THE DEBT RESTRUCTURING STRATEGIES AND THE LEVEL OF NON-PERFORMING LOANS IN MICROFINANCE INSTITUTIONS IN NAIROBI COUNTY

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A research project submitted to the Graduate School in partial fulfilment for the Requirements of the Master of Business Administration degree of Egerton University

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DECLARATION AND RECOMMENDATION

Declaration

I declare this research project is my own original work and has not been presented for examination in any university or any other institution for the award of diploma, degree or any other certificate

Signed ……………………………. Date ……………………

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Recommendation

This research project has been presented for examination with my approval as The University's Supervisor.

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DEDICATIONS

This Research Project is dedicated to my Parents Mr. & Mrs. Mutuku. Thank you for the way you raised me-encouraging me to work hard. You showed and taught me good virtues. I appreciate for the much needed financial and emotional support that you have always given me. You always stood by me and gave me hope in all undertakings. I would also like to dedicate this work to my sisters Lucy Mutuku and Sharon Mutuku and my niece Naomi Musengya; I wish it would serve to inspire, challenge, and direct you to originality, competency and self-actualization

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ABSTRACT

The purpose of this study was to determine the influence of debt restructuring strategies on the level of non-performing loans in microfinance institutions in Nairobi County. Specifically, the study sought to establish the effect of debt rescheduling, interest rate reduction and haircuts on the level of non-performing loans in MFIs in Nairobi County. Explanatory research design was adopted with the population of study comprising of all 57 MFIs in Nairobi County under umbrella body AMFI. Both primary and secondary data was collected. Primary data was collected with the help of a semi structured questionnaire while secondary data covering a period of five years from 2014-2018 was collected from AMFI published annual supervisory reports and MFIs final financial statements using a data collection sheet. The main respondents were credit managers from all the 57 MFIs. Data was analysed using descriptive statistics (mean and standard deviation), correlation analysis as well as simple and multiple linier regression analysis. The SPSS software was used to analyse the data. Results indicated that debt restructuring strategies were moderately adopted. The results also showed that non-performing loans and debt rescheduling in the MFIs are strongly and negatively correlated (r=-0.682), interest rate reduction had a weak negative correlation with non-performing loans (r=-0.120) while haircuts had a positive weak correlation with non-performing loans (r=0.201). Debt rescheduling and interest rate reductions were found to have a statistical significant influence on NPLs (adjusted R^2=0.652; F=96.550>4.0343; β=-0.355; P-value=0.008<0.05), Adjusted R^2=0.542; F=61.270>4.0343; β=-0.294; P = 0.000<0.05) respectively, while haircuts were insignificant (adjusted R^2=0.062; F=4.396>4.0343; β=0.042; P=0.000<0.855). Combined, debt rescheduling, interest rate reduction and haircuts were significant (adjusted R^2=0.773; F=58.785>2.798; P=0.000<0.05). Based on these results, the study concluded that debt rescheduling was the most significant in predicting the level of NPLs while haircuts had no significant influence on the level of NPLs in MFIs in Nairobi County. Therefore, the study recommends that MFIs should carefully evaluate possibility of rescheduling repayment periods for struggling borrowers. They should also refine the interest rates charged to clients so as to ease repayment difficulties. MFIs should also consider the use of more than one debt restructuring strategy to address NPLs.Futher studies should also be carried out on other debt restructuring strategies not included in the study to determine whether they have a significant influence on the level of NPLs in MFIs in Kenya.

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LIST OF ABBREVIATION

AMFI: Association of Microfinance Institutions

ASCA: Accumulated Savings and Credit Associations

CBK: Central Bank of Kenya

CDR: Corporate Debt Restructuring

EU: European Union

IMF: International Monitory fund

K-Rep: Rural Enterprise Programme

KWFT: Kenya Women Microfinance Bank

MFIs: Microfinance institutions

NIC: National Industrial Credit

NPAs: Non-Performing Asset

NPLs: Non-performing Loans

NSE: Nairobi Securities Exchange

RBI: Reserve Bank of India

ROSCAs: Rotating Savings and Credit Associations

SACCOs: Savings and Credit Cooperative Societies

SPSS: Statistical Package for Social Sciences

UK: United Kingdom

US: United States

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

It is commonly believed that the use of debt in capital structure provides a potential of increasing shareholder's earning due to interest tax shield/savings arising from the fact that interest expense is an allowable deduction for tax purposes (Graham, Hanlon, Shevlin, & Shroff, 2013). This benefit is more pronounced when economic conditions are conducive. However, during turbulent business environment when companies are exposed to high operating risks, huge amounts of debt may tug them into a situation of financial distress (Zeitun & Tian, 2014).

Although firms may fall into financial distress due to a number of factors such as internal processes (Geng, Bose & Chen, 2015), liquidity (Drehmann & Nikolaou, 2013), competition (Borio, 2014) and macroeconomic conditions (Bhattacharjee, Higson, Holly & Kattuman, 2009), literature supports that firms which over rely on use of debt capital are at a higher risk of falling into bankruptcy. According to Zeitun and Tian (2014), over use of debt capital in the capital structure expose firms to mandatory financial obligations in form of interest and principal amount repayments. When firms are unable to meet their short-term maturing financial obligations they become exposed to financial risks which may lead to financial distress and ultimately bankruptcy (Keener, 2013).

According to Garrido (2012) financially distressed businesses have two options; either to be declared insolvent and liquidate their assets to pay off the debts or renegotiate with their lenders to change the original terms of the debt, in an out of court arrangement called loan restructuring. Due to the increased costs associated with liquidations, as provided by the law, many businesses opt for out-of-court debt restructuring or private renegotiation (Senbet & Wang, 2012). Over the years debt restructuring has gained popularity and various studies suggests that debt restructuring strategies such as debt to equity swaps, debt to debt swaps, intersst rate reductions, haircuts, debt rescheduling and forbearance plans have been used by companies to avoid default (Keener, 2013; Geng, Bose & Chen, 2015; Mody, 2015; Reinhart & Trebesch, 2016; Sharma, 2016). Debt restructuring has also helped lenders reduce huge amount of bad loans from their portfolio thus being termed as a win –win approach (Matei, 2018).

In recent years, effective mechanisms and regulations have been put in place to enable financially distressed companies restructure and trade out their Non-performing loans, rather than go into liquidation. For instance, in India the Reserve bank of India (RBI) initiates and supervises the process of debt restructuring through the corporate debt restructuring system (CDR) (Hegdahl, 2017). According to RBI (2018), Indian banks have significantly reduced stressed assets by employing five main debt restructuring strategies: Debt rescheduling, reduction of interest rates, conversion of debt into equity, conversion of un-serviced portion of interest into term loans and foregoing certain amount of debts.

Debt restructuring strategies such as rescheduling repayment period, waiving a significant amount of interest, accepting haircuts, and in extreme cases writing off part or full debt have been noted by Solli (2015) as being widely used by MFIs in Peru, India and Uganda to settle bad loans. Generally, the microfinance sector targets people with low incomes in the society (Microfinance Information Exchange, 2005). Such people have high propensity to default consequently leading to high levels of NPLs in MFIs (Robinson, 2001).The importance of microfinance sector in economic development of a country cannot be underestimated because it provides resources and access to capital to the financially underserved, such as those who are unable to get checking accounts, lines of credit, or loans from traditional banks. Microfinance helps them invest in their businesses, and as a result, invest in themselves thus creating a direct impact on overall development and growth of economy (Wijesiri & Meoli, 2015). Therefore further investigation of these Debt restructuring strategies is vital for the growth and sustainability of the microfinance sector.

1.1.1 Debt Restructuring Strategies

Debt restructuring is the change in terms of a loan on account of financial difficulties being faced by the borrower and it involves an agreement between the borrower and the lender to modify the credit terms voluntary without resorting to a full judicial intervention. Restructuring activities include strategies that restructure the firm's finances, commonly referred to as Debt restructuring strategies. The process is carried out by either reducing the interest rates on the loans or extending the date when the company's liabilities are due to be paid in order to improve the firm's chances of paying back the loan (Matsa, 2018).

Globally, Debt restructuring strategies such as; Debt rescheduling, interest rate reduction, haircuts and debt to equity swaps have been widely used in India precisely during the

2008/2009 global financial crises to restore the shattered financial health of steel and textile industries (Sevta 2014). Debt to debt swaps and debt to equity swaps which involve the voluntary exchange of debts with assets or new debts with renegotiated repayment terms between the creditor and the debtor have also been prevalent and successful in Malaysia where a corporate debt committee supervises the negotiations between lenders and borrowers in an informal and voluntary arrangement to settle NPLs (Moye, 2000). Seki (2002) asserts that, debt equity swaps are commonly used in the United States of America to recapitalize companies either as part of a voluntary workout, reorganization of the company or a prepackaged bankruptcy plan. Steinfeld (2001) further observes that the Chinese government instituted the debt-equity swaps engineered between financial institutions and the failing state enterprise borrowers to remove distressed assets from the books of state banks. The program improved recovery of NPLs

Debt restructuring strategies have been under scrutiny in recent years in the UK For instance, the EU Commission put forward a proposal seeking to improve the effectiveness of debt restructuring mechanisms in November 2016.The proposal outlined that restructuring strategies such as Debt to equity negotiations and interest rate reduction need to be implemented to enable financially distressed companies restructure and trade out of their NPLs, rather than go into liquidation (Reinhart & Trebesch, 2016; Sharma, 2016).

Norway, a key oil exporter suffered a drop in prices of oil which affected companies, employees, lenders and shareholders (Hungnes, Kolsrud, Nitter-Hauge & Strøm, 2016). As a result, majority of companies in the energy sector struggled financially thus opting for out of court debt restructuring. The process involved amending and extending senior secured debt terms, adjustments to financial covenants, conversion of junior unsecured debt, new equity offerings, and asset sales. The aim was to facilitate recovery of the industry from recession. (Hegdahl, 2017)

In India, the Reserve Bank of India (RBI) first introduced Corporate Debt Restructuring (CDR) mechanism in the year 2001, as a voluntary, non-statutory system that allows corporates facing financial difficulties because of factors beyond their control to renegotiate with banks. The mechanism involves reformation of existing debt of a company by extending the repayment period, reduction of interest rates, conversion of debt into equity, conversion of un-serviced portion of interest into term loans and foregoing certain amount of debts. The

mechanism was meant to revive the corporates financial state and on the other hand reduce NPLs in the banking sector (CDR cell, 2016)

Nakayiza (2013) found out that measures like lowering interest rates and rescheduling repayments for clients with financial difficulties are some of the techniques used by the Centenary Bank LTD in Uganda to work out bad loans. Lowering interest rate was more preferred since it enhanced client's willingness to repay loans. Similarly, in Kenya, debt restructuring is more prevalent among commercial banks, microfinance institutions (MFIs) and Savings and Credit Cooperative Societies (SACCOs). However, there is very limited literature on the concept of debt restructuring in MFIs context. For instance, Kiyai (2003) identified techniques like interest rate reduction, loan rescheduling, debt-equity swaps and haircuts as the most common among commercial banks. Interest rate reduction and debt rescheduling was more effective in dealing with non-performing loans in Kenyan commercial banks.

Kariuki & Ngahu (2016) concluded that interest rate reduction, debt rescheduling, debt equity swaps and haircuts have a significant influence on NPLs in Kenyan banks. Further, Leseeto (2010) points that granting refined interest rates to borrowers willing to repay their loans help mitigate non-performing loans among MFIs in Kenya. To ease the burden of loan repayments on distressed borrowers, the Central bank of Kenya periodically cuts the base lending rates to Banks and MFIs as well as issuing prudential guidelines on loan bailouts, Rescheduling and haircuts (CBK, 2019).

Although many researchers have focused on different debt restructuring strategies, the general objective of this study is to establish the influence of debt restructuring strategies on the level of nonperforming loans in MFIs in Nairobi County. The study will focus on three main strategies (Debt rescheduling, interest rate reduction and haircuts). The debt restructuring strategies selected are perceived by the researcher as the most commonly used by MFIs globally to settle bad loans as supported by Solli (2015). Previous empirical studies by (Matsa, 2018; Kariuki & Ngahu, 2016; Nakayiza, 2013; Kiyai 2003) have also indicated the selected strategies as having the highest effect on the Level of nonperforming loans in Kenyan commercial banks thus need to justify the same in MFIs in Nairobi County.

1.1.2 Non-Performing Loans

According to International Monetary fund IMF (2009), loans are non-performing when interest and principal obligations have not been met by ninety days or more and it is reasonable to doubt that the payments will fully be made. Non-performing Loans (NPLs) are defined as principal, including interest that is 90 days or more overdue as per IMF (2006). Fofack, (2005) concurs with this definition noting that non-performing loans are outstanding loans which for quite a duration of time do not generate income, this means that the principal including interest on these loans have been unpaid for about three months. Non-performing loans affect the performance of loaning institutions since they are treated as undesirable outputs or costs to the lender.

According to Gaitho (2010) financial institutions face the risks of non-performing loans as a result of unfavourable economic conditions such as economic depression and recessions. Controlling the risks is thus crucial to the performance of any financial institution as well as the wider economy. Mitman (2016) further argued that the common causes of non-performing loans among financial institutions include; insider lending, high interest rates, macroeconomic instability, inadequate credit risk management policies, financial mismanagement and political interference. Brownbridge (1998) argued that most of the bank failures are caused by nonperforming loans and arrears affecting more than half of the loan portfolios were typical of the failed banks. Many of the bad debts were attributable to moral hazard, in particular insider lending and lending at high interest rates to borrowers in the riskier segments of the credit markets. Non-performing loans can lead to efficiency problem in the financial sector. Saba Kouser and Azeem (2012). Argued that, there exist a negative relationship between the level of non-performing loans and performance efficiency even among banks that do not fail.

The Global Economy (2015) established that the global average of non-performing loans was 7.1 percent. The country with the highest value was San Marino with 46.76 percent and Macao with the lowest value of 0.12 percent. According to the World Bank (2015) for the period 1998 to 2015, Kenya maintained an average of 16.3 percent of non-performing loans during the period, with a low percentage of 4.43 in 2011 and a maximum level of 34.9 percent in 2003. The central bank of Kenya defines NPLs as those loans that are not being serviced as per loan contracts and expose the financial institutions to potential losses. Further The CBK recommends restructuring of overdue accounts as a way of tackling NPLs (CBK, 2018)

1.1.3 Microfinance Institutions in Kenya

Microfinance institutions are institutions that provide a range of financial services to micro and very small enterprises and retail customers. Microfinance often serves the needs of the most economically marginalized groups (World Bank, 2018). They finance the livelihood, health care, housing improvements, small business creation, and other needs in underserved populations, specifically poverty and near-poverty level individuals worldwide. Most of them take the form of credit unions, commercial banks, nongovernmental organizations, and even government banks. It is estimated that approximately 1.7 billion people around the world don't have access to financial services (World Bank, 2018). Thus the relevance of microfinance in economic development cannot be under estimated.

The Kenyan microfinance sector emerged in the 1980s and is broadly classified into two: deposit-taking institutions and non-deposit-taking institutions. Deposit-taking institutions are allowed to accept deposits from members of the public on current account or savings and payment on and acceptance of cheques and are regulated by the central bank under microfinance regulations of 2008. On the other hand, non-deposit-taking institutions, also known as credit only microfinance institutions, do not fall under the jurisdiction of the CBK's microfinance regulation and are thus not subject to the prudential regulations. This means that they are self-regulated and to some extent regulated by member body such as AMFI (CBK, 2019).

Among the first institutions to offer microcredit in Kenya was the Small and Micro-Enterprise Programme (SMEP) owned by the National Council of Churches of Kenya (NCCK) and K-Rep. However, before the enactment of Microfinance Act of 2006, the Microfinance Regulations for Deposit Taking MFIs Act of 2008 and the 2013 amendments which referred deposit-taking institutions as Microfinance Banks, Microfinance Institutions operated without a proper regulatory framework (Kibet & Wagacha, 2018). For instance, they could not mobilize public deposits for on-lending, yet their sources of funds continued to dwindle while the demand for credit and other financial services was increasing. Besides, MFIs also faced pressure from their donors to become self-sustaining. This led to the commercialisation of microfinance where willing Microfinance Institutions transformed into commercial banks. For instance, the Kenya Rural Enterprise Programme (K-Rep)

transformed into K-Rep Bank which occurred in the absence of a legal framework to regulate and supervise MFIs (CBK, 2018).

After the establishment of a regulatory framework, Kenya has experienced a rapid growth of Microfinance Institutions. By 2010 there were 24 large micro finance institutions in Kenya, which provided over sh. 1.5 trillion to approximately 1.5 million active borrowers. Currently, there are 57 institutions practicing micro-lending serving over 6.1 million clients with assets worth more than Ksh. 325 billion (AMFI, 2018). The institutions comprise of Commercial banks, wholesale businesses, SACCOS, development institutions, MFI banks and Credit only MFIs. Among them, Equity Bank had the largest market share of approximately 73.50% closely followed by Kenya Women Microfinance Bank (KWFT) with 12.06%. Others are K-Rep, now Sidian Bank, with 6.39%, Faulu (3.56%) and Jamii Bora (0.86%) (CBK, 2018).

The sector, which last posted profits in 2015 has seen non-performing loans rise to 99.1 billion at the end of 2018, up from 73.71 billion in 2017,Further, losses in micro-finance banking sector hit 7.31 billion for the period ended December 2018, up from 3.77 billion over a similar period in 2018 (CBK, 2019). The Association of Microfinance Institutions (AMFI) is the umbrella body of MFIs in Kenya and has ensured the industry remains key in the achievement of the financial inclusion goal of Vision 2030 by reducing the share of population without financial access to about 30 percent amid the several challenges (AMFI, 2018). This study focused on MFIs who are members of the umbrella body because they are subject to regulation by the body and may thus be regarded as homogeneous.

1.2 Statement of the Problem

The levels of non-performing loans in the global financial sector have been increasing steadily in the last few decades (CBK, 2017). These phenomena can be attributed to; increased insider lending, high interest rates, unfavourable macro-economic factors, poor risk mitigation strategies, poor loan recovery strategies, and political interference (AMFI, 2018). For instance, the Kenyan microfinance sector saw non-performing loans rise to 99.1 billion at the end of 2017 up from 73.71 billion in 2016. The situation aggravated micro-finance banking sector losses which hit 7.31 billion for the period ended December 2017, up from 3.77 billion over a similar period in 2016. At the same time, customer deposits dropped to394.16 billion, from 401.98 billion in 2016.These statistics paint a picture of a troubled microfinance sector (CBK, 2018).

Studies show that majority of institutions in similar situations have resulted to debt restructuring. Scholars such as (Gilson, 2012; Antonoff 2013; Payne, 2018; McConnell, 2016) have shown that debt restructuring can be a win-win strategy which is beneficial to both the lender and the borrower. It enhances the ability of the debtor to come out of financial distress as well as improving chances of debt recovery thus reducing non-performing loans. The concept of debt restructuring has gained popularity in the financial sector and the field of academic research both locally and internationally. Existing literature in the local context (Onyango, 2009; Mungai, 2014; Karanja, 2015; Odula, 2015) show that debt restructuring resulted in improved performance, growth in shareholders' value, increased loan recovery and performance improvement in Kenyan banking industry. Despite the challenges facing Kenyan microfinance sector, most of the studies reviewed have concentrated on commercial banks. The few on MFIs were conducted in developed countries and did not clearly show the relationship between various debt restructuring strategies and non-performing loans. Given the integral part played by microfinance institutions in the Kenyan financial sector and the high levels of NPLs threatening the sustainability of the sector, the study has identified this as a literature gap and it is on this background that the study seeks to fill this gap by answering the question: What is the influence of debt restructuring strategies on the level of non-performing loan in microfinance institutions in Nairobi County?

1.3 Objectives of the Study

1.3.1 General Objective

The general objective of the study was to determine the influence of debt restructuring strategies on the level of non-performing loans in microfinance institutions in Nairobi County

1.3.2 Specific Objectives

The study specifically sought to achieve the following objectives:

i.   To establish the influence of debt rescheduling on the level of non-performing loans in microfinance institutions in Nairobi County;

ii. To determine the influence of reduction of interest rates on the level of non-performing loans in microfinance institutions in Nairobi County;

iii. To establish the influence of haircuts on the level of non-performing loans in microfinance institutions in Nairobi County;

iv.   To determine the combined influence of debt rescheduling, interest rate reduction and haircuts on the level of non-performing loans in microfinance institutions in Nairobi County.

1.4 Research Hypotheses

To achieve the objectives, the study tested the following Hypotheses

$H0_1$ Debt rescheduling has no significant influence on the level of non-   performing loans in microfinance institutions in Nairobi County;

$H0_2$ Reduction of interest rates has no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County;

$H0_3$ Bondholder haircuts have no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County;

$H0_4$ Combined, debt rescheduling, interest rate reduction, and bondholder haircuts have no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County.

1.5 Significance of the Study

The findings of this study are of great significance to a number of stakeholders. First, the study's findings are significant to the management of microfinance institutions in Nairobi County, as they will help them to understand the concept of debt restructuring and its implications on the level of non-performing loans. The managers will therefore be in a position to develop strategies that accords firms better loan repayment and superior performance. Secondly, the study results are of importance to practitioners and management consultants in debt management since it enables them develop strategies aligned to the sector and help their clients have better loan portfolios.

In addition, the findings of study are important to the Kenyan government through the relevant Ministries and other arms of the government such as the treasury, legislature and the Judiciary in developing and enforcing government policies on government development agenda especially in microfinance institutions. This is informed by the fact that all business organizations, microfinance institutions included, operate with the mandate of the

government and are as such regulated by the state. The findings thus help the relevant authorities come up with strategies that assist the microfinance institutions have better loan repayments.

Finally, the study findings significantly contribute to the existing pool of knowledge on the concept of debt restructuring and its effect on the level of non-performing loans. Scholars and other researchers will find the outcomes of this study relevant as a reference material to advance their research.

1.6 Scope and Limitations of the Study

This study was conducted on microfinance institutions in Nairobi County. Microfinance institutions were selected because they form majority of financial Institutions in Kenya and are not regulated by the central bank of Kenya. Microfinance institutions also play a critical role in economic growth and development through financial access and financial deepening. However, they are a relatively new phenomenon and have not been given due attention by scholars especially on the subject of debt restructuring. The study focused on Nairobi County because the environment is very dynamic and competitive thus presenting great challenges to MFIs. The findings of the study are only applicable to the microfinance sector only and may not be generalised to all other financial institutions such as commercial banks since they have different operational scope.

The study aimed at determining the influence of loan restructuring strategies on the level of non-performing loans in microfinance institutions in Nairobi County. Specifically, the study sought to establish the influence of debt rescheduling, interest rate reduction and haircuts on the level of non-performing loans in microfinance institutions in Nairobi County. This means that the study was limited in scope and therefore the findings of this study are only true to the extent to which these three variables predicted non-performing loans.

The target population of the study was all the 57 AMFI registered Microfinance institutions in Nairobi county. Credit managers and their officers were the main respondents. The study utilized data for a duration of five years from 2014 to 2018. Therefore the findings will be true only for that period and cannot be used to make long-term inferences on the influence of debt restructuring strategies on the level of non-performing loans in microfinance institutions in Nairobi County.

1.7 Assumptions of the Study

In conducting this research, a number of assumptions were made. For instance, the study utilised both primary and secondary data. Primary data was collected directly from credit managers and their representatives at firm level. The study assumed that the responses given by the respondents were objective and a true representation of the state of affairs in microfinance institutions. Further, the study assumed that the credit managers were the most suited in responding to the research instrument because they are directly involved in advancement of credit and management of the loan portfolio. Therefore, they have all the relevant information relating to debt restructuring strategies and non-performing loans.

The study also assumed that all microfinance institutions in Nairobi County were homogeneous. In this regard, the study assumed that the institutions offered similar (or almost similar) services. Additionally, the study assumed that all microfinance institutions in Nairobi County employed debt restructuring on NPLs

The study further assumed that although there are numerous loan restructuring strategies, others like debt-for-equity swaps are only applicable in agreements between commercial banks and big corporates and not at microfinance level. Consequently, the only practical strategies for microfinance institutions were debt rescheduling, interest rate reduction and debt haircuts.

1.8 Operational Definition of Terms

Commercial banks: They are financial institutions which perform the functions of accepting deposits from the general public and giving loans for investment with the aim of earning profit.

Debt Rescheduling: The lengthening of the time of debt repayment and forgiving, or dismissing, part of a loan.

Debt Restructuring Strategies: The techniques applied in Modifications of terms of an existing loan.

Extension of loan repayment period: It is the increment of loan term by allowing borrowers to temporarily stop making payments or to temporarily reduce the monthly repayment amount for a specified amount of time

Haircuts: A debt restructuring strategy where a portion of the outstanding interest payments or penalties will be written off and/or a portion of the principal will not be repaid.

Interest rate reduction: lowering the interest charged on the loan advanced to MFI borrowers over a given period of time.

Interest: This is the cost of borrowing the principal.

Loan Restructuring: Modifications of an existing loan through change in repayment pattern, reduction of interest rates, and waiver of some interest and penalties in response to a borrower's short-term inability to pay the loan.

Loan: It is the money given to MFI customers with an obligation for future repayment of the loan value amount along with interest or other finance charges

Microfinance institutions: They are financial institutions that grant access to credit facilities to individuals, small businesses and organization and also some accept deposits from members.

Non-Performing Loan: This is a loan that is in default or close to being in default. Mainly loans become non-performing after being in default for 90 days.

Portfolio at Risk: The value of the outstanding balance of all loans in arrears (principal). The Loan Portfolio at Risk is generally expressed as a percentage rate of the total loan portfolio currently outstanding.

Principal: It is the money that the MFI borrower originally agrees to pay back, excluding interest and other charges

Repayment period: The length of time allowed or agreed to repay a loan when approved.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter contains a review of literature on the subject for study and organized under the following sub-headings, theories underlying the study, empirical review, summary of literature and knowledge gaps and the conceptual framework.

2.2 Theories Underlying the Study

This section provides review of relevant theoretical literature. Specifically, the study is anchored on the creditor's bargain theory and value-based theory

2.2.1: The Creditor's Bargain Theory

The Creditor's Bargain Theory as proposed by Jackson (1982) asserts that the insolvency law reflect the notional agreement the creditors of a company themselves would strike if given the chance to bargain with each other before they lend anything to the firm. The model thus holds that bankruptcy should reflect the conjectural settlement that creditors would reach among themselves in the event they had an opportunity to negotiate before a bankruptcy petition (Senbet & Wang, 2012). The theory, further argued that without bankruptcy law it is unlikely that the bankrupt's assets would be deployed in the same way as a sole owner would choose. Consequently, a creditor who obtains control of the debtor's assets well in time, when the debtor is still solvent, may get full payment while late arriving creditors may get nothing. This individualistic method of satisfying creditors is what destroys the value of the collective creditors (Westbrook, 2015). However, if all creditors postpone their immediate collection, the debtor may survive and produce more as a going concern than if liquidated piecemeal.

At the same time, senior creditors exercising control over the debtor firm, determines that a bankruptcy filing to facilitate such a sale is the optimal strategy for the distressed firm. The debtor then files, and the sale is accomplished. While the prevalence of these sales is plain, there is reason to doubt that they achieve the goals of an appropriate system of reorganization. Ayotte and Morrison (2017) in their study on creditor control and conflict showed that the outcomes of debtor and creditor bargain are distorted by conflict between junior and senior creditors. This conflict stems from the mismatched incentives of the different classes of creditors. On one hand, senior creditors have an incentive to sell the

company in a quick sale even when reorganization has a higher expected return for the estate (Jenkins & Smith, 2014). Thus, when senior creditors are exercising control, which they do in most cases, the result is an inefficient sale of the debtor's assets. On the other hand, junior creditors have an incentive to block the quick sale in favour of a drawn-out reorganization even when the sale has the higher expected return for the estate. As a result of these distortions, the assets of a bankrupt firm are not maximized because the assets of the firm are sold at a lower price than their market value. Conversely, when junior creditors gain control, the firm spends unnecessary resources on reorganization.

The process involves delaying the due dates of required payments or sometimes reducing payment amounts by extending or lengthening of the time of debt repayment period Since the main focus of the theory is the maximization of the value of the debtor 's assets, so as to effectively confront the common-pool problem. Owing to the fact that the theory explains how to avoid the common pool problem in case of the insolvency of a debtor, the theory becomes relevant in explaining the need for debt restructuring in this study. This is because creditors need to agree on a bargain as proposed by the Creditor's Bargain Theory, a situation that can only be made possible through the adoption of a binding sovereign debt restructuring regime that prevents hold-outs. Debt restructuring strategies such as debt rescheduling, interest rate reduction, debt-for-equity swaps and bondholder haircuts are therefore best anchored by this theory since it involves restructuring of the existing loan or bond terms.

2.2.2 Value-Based Theory

The value-based theory was proposed by Korobkin (1991). It attempts to explain why bankruptcy law emerged as a system. In contrast to other theories, which view a debtor as a pool of assets that must be liquidated, the value-based theory views the debtor as a natural person with personality and dynamic potential. As such the debtor is a moral, political and social actor. In this sense, the theory compares the debtor's estate with that of a human life. According to Ashayeri, Ma and Sotirov (2014), bankruptcy law arose in response to problems arising from the financial distress encompassing not only economic but also moral, political, personal and social issues.

Lee (2016) opined that value-based theory supports protection of non-investors in bankruptcy. The proponent of the theory was of the view that the economic aspect of bankruptcy law undermines the explanation of the bankruptcy system by only recognizing the

economic values involved in the financial distress of a debtor corporation (Symes, 2016. On the other hand, the value-based theory recognizes all the values affected in a bankruptcy case, not only the economic value, but also the moral, political and social values. Thus, the theory concludes that the goal of bankruptcy laws should be to address the problems of financial distress and to create conditions for a discourse in which values of participants may be rehabilitated into a coherent and informed vision of what the enterprise shall exist to do. Therefore, bankruptcy reorganization should seek to rehabilitate and redefine the values of the debtor into a coherent new version of what the enterprise shall exist to do (Onakoya & Olotu, 2017).

Since the value-based theory takes into account the protection of the values affected in every specific business failure case as the goal of bankruptcy, it supports alteration of the interested parties' non-bankruptcy rights, wealth redistribution in bankruptcy and protection of non-investors of a specific bankruptcy case (Ashayeri, Ma & Sotirov, 2014). The value-based theory claims that in responding to financial distress, bankruptcy law sometimes should and must alter rights recognized under substantive non-bankruptcy law since it is an essential and inevitable part of a full response to the problem of financial distress (Zulaeha, 2016). To summarize, under the value-based theory, the values protected include values not only held by formal investors but also values held by non-investors. The theory is relevant to the concept of loan restructuring because by ensuring that all rights of parties in a bankruptcy are protected, it advocates for preservation of debtor's resources and recommends debtors to be given the necessary recognition in the liquidation process by reorganizing their debt structure which gives them an opportunity to turn around, improve their liquidity and free themselves from financial distress. The theory also takes into account the interest of other stakeholders other than the primary lenders. For this reason, the study finds the theory applicable in anchoring debt rescheduling, interest rate reduction and Bondholder haircuts.

2.3 Debt Restructuring Strategies

This section gives a preview of the main concepts used in the study specifically; debt rescheduling, reduction of interest rates and haircuts.

2.3.1 Debt Rescheduling

Debt rescheduling refers to restructuring of the existing loan or bond terms in order to extend the repayment period (Blackmon, 2014). The process involves delaying the due dates of

required payments or sometimes reducing payment amounts by extending or lengthening of the time of debt repayment (Furceri & Zdzienicka, 2012). The aim of the procedure is to provide a borrower with relief when needed due to an economic downturn or unforeseen event that significantly affect the liquidity and solvency of the firm and is likely to lead the debtor into bankruptcy. Though hard for the lender to accept a loan rescheduling, the lender may be forced to swallow the bitter pill since debt rescheduling represents a better option for the lender than default or filing for bankruptcy. Debt rescheduling also aims to take measures that avert the impending insolvency and that ensure the short-term survival of the business (Jedidi, 2013).

Therefore, debt rescheduling involves effecting change in capital structure by reorganizing of business assets and liabilities to achieve balanced operative results in form of financial restructuring (Prokop, 2012). The financial reorganization may also be effected to bring balance in debts and equity funds, short term and long-term financing, to achieve reduction in finance charges, to reduce loss of capital, to increase EPS, to improve market value of shares and to reduce the control of financiers on the management of a company.

2.3.2 Interest Rate Reduction

In the process of debt restructuring, Mitman (2016) noted that lenders may reduce the interest rates on the loans if the borrower will be able to continue servicing the facility at the reduced interest rate. According to Montes (2014), the process is similar to loan consolidation where it is motivated by opportunities of reducing interest rate expense by taking loan facilities at a lower interest rate and at the same time selling out the old debt. The process involves defining new reimbursement schedules in accordance with the real payment possibilities of the debtor. Additionally, Goodman and Levitin (2014) argued that the creditor may also allow the borrower to service only the capital amount of the loan for a specified period after which the borrower resumes servicing both capital and interest. This has the effect of improving liquidity of the borrower and may translate to improved performance and ability to pay debt obligation in future.

Further, to ease the cash flow burden of the borrower, the lender may decide to write-off accumulated accrued interest on the account. The lender may even go further and forego interest as the customer pays only the capital amount. Mitman (2016) advises that interest rates cut should be granted only in the extreme case where the financial viability of the

borrower can be salvaged in the long run. On their part, Shajari and Shajari (2012) showed that one of the most commonly used restructuring techniques is to offer the borrower a less than market interest rate. This strategy tends to convince the debtor that the lender is mindful of their long-term financial health and resume servicing their debt obligations sooner. The strategy has the effect of improving the borrower's immediate cash flows. However, this strategy is not preferred by banks, but they may be willing to consider it in certain severe situations.

2.3.3 Haircuts

Haircuts are usually invoked when there is a permanent inability on the side of the borrower (debtor) to honour a debt obligation. Haircuts were advocated in the banking sector in the United States as a potential solution for the subprime mortgage crisis. For instance, Stiglitz (2013) noted that reducing bank debt levels and increasing equity levels increases the confidence in the financial system and by so doing addressing bank solvency and credit market liquidity issues. At the same time, Cruces and Trebesch (2013) argued in favor of haircuts stating that bad loans should be written down on the books. They further observed that lenders don't really have a choice but to take the haircuts if the firm has a possibility to recover from financial distress since the losses that they would suffer are already captured in deeply discounted bond prices in the market.

As noted by Esteves (2013), haircuts present an elegant solution to the problem by reducing the debt along with its interest payments. On the other hand, Tarr (2009) stated that a haircut may be viewed as the difference between the value of an asset used as collateral and the value ascribed to that asset when used as collateral for that loan reflecting the perceived risk of the asset falling in value or being sold at a very discounted price in case of a default. However, conventionally, the term is used to refer to a situation where debt holders receive less than the par value of their debt. During the Eurozone crisis, and particularly in the context of the Greek financial crisis, the term "haircut" acquired more specifically the meaning of state-debt holders receiving less than par. It's "the market's euphemism for wiping out a large portion of the debt owed to the creditors. The haircut agreed to by Greek-state debt holders was deemed "voluntary" by the banks' chief negotiator.

While some scholars use the terms haircuts and debt relief interchangeably, Sturzenegger and Zettelmeyer (2007) argued that haircuts are not necessarily the same as debt relief. They

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argued that debt relief is broadly defined as a reduction in the value of outstanding debt obligations while haircuts involve reducing the absolute amount of debt.

2.4 Empirical Studies

This section provides review of literature on studies done by other scholars relating to debt restructuring strategies and nonperforming loans.

2.4.1 Debt Rescheduling and Non-Performing Loans

Chua (1999) studied the various ways in which MFIs can ease the impact of a natural disaster on clients by rescheduling loans. Using a survey design, findings indicated that, MFIs across the globe, choose between three types of rescheduling. The first method postpones payments of loan principal only for a specified period, while clients are expected to continue to make interest payments throughout the remaining contract period. The two other methods involve deferring both principal and interest payments for a specified period. In one form, interest continues to accrue over the period of deferment, but clients pay accumulated interest at a later date. In a second form, the MFI temporally stops the clock on interest accumulation during the period of deferment. The study concludes that both deferral measures are effective since they allow borrowers to have time for reorganization and to regain better financial footing. Findings in this study cannot be inferred to the current study since the researcher did not specifically link debt rescheduling to non-performing loans of MFIs

Charalambides and Koussis (2018) investigated the effects of debt rescheduling on debt capacity and overall firm value. The study developed a stochastic continuous time trade-off model with optimal capital structure that incorporates management's selection of optimal investment timing and switching between full-scale operations, reorganization and rescheduling and termination of operations/liquidation. The findings of the study revealed that Debt rescheduling reduces debt capacity and overall firm value. Rescheduling results in reduced agency costs between shareholders and debt holders. Debt rescheduling however had a positive effect in that more significant anticipated debt reduction in rescheduling results in reduced agency costs between shareholders and debt holders. However, this study investigated the effects of debt rescheduling on debt capacity and overall firm value therefore the findings may not be generalised to a study conducted on the influence of debt rescheduling on non-performing loans.

Gur (2001) conducted a study to assess the country risk assessment model and the Asian crisis. The study noted that globally, countries rescheduled their debts in the event that they were not able to service such external debts. More so, it was noted that countries such as Nicaragua, Panama and Argentina were rated as high-risk countries and therefore, rescheduled their debts in various degrees between 1997 and 1998. Korea exercised its major debt rescheduling in 1998. However, it was concluded that not all debt payment difficulties resulted into debt rescheduling covenants. For instance, despite the severe economic conditions and debt service difficulties, countries such as Thailand, Philippines and Malaysia did not exercise debt rescheduling during the Asian crisis compared to Indonesia and Korea.

Marchesi (2013) conducted an empirical analysis to determine the relationship between adoption of an IMF programme and the concession of a debt rescheduling by commercial creditors. The study used bivariate probit model to test the relationship of the variables and the results confirmed that the adoption of IMF programme had a significant effect on the subsequent concession of a debt rescheduling by private and commercial creditors. This study targeted private and commercial creditors in Italy while the current study targeted microfinance institutions in Kenya. Therefore, the findings cannot be generalised.

Siddiqui, Siddiqui and Kazmi (2014) conducted a study in Pakistan to investigate the probability of debt rescheduling. The study adopted a qualitative response model and employed both Economic (financial ratios) and political indicators to determine if any of these indicators or both of them had an effect on the country's ability to meet the debt obligation and its prospects for debt rescheduling. The findings of the study showed that financial ratios are significant determinants of debt rescheduling for Pakistan. This study was however conducted in Pakistan and investigated determinants of debt rescheduling therefore the findings of the study may not be inferred to the current study.

Laušev, Stojanovic & Todorovic, 2015 conducted a study to determine the debt rescheduling probabilities in European countries. The study utilized Panel Logit Models applied to a set of macroeconomic, financial, and political variables. The study targeted 15 Eastern European countries during the transition period from 1990-2005. The findings of the study suggested that policy efforts focused on reducing government expenditure, attracting foreign direct investment, increasing export revenues, and keeping a good repayment record result in low debt rescheduling probabilities and, in turn, decrease the cost of debt for these countries.

Although this study gives clear insights on debt rescheduling, the study was done in Eastern European countries, therefore its findings may not be generalised to a study done in an African country (Kenya).

2.4.2 Interest Rates Reduction and Non-Performing Loans

Kaggwa (2013) sought to examine the contribution interest rates have on loan portfolio performance in commercial banks in Uganda. The study employed a case study research design and the methodology used in this study was both qualitative and quantitative. Questionnaires and documentary review were the major tools of data collection. The study findings indicate that although Centenary Bank has tried to follow procedures and regulations in administering credit, there is still clients' defaulting on loan repayments and increasing the effect of bad debts in the bank. This has created risk in loan portfolio performance and has affected profitability. The findings further revealed that there is lack of effective analysis on the impact of increasing interest rates on loan repayment trends. The study indicates that loan restructuring measures like reducing interest rates and extension of repayment periods for clients with financial difficulties are some of techniques used by Banks in Uganda to solve the problem of non-performing loans. Interest rate reduction was more preferred and by offering fair interest rates the banks enhanced client's willingness to repay loans thus eliminating huge amounts of non-performing loans from their portfolio. The researcher recommends that; there is need for an effective loan portfolio management which begins with oversight of the risk in individual loans. Economic trends need consideration before deciding interest rates on loans. Fair interest rates favour clients' willingness to repay affordably. The findings of this study are relevant to the current study although the study is different because it was done in Uganda and specifically focused on the centenary bank which is a commercial bank.

Kibet (2012) conducted a study to find out whether there exist any relationships between interest rate and the level of non-performing loans in various commercial banks in Kenya and how borrowers had been affected by the increased instalments arising from the interest rate change. The study population were the various commercial banks in Kenya. Employing a descriptive research design, it was noted that there was no significant relationship between interest rate and non-performing loans in commercial banks in Kenya. This study gives a clear picture on the relationship between interest rates and the level of non-performing loans

in commercial banks in Kenya and how this has affected the borrowers. However, the study was focused on commercial banks only and therefore its findings might not be inferred on microfinance institutions in Kenya.

Ngugi (2013) conducted a study on the effects of interest rate reduction for Kenya's banking sector and how it influences the level of non-performing loans. The study adopted a descriptive research design and targeted 43 licensed commercial banks. The study used secondary data obtained from commercial banks. Data was analysed using descriptive statistics and inferential analysis. The findings of the study show that the interest rate reduction had a positive effect on performance of commercial banks in Kenya. Further the study found that interest rate affected the level of non-performing loans in the banking sector.

Chege (2014) sought to establish the impact of interest rates on non-performing loans in commercial banks in Kenya. The study targeted a sample of licensed commercial Banks in Kenya. This study adopted a descriptive research design. Secondary data was collected on the interest rate charged by the banks, total loan and advances, total non-performing loans, total assets, total risk weighted assets, non-interest expense, total revenue for five-year period (2009 – 2013). The data collected was analyzed using both descriptive and inferential statistics from multiple linear regression analysis using the ordinary least square method. The findings of the study showed a negative and good linear relationship between banks' Non-Performing Loans and interest rate; interest rate spread and total assets. Further the findings showed a positive and good linear relationship between banks' Non-performing loans and cost income. Whereas this study brings a clear understanding on the impact of interest rates on non-performing loans, the study focused on commercial banks and therefore its findings might not be relevant to microfinance institutions which are the main focus in the current study.

2.4.3 Haircuts and Non-Performing Loans

Sturzenegger and Zettelmeyer (2008) sought to estimate the effects of haircut losses in sovereign debt restructurings in Russia, Ukraine, Pakistan, Ecuador, Argentina, and Uruguay. This study was conducted with respect to the new generation of sovereign debt restructurings that started with Russia's 1998 default. The study estimated the substantial differences between average haircuts ranging from 10-15 percent to more than 70% in the case of the Argentina domestic exchanges. The study findings showed that some exchanges exhibit

substantial variations in haircuts even within the exchange, depending on the instrument tendered. When domestic and foreign residents could be identified we find that exchanges have tended to be milder on domestic bondholders. The findings of this study suffer from generalizability since the study was based on European countries. The study also investigated haircut losses in sovereign debt restructuring, it however failed to show how haircuts affect the level of non-performing loans.

Ghosal, Miller and Thampanishvong (2010) studied haircuts in sovereign debt, recovery and sustainability. The study developed an incomplete information model of debt restructuring where the prospect of uncertain economic recovery and the signaling about sustainability concerns together generate multi-period delay. The results from our analysis show that there is a correlation between delay length and size of haircut. This study was conducted in West Midlands England and therefore the findings may not be generalized in the current study.

Marchesi and Prato (2013) studied the impact of haircuts on economic growth. The study analysed 89 defaults in 72 countries over the period 1979-2005. Creditors losses or haircuts were used as proxies of the severity of the default realised. Controlling for the severity of the default through the haircuts size, this study found that the severity of the default is indeed correlated with a further contraction in output one year after the default and with a positive increase in output three years after the default. The study further established a negative and significant impact on short-term output growth. However, the study examined the impact of haircuts on economic growth while the current study examined the effect of haircuts on non-performing loans.

Nguyen (2018) conducted a study to examine the relations between the collateral haircuts and bond yields in the European bond markets. Based on collateral haircut dataset, the study showed that newly issued or on-the-run bonds requires lower haircuts and yields more than older or off-the-run bonds from the same issuers and with similar maturities. The study also showed that investors demand higher yields for bonds with higher collateral haircuts. Further, it was concluded that collateral haircuts on bond yields remains robust after controlling for the variations in credit quality, market liquidity and the effects of the European sovereign debt crisis. The study examined the relations between the collateral haircuts and bond yields in the European bond markets while the current study investigated the effects of haircuts on non-performing loans in microfinance institutions in Nairobi City County

In a study on debt reduction techniques and their effects on non-performing loans of commercial banks in Kenya, Torome (2013) aimed at finding out the techniques used by the commercial banks in Kenya to entice defaulting borrowers to resume servicing their obligations. The study adopted a survey research design in which all the 43 commercial banks were surveyed. The study established that, commercial banks in Kenya were widely accepting haircuts under a directive from the CBK. The strategy was employed with the aim of reducing non-performing loans. However, this study was based on commercial banks while the current study will be conducted on microfinance institutions in Nairobi County.

Ngali (2016) conducted a study to examine the effect of the penalty amnesty offered by the Higher Education Loans board on loan recovery. The study adopted descriptive research design. Secondary data from the university loans board for period 1998/1999 and 2012/2013 was collected and analyzed using both descriptive and inferential statistics. The study indicated that loan collections consistently improved over the amnesty period. In fact, the collection during the amnesty period made a third of the total collections for the year 2013.This presents evidence that the response towards the amnesty was positive since the collections surpassed the target expected. The study also found that the amnesty had a positive influence on the Loan recovery and significantly reduced non-performing loans. Although findings of this study show a positive relationship between penalty waivers and debt recovery, the results cannot be used to make an inference on the current study since it is evident that it specifically concentrated on Higher education loans board while the current study focused on MFIs.

2.5 Summary of Literature Review and Knowledge Gaps
In view of the above discussions, numerous studies have been conducted on the determinants of Non-performing loans as well as organisational restructuring. However, most of these studies focused on commercial banks. In addition, most studies in restructuring focused on forms of organisational restructuring such as operational restructuring and financial restructuring but failed to focus on debt restructuring. The summary of literature and knowledge gaps is as shown in table 2.1

Table 2.1: Summary of Literature and Knowledge Gaps

Author/s	Research Topic	Research Finding	Research Gaps	Focus of Current Study
(Laušev, Stojanovic & Todorovic, 2015)	Debt rescheduling probabilities in European countries	The findings of the study suggested that policy efforts focused on reducing government expenditure, attracting foreign direct investment, increasing export revenues, and keeping a good repayment record result in low debt rescheduling probabilities and, in turn, decrease the cost of debt for these countries.	The study was done in Eastern European countries; therefore, its findings may not be generalised to a study done in an African country (Kenya).	The current study will focus on debt rescheduling on Non-performing loans in microfinance institutions in Kenya which are not quoted.
Chege (2014)	Impact of interest rates on non-performing loans among commercial banks in Kenya	The findings of the study showed a negative and significant relationship between banks' Non-Performing Loans and interest rate; interest rate spread and total assets. Further the findings showed a positive and good linear relationship between banks' Non-performing loans and cost income.	The study was limited in scope since it only focused on interest rates as a determinant of non-performing loans ignoring other strategies such as debt rescheduling, interest rate reduction, debt to equity swaps and bondholder haircuts. The study was based on commercial banks in Kenya and not micro finance institutions.	The study was wider in scope to include debt rescheduling, interest rate reduction, debt to equity swaps and bondholder haircuts as strategies to reduce non-performing loans. The study was conducted on micro finance institutions which are not regulated by the central bank as opposed to commercial banks which are heavily regulated.
Marchesi and Prato (2013)	The impact of haircuts on economic growth	The severity of the default is indeed correlated with a further contraction in output one year after the default and with a positive increase in output three years after the default. The study further established a negative and significant impact on short-term output growth.	The study examined the impact of haircuts on economic growth while the current study will examine the effect of bondholder haircuts on non-performing loans.	The study investigated the effect of bondholder haircuts on the level of non-performing loans in microfinance institutions.
Kibet (2012)	Relationships between interest rate and the level	There was no significant relationship between interest rate	The study was focused on commercial banks only.	This study conducted regression analysis to establish the causal

	of non-performing loans among various commercial banks in Kenya	and non-performing loans among commercial banks in Kenya.	The study focused on determining whether there exists a relationship between interest rates and the level of non-performing loans based on descriptive statistics only. The study therefore failed to show the effects of interest rates and non-performing loans on the performance of commercial banks since no inferential analysis was conducted. The study only concentrated on one variable affecting non-performing loan.	effect relationship between interest rate reduction as a loan restructuring strategy and Non-performing loans. The study was based on credit only micro-finance institutions as opposed to commercial banks. Additionally, the study was wider in scope to include other loan restructuring strategies such as debt rescheduling, debt to equity swaps and bondholder haircuts.
Sturzenegger and Zettelmeyer (2008)	Effects of haircut losses in sovereign debt restructurings in Russia, Ukraine, Pakistan, Ecuador, Argentina, and Uruguay.	The study findings showed that some exchanges exhibit substantial variations in haircuts even within the exchange, depending on the instrument tendered. When domestic and foreign residents could be identified we find that exchanges have tended to be milder on domestic bondholders.	The findings of this study suffer from generalizability since the study was conducted only basing on European countries. The study also investigated haircut losses in sovereign debt restructuring, it however failed to show how haircuts affect the level of non-performing loans.	The study was conducted in Kenya specific on micro finance institutions, the study investigated the effects of bondholder's haircut on non-performing loans.

Source: Author and Literature Review (2019)

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2.6 Conceptual Framework

The conceptual framework shown in figure 2.1 below represents the relationship between debt rescheduling, interest rate reduction and haircuts and the level of non-performing loans in micro finance institutions in Nairobi County

Independent Variable

Loan Restructuring Strategies

Dependent Variable

Debt Rescheduling
- Extension of repayment period
- Reducing instalment amounts
- Repayment holidays
- grace periods
- Debt roll-overs
- Change in amortization schedule

- **Interest Rate Reduction**
- Loan consolidation
- Negotiation for lower rates
- Loan/debt refinancing

Bondholders Haircut
- Partial principal amount waiver(debt reduction)
- Penalty waivers
- Partial or full waivers of accrued interest

Non-Performing Loans

Portfolio at risk

Figure 2.1: Conceptual Framework

The general objective of the study was to determine the influence of debt restructuring strategies on the level of non-performing loans in microfinance institutions in Nairobi County. Specifically, the study sought to establish the influence of debt rescheduling, interest rate reduction and haircuts on the level of non-performing loans in microfinance institutions in Nairobi County. In the conceptual framework the independent variable, loan restructuring strategies, is operationalized through: Debt rescheduling which involves extending the loan repayment period, Interest rate reduction, which involves redesigning the loan aimed at reducing the interest rate, and haircuts which involves waiving some part of principal amount or interest thereof or both. It was established that debt rescheduling has an inverse relationship with non-performing loans such that when financially distressed borrowers are given an extension on the loan repayment period, the instalment payable reduces making it easier for them to pay and consequently reducing the proportion of Nonperforming loans.

In addition, the study noted that interest rate reduction has an inverse relationship with non-performing loans because when interest rate reduces, the instalment reduces making it affordable to borrowers thus avoiding default and as a result reducing NPLs. The study found that , haircuts have a weak positive relationship with non-performing loans suggesting that as more and more principal amount and/or interest are waived the amount of unpaid loans increases. However, this relationship was insignificant.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presents the research methodology that the researcher adopted in achieving the research objectives. This chapter covers the research design, the study's target population, the sample size, the procedure used for sampling and data collection instruments, validity and reliability of the research instrument, data collection procedures, analysis of the data, presentation and finally the ethical considerations.

3.2 Research Design

This study used explanatory research design. The explanatory research design is used to show the cause and effect of the relationship between independent variables and the dependent variable (Lewis, 2015). This design fits the study of this nature since the researcher sought to determine the influence of debt rescheduling, reduction of interest rates and haircuts on the level of non-performing loans in microfinance institutions in Nairobi County
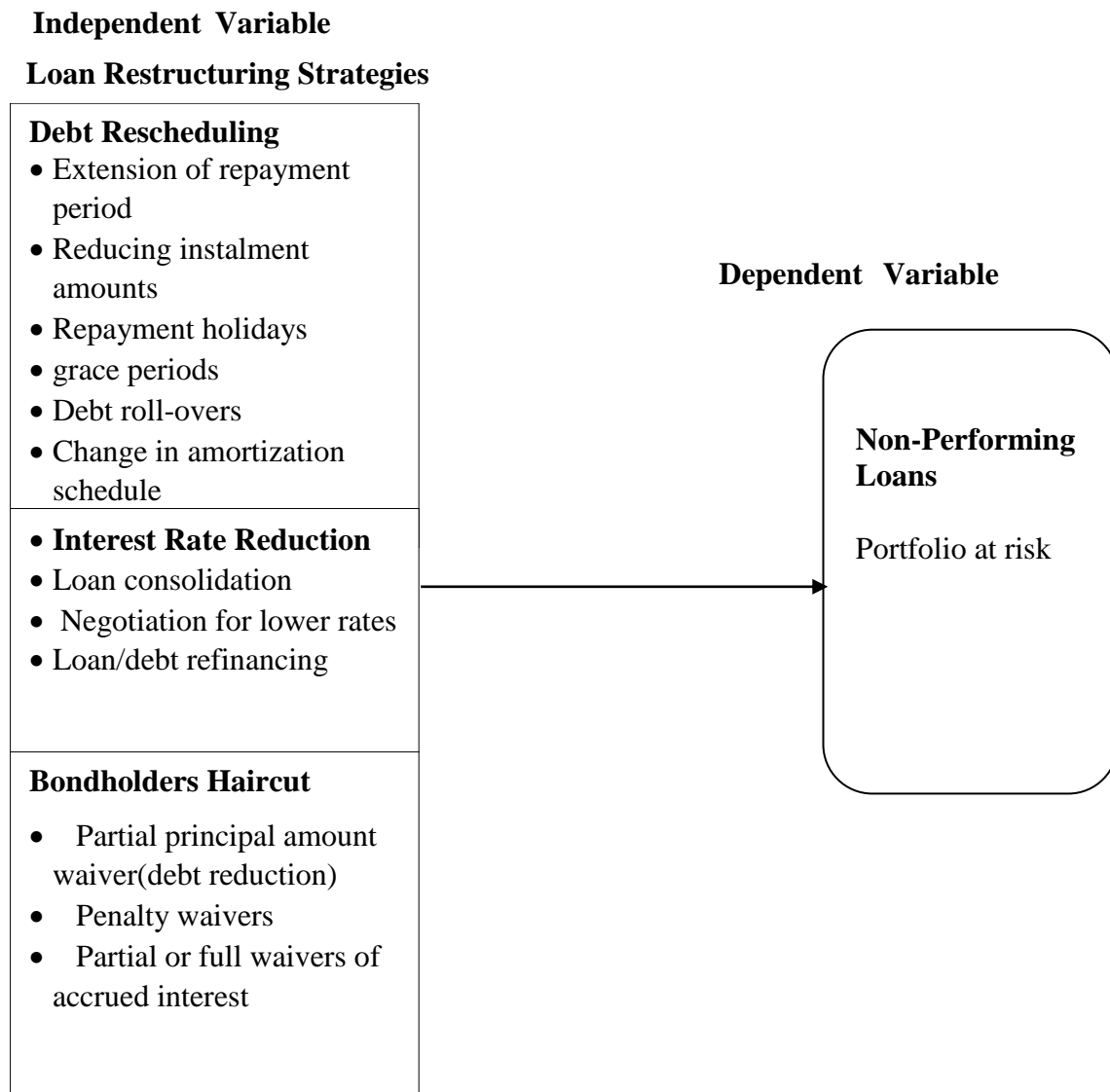
3.3 Target Population

The population for this study comprised of microfinance institutions in Nairobi County. Microfinance institutions were selected because they form majority of financial Institutions in Kenya and are not regulated by the central bank of Kenya. This study focused on microfinance institutions operating in Nairobi County because all microfinance institutions in Kenya have an operational office in Nairobi County. Additionally, MFIs in Nairobi County operate in a very dynamic and competitive environment which presents great challenges. According to AMFI (2019), 57 MFIs operate within Nairobi County (see appendix IV). Owing to the small number of the microfinance institutions, the study conducted a census on all the 57 microfinance institutions. One respondent, being the credit manager in the MFI was selected to respond to the research questionnaire. Where the credit manager was not available to respond, the assistant credit manager or the person in charge of credit was selected.

3.4 Data and Data Collection Instruments

Both primary and secondary data was collected. Primary data was collected by use of drop and pick questionnaires. These questionnaires were closed ended. As Saunders (2011) notes, the closed ended questions are most appropriate since they give more information and can easily be evaluated by the researcher.

The researcher collected primary data from the credit manager or their assistant/the person in charge of credit in the MFI. Data was collected during the month of October 2019. The questionnaire had section A-D. Section A provided demographic information on respondent's designation and number of years worked in the institution. Section B-D provided data on debt rescheduling, interest rate reduction, and haircuts. Secondary data on total outstanding loans in arrears of over 30 days, total refinanced or restructured loans, and total outstanding gross loan portfolio as at end of each financial year from 2014-2018 was collected by reviewing documents maintained by microfinance institutions such as final financial statements and AMFI Annual Reports

3.4.1 Validity of Research Instrument

The research instrument validity seeks to determine if the inferences from the data is meaningful and accurate (Csikszentmihalyi & Larson, 2014). A pilot study was conducted on a randomly selected sample of ten microfinance institutions operating in Kiambu County after which the results were used to establish how valid the research instrument is. Face and content validity were used to test the research instrument validity. Face validity looks at the representative of the data collection instrument at face value. It seeks to determine if the instrument covers what it should cover (Bryman & Bell, 2015). Content validity seeks inference from similar test that are drawn from similar items like those in the research. The researcher sought assistance from supervisors and other lecturers in the university to determine if the research instrument had both face and content validity. Following the reviews received from the supervisor and two other university lecturers, the study found the research instrument to have both face and content validity after a few amendments.

3.4.2 Reliability of Research Instrument

Cronbach's alpha (α) was used to determine the reliability of the research instrument. If the Cronbach alpha coefficient is at 0.6 or above, this is determined as adequate reliability (Field, 2009). In the current study, the researcher aimed for a 0.6. The pilot results were summarised in table 3.1.

Table 3.1: Reliability Coefficients

Variable	Cronbach's Alpha Coefficient	Conclusion
Debt Rescheduling	0.767	Reliable
Interest Rate Reduction	0.957	Reliable
Haircuts	0.751	Reliable
Non-performing loans	0.789	Reliable
Overall	0.824	Reliable

Source Data: Research Data 2019

The results shown in table 3.1 indicate that the overall reliability index was 0.824 indicating that there was overall reliability of the study constructs. Particularly, the results showed that debt rescheduling had a coefficient of 0.767, interest rate reduction had a coefficient of 0.957 and haircuts had a coefficient of 0.751 while non-performing loans had a coefficient of 0.789. Based on these results, the study concluded that all the study constructs were reliable since they had coefficients greater than 0.6 as recommended by Field (2009).

3.5 Data Analysis and Presentation

The collected data was cleaned and edited for consistency and completeness. The data was then coded and checked for more errors and omissions as recommended by Sekaran and Bougie (2010). Statistical Package for Social Sciences (SPSS) Version 23 was used in the analysis of this data. Quantitative data was analysed with the help of descriptive statistics methods including mean and frequencies. Tables were used to present the results. The use of descriptive statistics is preferred as these methods allow for the meaningful description of the results by use of minimal indices (Marshall & Rossman, 2014).

Pearson correlation coefficient was used to determine the direction and strength of the relationship between debt rescheduling, interest rate reduction, haircuts and nonperforming loans. The assumption made during this analysis was that the data obtained from the study is normally distributed and continuous. Simple regression analysis was used to determine the influence of debt rescheduling, interest rate reduction and haircuts on the level of NPLs in MFIs in Nairobi County. Multiple regression analysis was used to determine the composite effect of debt rescheduling, interest rate reduction and haircuts on the level of NPLs in MFIs in Nairobi County. It was preferred because it can accommodate more than two independent variables to predict the dependent variable (Hayes 2016).

Decision on hypothesis testing was made based on 0.05 significance level. To test the model significance the researcher used the coefficient of determination (R^2) to determine the variation in the level of non-performing loans as a result of the changes in the loan restructuring strategies. The researcher further computed the F-statistic at 95% confidence level to determine if a significant relationship does exist between loan restructuring strategies and the level of non-performing loans in microfinance Institutions.

3.5.1 Model Specification

Both simple and multiple regression analysis were conducted. Simple regression was conducted on objective one to three while multiple regression analysis was conducted for the combined effect in objective four. The model was found suitable because non-performing loans which is the dependent variable is a continuous variable (Field, 2013).

The first objective of the study was to establish the influence of debt rescheduling on the level of non-performing loans in microfinance institutions in Nairobi County. The simple linear regression model for debt rescheduling was specified as;

$$Y = \beta_0 + \beta_1 X_1 + \mathcal{E} \quad \text{...3.1}$$

Where: Y= Non-Performing Loans (Portfolio at Risk)

β_0 =constant

β_1 = Variable Coefficients

X_1= Debt Rescheduling

$\mathcal{E}$ - Error Term

The second objective of the study was to determine the effect of reduction of interest rates on the level of non-performing loans in microfinance institutions in Nairobi County. The simple regression mode was specified as follows;

$$Y = \beta_0 + \beta_2 X_2 + \mathcal{E} \quad \text{...3.2}$$

Where: Y= Non-Performing Loans (Portfolio at Risk)

β_0 =constant

β_2 = Variable Coefficients

X_2 = Interest Rate Reduction

$\mathcal{E}$ = Error Term

The third objective of the study was to establish the influence of haircuts on the level of non-performing loans in microfinance institutions in Nairobi County. The simple linear regression model was specified as follows;

$$Y = \beta_0 + \beta_3 X_3 + \mathcal{E} \ \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 3.3$$

Where: Y= Non-Performing Loans (Portfolio at Risk)

β_0 = constant

β_3 = Variable Coefficients

X_3 = Haircuts

$\mathcal{E}$ = Error Term

In the fourth and last objective, the study sought to determine the combined influence of debt rescheduling, interest rate reduction and haircuts on the level of non-performing loans in microfinance institutions in Nairobi County. The multiple regression model used is as shown below;

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \mathcal{E} \ \dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots\dots 3.4$$

Where: Y= Non-Performing Loans of Microfinance Institutions in Nairobi City County (Portfolio at Risk)

Portfolio at risk = Total outstanding loans in arrears of over 30 days + Total refinanced or restructured loans / Total outstanding gross loan portfolio

β_0 = constant

$\beta_1, \beta_2, \beta_3$ = Variable Coefficients

X_1 = Debt Rescheduling

X_2 = Interest Rate Reduction

X_3 = Haircuts

$\mathcal{E}$ = Error Term

3.6 Diagnostics Tests

Diagnostic tests were carried out on the collected data before actual analysis to test the assumptions of the multiple regression models (Mutandwa, Grala & Grebner, 2016). The relevant diagnostics tests for the study were normality, autocorrelation and multicollinearity.

3.6.1 Normality

Normality tests were required to confirm if the data is appropriate for regression analysis. As a condition, for data to be tested for regression analysis, it must be normally distributed. The two common numerical methods for testing normality are Shapiro-Wilk test and Kolmogorov-Smirnov test. The study used Shapiro-Wilk test. The study followed Field (2013) recommendation that a P- value greater than 0.05 indicates a normally distributed data.

3.6.2 Autocorrelation

To test for autocorrelation, the study conducted a Durbin Watson test for autocorrelation. According to Saunders, Lewis and Thornhill (2009) the Durbin-Watson test value of 2 shows no autocorrelation, -2 indicates a positive autocorrelation while the value above 2 shows a negative autocorrelation.

3.6.3 Multicollinearity

The study conducted multi-collinearity tests to confirm appropriateness of data for Principal component analysis. Principal component analysis was required to analyze data collected through open-ended questions and interview guide. The tests were conducted by running an r-matrix such that if correlations are greater than 0.9 or less than 0.3, the data is not appropriate for Principal component analysis. Variance Inflation Factor (VIF) was used for this test. A VIF value of above 10 and a tolerance of less than 0.1 indicate presence of multi-collinearity (Hair et al., 2010).

3.7 Measurement of Research Variables

All research variables were measured as shown in Table 3.1.

Table 3.2: Measurement of Research Variables

Variable	Operational definition	Measurement
Non-performing loans	A loan that is in default or close to being in default. Mainly loans become non-performing after being in default for 30 days.	Portfolio at risk = Total outstanding loans in arrears of over 30 days + Total refinanced or restructured loans / Total outstanding gross loan portfolio.
Debt Rescheduling	Extension of the time of debt repayment by either granting repayment holidays or reducing the instalment amounts	• Extension of repayment period • Reducing instalment amounts • Repayment holidays • grace periods • Debt roll-overs • Change in amortization schedule.
Interest rate reduction	Lowering the interest charged on the loan advanced to MFI borrowers over a given period of time.	• Loan consolidation • Negotiation for lower rates • Loan/debt refinancing
Haircuts	A debt restructuring strategy where a portion of the outstanding interest payments, penalties and/or a portion of the principal are written off.	• Partial principal amount waiver(debt reduction) • Penalty waivers • Partial or full waivers of accrued interest

 Source: Author and Literature Review (2019)

3.8 Ethical Issues

According to Neuman and Robson (2014) ethical concerns in social sciences involves making a judgment about right and wrong behaviour. Such judgements relate to confidentiality of the data collected, identity of respondents and voluntary participation in research (Field, 2009). In this study, the information provided was treated with confidentiality at the highest level. The researcher used codes to ensure the information from the questionnaires responses is kept confidential. In addition, the identity of the respondents was concealed since no respondent was required to provide their names or any other identification information thus anonymity was maintained. As noted by Csikszentmihalyi and Larson (2014) the researcher sought informed consent from the respondents and ensured that participation in the study was voluntary. The researcher also sought a research permit from the National Commission for Science, Technology and Innovation (NACOSTI).

CHAPTER FOUR
RESULTS AND DISCUSSION

4.1 Introduction

In this chapter, the results obtained from the analysis of data collected on the study variables are presented. Specifically, the chapter provides the descriptive statistics, inferential statistics; correlation and regression analysis as well as the interpretations and discussions on the findings.

4.2 Response Rate

The target population for this study was 57 respondents all being the credit managers from all the 57 microfinance institutions in Nairobi county. The study response rate was as distributed in table 4.1.

Table 4.1: Response Rate

	Frequency	Percent
Response	52	91.2%
Non-response	5	8.8%
Total	**57**	**100.0%**

Table 4.1 shows that, of the 57 respondents targeted, 52 responded representing 91.2% response rate. This response rate was found to be adequate based on Walliman (2017) recommendations that a response rate of above 70% is considered adequate and fit for data analysis.

4.3 Demographic Information

The study sought to identify the number of years the respondents had worked in the institutions (length of service) as well as the designation of the respondents. The demographic results were as indicated in table 4.2.

Table 4.2: Demographic Statistics

	Frequency	Percent
Length of service		
Less than 1 year	6	11.5
1-5 years	16	30.8
6-10 years	22	42.3
Over 10 years	8	15.4
Total	**52**	**100.0**
Designation		
Institutional credit manager	7	13.5
Branch credit manager	31	59.6
Business unit manager	14	26.9
Total	**52**	**100.0**

The demographic statistics indicated that majority of the respondents represented by 42.3% had worked in the MFIs for a period of 6 to 10 years. 30.8% of the respondents had worked in the MFIs for between 1and 5 years, 15.4% had worked for over 10 years while only 11.5% of the respondents had worked in the MFI for less than 1 year. It was thus established that majority of the respondents had worked in the institutions for long enough and therefore the information provided by the respondents was reliable.

In addition, the demographic results showed that majority of the respondents (59.6%) were branch credit managers followed by business unit managers at 26.9% and institutional credit managers at 13.5%. These findings show that most of the information was obtained from branch credit managers who have first-hand information on loan restructuring and Non-performing Loans in their branches and therefore deemed reliable

4.4 Diagnostic Tests

The researcher conducted diagnostic on the data on loan restructuring strategies (debt rescheduling, interest rate reduction and bondholder haircuts) and non-performing loans.

4.2.1 Normality Test

To test for normality of data, the study used Shapiro-Wilk test and the Q-Q Plots results for the Shapiro Wilk test are as shown in table 4. 3

Table 4.3: Normality test Results

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Debt Rescheduling	.077	52	.200[*]	.976	52	.381
Haircuts	.146	52	.007	.962	52	.098
Interest Rate Reduction	.158	52	.002	.962	52	.091
non-performing loans	.120	52	.058	.961	52	.087

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

The Q_Q plots results are as shown in figures 4.1, 4.2, 4.3, 4.4

The normality test results in table 4.3 indicate that all the variables in the study had a significance level greater than 0.05 implying that the data was normally distributed.
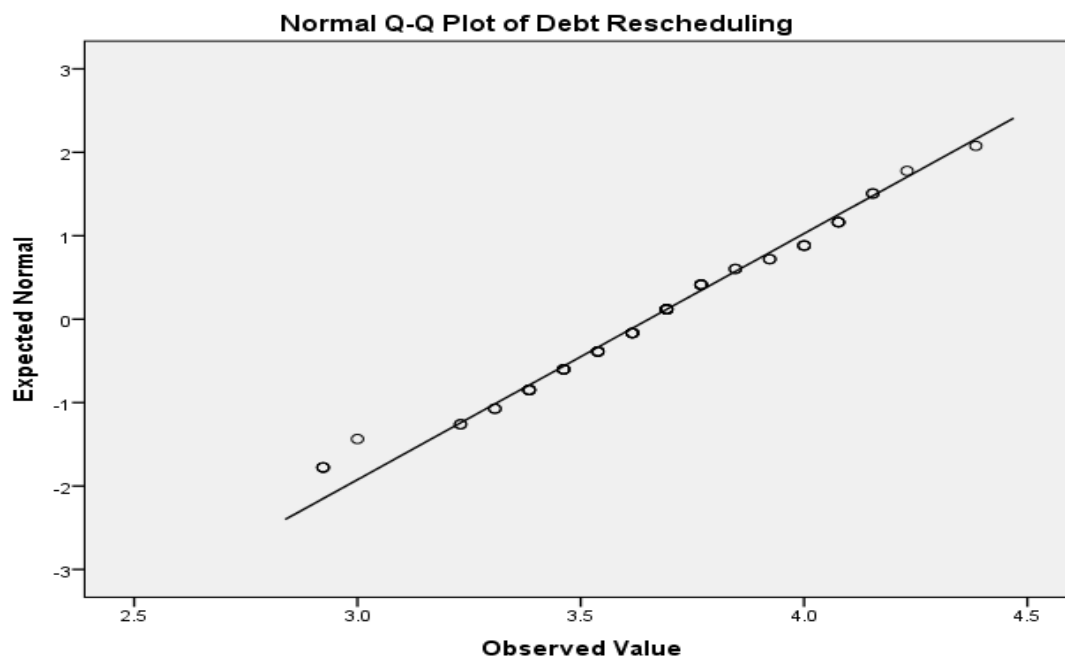
Figure 4.1: Normal Q-Q Plot for Debt Rescheduling

The results in figure 4.1 indicate that debt rescheduling was normally distributed. This is shown by majority of the data points being distributed close to the line of best fit.
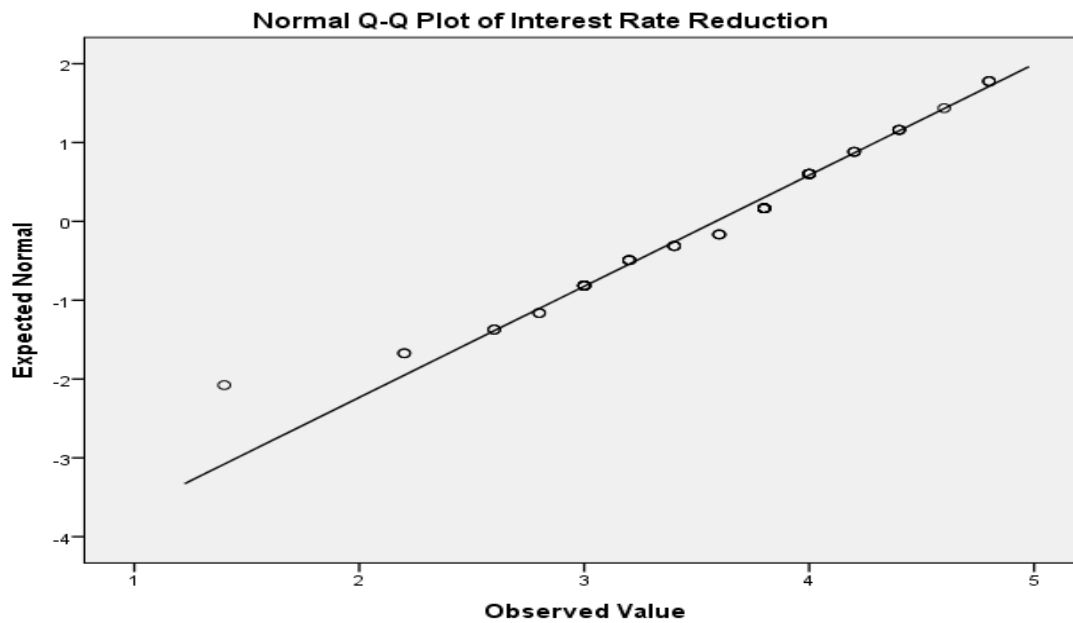
Figure 4.2: Normal Q-Q plot for Interest Rate Reduction

The Q-Q plots in figure 4.2 indicate that most of the scatter plots are in line with the line of best fit. This implies that the interest rate reduction data was normally distributed.
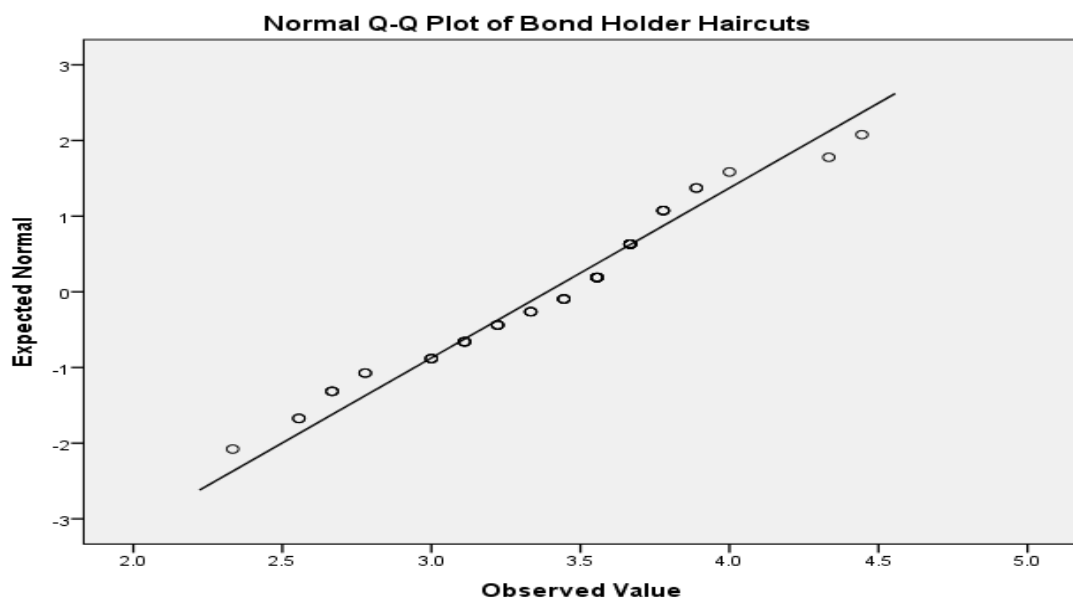
Figure 4.3: Normal Q-Q plot for Bond Holder Haircuts

The results of a normal Q-Q Plot in figure 4.3 for bond holder haircuts indicates that the data was normally distributed, since the scatter plots closely follow the line of best fit.
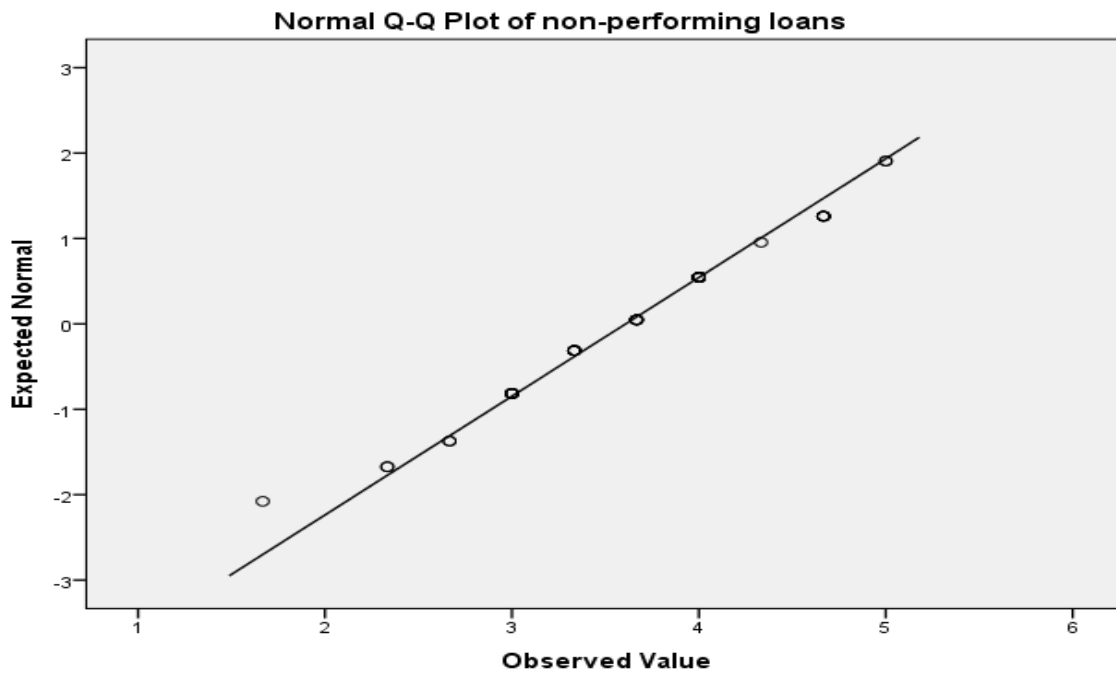
Figure 4.4: Normal Q-Q plot for Non-performing Loans

The results of a normal Q-Q Plot in figure 4.4 for non-performing loans indicates that the data was normally distributed, since most of the scatter plots were in line with the line of best fit.

4.2.2 Autocorrelation Tests

To test for autocorrelation, the study used the Durbin Watson tests. The autocorrelation results are shown in table 4.4

Table 4.4: **Autocorrelation Results**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.887a	.786	.773	.34292	1.873

a. Predictors: (Constant), Bond Holder Haircuts, Interest Rate Reduction, Debt Rescheduling
b. Dependent Variable: non-performing loans

The autocorrelation results in table 4.4 indicate a Durbin-Watson value of (1.873 which is approximately 2). These values, based on Saunders al. (2009) indicate that there was no autocorrelation in the sample.

4.2.3 Multicollinearity Tests

To test for multi-collinearity the study conducted a Variance Inflation Factor (VIF) test. The results are as shown in table 4.5

Table 4.5: **Multicollinearity Results**

	Collinearity Statistics	
Model	Tolerance	VIF
Debt Rescheduling	.910	1.099
Interest Rate Reduction	.995	1.005
Bond Holder Haircuts	.909	1.100

a. Dependent Variable: non-performing loans

The multicollinearity results in table 4.5 indicate that the variables had tolerance values of 0.910, 0.995 and 0.909 and variance inflation factors VIF of 1.099, 1.005 and 1.100 respectively. According to Hair, Black and Babin (2010) VIF value of less than 3 and a tolerance of less than 1 indicates no multi-collinearity. Therefore the study finds that there is no multicollinearity.

4.5 Descriptive Statistics

This study targeted the 57 MFIs in Nairobi County as at 31st December 2018. Complete data from 52 MFIs based on the selected variables was obtained thus accounting for 91.2% of the target population, which was appropriate to carry out the study.

4.5.1 Debt Rescheduling

The following specific aspects of debt rescheduling were used in the study; Extension of repayment period, Reducing instalment amounts, Repayment holidays, grace periods, Debt roll-overs and Change in amortization schedule. Table 4.6 shows the overall descriptive statistics of the all aspects of debt rescheduling used in study.

Table 4.6: Descriptive Statistics for Debt Rescheduling

	N	Min	Max	Mean	Std. Dev
Repayment holidays are granted to clients facing financial distress	52	2	5	4.73	.689
It is the practice of the firm to negotiate with the clients for an appropriate grace period before they start repaying the loan.	52	2	5	4.48	.828
More clients start repaying their loans with ease upon extension of the repayment period	52	3	5	4.16	.769
Our amortization schedule is made flexible to accommodate clients who land in financial distress.	52	3	5	4.06	.669
To enable clients to make regular payments we normally reduce instalment amounts	52	2	5	4.04	.885
Debt roll overs are usually granted to struggling clients to ease their financial burden when debts fall due	52	2	5	4.03	.975
Our MFI usually extends loan repayment period for clients who are unable to repay	52	1	5	3.75	1.604
We allow debtors to pay additional fee in order to extend the loan's due date.	52	1	5	3.72	1.456
Reduced instalment amounts motivate clients to honour their obligation in time	52	2	5	3.67	.810
We accept changes in loan amortization schedule	52	2	5	3.60	.912
When clients have financial difficulties, we grant them grace period after which they resume repayment	52	2	5	3.15	.916
Our company critically evaluate client's application for extension in their repayment period	52	1	5	2.21	.997
Repayment holiday makes clients consistently honour their repayment obligation	52	1	3	1.87	.768
Aggregate	52			**3.65**	**0.848**

The results in table 4.6 indicate that most of the respondents strongly agreed that microfinance institutions in Nairobi County grant repayment holidays to clients facing financial distress as indicated by a mean score of 4.73 and a standard deviation of 0.689, the respondents also agreed that institutions negotiate with the clients for an appropriate grace period before they start repaying the loan. Moreover, the respondents also agreed that more clients start repaying their loans with ease upon extension of the repayment period, the institutions make the amortization schedule flexible to accommodate clients who land in financial distress, the institutions also normally reduce instalment amounts to enable clients to make regular payments and usually grant roll overs to struggling clients to ease their financial burden when debt fall due as indicated by mean scores of 4.48, 4.16, 4.06, 4.04 and 4.03 respectively. Low standard deviations of 0.828, 0.769, 0.669, 0.885 and 0.975 show that most of the respondents had similar opinions on these statements.

In addition, the respondents also agreed that the institutions usually extend loan repayment period for clients who are unable to repay as shown by a mean of 3.75 and a high standard deviation of 1.604 shows that there were disparities in the respondent's opinion on the same. Similarly, respondents agreed that the institutions allow debtors to pay additional fee in order to extend the loan's due date as indicated by a mean score of 3.72 and a high standard deviation of 1.456 which indicates disparities in the respondent's opinion. Moreover, reduced instalment amounts motivate clients to honour their obligation in time as indicated by a mean score of 3.67 and a low standard deviation of 0.810 which indicates a general agreement by the respondents. Similarly, the respondents agreed that the microfinance institutions accept changes in loan amortization schedule as indicated by a mean score of 3.60 and a standard deviation of 0.912 which shows that there were no disparities in the respondent's opinion. The respondents could not form a decision on whether microfinance institutions grant grace period to clients with financial difficulties after which they resume repayment as indicated by mean of 3.15and a low standard deviation of .916.

Lastly, the respondents did not agree that the microfinance institutions critically evaluate client's application for extension of their repayment period and that repayment holiday makes clients consistently honour their repayment obligation. This is shown by mean scores of 2.21 and 1.87 and low standard deviation of 0.997 and 0.768 respectively. Overall, the respondents agreed on the adoption of debt rescheduling among the microfinance institutions in Nairobi

County this indicates that debt rescheduling was practised to moderate extent as shown by an aggregate mean of 3.65. There was less or minimal disparities regarding debt rescheduling by microfinance institutions in Nairobi County as shown by a low standard deviation of 0.871.

4.5.2 Interest Rate Reduction

The following specific aspects of interest rate reduction were used in the study; Loan consolidation, Negotiation for lower rates and Loan/debt refinancing Table 4.7shows the overall descriptive statistics of the all aspects of interest rate reduction used in study.

Table 4.7: Descriptive Statistics for Interest rate Reduction

	N	Min	Max	Mean	Std. Dev
When the CBK lowers the base lending rate we also consider extending the same benefit to our clients	52	2	5	4.07	.610
Debt consolidation encourages clients to pay their loans promptly when due	52	2	5	4.02	.874
Clients with multiple debts are normally offered options to consolidate them to one loan with favourable interest rates	52	1	5	3.85	.958
We allow clients facing financial problems to replace their existing loans with new loans at better terms	52	1	5	3.44	1.056
Our institution accepts loan refinancing from struggling borrowers	52	2	5	3.37	1.010
Debt consolidation boosts the credit scores of clients struggling to manage several debts	52	1	5	3.02	1.056
Our borrowers usually refinance loans when competitive interest rates are offered	52	1	5	2.85	.758
Offering lower interest rate negotiations allows customers to continue repaying their loans consistently	52	1	5	2.04	1.040
To encourage periodic repayments, we normally renegotiate with clients to lower interest rates for their existing loans	52	2	5	2.02	.748
Aggregate	**52**			**3.193**	**0.928**

Table 4.7 show that most of the microfinance institutions in Nairobi county lower the base lending rate for their clients when CBK lowers its interest rates as well with a mean score of 4.07 and a standard deviation of 0.610, the respondents agreed that debt consolidation offered by microfinance institutions encourages clients to pay their loans promptly when due with a mean score of 4.02 and a standard deviation of 3.85. In addition, the respondents agreed that microfinance institutions in Nairobi County offer clients with multiple debts options to consolidate them to one loan with favourable interest rates as evidenced with a mean score of 3.85 and .958. Moreover, the microfinance institutions allow clients facing financial problems to replace their existing loans with new loans at better terms with a mean of 3.44 and a standard deviation of 1.056, they accept loan refinancing from struggling borrowers with a mean of 3.37 and standard deviation of 1.010, the results also show that loan refinancing by MFIs helps to decrease interest rate and therefore the total cost of the loan thus results in a shorter payment term with a mean of 3.25 and standard deviation of 1.056.

In addition, the MFIS believed that their borrowers usually refinance loans when competitive interest rates are offered as shown by a mean of 2.85 and a standard deviation of 0.758, that offering lower interest rate negotiations allows customers to continue repaying their loans consistently with a mean score of 2.04 and a standard deviation of 1.040. To encourage periodic repayments, the MFIs negotiate with clients to lower interest rates for their existing loans with a mean of 2.02 and a standard deviation of 0.748. On average, interest rate reduction had a mean score of 3.193 and a standard deviation of 0.928. This indicates that the respondents had a neutral opinion on the adoption and practise of interest rate reduction meaning that the microfinance institutions in Nairobi County offered interest rate reduction to a moderate extent.

4.5.3 Haircuts

The following specific aspects of haircuts were used in the study; Partial principal amount waiver (debt reduction), Penalty waivers and Partial or full waivers of accrued interest Table 4.8 shows the overall descriptive statistics of the all aspects of haircuts used in study.

Table 4. 8: Descriptive Statistics for Haircut

	N	Min	Max	Mean	Std. Dev
We offer penalty waivers to enable debt holders to clear their debts in lump sum.	52	1	5	4.77	0.804
Interest waivers are only granted to promising clients who will resume repayments when their operations picks	52	1	5	4.50	0.835
Accrued interest waivers are usually given to clients in extreme cases	52	1	5	4.46	1.056
A reduction of the total owed lifts the burden of high levels of debt thus encouraging clients to pay the balances	52	1	5	3.91	1.192
We cancel some or all the principal amount owed by borrowers to enable them continue operating and pay later	52	1	5	2.60	1.241
Interest waivers entice clients to honour their debt repayment schedules	52	1	5	2.52	1.623
To qualify for interest waivers, clients must give a legitimate reason for not paying on time and prove that they are exercising ordinary care and prudence.	52	1	5	2.06	0.978
First-time noncompliant clients are allowed to request abatement of certain penalties for a single repayment period citing reasons for failure to pay in time	52	1	5	2.00	1.078
Penalty waivers encourage our borrowers to repay their loans promptly	52	1	5	1.83	0.834
Aggregate	**52**			**3.13**	**1.060**

Table 4.8 shows that the respondents strongly agreed that microfinance institutions offer penalty waivers to enable debt holders to clear their debts in lump sum with a mean score of 4.77 and a standard deviation of 0.804. Further, the respondents agreed that the MFIs grant interest waivers only to promising clients who will resume repayments when their operations picks and that the MFIs only offer accrued interest waivers to clients in extreme cases with mean scores of 4.50 and 4.46 a standard deviation of 0.835 and 1.056 respectively. Moreover,

the respondents agreed that a reduction of the total owed lifts the burden of high levels of debt thus encouraging clients to pay the balances as shown by a mean score of 3.91 and a standard deviation of 1.1192. Also, the MFIs cancel some or all the principal amount owed by borrowers to enable them continue operating and pay later and that the MFIs believed that interest waivers entice clients to honour their debt repayment schedules as indicated by mean scores of 2.60 and 2.52 and standard deviations of 1.241 and 1.623 respectively. The study also noted that MFIs believed that for a client to qualify for interest waivers, they must give a legitimate reason for not paying on time and prove that they are exercising ordinary care and prudence, allowed first-time noncompliant clients to request abatement of certain penalties for a single repayment period citing reasons for failure to pay in time as shown by mean scores of 2.06, 2.00 and a standard deviation of 0.978 and 1.078 respectively. Moreover, the MFIs believe that penalty waivers encourage borrowers to promptly repay loans at 1.83 mean score and 0.834 standard deviation. In general, the study found that the respondents agreed that bondholder's haircut services were moderately offered by microfinance institutions in Nairobi County as shown by a mean score of 3.13.

4.5.4 Non-Performing Loans

The study used portfolio at risk ratio to measure the level of nonperforming loans in microfinance institutions in Nairobi County. Table 4.9 shows the descriptive statistics of NPLs

Table 4.9: Descriptive Statistics for Non-Performing Loans

Year	2014	2015	2016	2017	2018	Aggregate
Average outstanding loans in arrears of over 30 days	44,681,174.9	59,609,128.0	85,040,487.4	87,778,799.5	79,973,477.2	71,416,613.4
Average refinanced or restructured loans	9,302,558.1	11,215,765.7	14,372,406.3	22,863,693.9	23,817,323.5	16,314,349.50
Average outstanding gross loan portfolio	171,274,285.4	192,211,627.1	222,869,487.6	236,802,159.9	249,148,958.8	214,461,303.8
Mean PaR	0.315	0.368	0.446	0.467	0.417	0.403
Std. Dev.	0.034	0.031	0.027	0.026	0.025	0.029
Minimum	0.010	0.031	0.017	0.028	0.064	0.030
Maximum	0.851	0.702	0.943	0.868	0.874	0.848
Skewness	1.361	1.207	0.851	1.062	0.945	1.085
Kurtosis	1.274	1.058	0.927	0.861	0.782	0.980

In table 4.9, the aggregate mean score for PaR was 0.403 suggesting that a number of MFIs were struggling with non-performing loans averaging 40.3% of their gross loan portfolio as shown by the high mean score. Particularly, Mean PaR was 0.315 in 2014, 0.368 in 2015, 0.446 in 2016, 0.467 in 2017, and 0.417 in 2018 indicating that on average PaR was highest in 2017 and smallest in 2014. The aggregate standard deviation for PaR among MFIs in Nairobi City County was 0.029. The low standard deviation depicted that this was a common problem among MFIs struggling with high volumes of non-performing loans. Particularly, standard deviation was 0.034in 2014, 0.031 in 2015, 0.027 in 2016, 0.026 in 2017, and 0.025 in 2018. From these results it is deduced that the highest deviations were observed in 2014 and least in 2018.

The minimum observed PaR among MFIs in Nairobi City County was on aggregate equal to 0.030 indicating that there were some MFIs which were very efficient in managing their portfolio at risk suggesting that their nonperforming loans were low. The least observed PaR were 0.010 in 2014, 0.031 in 2015, 0.017 in 2016, 0.028 in 2017, and 0.064 in 2018. The highest being observed in 2018 and smallest in 2014. On the other hand, the aggregate maximum value of PaR among MFIs in Nairobi County was 0.848 indicating that there are some MFIs which were very inefficient in management of their loan portfolios with 84.8% of their gross loan portfolio being non-performing. In 2014, the maximum PaR was 0.851, 0.702 in 2015, 0.943 in 2016, 0.868 in 2017, and 0.874 the highest being observed in 2016 and least in 2015. At the same time the results showed that the data obtained on non-performing loans was positively skewed as shown by a Skewness level of 1.085 which was greater than zero. Similarly the data was slightly flat (platokurtic) as shown by a Kurtosis of 0.9804< 3.

For the purpose of inferential analysis, PaR was converted into five point likert scale form such that a ratio less than 0.1=1, greater than 0.1 but less than 0.2= 2, greater than 0.2 but less than 0.3= 3, greater than 0.3 but less than 0.4 = 4 while PaR above 0.4 = 5

4.6 Inferential Analysis

The study carried out inferential data analysis through correlation and regression analysis to determine the association of the study variables and relationship between the dependent variable and independent variables.

4.6.1 Correlation Analysis

The study conducted Pearson correlation coefficient analysis to determine the association between the study variables. The direction and strength of the relationship existing between the study variables was determined with the assumption that the data obtained from the study is normally distributed and continuous. The correlation analysis results were as shown in table 4.10.

Table 4.10: Correlations

		Non-performing loans	Debt Rescheduling	Interest Rate Reduction	Haircuts
Non-performing loans	Pearson Correlation	1			
	Sig. (2-tailed)				
	N	52			
Debt Rescheduling	Pearson Correlation	-.682[**]	1		
	Sig. (2-tailed)	.000			
	N	52	52		
Interest Rate Reduction	Pearson Correlation	-.120[*]	.038	1	
	Sig. (2-tailed)	.036	.092		
	N	52	52	52	
Haircuts	Pearson Correlation	.201	.296[*]	.050	1
	Sig. (2-tailed)	.094	.033	.727	
	N	52	52	52	52

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

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

Form table 4.10, non-performing loans and debt rescheduling in the MFIs had a strong, negative significant correlation as shown by a correlation coefficient of ($r = -0.682$, $p < 0.05$), interest rate reduction and non-performing loans had a weak, negative significant correlation as indicated by coefficient of ($r = -0.120$, $p < 0.05$) while haircuts and non-performing loans had a positive, weak but insignificant correlation as indicated by coefficient ($r = 0.201$, $p > 0.05$).

From these findings, the study finds that debt rescheduling, interest rate reduction, and non-performing loans were negatively and significantly correlated. However, haircuts and non-performing loans were positively correlated. These findings concurred with the findings of McConnell (2016) who indicated that loan restructuring is beneficial to both the lender and the borrower as it enhances the ability of the debtor to come out of financial distress as well as improving chances of debt recovery thus reducing non-performing loans and Odula (2015) who stated that loan restructuring results in improved performance, growth in shareholders' value, increased loan recovery and performance improvement in Kenyan banking industry.

4.6.2 Testing of Hypotheses

The study used both simple and multiple linear regression analysis to determine the influence of debt restructuring strategies on the level of nonperforming loans in MFIs in Nairobi County. Fitness of the model decision was based on F-statistic and the associated P-values. The decision on whether to reject or accept the null hypothesis was based on P-values at 0.05 significance level. The statistical analysis, interpretations and discussions are presented in this section.

4.6.2.1 Influence of Debt Rescheduling on the Level of Non-performing Loans

The first objective of the study was to establish the influence of debt rescheduling on the level of non-performing loans in microfinance institutions in Nairobi County. The study used simple linear regression to test the hypothesis which stated that rescheduling repayment period has no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County and results were as shown in the tables; 4.11,4.12 and 4.13

Table 4.11: Model Summary for Debt Rescheduling

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.812[a]	.659	.652	.42429

a. Predictors: (Constant), Debt Rescheduling

Table 4.12: ANOVA[a] for Debt Rescheduling

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	17.381	1	17.381	96.550	.008[b]
	Residual	9.001	50	.180		
	Total	26.382	51			

a. Dependent Variable: non-performing loans

b. Predictors: (Constant), Debt Rescheduling

Table 4.13: Coefficients[a] Debt Rescheduling

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	2.677	1.092		2.451	.018
Debt Rescheduling	-.355	.128	-.278	-2.773	.008

a. Dependent Variable: non-performing loans

From the results shown in model summary table 4.11, it was observed that adjusted R^2 for the model was 0.652 suggesting that debt rescheduling predicted 65.2% of all variations in non-performing loans in MFIs in Nairobi County while 34.8% of all variations in non-performing loans in MFIs in Nairobi County were instigated by other factors other than debt rescheduling.

Based on the ANOVA results in table 4.12, the F-statistic for the model was 96.550>4.0343 F-critical and the P-Value=0.008<0.05. The study thus established that the model is a good fit for the data and hence was used to predict the influence of debt rescheduling on the level of non-performing loans in MFIs in Nairobi County.

The regression coefficients results shown in table 4.13 showed un-standardized beta coefficients of; β=2.677; P-value=0.018<0.05 constant and β=-0.355; P-value=0.008<0.05 debt rescheduling, Therefore the simple regression model for debt rescheduling was summarised as follows;

$$Y= 2.677- 0.355X_1$$

From the model, holding debt rescheduling constant at zero, non-performing loans would be equal to 2.677 while holding all other factors constant, a unit increase in debt rescheduling would lead to a 0.355 decrease in non-performing loans in the MFIs in Nairobi County

Since P-value=0.008<0.05 for debt rescheduling indicate a statistical significant influence of debt rescheduling on nonperforming loans in MFIs in Nairobi County, The null hypothesis (H0$_1$) which states that, rescheduling repayment period has no significant influence on the level of non-performing loans in MFIs in Nairobi County was rejected and the alternative hypothesis which states that, rescheduling repayment period has a significant influence on the level of non-performing loans in MFIs in Nairobi County was accepted. The results of the study conforms to those of the study done by Chua (1999) on ways in which MFIs can ease the impact of a natural disaster on clients by rescheduling loans where loan rescheduling was found to be effective since it allows borrowers to have time for reorganization and to regain better financial footing

4.6.2.2 Influence of Interest rate Reduction on the Level of Non-performing Loans

The second objective of the study was to determine the influence of interest rate reduction on the level of non-performing loans in microfinance institutions in Nairobi County. The study used simple linear regression to test the hypothesis which stated that reduction of interest rates has no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County and the results were as shown in tables;4.14,4.15 and 4.16.

Table 4.14: Model Summary for Interest Rate Reduction

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.742[a]	0.551	.542	.48693

a. Predictors: (Constant), Interest Rate Reduction

Table 4.15: ANOVA[a] for Interest Rate Reduction

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	14.527	1	14.527	61.270	.000[b]
	Residual	11.855	50	.237		
	Total	26.382	51			

a. Dependent Variable: Non-performing loans

b. Predictors: (Constant), Interest Rate Reduction

Table 4.16: Coefficients[a] for Interest Rate Reduction

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.403	.247		1.635	.108
	Interest Rate Reduction	-.294	0.068	-.282	-4.324	0.000[b]

a. Dependent Variable: Non-performing loans

The results in table 4.14 showed that the adjusted R^2 for the relationship between interest rates reduction and non-performing loans was 0.542 indicating that the model predicted 54.2% of all variations in non-performing loans in MFIs in Nairobi County. The results thus

imply that 55.8% of all variations in non-performing loans in MFIs in Nairobi County were influenced by other factors other than interest rates reduction.

The ANOVA results in table 4.15 showed that the F-statistic for the model was 61.270> 4.0343 F-critical; P = 0.000<0.05. Since the F-statistic was greater than the F-critical and the P-value was less than the significance level, the study concluded that the model was a good fit for the data and hence was used to predict the influence of interest rate reduction on the level of non-performing loans in MFIs in Nairobi County.

Based on the regression coefficient results shown in table 4.16 the constant, coefficient was $\beta=0.403$; P-value=0.000<0.05 and interest rate reduction coefficient was $\beta=-0.294$; P-value=0.000<0.05.Therefore the simple regression model was summarised as follows;

$$Y = 0.403 - 0.294X_1$$

This means that, holding interest rates reduction constant at zero, non-performing loans in MFIs in Nairobi County would be equal to 0.403. On the other hand, holding all other factors constant, a unit increase in interest rates reduction would lead to a 0.294 reduction in non-performing loans in MFIs in Nairobi County.

Since the regression coefficients results show a statistical significant relationship between interest rate reduction and the level of non-performing loans in MFIs in Nairobi County, as indicated by P-value=0.000<0.05 .The null hypothesis ($H0_1$) which states that, reduction of interest rate has no significant influence on the level of non-performing loans in MFIs in Nairobi County was rejected because (P<0.005) and the alternative hypothesis which states that, reduction of interest rates has a significant influence on the level of non-performing loans in MFIs in Nairobi County was accepted. From the results it was concluded that, interest rate reduction was significant in predicting the level of non-performing loans in MFIs in Nairobi County. The findings of this study were consistent with those reached by Kaggwa (2013) who examined the contribution interest rates have on loan portfolio performance in commercial banks and indicated that loan restructuring measures such as reducing interest rates and extension of repayment periods for clients with financial difficulties are some of techniques used by Banks to solve the problem of non-performing loans and by offering fair interest rates the banks enhanced client's willingness to repay loans thus eliminating huge

amounts of non-performing loans from their portfolio. The findings on this variable however differed with conclusions reached by Kibet (2012) that there is no significant relationship between interest rate and non-performing loans in commercial banks in Kenya.

4.6.2.3 Influence of Haircuts on the Level of Non-performing Loans

The third objective of the study was to determine the influence of haircuts on the level of non-performing loans in microfinance institutions in Nairobi County. To achieve the objective, the hypothesis that haircuts have no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County was tested using simple linear regression and the results were as shown in Table 4.17, 4.18 and 4.19.

Table 4.17: Model Summary for Haircuts

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.284[a]	.081	.062	.69642

a. Predictors: (Constant), Haircuts

Table 4.18: ANOVA[a] for Haircuts

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.132	1	2.132	4.396	.041[b]
	Residual	24.25	50	.485		
	Total	26.382	51			

a. Dependent Variable: Non-performing loans

b. Predictors: (Constant), Haircuts

Table 4.19: Coefficients[a] for Haircuts

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	3.603	.781		4.615	.000
	Haircuts	.042	.228	.041	.184	.855

a. Dependent Variable: Non-performing loans

The results in model summary, table 4.16 indicated that the value of adjusted R^2 was 0.062 suggesting that haircuts only predicted 6.2% of all variations in non-performing loans in MFIs in Nairobi County. The results also show that 93.8% of all variations in non-performing loans in MFIs in Nairobi County were explained by other variables other than haircuts.

The ANOVA results in table 4.18 indicated that F-statistic for the model was 4.396 >4.0343; P= 0.041< 0.05. Since the F-statistic was greater than the F-critical value and the P-value was less than significance level, the model was found to be a good fit for the data and hence was used to predict the influence of haircuts on the level of non-performing loans in MFIs in Nairobi County.

Based on the regression coefficient table, 4.19 the constant had a coefficient of β=3.603; P=0.041>0.05 while the coefficient for haircuts was β=0.042; P=0.855> 0.05.The simple regression equation was summarised as follows;

$$Y= 3.603 + 0.042X_1$$

This indicate that, holding haircuts constant at zero, non-performing loans in MFIs in Nairobi County would be equal to 3.603.On the other hand, holding all other factors constant and increasing haircuts by one unit would lead to a 0.042 increase in the level of non-performing loans.

The regression coefficients results also show that haircuts had a (P-value=0.855 >0.05) .This implies a statistical insignificant relationship between haircuts and the level of non-performing loans in MFIs in Nairobi County. Because haircuts were statistically insignificant in predicting the level of non-performing loans in microfinance institutions in Nairobi County, The null hypothesis (H0$_1$) which states that, haircuts have no significant influence on the level of non-performing loans in MFIs in Nairobi County was accepted. From the results it was concluded that, haircuts were not significant in predicting the level of non-performing loans in MFIs Nairobi County. The findings of the study however contradicted with those reached by Leseeto (2010) that haircuts such as waivers on charges or penalties on unpaid loans reduces non-performing loans since they encourage a win-win situation where affected individuals and organizations takes advantage of the amnesty to save on the charges they would have incurred with no remission.

4.6.2.4 Combined Influence of Debt Restructuring Strategies on the level of Non-Performing Loans

The fourth objective of the study was to determine the combined influence of debt rescheduling, interest rate reduction and haircuts on the level of non-performing loans in microfinance institutions in Nairobi County. To achieve the objective, the study tested the hypothesis that combined, debt rescheduling, interest rate reduction, and haircuts have no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County.

The study conducted a multiple regressions analysis to measure the composite effect of debt restructuring strategies on the level of non-performing loans in microfinance institutions in Nairobi County. The regression model was specified as follows:

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

The multiple regression analysis results are as shown in tables 4.20, 4.21 and 4.22.

Table 4.20: Model Summary for Combined Influence

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.887[a]	.786	.773	.34292

a. Predictors: (Constant), Debt Rescheduling, Interest Rate Reduction, Haircuts

Table 4.21: ANOVA[a] for Combined Influence

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	20.738	3	6.913	58.785	.000[b]
	Residual	5.644	48	.118		
	Total	26.382	51			

a. Dependent Variable: non-performing loans

b. Predictors: (Constant), Debt Rescheduling, Interest Rate Reduction, Haircuts

Table 4.22: Coefficients[a] for Combined Influence

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.331	.613		.541	.591
	Debt Rescheduling	-.892	.068	.880	-13.146	.000
	Interest Rate Reduction	-.172	.008	0.132	-21.500	.000
	Haircuts	.034	.113	.021	.298	.767

a. Dependent Variable: non-performing loans

The model summary table 4.20 results show that there is a strong relationship between debt restructuring strategies and the level of nonperforming loans in MFIs in Nairobi County (R=0.887).The adjusted R square for the model was 0.773 implying that 77.3% of the variations in the level of non-performing loans in MFIs in Nairobi County were explained by changes in debt rescheduling, interest rate reduction and haircuts. The remaining 22.7% of the variations in non-performing loans were explained by other factors not considered in the study.

The ANOVA results in table 4.21 show the F-calculated value 58.785>2.798; P=0.000<0.05. These results show that the model was fit to predict the combined influence of debt restructuring strategies on the level of non-performing loans in MFIs in Nairobi County. Further, based on the ANOVA results, the P-value =0.000<0.05 indicating a statistical significant relationship between debt restructuring strategies and the level of NPLs in MFIs in Nairobi County hence the null hypothesis (H0_1) which states that combined, debt rescheduling ,interest rate reduction haircuts have no significant influence on the level on NPLs in MFIs in Nairobi County was rejected and the alternative hypothesis which state that combined, debt rescheduling, interest reduction and haircuts have significant influence on the level of NPLs in MFIs in Nairobi County was accepted. The results of the study conforms to the study by Kiyai (2003) on bad debts restructuring techniques and non-performing loans in commercial banks in Kenya which found out that commercial banks had significantly reduced the levels of NPLs by applying a combination of debt restructuring techniques such as interest rate reduction, debt rescheduling, haircuts, debt-equity swaps and repayment holidays

The regression coefficient results in table 4.22 indicated that the constant, β=0.331; P=0.591>0.05, coefficient for debt rescheduling, β=-0.892; P=0.000<0.05, coefficient for interest rate reduction, β=-0.172; P=0.000<0.05, coefficient for haircuts β=0.034; P=0.767>0.05.Therefore the multiple regression equation was summarised as follows;

$Y= 0.331-0.892X_1 -0.172X_2 + 0.034X_3$

This implies that if all variables were held constant at zero, the level of non-performing loans of the microfinance institutions in Nairobi County would be 0.331. Also if all factors were held constant and debt rescheduling increased by one-unit, the level of non-performing loans

of microfinance institutions in Nairobi County would reduce by 0.892. Similarly, if all factors were held constant and interest rate reduction increased by one unit, the level of non-performing loans in MFIs in Nairobi County would reduce by 0.172. Moreover, haircuts had a positive coefficient implying that if all factors were held constant and haircuts increased by one unit, the level of non-performing loans would increase by 0.034.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Summary of Findings

The general objective of this study was to determine the influence of debt restructuring strategies on the level of non-performing loans in microfinance institutions in Nairobi County. The study came up with a number of key findings on debt restructuring strategies and nonperforming loans in MFIs in Nairobi County. The findings are summarized as per the research objectives.

5.1.1 To Establish the Influence of Debt Rescheduling on the Level of Non-Performing Loans in Microfinance Institutions in Nairobi County

The first objective of the study was to establish the influence of debt rescheduling on the level of non-performing loans in microfinance institutions in Nairobi County. The null hypothesis tested was rescheduling the repayment period has no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. Based on the results, the study found that debt rescheduling had a significant effect on the level of non-performing loans in MFIs in Nairobi County.

5.1.2 To Determine the Influence of Interest Rates Reduction on the Level of non-Performing Loans in Microfinance Institutions in Nairobi County

Secondly, the study sought to determine the effect of reduction of interest rates on the level of non-performing loans in microfinance institutions in Nairobi County. The study tested the null hypothesis that reduction of interest rates has no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. The findings of the study showed that reduction of interest rates has a significant influence on the level of non-performing loans in microfinance institutions in Nairobi County.

5.1.3 To Establish the Influence of Haircuts on the Level of Non-Performing Loans in Microfinance Institutions in Nairobi County;

The third objective of this study was to establish the influence of haircuts on the level of non-performing loans in microfinance institutions in Nairobi County. The corresponding null hypothesis was that haircuts have no significant influence on the level of non-performing

loans in microfinance institutions in Nairobi County. The findings of the study showed that bondholder haircuts have no significant influence on the level of non-performing loans in microfinance institutions in Kenya.

5.1.4 To Determine the Combined Influence of Debt Rescheduling, Interest Rate Reduction and Haircuts on the Level of Non-Performing Loans in Microfinance Institutions in Nairobi County

Finally, the study sought to establish the combined effect of debt rescheduling, interest rates reduction and haircuts on the level of non-performing loans in microfinance institutions in Nairobi County. The corresponding null hypothesis was that: Combined, debt rescheduling, interest rate reduction, and haircuts have no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. The study found that when combined the three strategies had significant influence on the level of non-performing loans in microfinance institutions in Nairobi County.

5.3 Conclusions

The study concluded that rescheduling the repayment period has a significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. These conclusions are in line with the existing literature which shows how interest continues to accrue over the period of deferment, but clients pay accumulated interest at a later date and that both deferral measures are effective since they allow borrowers to have time for reorganization and to regain better financial footing. It is noted that the findings of this study are in line with those of other scholars which implies that the findings can be generalised in other studies.

The study also concluded that reduction of interest rates has a significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. The conclusions on these variables were in line with the conclusions from the existing literature which indicated that reduction of interest rates would result to a reduced level of non-performing loans. The empirical findings reviewed from other sectors had corresponding conclusions with the current study. Therefore the conclusions reached in this study can be generalised to other institutions other than microfinance institutions.

The study also concluded that haircuts have no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. This conclusion concurred with the existing literature on haircuts in sovereign debt, recovery and sustainability that there is a correlation between delay length and size of haircut in that the longer the delay length to repay the loan the higher the hair cut hence a reduction of the level of nonperforming loans. The conclusions of this study concurred with some of the existing literature but at the same time differed with others hence can be generalized to other institutions other than microfinance institutions.

Lastly, the study found that when combined debt restructuring strategies had significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. It was thus concluded that combined, debt rescheduling, interest rate reduction, and haircuts have a significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. Since, these findings were consistent with findings in other studies conducted in different context, the study concluded that the findings can be generalised to other contexts such as commercial banks and SACCOs.

5.4 Recommendations for Policy and Practice

The study concluded that rescheduling the repayment period has a significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. The study therefore recommends that the management of the microfinance institutions should consider debt rescheduling as a good strategy of reducing the level of non-performing loans. Microfinance institutions should encourage their clients especially those struggling to pay to consider debt rescheduling to make it easier for them to pay.

Secondly, the study concluded that reduction of interest rates has a significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. The study therefore makes two recommendations on this variable. First, the study recommends that the central bank of Kenya should consider reducing the lending rates to microfinance institutions with high levels of non-performing loans so that they can extend the same services to their borrowers thereby reducing the level of non-performing loans. Secondly, the microfinance institutions should offer reduced interest rates for struggling borrowers with good credit ratings. This will enable the borrowers to pay their outstanding loans therefore reducing the level of non-performing loans in microfinance institutions in Kenya.

In addition, the study concluded that haircuts have no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. Based on this conclusion, the study recommends that microfinance institutions should channel more of its resources on strategies such as debt rescheduling and interest rate reduction that can significantly reduce the level of non-performing loans.

Besides, the study concluded that combined, debt rescheduling, interest rate reduction and haircuts had significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. Based on these findings, it is recommended that the management of microfinance institutions in Kenya should seek to adopt numerous strategies together as opposed to a single strategy at a time so as to reduce the level of non-performing loans.

5.5 Contributions of the Study to the Body Knowledge

The study contributes to the body of knowledge by proposing a management model applicable by microfinance institutions in Nairobi County and beyond in managing the level of non-performing loans. This is anchored on the adopted conceptual framework which indicated that when combined, debt rescheduling, interest rate reduction and haircuts significantly influence the level of non-performing loan in microfinance institutions in Nairobi City County.

Secondly, the study contributes theoretically to the body of knowledge by validating the applicability of the theoretical anchorage of creditor's bargain theory and value-based theory which had been applied in other contexts but was significantly absent in microfinance institutions. Reviewed literature indicated that creditor's bargain theory, value-based theory and the game theory had been used individually to anchor studies in other contexts such as commercial banks and insurance companies. Thus, by successfully anchoring the conceptualisation of debt rescheduling, interest rate reduction and haircuts in this study fill the gap.

Empirically, the study contributes to the body of knowledge by showing the relationship that exists between the study variables among microfinance institutions in Nairobi County. Existing literature showed that although the study constructs had been studied previously, the scholarship considered their individual influence on Non-performing loans and not their

combined influence. The study also noted that most of these relationships were studied at macro level and very little, if any was done at firm level.

5.6 Suggestions for Further Research

Findings of this study were based on 57 microfinance institutions in Nairobi County. The study therefore suggests that other studies should be conducted focusing on microfinance institutions in other counties to see whether the same results would be obtained. On the same note, the study also suggests that since the study focused on microfinance institutions only, there is need to carry out other studies focusing on all commercials banks in Kenya to determine the effect of debt restructuring strategies on the level of non-performing loans.

The study established that 77.3% of the variations in non-performing loans among the MFIs in Nairobi County were explained by changes in debt rescheduling, interest rate reduction and haircuts. The remaining 22.7% of the variations in non-performing loans were explained by other factors not mentioned in the model. Therefore, since the studies conducted to this point are not inclusive enough, there is need to conduct further research to determine the factors that explain the 22.7% of the variations in the level of non-performing loans in microfinance institutions in Nairobi County.

Moreover, the study also found that haircuts have no significant influence on the level of non-performing loans in microfinance institutions in Nairobi County. The study therefore suggests that other studies should be conducted on the effect of haircuts on the level of non-performing loans in microfinance institutions in Kenya to determine whether similar findings will be obtained.

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Appendix I: Introduction Letter

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OFFICE OF THE DIRECTOR GRADUATE SCHOOL

Ref: CM11/62501/14 ....

Date: 13th September, 2019 ....

The Director General
National Commission for Science Technology and Innovation,
P. O. Box 30623-00100
NAIROBI.

Dear Sir,

**RE: REQUEST FOR RESEARCH PERMIT – MR. STEPHEN MUMINA
MUTUKU REG. NO. CM11/62501/14**

This is to introduce and confirm to you that the above named student is in the Department of Accounting, Finance and Management Science, Faculty of Commerce, Egerton University.

He is a bona-fide registered MBA student in this University. His research topic is **"Influence of Loan Restructuring Strategies on the Level of Non-Performing Loans in Microfinance Institutions in Kenya."**

He is at the stage of collecting field data. Please issue him with a research permit to enable him undertake the studies.

Your kind assistance to him will be highly appreciated.

Yours faithfully,

Dr. S. P. Nyalala
DEPUTY DIRECTOR BOARD OF POSTGRADUATE STUDIES

DIRECTOR, BOARD OF POST GRADUATE STUDIES
1 3 SEP 2019
EGERTON UNIVERSITY, 20115 EGERTON

SPN/en

"Transforming Lives Through Quality Education"

Appendix II: Research Questionnaire

I am Stephen Mutuku a student from Egerton University. Currently, I am doing a research on **INFLUENCE OF DEBT RESTRUCTURING STRATEGIES ON THE LEVEL OF NON-PERFORMING LOANS IN MICROFINANCE INSTITUTIONS IN NAIROBI COUNTY** .You are hereby requested to answer the questions or comment on the statements in the questionnaire shown below**.** All the information provided will be treated with confidentiality. *Answer all questions as indicated by either filling in the blank or ticking the option that applies*.

Section A: Demographic Information

1) Please indicate your designation.

Institutional credit manager	[ ]
Branch credit manager	[ ]
Business unit manager	[ ]
Other……………please specify	[ ]

2) How many years have you worked in the Institution?

Less than 1 year	[ ]	1-5 years	[ ]
6-10 years	[ ]	over 10 years	[ ]

Section B: Debt Rescheduling

Please indicate by a tick [√] the extent to which you agree on the following statements on the aspect of debt rescheduling in your institution.

Where: Where; 1=Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Statement	1	2	3	4	5
Our MFI usually extends loan repayment period for clients who are unable to repay					
Our company critically evaluate clients application for extension in their repayment period					
More clients start repaying their loans with ease upon extension of the repayment period					
Reduced instalment amounts motivates clients to honour their					

Statement	1	2	3	4	5
obligation in time					
To enable clients to make regular payments we normally reduce instalment amounts					
Repayment holidays are granted to clients facing financial distress					
Repayment holiday makes clients consistently honour their repayment obligation					
When clients have financial difficulties, we grant them grace period after which they resume repayment					
It is the practice of the firm to negotiate with the clients for an appropriate grace period before they start repaying the loan.					
Debt roll overs are usually granted to struggling clients to ease their financial burden when debts fall due					
We allow debtors to pay additional fee in order to extend the loan's due date.					
we accept changes in loan amortization schedule					
Our amortization schedule is made flexible to accommodate clients who land in financial distress.					

Section C: Interest Rate Reduction

Please indicate by a tick [√] the extent to which you agree on the following statements on the aspect of interest rate reduction in your institution.

Where: Where; 1=Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Statement	1	2	3	4	5
To encourage periodic repayments we normally renegotiate with clients to lower interest rates for their existing loans					
Offering lower interest rate negotiations allows customers to continue repaying their loans consistently					
When the CBK lowers the base lending rate we also consider extending the same benefit to our clients					
Clients with multiple debts are normally offered options to consolidate them to one loan with favourable interest rates					

Statement	1	2	3	4	5
Debt consolidation boosts the credit scores of clients struggling to manage several debts					
Debt consolidation encourages clients to pay their loans promptly when due					
We allow clients facing financial problems to replace their existing loans with new loans at better terms					
Our institution accepts loan refinancing from struggling borrowers					
Our borrowers usually refinance loans when competitive interest rates are offered					
Loan refinancing helps to decrease interest rate and therefore the total cost of the loan thus results in a shorter payment term					

Section D: Bond Holder Haircuts

Please indicate by a tick [√] the extent to which you agree on the following statements on the aspect of bond holder haircuts in your institution.

Where: Where; 1=Strongly Disagree, 2= Disagree, 3=Neutral, 4=Agree, 5=Strongly Agree

Statement	1	2	3	4	5
We cancel some or all the principal amount owed by borrowers to enable them continue operating and pay later					
A reduction of the total owed lifts the burden of high levels of debt thus encouraging clients to pay the balances					
We offer penalty waivers to enable debt holders to clear their debts in lump sum.					
First-time noncompliant clients are allowed to request abatement of certain penalties for a single repayment period citing reasons for failure to pay in time					
Penalty waivers encourage our borrowers to repay their loans promptly					
Accrued interest waivers are usually given to clients in extreme cases					
Interest waivers are only granted to promising clients who will					

resume repayments when their operations picks					
To qualify for interest waivers, clients must give a legitimate reason for not paying on time and prove that they are exercising ordinary care and prudence.					
Interest waivers entice clients to honour their debt repayment schedules					

THANK YOU FOR PARTICIPATING…….

Appendix III: Secondary Data Collection Sheet

Microfinance name………………………..

Year	2014	2015	2016	2017	2018
Variable					
Total outstanding loans in arrears of over 30 days(As at end of financial year)					
Total refinanced or restructured loans(As at end of financial year)					
Total outstanding gross loan portfolio(As at end of financial year)					

Appendix IV: List of Registered Microfinance Institutions: Source (AMFI 2019)

BANKS

1. Co-operative Bank
2. Eclof Kenya
3. Equity Bank
4. Jamii Bora Bank
5. Kenya Post Office Savings Bank
6. Sidian Bank Ltd

Wholesale

7. MESPT
8. Oikocredit
9. Stromme Microfinance East Africa

SACCOs

10. Stima Sacco Society Ltd

DEVELOPMENT INSTITUTIONS

11. Swiss contact - Swiss Foundation for Technical Cooperation

MICROFINANCE BANKS

12. Caritas Microfinance Bank Ltd
13. Century Microfinance Bank Ltd
14. Daraja Microfinance Bank
15. Faulu Kenya Microfinance Bank
16. Kenya Women Microfinance Bank
17. Kenya Women Microfinance Bank
18. Maisha Microfinance Bank
19. Rafiki Microfinance Bank Ltd
20. Remu Microfinance Bank Ltd
21. SMEP Microfinance Bank Ltd
22. Sumac Microfinance Bank Ltd
23. U&'I Microfinance Bank Ltd

CREDIT ONLY INSTITUTIONS

24. Vision Fund Kenya Limited
25. BIMAS
26. SISDO
27. Letshego Kenya Ltd
28. PAWDEP
29. YEHU Microfinance Trust
30. Jitegemea Credit Scheme
31. AAR Credit Services
32. Juhudi Kilimo Co.Ltd
33. Musoni Kenya Ltd
34. Select Management Services Ltd
35. Greenland Fedha Ltd
36. Platinum Credit Limited
37. Focus Capital Limited
38. Jubilant Kenya Ltd
39. Habitat for Humanity Kenya
40. Real People Ltd
41. Speed Capital Ltd
42. Neema Health Educational & Empowerment Programme (NEEMA – HEEP Ltd)
43. Micro Mobile Ltd
44. Ushindi Bora Ltd
45. Sevenstar Capital Services Ltd
46. Hand in Hand Eastern Africa
47. Star Credit Ltd
48. Getbucks Ltd
49. Private Equity Ltd
50. Jumo Kenya Ltd
51. Nyali Capital Limited
52. Premier Credit Limited
53. Moneyworth Investment Limited
54. Hazina Development Trust Limited
55. Spring Board Capital
56. Fountain Credit
57. Longitude Finance

Appendix V: Research Permit

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR
SCIENCE, TECHNOLOGY & INNOVATION

Ref No: 596030

Date of Issue: 04/October/2019

RESEARCH LICENSE

This is to Certify that Mr.. stephen mutuku of Egerton University, has been licensed to conduct research in Nairobi on the topic: INFLUENCE OF LOAN RESTRUCTURING MEASURES ON THE LEVEL OF NONPERFORMING LOANS IN MICRO FINANCE INSTITUTIONS IN KENYA for the period ending : 04/October/2020.

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Applicant Identification Number

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Appendix VI: Research Publication

DEBT RESCHEDULING, A NECESSARY STRATEGY IN MANAGEMENT OF NON-PERFORMING LOANS: INSIGHTS FROM MICROFINANCE INSTITUTIONS IN NAIROBI CITY COUNTY

Stephen Mutuku Mumina[1] & Kalui Fredrick Mukoma[2], Ph.D.
[1]*Faculty of Commerce - Egerton University, muminamutuku88@gmail.com*
[2]*Faculty of Commerce - Egerton University*

Abstract

The purpose of this study was to determine the influence of debt rescheduling on the level of non-performing loans in MFIs in Nairobi County. Explanatory research design was adopted with the population of study comprising of all 57 MFIs in Nairobi County under umbrella body AMFI. Both primary and secondary data was collected. Primary data was collected with the help of a semi structured questionnaire while secondary data covering a period of five years from 2014-2018 was collected from AMFI published annual supervisory reports and MFIs final financial statements using a data collection sheet. Data was analysed using descriptive statistics (mean and standard deviation), correlation analysis, as well as linier regression analysis. The SPSS software was used to analyse the data. Results indicated that non-performing loans and debt rescheduling in the MFIs are strongly and negatively correlated (r=-0.682).Debt rescheduling had a statistical significant influence on NPLs (adjusted R^2=0.652; F=96.550>4.0343; β=-0.355; P-value=0.008<0.05). Based on these results, the study concluded that debt rescheduling was significant in predicting the level of NPLs in MFIs in Nairobi County. Therefore, the study recommends that MFIs should carefully evaluate possibility of rescheduling repayment periods for struggling borrowers. The study contributes to the body of knowledge by proposing a management model for MFIs in managing their NPLs. The study also contributes theoretically by validating the applicability of the theoretical anchorage of creditor's bargain theory which had been applied in other contexts but was significantly absent in microfinance institutions. Empirically, the study contributes by showing the relationship that exist between the study variables among microfinance institutions in Nairobi City County, a gap identified in previous scholarship. Future studies should be carried out on other debt restructuring strategies other than debt rescheduling to determine whether they have a significant influence on the level of NPLs in MFIs in Kenya.

Key Words: Debt rescheduling, non-performing loans, microfinance institutions.

Introduction

Use of debt in the capital structure provides corporates an opportunity to enjoy interest tax shield/savings arising from the fact that interest expense is an allowable deduction for tax purposes (Graham, Hanlon, Shevlin, & Shroff, 2013). This provides the potential to increase the shareholder's earning, particularly when economic conditions are conducive such that