CREDIT RISK MANAGEMENT AND LOAN PERFORMANCE IN MICROFINANCE BANKS IN KENYA

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D53/OL/23119/2012

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS IN PARTIAL FULFILMENT OF THE REQUIREMENT FOR THE AWARD OF DEGREE IN MASTER OF BUSINESS ADMINISTRATION (FINANCE) OF KENYATTA UNIVERSITY

FEBRUARY, 2018
DECLARATION

Declaration by Student

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

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Declaration by the Supervisor

I confirm that the work in this project was done by the candidate under my supervision as the appointed University supervisor.

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DEDICATION

This study is dedicated to my parents, my brothers and my entire family for their unconditional support, financial and moral and their continuous encouragement throughout my studies.
ACKNOWLEDGEMENT

I am thankful to the almighty God for the far He has brought me in my academic journey. Special gratitude goes to my father Mr. Peter Murigi for his encouragement to further my studies as well as his unwavering support in my entire academics, both financial and moral. Sincere appreciation also goes to my project supervisor Mr. Anthony Thuo for his guidance, support and direction in the development and conceptualisation of this research project.

I would also like to acknowledge all my MBA lecturers at Kenyatta University for the numerous tutorials and guidance which has shaped my understanding of business and particularly finance my area of specialization, without them it would have been difficult to develop and complete the study. Further, I acknowledge my MBA classmates who have been good companions and who have made my post graduate journey a lifetime experience.
# TABLE OF CONTENTS

DECLARATION............................................................................................................. i
DEDICATION.................................................................................................................... ii
ACKNOWLEDGEMENT................................................................................................... iii
TABLE OF CONTENTS ................................................................................................... iv
LIST OF TABLES ............................................................................................................. ix
LIST OF FIGURES ......................................................................................................... x
OPERATIONAL DEFINITION OF TERMS......................................................................... xi
ABBREVIATIONS AND ACRONYMS............................................................................... xiii
ABSTRACT...................................................................................................................... xiv

CHAPTER ONE ............................................................................................................. 1

INTRODUCTION........................................................................................................... 1

1.1 Background of the study ....................................................................................... 1
   1.1.1 Credit Risk Management .............................................................................. 2
   1.1.2 Loan Performance ...................................................................................... 3
   1.1.3 Credit Risk Management and Loan Performance ........................................ 4
   1.1.4 Microfinance Banks in Kenya ....................................................................... 6

1.2 Statement of the problem ..................................................................................... 8

1.3 Research objectives .............................................................................................. 10
   1.3.1 General Objective ...................................................................................... 10
   1.3.2 Specific Objectives .................................................................................... 10

1.4 Research Questions ............................................................................................... 10
3.3 Target Population .................................................................................................................. 28
3.4 Sample Size and Sampling Design ...................................................................................... 29
3.5 Validity and Reliability of the Research Instrument .............................................................. 29
  3.5.1 Pilot Study ......................................................................................................................... 29
  3.5.2 Validity of the Research Instrument ................................................................................. 30
  3.5.3 Reliability of the Research Instrument ............................................................................. 30
3.6 Data collection Procedure ...................................................................................................... 31
3.7 Data analysis and Presentation ............................................................................................... 31
3.8 Regression Model .................................................................................................................. 32
3.9 Ethical Considerations ........................................................................................................... 33

CHAPTER FOUR ........................................................................................................................ 34

DATA ANALYSIS, PRESENTATION AND INTERPRETATION .............................................. 34
4.1 Introduction ............................................................................................................................. 34
4.2 Demographic Characteristics of the Respondents ................................................................. 35
  4.2.1 Gender of the Respondents ............................................................................................ 35
  4.2.2 Age of the Respondents ................................................................................................. 36
  4.2.3 Highest Education Level Attained by the Respondents .................................................. 37
  4.2.4 Occupation Level in the Organization .......................................................................... 38
  4.2.5 Period worked in the Micro-finance Bank .................................................................... 39
4.3 Credit Risk Environment ........................................................................................................ 40
  4.3.1 Sound credit risk management system ............................................................................ 40
  4.3.2 Descriptive for Credit Risk Environment ..................................................................... 41
4.3.3 Extent of establishment of an appropriate credit risk environment

4.3.4 Extent of an appropriate credit risk environment effect on loan performance

4.4 Sound Credit Appraisal Process

4.4.1 Operation of sound credit risk management system under sound credit appraisal process

4.4.2 Descriptive Statistics for Credit Risk Appraisal Process

4.4.3 Extent the sound credit appraisal process affect loan performance

4.5 Credit Administration, Measurement and Monitoring Process

4.5.1 Extent the Bank Maintains an Appropriate Credit Administration, Measurement and Monitoring process

4.5.2 Descriptive Statistics for Credit Administration, Measurement and Monitoring Process

4.5.3 Extent an Appropriate Credit Administration, Measurement and Monitoring Process affect loan performance

4.6 Internal Control over Credit Risk Management

4.6.1 Internal Control over Credit Risk Management in the Bank

4.6.2 Extent the Internal Control System over Credit Risk Management is Adequate

4.6.3 Descriptive Statistics for Internal Control System over Credit Risk Management

4.6.4 Extent the Internal Control System affects loan performance

4.6.5 Extent the Credit Risk Management Practices Adopted Influence the Level of Non-performing loans
4.7 Regression Analysis .............................................................................................................................................. 59

CHAPTER FIVE .......................................................................................................................................................... 63

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS ................................................................................... 63

5.1 Introduction ......................................................................................................................................................... 63

5.2 Summary of Findings ......................................................................................................................................... 63

5.3 Conclusion ......................................................................................................................................................... 65

5.4 Recommendations ............................................................................................................................................. 66

5.5 Limitations of the study ...................................................................................................................................... 66

5.6 Areas for Further Research ................................................................................................................................. 66

REFERENCES .......................................................................................................................................................... 67

APPENDICES .......................................................................................................................................................... 77

APPENDIX I: INTRODUCTORY LETTER TO RESPONDENTS ........................................................................... 77

APPENDIX II: QUESTIONNAIRE ............................................................................................................................... 78

APPENDIX III: LICENSED MICRO FINANCE BANKS IN KENYA ........................................................................ 82

APPENDIX IV: KU RESEARCH APPROVAL ......................................................................................................... 83

APPENDIX V: NACOSTI RESEARCH AUTHORIZATION .................................................................................... 84
LIST OF TABLES

Table 3.1: Reliability Statistics ............................................................................................................. 31
Table 4.1: Descriptive for credit risk environment .................................................................................. 43
Table 4.2:Extent of establishment of an appropriate credit risk management ........................................... 44
Table 4.3:Extent of an appropriate credit risk management effect on loan performance .............. 45
Table 4.4: Descriptive statistics for credit risk appraisal process .......................................................... 47
Table 4.5: Extent of the sound credit appraisal process effect on loan performance ..................... 48
Table 4.6: Extent the bank maintains an appropriate credit administration, measurement and monitoring process ........................................................................................................................................... 50
Table 4.7: Descriptive Statistics for Credit Administration, Measurement and Monitoring Process ........................................................................................................................................... 52
Table 4.8: Extent an appropriate credit administration, measurement and monitoring process affect loan performance ...................................................................................................................... 53
Table 4.9: Extent to which the Internal Control System over Credit Risk Management is Adequate ........................................................................................................................................... 55
Table 4.10: Descriptive Statistics for Internal Control System over Credit Risk Management ... 57
Table 4.11: Extent to which the Internal Control System over Credit Risk Management is Adequate ........................................................................................................................................... 58
Table 4.12: Extent to which the Internal Control System over Credit Risk Management is Adequate ........................................................................................................................................... 59
Table 4.13: Model summary .................................................................................................................. 60
Table 4.14: ANOVA ............................................................................................................................... 61
Table 4.15: Table of Coefficients ......................................................................................................... 61
LIST OF FIGURES

Figure 1.1: Conceptual framework ................................................................. 27

Figure 4.1: Response rate of the respondents .................................................. 35

Figure 4.2: Gender of the respondents ............................................................ 36

Figure 4.3: Age of the respondents ................................................................. 37

Figure 4.4: Highest education level of the respondents .................................... 38

Figure 4.5: Occupational level in the micro-finance bank ............................... 39

Figure 4.6: Period worked in the micro-finance bank ...................................... 40

Figure 4.7: Sound credit risk management system ......................................... 41

Figure 4.8: Sound credit risk management system ......................................... 46

Figure 4.9: Internal control system over credit risk management in the bank ...... 54
**OPERATIONAL DEFINITION OF TERMS**

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
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<tbody>
<tr>
<td><strong>Credit risk</strong></td>
<td>The risk that a borrower will default on any type of debt by failing to make required payments which includes lost principal and interest, disruption to cash flows, and increased collection costs.</td>
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<tr>
<td><strong>Credit administration</strong></td>
<td>Disbursement procedures for Medium-term and Long-term Direct Loans and Guarantees in compliance with the bank's policies and procedures.</td>
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<td><strong>Credit appraisal process</strong></td>
<td>This is the process of assessing the various risks that can impact on the repayment of a loan.</td>
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<td><strong>Credit monitoring</strong></td>
<td>Process of periodically reviewing your credit reports for accuracy and changes that could be indicative of irregular credit activity.</td>
</tr>
<tr>
<td><strong>Credit risk Environment</strong></td>
<td>Significant credit risk strategies and policies that are approved and reviewed annually by the Risk Committee and the Board. Through such policies, the Board establishes the Group’s tolerance for risk.</td>
</tr>
<tr>
<td><strong>Credit Risk measurement</strong></td>
<td>The potential magnitude of the loss that may be incurred if a borrower defaults on any type of debt by failing to make required payments.</td>
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<td><strong>Internal control</strong></td>
<td>The policies and procedures that financial institutions establish to reduce risks and ensure they meet operating, reporting and compliance objectives.</td>
</tr>
<tr>
<td><strong>Microfinance</strong></td>
<td>A type of banking service that is provided to unemployed or low-income individuals or groups who otherwise have no other access to financial services.</td>
</tr>
<tr>
<td><strong>Microfinance Bank</strong></td>
<td>Any company licensed by the Central Bank of Kenya (CBK) to carry on business of providing microfinance services such as savings, loans, domestic funds transfer, and other financial services that are</td>
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needed by the economically active poor, micro, small and medium enterprises to conduct or expand their businesses

**Performing Loan**
A loan in which: interest and principal payments are less than 90 days overdue; less than 90 days' worth of interest has been refinanced, capitalized, or delayed by agreement; and continued payment is anticipated

**Non-performing Loan**
A sum of borrowed money upon which the debtor has not made his or her scheduled payments for at least 90 days. Once a loan is nonperforming, the odds that it will be repaid in full are considered to be substantially lower
### ABBREVIATIONS AND ACRONYMS

<table>
<thead>
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<th>Abbreviation</th>
<th>Description</th>
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<tr>
<td>CBK</td>
<td>Central Bank of Kenya</td>
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<td>MFBs</td>
<td>Microfinance Banks</td>
</tr>
<tr>
<td>MFIs</td>
<td>Micro Finance Institutions</td>
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<td>MPT</td>
<td>Modern Portfolio Theory</td>
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<td>NPA</td>
<td>Non-Performing Asset</td>
</tr>
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<td>NPL</td>
<td>Non-Performing Loans</td>
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<td>NPLR</td>
<td>Non-Performing Loans Ratio</td>
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<td>NSE</td>
<td>Nairobi Stock Exchange</td>
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<td>RAPMs</td>
<td>Risk-adjusted Performance Measures</td>
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<td>RAROC</td>
<td>Risk-Adjusted Return on Capital</td>
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<td>RARORAC</td>
<td>Risk-adjusted Return on Risk-adjusted Capital</td>
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<tr>
<td>SPSS</td>
<td>Statistical Package for Social Sciences</td>
</tr>
<tr>
<td>TL</td>
<td>Total Loans</td>
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The concept of micro-finance in Kenya is one of the most developed in the sub-Saharan Africa. As such there is much interest in the knowledge regarding sustainability of the continuous growth and development of this concept of financing. However, given the importance of credit risk in microfinance functioning, the efficiency of microfinance risk management which includes techniques, methods, processes, procedures, activities and incentives is expected to significantly influence its loan performance. This study therefore sought to determine the relationship between credit risk management and loan performance in microfinance banks in Kenya. Specifically, the study determined the relationship between credit risk environment setting and loan performance in Microfinance Banks in Kenya, established the relationship between credit appraisal process and loan performance, determined the relationship between credit administration, measurement and monitoring and loan performance and finally determined the relationship between internal controls over credit risk and loan performance in Microfinance Banks in Kenya. To undertake the study, a descriptive research design was adopted. The target population comprised the twelve microfinance banks registered by the CBK as at December 2015 and a sample size of sixty (60) respondents obtained by purposively sampling five respondents from each of the twelve microfinance bank. Data was collected through the use of questionnaires and analyzed using SPSS where descriptive and inferential statistics to determine the relationship between credit risk management variables and loan performance was conducted. From the study, 61% of the respondents were male, 46% were aged between 30-39 years with 81% having an education level of above a university degree and had worked in the microfinance banks for a period between 3-5 years. Findings further indicated that the senior management in the banks developing policies and procedures for identifying, measuring, monitoring and controlling credit risk was an important key credit risk environment aspect, microfinance bank having established overall credit limits both at individual borrowers and counterparties level was critical in credit appraisal process, the bank having a system for monitoring the condition of individual credits, including determining the adequacy of the provisions and reserves was important in credit administration, measurement and monitoring and finally the bank having an independent internal control system for conducting on going assessment of the bank’s credit risk management process was significant in internal control system in the banks. The study found that there was a positive statistically significant relationship between credit risk environment, credit appraisal process, credit administration, measurement and monitoring, internal control over credit risk and loan performance in the microfinance banks. The findings of the study provide additional insight to the various interested parties in the area of study including management of microfinance banks, regulatory authorities and investors in development of policy regulations that will enhance loan performance in Microfinance Banks.
CHAPTER ONE

INTRODUCTION

1.1 Background of the study

The concept of micro financing involves lending money to individuals and small-scale enterprises that either can’t afford or cannot access bank loans or other forms of financing in the market. This kind of lending activity can expose these institutions to credit risks. Credit risk refers to the likelihood of a loss arising from the default of an individual or an enterprise to repay the loan granted. These losses directly affect financial performance of these MFIs adversely at the end of the year. In order to mitigate the losses arising from lending activities, the MFIs must ensure that lending risks are not excessive. Credit risk is the most obvious risk that a credit union faces based on the nature of its activity. In terms of potential losses, it is typically the largest type of risk. The default of a small number of members may result in a very large loss for the union (Bessis, 2003).

Credit risk can occur when the member is unable to pay or cannot pay on time. There can be many reasons for default, in most cases the borrower is in a financially stressed situation and may be facing a bankruptcy procedure. He can also refuse to comply with the debt service obligation, for example in the case of a fraud or a legal dispute. Credit risk is hard to eliminate but it can be diversified because a portion of the default risk may result from the systematic risk. In addition, the peculiar nature of some portion of these losses remains a problem for creditors in spite of the beneficial effect of diversification on total uncertainty. This is particularly true for banks that lend in local markets and the ones that take highly illiquid assets. In such cases, credit risk is not easily transferred and accurate estimates of loss are difficult to obtain (Ekka et al., 2011).
Given the importance of credit risk management in microfinance functioning, the efficiency of microfinance risk management which includes techniques, methods, process, procedures, activities and incentives is expected to significantly influence its financial performance (Harker & Satvros, 1998). The MFIs should operate within sound, well defined credit granting criteria. The criteria should include a clear indication of the institution’s target market and a thorough understanding of the borrowers as well as the purpose and structure of the credit and its source of repayment. There has to be a well-defined process of loan approval as well as a clearly established procedure of amendment of the current loan agreement, renewal and re-financing of existing credits (Harker & Satvros, 1998). Credit risk management should be at the center of a Bank’s operations in order to maintain financial sustainability and reaching out to more clients (Ogilo, 2012). He further states that credit risk is the most significant of all other risks faced by commercial banks in Kenya. Credit risk is the most expensive risk in financial institutions and its effect is more significant as compared to other risks as it directly threatens the solvency of financial institutions.

1.1.1 Credit Risk Management

Risk management is recognized in today’s business world as an integral part of good management practice. It entails the systematic application of management policies, procedures and practices to the tasks of identifying, analyzing, assessing, treating and monitoring risk (Haneef, et al., 2012). Credit risk management is defined as identification, measurement, monitoring and control of risk arising from the possibility of default in loan repayments (Coyle, 2000).

According to Basel Committee on Banking Supervision (2000) a sound and comprehensive credit risk management program need to address four areas: (i) establishing an appropriate credit
risk environment; (ii) operating under a sound credit granting process; (iii) maintaining an appropriate credit administration, measurement and monitoring process; and (iv) ensuring adequate controls over credit risk. Specific credits risk management practices may however differ among banks depending upon the nature and complexity of their credit activities. These practices should also be applied in conjunction with sound practices related to the assessment of asset quality, the adequacy of provisions and reserves, and the disclosure of credit risk.

There are various approaches available for MFIs in Kenya to manage credit risk. Most of these approaches have been put forth by different scholars. Ekka et al. (2011) indicates that MFIs may apply certain conventional risk management approaches to mitigate credit risk. Such approaches include setting loan limits to mitigate risk exposure especially from new clients that have no collateral, Standardized loan terms, zero tolerance to delinquency and group-based lending. Fuser & Meier (1999) had earlier on mentioned the same approaches of credit risk management as including credit limits, taking collateral, loan selling, syndicated loans, credit insurance, and securitization and credit derivatives. Boston Consulting Group (BCG), 2001 found that the sole determining success factors are not the technical development but the ability to understand risk strategically and also the ability to handle and control risk.

1.1.2 Loan Performance

Loan performance refers to the financial soundness of a financial institution on the performance of their disbursed loans to various sectors. It also means how the loans are scheduled to act and how they are actually performing in terms of the schedule payment compared to the actual payments. It is closely associated with timely and steady repayment of interest and principal of a loan. Default on borrowed funds could arise from unfavorable circumstances that may affect the ability of the borrower to repay (Hull, 2007).
The most common reasons for the existence of defaults include if the financial institution is not serious on loan repayment, the borrowers are not willing to repay their loan, the financial institutions staffs are not responsible to shareholders to make a profit, clients lives are often full of unpredictable crises, such as illness or death in the family, if loans are too large for the cash needs of the business, extra funds may go toward personal use and if loans are given without the proper evaluation of the business (Norell, 2001). The main causes of default of loans are poor business performance, diversion of funds and domestic problems as indicated by Wakuloba (2005).

Breth (1999) argued that there are many socio-economic and institutional factors influencing loan repayment rates. The main factors from the lender side are high-frequency of collections, tight controls, good management of information system, loan officer incentives and good follow ups. Additionally, the size and maturity of loan, interest rate charged by the lender and timing of loan disbursement have also an impact on the repayment rates (Okorie & Andrew, 2007). The main factors from the borrower side include socio economic characteristics such as, gender, educational level, marital status and household income level and peer pressure in group based schemes.

1.1.3 Credit Risk Management and Loan Performance
Credit extended to borrowers may be at the risk of default such that whereas banks extend credit on the understanding that borrowers will repay their loans, some borrowers usually default and as a result, banks income decrease due to the need to provision for the loans. Every financial institution bears a degree of risk when the institution lends to business and consumers and hence experiences some loan losses when certain borrowers fail to repay their loans as agreed. Such unpaid loans are referred to as non-performing loans (Kithinji, 2010).
The standard most widely accepted international measure of portfolio quality (loan performance) in banking is Portfolio at Risk (PAR) beyond a specified number of days. It shows the portion of the portfolio that is “contaminated” by arrears and therefore at risk of not being repaid, the older the delinquency, the less likely that the loan will be repaid. Portfolio at Risk (PaR) is calculated by dividing the outstanding balance of all loans with arrears by the outstanding gross portfolio as of a certain date (Stauffenberg, et al., 2003)

CBK Prudential Guidelines (2006) defines non-performing loan as a loan that is no longer generating income. The guidelines state that loans are non-performing when: principal or interest is due and unpaid for 90 days or more; or interest payments for 90 days or more have been re-financed, or rolled-over into a new loan. Non-performing loans are one of the main reasons that cause insolvency of the financial institutions and ultimately hurt the whole economy (Hou, 2007). According to Kangogo (2014), it is necessary to control non-performing loans for the economic growth in the country, otherwise the resources can be jammed in unprofitable projects and sectors which not only damages the financial stability but also the economic growth.

Keeton and Morris (1987) presented one of the earliest studies that examined the relationship between non-performing loans and credit risk management. They examined the losses by 2,470 insured commercial banks in the United States (US) over the 1979-85. Using NPLs net of charge-offs as the primary measure of loan losses. They reported that commercial banks with greater risk appetite tend to record higher losses.

A study on the effect of credit risk management on loan portfolio quality of tier one commercial banks in Kenya concluded that credit risk management influences the level of nonperforming assets which affects loan portfolio quality thus affecting the general performance of the bank
(Onuko, et al., 2015). A study by Haneef et al., (2012) concluded that non-performing loans are increasing due to lack of risk management which threatens the profitability of banks. In view of the foregoing, there is therefore a need for banks to adopt appropriate credit risk management techniques to minimize incidences of loan defaults to enhance loan performance as past studies have revealed that loan performance is a critical element for good financial performance of banks.

1.1.4 Microfinance Banks in Kenya

A Microfinance institution is a financial institution specializing in banking services for low-income groups or individuals. A microfinance institution provides account services to small-balance accounts that would not normally be accepted by traditional banks, and offers transaction services for amounts that may be smaller than the average transaction fees charged by mainstream financial institutions (Ningshen & Boraian, 2014)

The Microfinance industry over the years experienced growth and risk management challenges that brought increasing calls for regulation and hence the enactment of microfinance act 2006 and Deposit Taking Microfinance Regulations of 2008 (CBK,2008). With the support of the Financial Sector Deepening (FSD) Kenya, Faulu and Kenya Women Finance Trust (KWFT) engaged in the process that led to their licensing as the pioneer deposit-taking microfinance institutions (DTMs) in Kenya. Both transformations were generally successful and helped the two institutions to maintain their strategic positioning in the market. However, in both cases, the process required more resources and took much longer than expected. In addition, the transformations rose greater than anticipated organizational challenges. By start of 2009 when KWFT embarked on the transformation into a deposit-taking institution in earnest, it was the largest non-bank microfinance institution in Kenya, serving 250,000 women only clients. Other
DTMs were later licensed. These include SMEP DTM, REMU DTM, Rafiki DTM, Century DTM and SUMAC DTM, Uwezo DTM and U&I DTM, bringing total nine DTMs as of 2013 (CBK, 2013). These DTMs were transformed into Faulu microfinance bank, Kenya women Microfinance, SMEP microfinance bank, REMU microfinance bank, Rafiki microfinance bank, Century microfinance bank, SUMAC microfinance bank, Uwezo microfinance bank and U&I Microfinance bank. The licensing of Daraja, Choice and Caritas Microfinance banks in 2015 brings Microfinance banks operating in Kenya to a total of twelve, with 98 branches and 69 marketing offices. Collectively, they have 1.47 million deposit accounts valued at Sh32.04 billion with an outstanding loan portfolio of Sh34.77 billion (CBK, 2015).

A growing literature suggests that risk management is even more challenging for the Microfinance banks compared to the conventional counterpart. This is largely attributed to the fact that the Microfinance banks are faced with additional risks due to the specific features of the financing contracts, liquidity infrastructure, legal requirements, nature of clientele and governance underlying the Microfinance bank operations (Cihak & Hesse, 2008). Moreover, in view of the increasing pressure of globalization, effective and efficient risk management in the Microfinance institutions is particularly important as they endeavor to cope with the challenges of cross border financial flows (Sundararajan & Errico, 2002). Microfinance banks use various credit risk management methods such as credit limits, taking collateral, diversification, loan selling, syndicated loans, credit insurance and securitization and credit derivatives. It is important for staff of microfinance banks to understand the aspect of risk in the banking operations and the risks that are inherent and exposed in their business operations. Better understanding of risk management is also necessary especially in the financial intermediation activities where managing risk is one its important activities (Jamaat & Asgari, 2010).
1.2 Statement of the problem

The concept of micro-finance in Kenya is one of the most developed in the sub-Saharan Africa. As such there is much interest in the knowledge regarding sustainability of the continuous growth and development of this concept of financing (Kipkemboi, 2013). According to Kipsang (2014) growth of microfinance sector in Kenya is exposed to various risks which originate from both the internal and external environment and specifically, financial risks which threaten their financial viability and long-term sustainability. As a result well run microfinance institutions (MFI’s) make better use of scarce funds by providing better financial services and reaching more poor clients. Credit policies and procedures are designed to guide lending and ensure prudent lending operations. Recently, receiving loans has become an issue of concern for small businesses (Otieno & Nyagol, 2016).

A number of studies have been done locally and internationally in relation to credit risk management and loan performance. Walsh (2010) carried out an assessment of the credit management process of credit unions. The study found that credit unions are deficient in the credit control department. A study conducted by Ahlberg and Anderson (2012) on credit risk, Credit Assessment, Basel III, Small Business Finance in 95 small and large banks in Sweden found out that most banks had a well-developed credit process where building a mutual trust relationship with the customer is crucial. A study by Iqbal and Mirakhor (2007) found out that strong risk management practices can help MFIs reduce their exposure to credit risk and enhance their ability to compete well in the industry. In his study, Simiyu (2008), established that majority of the institutions used Credit Metrix to measure the credit migration and default risk. The findings showed that the microfinance institutions are faced with the challenge of strict operational regulations from the Central Bank of Kenya. Chege (2010) concluded that credit risk
management practices enhance profitability of the MFI. Kombo et al., (2010) asserted that strategic risk, credit risk and liquidity risk are the most frequent risks; whereas reputation and subsidy dependence risks occur at a very low incidence for Micro Finance Institutions (MFIs) located in Kisii area. Kiplimo and Kalio (2012) established that there was a strong relationship between client appraisals and loan performance in MFIs. Mwithi (2012) found that there was a positive correlation between credit risk assessment and management of microfinance institutions in Nyeri County. Kisala (2014) in his study found a significant relationship between loan performance and credit risk management in MFIs in Nairobi, Kenya. Further, a study by Kipkemboi (2013) revealed a positive relationship between credit risk management practices and financial performance of MFIs. Njenga (2014) denoted a positive relationship between the variables under study in her determination on the effect of credit management practices on loan performance in deposit taking MFIs in Kenya. Otieno and Nyagol (2016) concluded the existence of a significant relationship credit risk management and performance and that credit risk management impacts performance of MFBs.

However, these studies do not cover credit risk management and loan performance in microfinance banks in Kenya. These credit risk management aspects include credit risk environment, credit appraisal process, credit administration, measurement and monitoring and internal controls. This study will therefore seek to bridge the literature gap in the vital area of credit risk management in microfinance banks in Kenya.
1.3 Research objectives

1.3.1 General Objective

The main objective of this study was to investigate the relationship between credit risk management and loan performance in Microfinance Banks in Kenya.

1.3.2 Specific Objectives

i. To determine the relationship between credit risk environment setting and loan performance in Microfinance Banks in Kenya

ii. To establish the relationship between credit appraisal process and loan performance in Microfinance Banks in Kenya

iii. To determine the relationship between credit administration, measurement and monitoring and loan performance in Microfinance Banks in Kenya

iv. To determine the relationship between internal controls over credit risk and loan performance in Microfinance Banks in Kenya

1.4 Research Questions

i. What is the relationship between Credit risk environment and loan performance in microfinance banks in Kenya?

ii. What is the relationship between Credit appraisal process and loan performance in Microfinance Banks in Kenya?

iii. What is the relationship between Credit administration, measurement and monitoring and loan performance in Microfinance Banks in Kenya?

iv. What is the relationship between internal control over credit risk and loan performance in Microfinance banks in Kenya?
1.5 Significance of the study

The findings of this study will be both useful as they are timely. The results of the study will inform the management of Microfinance banks in Kenya regarding the significance of credit risk management on loan performance in the banks they manage. They will therefore be better placed to formulate appropriate credit risk management policies and strategies for their institutions for the enhanced management of credit risk.

The government and regulatory authorities may find the insights of the study useful in the development of regulations for the population under study. The study results will be useful to investors who may be considering investing in the population under study as it will provide useful revelations regarding risk and return tradeoff inherent in such institutions and their effect on profitability and shareholder wealth. The study will provide a basis for scholars who are interested in further research in this field as well as lessen their burden in determining the research gap that exists in view of the findings of the study.

1.6 Scope of the study

This study examined the relationship between credit risk management and loan performance in Microfinance Banks in Kenya. The study adopted a descriptive research design with the target population being the 12 Microfinance Banks in Kenya. The study was conducted in Nairobi since most of the microfinance banks have operations in Nairobi. The study was conducted after the end of the financial year when an assessment of the loan performance was done which was critical in providing the data required for the study.
1.7 Organization of the study

This study is organized into five chapters. The main components of chapter one include the background of the study, statement of the problem, objectives of the study, research questions, significance of the study and scope of the study. Chapter two comprises of theoretical and empirical literature review, research gap and finally the conceptual framework. Chapter three comprises the description of methodology used which includes research design, population and sampling design, the research instruments, the data collection and analysis procedures. Chapter four comprises of the study findings and their interpretation and finally chapter five has the summary, conclusion, recommendations and areas for further research.
CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

The study specifically covers both the theoretical and empirical literature. This is followed by research gaps that were addressed as per the study objectives and conceptual framework.

2.1 Theoretical Literature

2.1.1 Modern Portfolio theory

Modern Portfolio Theory (MPT) is a theory of investment which tries to maximize return and minimize risk by carefully choosing different assets (Markowitz, 1952). The primary principle upon which Modern Portfolio Theory is based (MPT) is the random walk hypothesis which states that the movement of asset prices follows an unpredictable path: the path as a trend that is based on the long-run nominal growth of corporate earnings per share, but fluctuations around the trend are random (Chandra & Shadel, 2007). Since the 1980s, banks have successfully applied modern portfolio theory (MPT) to market risk. Many financial institutions are now using value at risk (VAR) models to manage their interest rate and market risk exposures. Unfortunately, however, even though credit risk remains the largest risk facing most banks, the practical use of MPT to credit risk has lagged (Margrabe, 2007).

Financial institutions recognize how credit concentrations can adversely impact financial performance. As a result, a number of sophisticated institutions are actively pursuing quantitative approaches to credit risk measurement, while data problems remain an obstacle. This industry is also making significant progress toward developing tools that measure credit risk in a portfolio context. They are also using credit derivatives to transfer risk efficiently while preserving
customer relationships. The combination of these two developments has precipitated vastly accelerated progress in managing credit risk in a portfolio context over the past several years (Saunders & Cornett, 2007).

Banks can reduce portfolio risk simply by holding combinations of risk weighted assets that are not perfectly positively correlated (correlation coefficient). In other words, Banks can reduce their exposure to individual asset risk by holding a diversified portfolio of assets. Diversification may allow for the same portfolio expected return with reduced risk. These ideas have been started with Markowitz and then reinforced by other economists and mathematicians such as Andrew Brennan who have expressed ideas in the limitation of variance through portfolio theory (Smith, 2013). The modern portfolio theory is therefore relevant for the study since managing credit risk from a portfolio context would be more effective than an asset-by-asset approach.

The modern portfolio theory determines that a portfolio approach as opposed to an asset-by-asset approach is more efficient in measurement and monitoring of risk. The MPT tries to maximize return and minimize risk by carefully choosing different assets i.e. creating a portfolio. Banks have traditionally taken an asset-by-asset approach to credit risk measurement which according to the MPT has difficult in identification, measurement and monitoring of concentration. Concentration risk refers to additional portfolio risk resulting from increased exposure to a borrower, or to a group of correlated borrowers and is among the chief forms of credit risk facing banks (Margrabe, 2007). The theory infers that better measurement and monitoring of risk through a portfolio approach would result in minimization of risk and maximization of returns. Further, it proposes a positive relationship between credit administration, measurement and monitoring and the performance of loans brought about by decreased default which is very
important in any microfinance bank. For this reason, the theory was found to be very relevant to this study.

2.1.2 Asymmetric Information Theory

This is also referred to as the theory of imperfect information. Asymmetric information refers to situations, in which some agent in a trade possesses information while other agents involved in the same trade do not. Information asymmetry arises when the borrower has much better information about his financial state than the lender. According to Auronen (2003), it may be difficult to distinguish between good and bad borrowers. The lender has difficulty knowing whether it is likely the borrower will default. The lender may try to overcome this problem by looking at past credit history and evidence of income/cash flow. However, this only gives limited information. According to the theory, the person that possesses more information on a particular item to be transacted (the borrower) is in a position to negotiate appropriate terms for the transaction than the other party (the lender). The party that knows less about the same specific item to be transacted is therefore in a position of making either right or wrong decision concerning the transaction

Adverse selection occurs where the less informed party (the lender) makes a wrong decision and ends up lending to a borrower whom he would not have lent to if he had more information. According to Kipyego (2013), the adverse selection problem signals that when lenders cannot distinguish between good and bad borrowers, all borrowers are charged a normal interest rate that reflects their pooled experience. If this rate is higher than worthy borrowers deserve, it will push some good borrowers out of the borrowing market, forcing in turn to banks charging even higher rates to the remaining borrowers
According to Onuko et al., (2015), if borrowers could provide true and complete information regarding their financial status to the lenders at the time of seeking for credit, then lenders (banks) could be at a better position of making informed credit decisions thereby reducing the risks associated with credit. When credit risk is reduced, level of NPA is reduced hence a good portfolio quality for the financial institutions. Similarly, if banks could make additional efforts to ensure they obtain all relevant information on credit applicants during the credit appraisal process, the credit risk associated with such applicants could be reduced. For this reason, the theory is relevant for the study.

This theory is significant in this study since it infers that lack of a sound credit appraisal process would result to increased credit risk due to inability/failure of the microfinance bank to obtain all relevant information on credit applicants leading to the possibility of granting credit to undeserving borrowers. This would in turn lead to deterioration in loan performance. The reverse of this is true implying a positive relationship between sound credit appraisal and loan performance. This study focused on credit administration, measurement and monitoring which is very significant sound credit appraisal process in microfinance.

2.1.3 The Agency Theory

Agency theory is the study of the agency relationship and the issues that arise from this, particularly the dilemma that the principal and agent, while nominally working toward the same goal, may not always share the same interests. The literature on agency theory largely focuses on methods and systems and their consequences that arise to try to align the interests of the principal and agent (Delves & Patrick, 2000). An agency relationship is one in which one or more persons (the principal) engage another person (the agent) to perform some service on their behalf which
involves delegating some decision making authority to the agent. Perhaps the most recognizable form of agency relationship is that of employer and employee. Other examples include lender (principal) and borrower (agent); constituents (principal) and elected representative (agent); or shareholders (principal) and CEO.

According to the agency theory, a firm consists of a nexus of contracts between the owners of economic resources (the principals) and managers (the agents) who are charged with using and controlling those resources (Jensen & Meckling, 1976). The theory posits that agents have more information than principals and that this information asymmetry adversely affects the principals’ ability to monitor whether or not their interests are being properly served by agents. As such, the theory describes firms as necessary structures to maintain contracts, and through firms, it is possible to exercise control which minimizes opportunistic behavior of agents (Abdel-Khalik, 1993). According to the theory, in order to harmonize the interests of the agent and the principal, a comprehensive contract is written to address the interest of both the agent and the principal. The agent-principal relationship is strengthened more by the principal employing an expert and systems (auditors and control systems) to monitor the agent (Jussi & Petri, 2004). Further the theory recognizes that any incomplete information about the relationship, interests or work performance of the agent described could be adverse and a moral hazard. Moral hazard and adverse selection impact on the output of the agent in two ways; not possessing the requisite knowledge about what should be done and not doing exactly what the agent is appointed to do. The agency theory therefore works on the assumption that principals and agents act rationally and use contracting to maximize their wealth (Jensen & Meckling, 1976).
This theory is applicable to this study simply because internal control is one of many mechanisms used in business to address the agency problem by reducing agency costs that affects the overall performance of the relationship as well as the benefits of the principal (Payne, 2003). Internal control enhances the provision of additional information to the principal (shareholder) about the behavior of the agent (management) and therefore reduces information asymmetry and lowers investor risk and low revenue. In this study, independent ongoing credit risk assessment and early remedial action on deteriorating credits which is handled by the principals and agents as posited by this theory was evaluated by the study making the theory very relevant.

2.3 Empirical Literature review

2.3.1 Credit Risk Environment and Loan performance

A study was carried out by Addae-Korankye (2014) on the causes and control of loan default/delinquency in microfinance institutions in Ghana. The study found that the causes of loan default included high interest rate, inadequate loan sizes, poor appraisal, lack of monitoring and improper client selection. Measures to control default were found to include training before and after disbursement, reasonable interest rate, monitoring of clients, and proper loan appraisal. It was recommended among others that MFIs should have clear and effective credit policies and procedures and must be regularly reviewed. It was concluded that the government and hence Bank of Ghana should regularly monitor and supervise the MFIs so as to ensure safety of clients’ deposits and customers’ confidence.

Haneef et al., (2012) did a study to investigate the impact of risk management on non-performing loan and profitability of banking sector of Pakistan. Five banks were selected for data
collection and whole data was secondary in nature. The result of this study reveals that there is no proper mechanism for risk management in banking sector of Pakistan. Study also concluded that non-performing loans are increasing due to lack of risk management which threatens the profitability of banks. They further concluded that risk management encompasses risk identification, assessment, measurement, monitoring and controlling all risks inherent in the business of banking; the basic principles relating to risk management that are applicable to every financial institution, irrespective of its size and complexity.

Mwithi (2010) conducted a study to determine the relationship between credit risk management practices and the level of non-performing loans of microfinance institutions in Nyeri County, Kenya. The study found out that the level of credit risk assessment and management was high in the MFIs. It was also found out that effective management of their institutions was affected by liquidity and profitability, and that asymmetric information in loan market affects the effective management of NPLs in MFIs in Nyeri County. The study found that inability to enforce covenants leads to NPLs among MFIs in Nyeri County to a very large extent. The study concluded that the relationship between credit risk management approaches employed by Micro Finance Institutions in Nyeri County and the level of Non-Performing Loans was a negative correlation i.e. the higher the level of credit risk management, the lower the level of NPLs.

In a study conducted by Nyong’o (2014) on the relationship between credit risk management and non-performing loans in commercial banks in Kenya. It was found that credit risk management practices adopted by the banks influences the level of non-performing loans to a great extent and that risk identification, risk monitoring and risk analysis and appraisal would lead to decrease in non-performing loans while bank size and interest rates would lead to increase in non-
performing loans. The study further recommended that the boards of commercial banks should outline risk management strategy and formulate well-defined policies and procedures. That Risk management department should be made on portfolio or business line basis, to adopt a holistic approach judging the overall risk exposure in assessing and managing risk profile of the bank.

2.3.2 Credit Appraisal process and Loan performance

In a study conducted by Arko (2012) on the causes and effects of NPLs on MFIs’ operations in Ghana, it was asserted that the lender should ensure that good decisions are made relative to granting of loans with the object of minimizing credit risk. In other words, the lender ought to always aim to assess the extent of the risk associated with the lending and try to minimize factors that could otherwise compromise repayment. The scholar further asserts that, needless to say, the lender should gather information regarding the prospective borrower that will assist in reaching a sound credit decision. It was noted that in order to mitigate NPLs which are occasioned by non-repayment of loans, MFIs in Ghana have adopted a standard loan request procedure and requirements that are usually contained in credit policy manual with the object of guiding loan officers and customers.

Orua (2009) conducted a study on the relationship between loan applicant appraisal and loan performance of microfinance institutions in Kenya. The study revealed that short-term debt significantly impacted MFI outreach positively. Long term debt however showed positive relationship with outreach but was not significant with regard to default rates. A study by Kisaka and Simiyu (2014) on credit risk management techniques used by microfinance institutions in Kenya established that most microfinance institutions use 6C techniques of credit risk management. The study results also revealed that understanding the organizations exposure to
credit is treated as critical by the microfinance institutions. To avoid loan losses, the microfinance institutions used follow ups. The results also show that MFIs take loan review analysis as crucial aspects of risk management by doing proper documentation and analysis. The results also show that the microfinance institutions are faced with the challenge of strict operational regulations from the Central Bank of Kenya. Loan recovery is a major challenge to the majority of the institutions.

2.3.3 Credit Administration, Measurement and Monitoring Process and Loan performance

Mutua (2014) evaluated the effect of credit risk management on the financial performance of commercial banks in Kenya. The study targeted auditors of all commercial banks in Kenya; the population of the study were the credit controllers of all the 43 commercial banks in Kenya. Primary data was collected using questionnaires which were administered using drop and pick method by the researcher. The data was then analyzed using quantitative techniques. The study concluded that bank considers risk identification as a process in credit risk management, that the bank focuses in interest rate risks in the risk identification map and that the bank focuses in foreign exchange risks. The study also concluded that in view of risk analysis as a credit risk management practice in the bank the application of modern approaches to risk measurement, particularly for credit and overall risks is important for commercial banks and that risk analysis helps the bank management to discover mistake at early stages and that risk monitoring can be used to make sure that risk management practices are in line with proper risk monitoring.

Mutua (2016) did a study on the impact of credit risk management on financial performance of savings and credit co-operative societies in Kitui County. The research design used in this study was a descriptive research design. The data collection instruments in this case included self-
administered questionnaires which were used to extract valuable primary data from the SACCOs’ management. The study used quantitative method to analyze the data and examine the simultaneous impact of the independent variables on the dependent variable. The findings indicated that there was a very strong positive relationship between credit monitoring and financial performance of SACCOs, a very strong positive relationship between loan policy in mitigation of risk and financial performance of SACCOs and that there was a very strong positive relationship between loan defaulters and financial performance of SACCOs.

Muasya (2013) investigated the relationship between credit risk management practices and loans losses - a study on commercial banks in Kenya. Descriptive research design was utilized in this study as it aimed to see if there is a relationship between credit risk management practices and loan portfolio losses in commercial banks in Kenya. Research findings indicated that a significant number of commercial banks in Kenya had not put in place credit risk management information systems to effectively measure, monitor, control and identify risk, and that majority of management of commercial banks in Kenya recognized the need for information sharing among players within the industry in order to mitigate the risk. It was concluded that credit risk management practices are common among most of the commercial banks in Kenya and that management of these commercial banks appreciated government legislation relating to credit risk management through the introduction of the credit sharing information Act, and that there is a significant negative relationship between credit risk management practices and loan losses in commercial banks in Kenya.
2.3.4 Internal controls over credit risk and Loan performance

Negera (2012) assessed the determinants of non-performing loans. The mixed research approach was adopted for the study. Survey was conducted with professionals engaged in both private and state owned Banks in Ethiopia holding different positions using a self-administered questionnaire. In addition, the study used structured review of documents and records of banks and in-depth interview of senior bank officials in the Ethiopian banking industry. The findings of the study shows that poor credit assessment, failed loan monitoring, underdeveloped credit culture, lenient credit terms and conditions, aggressive lending, compromised integrity, weak institutional capacity, unfair competition among banks, willful default by borrowers and their knowledge limitation, fund diversion for unintended purpose, over/under financing by banks ascribe to the causes of loan default.

A study conducted by Ahmed and Malik (2015) on credit risk management and loan performance. They examined credit risk management and loan performance with credit terms, client appraisal, collection policy, credit risk control as independent variables and loan performance as dependent variable. The results of the analysis showed that the credit terms and client appraisal have positive and significant impact on the loan performance, while the collection policy and credit risk control have positive but insignificant impact on loan performance. Gladys (2012) in her study to establish the effect of credit risk management techniques used to evaluate SMEs on the level of Nonperforming loans by Commercial banks in Kenya. A descriptive study of credit risk management techniques was used by commercial banks in Kenya was carried out on all the banks. A regression analysis was developed in order to examine the relationship credit risk management and SME Nonperforming loans in Banks in
Kenya. The study established that there is a negative relationship between Credit Risk Management and nonperforming loans.

2.3.5 Loan Performance

Kangogo et al., (2014) conducted a study on the determinants of Non-Performing Personal Loans in Kenya’s Banking Industry. A case study research design of tier one banks in Kenya was employed. To achieve the objectives of the study, secondary data was collected from Central Bank of Kenya and Kenya National Bureau of Statistics. Correlation analysis was used to show the relationship between personal loan non-performance and unemployment, GDP, inflation and interest rate spread. A regression analysis was also carried out to analyze the impact of selected independent variables on non-performance of personal loans for the period 2000 to 2012. The study found a strong relationship between the four economic variables; GDP, inflation, unemployment and interest rates. GDP and unemployment were found to be negatively related to loan non-performance while inflation and interest rates were found to be positively related to loan non-performance. The coefficient of unemployment was found to be negative contrary to most empirical studies. This negative relationship could be explained by the fact that most personal loans by commercial banks in Kenya are only given to those already in employment as the pay slip is the security and as such the chances of default are low for those already in employment.

Munguti (2013) did a study on determinants of micro credit performance in microfinances in Kenya. The researcher took micro loan accounts at Small and Micro Enterprises programme-Deposit Taking Microfinance (SMEP-DTM) at Machakos branch in Machakos County. This study focused on all types of loans by the micro finance for the period running from 1st July 2009
to 30\textsuperscript{th} June 2012. During this period the microfinance advanced a total of 7000 loans. The researcher used stratified sampling to get a sample size of 180 borrowers. The data was gathered using questionnaires and analyzed using Logit model in the Statistical Package for Social Sciences (SPSS). The study found the default rate to be 46.36 per cent.

Vogiazas and Nikolaudou (2011) investigated the determinants of nonperforming loans in the Romanian banking sector by means of time series modelling. The study was motivated by the hypothesis that macroeconomic-cyclical indicators, monetary aggregates, interest rates, financial markets, and bank-specific variables influence the nonperforming loans in the Romanian banking system. Using monthly series that span from December 2001 to November 2010, they covered both the booming period and the recent financial crisis. The study examined the existence of a potential transmission channel to the Romanian banking system by investigating the impact of the Greek crisis to the Romanian nonperforming loans. Findings indicated that macroeconomic variables, specifically the construction and investment expenditure, the inflation and the unemployment rate, and the country's external debt to GDP and monetary aggregate M2 jointly with Greek crisis-specific variables influence the credit risk of the Romanian banking system.

2.4 Research gaps

From the studies conducted, there seems to be a consensus regarding negative effects of Non-performing loans on the performance of banks. Non-performance of loans has been pointed out as one of the major factors leading to poor performance of banks worldwide as well as bank failures. From the available literature, factors affecting loan performance include: Macroeconomic factors such as GDP, interest rates, inflation, unemployment and bank specific factors such as bank Credit risk management practices. Further, available empirical literature concedes that there is a strong relationship between credit risk management and loan performance in banks.
especially commercial banks. A negative relationship has been found between credit risk management and Non-performing loans by a majority of the studies conducted locally and internationally.

However, most of the studies in this area have focused on the banking sector as a whole, Commercial banks and microfinance institutions on aggregate. Not much research has been done to establish how Credit risk management is related to the performance of loans specifically for Microfinance Banks in Kenya. In order to fill this gap, this study seeks to determine the relationship between credit risk management and loan performance in microfinance banks in order to act as a guide to Microfinance banks’ management in controlling loan performance as they pursue good financial performance for the institutions they manage.

2.5 Conceptual framework

In this study, the conceptual framework is based on four independent variables that are presumed to affect loan performance in microfinance banks in Kenya. The independent variables representing credit risk management will be credit risk environment, credit appraisal process, credit administration, measurement and monitoring and internal control over credit risk while the dependent variable will be loan performance indicated by Ratio of Non-performing loans to total loans.
INDEPENDENT VARIABLES

Credit Risk Environment
- Credit risk strategy
- Credit policies and procedures
- Risk management for all products

Credit Appraisal Process
- Well defined Target Market
- Proper vetting of borrowers
- Credit limits for borrowers
- Appropriate Credit approval process

Credit administration, measurement and monitoring
- Monitoring system for credits
- Information systems and analytical techniques for measuring credit risk
- Internal risk rating system

Internal Control over credit risk
- Independent ongoing credit risk assessment
- Prompt reporting of policy exceptions
- Early remedial action on deteriorating credits

DEPENDENT VARIABLE

Loan Performance
- Ratio of Non-performing loans to total loans

Figure 1.1: Conceptual framework
Source (Researcher, 2017)
CHAPTER THREE

METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that was used in this study. Specifically, it covers the research design, target population, sample size and sampling design, data collection, data analysis and presentation and regression models.

3.2 Research Design

A research design is a plan showing how the research problem will be solved (Mugenda & Mugenda, 2003). This study used descriptive research design. This design aims at collecting data without manipulating the research variables or the respondents in an attempt to get the information required (Mugenda and Mugenda, 2008). The descriptive design was used in this study because of its appropriateness in establishing relationships between variables and facilitating the collection of information for achieving the objectives of the study. Further, Mugenda and Mugenda (2003) denoted that descriptive research enables subjects to give more information on the issue of interest under study. This research design was therefore appropriate in investigating the relationship between credit risk management and loan performance in Microfinance Banks.

3.3 Target Population

The population refers to the entire group of individuals or objects to which researchers are interested in generalizing the conclusions. The population usually has varying characteristics and it is also known as the theoretical population (Kothari, 2008). The target population is the population in research to which the researchers can apply their conclusions. Target population is a subset of the population at large and is also known as the study or accessible population.
(Pyrczak, 2010). The study population consisted of all the 12 Microfinance banks (AMFI List of DTMIs in Kenya, 2015) currently operating in Kenya (Appendix III) which are involved in some form of lending and are therefore exposed to credit risk and subsequently experience non-performing loans. The population provided insightful and relevant information on the relationship between credit risk management and loan performance in Microfinance Banks in Kenya.

3.4 Sample Size and Sampling Design

Kombo and Tromp (2009) and Kothari (2008) describe a sample as a collection of units chosen from the universe to represent it. Levy & Lemeshow (2013) defined sample as subset of the population to be studied. Sampling design is the strategy used to select study participants or respondents (Kothari, 2008). According to Cooper and Schindler (2006), a census is feasible when the population is small and therefore this was a census study. All the 12 microfinance banks registered by the regulator as at December 2015 were selected and used for the study. Purposive sampling was used in the selection of one credit manager, two credit analysts and two credit officers in each of the microfinance bank and therefore a total of 60 respondents was the sample size. The respondents were selected due to their involvement in handling matters concerning loans and repayment and therefore provided the information required in the study.

3.5 Validity and Reliability of the Research Instrument

3.5.1 Pilot Study

Prior to the actual study, a pilot study was carried out to pretest the validity and reliability of data collected using the questionnaire. The Test re-test method was used to pilot the questionnaires from respondents who did not form part of the sample of the study.
3.5.2 Validity of the Research Instrument

Joppe (2004) states that validity determines whether the research truly measures that which it is intended to measure or how truthful the research results are. According to Mugenda and Mugenda, (2003) internal validity is concerned with the extent to which a study establishes that a factor or variable has actually caused the effect that is found while external validity of the instrument indicates the appropriateness, meaningfulness and applicability of inferences to the target population. Validity of the questionnaire was established by the researcher and supervisor reviewing the items.

3.5.3 Reliability of the Research Instrument

Joppe (2004) defines reliability as the extent to which results are consistent over time and an accurate representation of the total population under study. Reliability analysis allows examination of the properties of measurement scales and the variables making them up. The reliability analysis procedure calculates a number of commonly used measures of scale reliability and provides information on the relationship between individual variables in the scale. A reliability analysis was carried out in this study to measure the reliability of independent variables. Cronbach’s alpha was used to determine the reliability whereby a co-efficient of above 0.7 implied that the instruments are sufficiently reliable for the measurement (Cooper, 2003). As indicated in table 3.1 below, findings revealed that the variables used in the study were reliable (Cronbach’s Alpha= 0.914). The Variable-Total statistics further reveal that each of the variables had a measure of 0.917 on the Cronbach’s Alpha scale meaning that all of them are reliable.
Table 3.1: Reliability Statistics

<table>
<thead>
<tr>
<th>Cronbach's Alpha</th>
<th>Cronbach’s Alpha Based on Standardized Items</th>
<th>N of Items</th>
</tr>
</thead>
<tbody>
<tr>
<td>.914</td>
<td>.917</td>
<td>22</td>
</tr>
</tbody>
</table>

3.6 Data collection Procedure

The study used primary data which was collected through structured questionnaires (Appendix II) administered by the "drop and pick later" method to the respondents. The questionnaires comprised closed ended questions which enabled the researcher to collect quantitative data for statistical analysis. The questionnaire is ideal for the descriptive survey, as it will enable quick collection of similar data across a relatively dispersed population (Kothari, 2008). Using a pre-designed questionnaire ensured that information sought was relevant to the objectives of the research, was standard and focused the research on collecting the information rather than thinking about what information to collect.

3.7 Data analysis and Presentation

Data analysis entailed the use of descriptive and inferential statistics which was done using the Statistical Package for Social Sciences (SPSS). Descriptive statistics such as percentages, frequencies, measures of central tendency such as means and standard deviation were done on the general information and variables under study. Mean values informed the study on those credit risk management practices mostly used by microfinance banks and the extent of their influence on loan performance. Standard deviations indicated deviations about the mean values of credit risk management and influence on loan performance. Percentages and frequencies
recorded the number of times a score or record was registered (Sprinthall, 2011). Inferential statistics (regression analysis, ANOVA) were conducted to determine nature of relationship between credit risk management and loan performance. Linear regression was used to establish the relationship between credit risk management and loan performance in Microfinance banks.

### 3.8 Regression Model

A major objective of any statistical investigation is to establish relationship which makes it possible to predict one or more variables in terms of others (Freund, 2001). The study adopted the following regression model to establish the form of relationship between credit risk management and loan performance in Microfinance Banks. The equation took the following form:

\[
Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon
\]

Where:

- \(Y\) = Loan performance
- \(X_1\) = Credit risk environment
- \(X_2\) = Credit appraisal
- \(X_3\) = Credit administration, measurement and monitoring
- \(X_4\) = Internal controls over credit risk
- \(\beta_0\) = the constant
- \(\beta_1 - \beta_4\) = the regression coefficient or change included in \(Y\) by each \(X\)
- \(\varepsilon\) = error term
3.9 Ethical Considerations

Authority to carry out this research was sought from all relevant authorities including Kenyatta University Graduate School, Ethical Review Committee and National Council of Science, Technology and Innovation (NACOSTI). Informed consent from respondents was sought and no inducement was given to elicit participation. Individuals unwilling to participate in the research were permitted to opt out or delegate the response to their juniors who may be deemed to be of equivalent ability for the purpose of the study. Confidentiality was guaranteed to the participants by assuring them that the information they provided was to be published as anonymous statistical data and used only for the purpose of academic research. Further, research assistants were also oriented in the ethics of the research.
CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION

4.1 Introduction

This chapter presents response rate, demographic characteristics of the respondents, data analysis and discussion of the relationship between credit risk management and loan performance in microfinance banks in Kenya. Analysis of the data was carried out using descriptive statistics with the aid of statistical package for social sciences (SPSS). The analysis was carried out with the guidance of the research objectives. The results are mainly presented through analysis of descriptive statistics and correlation results that test the relationship between the dependent variable and independent variables in this study.

The population of the study comprised of the 12 registered micro-finance banks where 5 questionnaires were given out in each micro-finance bank. Out the 60 questionnaires given to the respective respondents 54 of them were filled and collected indicating an excellent response rate of 90% as shown in the figure 4.1 below.
4.2 Demographic Characteristics of the Respondents

4.2.1 Gender of the Respondents

Respondents were to indicate their gender and as illustrated by figure 4.2, a total of 61% of the respondents involved in the study were male while the remaining 39% consisted of female. According to a report by Ernst & Young (2011), firms with a larger percentage of women especially in leadership positions show positive financial results. Further, firms that have high representation of women financially outperform, on average compared to those with the lowest. The results in this study show that most of the respondents were males (61%) and there is therefore more that needs to be done in the micro-finance banks to ensure diversity and empowering of women.
4.2.2 Age of the Respondents

Respondents were to indicate their age based on the categories provided. The greatest proportion of the respondents included in the study were in the age bracket of 30-39 years at 46%, followed by 20-29 years, then 40-49 years and finally those below 20 years taking the least percentage of 4% as shown in figure 4.3 below. This shows a workforce full of energy for the course in the micro-finance banks.

According to Ours & Stoeldraijer (2010), the importance of physical strength or the possibilities to compensate deficits in skills are likely to differ between age and sectors. The findings of this study are in agreement with a study by Vandenberghe & Waltenberg (2010), on ageing workforce and productivity who found out that the age productivity profile increases until the age group 30-35 years and then decreases until the age group from 55-60 years. Young workers
below 20 years and workers older than 50 years have a significantly smaller productivity than the reference group.

![Age of the respondents](image)

**Figure 4.3: Age of the respondents**  
Source: Research data (2017)

### 4.2.3 Highest Education Level Attained by the Respondents

The respondents were to indicate their highest education level attained. Results shown in figure 4.4 below indicate that most respondents had education level of bachelors (50%), followed by masters holders (31%) while diploma level was the least with 19%. Results from a study by Soderbom & Teal (2000) indicated that a one-year increase in the average education of the workforce increases value-added by about 14 per cent. In this study, most respondents (81%) had degree level of education and above. This means that there is increased value added in the micro-finance banks. Further, this indicates that there is a good working quality of the employees in the MFIs which enhances the organizational loan management which can lead to its performance. In
addition, this qualification of the respondents shows that data collected were provided by people understanding the subject under study.

![Graph showing highest education level of the respondents]

**Figure 4.4: Highest education level of the respondents**
Source: Research data (2017)

### 4.2.4 Occupation Level in the Organization

Respondents were to indicate the occupational level they hold in the micro-finance banks. The various levels provided included officer level, lower management, middle management and top management levels. Results shown in Figure 4.5 below indicate that 37% of the respondents were in the middle management, 28% in the lower management while 20% and 15% of the respondents were in the officer level and top management level respectively. Findings from the study indicating 37% of the respondents were in the middle management mean that most of the respondents were managers who report to top management and serve as the head of major departments and their specialized units. Further, the managers serve as a liaison between top managers and the rest of the organization from a very unique standpoint. They are typically
much more visible to the greater workforce than top management, but they spend most of their
time developing and implementing strategic actions plans needed to achieve the organizational
goals set by top management. Middle managers essentially have the important role of designing,
selecting, and carrying out the best plan possible as a means of propelling a company towards its
overall goals.

Figure 4.5: Occupational level in the micro-finance bank
Source; Research data (2017)

4.2.5 Period worked in the Micro-finance Bank

The respondents were to indicate the length of time they have been working. The numbers of
years were categorized into four that is 0-2 years, 3-5 years, 6-10 years and 11-15 years. Results
in Figure 4.6 indicate that most respondents had worked for 3-5 years (46%), 6-10 years and
below 2 years had 31% and 17% of the respondents respectively. The least were those who had
worked for 11-15 years and were only 6% of the respondents. The findings show that most
respondents had worked for the period between 3-5 years which indicates that the respondents
had some work experience which equips them with certain soft skills such as team working,
communication skills and commercial awareness, all of which are sought after by employers. They also have a better understanding of the banking sector including the challenges. This implies that most respondents have enough experience to accomplish their duties in order to improve the effectiveness of loan management. Therefore, when the institution has many employees experienced, there is upholding the positive effect of loan management on performance. For this study, this shows that we can rely on their views because they know what is happening in credit risk management.

![Figure 4.6: Period worked in the micro-finance bank](image)

Source; Research data (2017)

4.3 Credit Risk Environment

4.3.1 Sound credit risk management system

The respondents were to indicate whether their micro-finance banks had a sound credit risk management system. Results indicated that 93% of the respondents said that their micro-finance
banks had a sound credit risk management system while 7% of the respondents indicated that their micro-finance banks did not. According to Onuko, et al., (2015), the board of directors should have responsibility for approving and periodically (at least annually) reviewing the credit risk system and significant credit risk policies of the bank. The system should reflect the bank’s tolerance for risk and the level of profitability the bank expects to achieve for incurring various credit risks. This is evident based on the responses as indicated by the findings.

![Sound credit risk management system](chart)

**Figure 4.7: Sound credit risk management system**
Source; Research data (2017)

### 4.3.2 Descriptive for Credit Risk Environment
The survey asked respondents to indicate the extent of their agreement on the various aspects of credit risk environment. The statistics are summarized in table 4.1 below. Findings from the study indicate that the senior management in our bank develops policies and procedures for identifying, measuring, monitoring and controlling credit risk had the highest mean of 4.4444 and a standard deviation of 0.57188. This was followed by the senior management in our bank strictly implements the credit risk strategy approved by the board of directors which had a mean of 4.2778 and a standard deviation of 0.68451. The aspect of credit risk management which had
the lowest mean was our bank identifies and manages credit risk inherent in all products and activities with 3.7778. The findings concur with what Mwengei (2013), denoted that financial institutions should have in place comprehensive procedures and information systems to effectively monitor and control credit risk. These procedures should incorporate prudent criteria for identifying and reporting existing and potential problem accounts, ensuring that such accounts are sufficiently reviewed, adequately monitored and the relevant corrective action taken. The accurate classification of accounts and provisioning for loan losses should also form part of these procedures. Further, Nyong’o (2014) concluded that most banks in Kenya operate under a sound credit risk management process that reduces loan default which leads to low non-performing loans. The study also concluded that banks take into consideration potential future changes in economic conditions when assessing individual credits and their credit portfolios. For proper credit management process, banks should have management information systems that provide adequate information on the composition of the credit portfolio which is the sole responsibility of the senior management.
Table 4.1: Descriptive for credit risk environment

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>The board of directors approves the credit risk strategy and</td>
<td>54</td>
<td>1.00</td>
<td>5.00</td>
<td>4.1111</td>
<td>1.14376</td>
</tr>
<tr>
<td>significant credit risk policies of the bank</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The senior management in our bank strictly implements the</td>
<td>54</td>
<td>3.00</td>
<td>5.00</td>
<td>4.2778</td>
<td>.68451</td>
</tr>
<tr>
<td>credit risk strategy approved by the board of directors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The senior management in our bank develops policies and</td>
<td>54</td>
<td>3.00</td>
<td>5.00</td>
<td>4.4444</td>
<td>.57188</td>
</tr>
<tr>
<td>procedures for identifying, measuring, monitoring and</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>controlling credit risk</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The credit risk policies and procedures developed address</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>3.9444</td>
<td>.85598</td>
</tr>
<tr>
<td>credit risk in all the banks activities and at both the</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>individual credit and portfolio levels</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our bank identifies and manages credit risk inherent in all</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>3.7778</td>
<td>.71814</td>
</tr>
<tr>
<td>products and activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The bank subjects new credit products and activities to</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>3.9815</td>
<td>.98077</td>
</tr>
<tr>
<td>adequate risk management procedures and controls before being</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>introduced or undertaken</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source; Research data (2017)
4.3.3 Extent of establishment of an appropriate credit risk environment

The extent to which the micro-finance banks had established an appropriate credit risk environment was evaluated. The respondents were to indicate their level of agreement as no extent, little extent, moderate extent, great extent and very great extent. Findings are summarized in Table 4.2 below and they indicate that the extent of establishment of an appropriate credit risk management was at moderate extent (51%) and great extent (31%).

Table 4.2: Extent of establishment of an appropriate credit risk management

<table>
<thead>
<tr>
<th>Extent of establishment of appropriate credit risk management</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Little extent</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>28</td>
<td>51</td>
</tr>
<tr>
<td>Great extent</td>
<td>16</td>
<td>31</td>
</tr>
<tr>
<td>Very great extent</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research data (2017)

4.3.4 Extent of an appropriate credit risk environment effect on loan performance

The extent to which the micro-finance banks’ appropriate credit risk environment effect on loan performance was evaluated. The respondents were to indicate their level of agreement as no extent, little extent, moderate extent, great extent and very great extent. Findings summarized in Table 4.3 below indicate that the extent of appropriate credit risk environment effect on loan performance was at a great extent (54%).
Table 4.3: Extent of an appropriate credit risk environment effect on loan performance

<table>
<thead>
<tr>
<th>Extent of an appropriate credit risk environment effect on loan performance</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Little extent</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>7</td>
<td>13</td>
</tr>
<tr>
<td>Great extent</td>
<td>29</td>
<td>54</td>
</tr>
<tr>
<td>Very great extent</td>
<td>6</td>
<td>11</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research data (2017)

4.4 Sound Credit Appraisal Process

4.4.1 Operation of sound credit risk management system under sound credit appraisal process

The respondents were to indicate whether the credit risk management system was operating under a sound credit appraisal process. Results indicated that 78% of the respondents said that their credit risk management system was operating under a sound credit appraisal process while 22% of the respondents indicated that their credit risk management system was not operating under a sound credit appraisal process. A report by Basel (2000) indicated that an effective credit risk assessment and loan accounting practices should be performed in a systematic way and in accordance with established policies and procedures. The report further indicated that to be able to prudently value loans and to determine appropriate loan loss provisions, it is particularly important that banks have a system in place to reliably classify loans on the basis of credit risk. Larger loans should be classified on the basis of a credit risk grading system. Other, smaller loans may be classified on the basis of either a credit risk grading system or payment delinquency status.
4.4.2 Descriptive Statistics for Credit Risk Appraisal Process

The survey asked respondents to indicate the extent of their agreement on the various aspects of credit risk appraisal process. The descriptive statistics are summarized in table 4.4 below. Findings from the study indicate that our bank having established overall credit limits both at individual borrowers and counterparties level had the highest mean of 4.3148 and a standard deviation of 0.63911. All extensions of credit are made on an arm’s length basis had the lowest mean of 3.8519 and a standard deviation of 0.71129. According to Gakure et al., (2012), directors, senior management or other influential parties such as shareholders must not seek to override the established credit-granting and monitoring processes of the bank. Basel (2000) further noted that a potential area of abuse may arise from granting credit to non-arms-length and related parties, whether counterparties or individuals. It is important that credit institutions grant credit to such parties on an arm’s-length basis and that the amount of credit granted is suitably
monitored. Moreover the terms and conditions of such credits must not be more favorable than those granted to non-related borrowers under similar circumstances whilst imposing strict absolute limits on such credits. The study by Aliija and Muhangi (2017) established that client appraisal is a viable strategy for mitigating risk and there was a strong relationship between credit performance of MFIs and credit appraisal.

Table 4.4: Descriptive statistics for credit risk appraisal process

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our bank operates within sound, well defined credit appraisal criteria</td>
<td>54</td>
<td>3.00</td>
<td>5.00</td>
<td>4.1852</td>
<td>.82586</td>
</tr>
<tr>
<td>Our bank has established overall credit limits both at individual borrowers and counterparties level</td>
<td>54</td>
<td>3.00</td>
<td>5.00</td>
<td>4.3148</td>
<td>.63911</td>
</tr>
<tr>
<td>Our bank has a clearly established process for approving new and refinancing of existing credits</td>
<td>54</td>
<td>3.00</td>
<td>5.00</td>
<td>4.0741</td>
<td>.86552</td>
</tr>
<tr>
<td>All extensions of credit are made on an arm’s length basis</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>3.8519</td>
<td>.71129</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research data (2017)

4.4.3 Extent the sound credit appraisal process affect loan performance

The extent to which the sound credit appraisal process affects loan performance was evaluated. The respondents were to indicate their level of agreement as no extent, little extent, moderate extent, great extent and very great extent. Findings summarized in Table 4.5 below indicate that
the extent of sound credit appraisal process affects loan performance was at moderate extent (31%) and great extent (44%). Aliija and Muhangi (2017) revealed that MFIs use sound credit appraisal process through client appraisal in credit management to a great extent. Muturi and Rotich (2016) concluded that credit management is one of the most important activities in any company and cannot be overlooked by any economic enterprise engaged in credit irrespective of its business nature. Sound credit management through a sound credit appraisal process is a prerequisite for a financial institution’s stability and continuing profitability.

Table 4.5: Extent of the sound credit appraisal process effect on loan performance

<table>
<thead>
<tr>
<th>Extent of the sound credit appraisal process effect on loan performance</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Little extent</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>17</td>
<td>31</td>
</tr>
<tr>
<td>Great extent</td>
<td>24</td>
<td>44</td>
</tr>
<tr>
<td>Very great extent</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100</td>
</tr>
</tbody>
</table>

Source; Research data (2017)

4.5 Credit Administration, Measurement and Monitoring Process

4.5.1 Extent the Bank Maintains an Appropriate Credit Administration, Measurement and Monitoring process

The extent the bank maintains an appropriate credit administration, measurement and monitoring process was evaluated. The respondents were to indicate their level of agreement as no extent,
little extent, moderate extent, great extent and very great extent. Findings summarized in Table 4.6 below indicate that the extent the bank maintains an appropriate credit administration, measurement and monitoring process was at moderate extent (28%) and great extent (46%). A study carried out by Huppi and Feder (1990) revealed that effective monitoring leads to higher recovery of loans by exposing possible dangers (like loan diversions) and reminding borrowers of their obligations to the lending bank (i.e. calling for redoubling of efforts towards loan repayments). Monitoring of credit facilities has been concentrated typically on ensuring repayment when there are signs of defaults for either payment of interest or principal repayment by installments. Such practice fails to achieve desirable loan repayments since the facility might have already gone bad. This study revealed that the micro-finance banks to a great extent maintain an appropriate credit administration, measurement and monitoring process. Further, findings by Afande (2014) showed that with respect to monitoring of borrowers, it is very important as current and potential exposures change with both the passage of time and the movements in the underlying variables.
Table 4.6: Extent the bank maintains an appropriate credit administration, measurement and monitoring process

<table>
<thead>
<tr>
<th>Extent the bank maintains an appropriate credit admin, measurement and monitoring process</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td>2</td>
<td>4</td>
</tr>
<tr>
<td>Little extent</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>15</td>
<td>28</td>
</tr>
<tr>
<td>Great extent</td>
<td>25</td>
<td>46</td>
</tr>
<tr>
<td>Very great extent</td>
<td>8</td>
<td>15</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research data (2017)

4.5.2 Descriptive Statistics for Credit Administration, Measurement and Monitoring Process

The survey asked respondents to indicate the extent of their agreement on the various aspects of credit administration, measurement and monitoring process. The descriptive statistics are summarized in table 4.7 below. Findings indicate that the bank having a system for monitoring the condition of individual credits, including determining the adequacy of the provisions and reserves had the highest mean of 4.2222 and a standard deviation of 0.88310. Results further indicate that the bank taking into consideration potential future changes in economic conditions when assessing individual credits and their credit portfolios had the lowest mean of 3.5000 and a standard deviation of 1.14513. This is important as it helps in monitoring of credit facilities to ensure that repayment is done when there are signs of defaults for either payment of interest or principal repayment by installments thus no loss is incurred by the banks. This implies that MFIs
should develop appropriate credit policies to ensure that credit administration is done effectively and increasing the affect loan repayments and bad debts. This is in line with Batar et al. (2008), who stated that credit policy provides the basis of all the credit management, it establishes objective standards and parameters to be followed by bank employees responsible for the provision and processing of loans and management. Additionally, Riach (2010) observed that credit terms are normally looked at as the credit period terms of discount and the amount of credit and choice of instrument used to evidence credit.
Table 4.7: Descriptive Statistics for Credit Administration, Measurement and Monitoring Process

<table>
<thead>
<tr>
<th>Indicators</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our bank has a system for the ongoing administration of various credit risk bearing portfolios</td>
<td>54</td>
<td>3.00</td>
<td>5.00</td>
<td>3.8148</td>
<td>.84840</td>
</tr>
<tr>
<td>Our bank has a system for monitoring the condition of individual credits, including determining the adequacy of the provisions and reserves</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>4.2222</td>
<td>.88310</td>
</tr>
<tr>
<td>The rating system is consistent with the nature, size and complexity of our banks activities</td>
<td>54</td>
<td>3.00</td>
<td>5.00</td>
<td>4.0185</td>
<td>.62919</td>
</tr>
<tr>
<td>Our bank has information systems and analytical techniques that enable management to measure the credit risk inherent in all on and off balance sheet activities</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>3.7222</td>
<td>.95989</td>
</tr>
<tr>
<td>The management information system should provide adequate information on the composition of credit portfolios</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>4.0556</td>
<td>.83365</td>
</tr>
<tr>
<td>Our bank takes into consideration potential future changes in economic conditions when assessing individual credits and their credit portfolios</td>
<td>54</td>
<td>1.00</td>
<td>5.00</td>
<td>3.5000</td>
<td>1.14513</td>
</tr>
</tbody>
</table>

Valid N (listwise) 54

Source: Research data (2017)

4.5.3 Extent an Appropriate Credit Administration, Measurement and Monitoring Process affect loan performance

The extent to which an appropriate credit administration, measurement and monitoring process affect loan performance was evaluated. The respondents were to indicate their level of agreement as no extent, little extent, moderate extent, great extent and very great extent. Findings
summarized in Table 4.8 below indicate that the extent to which an appropriate credit administration, measurement and monitoring process affect loan performance was at great extent (30%) and very great extent (35%). The findings are supported by those of Mumbi and Omagwa (2017) who concludes that lending requirements is a factor that influences financial performance of commercial banks in Kenya and in this regards borrowers’ historical and projected cash flows and adequate collateral margins should be evaluated in order to improve financial performance and loans recovery. Further, monitoring the recovery process is important to ensure that loan default is averted.

Table 4.8: Extent an appropriate credit administration, measurement and monitoring process affect loan performance

<table>
<thead>
<tr>
<th>Extent an appropriate credit administration, measurement and monitoring process affect loan performance</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Little extent</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Great extent</td>
<td>16</td>
<td>30</td>
</tr>
<tr>
<td>Very great extent</td>
<td>19</td>
<td>35</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research data (2017)
4.6 Internal Control over Credit Risk Management

4.6.1 Internal Control over Credit Risk Management in the Bank

The respondents were to indicate whether there was an internal control system over credit risk management system in their bank. Results indicated that 93% of the respondents said that there was an internal control system over credit risk management system in their bank while 7% of the respondents indicated that an internal control system over credit risk management system was not in existence in their bank. Financial institutions should establish internal controls and practices to ensure that the credit initiation, approval, review, administration, payments and work-out functions are kept as separate as possible. This is indicated by the high positive response of the respondents involved in this study.

![Pie chart showing internal control system over credit risk management in the bank]

**Figure 4.9: Internal control system over credit risk management in the bank.**

Source; Research data (2017)
4.6.2 Extent the Internal Control System over Credit Risk Management is Adequate

The extent to which the internal control system over credit risk management is adequate was evaluated. The respondents were to indicate their level of agreement as no extent, little extent, moderate extent, great extent and very great extent. Findings summarized in Table 4.9 below indicate that the extent to which the internal control system over credit risk management is adequate was at great extent (48%). Pyle (1997) argued that internal control is effective only when properly designed and operating as intended, you need to monitor the quality of your internal control’s performance over time. Effective monitoring helps ensure your system of internal control continues to provide the protection you envisioned which is indicated by the findings of this study.

Table 4.9: Extent to which the Internal Control System over Credit Risk Management is Adequate

<table>
<thead>
<tr>
<th>Extent to which the Internal Control System over Credit Risk Management is Adequate</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Little extent</td>
<td>18</td>
<td>33</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>10</td>
<td>19</td>
</tr>
<tr>
<td>Great extent</td>
<td>26</td>
<td>48</td>
</tr>
<tr>
<td>Very great extent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research data (2017)
4.6.3 Descriptive Statistics for Internal Control System over Credit Risk Management

The survey asked respondents to indicate the extent of their agreement on the various aspects of credit administration, measurement and monitoring process. The descriptive statistics are summarized in table 4.10 below. Results indicated that the bank having an independent internal control system for conducting on going assessment of the bank’s credit risk management process had the highest mean of 4.2778 and a standard deviation of 0.73758. Conversely, the bank having a system for early remedial action on deteriorating credits and managing problems credits had the lowest mean of 3.6111 and a standard deviation of 1.12295.

According to a report by Haneef et al. (2012), the board of directors is responsible for taking or ensuring all measures required to ensure that internal control system carry out their tasks impartially and independent of the bank's primary activities. In house regulations on internal audit (inspection) and risk management should be designed so that these units are administratively independent of each other and accountable to the bank's board of directors and senior management individually within the scope of the internal control function. Further, this clearly shows that credit control is a critical system of control as it prevents the institution from becoming illiquid due to improper issuance of credit to customers and therefore appropriate controls and responses must be put in place. This concurred with Weston (1982), who stated that credit policies considers credit limit which the firm will extend at a point in time. He further stated that banks should have keen awareness of the need to identify, measure monitor and control credit risks as well as have adequate capital against these risks. Muturi (2016) indicated that banks must ensure that the credit-granting function is being properly managed and that credit exposures are within levels consistent with prudential credit standards. Moreover, Kakuru (2003)
noted that it’s important that credit standards are based on the individual credit application by considering character assessment, capacity, condition, and collateral and security capital.

Table 4.10: Descriptive Statistics for Internal Control System over Credit Risk Management

<table>
<thead>
<tr>
<th>Description</th>
<th>N</th>
<th>Min</th>
<th>Max</th>
<th>Mean</th>
<th>Std. Deviation</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our bank has an independent internal control system for conducting ongoing assessment of the bank’s credit risk management process</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>4.2778</td>
<td>.73758</td>
</tr>
<tr>
<td>The results of these reviews are communicated directly to the board of directors and senior management</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>3.9074</td>
<td>.85271</td>
</tr>
<tr>
<td>The internal control system ensures that the credit granting function is properly managed</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>3.8148</td>
<td>1.06530</td>
</tr>
<tr>
<td>The internal control system ensures that the credit exposures are within prudential standards and internal limits</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>3.9630</td>
<td>.82332</td>
</tr>
<tr>
<td>The internal control system ensures that the credit exposures that are exceptions to policies, procedures and limits are reported in timely manner to the management</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>3.7963</td>
<td>1.05293</td>
</tr>
<tr>
<td>Our bank has a system for early remedial action on deteriorating credits and managing problems credits</td>
<td>54</td>
<td>2.00</td>
<td>5.00</td>
<td>3.6111</td>
<td>1.12295</td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>54</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Source: Research data (2017)
4.6.4 Extent the Internal Control System affects loan performance

The extent to which the internal control system affects loan performance was evaluated. The respondents were to indicate their level of agreement as no extent, little extent, moderate extent, great extent and very great extent. Findings summarized in Table 4.11 below indicate that the extent to which the internal control system over credit risk management is adequate was at great extent (54%).

Table 4.11: Extent to which the Internal Control System over Credit Risk Management is Adequate

<table>
<thead>
<tr>
<th>Extent to which the Internal Control System over Credit Risk Management is Adequate</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Little extent</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>12</td>
<td>22</td>
</tr>
<tr>
<td>Great extent</td>
<td>29</td>
<td>54</td>
</tr>
<tr>
<td>Very great extent</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research data (2017)

4.6.5 Extent the Credit Risk Management Practices Adopted Influence the Level of Non-performing loans

The extent to which the credit risk management practices adopted influence the level of non-performing loans in the bank was evaluated. The respondents were to indicate their level of agreement as no extent, little extent, moderate extent, great extent and very great extent. Findings summarized in Table 4.12 below indicate that the extent to which the credit risk management practices
adopted influence the level of non-performing loans in the bank was at great extent (33%) and to a great extent (52%). The findings of this study are consistent with those found by Kithinji (2010) who contended that the concept of credit risk management can be treated as the heart of any financial organization and plays the vital role in the performance of a financial institution as it analyzes credit worth ability of borrowers. He further argued that if there is any gap in credit risk assessment, then recovery of the provided loans is challenged greatly. As a whole, profitability falls in a great uncertainty.

Table 4.12: Extent to which the Internal Control System over Credit Risk Management is Adequate

<table>
<thead>
<tr>
<th>Extent to which the Internal Control System over Credit Risk Management is Adequate</th>
<th>Frequency</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No extent</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Little extent</td>
<td>3</td>
<td>6</td>
</tr>
<tr>
<td>Moderate extent</td>
<td>5</td>
<td>9</td>
</tr>
<tr>
<td>Great extent</td>
<td>18</td>
<td>33</td>
</tr>
<tr>
<td>Very great extent</td>
<td>28</td>
<td>52</td>
</tr>
<tr>
<td>Total</td>
<td>54</td>
<td>100</td>
</tr>
</tbody>
</table>

Source: Research data (2017)

4.7 Regression Analysis

A linear regression analysis was conducted so as to test relationship among the variables. The research applied the statistical package for social sciences (SPSS) to code, enter and compute the
measurements of the multiple regressions for the study. Table 4.13 below, provides the summary of the regression model applied in this study.

Coefficient of determination explains the extent to which changes in dependent variable can be explained by the change in the independent variables or the percentage of the variation in the dependent variable (Loan performance) that is explained by all the four independent variables (Credit risk environment, Credit appraisal process, Credit administration, measurement and monitoring, internal control over credit risk).

Table 4.13: Model summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted R Square</th>
<th>Std. Error of the Estimate</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>.936(a)</td>
<td>.875</td>
<td>.870</td>
<td>.18705</td>
</tr>
</tbody>
</table>

Predictors: (Constant), Credit risk environment, Credit appraisal process, Credit administration, measurement and monitoring, Internal control over credit risk

According to the direct relationship model applied in this study, Adjusted R Square was 0.870 implying that the independent variables studied explain 87.0% of the relationship between credit risk management and loan performance in microfinance banks in Kenya. This implies that the other variables not studied in this research contributed 13.0% of the variability in loan performance of Microfinance Banks.

The ANOVA report which assesses the overall significance of the regression model applied in this study indicated that, p<0.5 (Sig. =0.000) and therefore our model was significant at 95% confidence level.
Table 4.14: ANOVA

<table>
<thead>
<tr>
<th>Model</th>
<th>Sum of Squares</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Regression</td>
<td>7.626</td>
<td>1</td>
<td>7.626</td>
<td>59.260</td>
<td>.000(a)</td>
</tr>
<tr>
<td>Residual</td>
<td>6.691</td>
<td>52</td>
<td>.129</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total</td>
<td>14.317</td>
<td>53</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: (Constant), Credit risk environment, Credit appraisal process, Credit administration, measurement and monitoring, Internal control over credit risk

b. Dependent Variable: Loan Performance

Below is the table of coefficients for the regression model applied in the study;

A composite index was calculated by finding the average of each of the independent variables and the dependent variable. The means provided figures used in obtaining coefficients using SPSS are indicated in Table 4.15

Table 4.15: Table of Coefficients

<table>
<thead>
<tr>
<th></th>
<th>Unstandardized Coefficients</th>
<th>Standardized Coefficients</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Std. B</td>
<td>Std. Error</td>
</tr>
<tr>
<td>(Constant)</td>
<td>-.259</td>
<td>.107</td>
</tr>
<tr>
<td>Credit risk environment</td>
<td>.304</td>
<td>.026</td>
</tr>
<tr>
<td>Credit appraisal process</td>
<td>.366</td>
<td>.034</td>
</tr>
<tr>
<td>Credit administration, measurement and monitoring</td>
<td>.387</td>
<td>.030</td>
</tr>
<tr>
<td>Internal control over credit risk</td>
<td>.250</td>
<td>.000</td>
</tr>
</tbody>
</table>

a. Dependent Variable: Loan performance

The linear regression model for this study was

\[ Y = \beta_0 + \beta_1 X_1 + \beta_2 X_3 + \beta_3 X_3 + \beta_4 X_4 + \epsilon \]
Where:

\[ Y = \text{Loan Performance} \]
\[ X_1 = \text{Credit risk environment} \]
\[ X_2 = \text{Credit appraisal} \]
\[ X_3 = \text{Credit administration, measurement and monitoring} \]
\[ X_4 = \text{Internal controls over credit risk} \]
\[ \beta_0 = \text{the constant} \]
\[ \epsilon = \text{error term} \]

As per the SPSS results generated, the equation translates to:

**Loan Performance** = -0.259 + 0.337 \( X_1 \) + 0.393 \( X_2 \) + 0.439 \( X_3 \) + 0.341\( X_4 \)

Where; **Loan performance** = Constant + Credit risk environment + Credit appraisal process + Credit administration, measurement and monitoring + Internal control over credit risk

The results in Table 4.15 imply that credit risk environment relates positively with loan performance, the relationship is statistically significant at the 99% confidence level (\( \beta=0.337, \ p<0.01; \ p=0.000 \)); There is a positive relationship between loan performance of micro-finance banks and credit appraisal process which is statistically significant at the 95% confidence level (\( \beta=0.393, \ p<0.5; \ p=0.000 \)); Credit administration, measurement and monitoring relates positively with loan performance and the relationship is significant at 99% level of confidence (\( \beta=0.439, \ p=0.000 \)). Similarly there is a positive relationship between loan performance and internal control over credit risk and the relationship is statistically significant at the 95% level of confidence (\( \beta=0.341, \ p=0.000 \)).
CHAPTER FIVE
SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents a summary of the findings, conclusions and recommendations based on the findings. Further, the chapter has the limitations of the study and areas for further research.

5.2 Summary of Findings

The general objective of the study was to investigate the relationship between credit risk management and loan performance in Microfinance Banks in Kenya. The study therefore sought to achieve four specific objectives which comprised of finding out how credit risk environment, credit appraisal process, credit administration, measurement and monitoring process and internal control over credit risk affect the loan performance of Microfinance Banks in Kenya. The target population was all the 12 Microfinance banks currently operating and registered in Kenya as of 31st December 2015. A structured questionnaire was used to collect data. The administration of the questionnaires was by hand delivery. The data was analyzed using SPSS by employing descriptive and inferential statistics such as percentages and regressions. The findings pertaining to the four objectives of the study were presented in form of percentages, frequency tables, charts and graphs. From the findings also, it was established that most respondents were in the middle management of the banks. Furthermore, most were male, had education level of a university degree and above, had worked in the banks for 3-5 years and were in the age category between 30-39 years.

The first objective was to determine the relationship between credit risk environment setting and loan performance in Microfinance Banks in Kenya. Findings indicated 93% of the respondents denoted that their micro-finance banks had a sound credit risk management system. From the
indicators enlisted, the senior management in the banks developing policies and procedures for identifying, measuring, monitoring and controlling credit risk was an important key credit risk environment aspect since it had the highest mean of 4.4. Results further indicated that the senior management in the bank strictly implementing the credit risk strategy approved by the board of directors was another key credit risk environment aspect hence positively affecting the loan performance of Microfinance banks in Kenya. Further, the extent of establishment of an appropriate credit risk management was at moderate extent (51%) and great extent (31%).

The second objective was to establish the relationship between credit appraisal process and loan performance in Microfinance Banks in Kenya. Findings indicated that 78% of the respondents denoted that their credit risk management system was operating under a sound credit appraisal process. Results further indicated that the bank having established overall credit limits both at individual borrowers and counterparties level was critical in credit appraisal process and therefore had the highest mean of 4.3. Results further indicated that all extensions of credit being made on an arm’s length basis was not a key credit appraisal process in the microfinance banks. Additionally, extent of sound credit appraisal process affects loan performance was at moderate extent (31%) and great extent (44%).

The third objective of the study was to determine the relationship between credit administration, measurement and monitoring and loan performance in Microfinance Banks in Kenya and findings showed that the extent the bank maintains an appropriate credit administration, measurement and monitoring process was at great extent (46%). It was also established that the bank having a system for monitoring the condition of individual credits, including determining the adequacy of the provisions and reserves had the highest mean of 4.2. Results further indicate that the bank taking into consideration potential future changes in economic conditions when
assessing individual credits and their credit portfolios had the lowest mean thus not considered crucial by the respondents in credit administration, measurement and monitoring and loan performance in Microfinance Banks in Kenya. Moreover, the extent to which an appropriate credit administration, measurement and monitoring process affect loan performance was at great extent (30%).

The fourth objective was to determine the relationship between internal controls over credit risk and loan performance in Microfinance Banks in Kenya. Results indicated that 93% of the respondents noted that there was an internal control system over credit risk management system in their bank. Results further indicated that the bank having an independent internal control system for conducting on going assessment of the bank’s credit risk management process had the highest mean of 4.3. Conversely, the bank having a system for early remedial action on deteriorating credits and managing problems credits had the lowest mean. Additionally, findings showed that the extent to which the internal control system over credit risk management is adequate was at great extent (48%).

5.3 Conclusion

This study concludes that loan performance is significantly affected by credit risk environment, credit appraisal process, credit administration, measurement and monitoring and internal control over credit risk. As indicated by the regression equation Loan Performance = -0.259 + 0.337 (credit risk environment) + 0.393 (credit appraisal process) + 0.439 (credit administration, measurement and monitoring) + 0.341(internal control over credit risk). The inferential statistics analysis of the study findings indicated that all the study variables positively affected loan performance of the microfinance banks in Kenya. They are therefore very relevant in explaining the loan performance of the microfinance banks in Kenya.
5.4 Recommendations

The following recommendations were made in the light of the findings and conclusions to assist the management of microfinance banks in Kenya to improve on their loan performance relative to the credit risk management.

1. The senior management in the banks should develop policies and procedures for identifying, measuring, monitoring and controlling credit risk.

2. The MFIs should establish overall credit limits both at individual borrowers and counterparties level since this is critical in credit appraisal process.

3. The MFIs should have a system for monitoring the condition of individual credits, including determining the adequacy of the provisions.

4. MFIs should have an independent internal control system for conducting ongoing assessment of the bank’s credit risk management process.

5.5 Limitations of the study

The major limitation of the study was cost and time. The researcher sampled a representative sample to mitigate the same such that only 60 respondents were targeted in the microfinance banks.

5.6 Areas for Further Research

From the findings and conclusion, the study recommends an in-depth study to be carried out on other firms in different industries to find out if the same results would be obtained, since this study was limited to the banking industry. The findings of the study indicated that the variables studied explained 87% of the changes in loan performance of microfinance banks thus there are also other factors affecting loan performance which should be critically examined.
REFERENCES


Coyle B. (2000). Framework for Credit Risk Management; Chartered Institute of Bankers, United Kingdom.


Sundararajan & Errico (2002). Credit Programme: A Case Study of Uasin Gishu District Trade Development Joint Loan Board, Nairobi


Walsh, L. (2010). An assessment of the credit management process of credit unions: An examination of three Chapters, Published Masters in Business Studies, Waterford Institute of Technology, Waterford

APPENDICES

APPENDIX I: INTRODUCTORY LETTER TO RESPONDENTS

Dear Sir/Madam,

RE: REQUEST FOR PARTICIPATION IN MY RESEARCH WORK.

I am a postgraduate student in the faculty of commerce, Kenyatta University pursuing a Master of Business Administration (MBA) degree program. In order to fulfil the degree requirements I am currently undertaking a research on “The relationship between credit risk management practices and loan performance in microfinance banks in Kenya” Your Institution has been selected to participate in this study. I would highly appreciate if you spare some time for me to fill this questionnaire.

This exercise is strictly for academic purposes and any information obtained will be treated with confidentiality. A copy of the financial research report will be available to you once the study is complete upon request.

Thank you in advance for your co-operation
APPENDIX II: QUESTIONNAIRE

Instructions: Please tick where appropriate
Your cooperation and feedback is valued and highly appreciated.

Section A: Demographic information
1. Gender
   Male [ ]  Female  [ ]

2. Age Bracket (Choose one)
   Below 20 years [ ] 20-29 years  [ ] 30-39 years [ ] 40-49 years [ ] Over 50 years [ ]

3. Highest education level attained
   Certificate [ ] Diploma [ ] Bachelor’s degree [ ] Master’s degree [ ] Others [ ]

4. Your Occupational level in the organization (Choose one)
   Officer level [ ] Lower Management [ ] Middle Management [ ] Top Management [ ]

5. Number of years worked in your organization (Choose one)
   0-2 years [ ] 3-5 years [ ] 6-10 years [ ] 11-15 years [ ] Over 15 years [ ]

Section B: Credit Risk Environment
1. Does your bank have a sound credit risk management system?
   Yes [ ] No [ ]

2. To what extent do you agree with the following statement on establishing a proper credit risk environment in your bank? Rate using a scale of 1 to 5 where 5 is strongly agree, 4 is Agree, 3 is Neutral, 2 is Disagree and 1 is Strongly disagree.

<table>
<thead>
<tr>
<th>Credit Risk Environment</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>The board of directors approves the credit risk strategy and significant credit risk policies of the bank.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The senior management in our bank strictly implements the credit risk strategy approved by the board of directors</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The senior management in our bank develops policies and procedures for identifying, measuring, monitoring and controlling credit risk.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
The credit risk policies and procedures developed address credit risk in all the bank’s activities and at both the individual credit and portfolio levels.

Our bank identifies and manages credit risk inherent in all products and activities.

The bank subjects new credit products and activities to adequate risk management procedures and controls before being introduced or undertaken.

3. On overall, to what extent has your bank established an appropriate credit risk environment?
   Very great extent [ ]   Great extent [ ]   Moderate extent [ ]   Little extent [ ]   No extent [ ]

4. To what extent does existence of an appropriate credit risk environment affect Loan performance in your bank?
   Very great extent [ ]   Great extent [ ]   Moderate extent [ ]   Little extent [ ]   No extent [ ]

Section C: Sound Credit Appraisal Process

5. Does your credit risk management system operate under a sound credit appraisal process?
   Yes [ ]   No [ ]

6. To what extent do you agree with the following statements about operating under a sound credit appraisal process in your bank? Rate using a scale of 1 to 5 where 5 is strongly agree, 4 is Agree, 3 is Neutral, 2 is Disagree and 1 is Strongly disagree.

<table>
<thead>
<tr>
<th>Credit appraisal process</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our bank operates within sound, well-defined credit-appraisal criteria</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our bank has established overall credit limits both at individual borrowers and counterparties level.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our bank has a clearly established process for approving new and re-financing of existing credits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All extensions of credit are made on an arm’s-length basis.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
7. On overall, to what extent does a sound credit appraisal process affect loan performance in your bank?
Very great extent [ ] Great extent [ ] Moderate extent [ ] Little extent [ ] No extent [ ]

Section D: Credit Administration, Measurement and Monitoring Process

8. To what extent does bank maintain an appropriate credit administration, measurement and monitoring process?
Very great extent [ ] Great extent [ ] Moderate extent [ ] Little extent [ ] No extent [ ]

9. To what extent do you agree with the following statements about credit administration, measurement and monitoring process in your bank? Use a scale of 1 to 5 where to a very great extent, 4 is to a great extent, 3 is to a moderate extent, 2 is to a little extent while 1 is to no extent

<table>
<thead>
<tr>
<th>Credit Administration, Measurement and Monitoring</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our Bank has a system for the on-going administration of various credit risk-bearing portfolios</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our bank has a system for monitoring the condition of individual credits, including determining the adequacy of provisions and reserves</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The rating system is consistent with the nature, size and complexity of our bank’s activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our bank have information systems and analytical techniques that enable management to measure the credit risk inherent in all on- and off-balance sheet activities</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The management information system should provide adequate information on the composition of the credit portfolio.</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our bank take into consideration potential future changes in economic conditions when assessing individual credits and their credit portfolios</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

11. To what extent does an appropriate credit administration, measurement and monitoring process affect loan performance in your bank?
Very great extent [ ] Great extent [ ] Moderate extent [ ] Little extent [ ] No extent [ ]
Section E: Internal Control over credit risk management

12. Does your bank have an internal control system over credit risk management?
Yes [ ] No [ ]

13. To what extent are the internal controls over credit risk at your bank adequate?
Very great extent [ ] Great extent [ ] Moderate extent [ ] Little extent [ ] No extent [ ]

14. To what extent does the following credit risk management element influence loan performance in your bank? Use a scale of 1 to 5 where 5 indicates to a very great extent, 4 is to a great extent, 3 is to a moderate extent, 2 is to a little extent while 1 is to no extent

<table>
<thead>
<tr>
<th>Internal control over credit risk</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Our bank has an independent internal control system for conducting on-going assessment of the bank’s credit risk management process</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The results of these reviews are communicated directly to the board of directors and senior management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Internal control system ensures that the credit granting function is properly managed</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Internal control system ensures that the credit exposures are within prudential standards and internal limits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>The Internal control system ensures that exceptions to policies, procedures and limits are reported in a timely manner to management</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Our bank has a system in place for early remedial action on deteriorating credits and managing problem credits</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

15. To what extent does internal control over credit risk affect loan performance in your bank?
Very great extent [ ] Great extent [ ] Moderate extent [ ] Little extent [ ] No extent [ ]

16. On overall, to what extent does the credit risk management practices adopted by your bank influence loan performance?
Very great extent [ ] Great extent [ ] Moderate extent [ ] Little extent [ ] No extent [ ]

THANK YOU FOR YOUR PARTICIPATION
## APPENDIX III: LICENSED MICRO FINANCE BANKS IN KENYA

<table>
<thead>
<tr>
<th>No.</th>
<th>Bank Name</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Choice Microfinance Bank Limited</td>
</tr>
<tr>
<td>2</td>
<td>Faulu Microfinance Bank Ltd</td>
</tr>
<tr>
<td>3</td>
<td>Kenya Women Microfinance Bank Ltd</td>
</tr>
<tr>
<td>4</td>
<td>SMEP Microfinance Bank Ltd</td>
</tr>
<tr>
<td>5</td>
<td>Remu Microfinance Bank Ltd</td>
</tr>
<tr>
<td>6</td>
<td>Rafiki Microfinance Bank Ltd</td>
</tr>
<tr>
<td>7</td>
<td>Uwezo Microfinance Bank Ltd</td>
</tr>
<tr>
<td>8</td>
<td>Century Microfinance Bank Ltd</td>
</tr>
<tr>
<td>9</td>
<td>Sumac Microfinance Bank Ltd</td>
</tr>
<tr>
<td>10</td>
<td>U&amp;I Microfinance Bank Ltd</td>
</tr>
<tr>
<td>11</td>
<td>Daraja Microfinance Bank Ltd</td>
</tr>
<tr>
<td>12</td>
<td>Caritas Microfinance Bank Ltd</td>
</tr>
</tbody>
</table>

**Source:** Central Bank of Kenya (CBK) Website 2015
APPENDIX IV: KU RESEARCH APPROVAL

KENYATTA UNIVERSITY
GRADUATE SCHOOL

E-mail: dean-graduate@ku.ac.ke
Website: www.ku.ac.ke

P.O. Box 43844, 00100
NAIROBI, KENYA
Tel. 810901 Ext. 4150

FROM: Dean, Graduate School
TO: Murugi David Macharia
     C/o Accounting and Finance Dept.

SUBJECT: APPROVAL OF RESEARCH PROJECT PROPOSAL

DATE: 20th July, 2016
REF: D53/OL/23119/201?

This is to inform you that Graduate School Board at its meeting of 8th July, 2016 approved your Research Project Proposal for the MBA Degree Entitled, “The Relationship between Credit Risk Management Practices and Loan Performance in Microfinance Banks in Kenya”.

You may now proceed with your Data Collection, Subject to Clearance with Director General, National Commission for Science, Technology and Innovation.

As you embark on your data collection, please note that you will be required to submit to Graduate School completed Supervision Tracking Forms per semester. The form has been developed to replace the Progress Report Forms. The Supervision Tracking Forms are available at the University’s Website under Graduate School webpage downloads.

Thank you.

EDWIN OBUNGU
FOR: DEAN, GRADUATE SCHOOL

c.c. Chairman, Accounting and Finance Department.
Supervisors:

1. Mr. Anthony Thuo
   C/o Department of Accounting and Finance
   Kenyatta University

EO/rwm
APPENDIX V: NACOSTI RESEARCH AUTHORIZATION

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471, 2241349, 3310571, 2219420
Fax: +254-20-318245, 318249
Email: dg@nacosti.go.ke
Website: www.nacosti.go.ke
When replying Please quote

Ref: No. NACOSTI/P/16/59339/13594

Date: 8th September, 2016

David Macharia Murigi
Kenyatta University
P.O. Box 43844-00100
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on “The relationship between Credit Risk Management practices and loan performance in microfinance banks in Kenya,” I am pleased to inform you that you have been authorized to undertake research in all Counties for the period ending 7th September, 2017.

You are advised to report to the Chief Executive Officers of selected Microfinance Banks, the County Commissioners and the County Directors of Education, all Counties before embarking on the research project.

On completion of the research, you are expected to submit two hard copies and one soft copy in pdf of the research report/thesis to our office.

Boniface Wanyama
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The Chief Executive Officers
Selected Microfinance Banks.

The County Commissioners
All Counties.

THIS IS TO CERTIFY THAT: MR. DAVID MACHARIA MURIGI of KENYATTA UNIVERSITY, 1282-20117 Naivasha, has been permitted to conduct research in All Counties on the topic: THE RELATIONSHIP BETWEEN CREDIT RISK MANAGEMENT PRACTICES AND LOAN PERFORMANCE IN MICROFINANCE BANKS IN KENYA for the period ending: 7th September, 2017.

[Signature]

[Date]

[Stamp]

The National Commission for Science, Technology and Innovation