EFFECT OF CREDIT REFERENCE BUREAU SERVICES ON NON-PERFORMING LOAN PORTFOLIOS IN KENYA. "A CASE STUDY OF DEPOSIT TAKING MICROFINANCE INSTITUTIONS"

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DECLARATION AND APPROVAL

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

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Supervisor's Approval

The project has been submitted for examination with my approval as university supervisor.

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DEDICATION

This research project work is dedicated to my parents: Nelly & Evans Omare, Betty Owiso, Siblings: Edwin, Laban Omare & Leah Mboshe for their encouragement and support during this course.

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LIST OF ABBREVIATIONS AND ACRONYMS

AMFI   Association of Microfinance Institutions Kenya

C.B.K   Central Bank of Kenya

C.I.S   Credit Information Sharing

C.R.B   Credit Reference Bureau

DTM's   Deposit Taking Microfinance Institutions

FSD   Financial Sector Deepening

IMF   International Monetary Fund/Corporation

K.S.H   Kenya shilling Currency

M.F.I   Microfinance Institutions

N.P.L   Non-Performing Loans

ROSCA   Rotating Savings and Credit Associations

SPSS   Statistical Package for Social Sciences

VIF   Variance Inflation Factor

DEFINITIONS OF TERMS

Credit reference bureau – According to Sinare (2008), Credit References Bureaus are information brokers, providing creditors with reliable, relevant and comprehensive data on the repayment habits and current debt of their credit applicants hence it is a company that collects information from various sources and provides consumer credit information on individual consumers for a variety of uses.

Loans - An amount of money that is borrowed, often from a bank, and has to be paid back, usually together with an extra amount of money that you have to pay as a charge for borrowing (Cambridge Advanced Learner's Dictionary).

Non-performing loans- It is termed as non-performing, when the loan ceases to "perform" or generate income for the bank When a borrower cannot repay interest and/or installment on a loan after it has become due, then it is qualified as default loan or non-performing loan Chowdhury&Adhikary, (2002).

Micro finance institutions- Schreiner and Colombet (2001) define microfinance as "the attempt to improve access to small deposits and small loans for poor households neglected by banks." Therefore, microfinance involves the provision of financial services such as savings, loans and insurance to poor people living in both urban and rural settings who are unable to obtain such services from the formal financial sector.

Loan Recoveries – is the extent to which principal and accrued interest on a debt instrument that is in default can be recovered, expressed as a percentage of the instrument's face value Barron and Staten, (2003).

Write off - A write-off is a reduction in the value of an asset or earnings by the amount of an expense or loss. Companies are able to write off certain expenses that are required to run the business, or have been incurred in the operation of the business and detract from retained revenues Aballey, (2009).

Credit reference reporting: - A framework structure in which registered credit bureaus gathers and store consumer information from credit providers and in turn avail the information to authorized users at a fee, mainly for the purpose of appraising credit allocation Credit Reference Regulations, (2008)

Risk: - Exposure to change or probability that some future events will occur making the expected and actual outcome to differ (Oxford Advanced Learner dictionary 7th Edition).

Default: - Failure by a borrower to honour payment obligations (Oxford Advanced Learner's Dictionary, 7th Edition).

Loan Quality: - is related to the left-hand side of the bank balance sheet. Bank managers are concerned with the quality of their loans since that provides earnings for the bank (Credit Reference Regulations, 2008)

ABSTRACT

The research project sought to examine the effect of listing with Credit Reference Bureau service on non-performing loans of deposit taking microfinance institutions in Kenya. The specific objectives were to assess how loan recoveries as a result of listing with credit reference bureau affects non-performing loans by deposit taking microfinance institutions in Kenya, to assess how write offs as a result of listing with credit reference bureau affect non-performing loans by deposit taking microfinance in Kenya, to examine how loan quality as a result of listing with credit reference bureau affect non-performing loan in deposit taking microfinance in Kenya and what effect does listing with credit reference bureau has on non-performing loans levels in Deposit Taking Microfinance in Kenya. This research study adopted a descriptive survey approach on effect of listing with Credit Reference Bureau Service on non-performing loans of deposit taking microfinance institutions in Kenya. Further, this study targeted all registered deposit taking microfinance institutions by the Central Bank of Kenya (CBK). Target population was 12 registered Deposit taking microfinance institutions that have listed with Credit Reference Bureaus in Kenya. This study used primary data that was collected by use of a questionnaire. The data was analyzed by use of Descriptive and inferential statistics to measure interrelationships between the variables. Tables were used to display the information to improve presentation of the analyzed results for ease of interpretation. Regression analysis was used to test the relationship between dependent and independent variable. In light of the research findings, the regression model could only explain 52% in variance of non-performing loans. The study results revealed that there was a statistically significant relationship between loan recoveries and non-performance of loans (p=0.000); there was a statistically significant relationship between write offs and non-performance of loans (p=0.000) and that there was a statistically significant relationship between quality loan portfolio and non-performance of loans (p=0.000). Hence, credit information sharing and level of nonperforming loans are indeed related meaning there is a direct relationship between the number of credit checks done by the CRBs and the level of NPLs. It is thus recommended that a study be carried out consisting of other factors which were not part of the model to predict non-performing loans. The findings of this study would be useful to the D.T.M's Banks in Kenya, as it will help the banks in formulating effective policies related to reducing non-performing loans in Kenya. In addition, the findings of the study would also be useful to the microfinance institutions as it would be insightful on how this institutions can increase and control credit distribution to their clients.

Key Words*: Credit Reference Bureau, Deposit Taking Micro-Finance, Writing off, and Recoveries.*

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Microfinance is the provision of a wide range of financial services and products ranging from savings credit facilities, money transfer and micro insurance to the economically active poor, low-income households and Small and Micro Scale Enterprises (SMEs) in both rural and urban areas, using innovative delivery methodologies and channels (Central Bank of Kenya 2007). Historically, microfinance in Africa has developed in different stages across the region. Financial intermediaries such as cooperatives, rural and postal savings banks pioneered the industry in the 1970s, especially in West and East Africa. In the 1980s and 90s, the sector saw a number of donor supported credit only non-governmental organizations (NGOs) develop and sometimes transform into new types of non-bank financial institutions by the end of the 90s (Modurch, 1999). In the early 1990s, microfinance became more vibrant to counter the social economic effects of the liberalized economy (Otero 2006).

According to Association of Microfinance Institutions (AMFI) of Kenya (2004), two categories of microfinance operate in Kenya, formal and informal based on the statutes under which they operate or registered. They are also based on customer provider relationship in the management and ownership of the finance service provider. Member based ones include savings and credit cooperatives and merry-go rounds. Between 1980s and 1990s the dominant and specialized microfinance institutions in Kenya were Kenyan women finance Trust (KWFT), Kenya Rural Enterprise program (K-REP), Faulu Kenya and Family Finance. So far some of them have converted into full pledged commercial banks. Client based and the specialized microfinance institutions include Faulu Kenya, KWFT, K-REP among others although most borrowers use micro credit finances on food, shelter and clothing to meet their basic needs rather than investment (FSD Kenya 2014).

The Microfinance Act, 2006 and the Microfinance (Deposit Taking Microfinance Institutions) Regulations 2008 is to regulate the establishment, business and operations of microfinance institutions in Kenya through licensing and supervision. Currently, there are twelve registered deposit taking micro-finance in Kenya by the central bank of Kenya. The Act enables Deposit Taking Microfinance Institutions licensed by the Central Bank of Kenya to mobilise savings from the public, thus promoting competition, efficiency and access. It is

therefore, expected that the microfinance industry will play a pivotal role in deepening financial markets and enhancing access to financial services and products by majority of the Kenyans (C.B.K 2015). Lending by microfinance is either group or individual based approach. The main aim of micro finance is to provide funds for investment in micro businesses that is expected to increase income to investor households and hence improve their livelihood. In addition, unregistered shylocks lend at very high interest rates. Interest rates charged by specialized microfinance institutions are monthly which reflect that they are low but are actually higher than commercial banks. The rapid proliferation of MFIs has drawn some criticism. Some observers fear that it has outpaced the capacity of developing world governments to implement sensible regulatory measures (Howard et al, 2006).

In 2006, the Indian governments cracked down on two large MFIs following suicides of at least sixty of their customers who were under pressure to repay loans at prohibitively high interest rates (Fernado et al, 2006). In Kenya, the government of Kenya through central bank of Kenya as regulator closed Akiba micro finance on grounds that it had unlawfully taken customers deposits and reneged on payments (Mullei, 1999). In order to overcome challenges of loan defaults, micro finance institutions use various credit lending models such as the Grameen (village) Bank in India founded by professor Yunus (Yunus, 2003). The bank adopted a methodology where a bank unit is set up with a field manager and a number of bank workers covering area of about 15 to 22 villages. The managers and the workers start by visiting villages to familiarize themselves with local milieu in which they will be operating and identify prospective clientele, as well as explain the purpose, functions and mode of operation of the bank to local population.

Rotating savings and credit associations (ROSCA) is where ROSCA's members form groups of individuals who pay into an account on a monthly basis (Aghion and Morduch 2005). Each individual then earns an opportunity to receive a relatively large loan with to invest. The group decides who receives the loan each term, often based on rotating schedule. The initial money is either accumulation of the group members' individual deposits or more frequently, by an outside donation. The third is the use of CRB to know credit history of clients thus it provides rapid access to accurate and reliable standardized information on potential borrowers, enabling lenders to evaluate credit risk more accurately and to reduce

lending processing time and costs. This in turn promotes profitability and increased credit activity.

1.1.1 Non-Performing Loan (N.P.L)

A loan refers to something lent for the borrower's temporary use on a condition that is equivalent to what is returned (Morsman, 1993). Successful lending is about getting the balance right between financial return the lender expects and the risk that the borrower may not be repaid as anticipated. According to the International Monetary Fund (IMF, 2009), a non- performing loan is any loan in which interest and principal payments are more than 90 days overdue or more than 90 days' worth of interest has been refinanced. On the other hand, the Basel Committee (2001) puts non-performing loans as loans left unpaid for a period of ninety days. Advancing credit facilitates is a key role of the micro finance industry in addition to, loans are the dominant asset and represent 50-75 percent of the total amount at most banks they are the major contributor of operating income and represent the banks greater risk exposure (Mac Donald and Koch,2006). Failure to manage loans, which make up the largest share of banks assets, would likely lead to high levels of non-performing credits. Lending is the principle activity of commercial banks and the loan portfolio is the largest asset and the predominant source of revenue for the lending institutions (Morsman, 1993).

According to the Banking Act and Prudential Guidelines (2013), a loan is considered as non-performing "when the principal or interest due is in arrears for 90 days or more". With respect to the Microfinance Act 2006 and the Microfinance Regulations 2008, a loan is considered as non-performing "if the principal or interest is due and unpaid for more than 30 days or when a credit facility is classified as substandard, doubtful or loss". This difference in classification needs to be addressed to ensure uniformity in reporting and provisioning. According to CBK banking sector quarterly report (2015), as at 30th June 2015, there were 12 Microfinance Banks (MFBs) in operation. The 2 new Microfinance institutions in this quarter are Choice Microfinance Bank Ltd and Daraja Microfinance Bank Ltd. All the Microfinance Banks had granted loans and advances worth Ksh. 43.3 billion compared to Ksh. 41.1 billion as at the end of March 2015 thus translating to a growth of 5.4%. The MFBs deposit base stood at Ksh. 39.7 billion as at June 2015 representing an increase of 0.8% from Ksh. 39.4 billion in March 2015.

The long-term borrowings by the MFBs increased from Ksh. 4.7 billion in March 2015 to Ksh. 8.1 billion in June 2015 signaling decreased reliance on deposits by MFBs as a source of funding customers' loans. The number of MFBs deposit accounts and loan accounts stood at 2,366,799 and 434,752 respectively in June 2015 compared to 2,320,637 deposit accounts and 440,517 loan accounts registered as at the end of March 2015. According to the C.B.K quarterly banking report (2015), the overall banking sector, on the back of increased overall lending, as a ratio of gross NPL's to gross loans, the figures declined marginally to 4.6% at the end of June 2015 from 4.7% a year earlier. The coverage ratio, measured as percentage of specific provisions to total NPLs, increased from 38.5% to 39.1%. The quality of assets measured as proportion of net NPLs to gross loans, decreased marginally from 2.8% in June 2014 to 2.7% in June 2015. High NPL's can hurt deposit taking microfinance institutions growth particularly as interest rate volatility and hikes compromise borrowers. Thus competitive pressure and performance targets for lending officers mean more marginal clients get approved and banks chase riskier business, in addition to the legal system may make it harder for banks to recover a loan.

According to (Hou, 2007), the minimization of NPL is a necessary condition for improving economic growth. When NPL retained permanently, these will have an impact on the resources that are enclosed in unprofitable areas. Thus, NPL are likely to hamper economic growth and reduce the economic efficiency. In recent years, the literature on non-performing loans has occupied the interest of several authors particularly the attention in understanding of the variables liable to the financial vulnerability (Khemraj and Pasha, 2009). This vulnerability is explained by the role of bad debt as exposed by the strong relationship between NPL and banking crises. Indeed, Sorge (2004) argues the use of such variables (non-performing loans and loan losses provisions) to assess the vulnerability of the financial system tests.

To overcome this challenge, an institution is required to monitor the behaviour of borrowers. As a result, the idea of establishing credit Reference Bureau was conceived in order to enable financial institutions to determine credit worthiness of their borrowers and therefore reduce the loan default rate. Credit reference Bureau allows for credit information sharing among the financial institutions. Credit information sharing plays asymmetry that exists between financial institutions and borrowers in order to find a way forward to prevent further failures.

Table 1.1: Deposit Taking Microfinance Banks Total Non-Performing Loan (N.P.L)

DEPOSIT TAKING MICROFINANCE BANKS - KENYA					
TOTAL NON-PERFORMING LOAN (N.P.L)					
Years	**2011**	**2012**	**2013**	**2014**	**2015**
N.P.L in Ksh.M	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**
K.W.F.T	702	757	993	951	2370
FAULU	149	190	332	498	503
RAFIKI		61	183	306	503
SMEP	136	265	203	230	297
REMU	2	10	29	35	59
SUMAC			18	46	78
CENTURY			6	15	35
U&I			3	6	9
UWEZO	2	7	19	27	33
CHOICE					
DARAJA					
CARITAS					
TOTALS	**991**	**1306**	**1786**	**2114**	**3888**

Source: C.B.K Bank Supervisory Report (2015).

1.1.2 Credit Reference Bureau

According to central bank of Kenya Bank Supervision Report 2014 defines credit reference bureau (CRB) as a company licensed to collect and collate (combine) credit information on individuals from different sources and provide that information upon the request of a credit provider in form of a credit report. Credit providers can only request a report on a borrower who has actually applied for a loan from them. Credit information sharing in Kenya's financial sector started in July 2010 commercial banks then commenced submitting negative credit information on their borrowers to the licensed credit reference bureau in August 2010. In 2013, The Credit Reference Bureau Regulations act was amended to allow all commercial banks and microfinance banks to submit full file credit information (both positive and negative information) to the licensed CRBs effective 28th February 2014.

A credit reference bureau receives, collates, compiles and disseminates to authorized users, information on borrowers' credit histories from approved data sources. The first bureau, credit reference bureau Africa, opened in February 2010, they are three licensed CRBs namely, Metropol, Credit info in addition to Credit Reference Bureau Africa as at the end of March 2016. The mechanism has continued to witness significant growth in usage by commercial banks, microfinance banks and customers during the year. As at 31st December 2014, a total of 5.2 million and 88,536 credit reports had been requested by banks and customers respectively from the two licensed CRBs. A study by Barron and Staten (2003) showed that lenders could significantly reduce their default rate by including more comprehensive borrower information in their default prediction models. A similar study specific to Brazil and Argentina found similar default rate decreases when more information was available on non-payers (Powell, et al. 2004). According to World Bank "Doing Business" 2015 report, 14.3% of adults were covered by CRBs in Kenya, in comparison with an average of 5.8% in sub-Saharan Africa and 67% in OECD countries.

Hansen (2004) highlighted that many borrowers make a lot of effort to repay their loans, but do not get rewarded for it because this good repayment history is not available to the financial institution that they approach for new loans or credit. Whenever borrowers fail to repay their loans, financial institutions are forced to pass on the cost of defaults to other customers through increased interest rates and others fees. Credit reporting allows deposit taking microfinance institutions to better distinguish between good and bad borrowers. Credit Referencing is a typical response to information asymmetry problems between lenders and borrowers (Olegario 2003). Hence this study attempt to look at effect of listing with credit reference bureau on non-performing loans of deposit taking micro-finance institutions in Kenya.

1.2 Statement of the Problem

The CBK Annual Supervision Report, 2012 indicated rising levels of non-performing loans by the MFI's in the last 3 years, a situation that adversely impacted on their profitability. Schreiner (2001) indicates that financial institutions are facing a higher risk of non-performing loans, noting that larger loans have greater risk exposure. This trend threatens the viability and sustainability of the MFI's in bridging the financing gap that exist in the

conventional financial sector as all credit decision should be established on a comprehensive evaluation of the risk conditions and characteristics of the borrower that can be done by accessing credit reports from the licensed CRB's. Credit assessment, management and monitoring play a fundamental role in determining the nature and repay ability of the loan taken by a borrower, several other institutions have faced difficulties over the years for myriad reasons, major causes can be directly linked to lax credit standards for borrowers, poor portfolio risk management and lack of attention to macroeconomic changes that can lead to deterioration in the credit standing of borrowers, (Basel, 1999). In addition, the identification of the underlying causes of non-performing loans is necessary for the minimization of the chances of occurrence of such bad loans in Kenyan banks (Collins and Wanjau, 2011).

A number of empirical studies have been conducted on credit reference bureaus but most of them have focused on its effect on financial performance. Gitahi (2013) studied the effect of credit reference bureau on the level of non-performing loans by the commercial banks, Sigei (2010) studied on evaluating the effectiveness of credit reference bureau in Kenya the case of KCB, Nganga (2011) studied on shareholder perception of credit reference bureau service in Kenya credit market. effect credit risk management practices and the level of non-performing loans of microfinance institutions in Nyeri county (Mwithi, 2012), credit risk management practices and financial performance of deposit taking microfinance institutions in Kenya (Korir, 2012) and credit risk management practices and loan losses in microfinance institutions in Kenya (Wambua, 2012), no study has been done to assess the effect of listing with credit reference bureaus on non-performing loans of deposit taking micro finance institutions in Kenya. Based on this evaluation, this research therefore answered the following question; what is the effect of credit reference bureaus on non-performing loans in deposit taking micro-finance institutions in Kenya? Specifically, it sought to establish whether CRB has helped in reducing non-performing loans in deposit taking microfinance institutions in Kenya. The findings of this study would be useful to the D.T.M's Banks in Kenya, as it will help the banks in formulating effective policies related to reducing non-performing loans in Kenya. In addition, the findings of the study would also be useful to the microfinance institutions as it would be insightful on how this institutions can increase and control credit distribution to their clients.

1.3 Objective of the Study

1.3.1 General Objective

The main objective of the study is to assess the effect of listing with credit reference bureau on non-performing loans in deposit taking micro-finance institutions in Kenya.

1.3.2 Specific Objectives:

The specific objectives are:

i.   To assess how listing of non-performing loans with CRB affects loan recoveries of DTMs in Kenya

ii. To assess how listing of non-performing loans with CRB affects loan write offs portfolios in DTMs in Kenya

iii. To examine how listing of non-performing loans with CRB affects quality of loans portfolio in DTMs in Kenya

1.4 Research Hypothesis

H_{O1}: There is no statistical relationship between listing with credit reference bureaus on loan recoveries and non-performing loans in deposit taking microfinance institutions in Kenya

H_{O2}: Write off has no effect on non-performing loan as a result of listing with credit reference bureaus in deposit taking microfinance institutions in Kenya

H_{O3}: Loans quality has no effect on non-performing loan as a result of listing with credit reference bureau on deposit taking micro-finance institutions in Kenya

1.5 Justification of the Study

CRB's is expected to instill good credit behavior that will attract competitive pricing of credit facilities. Credit reporting allows deposit taking microfinance institutions to better distinguish between good and bad borrowers with an aim of minimizing on default rate by its clients. Several experts have recommended the credit reference bureau technology as a possible remedy for the lenders in any situation to harness the benefits in the financial sector (McIntosh, et al. 2005). Thus, there is need for these institutions to secure the confidence of investors and encourage more to invest or bank with these institutions therefore this project explored significance of listing with CRBs has on deposit taking microfinance institution

under the current prevailing conditions to ascertain its effect on NPLs in deposit taking micro-finance institutions in Kenya.

1.6 Significance of the study

The information generated would be useful to financial and non-financial institutions in providing insights on how to improve in its lending procedures in addition to implementing workable strategies to control the problem of non-performing loan portfolio in their respective institutions. Hence, they will be improving their financial performance and profitability as these institutions will be operating within the same environment and deal with customers with similar characteristics.

The research study would be of benefit to the public in general shall find the results of the study valuable as means of adopting the best practices as pertains to the lending procedures and thereby improve on their non-performance loans in their various business.

The study findings will provide information when making economic policy decisions such that they can come up with applicable prudential regulations and finally this study will be relevant to future researchers, as it will contribute literature vital for future research. Those who will be interested in doing research concerning effect of credit reference bureau on nonperforming loans will be able to build their literature base by reading this study.

1.7 Scope of the Study

This research targeted all 12 registered deposit taking microfinance institutions listed by central bank of Kenya. The aim was to investigate effects of listing with credit reference bureau on non-performing loans in deposit taking microfinance institutions in Kenya, the study looked into how effect of listing with credit reference bureau has on loan recoveries, write-offs, loan quality and levels of non-performing in deposit taking microfinance in Kenya. The study focused on the MFIs within Nairobi County.

1.8 Limitations of the Study

The study was limited to only registered deposit taking microfinance institutions in Kenya by the central bank of Kenya and their financial statement however some deposit taking micro-

finance were registered in 2015 this means that they have been in operation for a year or less than a year hence were not be used in the analysis.

1.8.1 Delimitations of the study

The limitation that the firms did not registered at the same time and only registered ones will be used, will be treated in their respective periods that they were registered by the central bank of Kenya to operate as deposit taking microfinance institutions in Kenya moreover; they control a significant market share, branch network and profitability in the industry. Descriptive research design was used in the study, this is because the study is about knowledgeable aspects of the phenomena, but little knowledge is available regarding their traits in nature or details. Therefore, descriptive research aimed at generating knowledge that may be useful to describe or develop a profile of the study. The population was not large and so, stratified sampling was used and involved only those companies in the microfinance sectors that are registered by the central bank of Kenya as deposit taking institutions.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter highlights on what other researchers have investigated and wrote in the same field, it is secondary data found in textbooks, reports and journals. The literature review has been categorized into theories guiding the study, influence of listing with credit reference bureau on non-performing loans and conceptual framework.

2.2 Theoretical Framework

In an attempt to establish the effect of listing with credit reference bureau service on non-performing loans of deposit taking micro-finance institutions in Kenya. This study has been guided by adverse selection theory, credit risk theory, and information sharing theory.

2.2.1 Information Sharing Theory

Research on information sharing is relatively recent and growing in Kenya. Earlier papers analyze the effect of information sharing in a market with uneven info, both moral hazard and adverse selection. In moral hazard setups, information sharing may provide borrowers with motivations to perform because information becomes available to competitors, borrowers are contented to perform better because they no longer fear being held up by the lender monopolist (Padilla, 1997). Second, borrowers do not want to default, because this will be publicly known when default information is shared, borrowers will face an increase in interest rates and a decrease in access to finance not only by the current financial institution, but also by the rest of the financial institutions in the market. This is called disciplinary effect. (Padilla, 2000). Providing comprehensive info on individual's credit history, Moreover, information sharing resolves adverse selection problems when financial institutions have extant information advantage, as in Pagano (1993) and Padilla (2000).

By sharing information, financial institutions may learn about those goods and bad borrowers of the competitor financial institutions who exogenously switched from previous financial institutions. Gehrig and Stenbacka (2001), however, identify a dark side of information sharing rather than starting with ex-ante informational advantage, their adverse selection model considers a two period competition with symmetric knowledge in period one. In their

location model, when banks have less incentives to acquire information for too many customers in period one, when they know they will have to compete away rents on them by sharing information in period two. They show that if information about borrowers true becomes known to other banks, second period competition will be higher and first period interest charges will increase.

In contrast, we distinguish between data that can be shared as well as info that cannot be shared for instance soft copy info, relationship specific information. Hauswald and Marquez (2003) show that information processing, providing the screening MFIs with more informational advantage, will safeguard it from competition allowing to earn rents. Advances in the screening technology, therefore, will increase returns from screening. Access to that same information, on the other hand, levels the playing field for MFIs and erodes their charges attributable to increased rivalry. Therefore, high-tech technological growth that allows for easier access to the incumbent's data will drop the earnings to invest in that kind of information.

2.2.2 Adverse Selection Theory

Deposit taking microfinance institutions through loaning products are exposed to the adverse selection problems in their credit risk valuation of credit facilities application. The adverse selection problem arises because micro-finance institutions have access to information of their clienteles who need to access credit facilities but lack similar information on other lending institutions. This results to information asymmetry that disadvantages the good borrowers and increases the cost of credit facilities (Otwori, 2013). The lending institutions in the context of asymmetrical information settings are forced to price their credit facilities in terms of the interest rates in a manner that is reflective of the borrowers pooled. The CRB are designed to reduce information asymmetry between various lending institutions. This is meant to assist the lenders differentiate between good and risky borrowers. So that the lenders are better able to profile both the local and foreign credit facility applicants, then the good borrowers should be able to get attractive interest rates due to their low risk profile. The financial institutions also benefits from having an improved pool of borrowers, decreases default rates and expansion of the credit market. In the adverse selection theory, the interest

rate may not raise enough to guarantee that all loan applicants secure credit, in times when loanable funds are limited.

In general, the volume of credit and level of effort is less than the first best. Borrowers who have greater wealth to put as security in order to obtain inexpensive credit, which have the enticement to work harder, and earn more income as a result. Existing asset variations inside the borrowing classes are anticipated moreover magnified into the future by operation of the credit market, by exchange information about their customer's banks can improve their knowledge of claimant's personalities and conduct. In Principles, this reduction of informational asymmetries can reduce adverse selection problems in the lending, as well as change borrower's incentives to repay.

Information asymmetries are the main obstacle for deposit taking microfinance institutions to arrange for loans to their customers. For that reason, effective credit risk management is required. According to Silwal (2003) to abate these hitches, financial organizations generally requires business proposal, borrower past credit information and security in advance before approving loans. Deposit taking microfinance institutions similarly offer credit through group based lending method to mitigate adverse selection and to replace the collateral requirement. Pagano and Jappelli (1993) show that information sharing reduces adverse selection by in improving MFI's information on credit applicants.

In their model, each bank has private information roughly on local credit applicants, on the other hand, they have no information about non local applicants. If D.T.M's exchange client's credit information, they can also check on the quality of non-local credit seekers, in addition to loan them as do with clients. Information sharing can also create incentives for borrowers to perform in line with deposit taking microfinance institutions interest. Klein (1982) shows that information sharing can motivate borrowers to repay loans, in his model borrowers repay their loans because they recognize the fact that nonpayers will be excluded from future borrowing.

2.2.3 Credit Risk Theory

Early literature on credit uses traditional actuarial methods of credit risk, whose major difficulty lies in their complete dependence on historical data. Up to now, there are three

quantitative approaches of analyzing credit risk: structural approach, reduced form appraisal and incomplete information approach (Crosbie et al, 2003). Merton (1974) introduced the credit risk theory otherwise called the structural theory, which said the default event derives from a firm's asset evolution modeled by a diffusion process with constant parameters. Such models are commonly defined "structural model "and based on variables related a specific issuer.

An evolution of this category is represented by asset of models where the loss conditional on default is specific. In these models, the default can happen throughout all the life of a corporate bond and not only in maturity (Longstaff and Schwartz.1995). Many researchers including Al Amari (2002) have highlighted the importance of using credit rating models in evaluating credit risk. However, Al Amari (2002) argues that there is no optimal method. This indicates that one type of rating model might work for specific financial institutions but fails to work in others. He also reflects on other factors used in determining the creditworthiness of a customer, for example to what extent is a customer classified as good or bad, which can be measured via statistical techniques

2.3 Empirical Review

Research by Armstrong, (2008) based on information from several countries across the globe show that the existence of credit registries is associated with increased lending volume, growth of consumer lending, improved access to financing and a more stable banking sector. Further, Hansen *et al*, (2004), highlighted that many borrowers make a lot of effort to repay their loans, but do not get rewarded for it because this good repayment history is not available to the bank that they approach for new loans. Whenever borrowers fail to repay their loans, banks are forced to pass on the cost of defaults to other customers through increased interest rates and other fees.

Owusu (2008) on credit practices in rural banks in Ghana found out that the appraisal of credit applications did not adequately assess the inherent credit risk to guide the taking of appropriate credit decision he also found out that the drafted credit policy documents of the two banks lacked basic credit management essentials like credit delivery process, credit portfolio mix, basis of pricing, management of problem loans among others to adequately

make them robust. In his recommendations he stated that credit amount should be carefully assessed for identified projects in order to ensure adequate funding. This situation provides the required financial resources to nurture projects to fruition, thus forestalling diversion of funds to other purposes, which may not be economically viable.

Githingi (2010) surveyed on operating efficiency and loan portfolio indicators usage by microfinance institutions found out that most microfinance institutions to a great extend used operating efficiency indicator as a credit risk management practice. Efficiency and productivity ratios are used to determine how well microfinance institutions streamline their credit operations. He also noted that microfinance institutions need to employ a combination of performance indicators such as profitability, operating efficiency and portfolio quality indicators to measure their overall performance.

Gisemba (2010) researched on the relationship between risk management practices and financial performance of SACCOs and found out that the SACCOs adopted various approaches in screening and analyzing risk before awarding credit to client to minimize loan loss. This includes establishing capacity, conditions, use of collateral, borrower screening and use of risk analysis in attempt to reduce and manage credit risks. He concluded that for SACCOs to manage credit risks effectively they must minimize loan defaulters, cash loss and ensure the organization performs better increasing the return on assets.

2.3.1 Effect of Increase or decrease in non-performing loans

Lending is the principle activity of any financial institution hence loan portfolio is the largest asset and the predominant source of revenue for the lending institutions (Morsman, 1993). The question of loan default is related with non-recovery or repayment of loans. When a borrower cannot repay interest and/or installment on a loan after it has become due, then it is qualified as default loan or non-performing loan (Chowdhury&Adhikary, 2002). It is known as non-performing, because the loan ceases to "perform" or generate income for the bank. Many banks focus on the corporate or wholesale lending, which poses a challenge for the management to maintain the required liquidity position (Akhtar, 2007). This lending is mostly long-term, which may create liquidity problems for a bank (Kashyap et al., 2002). This situation gives rise to non-performing loans (NPLs), when NPLs experience a rapid increase, liquidity crisis becomes inevitable. Any reduction of informational asymmetries can

reduce adverse selection problems in lending, as well as change borrowers' incentives to repay, both directly and by changing the competitiveness of the credit market in addition the logic underlying the existence of credit reference bureau (CRBs) is to solve the problem of the informative asymmetry between lenders and borrowers regarding the creditworthiness of the latter. Issuers with lower credit ratings pay higher interest rates embodying larger risk premiums than higher rated issuers (Millon and Thakor, 1985).The CRB prevent the cases of serial defaulters. The serial defaulters move from different lenders because they cannot access credit facilities with their current lenders. This has the effect of increasing the average risk of lending and the corresponding interest rates.

This may also have the effect of providing the low risk customers with a higher interest rate that does not reflect the low risk situation (Nawaz et al. 2012).. One of the features that deposit taking microfinance institutions deliberate when deciding on a loan credit application is asserted to be the estimated chances of recovery. To arrive at this, credit information is required on how well the applicant has honored past loan obligations (Aballey, 2009). This credit information is important because there is usually a definite relationship between past and future performance in loan repayment. Whenever a borrower has credit information that the lender cannot access, this is officially referred to as information asymmetry (Karim et al., 2010). It is also pointed out that, information exchange from multiple sources improves the precision of the signal about the quality of the credit seeker as a result, the default rate reduces.

Banking competition for borrowers strengthens the positive effect of information sharing on lending for instance, when credit markets are competitive, information sharing reduces informational interest charged and increases banking competition, which in turn leads to increased lending (Awunyo, 2013).. Information sharing can also create incentives for borrowers to perform in line with banks' interests. It is shown that, information sharing can motivate borrowers to pay their loans, when the legal atmosphere makes it difficult for banks to implement credit agreements (Millon and Thakor, 1985). In this model borrowers repay their loans because they know that defaulters are blacklisted, reducing external finance in the near future. The use of the CRB creates information collateral that can be used to borrow from M.F.I's and has the benefit of reduced information asymmetry between both parties thus

Credit information sharing thus enables borrowers to build a track record (reputational capital) that they can use to access credit (Agu &Okoli, 2013).

2.4 Write off

Bad debts are accounts receivable that a company has identified as uncollectible. Writing off bad debts removes the corresponding amounts from a company's balance sheet. Bad loans result from the inability of debtors to repay their loans and their interests within the specified time (Aballey, 2009), resulting in adverse effects on the financial condition of the creditor (Aballey, 2009; Agu&Okoli, 2013). In the context of this study therefore, a bad loan is the consequence of deposit taking microfinance institutions lending out money and not being able to repay its loaned amount resulting in a negative financial effect to the company. Logically, bad loans take their name from the fact that they are practically in opposition to the financial situation of the bank. By the time they are referred to as "bad loans", there is the fear that the amounts involved and their interest cannot be fully paid by the debtor (Chelagat, 2012; Awunyo-Vitor, 2013).

In this regard, a financial loss is encountered instead of a profit, leading to adverse effects on the deposit taking microfinance bank, the defaulting SMEs and other corporations and individuals who would like to borrow from these institutions in future. Bad loans need to be avoided in view of the fact that their effects are multidimensional thus they do not only hinder profitability among deposit taking microfinance institutions, but they also limit lending to the defaulting entity, individuals and other corporations. This assertion is based on evidences in Ghana (Appiah, 2011; Awunyo-Vitor, 2012). Research studies have shown that bad loans make two major effects on any financial institutions. These effects are the limitation of bank's financial performance and lending potential. In a foreign country context, this evidence is acknowledged by Karim et al. (2010), Obamuyi, (2007), Nguta&Huka, (2013), whereas locally, Chelagat (2012) and Aballey (2009).

At large, the main effect of bad loans on banks is the fact that increasing bad loans limit the financial growth of banks (Karim, Chan & Hassan, 2010; Kuo et al., 2010). This consequence is as a result of the fact that bad loans deprive banks of the needed liquidity and limit their capability to fund other potentially viable businesses and make credit facilities available to

individuals. Karim et al. (2010) argues that there are many other viable businesses that the bank cannot explore because of the fact that its funds are caught up in bad loans. In the face of these consequences, the bank experiences a shortfall in generated revenues and this translates into reduced financial performance (Karim et al., 2010; Nawaz et al. 2012).

Another basic effect of bad loans on the bank is a reduction in the bank's lending potential (Karim et al., 2010). Though this has been acknowledged earlier, it is important to discuss it as a primary independent effect. Banks make a greater part of their revenues and profit from lending activities (Karim et al., 2010; Nguta&Huka, 2013). As a result, when banks lose much of their lending capital to bad loans, it is likely that a greater part of their revenue is lost. Once revenue is lost in one financial year, the capability of the bank to provide access to credit facilities to other businesses and individuals would practically fall in the following financial years. This means that the bank would fail to lend, or it would reduce its amount allocated to lending in the next financial year. In this study, the amount located to lending is referred to as annual "loan size".

Deposit taking microfinance institutions can reduce bad debt expenses by improving their collection processes and tightening credit approvals. For example, a small business could insist on cash payments from new businesses and arrange flexible payment options for long-time customers who are experiencing financial difficulties. Following up with overdue customers and offering electronic payment options could speed up the collection process.

2.5 Loan Recoveries.
Micro finance institutions play a pivotal role in the economy in the intermediation process by mobilizing deposits from surplus units to deficit units. The surplus is channeled to deficit units through lending. Micro finance institutions other financial institutions in Kenya are involved in lending as the major activity and the size of loans as a percentage of banks assets attests to this fact. As at December 2014, the loan portfolio amounted to Kshs. 39.1 Billion and Deposits amounted to Kshs. 35.8 Billion, which is an indicator that the MFBs are able to fund a large proportion of their loan portfolio using customer deposits. This makes Loans and advances the largest asset and consequently the largest source of income for banks. In view of the significant contribution of loans to the financial health of deposit taking microfinance

institutions through interest income generated, these assets are considered the most important assets of banks (Nelson and Schwedt, 2006).

Due to the nature of business that micro finance undertakes, they expose themselves to the risks of default from loan borrowers. When the nonperforming assets ratio is high, the bad and doubtful debts provisions made are not adequate protection against default risk. Debt recovery is the process of pursuing loans that have not been repaid and managing to recover them by convincing the loaned person to attempt to repay their outstanding loans. The recovery rate measures the extent to which the creditor recovers the principal and accrued interest due on a defaulted debt. Debt recovery is a very important component of banking as it plays a key role in ensuring that the main objective of the bank (to issue loans) results into the desired outcome of making a margin out of the loans advanced. It is evident that the presence of debt recovery puts pressure to the loanees to pay up lest they get the dreaded calls from the banking staff through the debt recovery unit. Debt recovery unit is involved in the day today role of ensuring that the loans issued to the banks. Debt Collection Strategies will help a firm take control of its accounts receivable and save time and potential legal hassle down the road.

In evaluating the impact of NPLs on the loan supply by banks, there are studies that suggest that credit creation is impacted by both macroeconomic variables that influence loan uptake as well as internal structures such as the composition of a bank's balance sheet and the demand for loans. Baum etal (2002). The impact of NPLs/Total Loans (a balance sheet variable) on loan supply will be the mechanism used to identify a threshold range within which there is a clear distinction between mood swings as it relates to banks decision making process in loan dispersal. Debt collection strategies help a firm get results and keep the firm legally compliant with government guidelines. Not only does the firm need to understand and abide by collections law, but also needs to know the strategies and techniques that will help to easily and effectively contact and deal with debtors. From account categorization and prioritization, to resource allocation and contacting procedures, an organization needs to develop, implement, and follow a formal process for handling all collections.

A firm needs to uncover specific techniques and strategies for developing a formal debt collection process that will save time and effort in   contacting debtors and managing

delinquent accounts (Mori, 2006).Which would imply that the higher NPLs in a bank's portfolio, the less credit that the bank can and is willing to supply for a simple commercial bank balance sheet, assets are mainly composed of commercial loans and other earning assets; while on the liability side, deposits and capital are the main components? Thus, we can conjecture that the loan growth is affected by deposit growth, capital growth and other earning assets growth. In addition, we consider the non-performing loan growth.

As financial intermediates, deposit taking microfinance banks main function is to receive deposits and make loans to facilitate the flow of capital. For most of the micro institutions, deposits are the main funding sources for M.F.I's assets. Loans take up the biggest proportion in the asset portfolio. With the expansion of the asset size, banks will expand the volume of the loans to re-balance the asset portfolio. Under the normal situation, loan growth rate is expected to move in the same direction as the growth of deposits. The growth in NPLs influences significantly credit supply. Due to the psychological effect, banks are reluctant to extend new loans when they see that old loans are in default. Moreover, NPLs influence a decline in loans due to growing financing costs, interest margin growth, and reduction in free capital. Financing costs imply provisioning needed to cover final loan losses. Uncertainty with regard to potential losses grows as NPLs grow.

The bigger the uncertainty the higher the risk premiums for potential losses. As risk premiums increase, available funds for borrowers' funding decrease by the same amount (Diawan&Rodrik, 1992). The rising of non-performing loans (N.P.l's) has an effect to the financial institutions in that they tightened their lending and switch their attentions to rehabilitating the non-performing loans (N.P.l's) in their books. This prevents viable businesses from obtaining funds to generate economic activities in the country.

2.6 Quality of Loan Portfolio

Virtually all research on the causes of bank and thrift failures find that failing institutions have large proportions of nonperforming loans prior to failure and that asset quality is a statistically significant predictor of insolvency (Demirguc-Kunt 1989, Whalen 1991, and Barr and Siems 1994). Loan quality problems may be caused by events both internal and exogenous to the bank, such as regional economic downturns, in which causes extra expenses associated with the nonperforming loans (monitoring, negotiating workout arrangements,

seizing and disposing of collateral, diverted senior managerial focus) can create the appearance, if not the reality, of low cost efficiency. Moreover, Clair (1992) analyzes loan growth and loan quality on the sample of Texas banks for 1984 through 1990.

The study finds that relationship between loan growth and loan quality depends on bank capital level. Namely, rapid loan growth reduces loan quality with highest effect on banks with low capital adequacy ratio. The above literature gives ample evidence that healthy loan portfolios are vital assets for banks in view of their positive impact on the performance of banks. Unfortunately, some of these loans usually do not perform and eventually result in bad debts which affect banks earnings on such loans. These bad loans become cost to banks in terms of their implications on the quality of their assets portfolio and profitability.

According to Alton and Hazen, (2001). Non-performing loans are those loans, which are ninety days or more past due or no longer accruing interest. The major business of a financial institution is to lend out money. The credit creation process works smoothly when funds are transferred from ultimate savers to borrower (Bernanke, 1993). Being a business likes any other, it has a profit component, which is interest, earned on the loans advanced. In the event those substantial amounts of loans given out are not repaid as per the laid down contract, then the bank loses on income hence weakening the institution(s) liquidity levels. Eventually, the outcome of a weakened bank is bankruptcy and loose of customer confidence. Robert and Gary (1994) state that the most obvious characteristics of failed banks is not poor operating efficiency, however, but an increased volume of non-performing loans. A rise in non-performing loans handicaps the financial institutions in terms of its day to day operations. According to (McNulty et al 2001), controlling NPAs is very important for both the performance of an individual bank and the economy's financial environment.

According to (Meeker and Laura 1987), the accumulation of non-performing assets in banks has assumed great importance as it tends to reflect asset quality as a whole. When a bank is faced with high amount of NPA's, It looses not only the little income raised from operations but is also set aside a large junk of funds as provisions to cushion against loans defaulted. For a bank to operate effectively and be able to meet its day to day obligations, a health asset book is of essence. O'Brien and Browne (1992) sited that one factor that can contribute to the slowdown in monetary transaction is a reduction in bank lending. It is understood that a slowdown in loans reflects influences on both the demand and the supply side. On the

demand side, a slowdown in economic activity and the subsequent loss of purchasing power by many individuals has disqualified them from being able to qualify for access to loans. This has resulted in dramatic fall in loans demanded. According to O'Brein and Browne (1992), on the supply side, the decline in credit is soothed by two channels on the supply side i) a deterioration in asset quality and ii) stricter attitudes of regulators, especially through more stringent capital standard.

Deposit taking micro finance need to appreciate the fact that retail operations forms an important source of funding for the asset side of the balance sheet. Loan products and increasing deposit size becomes the go to mark. On the flip side of the aggressive push to increase client base, the crisis highlighted that fundamentally what can be gained by aggressively pushing credit policies, can be lost in turbulent market conditions. The cost of financial intermediation has increased as evidenced by an increase in the cost resulting from higher capital costs and loan losses. One of the major indicators of distress in the banking sectors that has been closely monitored across the world since the global crisis is the sharp increase in non-performing loans/Loans (NPLs/Loans). A Non-performing loan under Basel II is any loan that is past due for more than 90 days, but subject to national variation.

2.7 Conceptual framework

A conceptual framework is a collection of inter related group of ideas that are broad based on theories Smyth(2014). That is a set of prepositions which are derived from and supported by data taken from the field of inquiry that are relevant Raichel&Ramey (1987) based on the reviewed, this study proposes a conceptual framework in which the dependent variable credit reference bureau and independent variable recovery rate, increase/decrease in N.P.L's, write-off and increase/decrease in loan quality.

Independent variables

Dependent variable

```
┌─────────────────────────────┐
│ Loan quality                │
│   ➢ Capital levels          │ ─────────→
│   ➢ Asset base              │
└─────────────────────────────┘                    ╭─────────────────────────────────╮
                                                    │ Non-performing loan (NPL)       │
┌─────────────────────────────┐                    │                                 │
│ Loan Recoveries             │                     │     NPL ratio= NPLs/ Gross      │
│   ➢ Financial information   │ ─────────→ ──────→ │                                 │
│   ➢ Portfolio Quality       │                     │     loan                        │
└─────────────────────────────┘                    ╰─────────────────────────────────╯

┌─────────────────────────────┐
│ Write Off                   │
│   ➢ Bad debts               │ ─────────→
│   ➢ Outstanding             │                      ┌─────────────────────────────┐
│     Portfolio               │                      │   ➢ Economic                │
└─────────────────────────────┘                      │     Environment             │
                                                      │                             │
                                                      └─────────────────────────────┘
```
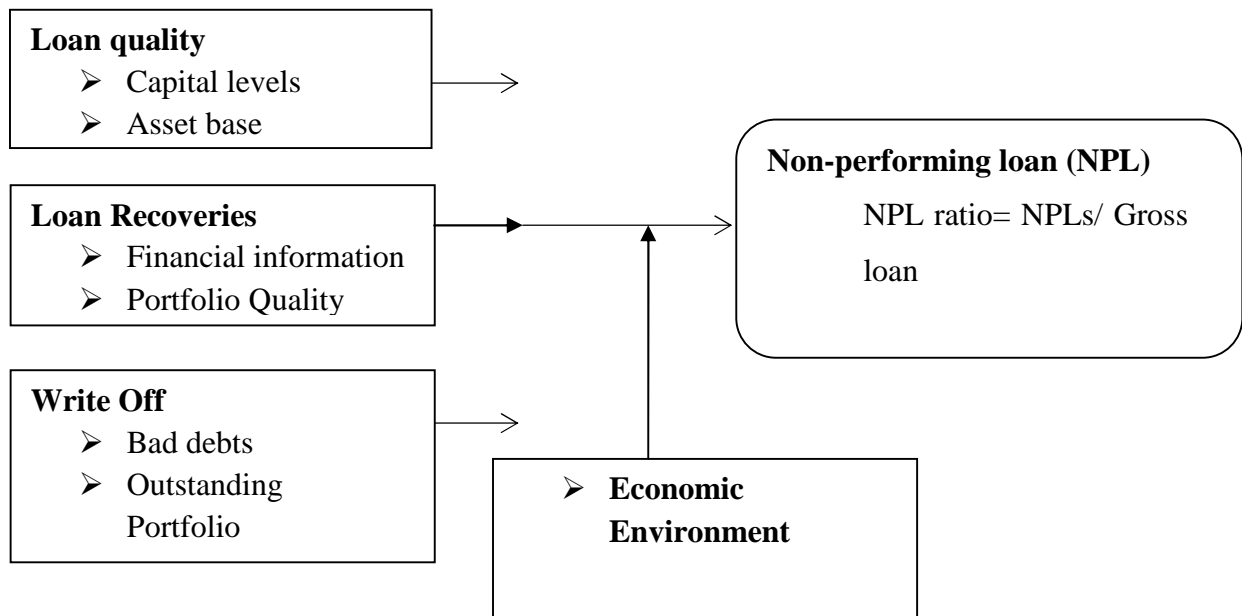
Figure 2.1: **Conceptual framework**

Source: Researcher (2016)

2.8 Operationalization of variables

Write off – this is a loan provision that records the possibility that an asset in the balance sheet is not 100% recoverable. Provisions expense is anticipated loss of value in the portfolio gradually over the appropriate periods in which that asset generates income, instead of waiting until the actual loss of the asset is realized. We use write off ratio that is Value of Loans Written Off/ Period Average Gross Portfolio. This ratio represents the loans that the institution has removed from its books because of a substantial doubt that they will be recovered. Loan losses or write-offs occur when it is determined that loans are unrecoverable. Because loan loss reserves already provided for possible losses, loan losses are written off against loan loss reserves and are also removed from the outstanding portfolio.

Non-performing loan – According to the International Monetary Fund (IMF, 2009), a non-performing loan is any loan in which interest and principal payments are more than 90 days overdue. Local banking regulations determine the delinquency point to be classified as non-performing. Many banking systems define NPLs as those overdue by 90 days or more. Banks normally set aside money to cover potential losses on loans (impairment loss provisions) and write off bad debt in their profit and loss account on Performing Loans = Amount of Non-Performing loans / Gross Loan or NPL ratio= NPLs/ Gross loan

Loan Recoveries - Some deposit taking microfinance institutions will report repayment rates as indicators of portfolio quality, such rates are based on cash flow for a given period as such using historical repayment rate may provide cash flow predictions. Hence, is concerned with the question of how much of the total outlays of the loans scheme (total loans disbursements plus all other costs including administration) will be recovered through loans repayment. Thus, if some borrowers defaulted, total repayment receipts would fall, but the individual required repayment ratio would remain unchanged. The recovery ratio is measured by the ratio of total (discounted) repayments to total (discounted) outlays. Clearly, the recovery ratio is always lower than the repayment ratio because the latter takes no account of the probability of repayment default and does not include general administration costs.

Loan quality– is a key aspect of financial performance for deposit taking microfinance institutions. While deposit taking microfinance institutions continue to expand their provision of deposits, insurance and other financial products, the loan portfolio is still typically the

predominant component of its asset base. Accordingly, asset quality remains a key indicator of an MFI's financial viability. These ratios measure the quality of the MFIs loan portfolio. We can use portfolio at risk ratio that is Outstanding Balance in Arrears over 30 Days plus Restructured Loans/ Total Outstanding Gross Portfolio. It shows the portion of the portfolio that is "contaminated" by arrears and therefore at risk of not being repaid.

In conclusion, it is presumed that the aforementioned independent variables affect non-performing loans.

<div align="center">

CHAPTER THREE

RESEARCH METHODOLOGY

</div>

3.1 Introduction

This chapter covers the methodology and procedures that were used for collecting and analyzing data for the study. This chapter deals with the type of research design, the population and sampling design, data collection methods and data analysis methods.

3.2 Research Design

The study used descriptive research design aimed at analyzing the effects of CRBs on non-performing loans of deposit taking microfinance institutions. Mugenda & Mugenda (2008) define descriptive research design as an approach in research that describes the characteristics or behavior of a particular population in a systematic and accurate fashion. Both qualitative and quantitative approaches were used. The descriptive research design attempts to collect data from the target population in order to determine the status of the population in relation to topic of study. Gay (2002) concurs that descriptive research is good enough as it involves a process of collecting data in order to test hypotheses or answer questions concerning the status of the subject in the study.

This study used descriptive design as it aimed to establish the effect of listing with credit reference bureaus on non-performing loans of deposit taking microfinance institutions in Kenya. This is because the study sought to establish relationship between two variables. Descriptive designs result in a description of the data, in words, pictures, charts, or tables, and indicate whether the data showed statistical relationships or is merely descriptive. All registered deposit taking microfinance institutions by Central Bank of Kenya as at March 2016 were used thus relying on both primary and secondary data.

3.3 Population of Study

Population in statistics is the specific population about which information is desired. According to Field (2005), a population is a well-defined or set of people, services, elements, and events, group of things or households that are being investigated. The population of interest in this study was 12 Registered Deposit taking microfinance institutions by Central Bank of Kenya as at March 2016. The study focused on the institutions employees who were

familiar with MFIs operations and non-performing loans. Credit managers and loan officers/collectors of these institutions were chosen as the target group. For credible data, the study picked seven respondents from each DTM, which gave a population of 84 respondents. The researcher chose two credit managers and five credit officers in each DTM.

3.4 Sampling and Sample Frame.

According to Orodho (2003), sampling refers to the process of selecting units (for example, people, organizations) from a population of interest so that by studying the sample we may fairly generalize our results back to the population from which they were chosen. The researcher targeted the 12 D.T.M's in Kenya, Only 12 are registered with CBK and have complete annual financial reports for 5 consecutive years from 2010-2015 hence were studied. For primary data, the researcher targeted Credit managers and loan officers from each of the 12 institution whereby, from each institution 7 respondents were chosen for the study totaling to 84 respondents, among the 7 respondents from each institution 2 was the credit manager and the other 5 were loan officers. The population was not large therefore, stratified sampling was used. Nassiuma's (2000) formula was used to calculate the sample size as outline hereunder.

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

n = Sample size

N = population size

C = Coefficient of variation (30%)

e = Error rate (0.02)

Substituting these values in the equation, estimated sample size (n) was:

n $\qquad$ = $\qquad$ $\dfrac{84\,(0.3)^2}{0.3^2 + (84\text{-}1)0.02^2}$

n $\qquad$ = $\qquad$ 61.3

n $\qquad$ = $\qquad$ 61 respondents

For simple presentation of sample, stratified sampling formula was used. The target respondents were put in to two major strata. The stratified sampling formula was applied as

follows; $n_h = (N_h / N) * n$: where n_h is the sample size for stratum h, N_h is the population size for stratum h, N is total population size, and n is total sample size.

Table 3.1: Sample of the Study

Respondents	Population	Strata Sample $n_h = (N_h / N) * n$
Credit Managers	24	17
Credit Officers	60	44
Total	84	61

Source: Researcher (2016)

3.5 Data Collection Method and Instrument

According to Ngechu (2004), there are many methods of data collection. The choice of a tool and instrument depends mainly on the attributes of the subjects, research topic, problem question, objectives, design, expected data and results. This is because each tool and instrument collects specific data. This study used both primary and secondary data. Primary data was collected by way of structured and semi structured questionnaires with both open and closed ended questions this was distributed to credit managers and loan officers of registered Deposit taking microfinance institutions.

The questionnaires were also administered by multiple approaches that include drop and pick later method. To increase the response rate, a follow up was done by use of telephone calls. Secondary data was obtained from the published annual reports and financial statements of the institutions. The information covered a period of four years from years 2010 to 2015. This category of data was mainly found in the print and electronic media meant for public consumption. Thus, Secondary data was used to analyze the level of non-performing loans as these financial statements are audited, they are considered to have an acceptable level of reliability (Neuman 1997).

3.6 Validity and Reliability

According to Mugenda & Mugenda (2003), validity is the accuracy and meaningfulness of inferences, which are based on the research results. Validity per se is the degree to which results obtained from the analysis of the data actually represent the phenomenon under study.

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To enhance content validity, the lecturers in the field of finance first appraised the research instruments. Reliability is a measure of the degree to which a research instrument yields consistent results or data after repeated trials (Mugenda and Mugenda 2003). Reliability in research is influenced by random error, as random errors increase, reliability decreases. Errors may arise from inaccurate coding and ambiguous instructions to the respondents. The questionnaire used in this study was given to three independent experts in consultation with a statistician who evaluated it for face and content validity as well as for conceptual clarity and investigative bias. The two scores from the pilot test data were subjected to Cronbach's reliability coefficient Formula to compute reliability coefficient.

The Cronbach's Alpha-Coefficient was obtained as follows;

$$= \frac{n}{n-1} \left[1 - \frac{Vi}{Vtest} \right]$$

Where :

  = Reliability

n = Number of questions in questionnaire

Vi = Variability of each of question score

Vtest = Variability of each of overall questions' score.

The Cronbach Alpha value of 0.807 was obtained for all the variables used. This indicated that the instrument actually measured the concepts aimed to be measured and it shows significant consistency. After the two check-ups, the data was now ready for analysis.

3.7 Data Analysis and Presentation

Data was edited, coded, and then analyzed by help of SPSS. Descriptive data was presented in the form of frequency tables and percentages. Multiple linear regressions was used to link the relationship between independent variables and dependent variable and to test the hypothesis of the study. Chi-square test was used to analyze data to show if there was any significant perceived relationship between philanthropic corporate social responsibility and corporate strategic positioning. Descriptive data was presented in the form of frequency tables, percentages, means and standard deviation to measure interrelationships between the variables. Narrative interpretation of the data was applied for qualitative data. To establish

the link between write off, demand, recovery rate variables and non-performing loans, the study used the regression model below:

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

Where:

Y is the dependent variable (Non-performing Loans)

β_0 is the regression constant

β_1, β_2 and β_3 are the coefficients of independent variables,

X_1 is loan quality

X_2 is write off

X_3 is loan recoveries

is the Error Term.

The study also checked the model significances (f and t-significances) for statistical reporting.

CHAPTER FOUR
DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents the data analysis, presentation and interpretation of findings on the data collected from respondents on the effect of listing with credit reference bureau on non-performing loans in deposit taking micro-finance institutions in Kenya. Descriptive and inferential statistics and discussions are covered under this section.

4.2 Response rate

Target respondents were credit manager and loan officer of 12 Deposit taking microfinance institutions. Out of 61 questionnaires distributed to the respondents, 60 were completely filled and returned while one incomplete questionnaires that was not filled or returned was omitted. It is out of these questionnaires' responses that the presentation of the general information and other analysis was done. An overall response rate of 98% was realized which was higher than 51% that is recommended by Mugenda & Mugenda (2003) who asserts that more than 51% response rate is very good to proceed with data analysis. Therefore, the study response was deemed excellent. Furthermore, to present sample characteristics, cross tabulations and frequency distributions were used to indicate variations of respondents based on age, educational level, tenure and gender. The sample characteristics were presented basing on the responses from credit and loan officers.

4.2.1 Gender and Category of the respondents

The researcher used Cross tabulation to present Gender and Category of the respondents. Table 4.1 presented the results:

Table 4.1: Gender and Category of the respondents

		Category		
		Credit Officers	Loan Officer's	Total
Gender	**Male**	45%	54%	48
	Female	33%	66%	12

Source: Researcher (2016)

From the results in Table 4.1, out of the 48 male respondents, 45% were credit officers and 54% were loan Officers, whereas, for the female respondents, 33% were credit officers and 66% were loan Officers. From the results, the loan officers were more responsive for both genders but the male were more responsive compared to their female counterparts generally thus it enabled the researcher to determining how close the sample replicates the population under study.

4.2.2 Age group and category of the respondents

The researcher to present the age group and category of the respondents used cross tabulation. Table 4.2 presented the results:

Table 4.2: Age Group and Category of the respondents

| Age Group | Respondent Category | | |
	Credit officers	Loan Officers	Total
18-24 yrs	2	3	1.84%
25-29 yrs	3	5	11.02%
30-34 yrs	5	7	16.27%
35-39 yrs	11	14	41.21%
Over 40 yrs	4	6	29.66%

Source: Researcher (2016)

According to the results in Table 4.2, 1.84% of the respondents belonged to the 18-24 years age group, 11.02% belonged to the 25-29 years age group, 16.27% belonged to the 30-34 years age group, 41.21% belonged to the 34-39 years age group and 29.66% belonged to the 40 years and above age group. Additionally, 30.18% of the respondents were credit officers and 69.82% were loan Officers. From the findings, the majority of the respondents belonged to the 34-39 years age group. Therefore, this group enabled the researcher to differentiate between different sub-groups working in the DTMs thus, this segmentation offered more insights on what the researcher might have missed by only looking at the aggregate data.

4.2.3 Level of Education and Category of the respondents

The researcher, to present the level of education and category of the respondents used cross tabulation. Table 4.3 presented the results:

Table 4.3: Level of Education and Category of the respondents

Education levels	Respondent Category	
	Credit officers	Loan Officers
Certificate		100%
Diploma	4 %	96%
Undergraduate	47%	53%
Others	31%	69%

Source: Researcher (2016)

From Table 4.3, all the respondents who possessed certificate level of education were loan Officers (100%), for the diploma holders, 4.05% were credit officers and 95.95% were loan Officers. For the degree holders, 46.78% were credit officers and 53.22% were loan Officers. Lastly, for the Masters holders, 31.37% were credit officers and 68.63% were loan Officers. This means that Central bank and top management of the DTM's bank could only address indicating that other than, educational qualification, the other reasons for nonpayment of loans since it may be an issue beyond the normal staff level.

4.2.4 Tenure and Category of the respondents

The researcher to present tenure and category of the respondents used frequency tabulation.

Table 4.4: Tenure and Category of the respondents

Tenure	Frequency	%
0-3years	19	32.17
3-6 years	24	40.87
6-9 years	14	21.74
Over 9 years	3	5.22
Total	60	100

Source: Researcher (2016)

According to the results in table 4.4 32.17% of the staff had worked for 0-3 years, 40.87% had worked for 3-6 years, 21.74% had worked for 6-9 years and 5.22% had worked for over 9 years. From the results, the majority of the respondents had worked for 3-6 years with the bank. This implies that, majority of the employees of the bank have not changed jobs so often hence they have been with the bank for quite some time. An indication that, they understand their work well and any recommendation they give is accurate and they can be relied on.

4.3. Descriptive Statistics

The descriptive statistics were related to the four research questions and the responses attained from questionnaires. The study findings on the research questions covered aspects of loan recoveries, write-offs and loan quality. The researcher prepared a Likert scale and computed a total score for each respondent. These together with other items were each rated on a 5-point Likert scale ranging from: 1= Strongly Agree to 5= Strongly Disagree and the results summarized and presented.

4.3.1. Loan Recoveries

The first research question sought to assess how loan recoveries as a result of listing with credit reference bureau affects non-performing loans by deposit taking microfinance institutions in Kenya. The researcher sought to analyze the relationship between loan recoveries and Non-performing loans. The objective was achieved by asking the respondents to respond to questions that best described their immediate environment.

Table 4.5: Loan recoveries

KEY **SA**: Strongly Agree, **A**: Agree, **N**: Neutral; **D**: Disagree; **SD**: Strongly Disagree

STATEMENT	SA	A	N	D	SD	MEAN
	%	%	%	%	%	
Financial information relating to a borrower is so crucial to a successful loan recovery.	9(16)	20(30)	8(15)	9(16)	14(22)	2.97 (59.4)
Borrowers usually avoid defaulting on loans because this tarnishes their reputation**.**	17(26)	17(26)	5(11)	17(29)	3(7)	3.36 (67.2)
The reputation of the borrower usually plays a big role in the enforcement of credit contracts at CRB listing.	22(34)	24(37)	1(4)	12(20)	1(4)	3.89 (77.8)
There is more flexibility in loan recoveries.	3(7)	3(8)	3(7)	39(55)	12(21)	2.07 (41.4)
Lending money after following the required procedures enhances recoverability of loans.	1(4)	5(11)	11(17)	24(36)	19(28)	2.05 (41.0)
Lack of complete and reliable financial information about a borrower increases the loan recovery risk of the lender.	25(38)	22(34)	1(5)	11(20)	1(1)	3.90 (38.0)

Source: Researcher (2016)

The scores in Table 4.5 showed the reactions of respondents to the examined loan recoveries. The statement: financial information relating to a borrower is so crucial to a successful loan recovery indicated strongly agree and agree were 16% and 30% respectively, while those who were in disagreement and strongly disagree were with 12% and 17%. This result showed that the majority of respondents tended to agree with the above statement This result showed that the majority of respondents tended to agree with the statement. This implied information is an essential motive for maintaining a reasonable loan level and serve as a beginning point for payment. These findings are consistent with Otwori (2013) that credit information sharing will continue to be instrumental in the decision making process of credit providers in Kenya as they seek to mitigate risks associated with information asymmetry and enable access to credit by the wider population.

On Borrowers usually avoid defaulting on loans because this tarnishes their reputation, the respondent's agreed 52% while those who disagreed represented 36%. This outcome showed that the majority of respondents tended to disagree with the reputation issues.This finding is consistent with Sonja (2009) that the CRBs are therefore a reality and their operations must be based on clearly stated procedures to safeguard the credit worthiness of borrowers' reputation.

On the issue of the reputation of the borrower usually plays a big role in the enforcement of credit contracts at CRB listing, the respondents agreed at 71% while the others disagreed at 24%. This outcome showed that the majority of respondents tended to agreed that there are enforcement matters in CRB. Brown, Jappelli and Pagano (2009) posits that borrowers repay their loans because they know that defaulters will be blacklisted, thus influencing their reputation and reducing external finance in future. Credit information sharing also helps reduce the level of NPLs, improves availability and lower cost of credit to firms.

There is more flexibility in loan recoveries was respresented at an agreed 15% and the majority disagreed at 76%. The findings shows that the majority of respondents tended to agreed. Klein (1982) shows that due flexibility can motivate borrowers to repay loans, when the legal environment makes it difficult for banks to enforce credit contracts.

The majority of the respondents disagreed that with the Lending money after following the required procedures enhances recoverability of loans and was seen to agree at 15% while the majority disagreed at 64%. Miller (2003) found out that credit information sharing plays a key role in improving the efficiency of financial institutions by reducing loan defaults.

Lack of complete and reliable financial information about a borrower increase the loan recovery risk of the lender was agreed at 72% while the minority disagreed at 21%. The majority of the respondents disagreed. This finding is in line with Central Bank of Kenya (2014) that the major benefit that the deposit taking microfinance institutions receive from CRB is that they are able to get credit information on prospective borrowers that will facilitate assessment of credit requests to mitigate risks of bad debts and increases the loan recovery risk of the lender.

The study findings indicated that 59.4% (mean=2.97) were of the view that financial information relating to a borrower is so crucial to a successful loan recovery; 67.2% (mean=3.36) were of the view that borrowers usually avoid defaulting on loans because this tarnishes their reputation; 77.8% (mean=3.89) were of the view that the reputation of the borrower usually plays a big role in the enforcement of credit contracts at CRB listing; 41.4% (mean=2.07) were of the view that there is more flexibility in loan recoveries; 41.0% (mean=2.05) were of the view that lending money after following the required procedures enhances recoverability of loans while 78.0% (mean=3.90) were of the view that lack of complete and reliable financial information about a borrower increases the loan recovery risk of the lender.

Table 4.6 Relationship Between Loan Recoveries and Non-performance loans

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-
Pearson Chi-Square	4.210E2[a]	54	0.000
Likelihood Ratio	222.98	54	0.000
Linear-by-Linear	2.333	1	0.127
N of Valid Cases	61		
a. 68 cells (97.1%) have expected count less than 5. The minimum expected count is .01.			

Source: Researcher (2016)

The study results revealed that there was a statistically significant relationship between loan recoveries and non-performance of loans (p=0.000). This implies that loan recovery is a very important component of banking as it plays a key role in ensuring that the main objective of the bank (to issue loans) results into the desired outcome of making a margin out of the loans advanced. It is evident that the presence of loan recovery puts pressure to the loanees to pay up lest they get the dreaded calls from the banking staff through the loan recovery unit.

4.3.2 Write-Offs Portfolios

The second research question sought to assess how write offs as a result of listing with credit reference bureau affect non-performing loans by deposit taking microfinance institutions in Kenya. The researcher sought to analyze the relationship between write-offs and non-performing loans. The objective was achieved by asking the respondents to respond to questions that best described their experiences. Table 4.7 shows the responses of repsondents views and opinions on the write-offs. To probe the bad debts are written off as uncollectable a summed agreement of 55% and disagreement of 31% was seen. This response shows that the majority of respondents tended to agree. Effective credit assessment therefore plays a very important role in the overall management of credit risk (Saunders & Wilson, 1999). On Nonpayment of loans on time limits financial performance indicated 50% agreement and 31% disagree. According to Saunders & Wilson (1999), banks need to provide enough time to potential customers to be able to calibrate the credit risk exposure. This response shows that the majority of respondents agreed.

Table 4.7: Write-offs.

KEY **SA**: Strongly Agree, **A**: Agree, **N**: Neutral; **D**: Disagree; **SD**: Strongly Disagree

STATEMENT	SA	A	N	D	SD	MEAN
	%	%	%	%	%	
Bad debts are written off as uncollectible.	13(21)	22(34)	5(11)	19(30)	1(1)	3.39 (67.8)
Nonpayment of loans on time limits financial performance	6(12)	25(38)	11(16)	15(24)	3(7)	3.21 (64.2)
Uncollectible loans limits funding of other operations.	13(17)	17(22)	12(16)	23(30)	8(11)	3.67 (73.4)
Bad debts limits subsequent lending.	8(11)	18(26)	7(13)	23(36)	4(11)	2.41(48.2)
High interest rates are a factor influencing bad debts.	9(16)	21(33)	10(17)	19(28)	1(1)	3.25 (65.0)
Non-conformity to set policies increase defaulting of loans.	1(5)	11(17)	13(21)	17(24)	18(29)	2.79 (55.8)

Source: Researcher (2016)

Further, on examining Uncollectible loans limits funding of other operations, it was established that 39% agreed but the majority 41% disagreed. This response shows that the majority of respondents tended to disgreed. On Bad debts limits subsequent lending, 37% agreed but the majority again disgreed 47%. This response shows that the majority of respondents tended to disgreed. High interest rates are a factor influencing bad debts was agreed at 49% but few disagreed at 29%. This response shows that the majority of respondents tended to greed. Lastly, Non-conformity to set policies increase defaulting of loans, the majority of the respondents disgreed 53%. the majority of the respondents disgreed 53%.

The study results revealed that 67.8% (mean=3.39) were of the opinion that bad debts are written off as uncollectible; 64.2% (mean=3.21) were of the opinion that nonpayment of loans on time; 73.4% (mean=3.67) were of the opinion that uncollectible loans limits funding of other operations; 48.2% (mean=2.41) were of the opinion that bad debts limits

subsequent lending; 65.0% (mean=3.25) were of the opinion that high interest rates are a factor influencing bad debts while 55.8% (mean=2.79) were of the opinion that non-conformity to set policies increase defaulting of loans.

Table 4.8 Relationship between Write offs and Non-Performing loans

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-
Pearson Chi-Square	3.652E2[a]	72	0.000
Likelihood Ratio	234.567	72	0.000
Linear-by-Linear	0	1	0.995
N of Valid Cases	61		
a. 89 cells (98.9%) have expected count less than 5. The minimum expected count is .01.			

Source: Researcher (2016)

The study results revealed that there was a statistically significant relationship between write offs and non-performance of loans (p=0.000). This implies that bad loans deprive banks of the needed liquidity and limit their capability to fund other potentially viable businesses and make credit facilities available to individuals.

4.3.3 Quality of Loan Portfolio

The third research question sought to examine how loan quality as a result of listing with credit reference bureau affect non-performing loan in deposit taking microfinance institutions in Kenya. The researcher sought to analyze the relationship between loan quality and non-performing loans. The objective was achieved by asking the respondents to respond to questions that best described their views and opinions.

Table 4.9 shows the responses of respondent's views and opinions on the loan quality. To probe Credit reference bureaus have clearly stated explicit goals like serving clients as professionally and diligently as possible majority of the respondents disagree 53% and only 33% agreed. It suggests that the respondents disagreed. On The objectives of credit reference bureau can only be achieved by implementing effective policies, majority of the respondents agreed 52% and 43% disagreed. Establishing the Credit worthiness of a client by credit reference bureaus is a complicated process that entails both subjective and objective decisionswas shown to be agreed at 74% and 15% disagreed

On Policies assist in both objective and subjective decision making, majority disagreed at 51%. Futher to that Credit Reference Bureaus provide the necessary infrastructure to ensure information integrity, security and up-to-date information on borrowersagreed at 49% and on Credit Reference Bureaus reduce over-indebtedness and risky multiple borrowing that often result in loan default 68% agreed. Lastly, Credit Reference Bureaus reduce information differences between borrowers and the bank through a system that enables information sharing was agreed at 72% and disagreed at 12%. Consequently, banks should go beyond information provided by the borrower and seek additional information from third parties like credit rating agencies and credit reference bureaus (Simson and Hempel, 1999).

Table 4.6: Loan Quality

KEY: **SA**: Strongly Agree, **A**: Agree, **N**: Neutral; **D**: Disagree; **SD**: Strongly Disagree

STATEMENT	SA	A	N	D	SD	MEAN
	%	%	%	%	%	
Credit reference bureaus have clearly stated explicit goals like serving clients as professionally and diligently as possible	8(13)	13(21)	2(3)	30(45)	8(13)	2.56 (51.2)
The objectives of credit reference bureau can only be achieved by implementing effective policies	12(20)	14(22)	7(12)	24(36)	3(7)	3.08 (61.6)
Establishing the Credit worthiness of a client by credit reference bureaus is a complicated process that entails both subjective and objective decisions.	26(41)	21(33)	3(7)	7(12)	2(3)	3.92 (78.4)
Policies assist in both objective and subjective decision making	10(13)	12(16)	12(16)	26(34)	13(17)	3.26 (65.2)
Credit Reference Bureaus provide the necessary infrastructure to ensure information integrity, security and up-to-date information on borrowers	12(20)	20(29)	12(20)	12(20)	4(8)	3.34 (66.8)
Credit Reference Bureaus reduce over-indebtedness and risky multiple borrowing that often result in loan default	27(38)	20(30)	1(4)	11(21)	2(3)	3.97 (79.4)
Credit Reference Bureaus reduce information differences between borrowers and the bank through a system that enables information sharing	27(38)	21(30)	2(7)	6(12)	2(3)	211.87

Source: Researcher (2016).

This shows that the objectives of CRBs have an impact of credit reference bureau procedures on credit risk management which is consistent with Aggarwal and Mittal (2012) that the

objectives of CRB's are: to collect information on clients' borrowing status and history from a range of credit sources and prepare credit reports; reduce information differences between borrowers and lenders through a system that enables information sharing among participating institutions; provide the necessary infrastructure to ensure information integrity, security and up-to-date information on borrowers.

The study results indicated that 51.2% (mean=2.56) were of the view that credit reference bureaus have clearly stated explicit goals like serving clients as professionally and diligently as possible; 61.6% (mean=3.08) were of the view that the objectives of credit reference bureau can only be achieved by implementing effective policies; 78.4% (mean=3.92) were of the view that establishing the Credit worthiness of a client by credit reference bureaus is a complicated process that entails both subjective and objective decisions; 65.2% (mean=3.26) were of the view that policies assist in both objective and subjective decision making; 66.8% (mean=3.34) were of the view that credit Reference Bureaus provide the necessary infrastructure to ensure information integrity, security and up-to-date information on borrowers; 79.4% (mean=3.97) were of the view that Credit Reference Bureaus reduce over-indebtedness and risky multiple borrowing that often result in loan default while 57.8% (mean=2.89) were of the view that Credit Reference Bureaus reduce information differences between borrowers and the bank through a system that enables information sharing.
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Table 4.9 Relationship between Quality loan portfolio and Non-performing loans

Chi-Square Tests			
	Value	df	Asymp. Sig. (2-
Pearson Chi-Square	$4.051E2^a$	63	0.000
Likelihood Ratio	213.98	63	0.000
Linear-by-Linear	15.199	1	0.000
N of Valid Cases	61		
a. 78 cells (97.5%) have expected count less than 5. The minimum expected count is .01.			

Source: Researcher (2016).

The study results revealed that there was a statistically significant relationship between quality loan portfolio and non-performance of loans (p=0.000). This implies that the quality of the loan portfolio influences non-performance of loans. Rapid loan growth reduces loan quality with highest effect on banks with low capital adequacy ratio. Healthy

loan portfolios are vital assets for banks in view of their positive impact on the performance of banks. Non-performing loans result in bad debts, which affect banks earnings on such loans. These bad loans become cost to banks in terms of their implications on the quality of their assets portfolio and profitability.

4.4 Correlation Analysis

Correlation analysis results are presented in this section to evaluate the relationship between the dependent and independent variable. Thus, inferential statistics were used to make inferences from the data to more conditions that are general.

In this section, the results that address the research questions are presented and Pearson's correlation test was used to answer the research questions of the study. Pearson correlations were run to establish the relationships between the study variables to answer the objectives of the study. The results are presented in the table 4.8:

Table 4.10: Correlation Results of Relationships between the variables

		Loan Recoveries	Write-Offs	Loan Quality	Non-Performing Loans
Loan Recoveries	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	60			
Write-Offs	Pearson Correlation	.173**	1		
	Sig. (2-tailed)	.000			
	N	60	60		
Loan Quality	Pearson Correlation	.479**	.172**	1	.
	Sig. (2-tailed)	.000	.000		
	N	60	60	60	
Non-Performing Loans	Pearson Correlation	.427**	.396*	.671**	1
	Sig. (2-tailed)	.000	.011	.000	.000
	N	60	60	60	60

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

Source: Researcher (2016)

4.4.1 Loan recoveries and Non-Performing Loans

Table 4.9 presents the results of the correlation analysis. The results revealed that loan recoveries and nonperforming are positively and significant related (r=0.427, p=0.000). This is confirmation that efforts to recoup back the loans had a positive effect on the improvement of non-performing loans. The results imply that if loans were recovered efficiently, this would positively affect the nonperforming loans. From account categorization and prioritization, to resource allocation and contacting procedures, DTM's needs to develop, implement, and follow a formal process for handling all collections. A firm needs to uncover specific techniques and strategies for developing a formal debt collection process that will save time and effort in contacting debtors and managing delinquent accounts

4.4.2 Write-Offs and Non-Performing Loans

Correlation results indicated a significant and positive relationship between write-offs and non-performing loans (r = .396, p<.011). The results reveal that Deposit taking microfinance institutions can reduce bad debt expenses by improving their collection processes and tightening credit approvals. Following up with overdue customers and offering electronic payment options could speed up the collection process. This is confirmation that if the management put a lot of emphasis on improving lending relationships, this would enhance credit repayment performance.

4.4.3 Loan Quality and Non-Performing Loans

Correlation results indicated a significant and positive relationship between loan quality and non-performing loans (r = .671, p<.000). The results provide basis that Loan products and increasing deposit size becomes the go to mark. Aggressive push will tend to increase client base, the crisis highlighted that fundamentally what can be gained by aggressively pushing credit policies, can be lost in turbulent market conditions. The cost of financial intermediation has increased as evidenced by an increase in the cost resulting from higher capital costs and loan losses. When the borrowers positively behave towards the credit terms, this would improve the quality of the lending relationships between the borrowers and the bank.

4.5 Regression Analysis

A Multiple linear regression model was used to predict to the extent to which Listing with CRB had an effect on non-performing loans. The prediction was carried out basing on the effect of the three independent factors: loan recoveries, loan quality and write off. In addition, the b coefficients for each independent variable generated from the model was subjected to a t-test, in order to test each of the hypotheses under study. The equation was of the form:

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

Whereby Y represented Non-performing Loans, X_1 is loan quality, X_2 is write off, X_3 is loan recoveries. β_0 is the model's constant, and β_1, - β_3, are the regression coefficients while e is the model's error term. The results obtained are shown in table 4.11:

Table 4.11: Multiple Linear Regression Analysis Model Summary

Model	R	R Squared	Adjusted R Square	Std of Error Estimate	F	Sig.
1	0.720	0.518	0.514	0.54947	6.355	0.001[b]

Independent: loan quality, write off, loan recoveries
Dependent variable: non-performing loans.

Source: Researcher (2016).

Results displayed in Table 4.11 show that there is a positive relationship between the dependent and independent variables used in the study. This is shown by a correlation (R) coefficient of 0.720. The determination as measured by adjusted R square value of r^2 = .518 which means there is moderately strong relationship between dependent and independent variables given a value of 0.514 thus, all this indicate that when all the variables are combined, the multiple linear regression model could explain for approximately 52% of the variation in the dependent variable by the variation in the independent variables on Non-performing loans

The results from the Coefficient of Determination in Table 4.12 shows a significant relationship (p=0.001) in all the variables.

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Table 4.72: Coefficient of Determination of the Effect of Listing with C.R.B

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	T	P-value	Collinearity Statistics Tolerance	VIF
(Constant)	.435	.167		2.608	.009		
Loan Recoveries	.229	.043	.205	5.334	.001	.0702	1.425
Write-offs	.180	.041	.193	4.440	.000	.0551	1.815
Loan Quality	.455	.043	.457	10.694	.000	.0569	1.759

a. Dependent Variable: Non-performing Loans

Source: Researcher (2016).

Information in Table 4.10, the multilinear linear regression equation becomes:

Non-performing Loans = .435 + .229 (loan recoveries) + .180 (Write-offs) + .455 (Loan Quality). The standard error was (0.167), being an estimate of the standard deviation of the coefficient, is a random variable with a mean of zero and which captured the variables that could not be quantified. If a coefficient is large compared to its standard error, then it is probably different from 0.

The independent variable, which was most important in the Non-performing loans, was also determined. This was obtained by the beta value whereupon the results identified Loan Quality as the most important variable of the study followed by Loan recoveries and lastly Write-offs in that order.

Table 4.10 shows the beta value for these variables 0.205,.193 and 0.457 which indicate that dependent variables would change by a corresponding number of standard deviation when the respective independent variable changed by one standard deviation. Further, from the model holding other factors constant (write off, loan recoveries, and loan quality) at zero, the non-performing loans becomes 0.435.

Holding other factors (write off, and loan quality) constant, a unit increase in loan recoveries would lead to a 0.229 (p=0.001) decrease in Non-performing loans. Khemraj and pasha(2009) found that economic growth of a country increase the income levels of its citizen, thus enhancing loan repayment capacity of the borrowers. Holding write off, loan recoveries constant a unit increase in loan quality would lead to 0.455 (p=0.000) decrease in non-performing loans. Equally, Gross(1998) established that loan default is heavily influenced by other factors such as income level, ability to repay, business management and financial literacy thus if borrowers could pay will consequently influence portfolio quality of deposit taking microfinance institutions.

The VIF value for all the independent variables were lesser than 10, and the Tolerance was also less than 0.1, thus there were no concerns over multi-collinearity. This led to the conclusion that Loan Quality, Loan recoveries and lastly Write-offs were all important factors.

The overall level of non-performing loans is moderately high. The results obtained by performing a series of Pearson's correlation coefficients manifested a significantly strong positive relationship between loan quality and non-performing loans($r = 0.671$, $p < 0.0000$). There is a significantly moderate positive relationship between loan recoveries and non-performing loans ($r = 0.427$, $p < 0.000$). The results also revealed a significantly weak positive relationship between write-offs and non-performing loans($r = 0.396$, $p < 0.011$).
The results obtained by performing multiple regression analysis shows that effect of the listing on non-performing loans is responsible for 52% of the variance that occurs within the study.

4.5 Hypotheses Testing

In this section, the specific objective to the research is highlighted, hypotheses are tested and implications discussed. Hence, Critical values can either be positive or negative. This depend on alternative hypothesis. If the alternative hypothesis states that the expected mean is greater than critical value, the region of rejection will have a positive sign this is so because the relevant value/region lies in the upper tail of the normal distribution, the null hypothesis is

only rejected if P-Value is greater than critical value of 0.05 (p 0.05) and accepted when P-Value is less than critical value of 0.05(p 0.05).

4.5.1 Research Findings and Summaries

Ho$_1$: There is no statistical relationship between listing with credit reference bureaus on loan recoveries and non-performing loans in deposit taking microfinance institutions in Kenya

Regression results showed that the loan recoveries factors significantly influence non-performing loans'. (=0.229; p value = 0.000 and t value 5.334) and thus the null hypothesis was rejected. The implication of this is that loan recoveries factors did influence non-performing loans. This further means inclusion of the research questions were a significant factor on non-performing loans in deposit taking microfinance institutions in Kenya. This coincides with Lee, Chiu, Lu, & Chen (2002) that an effective credit rating model can have a positive impact on financial institutions, as it can reduce the costs involved in the credit process and reduce the prospect of bad loans.

Ho$_2$: Write off has no effect on non-performing loan as a result of listing with credit reference bureaus in deposit taking microfinance institutions in Kenya

Regression results showed that Write off factors significantly influenced non-performing loans' (= 0.180; p value = 0.001 and t value =4.440) and thus the null hypothesis was rejected. The implication of this is that there should be clear policies and limits on loans. Ignoring these Write off factors would compromise the loan recoveries. Degryse & Van Cayseele (2000) report had similar findings in their study in which they show that a close relationship between the bank and the client favors the approval of the loan application, and that the demand for collateral decreases with the duration of the relationship, resulting in greater risk for the bank or lending institutions.

Ho$_3$: Loans quality has no effect on non-performing loan as a result of listing with credit reference bureau on deposit taking micro-finance institutions in Kenya

Regression results showed that Loans quality factors significantly influenced non-performing loans' performance and (= 0.450; p value = 0.001 and t value = 10.694) and thus the null

hypothesis was rejected. The implication of this is that Loans quality must be strategically integrated into the loan itself to boost recoveries. Unclear objectives on loan collection, for example, may result in low quality of loan portfolios. Without clear objectives of outreach, loan officers may not concentrate on serving the target group (Holt and Ribe, 1991). The DTMs should provide the necessary infrastructure to ensure information integrity, security and up-to-date information on borrowers.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion, conclusions, and recommendations arising out of the research findings in chapter four and suggests areas for further study. The study has generated several findings of which are in line with existing literature and previous research findings.

5.2 Research Findings and Summaries

In light of the research findings, the regression model could only explain 52% in variance of non-performing loans. The following sections summaries findings of Loan Quality, Loan recoveries and lastly Write-offs.

5.2.1 Loan recoveries and Non-performing loans

The findings revealed a significant positive relationship between loan recoveries and Non-performing loans, which implied that if the recoveries were stimulated in favour of the credit terms such that the borrowers complied with them then this would affect loan repayment performance. It was established that the deposit taking microfinance institutions level of interaction with CRB applies for all credit applications as indicated by respondents who all noted that the bank must request for customers credit information before applying for any form of credit. This clearly pointing out that frequent and constant interaction will ensure comprehensive information in an attempt to reduce the rate of loan default and at the same time avoid unnecessary excuses from borrowers that they were not aware of credit history.

The management of the deposit taking microfinance institutions should invest in the enhancement of relationship lending between the deposit taking microfinance institutions and its customers to create trust in the deposit taking microfinance institutions brand, products and services. Here the deposit taking microfinance institutions should ensure constant contact with its customers through the provision of the required information about the deposit taking microfinance institutions products and services. In addition, the management should ensure that deposit taking microfinance institutions policies, terms of reference and regulations are clear to both staff and the customers. Credit officers and management must know their

customers very well since such knowledge would easily help in loan administration. Relationship management should be encouraged. A banker should be able to assess the customer's needs, potentials, constraints, strengths, weaknesses, and design products that will satisfy him. Through it also the customer's willingness to pay can be assessed. The assertions that the behavior of the borrower will be sensitive to ethics, consequences of alternative actions including inaction, and the response of parties concerned to the borrower. Lending in low-income countries is notoriously difficult. Clients typically lack adequate collateral and lenders often have limited information about the profitability of their customers. Information asymmetries coupled with costly enforcement of repayment severely limits the profitability of lenders.

5.2.2 Write-offs and Non-Performing Loans

The findings showed a significant and positive relationship between write-off and non-performing loans, which implied that if the deposit taking microfinance institutions put a lot of emphasis on nurturing borrower relationships, this would enhance credit repayment performance by 35.6%. The findings are supported by Elsas (2005), Ongena & Smith (2000) who posit that the theoretical foundations of relationship banking are found in the modern literature of financial intermediation that acknowledges the special role of deposit taking microfinance institutions in alleviating the informational asymmetries in the credit markets. Early works of Degryse & Cayseele (2000) stress the information production function of banks. Screening and monitoring procedures give an information advantage to banks that allow them to overcome information and incentive problems between the bank and the borrower. Therefore, the main benefit attributed to bank financing with respect to other sources of finance is that banks help overcome problems of asymmetric information by producing and analyzing information and by designing loan contracts that improve borrowers' incentives.

The length of the relationship reflects private information obtained by the lender whereas age reflects public information on the reputation and survival of the form. Consequently, the studies that do not control for age and examine the effect of length are susceptible to biased results. Finally, the length of the relationship is right censored, meaning that it measures the past history between the bank and the form. Lending relationship has to do with the future

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expectation to deal with the same customer, and therefore, duration may be undervaluing the strength of relatively new relationships.

5.2.3 Loan Quality and Non-performing Loans

According to the findings, a significant and positive relationship between loan quality and non-performing loans was observed which implied that a unit positive change in borrower behaviour would enhance the quality of lending relationships by 28%. This is in line with the assertions made by Elsas & Krahnen (2000) that when the borrowers positively behave towards the credit terms of the bank, this would improve the quality of the lending relationships between the borrowers and the bank. This is in agreement with existing literature which postulates that long-term ties between main banks and their clients generate value and increase economic efficiency. Little is known, though, on how this value is divided among the stakeholders involved in such relationships.

In the course of building the relationship, the lender accumulates borrower specific information which gives him significant benefits (Boot, 2000). To the extent that the lender passes these benefits to the borrower, relationships will also be valuable from the borrower's point of view. The modern literature on financial intermediation has long emphasized the value creation function of lending relationships. In a context of asymmetric information in credit markets, lending relationships facilitate the information exchange between the borrower and the lender through repeated interaction over the duration of the relationship and through the provision of multiple financial services.

The literature on relationship lending has identified many benefits and some costs of such relationships. Elsas & Krahnen (2000) provides a very detailed explanation of each of them with their implications. In the following two subsections we summarize the main insights in Han (2008) and complement them with some recent contributions. Relationship lending adds value through various channels. Relationship lending facilitates the information exchange between the borrower and the lender. Lenders invest in generating information from their client firms and borrowers are more inclined to disclose information because of the preservation of certain confidentiality (Kon&Storey, 2003). The lower informational asymmetries make it possible to overcome problems of moral hazard and adverse selection

otherwise inherent in credit markets. For instance, they ameliorate the project-choice moral hazard (Diamond 1991) and solve agency problems of managerial behavior (Lown & Morgan, 2003).

5.3 Conclusions

The study concludes that, the main factors that lead to bad loans in the bank are; lending to borrowers with questionable characters, serial loan defaulters, high interest rates that make it hard for some to pay, diversion of funds by borrowers. These causes make many borrowers not to honour their obligations hence leading to many nonperforming loans. Most of these factors are due to information asymmetry in the MFI sector. The study concludes that as the economic sectors grows, the level of lending to these sectors will also increase and in return, the level of nonperforming loans tends to increase as the sector grows.

The study further concludes that, other factors lead to bad loans among micro-financial institutions such as high interest rates that make it hard for some to pay and diversion of funds by borrowers. These causes make many borrowers not to honour their obligations hence leading to many nonperforming loans. The study also concludes that there is little being done to reduce lending to high risk sectors. The management of the bank and central bank of Kenya seems not to be worried with the high bad loans in these subsectors.

5.4 Recommendations

5.4.1 Recommendations for Loan Recoveries

To make clients appreciate the credit policies and recovery procedures banks need to educate their customers on the importance of meeting their credit obligations to avoid being listed in the credit reference bureaus. On the other hand, to avoid inaccuracies in credit reporting Deposit taking microfinance institutions and regulators should device a way of verifying credit scores since at the moment the banks are using unverified data from the bureaus to either grant or deny a customer any credit facility. This has led to a rising number of litigations in court by customers against their deposit taking microfinance institutions for wrongful listings in CRB. Therefore, CRB should draw a lot of emphasis on borrower values, attitudes, experiences and beliefs, as this will influence the non-performing loans.

5.4.2 Recommendations for Write-Offs

The study recommends that the deposit taking microfinance institutions should ensure mandatory compliance to settlement of debts as constitutionally required of the integrity section of the Kenyan law. The government should license more bureaus to increase the availability of information among the deposit taking microfinance institutions and as well as individuals. Regulations should place emphasis on confidentiality of information handled by CRBs and places stringent restrictions on the use and application of such information. deposit taking microfinance institutions and CRBs should not share information with unauthorized third parties. The regulations need to provide for stringent penalties for such breaches by CRBs. This will make it easier for the current deposit taking microfinance institutions and prospective ones too.

5.4.3 Recommendations for Loan Quality

The study also recommends that other factors critical to boosting the standards and quality of Credit ratings include addition of customer information such as the level of performing loans, the repayment history of micro finance loans, SACCO loans, Hire purchase installments, credit card repayments and the ability to pay utilities on time, would influence the bank's lending rates thus directly influence the credit risk management of the banks, thus should be included in the client's reports. The study also established that the use of CRB by the lending institutions have increased the commitment of the borrowers to repayment of loans as they want to have good records.

The study therefore recommends that the government and the lending institutions should educate the borrowers of the importance of credit bureaus such as the reduction of the price of borrowing and as regards the regulations, the Government needs to look into what regulatory impediments to licensing of more CRBs that may hinder the sustainability of the reference bureaus in Kenya. The researcher would also recommend that the other sectors in the industry who advance credit, may make use of credit information sharing by asking their customers, employees and suppliers for their credit reports which are readily available from the CRBs before transacting, employing or doing business with them as this will go a long way in enhancing a culture of credit worthiness.

5.5 Areas for further study

The study recommends that further research should be done on other institutions in the financial sector such as Higher Education Loans Board (HELB), SACCOs and Banks to get comprehensive information on the impact of CRBs on non-performing loans. More research needs to be done to determine impact that CRBs have had on the financial performance of the MFI banks in Kenya. Whereas the current study focused on the impact of CRBs on non-performing loans, future studies should seek to establish whether the same impact implies to other institutions in the financial sectors of the economy. It is recommended that a study be carried out consisting of other factors which were not part of the model to predict non-performing loans. Future research should attempt to collect data from other industries such as academic institutions, government ministries to see whether other services are the same and could therefore benefit from this study.

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APPENDICES

APPENDIX I: Cover Letter

Hillary M. Omare

Kabarak University

P.O BOX 21946 - 00100

NAIROBI KENYA.

Dear Respondent,

SUBJECT: QUESTIONNAIRE FOR DATA COLLECTION

I am a Post Graduate Student at KABARAK University pursuing a Master of Business Administration degree. As part of my coursework, I am required to carry out and submit a research project report on Effects of Listing with Credit Reference Bureau on Non-Performing Loans. A case study of Deposit Taking Micro-Finance Institutions in Kenya. I would wish to base my study in your organization.

To achieve this objective, I kindly request you to fill this questionnaire for me and let me assure you that all the information that you give will be treated with all the privacy and will only be for the intended use.

Do not write your name or the name of your Centre. Thank you in advance for your time and cooperation.

Yours faithfully,

Hillary M. Omare

Appendix II: Questionnaire

Dear Respondent,

This Questionnaire Seeks To Establish The Relationship Between The Effects Of Listing With Credit Reference Bureau On Non-Performing Loans In Deposit Taking Micro-Finance Institutions In Kenya; You Have Been Selected To Participate In This Study.

SECTION I: GENERAL INFORMATION

Please tick the appropriate box for the questionnaire that follows below:

Demographic Characteristics

1.   Gender: Male [ ]   Female [ ]

2.   For how long have you worked this organization?

Years old	0-3yrs (1)	3-6 yrs (2)	6-9 yrs (3)	Over 9 yrs (4)
Tick				

3   Level of Education

Qualification	Below Secondary School (1)	Certificate (2)	Diploma (3)	Undergraduate Degree (4)	Post Graduate (5)	Other (6)
Tick						

4   Age group

Years old	18-24	25-29	30-34	35-39	40-49	50-59	60+
Tick							

Please indicate by ticking in the appropriate box to what extent you agree/disagree to the following statements below

SECTION II: LOAN RECOVERIES

The following statements reflect the effect of listing with credit reference bureau on non-performing loans in deposit taking micro-finance institutions in Kenya. Please indicate the degree to which each of the following statements best describes the effects of the impact of credit reference bureau policies on non-performing loans in DTM's banks in Kenya.

(SD- Strongly Disagree, D- Disagree, N- Not Sure, A- Agree and SA- Strongly Agree)

STATEMENT	SD	D	N	A	SA
Financial information relating to a borrower is so crucial to a successful loan recovery	1	2	3	4	5
Borrowers usually avoid defaulting on loans because this tarnishes their reputation	1	2	3	4	5
The reputation of the borrower usually plays a big role in the enforcement of credit contracts at CRB listing	1	2	3	4	5
There is more flexibility in loan recoveries	1	2	3	4	5
Lending money after following the required procedures enhances recoverability of loans	1	2	3	4	5
Borrowers always pay their loans promptly	1	2	3	4	5
Lack of complete and reliable financial information about a borrower increases the loan recovery risk of the lender	1	2	3	4	5

2. To what extent do Credit Reference Bureau policies affect loan recoveries in your institution?

Very great extent   [ ]

Great extent   [ ]

Neutral extent   [ ]

Less extent   [ ]

Not at all   [ ]

SECTION III: WRITE-OFFS

(SD- Strongly Disagree, D- Disagree, N- Not Sure, A- Agree and SA- Strongly Agree)

	SD	D	N	A	SA
Bad debts are written off as uncollectible	1	2	3	4	5
Nonpayment of loans on time limits financial performance	1	2	3	4	5
Uncollectible loans limits funding of other operations	1	2	3	4	5
Bad debts limits subsequent lending	1	2	3	4	5
High interest rates are a factor influencing bad debts	1	2	3	4	5
Information availability influences loan repayment procedures	1	2	3	4	5
Non-conformity to set policies increase defaulting of loans	1	2	3	4	5

3. To what extent do Credit Reference Bureau policies affect write-offs in your institution?

Very great extent   [ ]

Great extent   [ ]

Neutral extent   [ ]

Less extent   [ ]

Not at all   [ ]

SECTION IV: LOAN QUALITY

(SD- Strongly Disagree, D- Disagree, N- Not Sure, A- Agree and SA- Strongly Agree)

	SD	D	N	A	SA
Credit reference bureaus have clearly stated explicit goals like serving clients as professionally and diligently as possible	1	2	3	4	5
The objectives of credit reference bureau can only be achieved by implementing effective policies	1	2	3	4	5
Establishing the Credit worthiness of a client by credit reference bureaus is a complicated process that entails both subjective and objective decisions.	1	2	3	4	5
Policies assist in both objective and subjective decision	1	2	3	4	5

making					
Credit Reference Bureaus provide the necessary infrastructure to ensure information integrity, security and up-to-date information on borrowers	1	2	3	4	5
Credit Reference Bureaus reduce over-indebtedness and risky multiple borrowing that often result in loan default	1	2	3	4	5
Credit Reference Bureaus reduce information differences between borrowers and the bank through a system that enables information sharing	1	2	3	4	5

4. To what extent do Credit Reference Bureau policies affect loan quality in your institution?

Very great extent   [ ]

Great extent   [ ]

Neutral extent   [ ]

Less extent   [ ]

Not at all   [ ]

SECTION V: NON-PERFORMING LOANS

(SD- Strongly Disagree, D- Disagree, N- Not Sure, A- Agree and SA- Strongly Agree)

	SD	D	N	A	SA
Financial information relating to a borrower is an influence to non-performing loans	1	2	3	4	5
Lack of complete and reliable financial information about a borrower increases the credit risk of the lender	1	2	3	4	5
Safe extension of credit depends on complete and accurate information regarding every detail of the borrower's credit standing	1	2	3	4	5
Credit risk increases whenever there is any inadequacy as regards the credit information on borrowers	1	2	3	4	5
In absence of sufficient credit information on borrowers the bank increases borrowing rates in order to compensate for the poor payment behavior of a few borrowers	1	2	3	4	5
Incomplete credit information is one of the signs of a distorted credit culture	1	2	3	4	5
Safe extension of credit depends on complete and accurate information regarding every detail of the borrower's credit standing	1	2	3	4	5

Thank you for your cooperation

Appendix II: Non-Performing Loans (N.P. L'S)

BALANCE SHEET (2011 –2015) –DEPOSIT TAKING MICROFINANCE BANKS KENYA

	FAULU	KWFT	SMEP	REMU	RAFIKI	UWEZO	CENTUARY	SUMAC	U&I	TOTAL
DTMs OTHER DISCLOSURES-DECEMBER 2015										
NON-PERFOMING LOANS & ADVANCES										
Gross Non-Performing Loans And Advances	612	2558	326	73	514	43	48	78	11	**4264**
LESS										
Interest in suspense	109	188	29	15	11	10	13		1	**376**
Total Non-performing Loans and advances(a-b)	**503**	**2370**	**297**	**59**	**503**	**33**	**35**	**78**	**9**	**3888**
Impairment loss allowance	249	625	262	14	157	6	35	22	4	**1373**
Net non-performing loans (c-d)	**254**	**1745**	**36**	**44**	**346**	**27**	**1**	**56**	**5**	**2515**

Source: Bank Supervisory Annual Report 2015

	FAULU	KWFT	SMEP	REMU	RAFIKI	UWEZO	CENTUARY	SUMAC	U&I	TOTAL
DTMs OTHER DISCLOSURES-DECEMBER 2014 - KSH										
NON-PERFOMING LOANS & ADVANCES										
Gross Non-Performing Loans And Advances	606	1032	251	46	307	32	20	46	7	**2**
LESS										
Interest in suspense	108	81	21	12	2	5	5		1	**234**
Total Non-performing Loans and advances(a-b)	**498**	**951**	**230**	**35**	**306**	**27**	**15**	**46**	**6**	**2114**
Impairment loss allowance	155	300	257	6	74	7	12	17	3	**831**
Net non-performing loans (c-d)	**344**	**651**	**-27**	**28**	**231**	**21**	**3**	**29**	**2**	**1282**

Source: Bank Supervisory Annual Report 2014

DTMs OTHER DISCLOSURES-DECEMBER 2013-KSH.M

	FAULU KENYA	KWFT	SMEP	REMU	RAFIKI	UWEZO	CENTUARY	SUMAC	U&I	TOTAL
NON-PERFOMING LOANS & ADVANCES										
Gross Non-Performing Loans And Advances	467	1089	219	33	187	22	6	21	3	**2047**
LESS										
Interest in suspense	135	96	16	4	4	3		3		**261**
Total Non-performing Loans and advances(a-b)	**332**	**993**	**203**	**29**	**183**	**19**	**6**	**18**	**3**	**1786**
Impairment loss allowance	141	402	155	5	36	5	5	12	2	**763**
Net non-performing loans (c-d)	**191**	**591**	**48**	**24**	**147**	**14**	**1**	**6**	**1**	**1023**

Source: Bank Supervisory Annual Report 2013

DTMs OTHER DISCLOSURES-DECEMBER 2012-KSH.M

	FAULU	KWFT	SMEP	REMU	RAFIKI	UWEZO	CENTURY	U & I	SUMAC	TOTAL
NON-PERFOMING LOANS & ADVANCES										
Gross Non-Performing Loans and Advances	262	818	274	12	91	8	48	11	78	**1465**
LESS										
Interest in suspense	72	61	9	2	14	1	13	1		**159**
Total Non-performing Loans and advances(a-b)	**190**	**757**	**265**	**10**	**77**	**7**	**35**	**9**	**78**	**1306**
Impairment loss allowance	103	296	119	3	12	6	35	4	22	**539**
Net non-performing loans (c-d)	**87**	**461**	**146**	**7**	**65**	**1**	**1**	**5**	**56**	**767**

Source: Bank Supervisory Annual Report 2012

DTMs OTHER DISCLOSURES-DECEMBER 2011-KSH.M						
	FAULU KENYA	KWFT	SMEP	REMU	UWEZO	TOTAL
NON-PERFOMING LOANS & ADVANCES						
Gross Non-Performing Loans And Advances	171	775	142	3	3	**1094**
LESS						
Interest in suspense	6	73	6	1	0	**103**
Total Non-performing Loans and advances(a-b)	**149**	**702**	**135**	**2**	**2**	**991**
Impairment loss allowance	71	257	87	2	1	**418**
Net non-performing loans (c-d)	**78**	**445**	**49**	**1**	**0**	**573**

Source: Bank Supervisory Annual Report 2011