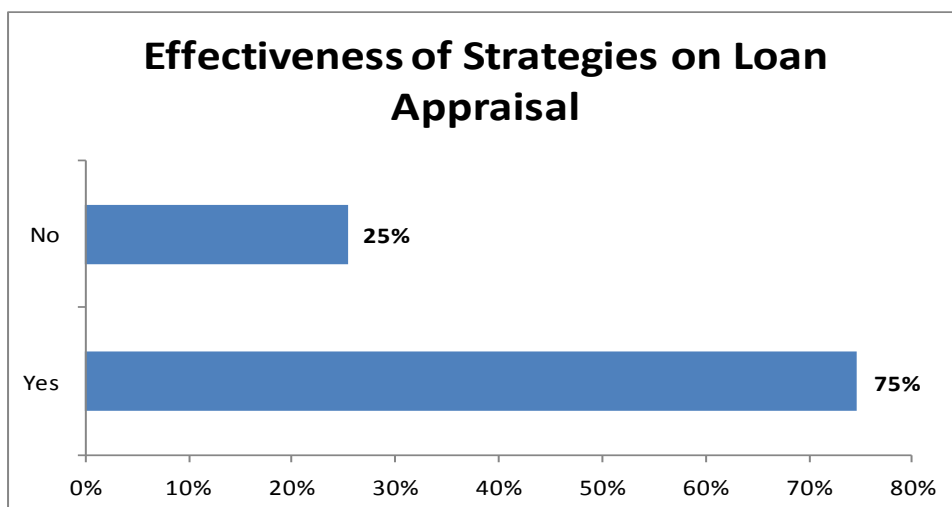
Figure 4.3: Effectiveness of Strategies on Loan Appraisal

The results revealed that the majority (75%) said that loan appraisal strategies were effective while 25% said they were not always effective.

4.3.1 Debt Recovery Policies

It was in the interest of the researcher to determine the extent which organization undertakes on various risk control measures to ensure that credit risk control is done well to prevent it from failing in its obligations and meeting it objectives. The table below revealed the frequency response rate.

Table 3: Debt Recovery Policies

Statement	0 Freq (%)	1 Freq (%)	2 Freq (%)	3 Freq (%)	4 Freq (%)	χ^2	P-Value
Training financial institution staff on risk control	-	1(1)	14(19)	35(26)	50(29)	6.847	.009
Ascertaining the value of collateral	-	33(44)	31(23)	34(24)	34(25)	0.19	.891
Secure loan financial institutioning system	-	9(7)	27(20)	31(23)	33(25)	.246	.620
CRB listing upon default	-	6(5)	24(18)	27(20)	43(32)	.641	.423
Penalties upon default	-	8(6)	19(14)	29(22)	44(33)	.600	.439
Ensuring the loan is used for intended purpose	-	15(11)	19(14)	37(28)	29(22)	.519	.471

Key: 1= 0= Not at all, 1= To a little extent, 2= To a moderate extent, 3= To a great extent, 4=To a very great extent. Freq = frequency, % = percent.

The results revealed on training bank staff on risk control, the majority (50%) said to a very great extent, 35% to a great extent while 14% said to a moderate extent. Value of collateral is ascertained according to the study. This was evidenced by 34% of the respondents who said to a very great extent and 32% who said to a great extent. In regard to secure loan banking system, the respondents held the view that this is carried out to a very great extent (33%), 31% said to a great extent while 27% said to a moderate extent. Listing in CRB for loan defaulters revealed that 43% agreed to a very great extent, 26% to a great extent, while 24% opined to a moderate extent. Penalties are imposed on loan defaulters to a very great extent

(46%), 29% were of the view to a great extent, 18% to a moderate extent while 8% said to a little extent. Is to whether the institution ensures that the loan is used for the intended purpose, 38% said to a great extent, 30% said to a very great extent, 18% to a moderate extent while 14% said to a very little extent.

The chi-square tests on the statements on debt recovery policies, the results revealed p values greater than .05 for all the statements expect the statement on training financial institution staff on risk control. The decision therefore was to fail to reject the null hypothesis and concluded that there is no statistically significant evidence to suggest that gender is likely to result change the opinion on the statements on debt recovery policies since most statements had p-values greater than alpha level of .05. However, there was likely to be some difference on opinion based on gender as to whether the institution trained its staff on risk control.

4.3.2 Whether Presence of Bad Debts Affect the Profitability

The researcher sought to establish whether the presence of bad debts affects the profitability of the institution. The figure below shows the results.
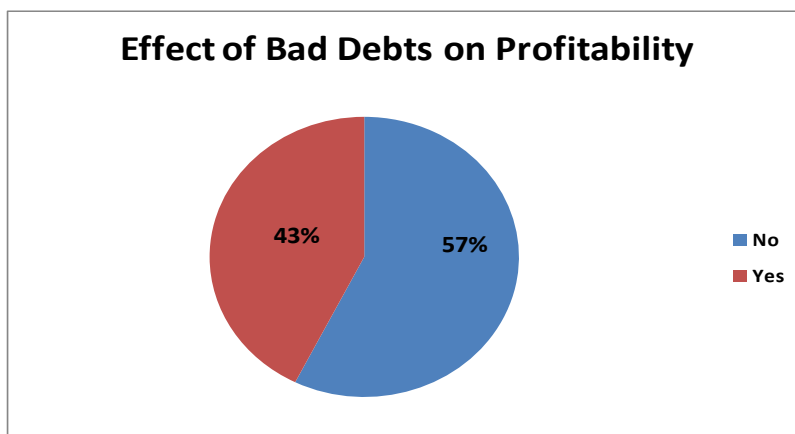
Figure 4.4: Effect of Bad Debts on Profitability

According to the results, 57% of the respondents said bad debts do not affect profitability of the institution while 43% said it does affect profitability. The respondents were also asked to comment on whether they have challenges when it comes to debt recovery from bad debtors.
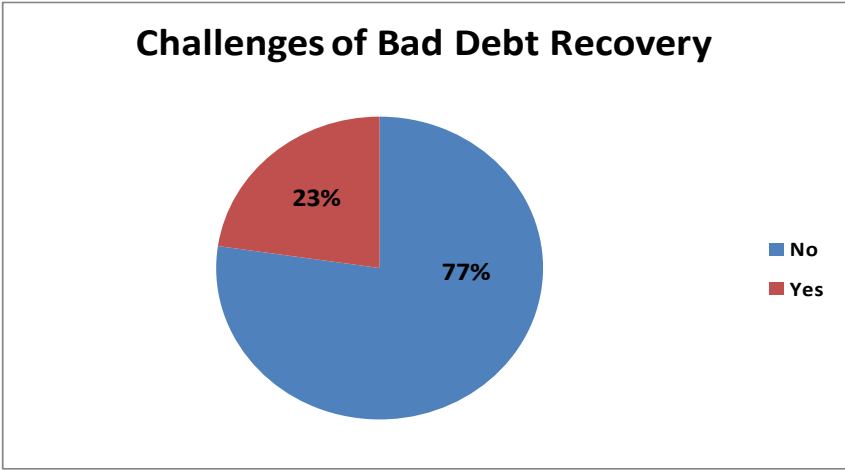
Figure 4.5: Challenges of Bad Debt Recovery

Seventy- seven percent of the respondents as shown in the figure above said they do not encounter challenges in bad debt recovery while 23% said they encounter some challenges. The researcher further sought to establish whether the strategies used to recover bad debts are effective or not.
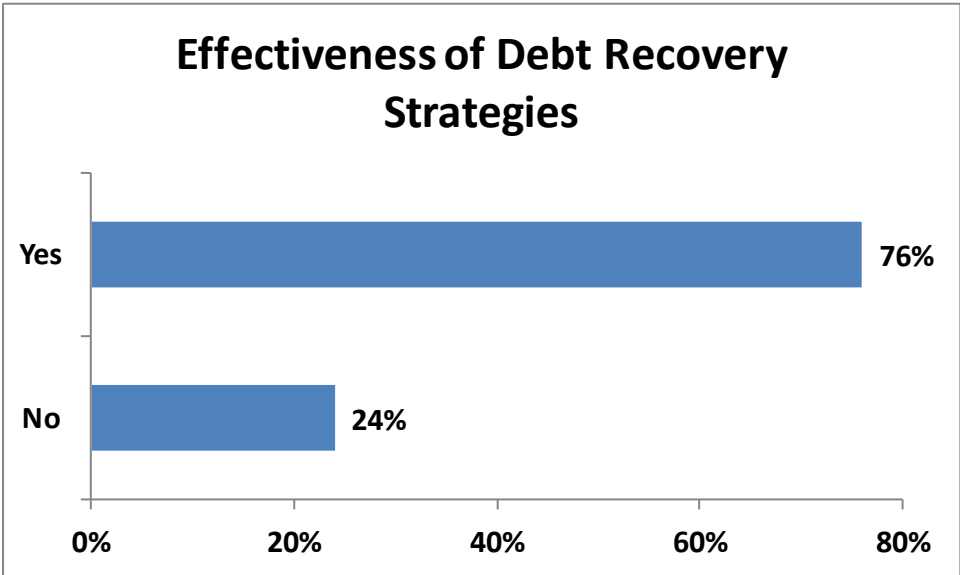
Figure 4.6: Effectiveness of Debt Recovery Strategies

According to the results above, 76% of the respondents said that the strategies used by the institution are effective in debt recovery while 24% opined that they are not as effective.

4.4 Credit Risk Monitoring

The researcher also sought to determine the extent that the organization undertakes on a number of credit risk monitoring measures to ensure that credit risk monitoring is properly done. The table below shows the frequency rate of the responses

Table 4: Credit Risk Monitoring

Statement	0 Freq (%)	1 Freq (%)	2 Freq (%)	3 Freq (%)	4 Freq (%)	χ^2	P-Value
Continuous monitoring of cash flows of borrower	-	13(9)	17(13)	18(14)	52(39)	.048	.826
Constant contact with borrowers	-	11(8)	18(14)	27(20)	43(32)	.110	.740
Review of clients loan repayment pattern	-	9(7)	12(9)	28(37)	51(38)	.037	.848
Supporting distressed borrowers and	-	9(7)	23(17)	19(14)	48(36)	.063	.802
Frequent loan classification/provisioning	-	13(10)	25(19)	29(22)	32(24)	3.297	.069
Revising credit risk control and appraisal measures	-	10(8)	14(10)	34(26)	42(32)	.848	.521

Key: 1= 0= Not at all, 1= To a little extent, 2= To a moderate extent, 3= To a great extent, 4=To a very great extent. Freq = frequency, % = percent.

Fifty-two percent of the respondents agreed to a very great extent that the institution continuously monitors of cash flows of borrower, 18% said to a great extent while 17% said to a moderate extent. As to whether there is constant contact with borrowers, 43% of the respondents said to a very great extent, 27% to a great extent, and 18% to a moderate extent. Fifty-one percent agreed to a very great extent that clients loan repayment pattern is reviewed, 28% said to a great extent while less than 15% said to a moderate extent. The respondents agreed to a very great extent that there is support of distressed borrowers, 23% said to a moderate extent, while 19% said to a great extent. On the issue of frequent loan classification/provisioning, 32% said to a very great extent, 29% opined to a great extent, 25% said to a moderate extent while 13% said to a very little extent. In addition, the researcher wanted to establish whether revising of credit risk control and appraisal measures is done. The results revealed that 42% said to a very great extent, 34% said to a great extent while 14% said to a moderate extent.

The chi-square test statistic results revealed p values greater than .05 for all the statements. The decision therefore was to fail to reject the null hypothesis and concluded that there is no

statistically significant evidence to suggest that gender is likely to result change the opinion on the statements on credit risk monitoring.

4.5 Inferential Statistics

4.5.1 Bivariate Correlation

Correlation is one of the most common and most useful statistics. A correlation is a single number that describes the degree of relationship between two variables (Trochim, 2006).Pearson Correlation Coefficient measures the degree of linear relationship between two variables (normally denoted by the letter r). Linear relationship means that a straight line can explain the relationship. Correlation ranges from -1.0 to 1.0 whereby -1.0 refers to perfect negative correlation and 1.0 refers to a perfect positive correlation. There are three types of relationships in a correlation. Namely; positive correlation for instance, higher scores in x are associated with higher scores in y. Negative correlation whereby higher scores of x are associated with lower scores of y. No correlation whereby there is no predictable relationship between x and y (Trochim, 2006).

Bivariate correlation is an endeavor to understand the method of testing the statistical significance of data in addition to testing the relationship between any two variables. A researcher is interested in not only the statistical significance but also knowing whether there is any relationship between the two variables discernible within the data. After finding the relationship, a researcher is also interested to know the strength of the relationship, and whether given one variable he can be able to predict the value of another variable.

A correlation coefficient matrix was run to determine the relationship between the explanatory, and the dependent variable as shown in the table below. This was to determine whether there was any significant correlation between the dependent variable and the explanatory variables. A hypothesis test will reveal whether the difference is attributed to ordinary random factors or not. Statistical significance confirms whether the difference is due to chance factors or not and if not due to chance, then it is said to be statistically significant. In other words, whether the correlation coefficient is statistically different from zero that is, whether we would expect to see similar results in the population. Therefore, since the data used is sampled and randomized, it cannot be inferred to be 100% significant. Accordingly, in this paper used a 5% significance level.

Table 5: Pearson's Correlation Coefficient Matrix of the Relationship between the Explanatory and the Dependent Variable

		Appraisal	Debt Recovery	Credit Risk	Diversification	Profitability
		Correlations				
Appraisal	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	75				
Debt Recovery	Pearson Correlation	-.191	1			
	Sig. (2-tailed)	.100				
	N	75	75			
Credit Risk	Pearson Correlation	.005	-.168	1		
	Sig. (2-tailed)	.963	.150			
	N	75	75	75		
Diversification	Pearson Correlation	-.007	.041	-.148	1	
	Sig. (2-tailed)	.950	.728	.204		
	N	75	75	75	75	
Profitability	Pearson Correlation	.105	.113	-.177	.786**	1
	Sig. (2-tailed)	.369	.335	.128	.000	
	N	75	75	75	75	75

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

The table above provides the Pearson's correlation Coefficient for the relationship between the dependent variable (profitability) and the independent variables (appraisal, debt recovery, credit risk and diversification). The analysis revealed a positive correlation between appraisal and profitability but statistically significant (r= 0.105, p=0.369). Debt recovery revealed a positive correlation of 0.113 associated with a p-value of 0.335. This was however statistically insignificant at 5% significance level (r=.113, p= .335). Results revealed a negative correlation between credit risk and profitability. However, there was no statistically significant evidence to suggest that credit risk was associated profitability at 5% significance level (r= .0.177, p= 0.128). In terms of diversification, results revealed that diversification was positively associated with profitability. This association was statistically significant leading to the conclusion that there was statistically significant evidence to suggest that diversification was likely to be associated with profitability.

4.5.2 Multiple Regression of the Independent Variables

The researcher chose to use a multiple regression analysis because, according to Field (2009), "Regression analysis enables us to predict future (outcomes) based on values of predictive

variables" (p. 198). This methodology allowed for a statistical analysis of the data. It was also an efficient means of gathering data without introducing threats to reliability that can occur with other data collection means. Multiple regression "calculates the contribution of each predictive variable by looking at the significance value of the t-test for each predictor. If a predictor meets the removal criterion (i.e. if it is not making a statistically significant contribution to how well the model predicts the outcome variable) it is removed from the model (Field, 2009, p. 2 13)." After this is completed, any remaining variable would then be assessed to determine their contribution to the outcome of the dependent variable.

According to Field (2009): In a multiple regression analysis it is important for the researcher to check and ensure that the assumption of no multi-collinearity (heavily related variable) had not been violated by having any variables that were too closely related to one another by checking the Pearson Correlation Coefficient, the tolerance level and the variance inflation factor (VIF) values between the predictive variables (Field, 2009). Multi-collinearity is the undesirable situation where the correlations among the independent variable are strong; it refers to actual disparity percentage to total disparity among variables. According to Mohamed (2012), if the VIF factor is less than 5 then there is no Multi-collinearity problem. The study examined the effect of Multi-collinearity on the regression models using the Variance Inflation Factor for the independent variables (VIF) analysis. The findings indicate (see table below) that the mean variance inflation factors for the independent variables was 1.05 implying that there was no Multi-collinearity problem since independent variables did not have variance inflation factors (VIF) that exceeded five.

Table 6: Multi-collinearity Diagnostics

Coefficients[a]

Model		Collinearity Statistics	
		Tolerance	VIF
1	Appraisal	.963	1.039
	DebtRecovery	.935	1.069
	CreditRisk	.951	1.051
	Diversification	.978	1.023

a. Dependent Variable: Profitability

4.5.3 Hypothesis Testing

Hypothesis testing is a process by which the researcher infers the result of sample data on the larger population based on a presupposition made prior to commencement of research

(Gujarati, 2003). The study performed hypothesis testing by determining statistical significance of the coefficients of explanatory variables. Test-of-significance method is meant to verify the truth or falsity of a null hypothesis by using sample results, showing that the means of two normally distributed populations are equal. This was done by using the two-tailed t-test statistic and the corresponding *p*-values at 1%, 5% and 10% levels. The decision to use a two-tailed test was based on the fact that the alternative hypothesis of the study is composite rather than directional (Gujarati, 2003).

This procedure was carried out against the null hypotheses enumerated in section 1.4 of chapter one. In all the tests, the decision rule was that: if the *p*-value observed is less than the set alpha (significance level), then reject the null hypothesis and if the observed *p*-value is greater than the set alpha, do not reject the null hypothesis.

4.5.4 Relationship betweenCredit Risk Mitigation Strategies and the Profitability of Microfinance Institutions

The researcher formulated the following hypotheses to help answer the research hypothesis:

$H_{01:}$ There is no clear link between loan appraisal procedures and the profitability of microfinance institutions in Nakuru town

$H_{02:}$ There is no clear link between debt recovery policies and the profitability of microfinance institutions in Nakuru town

$H_{03:}$ There is no clear link between credit risk monitoring and the profitability ofmicrofinance institutions in Nakuru town

$H_{04:}$ There is no clear link between diversification of credit products and the profitability of microfinance institutions in Nakuru town

The regression model was as follows: $y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

Where:

y = Profitability

β_0 = Constant Term

β_1 = Beta coefficients

X_1 = loan appraisal procedures

X_2 = debt recovery policies

X_3 = credit risk monitoring

X_4 = diversification of credit products

ε = Error term

The model summary (see table 3) revealed a coefficient of determination (r square) of 0.642 (64.2%). This meant that a change in profitability could be explained by 64.2% change in the explanatory variables (credit risk monitoring, loan appraisal procedures, debt recovery policies, andDiversification of credit products).

Table 7: Coefficient of Determination of Explanatory Variables on Profitability

		Model Summary		
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.801[a]	.642	.622	.306

a. Predictors: (Constant), Diversification, appraisal, CreditRisk, DebtRecovery

Regression standard error (Std. Error of the Estimate) is the average forecast error (difference between actual and values predicted by the estimated equation). Small values indicate that the estimated model fits the observed data closely. The Std. Average error (difference between actual and predicted values) was about 0.30.

Table 8: Analysis of Variances

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.785	4	2.946	31.434	.000[b]
	Residual	6.561	70	.094		
	Total	18.347	74			

a. Dependent Variable: Profitability
b. Predictors: (Constant), Diversification, appraisal, creditrisk, debtrecovery

ANOVA for the explanatory variables was used to describe whether these variables were significant and whether they could be used in the model to predict profitability as shown in table 4 above. Study revealed an f statistic of 31.43 that was associated with a p value of $p <.01$ and significant at 0.01 alpha level. This meant that the regression model could be used because the explanatory variables' impact on the dependent variable was statistically significant.

4.5.4.1 Interpretation of the Coefficients

Table 5 below revealed the regression model of the explanatory variables on the dependent variable. The results showed the unstandardized beta coefficients that could be used to predict the single outcome of profitability.

Table 9: Multiple Regression Model

<div align="center">

Coefficients[a]

</div>

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.337	.268		-1.258	.212
Appraisal	.078	.044	.130	1.786	.079
1 DebtRecovery	.083	.062	.098	1.329	.188
CreditRisk	-.030	.046	-.047	-.638	.526
Diversification	.771	.072	.776	10.730	.000

a. Dependent Variable: Profitability

The predicted multiple regression equation from the model above becomes:

y (profitability)= -0.337 +0.078(loan appraisal procedures)+ 0.083(debt recovery policies) - 0.030(credit risk monitoring)+ 0.771 (diversification of credit products).

Based on the model, findings revealed that loan appraisal procedures, debt recovery policies, and diversification of credit products were positively associated with the dependent variable (profitability). However, loan appraisal procedures, debt recovery policies as included in the model were not statistically significant at 5% significance level ($\beta 1$= 0.078,t= 1.786, p=0 .079; $\beta 2$=0.083,t= 1.329, p=0.188). According to the model, only resource availability could be used to estimate the profitability of microfinance institutions since it was statistically significant at .05 alpha level (β_1 = 0.497,t= 2.572, p=0.014). The null hypothesis that there is no clear link between loan appraisal procedures and the profitability of microfinance institutions in Nakuru town was therefore retained and concluded that there is no relationship between loan appraisal procedures and the profitability. Likewise, the study found no clear link between debt recovery policies and the profitability of microfinance institutions in Nakuru town hence the decision was to fail to reject the null hypothesis. In terms of the relationship between diversification of credit products and the profitability of microfinance institutions in Nakuru town, the model revealed a test statistic of 10.73 associated with a p value of p< .01. The decision to reject the null hypothesis 4 and conclude that there was sufficient evidence to suggest that diversification of credit products is associated with profitability (t= 10.73, p<.01).

The results revealed that credit risk monitoring was negatively correlated with profitability. However, this correlation was not statistically significant hence the null hypothesis 3 was retained and concluded that there was no evidence based on the sample to suggest that credit risk monitoring as associated with profitability.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of the findings, conclusions, and recommendations of the study. The study aimed at ascertaining the effect of credit risk mitigation strategies on the profitability of micro-finance institutions in Nakuru town.

5.2 Summary of the Findings

The study used questionnaires as the main data collection method. When asked to what extent review of credit history of the member or borrower is done, 42% said to a very great extent, 27% said to a moderate extent, 24% to a little extent and 17% said to a great extent. On analysis of credit risk based decisions, 44% to a very great extent, 33% to a great extent and less than 20% to a moderate extent. Screening of clients before advancing credit,46% to a great extent, 40% said a very great extent, while 13% said to a moderate extent.

On the challenges, the results revealed that the majority (92%) did not have challenges determining which clients are viable for loans and which are not while 8% said yes. According to the study, the main challenges faced by the respondents were failure to disclose full personal information by the clients and results revealed on training financial institution staff on risk control, the majority (50%) said to a very great extent, 35% to a great extent while 14% said to a moderate extent. Value of collateral is ascertained according to the study. This was evidenced by 34% of the respondents who said to a very great extent and 32% who said to a great extent. In regard to secure loan financial institutioning system, the respondents held the view that this is carried out to a very great extent (33%), 31% said to a great extent while 27% said to a moderate extent. Listing in CRB for loan defaulters revealed that 43% agreed to a very great extent, 26% to a great extent, while 24% opined to a moderate extent. Penalties are imposed on loan defaulters to a very great extent (46%), 29% were of the view to a great extent, 18% to a moderate extent while 8% said to a little extent. Is to whether the institution ensures that the loan is used for the intended purpose, 38% said to a great extent, 30% said to a very great extent, 18% to a moderate extent while 14% said to a very little extent.

Fifty-two percent of the respondents agreed to a very great extent that the institution continuously monitors of cash flows of borrower, 18% said to a great extent while 17% said

to a moderate extent. As to whether there is constant contact with borrowers, 43% of the respondents said to a very great extent, 27% to a great extent, and 18% to a moderate extent. Fifty-one percent agreed to a very great extent that clients loan repayment pattern is reviewed, 28% said to a great extent while less than 15% said to a moderate extent. The respondents agreed to a very great extent that there is support of distressed borrowers, 23% said to a moderate extent, while 19% said to a great extent. On the issue of frequent loan classification/provisioning, 32% said to a very great extent, 29% opined to a great extent, 25% said to a moderate extent while 13% said to a very little extent. In addition, the researcher wanted to establish whether revising of credit risk control and appraisal measures is done. The results revealed that 42% said to a very great extent, 34% said to a great extent while 14% said to a moderate extent.

On the regression part, findings revealed that loan appraisal procedures, debt recovery policies, and diversification of credit products were positively associated with the dependent variable (profitability). However, loan appraisal procedures, debt recovery policies as included in the model were not statistically significant at 5% significance level ($\beta1= 0.078, t= 1.786$, p=0 .079; $\beta2=0.083, t= 1.329$, p=0.188). According to the model, only resource availability could be used to estimate capacity building since it was statistically significant at .05 alpha level ($\beta_1 = 0.497, t= 2.572$, p=0.014). The null hypothesis that there is no clear link between loan appraisal procedures and the profitability of microfinance institutions in Nakuru town was therefore retained and concluded that there is no relationship between loan appraisal procedures and the profitability. Likewise, the study found no clear link between debt recovery policies and the profitability of microfinance institutions in Nakuru town hence the decision was to fail to reject the null hypothesis. In terms of the relationship between diversification of credit products and the profitability of microfinance institutions in Nakuru town, the model revealed a test statistic of 10.73 associated with a p value of p< .01. The decision to reject the null hypothesis 4 and conclude that there was sufficient evidence to suggest that diversification of credit products is associated with profitability (t= 10.73, p<.01).

The results revealed that credit risk monitoring was negatively correlated with profitability. However, this correlation was not statistically significant hence the null hypothesis 3 was retained and concluded that there was no evidence based on the sample to suggest that credit risk monitoring as associated with profitability. This is in agreement of the findings from a study carried out by Saunders, (2012) in the United States, the findings indicated that debt

recovery policies largely affected the profitability of microfinance institutions. He looked at various microfinance institutions in the country and also investigated the policies that were being used in debt collection. The results revealed that credit risk monitoring was negatively correlated with profitability. The results revealed that credit risk monitoring was negatively correlated with profitability.

5.3 Conclusion

The major conclusion from this study is that microfinance institutions in Nakuru town are faced with credit risk as depicted by the significant negative relationship between the profitability and credit risk. Secondly, changes in the lending CBK interest rates greatly affect the profitabilityof the Microfinance institutions inNakuru town.

Loan appraisal procedures, debt recovery policies, and diversification of credit products were positively associated with the dependent variable (profitability). This means that all these factors affected the profitability of microfinance institutions in Nakuru town. It is therefore important that microfinance institutions come up with ways of mitigating the effects of these factors.

5.4 Recommendations

The major policy recommendation is that the MFIs in Kenya must constantly pay attention to the credit risk being a major risk affecting its performance. For instance, it needs to come up with a ceiling on its non-performing loans beyond which it should shift its major focus towards thoroughly investigating and recovering the non-performingloans.

Secondly, the central financial institution of Kenya needs to come up with regulatory measures to regulate not only the DTMs but also the non-deposit taking MFIs. Besides, the government should come up with a legislation to strengthen the Association of Microfinance Institutions (AMFI-Kenya) regulatory role of MFIs in Kenya.

Lastly, the regulators who include the central financial institution of Kenya and the AMFI-Kenya must come up with capital adequacy requirements of the MFIs both the deposit and non-deposit taking, in line with best risk management practices in the financial sector globally.

5.5 Suggestions for further Research

Further research needs to be carried out on the unregulated MFIs in Kenya for instance, research need to be done on the effects of the absence of regulations on the Micro finance institution in Kenya

Secondly, research is recommended on the effect of Credit Reference Bureaus on loan performance in microfinance institutions in Kenya. Further research should also be done on the relationship between credit management and nonperforming loans on Microfinance Institutions in Kenya and on the reasons for loan default in microfinance organizations from the clientsperspective.

Finally, further research is recommended on the effect of insider lending on the performance of Microfinance institutions and more emphasis on the unregulated micro finance institutions.

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<div align="center">**APPENDICES**</div>

<div align="center">**APPENDIX I: LETTER OF INTRODUCTION**</div>

Dear Sir/ Madam,

RE: RESEARCH DATA COLLECTION

I am a student at Kabarak University undertaking a study on "THE EFFECTS OF CREDIT RISK MITIGATION STRATEGIES ON PROFITABILITY OF MICROFINANCE INSTITUTIONS IN NAKURU TOWN" for the fulfillment of requirements for the award of Master of Business Administration Degree.

I therefore humbly request you to fill in the questionnaire issued to you to the best of your ability. The research is purely academic in nature and any information obtained from this questionnaire will be confidential.

Thank you in advance.

Yours faithfully,

Kariuki M Joseph

APPENDIX II: QUESTIONNAIRE

Section A: Background Information

1. Name of the Microfinance institution...

2. Please indicate your gender.

Male ☐   Female ☐

3. Age of the respondent

Less than 20 years ☐

Between 21 and 30 ☐

Between 31 and 40 ☐

Between 41 and 50 ☐

Between 51 and 60 ☐

Above 60 ☐

4. Highest level of education.

Primary ☐

Secondary ☐

College ☐

University ☐

Section B: Loan Appraisal Procedure

To what extent does your organization undertake the following credit risk analysis strategies to ensure that loan appraisal is properly done to prevent it from failing in its obligations and meeting it objectives?

1. To a very great extent   2. To a great extent   3.To a moderate extent   4.To a little extent

5. Not at all

	1	2	3	4	5
Review of credit history of the member or borrower					
Analysis of credit risk based decisions					
Screening of clients before advancing credit					
Credit risk information sharing					
Weighing and prioritizing risk events and clients					

Others (specify)

....

....

....

Do you have challenges determining which clients are viable for loans and which are not?

Yes ☐   No ☐

If Yes state the challenges

………………………………………………………………………………………………

………………………………………………………………………………………………

………………………………………………………………………………………………

Do the strategies you use prove effective on loan appraisal?

Yes ☐   ☐   No

Section C: Debt Recovery Policies

4. To what extent does your organization undertake the following credit risk control measures to ensure that credit risk control is well done to prevent it from failing in its obligations and meeting it objectives?

1. To a very great extent   2. To a great extent   3.To a moderate extent 4.To a little extent 5. Not at all

	1	2	3	4	5
Training financial institution staff on risk control					
Ascertaining the value of collateral					
Secure loan financial institutioning system					
CRB listing upon default					
Penalties upon default					
Ensuring the loan is used for intended purpose					

Do the presence of bad debts affect the profitability of your institution?

Yes [   ]   No [   ]

Do you have challenges when it comes to debt recovery from bad debtors?

Yes [   ]   No [   ]

Do the strategies you use for debt collection prove effective?

Yes [   ]   No [   ]

Section D: Credit Risk Monitoring

To what extent does your organization undertake the following credit risk monitoring measures to ensure that credit risk monitoring is properly done to prevent it from failing in its obligations and meeting it objectives?

1. To a very great extent   2. To a great extent   3.To a moderate extent   4.To a little extent 5. Not at all

Credit Risk Monitoring

	1	2	3	4	5
Continuous monitoring of cash flows of borrower					
Constant contact with borrowers					
Review of clients loan repayment pattern					
Supporting distressed borrowers and					
Frequent loan classification/provisioning					
Revising credit risk control and appraisal measures					

Others (Specify)

....
....

Apart from credit risk identification, appraisal, control and monitoring, what other risk management does your organisation use?

....
....

Section E: Diversification of credit products

Please indicate the credit products available in your institution

………………………………………………………………………………………………
………………………………………………………………………………………………
………………………………………………………………………………………………

Has the diversification of credit products affected the profitability of your institution?

Yes   No

In what ways has the diversification of credit products affected your institutions profitability?

Increased profitability

64

Decreased profitability

Constant profitability ☐

Section F: Profitability

Has risk mitigation affected the profitability of your institution?

Yes ☐   No ☐

If Yes state how it has affected your profitability

…………………………………………………………………………………………………

…………………………………………………………………………………………………

…………………………………………………………………………………………………

Are the strategies being used effective and are they translating into profits for your institution?

Yes ☐   No ☐

APPENDIX III: LIST OF MICROFINANCE INSTITUTIONS

1. RafikiMicrofinance Financial institution ltd
2. Platinum credit
3. SMEP Microfinance Financial institution Ltd
4. Kenya Women Microfinance Financial institution Ltd
5. Daraja Microfinance Financial institution Ltd
6. Faulu Microfinance Financial institution Ltd
7. Choice Microfinance Financial institution Ltd
8. Caritas Microfinance Financial institution Ltd
9. U & I Microfinance Financial institution Ltd
10. Remu Microfinance Financial institution Ltd
11. Maisha Microfinance Financial institution Ltd
12. Sumac Microfinance Financial institution Ltd
13. Century Microfinance Financial institution Ltd
14. Daraja Microfinance Financial institution Ltd
15. Taifa Option Microfinance
16. Musoni Microfinance
17. JuhudiKilimo Microfinance

Source (Financial Institutions Report, 2012)