THE EFFECT OF CREDIT RISK MANAGEMENT PRACTICES ON LOAN PERFORMANCE IN MICROFINANCE INSTITUTIONS IN NAIROBI, KENYA

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DECLARATION

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

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

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I am also highly indebted to my entire family for their moral support and encouragement.

May God bless you abundantly.

DEDICATION

I dedicate this work to my family for their moral support, and encouragement during the undertaking of this work. To the almighty God I will be forever grateful for His blessings without which it would be impossible to accomplish anything.

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LIST OF ABBREVIATIONS

ATM	Automated Teller Machine
ATMIA	ATM Industry Association
CBK	Central Bank of Kenya
CDO‘s	Collateralized Debt Obligations
ROA	Return on Assets
USA	United States of America
AMFIK	Association of Micro Finance Institutions of Kenya
CB’s	Community Banks
MFI	Micro Finance Institutions
PAR	Portfolio At Risk
CAPM	Capital Asset Pricing Model
UNDP	United Nations Development Programme
CRM	Credit Risk Management

ABSTRACT

Credit risk has always been a concern not only to bankers but to the entire business world because the risks of a borrower not fulfilling his obligations in full on due date can seriously jeopardize the performance of a financial institution. This study sought to review the effect of credit risk management on the loan performance of microfinance institutions in Kenya. The research design used in this study was descriptive research design as it involved an in depth study of credit risk management and its relationship with loan performance in micro finance institutions. Primary data was collected through questionnaires while Secondary data collected from the micro finance institutions annual reports (2007-2011) was used. The study populations were the 9 micro finance institutions licensed by the Central bank of Kenya; however data was obtained from 5 micro finance institutions. The data collected from the annual reports of the micro finance institutions was analyzed using multiple regression analysis. In the model return on equity was used as the profitability indicator while non-performing loans ratio and capital adequacy ratio as credit risk management indicators. This study showed that there is significant relationship between loan performance and credit risk management.

The results of the analysis states that both non-performing loans ratio and capital adequacy ratio have negative and relatively significant effect on return on equity with NPLR having higher significant effect on ROE in comparison to CAR. Hence, the regression as whole is significant; this means that NPLR and CAR reliably predict ROE. Having established a relationship between credit risk management and the financial performance of micro finance institution, the research suggests that all micro finance institutions should adopt accredit risk grading system.

CHAPTER ONE

INTRODUCTION

1.1Background of the Study

The overall aim of a credit analyst is to reach a judgment about extending credit to a customer using information that is relevant to the principles of good credit management. While financial institutions have faced difficulties over the years for a multitude of reasons, the major cause of serious banking problems continues to be directly related to lax credit standards for borrowers, poor portfolio risk management, or a lack of attention to changes in economic or other circumstances that can lead to a deterioration in the credit standing of a bank's counterparties. This experience is common in both G-10 and non-G-10 countries Basel, (2000).

Risk is central to the banking business and can be defined as the chance or possibility of danger, loss, or injury Parry, (1997). While this study will primarily concern itself with credit risk, it is worth noting that financial institutions are faced with a variety of risks which they must identify, measure and manage. These include but are not limited to operational risk, legal or documentary risk, liquidity risk, hedging risk, sovereign risk, credit risk, market risk, delivery risk, position risk, and provisional risk Banks, (1993) While risk has affected many of the institutions active in today's markets, regulators have also been required to make changes to enforce oversight of products and institutions in their respective areas Banks, (1993).

The world over, credit risk has proved to be the most critical of all risks faced by a banking institution. A study of bank failures in New England found that, of 62 banks in existence before 1984, which failed from 1989 to 1992, in 58 cases it was observed that loans and advances were not repaid in time, Sabrani (2002). Developed economies, such as the United States, Sweden and Japan and developing countries, including much of Latin America and South East Asia, and transitional economies, have had significant crises relating to nonperforming loans. China, an example of an economy that has been in transition, may currently be experiencing the biggest problem of them all, Campbell (2007).

A key requirement for effective credit management is the ability to intelligently and efficiently manage customer credit lines. In order to minimize exposure to bad debt, and bankruptcies, companies must have greater insight into customer financial strength, credit score history and changing payment patterns. The ability to penetrate new markets and customers hinges on the ability to quickly and easily make well-informed credit decisions and set appropriate lines of credit. Credit management starts with the sale and does not stop until the full and final payment has been received. It is as important as part of the deal as closing the sale. In fact, a sale is technically not a sale until the money has been collected.

It may be difficult to establish an optimal credit policy as the best combination of the variables of credit policy is quite difficult to obtain. A firm will change one or two variables at a time and observe the effect. It should be noted that the firm's credit policy is greatly influenced by economic conditions Pandey, (2008). As economic conditions change, the credit policy of the firm may also change. Microfinance Institutions and other finance

institutions must develop a credit policy to govern their credit management operationsPandey, (2008) and since microfinance institutions generate their revenue from credit extended to low income individuals in the form of interest charged on the funds granted (Central Bank Annual Report, 2010) the loan repayments may be uncertain. The success of lending out credit depends on the methodology applied to evaluate and to award the credit Ditcher, (2003) and therefore the credit decision should be based on a thorough evaluation of the risk conditions of the lending and the characteristics of the borrower

1.1.1 Credit Risk Management Practices

Lending has been and still is the mainstay of financial institution and this is more true to emerging economies of developing countries where capital markets are not yet well developed. To most of the transition economies, lending activities has been a controversial and difficult matter. This is because business firms on one hand are complaining about lack of credit and the excessively high standards set by financial institutions, while financial institutions on the other hand have suffered large losses on bad loans Richard, (2006). It has been found out that in order to minimize loan losses thus credit risk, it is essential for financial institutions to have an effective credit risk management system in placeBasel, (2010).

Given the asymmetric information that exists between lenders and borrowers, financial institutions must have a mechanism that ensures that they not only evaluate default risk that is unknown to them in order to avoid adverse selection, and moral hazards. An effective system that ensures repayment of loans by borrowers is critical in dealing with asymmetric

information problems and in reducing the level of loan losses, thus the long-term success of any banking organization. Credit risk management is essential in optimizing the performance of financial institutions Basel(2010).

According to Greuning and Bratanovic (2003) the basis of a sound credit risk management system include guidelines that clearly outline the scope and allocation of bank credit facilities and the manner in which the credit portfolio is managed that is how loans are originated, appraised, supervised and collected. Derban, Binner and Mullineux (2005) recommended that borrowers should be screened especially by banking institutions in form of credit assessment. Collection of reliable information from prospective borrowers becomes critical in accomplishing effective screening as indicated by symmetric information theory. Qualitative and quantitative techniques can be used in assessing the borrowers although one major challenge of using qualitative models is their subjective nature.

However according to Derban, Binner and Mullineux (2005), borrowers attributes assessed through qualitative models can be assigned numbers with the sum of the values compared to a threshold. This technique minimizes processing costs, reduces subjective judgments and possible biases. The rating systems will be important if it indicates changes in expected level of credit loan loss. Brown Bridge (1998) concluded that quantitative models make it possible to numerically establish which factors are important in explaining default risk, evaluating the relative degree of importance of the factors, improving the pricing of default risk, screening out bad loan applicants and calculating any reserve needed to meet expected future loan losses. Derban ,Binner and Mullineux(2005).

1.1.2 Loan Performance in Microfinance

A performing loan is loan which is not in default, or is not about to be, with a reasonable expectation that the loan will not enter default even though it has not technically defaulted yet is a performing loan. As a general rule, banks and other financial institutions like to avoid non-performing loans, because there is a risk that they will not be able to recover the principal left on the loan, let alone the interest which has accrued.

Loan performance refers to rate of profitability or rate of return of an investment in various loan products .thus broadly, it looks at the number of clients applying for loans, how much they are borrowing, timely payment of installments, security pledged against the borrowed funds, rate of arrears recovery and the number of loan products on the chain. Loan portfolio refers to the total amount of money given out as loans in different loan products, to the different types of borrowers. These loan products may comprise of; Salary loans, Group guaranteed loans, Individual loans and corporate loans Puxty et al., (1991).It looks at the number of clients with loans and the total amount in loans. Wester Paul, (1993).

Loan portfolio is the Microfinance institutions most important asset hence, portfolio quality reflects the risk of loan delinquency and determines future revenues and an institutions ability to increase outreach and serve existing customers. Portfolio quality is measured as portfolio at risk over 30 days. How best a loan portfolio is performing is looked at in terms of profitability and or rate of return on the different loan products, this is a function of the number of the loans and the cost of administering these loans Indjeikein, (1997).

1.1.3 Effects of credit Risk management practice on Loan Performance

Credit risk management in Microfinance's functioning influence the efficiency of microfinance's risk management is and expected to significantly influence its loan performance Harker and Satvros, (1998). According to Pykhtin, (2005), credit risk management is an important function of financial institutions in creating value for shareholders and customers. The corporate finance literature has linked the importance of risk management with the shareholder value maximization hypothesis. This suggests that Microfinance will engage in risk management policies if it enhances shareholder value (Ali and Luft,(2002). Thus, effective credit risk management either in non-banking firms or in banking entities is expected to enhance the value of the firm and shareholder wealth.

Financial institutions should adopt credit risk management practices to maximize Shareholder value by enhancing the value of the firm. Value enhancement can arise from minimization of the costs of financial distress, minimization of taxes and minimization of the possibility that the firm may be forced to forego positive net present value projects because it lacks the internally generated funds to do so. However, the managerial risk aversion hypothesis holds that managers will seek to maximize their own personal well-being. This clearly indicates that the managers of the financial firms may sometime engage in credit risk management practices without considering the effects it will have on the shareholders.

Specifically this arises when the interests of shareholders are not perfectly aligned with those of the managers or when they pursue risk management strategies designed to insulate their own personal wealth from the effects of changes in interest rates, commodity prices, or

foreign currency values. Fatemi and Glaum (2000) outline the steps that may be taken without regard for the repercussions of these decisions for shareholders' value.

It therefore follows that regardless of whether shareholder value maximization or managerial risk aversion is the driving force, engagement in risk management practices is to be observed. One of the most important practices involves management of credit risk, particularly for banks and other firms in the financial services industry. The increasing variety in the types of counterparties from individuals to sovereign governments and the ever-expanding variety in the form of obligations from auto loans to complex derivatives transactions have meant that credit risk management has jumped to the forefront of risk management activities carried out by firms in the financial services industrySmith, (1998).

1.1.4 Microfinance Institutions in Kenya

Micro Finance Institution is a term commonly used to define financial institutions dedicated to assisting small enterprises, the poor, and households who have no access to the more institutionalized financial system, in mobilizing savings, and obtaining access to financial services. Through microfinance, small enterprises, low income people and women who are considered low income earners have been able to run small businesses which constitute a significant share of economic activity in developed and transitioning economies Kwan and Eisenbeis, (2005).

To meet the unsatisfied demand for financial services to small enterprises, low income people and women who are considered low income earners, a variety of MFIs have emerged over

time. Some of these institutions concentrate only on providing credit, others are engaged in providing both deposit and credit facilities, and some are involved only in deposit collection. They range from non-governmental organizations, savings and credit cooperatives, commercial Microfinance Institutions and regulated specialized providers Jorion, (1997).

In 1999, the Association of Microfinance Institutions (AMFI) was registered under the Societies Act as an umbrella organization to represent the microfinance institutions operating in Kenya. The AMFI's activities are aimed at supporting the growth and development of MFIs, by promoting sustainable, efficient, and effective delivery of microfinance services. AMFI has been playing a vital role in promoting the growth of microfinance in Kenya in addition to supporting MFIs to build capacity in order to overcome some of the challenges facing the sector. AMFI was instrumental in drafting and preparing the Microfinance Bill, which was passed and enacted into law in 2006 (USAID/Kenya, 2003).While Kenya has more than 250 organizations that practice some form of microfinance business, only 20-practice pure microfinance, of which 3 are deposit-taking and 17 are credit only. The remaining 230 MFIs combine microfinance with social welfare activities. According to the Microfinance Act, MFIs in Kenya are classified into three different tiers, with the first tier being deposit-taking institutions such as Microfinance Institutions, the second tier being credit only facilities, and the third tier being informal organizations supervised by an external agency other than the government .These distinct classifications have led to some of the Micro Finance Institutions specializing in certain niche markets, which have contributed to their growth and sustainability in delivering microfinance services (Association of Microfinance Institutions of Kenya, 2007)

1.2 Research Problem

The success of MFIs largely depend on the effectiveness of their credit management systems because these institutions generate most of their income from interest earned on loans extended to small and medium entrepreneurs. The Central Bank Annual Supervision Report, 2010 indicated high incidence of credit risk reflected in the rising levels of non-performing loans by the MFI's in the last 10 years, a situation that has adversely impacted on their profitability. This trend not only threatens the viability and sustainability of the MFI's but also hinders the achievement of the goals for which they were intended which are to provide credit to the rural unbanked population and bridge the financing gap in the mainstream financial sector. While many researchers have carried out general studies on causes of poor loan performance and their effects on the worldwide banking crises in Europe, Asia and parts of Africa, there have not been specific studies on the relationship between Credit risk management and loan performance on microfinance industry.

Loan performance result mostly from ineffective management of credit risks Hippolyte, (2005). Successful MFIs have managed to maintain high levels of loan recovery rates, generally over 95%. These remarkably high loan recovery ratios triggered the initial wave of funds from funding agencies and the subsequent inflow from a variety of social investors which they could use to expand their operations.

While many successful MFIs continue to contain credit risks within desired levels, they face greater challenges than before as indicated by the increased volatility of their portfolio at- risk (PAR) ratios. The sources of these challenges include increased competition in the market,

addition of new credit products with longer-term structures, shift to individual lending, increased scale of operations, and geographical expansion and efforts to deepen the outreach.

Credit risk management practices help MFIs reduce their exposure to credit risks, and enhance their ability to compete in the market with other well established financial institutions like banks Iqbal and Mirakhor, (2007). The micro finance institutions adopt various credit risks management practices in managing credit. InBangladesh a microfinance institution called Grameen Bank has managed credit risk and at the end of 2000 reported 2.4 million members, where 95 percent of them are women, with $225 million outstanding loan. In Thailand also has reported impressive outreach 5 through agricultural lending by the Bank for Agriculture and Agricultural Cooperative Meyer (2002). In general, a lot number of microfinance institutions have registered impressive outreach in several developing economies including India, Cambodia, and others which result to improved performance of the institution Meyer (2002). The wide variety of performance in microfinance institutions is realized due to credit risk management adopted by the organization. Large-sample studies of the industry have documented the existence of profits and a positive link between MFI performance and good macroeconomic conditions Altman and Narayanan, (1998).

Previous local studies have focus on effects of credit risk management practices on financial performance. For instance Kimeu (2008) who studied credit risk management techniques of unsecured banks loans of commercial banks in Kenya. Ndwiga (2012) investigated the relationship between credit risk management practices and financial performance of microfinance situations in Kenya. Simiyu (2008) studied techniques of credit risk

management in microfinance institutions in Kenya. To the researcher knowledge there is no known study done on impact of credit risk management practices on performance of microfinance institutions in Kenya, much of the work done relating to credit risk management practices on financial performance of microfinance institutions has been conducted in the developed world. This study seeks to fill this gap of knowledge by investigating the relationship between credit risk management practices and financial performance of microfinance situations in Kenya, which is a developing country.

1.3 Objective of the Study

The objective of the study is to determine effects of credit risk management practices on loan performance in Microfinance Institution in Nairobi,Kenya.

1.4 Value of the Study

The study will be significant to the management of Microfinance Institution in Kenya as they will be able to uncover the effects of credits risk management practices on loan performance and adopt appropriate credit risk management practices in reducing level of nonperforming loans and enhance loan performance. The study will provide an insight on the best credit risk management approaches micro finance institutions should adopt in order to effectively manage and enhance profitability. Managers in microfinance industry will find this study significant as it will provide an insight on the best credit risk management practices that should be taken to reduce occurrence of nonperforming loans and improvement of loan portfolio performance.

The study will be useful to the government in policy making regarding the loan requirements and also for the supervision of Microfinance institution.The policy makers will obtain knowledge on the best mechanisns that should be adopted to curb the poor loan perfomance and the responses that are appropriate should they occur. This study will therefore act as a guide in adopting effective credit risk management practices by MFIs in preventing the occurence defaults in Microfinance institutions.

This study will contribute to academia by showing how credit risk management (CRM) practices can affect the loan performance in MFIs Institution. It will add to the body of literature on CRM practice that has shown the effects of CRM on the management of the lending portfolio of Micro finance institutions. The study will also be significant to research who may find this study valuable to form a foundation to identify research gap and carry a further research.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is concerned with the review of literature related to the study, the theoretical review, determinant of loan performance in microfinance, empirical review and the conceptual framework. In the literature, it reviews other authors' works on credit risk management practices and loan performance. The last section is the summary of the literature which points out the research gaps on the empirical studies done.

2.2 Theoretical Review

This section discusses the theories that are established by other researchers, authors and scholars and are relevant to financial innovations. The study specifically reviews the agency theory, transaction cost theory, portfolio theory, capital asset pricing theory.

2.2.1 Agency Theory

According to the agency theory, the principal agency problem can be reduced by better monitoring such as establishing more appropriate incentives for managers. These are lacking in Malaysia for the following reasons; firstly, market take-over of poorly managed firms by raiders is more difficult in Malaysia because of various government restrictions on corporate equity ownership.

Market takeover serves as a check on the behavior of managers. Secondly, many major banks in Malaysia are owned by the government through various government-owned agencies. The principal-agent problem becomes worse when a bank is owned by government McColgan, (2001).

This is because the principal of the bank now is the government, and directors are appointed to run the bank based on political allegiance instead of competence. Thirdly, stock options are rarely used in Malaysia to award bank managers. When bank managers are given remuneration in terms of stock options they will make decisions which will increase the price of the company in the stock market .Fourthly Manager's horizon is short in Malaysia because their gratuity is not tied to the long term performance of the bank Bonin et al (2001).

2.2.2 Transaction Cost Theory

Transaction costs are the costs associated to the division of work. Williamson (2000), indicated that a transaction occurs when a good or service is transferred across technologically separable interfaces. Variables that describe a transaction are, among others, the specificity, the uncertainty, and the frequency of the transaction, whether an asset or a service is only or much more valuable in the context of a specific transaction. In the following, human capital specificity (the workout managers), the asset specificity (on loan and real estate level) and the site specificity (the location of the collateral) are taken into account, Reddy (2002).Goods and services are of a high specificity, if the supply is limited and unique and if there is no comparability. A threat to breach the contract can be seen as untrustworthy, since there is no alternative. A lock-in of one transaction party leads to a hold

up. Low specificity exists, if there is a range of homogeneous services or goods and supply is secured. Since goods or services are comparable and competition exists, there is no pricing problem. Furthermore, high competition may imply motivation and quality Yousaiken(2001).

2.2.3 Portfolio theory

Portfolio Theory was developed in the 1950s through the early 1970s and was considered an important advance in the mathematical modelling of finance. Since then, many theoretical and practical criticisms have been levelled against it. These include the fact that financial returns do not follow a Gaussian distribution or indeed any symmetric distribution, and those correlations between asset classes, Michael, Sproul (1998).

More technically, portfolio theory models assets return as a normally distributed (or more generally as an elliptically distributed random variable), define risk as the standard deviation of return, and model a portfolio as a weighted combination of assets so that the return of a portfolio is the weighted combination of the assets' returns. By combining different assets whose returns are not perfectly positively correlated, portfolio theory seeks to reduce the total variance of the portfolio return. Portfolio theory also assumes that investors are rational and markets are efficient, Sharpe(1964)

Portfolio theory of investment which tries to maximize portfolio expected return for a given amount of portfolio risk, or equivalently minimize risk for a given level of expected return, by carefully choosing the proportions of various assets. Although Portfolio Theory is widely used in practice in the financial industry and several of its creators won a Nobel Prize for the

theory, in recent years the basic Portfolio Theory have been widely challenged by fields such as behavioral economics, Marckowitz(1952)

2.2.4 Capital Asset Pricing Theory

William Sharpe (1964) published the capital asset pricing theory (CAPM) parallel work was also performed by Treynor (1961) and Lintner (1965). CAPM extended Harry Markowitz's portfolio theory to introduce the notions of systematic and specific risk. For his work on CAPM, Sharpe shared the 1990 Nobel Prize in Economics with Harry Markowitz and Merton Miller. In such a simple world, Tobin's (1958) super-efficient portfolio must be the market portfolio. All investors will hold the market portfolio, leveraging or de-leveraging it with positions in the risk-free asset in order to achieve a desired level of risk. CAPM decomposes a portfolio's risk into systematic and specific risk. Systematic risk is the risk of holding the market portfolio. As the market moves, each individual asset is more or less affected. To the extent that any asset participates in such general market moves, that asset entails systematic risk. Specific risk is the risk which is unique to an individual asset. It represents the component of an asset's return which is uncorrelated with general market movesLintner ,(1965).

No matter how much investor’s try to diversify their investments, it's impossible to get rid of all the risk. Investors, deserve a rate of return that compensates for taking on risk. The capital asset pricing model (CAPM) helps to calculate investment risk and what return on investment to expect. It is important to look at the formula behind the model, and the evidence for and against the accuracy of CAPM, and what CAPM means to the average investorr (Sharpe,

1964).

The key element of the model is that it separates the risk affecting an asset's return into two categories. The first type is called unsystematic, or company-specific, risk. The long-term average returns for this kind of risk should be zero. The second kind of risk, called systematic risk, is due to general economic uncertainty. The CAPM states that the return on assets should, on average, equal the yield on a risk-free bond held over that time plus a premium proportional to the amount of systematic risk the stockpossesses, Markowitz(1952).

The treatment of risk in the CAPM refines the notions of systematic and unsystematic risk developed by Harry M. Markowitz in the 1950's. Unsystematic risk is the risk to an asset's value caused by factors that are specific to an organization, such as changes in senior management or product lines. For example, specific senior employees may make good or bad decisions or the same type of manufacturing equipment utilized may have different reliabilities at two different sites. In general, unsystematic risk is present due to the fact that every company is endowed with a unique collection of assets, ideas and personnel whose aggregate productivity may vary.

2.3Determinants of Loan Performance

2.3.1 Interest Rate in Credit Management

Godquin, (2004) marked the beginning of attempts at explanations of credit rationing in credit markets. They asserted that interest rates charged by a credit institution are seen as having a dual role of sorting potential borrowers (leading to adverse selection), and affecting

the actions of borrowers (leading to the incentive effect).Weinberg (2006) advocated that interest charged and the amount of debt are the two main factors affecting repayment obligations. Some banks use the interest rates that an individual is willing to pay as a screening device to identify borrowers with a high probability of repayment. This may be dangerous since high risk-takers are the worst rate payers, in the process affecting default by borrowers on loans.

2.3.2 Loan size in Credit Management

Von Pischke (1991) noted that efficient loan sizes fit borrowers' repayment capacity and stimulate enterprise. If the amount of loan released is enough for the purposes intended, it will have a positive impact on the borrower's capacity to repay. On the other hand, in case of over and under finance, the expected sign is negative. If the amount of loan exceeds what the borrower needs and can handle, it will be more of a burden than help and extra funds may go toward personal use Norell, (2001), thereby undermining repayment performance. If the loan is too small, it may also encourage borrowers to divert the loan to other purposes, Vigano, (1993). Godquin (2004) reported that both age and size of loans have an inverse relationship to repayment performance. This concept is related to a study done by Pang (1991) and cited by Chong (2010) who pointed out that the main determinants of repayment obligations are the interest charged and the amount of debt.

Furthermore, loans that are too big also lead to repayment problems, dissatisfaction and high dropouts, Hietalahti& Linden, (2006).

Financial institution disburses loans based on cash flow requirements of the borrower.

However, from the lessons derived from micro finance programmesUNDP, (1997), micro finance institutions extend small, short-term primarily for working capital on simplified terms. Small Short-term loans are intended to test the client's commitment to repay and allow client to learn on the loan.

2.3.3 Loan Value

The second-best perspective of improving repayment performance is by increasing the value of outstanding debts repaid on time. The MFI deals with credit applications coming from borrowers heterogeneous in their localization, lending group, ability and preferences. The aim of the MFI is to maximize the global net expected return of its borrowers under a zero profit condition. The behavior of the borrower i.e. demand for credit and repayment is also a consideration whereby, the loan application of the borrower corresponds to the size and duration that maximizes his expected return. For a given borrower and duration of the loan, it is argued Freimer& Gordon, (1965) that the repayment probability decreases with the size of the loan. Also, where the maximum repayment rate the MFI can reach given its methodology is lower than the targeted 100%, the MFI will have to define a new target default probability. It will then allocate loans to borrowers only if the default probability of the loan they are asking for is inferior to the new targeted default probability. If there is observable heterogeneity in the repayment probability of borrowers, the MFI will allocate larger loans to safer borrowers Godquin(2004).

The loan period or term of a loan is usually classified as either short-term or long-term. A

short term loan in bank balance is one that is repayable within a period of one year. A long-term loan on the other hand, is any loan with payment terms extending beyond one year. Bragg (2010) asserted that the short time frame reduces the risk of non-repayment to the microfinance institution, which can be reasonably certain that the business's fortunes will not decline so far within such a short time period that it cannot repay the loan, while the MFIs will also be protected from long-term variations in the interest rate.

2.3.4 Saving Rates

Credit is linked to savings, and in most cases loan sizes are related to the amount each borrower has saved. Saving can play a significant role in increasing levels of institutional sustainability and enhancing levels of outreach. Therefore, MFIs that offer savings facilities have a cheap source of funds for further lending to more sustainable operations. On the other side, voluntary saving builds the equity of poor households and protects them against unforeseen economic and personal crisis (AEMFI, 2010). Zeller (1996) also agree with the importance of saving to influence the repayment rate. It is expected that saving services offered by the program improves the repayment rate of the group. Saving may increase the financial discipline of group members and they can also serve as loan collateral.

The Microfinance Information Exchange (MIX) reports that African regional deposits made-up 54% of the MFIs gross loan portfolio. In contrast, voluntary savings represented merely 22% of the Ethiopian microfinance portfolios (AEMFI, 2010). In case of AdCSI, mobilizing voluntary saving is only 10% of their gross loan portfolio. Therefore, the microfinance sector in Ethiopia still depends on donated funds and has not been in a position to finance its future

business by generating income operation (NBE, 2010).

2.3.5 Loan Policies

Loan Policy provides a general rule to guide decisions concerning credit management. Loan policies provide a framework for credit management process. They set standards and parameters to guide managers and credit officers in evaluating, granting and loan monitoring and follow up actions. They provide Directors, regulators, auditors with a basis for evaluating performance Me Naughton, (1992). Credit policy involves three decision variables namely credit terms such as interest charge, loan size, loan period, collateral requirement and eligibility criteria credit standards and collection effort Pandey(1995). It is therefore important to scrutinize the three loan policy decision variables of the two institutions in order to account for the differing loan portfolio performance.

2.5 Empirical Studies

Olomola (2002) found that repayment performance is significantly affected by borrower's characteristics, lenders characteristics and loan characteristics. Repayment problems can be in form of loan delinquency and default. Whatever the form however, the borrowers alone cannot be held responsible wherever problems arise; it is important to examine the extent to which both borrowers and lenders comply with the loan contract as well as the nature and duties, responsibilities and obligations of both parties as reflected in the design of the credit programme rather than heaping blames only on the borrowers.

Linbo (2004) examined efficiency versus risk in large domestic USA banks. He found that

profit efficiency is sensitive to credit risk and insolvency risk but not to liquidity risk or to the mix of loan products. Harker and Satvros (1998) conducted an empirical study on interest rate and exchange rate exposures of institutions in pre-crisis Korea. Results indicated that Korean commercial banks and merchant banking corporations had been significantly exposed to both interest rate and exchange rate risks, and that the subsequent profitability of Microfinance Institutions was significantly associated with the degree of pre-crisis exposure. The results also indicated that the Korean case highlights the importance of upgrading financial supervision and credit risk management practices as a precondition for successful financial liberalization.

Reta (2011) carried out a study on determinants of Loan Repayment Performance using on a Case Study in the Addis Credit and Saving Institution, Addis Ababa, Ethiopia. The objective was to analyze and identify the factors that influence the loan repayment performance of the beneficiaries of AdCSI Microfinance Institution. In order to achieve this objective, primary data was collected from 200 randomly selected clients (100 defaulters and 100 non-defaulters) by using structured interview. Moreover secondary data were obtained from the record of AdCSI the data analysis involved, descriptive statistics including mean, frequency and percentages to describe the socio-economic characteristics of the borrowers. Moreover, t-test and chi-square analyses were employed to compare the defaulters and non-defaulters group. A binary logit model was used to analyze the socio-economic factors that influence loan repayment.A total of twelve explanatory variables were included in the regression. Out of these, six variables were found to be significant for the probability of being defaulter. Age and five business types (baltina& petty market, kiosk & shop, services providing, weaving &

tailoring and urban agriculture) were important in influencing loan repayment performance of the borrower. In addition, sex and business experience of the respondents were found to be significant determinants of loan repayment rate. Addis microfinance institution has a number of internal and external problems like shortage of loanable funds for further expansion, competition, and improper interference of third party in the decision of loan approval.

Gestel and Baesens (2009) risk management is primarily concerned with reducing earnings volatility and avoiding large losses. In a proper risk management process, one needs to identify the risk, measure and quantify the risk and develop strategies to manage the risk. The highest concern in risk management is the most risky products. The prior concern for the risk management is those products that can cause the highest losses: high exposures with high default risk.

Korie*et al* (2012) carried out a study on determinants of loan repayment of Microfinance Institutions in Southeast States of Nigeria The objective of the study was to analyze the loan repayment performance, institutional factors, and factors affecting repayment rate of microfinance institutions (MFIs) in the South-east states of Nigeria. It was carried out in three states namely; Eboni, Enugu and Imo, out of the five southeast states. Using a cross-sectional data a multi-stage sampling technique was employed in selecting a total of 36 MFIs from the three states, that is, 12 MFIs per state. The three states were purposively selected based on the performance index of United Nations Development Programme in the selection of Micro start Projects, which made the final list in the Southeast states of Nigeria. For the sample size, four MFIs were chosen each from formal (commercial and development banks), semi-formal

(NGO-MFIs and community banks (CBs) and informal (Rotating Savings and Credit Associations (ROSCAS). Results from the study, affirmed that the formal segment was more organized, better equipped with higher quality and well-motivated staff than the semi-formal and informal segments. The informal sector presented the best repayment picture of the three segments, followed by the semi-formal institutions. Outstanding among the determinants of loan repayment of microfinance institutions were outreach, shocks, training duration, loan size and credit officer's experience.

Korir (2011) study was to investigate the impact of credit risk management practices on the financial performance of Deposit Taking Microfinance institutions in Kenya. The study used a descriptive survey approach in collecting data from the respondents. The number of the respondents was 36 staff working in all licensed Deposit taking microfinance institutions in Kenya. From the findings the study concludes that Deposit taking microfinance institutions in Kenya adopted credit risk management practices to counter credit risks they are exposed to and it also concluded that Deposit taking microfinance institutions adopt various approaches in screening and analyzing risk before awarding credit to clients to minimize on loan loss. This included establishing capacity/competition and conditions and use of collateral/security and character of borrower were used in screening and risk analysis in attempt to reduce manages credit risks. The study further concludes that there was a positive relationship between credit risk management practices and the financial performance of Deposit taking microfinance institutions.

Warue (2012) investigated empirical analysis of external factors affecting loan delinquency

performance in MFIs in Kenya. The study used primary data. The study target population comprised 49 MFIs registered by Association of Microfinance Institutions of Kenya (AMFIK). A survey research design was used and a census of the 49 MFIs was taken. The data was collected through a self-developed structured questionnaire and administered to MFIs loan officers for response. Multiple regression analysis was used to establish relationship between loan delinquency and microfinance institutions, self-help groups and external factors in MFIs in Kenya. The estimated regression coefficients and t-values were interpreted. The study found evidence on external factor was found positive and significantly (β= 2.549, t-value 2.069) related to loan delinquency performance in microfinance institutions in Kenya.

Sindani (2012) carried out a study on effectiveness of credit management system on Loan Performance, Empirical evidence from Micro Finance Sector in Meru, Kenya.The overall objective of the study was to assess the effectiveness of credit management systems on loan performance in microfinance institutions.The study adopted a descriptive survey design. This design investigates the current status and nature of the phenomena. A census survey of all the 70 credit officers in 14 microfinance institutions in Meru town was conducted. Specifically the study sought to establish the effect of credit terms, client appraisal, credit risk control measures and credit collection policies on loan performance. The respondents were the credit officers of the MFIs in Meru town. Collection policy was found to have a higher effect on loan repayment.

Ndwiga (2011) investigated the relationship between credit risk management practices and

financial performance of microfinance situations in Kenya. The objective of the study was to examine the effects of credit risk management practices on financial performance of Microfinance Institutions in Kenya. Exploratory research design was chosen because it enabled the researcher to generalise the findings to a larger population. The population of this study comprised of all licensed Microfinance institutions in Kenya. The population of this study comprised all the 43 licensed Microfinance institutions in Kenya. Inferential statistic was be sued to establish the relationship between credit risk management practices and the financial performance of MFIs, performance of MFIs will be measured by their profitability . From the findings the study concludes that microfinance institutions in Kenya have adopted various the credit risk management practices which are credit risk management, risk monitoring, risk identification and Risk Analysis and Assessment.The study concluded that there is positive relationship between credit risk management practices and financial performance of Microfinance Institutions in Kenya.

Kosgei, (2012) investigated effects of lending methodology on performance of loan portfolio in microfinance institution in Kenya .The purpose of the study was to assess the effect of lending methodology on the performance of gross loan portfolio/assets in micro-finance institutions. The specific objectives were to establish the effect of group and individual lending on performance of loan portfolio in Micro-finance institutions, and to establish the effect of moderating factors on performance of gross loan portfolio. Secondary data was used in the study of 8 out of 56 microfinance institutions under umbrella Association of Microfinance Institutions of Kenya (AMFI). This was motivated by availability of data. Panel data analysis was applied to test hypothesis that there is no relationship between group

lending on performance of loan portfolio. After running a regression in which loan portfolio performance is the dependent variable, the study found a positive significant coefficient of 0.79 and (p=0.42) on group lending without moderating factors. When moderating factors were included the coefficient becomes 0.38 and (p=0.19). The null hypothesis is therefore rejected. There is no significant relationship of individual lending on performance of loan portfolio in the regression despite finding a positive coefficient of 0.41 and (p=0.27). Therefore there is no effect on individual lending on performance

2.6 Summary of Literature Review

Studies have shown that even though banks are affected by many types of risk, the main type that has to be measured and monitored closely is the credit risk. Mismanagement of this type of risk has been found to bring about the occurrence of nonperforming loans and ultimately the bankruptcy of financial institutions causing major financial crises in various corners of the world affecting both developed and undeveloped economies.

Various studies also show that credit risk management practices improve on performance in microfinance institutions. For instance Mutie, (2006) studied the relationship between credit scoring practices in Kenyan commercial banks and NPLs. From the review of literature, study focus on influence of Credit risk management and effects on performance. This study aims at researching on effects of credit risk management practice loan performance in Microfinance Institutions in Kenya.

CHAPTERTHREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter discusses the methodology to be adopted by the researcher in carrying out the study. The chapter presents the population to be studied, the methods to be used to sample it, the instruments to be used in data collection and procedures that will be used in data analysis.

3.2 Research Design

This research will use a descriptive type of study. The major purpose of descriptive research design is to describe the state of affairs as it is at present. According to Mugenda and Mugenda (2003) a descriptive research is a process of collecting data in order to test hypotheses or answer questions concerning the current status of the subjects in the study. They point out that the purpose of a descriptive research is to determine and report the way things are done. Descriptive research design involve ranged from the survey which describes the status quo, the correlation study which investigates the relationship between variables, to developmental studies which seek to determine changes over time. A descriptive research match with the purpose of this study, as its intention is to investigate the effects of credit risk management practices on loan performance. The research design is deem fit in determining the effects of credit risk management practices on loan performance microfinance institution in Kenya.

3.3 Population of the Study

A population is a group of individuals, persons, events, objects or items from which samples are taken for measurement, it is the group the investigator wishes to make inference fromSaunders (2003) .The population of study will consist of all 9 licensed deposit taking Microfinance institution in Nairobi that are registered with the central bank of Kenya. The study will adopt a census study collect data from for five years from 2009 to 2013.

3.4 Data Collection Procedures

The study used both primary and secondary data. Primary data was collected using semi-structured questionnaires. The questionnaires were administered using drop and pick method. The questionnaires were used because they allowed the respondents who were credit and loan managers to give their responses in a free environment and save time and enable collection of large volume of qualitative data. The questionnaires were self-administered.Secondary data refers to the information obtained from articles, books, newspapers, internet and magazines. Secondarydatawasusedforthepurposeofthisstudyandthisdatawasderivedfromthefinancialstatementsofthebanks.Thisincludedthestatementofcomprehensiveincomeandstatementoffinancialpositionofthecommercialbanks.

3.6 DataAnalysis

Thedatacollectedfromtheannualreportsofthebankswasanalyzedusingmultipleregressionanalysis:therelationofonedependentvariabletomultipleindependentvariables.Theregressionoutputwasobtainedusing StatisticalPackageforSocialSciences(SPSSversion18).

3.6.1 Analytical Model

The research will be both quantitative and qualitative in nature. Collected data will be checked for completeness ready for analysis then coded. Data will be analyzed through the statistical package for social sciences (SPSS version 21) package. Tables and charts will be used for further representation for easy understanding and analyzes. The collected data will be thoroughly examined and checked for completeness and comprehensibility. The data will then be summarized, coded and tabulated. Inferential statistic will be used to establish the relationship between credit risk management and loans performance for the microfinance Institution in Kenya. The significance level for the study will be at 0.05.

The conceptual model to be used in the study is given as:

$Y= \beta_0 + \beta X_{it} + \varepsilon_{it}$ .....equation I

Where, Y is the dependent variable (Loan performance), β_0 is constant, β is the coefficient of the explanatory variables (credit risk management practices), X_{it} is the explanatory variable and ε_{it} is the error term assumed to have zero mean and independent across time period.

Analytical Model

A linear regression model will be applied to establish the relationship between credit risks management practices and the level of loan performance. The responses credit risks management practices will be measured by computing indices based on the responses derived from the Likert-Scaled questions. The relationship equation represented in the linear equation below.

$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + ę$

Where

Y= Loan Performance measured as a percentage of loan repaid to the total amount of loan advanced to clients.

ẹ = Error term: captures variables that were not included in the model.

α = Constant Term: The average loan performance holding the explanatory variables constant

β_1= Beta coefficients measures the changes in dependent variable attributed to the changes in explanatory variables.

X_1= Credit risk measured using risk coverage ratio measured as loan loss reserve divided by portfolio at risk

X_2= Interest rate spread calculated as (interest rate on gross Outstanding Loan Portfolio)-(interest rate paid on gross outstanding funding liabilities) which will be sourced from the financial statements

X3= GDP growth rate measured as a percentage change of GDP from the previous year.

X_4=interest rate measured as the interest rate charged on the loan advanced to consumers

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION.

4.1 Introduction

This chapter is a presentation of results and findings obtained from field data, both descriptive and inferential statistics have been employed specifically using regression and ANOVA to establish the significance of the model and also to establish the link between credit risk management practices and microfinance institutions in Nairobi Kenya.

4.2 Response Rate

The targeted population size was nine (9) MFIs licensed under the central bank of Kenya. The study used a census study whereby the entire population was studied as opposed to selecting a sample thereby making a response rate of 100%. According to Mugenda and Mugenda (1999), a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent. This means that the response rate for this study was excellent and therefore enough for data analysis and interpretation.

This high response rate can be attributed to the data collection procedures, where the researcher pre-notified the potential participants and applied the census method where secondary data was obtained from financial reports of the association of microfinance institutions in Kenya.

4.3 Descriptive statistics

Table 4.1 presents the descriptive statistics for the data set. Five variables namely Loan performance, credit risk, interest rate spread, GDP rate and interest rate of the 9 MFIs with 5 observations each were used in the analysis

Table 4.1: Descriptive Statistics table

Variable	Obs	Mean	Std.Dev.	Min	Max
Loan performance	5	0.10855	0.0578	0.0957	0.348
Credit risk	5	0.4733	0.07814	0.278	0.59
Interest rate spread	5	9.4278	0.74580	8.9334	10.27
GDP growth rate	5	3.62	1.2581	2.78	6.55
Interest rate	5	15.67	4.801	8.254	19.57

Loan performance had a mean of 0.10855 with standard deviation of 0.0578. This indicates that only Ksh. 0.10855 will not be repaid back on time by the clients for every one shilling of loan advanced by the MFIs. Credit risk ratio for the 9 MFIs had a mean of 0.4733 with standard deviation of 0.07814. The high credit ratio implies that MFIs were able to meet their financial obligations. The higher the credit ratio the more MFIs are able fulfills their obligations to its lenders. The study also established that interest rate spread had a mean of 9.4278 and standard deviation of 0.74580 which depicts a wide disparity between lending and deposit interest rate among MFIs. On average, GDP rate had a mean of 3.62 with standard deviation of 1.2581. This illustrates that the economy experienced moderate economic growth. Finally, mean value of interest rate was 15.67% which denotes that, in average the microfinance institutions in Nairobi charged 15.67% interest rate. Interest rate had a standard deviation of 4.801%. Other MFIs charged as high as 19.57% interest rate.

4.4 Correlation Matrix

The study sought to determine effect of credit risk management on loan performance of deposit taking microfinance institutions in Kenya. Pearson Correlation analysis was used to achieve this end at 99%, 95% and 90% confidence levels. The correlation analysis enabled the testing of study's hypothesis that credit risk has a significant effect on loan performance of MFIs. Table 4.2 shows the correlation matrix between the dependent and independent variables.

Table 4.2: Correlation coefficients of credit risk and corporate liquidity variables

	Loan~y	Credit~y	Spread~s	GDP~o	Interest~e
Loan Perfom	1.0000				
Credit Risk	0.7812	1.0000			
Interest Spread	-0.8337	0.7225	1.0000		
GDP rate~o	0.8355	0.2558	0.5871	1.0000	
Interest rate	-0.7911	-0.8775	-0.5870	-0.3785	1.0000

Table 4.2 shows that credit risk and GDP growth rate had a positive relationship with the loan performance of MFIs while interest spread and interest rate charged had a negative relationship with the loan performance of MFIs. Credit risk showed strong and positive (R=0.7812) relationship withloan performance of MFIs. This implies that an increase in loan performance will lead to an increase in loan performance of MIFs. Interest spread has strong but negative association (R=-0.8337) with loan performance of MFIs. This depicts that an increase in interest disparity will lead to poor loan performance. GDP growth rate is positively correlate with loan performance (R=0.8355) implying that an increase in economic growth rate will lead to an increase in loan performance. Good economic indicator performance indicates an increase in income therefore increases the disposable income of

clients hence easy loan repayment. Finally, interest rate charged on loan advanced increase reported a negative but strong relationship with loan performance (R=-0.7911). Increase on interest charged by MFIs increase the total amount of loan charged which eats into clients disposable income. This would increase the default rate thereby negatively affecting loan performance of the MFIs.

4.5 Regression analysis.

Regression analysis was used to determine determinant of coefficients (Model summary), analysis of variance (ANOVA) and regression coefficients. Determinant of coefficient (R square) is important in indicating the percentage of the proportion of the total variation in loan performance of MFIs that is attributed to the changes in credit risk management and the control variables. Analysis of variance is useful in determining if the model is fit for estimation and if the sample mean is drawn from the same population. Regression coefficient indicates the significance of coefficient estimates for each independent variable.

4.5.1Analysis of Variance

Table 4.3 gives an analysis of variance. This is established if there is significance difference between the means of the variable and under study and also to examine the overall significance of the model. Overall significance of the model is important in establishing whether the model is fit to giving true estimate of the variables. Since the p value (0.0001) is below 0.05, it can be concluded that the regression models was significant in giving true estimate of the variables. It also implies that the means of the variable are not significantly related.

Table 4.3:ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
	Regression	.250	4	.057	21.1111	.0001
1	Residual	.0871	9	.0027		
	Total	.3371	13			

4.5.2 Model Summary

Determination coefficients (R^2) were also carried out to determine the strength of the relationship between independent and dependent variablesas shown intable 4.4 below.

Table 4.4: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson Sig. F Change
1	0.9755	0.9516	0.8751	1.34780	1.8354

R square of 0.9755 indicates strong relationship between credit and control variables and loan performance of MFIs. R square of 0.9516 showed that 95.16% of the total variation in loan performance is attributed to the changes in explanatory variables. The Durbin-Watson test statistic tests the null hypothesis that the residuals from an ordinary least-squares regression are not auto correlated. The Durbin-Watson statistic ranges in value from 0 to 4. A value near 2 indicates non-autocorrelation; a value toward 0 indicates positive autocorrelation; a value

toward 4 indicates negative autocorrelation. Since the DW value of 1.8354 was close to 2, then it can be concluded that there was no autocorrelation among the model residual.

4.5.3: Regression coefficients

Multiple regression analysis was used to determine the significance of the relationship between the dependent variable and all the independent variables pooled together. The results are given in the model summary in Table 4.5 below.

Table 4.5: Regression coefficient

Loan performance	Coef.	Std.Err.	T	P>|t|
Credit risk	3.784	0.0578	4.0475	0.027
Interest spread~s	-0.725	-0.0377	-2.781	0.041
GDP rate~o	0.085	0.0259	1.65	0.013
Interest rate	-1.277	-0.7841	-3.54	0.021
_cons	0.48	0.2788	3.27	0.028

The model of this study was:

$Y=\alpha+\beta_1X_1+\beta_2X_2+\beta_3X_3 + \beta_4X_4 + \varepsilon$

Therefore from the regression result, the estimated model is given below

$Y = 0.48 + 3.784CDR - 0.725ITS + 0.085GDP – 0.48INT$

4.6 Discussion of findings.

From the regression result above, all the explanatory variables are statistically significant (P < 0.05) at 5% in causing the variation loan performance. On average MFIs will report loan performance of 0.48 units if the explanatory variables were excluded in the estimation model. This depicts that there are other control variables that affect loan performance of MFIS which were never considered in the study.Credit risk management is positively related with the loan performance as indicated with a positive coefficient. Credit risk is statistically significant($t=0.4075$, $p = 0.027$, $p<0.05$) in explaining the variation in loan performances and other factors held constant(interest spread, GDP rate and interest rate). Credit risk management, therefore, directly influences the level of loan performance in MFIs.

A unit increase in credit risk management will lead to 3.784 unit increase in loan performance of MFIs. Regression coefficient has also established that interest rate spread has a negative coefficient but is statistically significant ($t=-2.7891$, $p=0.041$ & $p<0.05$).A unit increase in interest spread will result to 0.725 unit decrease in loan performance of MFIs. GDP growth rate is significant ($t=1.65$, $p=0.013$ & $p<0.05$) in explaining the variation in loan performance. A unit increase in GDP growth rate will lead to 0.085 unit increase in loan performance. Interest rate is significant ($t=-3.54$, $p=0.021$, $p<0.05$). A unit increase in interest rate will lead to 1.277 unit decrease in loan performance of MFIs. This indicates that when MFIs increases its interest rates this may translate immediately into higher poorloan performance. Credit risk assessment and management ensures that loan are channeled to intended purposes, loans are allocated to only those who qualify/can repay, loan security/collateral is enough to cover loan, assessment of the character of the loan candidate and there is sufficient margin to cover loan.

CHAPTERFIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.0 Introduction

This chapter presents the summary and description of findings derived from the study.

The chapter also provides findings, conclusions and recommendations for policy as well as recommendations for further research.

5.1 Summary

The main objective of this study was to determine the effect of credit risk management on loan performance in MFIs. From the findings, there is evidence that suggests that several MFIs specific factors (credit risk, interest rate margins or spread, GDP growth rate, interest) are important determinants of loan performance. This study only considers four MFIs specific variables owing to data availability. The study established the following equation:

$$Y = 0.48 + 3.784CDR - 0.725ITS + 0.085GDP – 0.48INT$$

The study established significant, positive and good linear relationships between credit risk and GDP growth rate with loan performance while Interest spread and interest reported significant but negative relationship with loan performance with MFIs.

5.2. Conclusion

The study found that there is strong relationship between loan performance of microfinance institutions with credit risk management, the study further revealed that there was greater

variation on loan performance of microfinance as results of change in GDP growth rate, the study further revealed that there was a negative relationship between loan performance of MFIs, interest spread and interest rate charged on loans. Modeling in full the way spreads between interest rates on three-month Treasury bills and rates for the alternative instruments widen and narrow over time would require an almost limitless set of determining factors. The study found that the key indicator of financial performance and efficiency of MFIs is the spread between lending and deposit rates. If this spread is large, it works as an impediment to the expansion and development of loan repayment. This is because it discourages potential savers due to low returns on deposits and thus limits financing for potential borrowers. This has the economy-wide effect of reducing feasible investment opportunities and thus limiting future growth potential. It has been observed that large spreads occur in developing countries due to high operating costs, financial taxation or repression, lack of a competitive financial sector and macroeconomic instability. That is, risks in the MFIs are high. The study revealed that the magnitude of interest rate spread varies and it's inverse to the degree of efficiency of loan performance, which is an offshoot of a competitive environment. The nature and efficiency of the financial sectors is found to be the major reasons behind differences in spread.

5.3. RecommendationsforPolicy

MFIs should also apply efficient and effective credit risk management that will ensure that loans are matched with ability to repay, loan defaults are projected accordingly and relevant measures taken to minimize the same. MFIs should also enhance periodic credit risk monitoring of their loan portfolio to increase the loan performance. This can be achieved by hiring qualified debt

collectors and competent personnel.

It is recommended that MFIs should use the services provided by Credit Reference Bureaus for the purpose of determining the credit worthiness of borrowers as a means of minimizing bad loans. CRBs help lenders make faster and more accurate credit decisions. It is recommended that MFIs needs to invest on debt collections and this will entail hiring qualified and experienced debt collectors, lawyers so as to increase litigation of defaulters and auctioneers.

It is recommended that Central Bank which is the Regulatory Authority of MFIs in Kenya should apply stringent regulations on interest rates charged by MFIs so as to regulate their interest rate spread and also they should come up with rigorous policies on loan advances so as to mitigate moral hazards such as insider lending and information asymmetry. It is recommended that management should organize regular trainings in areas like credit management, risk management and financial analysis. This would sharpen the knowledge and skills of credit officers so as to improve on the quality of credit appraisals.

5.4. LimitationsoftheStudy

In attaining its objective the study was limited to 9 MFIs in Kenya. Secondary data was collected from the firm financial reports. The study was also limited to the degree of precision of the data obtained from the secondary source. While the data was verifiable since it came from the Central Bank publications, it nonetheless could still be prone to these shortcomings. The study was based on a five year study period from the year 2009 to 2013. A longer duration of the study will have captured periods of various economic significances such as booms and recessions. This may have probably given a longer time focus hence given a broader dimension to the problem.

5.5. Recommendations for Further Research

The study sought to determine the effect of credit risk management on the loan performance of MFIs in Kenya. There is need for a study to be conducted to determine the relationship between interest spread and loan performance of MFIs as it was found that interest spread negatively affects the loan performance of MFIs.

From the findings and conclusion, the study recommends and in-depth study to be carried out on the relationship between increase in interest rate and loan performance of MFIs in Kenya.

In order to better the effects of credit information sharing on default risk, there is need to a study to be carried out to determine the impact of credit information sharing on loan performance in MFIs, this will assist in MFIsincrease loan performance and also reduce the default risk.

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APPENDICES

Appendix I: Questionnaire

CREDIT RISK MANAGEMENT PRACTICES

I. CREDIT RISK IDENTIFICATION

Please respond to the following statements by indicating the extent to which you agree or disagree as per the given choices.

		5	**4**	**3**	**2**	**1**
		Strongly agree	**Agree**	**Uncertain**	**Disagree**	**Strongly disagree**
1	We analyze the business plan to identify risk exposure					
2	We consider professionalism in the respective business					
3	We consider capacity of the loan applicants					
4	We look at the long term planning horizon of every loan applicant					
5	We look at the conditions ie economic, political before we finance a project					
6	We consider the net worth of the business					
7	We consider the past track record of repayment					
8	We look at the character of loan applicants					
9	We look at the credit trustworthiness of loan applicants					
10	We periodically monitor projects financed					

II. CREDIT RISK ASSESSMENT

Please respond to the following statements by indicating the extent to which you agree or disagree as per the given choices

		5	**4**	**3**	**2**	**1**
		Strongly agree	**Agree**	**Uncertain**	**Disagree**	**Strongly disagree**
1	We periodically assess funded projects					
2	We have a credit evaluation committee					
3	We have monthly review of loan performance					
4	We have a loan recovery mechanism					
5	We calculate ratio analysis for profitability, efficiency, leverage					
6	We analyze growth in sales of our clients/ borrowers					

III. PORTFOLIO ASSET QUALITY

Please respond to the following statements by indicating the extent to which you agree or disagree as per the given choices

		5	4	3	2	1
		Strongly agree	**Agree**	**Uncertain**	**Disagree**	**Strongly disagree**
1	We periodically assess credit quality of our loan portfolio					
2	We invest in different loan products					
3	Decision to diversify our investment is only made by management					
4	The loan portfolio is invested in different sectors of the economy					
5	Our loan portfolio is fully insured					

IV. CREDIT RATING

Please respond to the following statements by indicating the extent to which you agree or disagree as per the given choices

		5	**4**	**3**	**2**	**1**
		Strongly agree	**Agree**	**Uncertain**	**Disagree**	**Strongly disagree**
	SECTION IV. CREDIT RATING					
1	The micro finance has an internal credit rating system.					
2	We do credit rating on all for all loans					
3	The micro finance has a loan classification procedure					
4	The micro finance has limits on the amount of loan one can get					
5	The micro finance has a credit committee					
6	The micro finance has a lender approval limit for					

	loans issued					

V. CREDIT RISK CONTROL

Please respond to the following statements by indicating the extent to which you agree or disagree as per the given choices

		5	**4**	**3**	**2**	**1**
		Strongly agree	**Agree**	**Uncertain**	**Disagree**	**Strongly disagree**
1	Clients are vetted before accessing loans					
2	Hefty penalties are charged on loan defaulters					
4	Loans are awarded after signing of a binding contract					
5	Management report to board of direct directors on non-performing loans					
6	We participate in loan portfolio hedging against risk					
7	Our clients are requested to provide guarantees					

Appendix II: List of Microfinance institutions

Source: Central bank of Kenya

1. Faulu Kenya DTM Limited

Physical Address: FauluKenya House, Ngong Lane -Off Ngong Road

Date Licenced: 21st May 2009

Branches: 27

2. Kenya Women Finance Trust DTM Limited

Physical Address: Akira House, Kiambere Road, Upper Hill,

Date Licenced: 31st March 2010

Branches: 24

3. SMEP Deposit Taking Microfinance Limited

Physical Address: SMEPBuilding - Kirichwa Road, Off ArgwingsKodhek Road

Date Licensed:14th December 2010

Branches: 6

4. RemuDTM Limited

Physical Address: Finance House, 14th Floor, Loita Street

Date Licensed: 31st December 2010

Branches: 3

5. Rafiki Deposit Taking Microfinance

Physical Address: : 2nd Floor, El-roiPlaza, Tom Mboya Street

Date Licensed: 14th June 2011

Branches: 3

6. UWEZO Deposit Taking Microfinance Limited

Physical Address: ParkPlazaBuilding, Ground Floor, MoktarDaddah Street

Date Licensed: 08 November 2010

Branches: 2

7. Century Deposit Taking Microfinance Limited

Physical Address: KK Plaza 1st Floor, New Pumwani Road, Gikomba

Date Licensed: 17th September 2012

Branches: 1

8. SUMAC DTM Limited

Physical Address: Consolidated Bank House 2nd Floor, Koinange Street

Date Licensed: 29th October 2012

Branches: 1

9.U&I Deposit Taking Microfinance Limited

Physical Address: AsiliComplexBuilding 1st Floor, River Road

Date Licensed: 8th April 2013

Branches: 2

AppendixIII: DataCollectionForm

MICRO FINANCE	YEAR	ROE	NPLR	CAR
AVERAGE VALUES				
UWEZO	2009	22.60	5.05	18.9
	2010	22.69	0.92	19.7
	2011	20.43	6.19	20.6
	2012	29.37	0.87	23.6
	2013	27.63	3.39	21.4
FAULU DTM	2009	24.93	0.74	43.2
	2010	22.36	3.68	32
	2011	19.34	0.14	34.7
	2012	24.93	0.74	43.2
	2013	22.67	0.89	46.4
SUMAC	2009	27.95	2.7	14
	2010	27.0	1.81	16.6
	2011	25.16	2.52	23.8
	2012	33.68	1.67	31.2
	2013	27.62	2.6	27.8
REMU	2009	24.66	0.43	14.03
	2010	14.09	2.99	14.65
	2011	5.42	1.23	16.04
	2012	16.91	1.14	16.2
	2013	9.51	0.62	19.04
RAFIKI DTM	2009	2.0	24.1	17
	2010	3.0	19.8	16

	2011	8.73	15.28	16
	2012	11.68	12.12	13.18
	2013	10.44	4.14	12.65