

**CAUSES OF NONPERFORMING LOANS IN MICROFINANCE BANKS IN  
NAIROBI, KENYA**

**BY**

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REQUIREMENTS FOR AWARD OF THE UNDERGRADUATE DEGREE IN  
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### STUDENT'S DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the Research Project contains no material previously published or written by another person except where due reference is made in the Research Project itself.

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## **DEDICATION**

I dedicate this work to myself, my family and my friends for being pillars of strength and support to me as I do this work.

## **ACKNOWLEDGEMENT**

Accomplishing this research would not have been possible had it not been for a number of people. I am extremely grateful.

I'm grateful to God for the energy and persistence he granted me as I did this study.

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## ABSTRACT

This study seeks to determine the causes of nonperforming loans in microfinance banks in Nairobi, Kenya. While microfinance may be revolutionary in changing non-bankable peoples lives for the better, it is essential to study the causes of non-performing loans due to the huge costs and losses that may result from them. Hence the study assessed borrower factors, loan factors and business factors to find out the extent to which they affect loan non-performance.

The study employed descriptive research design. There exist 13 microfinance banks in Kenya, and from the 13, the researcher was able to get data from 7. A total of 31 respondents gave feedback through questionnaires. The data was then analysed using Statistical Package for Social Sciences (SPSS, Version 25). Tables and figures were used in data presentation. Mean, standard deviation and percentages were used in data analysis.

According to the findings, borrower characteristics of age and gender had high influence on loan non-performance while education level had no significant influence. All loan and business characteristics had significant influence on loan performance.

Following the study, recommendations were made. Microfinance Banks should have rigorous screening processes to ensure that only credit worthy individuals and businesses gain access to loans. First, credit officers and recovery managers should mandatorily follow up with borrowers on loan utilization and repayment. This will enable them to closely monitor loan performance, such that non-performing loans can be easily identified, and corrective measures taken. Second, training borrowers on loan clauses, how to calculate repayment instalments monitor, personal finance management and saving will reduce default rates. Lastly, banks can introduce a merit system to award/motivate those that pay on time. Rewards can be in the form of a rebate or discount. Further research should be carried out on systemic factors influencing loan performance.

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### **List of Abbreviations**

**MFI** - Microfinance Institution

**MFB** – Microfinance Bank

**CBK** – Central Bank of Kenya

**NPL**- Nonperforming Loan

**NPP**- Nonperforming Portfolio

**AMFI-K** – Association of Microfinance Institutions Kenya

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to the study

Microfinance is a concept that was pioneered by Nobel Peace Prize laureate Muhammad Yunus in 1976 as part of his research on how to avail financial services to the impoverished. He started the Grameen Bank in Bangladesh as the first microfinance institution in the world, and since then, the microfinance sector has grown extensively over the years to more than 3,500 microfinance institutions (MFIs) in the world, offering microfinance services to more than 190 million non-bankable clients (Cheruiyot, 2015).

Microfinance Institutions are financial institutions whose activities are directed towards availing financial services to working low income earners or small enterprises who otherwise would not have access to conventional banking and related services (Mosha, 2016). More specifically, microfinance banks are formally registered, licensed and regulated institutions that offer microfinance services.

The credit given by microfinance institutions are generally small loans, also known as microloans or microcredit. There is no globally defined amount for small loans, however they can be as small as 100 Malaysian Ringt, which is roughly KES 2000 (Cheruiyot, 2015). Among the services provided by microfinance comprise of group loans, individual loans, insurance savings, leasing, insurance and other financial services. Microfinance banks may also engage in forex (Central Bank of Kenya, 2018). However, among these services microloans and mandatory savings are the major services offered to the MFB clients in Kenya (Mosha, 2016).

The aim of microfinance is to make sustainable financial services accessible to the economically active poor who are unable to access these services from conventional banks (Mosha, 2016). This is because such people fail to meet the credit requirements that is required by traditional banks and other financial service providers before granting one a loan (Muganyizi, 2015). Further fuelling this is absence of any formally recognized employment and which indicates that the poor cannot offer security or collateral for their loans. Businesswise, interest rates, risks and transaction costs in microfinance are high given that loans and deposits are usually small and unsecured. Hence to be risk-avoidant banks do not offer their services to such individuals. This then leave these non-bankable individuals with a handful of options, which is usually local loan sharks, whose interest rates are even higher than

those given in commercial banks (Muganyizi, 2015). This is not a viable or sustainable option given their already existing low-income and poor living standards.

### **1.1.1 Microfinance Banks in Kenya**

In Kenya, there exists 13 licensed microfinance banks which are regulated by the Central Bank of Kenya (Central Bank of Kenya, 2017) under the Microfinance Act of 2016 and the Regulations Act of 2008. All 13 of the aforementioned banks are located and headquartered in Nairobi, Kenya. Microfinance Banks may also optionally be members of AMFI-K (Association of Microfinance Institutions, Kenya), which is a member-based organization established in 1999 whose goal is to develop and support the emergence and sustenance of the microfinance industry. So far, AMFI-K has 46 members who serve an estimated 6,500,000 customers (Association for Microfinance Institutions, 2019). Microfinance in Kenya has mainly developed as an avenue for women, youth, the informal sector, low income individuals and entrepreneurs to access microloans which then finance small ventures to improve livelihood and grow business.

In Kenya's economy, microfinance has played a huge role in small-scale business development as they focus on the equity and financial inclusion of economically active, small-scale individual and businesses. The flexibility of and easy access to funds for small individuals and business owners has made microfinance a tool that has further pushed and grown entrepreneurship and business development in the SME sector (Mosha, 2016).

Microfinance banks, however, face several challenges. These include: a need for better corporate governance, dependence on funds from deposits for survival, inadequate donor funding, a need for better business models, insufficient support from government, credit risk and loan defaults, and adoption of changes in IFRSs. Among these challenges, nonperforming loans, which then lead to non-performing portfolios then losses, stands out as the major problem in microfinance banks, hence a need to study non-performing loans in MFBS, which will then help control the issue.

### **1.2 Statement of the Problem**

Lately in the microfinance industry in Nairobi, non-performing loans, indicated by high rates of default and delinquency have been creeping up. This goes to show that most microfinanciers

are operating non or low performing portfolios. As explained by Hwandi & Gama (2015) and Addae-Korankye (2014), operating such portfolios culminates into even larger issues such as delayed earnings, increase in collection costs, bad debt from loans that have been written off, credibility of the institution and lack of funds to support other operating costs. This is a cause for concern as it brings about great losses to microfinance banks and negatively affects the economy at large.

This research seeks to examine factors that lead to non-performing loans among Microfinance Banks in Kenya hence determine policies and procedures that can be implemented to minimise and better manage non-performing loans. In 2016, The Central Bank published a report that discussed credit risk as the single greatest impediment to the progress of Microfinance institutions.

Seeing as lending is the core business of MFBs, this makes monitoring and control of non-performing loans a necessity. This is because, to be financially sustainable, MFBs must ensure good credit management through and high portfolio performance through high repayment rates, low default and delinquency, efficient lending and cost recovery.

Globally, several research studies investigate the determinants of non-performing loans in microfinance. In a study conducted in Ghana, Addae-Korankye (2014) findings indicated that poor monitoring, poor screening of loan candidates, small loan sizes and high interest rates were the major causes of loan default/delinquency, and hence non-performing loans. The study focused mostly of activities of MFIs. However, it did not look much into borrower attributes (such as age, gender, education) and business factors (such as size, age, number of employees) that would contribute to loan non-performance. A study done in Dodoma, Tanzania by Mosha (2016) suggests that MFIs should employ better loan monitoring strategies, they should ensure loan officers and that collectors undergo proper training and build better relationships with their borrowers and involve them when drafting loan terms and conditions. Just like the Ghanaian study, borrower and business factors are not examined in this study.

Locally, Maigua (2015) did a study whose findings showed that a noteworthy relationship links business characteristics, lender characteristics and loan repayment default, and hence loan non-performance. The study also found that no significant relationship exists between loan characteristics and loan repayment. Another study by Warue (2012) portrayed that how long a business had been running, as well as divergent use of funds were positively and significantly linked to loan default, hence loan non-performance. She also spoke about tenancy, where

borrowers keep moving residence hence making repayment follow-ups difficult. However, loan characteristics were not addressed in the study, hence creating a gap.

Most of the mentioned studies focused on some factors that cause non-performance and not others. Most of the available literature also focuses mostly on commercial banks rather than microfinance banks. It is due to this niche that this study sought to fill the existing contextual and conceptual gaps in the field and with more depth by doing an all-round study on the major causes of non-performing loans in Kenya, with special focus on Microfinance Banks in Nairobi, Kenya.

### **1.3 Research Objectives**

#### **1.3.1 General Research Objective**

The study generally investigated the causes of nonperforming loans in microfinance banks in Nairobi, Kenya.

#### **1.3.2 Specific Research Objectives**

Specifically, study was guided by the following objectives;

1. To examine the effect of borrower characteristics on non-performing loans in Microfinance Banks in Nairobi, Kenya.
2. To examine the effect of business characteristics on non-performing loans in Microfinance Banks in Nairobi, Kenya.
3. To examine the effect of loan characteristics on non-performing loans in Microfinance Banks in Nairobi, Kenya.

### **1.4 Research Questions**

1. What effect do borrower characteristics have on non-performing loans in Microfinance Banks in Nairobi, Kenya?
2. What effect do business characteristics have on non-performing loans in Microfinance Banks in Nairobi, Kenya?
3. What effect do loan characteristics have on non-performing loans in Microfinance Banks in Nairobi, Kenya?

### **1.5 Significance Of the study**

As mentioned above, non-performing loans, characterised by loan delinquency and default, cause major financial issues for microfinance banks, especially since some microfinance loans are unsecured. Hence, these delinquent issues can spread from a few loans to entire portfolios. Given microfinance is highly concentrated around specific sectors e.g. agriculture, or specific age groups e.g. youth, or specific demographics e.g. women-only, this often means that many borrowers may be experiencing the same external factors e.g. famine in the case of agriculture, unemployment in the case of youth etc. Credit and portfolio management then becomes necessary to aid in detection and handling of nonperforming loans in order to prevent this threat to the longevity and sustainability of microfinance banks (Addae-Korankye, 2014).

Regarding a research niche, most studies the researcher encountered focused generally on microfinance institutions. This study narrows it down to microfinance banks, which stand out since they are formally licensed and regulated by the CBK compared to others such as table banking, Accumulating Savings and Credit Associations (ASCAs) or Rotating Savings and Credit Associations (ROSCAs), whose activities may not necessarily be monitored and controlled by laws and regulations.

### **1.6 Scope of the study**

This study concentrated on Microfinance Banks in Nairobi, Kenya.

### **1.7 Beneficiaries of the study**

**1. Clients of the MFBs:** The customers of MFBs gain from this research as they get a better understanding of the important part they hold in loan portfolio management. This may help them be better clients of MFBs and hence help MFBs meet their financial goals.

**2. Other researchers and academicians:** Researchers and academicians gain from the study adds information to other existing studies on MFBs and may help them in their own research as well.

**3. The microfinance industry in Kenya:** Since the financial sector deals with the similar customers as well as operate within the same business environment, this project will be of benefit to lending institutions in Kenya as a whole.

**4. Managers of MFIs:** This study will be beneficial to the microfinance sector in Kenya, specifically managers of MFBs. This study may assist in refurbishing their policies and procedures to help them be better at credit and portfolio management. This will then help improve overall financial operations, since interest income will be more consistent and loan paybacks will be timely.

**5. Financiers to microfinance institutions:** The study is beneficial to investors who provide funds to MFBs. This research will act as an informative tool, and it will help them gauge the efficiency and sustainability of their investment based on the performance of MFBs.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.0 Overview

This chapter analyses the work of a number of researchers on the same topic of studies as well as topics related to the study. Herein are the definition of concepts most relevant to microfinance in Kenya and non-performing loans, theories supporting the topic, empirical frameworks on the topic's research objectives and finally a diagrammatical representation of the relationships between the variables in the study will be depicted in the conceptual framework.

#### 2.1 Definition of concepts

##### 2.1.1 Non-performing loans and how they are measured

Meyer (2001) defined non-performing loans as those for which borrowers have missed to pay the stipulated contractual payments for a certain period of time. Ongweso (2006) explains that there is a multiplicity of causes of non-performing Loans (NPLs) in Kenya such as: depressed state of the economy, poor judicial systems, poor credit risk assessment and management, the relaxed regulatory and supervision systems present in most banks and also conflict of interest of dominant shareholders (Musyoka, 2013).

Loan non-performance can further be classified into loan delinquency and loan default. Pearson & Greeff (2006) defined default as a point within the loan term where the borrower misses at least three instalments within a 24-month period. On the other hand, loan is defined as delinquent repayment is overdue. The importance of measuring delinquency is because it indicates forthcoming losses and expenses due to the unpaid loan. Currently, delinquency indicators include: collection rates which compare what has been paid to totals overdue; arrears rates measures totals overdue amounts against total loan amounts; and portfolio at risk rates which measures the outstanding balance of loans that are not being paid on time against the outstanding balance of total loans (Addae-Korankye, 2014). A delinquent loan becomes a defaulted loan when the possibility of receiving loan repayments reduce because of a borrowers' complete failure, inability or unwillingness to repay the loan. Default is a legally contractual issue since the borrower is not complying with the terms and conditions of the loan.

### **2.1.2 Group Lending**

Mosha (2016) defines the group model as where a group of people, usually 4-5 individuals who know each other or have some sort of relationship, come together and borrow a loan jointly. In this type of lending, the whole collective suffers the consequences of loan default if it happens.

MFBs prefer group lending since it is easy for groups to collaborate on supporting each other and gathering funds where one or some members fall short.

### **2.1.3 Individual lending**

Here, a sole borrower is given funds and is responsible for making all payments of interest by themselves. It is however riskier for MFBs to give individual loans since in case of a shortfall, the borrower has no backing or group support to assist them repay the loan (Lehner, 2009). Intensive screening hence becomes a necessity to ensure that loan-worthy individual loan candidates are selected. The screening itself is additionally costly, which is another reason MFBs may prefer group lending to Individual lending. (Mosha, 2016)

### **2.1.4 Loan repayment**

A loan can be described as a lumpsum of funds given to an individual, group of individuals or company by a lending institution, individual or group of individuals. The recipient the loaned funds (borrower) is then required to periodically pay back interest on the loan plus a portion of the principal. (Mwaka, 2017)

## **2.2 Effects of Nonperforming Loans**

This section of the chapter seeks to explain the consequences of nonperforming loans to the banking industry, to borrowers and to the economy.

### **2.2.1 Effect of Nonperforming Loans on Borrowers**

When borrowers default their loans, and hence making them nonperforming loans, they end up registered as uncreditworthy loan candidates in the Credit Reference Bureau (CRB). The CRB is an institution that was set up to assist financial lending institutions deduce the credit worthiness of their potential loan candidates, hence minimize possible loan default risk. It reduces information asymmetry thus enabling financial institutions better select loan candidates. Being on the list is detrimental to a customer as they cannot access further loans for 7 years. To be delisted, they borrower must repay the loan in full then apply for a clearance

certificate. Irrespective of whether they find a way to clear the debt within those 7 years, the borrower will still have to apply for the clearance certificate (Kago, 2014).

### **2.2.2 Effect of Nonperforming Loans on Microfinance Banks and Microfinance Industry**

Nor low performing portfolios culminate into even larger issues such as delayed earnings, increase in collection costs, bad debt from loans that have been written off, credibility of the institution and lack of funds to support other operating costs. This is a cause for concern as it brings about great losses to microfinance banks (Addae-Korankye, 2014).

### **2.2.3 Effects of Nonperforming Loans on the Kenyan Economy**

In as much as loans are beneficial in that they can be used to boost business and enterprises, it poses an issue where, in a situation whereby loans borrowed are not used for investment activities, or where returns on the investments are delayed, the borrowers funds are not used in savings or investment, but are directed towards loan repayment.

On the banking side, increased credit risk due to nonperforming loans may lead to the bank experiencing high operations costs, which lead to losses. Losses may eventually lead to bankruptcy or insolvency and eventual closure of the microfinance bank.

## **2.3 Theoretical Framework**

This research is led by two theories, one relating to the microfinance side (Agency Theory) and another relating to the borrower side (Liquidity Preference Theory). Credit risk is the most imminent problem banks face and hence making credit risk measurement a necessity for all financial institutions (Ochung, 2013). The goal of any business involved in lending and credit is making interest revenue on the principal. Hence financial institutions must employ strategies, policies and procedures that enable them to thoroughly, effectively and efficiently screen the creditworthiness of borrowers and their ability to repay the loan before they extend credit.

At the same time, it is important to know how borrowed funds are utilized in order to determine possible causes of loan non-performance, i.e. default and delinquency (or lack thereof). Microfinance plays these roles economic betterment: helping the impoverished to meet their basic needs, improving the financial habits and experiences of the borrower's household and to empower individuals by supporting them in their projects, endeavors and businesses (especially women). However, there is a need to borrower characteristics to make sure that

those who get the loans are people who deserve it and not borrowers who will lead your microfinance business into losses and expenses.

### **2.3.1 Information Asymmetry Theory**

In as much as this theory is more widely practiced in the insurance industry, it is adopted in the banking sector, more specifically in the microfinance sector, in the screening and selection of loan candidates.

With relation to microfinance and loan default, the above theory presents the problem of Information asymmetry, where one party in a transaction (in this case the transaction being lending or borrowing a loan), has more information than the counter party and hence exploits their position to the disadvantage of the counter party. Existence of information asymmetry between the MFBs and borrowers leads to untrustworthy borrowers getting the loans, and those likely to be good borrowers missing out on the loan. Bad borrowers get access to loans even though they are not likely to repay the loan.

Moral Hazard, discussed even more in-depth by Stiglitz (1983), is where the microfinance bank is not able to recognize a borrower's inability to verify the real reason they are borrowing the loan; hence the MFB cannot tell what it will be used for.

Adverse selection is where the selected loan client has undesired habits and actions that were not initially seen during the screening process. As a result, the MFB lacks accurate information about the borrower's actual goodwill and commitment to repaying the funds borrowed. It becomes even more complicated given MFBs give unsecured loans, hence likelihood of repayment is higher since the borrower has no loss of stake in case of default. Even worse, an MFB cannot at all control how the funds borrowed are used.

An MFBs inability to recognize accurate demographic characteristics (such as age and gender), business knowledge levels, loan characteristics and financial literacy characteristics in their potential borrowers that affect loan repayment potential is detrimental to their business. Microfinance banks should hence work towards proper follow up measures to ensure accountability in how their borrowers use the funds they borrow. In a case where red flags indicating the possibility of loan default or delinquency exist, the MFB can then take appropriate measure to curb forthcoming credit risk and expenses due to bad debt.

The benefit of screening potential loan candidates is getting creditworthy borrowers who can repay their loans. Hence curbing operational issues in microfinance such as not being able to

cover overheads and business expenses. It also helps microfinance institutions maintain the internationally accepted portfolio risk level of 3%, or at least maintain low default and delinquency levels, hence aids them in managing and controlling non-performing loans (Addae-Korankye, 2014).

However, the demerit of the screening process is that it is tedious, and it takes up too much time hence delay on when the bank actually gives the loan (Mwaka, 2017). If the potential borrower needed the funds at an earlier time, then late delivery of the loan makes the loan irrelevant. In the example of a manufactory business, if they needed to purchase assets such as machinery for their production process which would then lead to higher production and hence a consequent increase in sales and greater customer satisfaction, then a delay in giving the loanable funds proves irrelevant as, by the time the loan is granted, due to inability of the business to deliver its services efficiently, customers will have already lost interest/ moved on to a competitor.

Berhanu (2005) cited in Kosen (2013) suggests that a way to curb moral hazard is to use collateral. However, this is disputed since most microfinance clients are poor and hence may not have collateral to secure their loans. On the other hand, Kosen (2013) citing Armendariz and Morduch (2010) say that if lending institutions find cheaper ways to conduct screening, this could be a solution to adverse selection.

### **2.3.2 Liquidity Preference Theory**

The liquidity preference theory theorizes the demand for money. It was first coined by Keynes (1936) in his book *The General Theory of Employment, Interest and Money*. Through incorporating Keynesian Analysis, it explains interest as a reward for parting with liquidity. In monetary economics, directly dispensable holdings/funds are called M1 and funds in this category are used to support different monetary motives in an individual which are; the transactional motive, the precautionary motive and the speculative motive.

The transactional motive explains how funds are used to cover basic recurrent transactions. In a situation where expenses exceed income earned or received, it becomes necessary to get a loan. This would happen where expenses are continuous, but income is earned occasionally, say monthly from one's day job.

The precautionary motive explains how income is used to cover sudden or unexpected social problems such as funeral charges after the sudden death of a family member, hospital bills after

sudden accidents or illnesses or unexpected expenses accrued when a visitor comes unannounced.

The speculative model explains investment actions and attitudes given changes in monetary policies. For example, how demand for money changes with changes in interest rates, how investment and risk attitudes change with changes in fiscal policy etc.

Findings suggest that borrowers who use their funds for the intended purposes have a higher probability of repaying the loan fully and in a timely fashion compared to those that divert from the purpose they borrowed the funds for. However, diverting from the proper use of funds used is a very common situation since sudden unexpected events occur (precautionary motive) and funds may be insufficient to cover basic needs (transactional motive), leading to drifting from the intended use of the funds. Because of this, microfinance is believed to be a negative thing, because it only pushes the poor deeper into destitution when they default their loans (Mwaka, 2017)

## **2.4 Empirical Framework**

An empirical framework gives insight into what results other researchers have obtained the study's selected objectives. The first part of each subtopic will explain international studies supporting the various study objectives, while the second part presents evidence from local papers (where applicable).

### **2.4.1 Borrower Characteristics and Nonperforming Loans**

The borrower characteristics covered in this study include age, gender and financial literacy. Under the subject of age, one study done in Kyrgyzstan by The Microfinance Centre for Central Asia (2011) conducted a study on 2,603 active borrowers. It was found that the young people (ages 20-34) as well as the old (ages 55+) had the best repayment rates. Conversely, those in their middle ages (35-55) have lower repayment rates since they are trying to cater for both their families and to repay the loan.

Contrary to this, Gebremedhin (2010) suggests the opposite, his defense being that young people are still at the start of their careers and professions, and hence may not be able to have a steady enough income to support consistent repayment. Those in their middle ages (between 35-55) are at the prime of their career and hence can repay loans more efficiently.

Locally, it was found by Mwaka (2017) that individuals had the following default rates at various age brackets: individuals between ages 81-95(100%), 21-35 (72.1%) and 36-50 (60%) had the highest default rates compare to ages 51-65 (52.4%) and 66-80 (37.5%). The justifications given are that those between age 21-50 may have family responsibilities competing with loan repayment, whereas those at 81+ may have no income at all to support loan repayment. At 51-80, these individuals are probably experiencing the empty nest syndrome where al dependants have left. They have more disposable income and hence when they take a loan they are better able to focus on loan repayment.

In studying gender, several studies show women as better at loan repayment. In a local study by Mwaka (2017), he suggested that women are more diligent in loan repayment. This may be due to several factors; they respond faster to coercion than men, they are part of credit groups and table banking groups. Evans & Winston (2008) from Ghana also did a study that showed that single, college educated women had lower probabilities of defaulting loan repayment compared to men and married women.

Internationally, D'Espallier, Guerin, & Mersland (2011) conducted a global study that covered 350 MFIs in 70 countries and deduced that women are majority members in most microfinance banks and institutions, hence a conclusion that MFIs with more female members experience lower risk. A conflicting study by Angaine & Waari (2014), and in another by Halkias (2008) suggests that there exists an insignificant relationship between loan default/delinquency(hence nonperforming loans) and gender.

Financial literacy skills include savings, investing, budgeting, and spending. (Kariuki, 2012). In a local study by Ombongi (2015), it was found that a high level of financial literacy contributes to a decrease in loan default and hence improves loan and portfolio performance. Further citing a study by (Mohd, 2010), (Ombongi, 2015) asserts that when borrowers are aware of the importance of compliance, it is easy for them to perform their due diligence without follow-up or coercion. Education programs organized by the authority or other public education institutions are needed to enhance borrowers' financial literacy as it involves basic mathematics that enable a borrower to calculate repayable amounts of principal and interest that are due. Ombongi (2015), further citing (Chan et. al. 2000) puts across the fact that higher financial literacy and knowledge about loan systems, policies and procedures leads to higher compliance thus lower loan delinquency/default rates, and hence better performing loans and portfolios.

### **2.4.2 Business Characteristics and Nonperforming Loans**

The relationship between nonperforming loans and type of business can be seen majorly through the size, age and activity carried out by the borrowing business. Size can be defined by the number of employees, profits made etc. (Maigua, 2015). From this perspective, it has been studied that larger businesses are less likely to default loans, hence have better performing loans. Thus, portfolios with loans from larger companies are more likely to be lucrative in comparison to a portfolio consisting of smaller businesses.

Similarly, Maigua (2015) suggests that businesses that have been in operation for a long time, due to their experience and stability, are less likely to default their loans. This is further supported in a local study done by Nguta (2013), it was observed that businesses that had been running for less than two years had a 52.4% default rate. Those that had been running for two to five years had a 44.2% default rate Those in operation for between five to ten years had a 78.6% default rate. Finally, for businesses in operation for more than ten years, default was a 0%. Under type of business, findings were that the manufacturing industry had a 67.9% default rate, the service industry had a 64% default rate, agriculture 58.3% and the trade sector recorded the least (34.9%) cases of loan repayment defaults

### **2.4.3 Loan Characteristics and Nonperforming Loans**

There are various loan characteristics to be studied in relation to loan delinquency and default, such as interest rates, loan term and size of loan. In a study in Tanzania Muganyizi (2015) citing (Morduch, 1999) suggests that generally, MFB loans have high interest (40-60%) compared to the conventional 10-15% offered by traditional banks. This may be due to several factors, as suggested by a Kenyan researcher, Cheruiyot (2015). Firstly, charging higher interest is done as a protective measure since loans are unsecure, hence probability of delinquency is higher. Also, the fact that giving smaller loans is expensive means that they need the higher interests in order to cover overheads and to obtain margins. Researchers however argue that it makes no sense to charge the poor high interests as it only sinks them deeper into destitution. Nonetheless, no study so far has established a link between high interest rates and lower borrowing rates. In Kenya, MFB loan rates are averaged at 20% (Central Bank of Kenya, 2018)

Bragg (2010), cited by Mulili (2013) defined loan period or loan term as either being short term, medium term or long term. Short time frames reduce the risk of non-repayment to the bank. Larger loans generally have more loan repayment problems than smaller loans.

## 2.5 Conceptual Framework

According to Mugenda & Mugenda (2003), conceptual framework identifying the associations between the variables being researched on and displaying this relationship in the form of a diagram.

In this study, the independent variables are borrower characteristics, loan characteristics and business characteristics. The dependent variable is nonperforming loans in microfinance banks in Nairobi, Kenya, as indicated by loan default/delinquency rates.

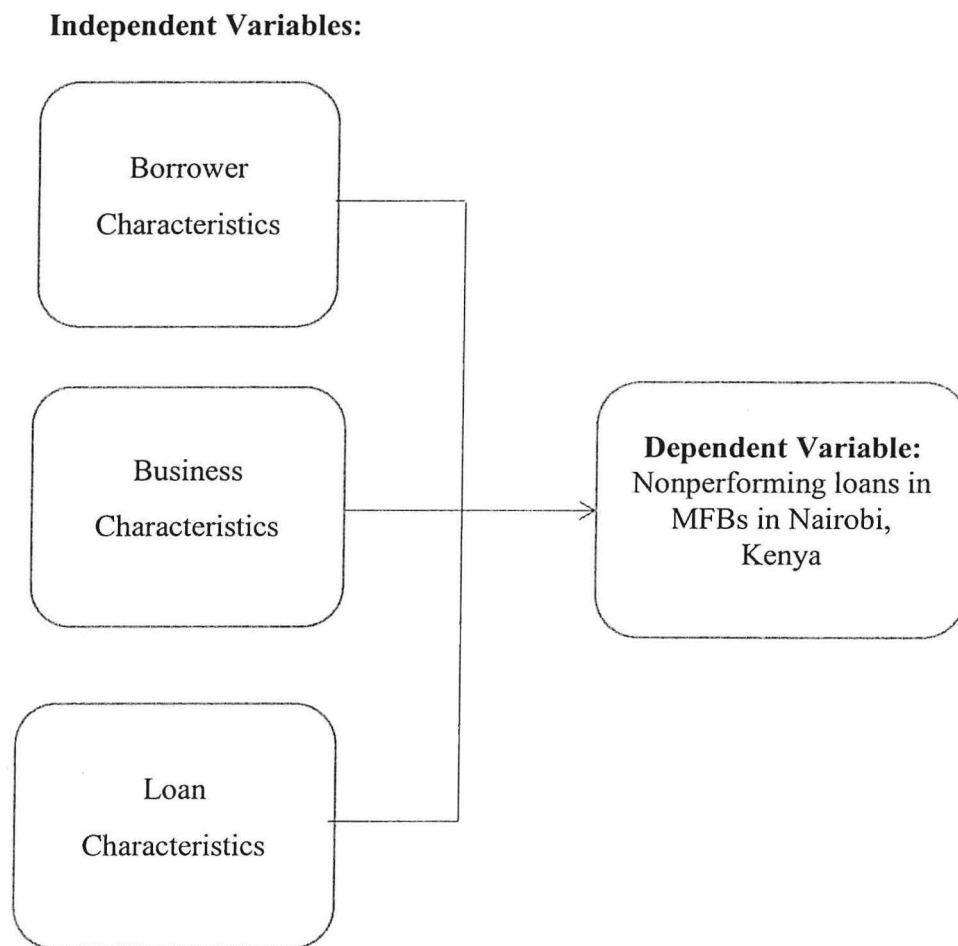


Figure 1: Conceptual Framework

## CHAPTER THREE

### RESEARCH METHODOLOGY

#### 3.0 Introduction

The third chapter of this proposal identifies the methods, processes and procedures employed in the gathering of, processing and analysis of data. Research design, data collection, sample population and data analysis are captured in this chapter.

#### 3.1 Research Design

Mulili (2013), citing Borg and Gall (1989) defines research design as the process of creating an empirical test to concur with or disagree with a claim. Mugenda and Mugenda (1999) simplify this and define it as the procedure used to conduct a study. Research design is the procedure with which the entire research is carried out involving data collection, measurement and analysis which is then used to answer the research questions and achieve the research objectives (Maigua, 2015).

Descriptive research design was used in this study as it allows one to work with primary data and causality relationships. It is also an effective way to get information required to describe views and opinions of respondents. Descriptive design also enables thorough analysis of the research topic. Boateng (2018) defines descriptive research a research design that describes characteristics of objects, people, groups, organization and environments.

#### 3.2 Target Population, sample size and study locale

Target population as defined by Mugenda & Mugenda (2003) is the greater population to which one hopes to generalize findings. In this study, the census method was used and all the 13 existing microfinance banks as per the CBK directory were the target population. The target respondents were individuals working in credit departments, sections or divisions such as loan officers/credit managers etc. The choice of using MFBs in Nairobi was because this is where most of the headquarters are based therefore proving a good population. The target respondents were clients and loan officers in the selected MFBs.

A sample, as defined by Wiersman (1995), cited by (Mulili, 2013) is a small representative fraction of the target population selected systematically for the research. An ideal sample should be large enough so that the investigation can be done with confidence and certainty. Sampling itself is selecting a satisfactory sample, which represents the whole population, to determine parameters of the whole population. Purposive sampling was used to select 5 loan

officers from each MFB, thus giving a sample size of 65 respondents. Note that a 95% confidence level was used in this study.

### **3.4 Data Collection**

The data collection instrument used in this study was a questionnaire. It was used on a drop and pick basis. Mulili (2013) defines a questionnaire as a collection of items to which a respondent is expected to react, usually in writing. Mulili (2013) further cites Naremo (2002) who says that questionnaires are important as they summarize all necessary and important data and are free from alteration when analyzing. They also reduce costs as they need only be given to the respondents, and thereafter picked, hence reducing the need for face to face meeting between interviewer and respondents.

The questionnaire will comprise of structured and unstructured questions. The structured questions will save on resources and will enable easy analysis since the responses are direct. Responses for the structured questions will be guided by a 5-point Likert scale. Unstructured questions will offer the respondent the opportunity to give a detailed response without the constraint that closed-ended questions enforce.

Questionnaires will also contain serial numbers to enable tracking and easy coding during analysis. The questionnaires are to be filled by credit managers or credit officers of the MFBs in the sample and the questions set will be both structured and unstructured, guided by the specific objectives in the study. The data collected here was primary data.

#### **3.4.1 Validity and Reliability of Data Collection Instruments**

Best & Kahn (2003) explain validity as the magnitude to which an experiment measures what it intends to. Moore (1983) additionally defines validity as the magnitude to which a tool measures the variables being researched on.

Validation of the questionnaire was done by a supervisor who is an expert in research. This aided the researcher to discern questions that were insufficient and ambiguous. These questions were then edited and altered to improve relevance, quality, clarity and conciseness, and hence validity.

Reliability as defined by Kothari (2004) is where a research tool/ instrument consistently gives anticipated outcomes when used severally to collect data from the same sample. A reliability test was done by asking the same question to 5 respondents, and once consistency in responses was established through the Pearson's Correlation Coefficient, the instrument was established as reliable.

To affirm reliability and validity of the data collected, the data will be checked for errors, accuracy, completeness and omissions while inputting data into the statistical software. Mugenda & Mugenda (2003) defined validity as the accuracy and meaningfulness of inferences which are based on research results. To achieve validity and reliability.

#### **3.4.2 Data Collection Procedures**

A consent letter to conduct the study was obtained from the researcher's university and necessary permissions from the banks will be gotten. Appointments for interviews will be set, after which questionnaires will be dispatched. The researcher will give the respondents 4 weeks to fill the questionnaires to allow them time to think without pressure. The researcher will then alert the respondents two days before the collection.

#### **3.4.3 Ethical Considerations in Data Collection**

An introductory letter will be attached to the questionnaires to indicate that permissions have been obtained from the relevant authorities, in this case, the researcher's university and the institution under research. The consent form will also confirm that the data collected is for academic research purposes only, and that anonymity and confidentiality will be maintained. It will also stipulate that the questionnaires will be filled based on voluntary participation.

#### **3.5 Data Analysis and Presentation**

Data analysis was conducted after all the data had been collected and cleaned. Descriptive statistics was used in the analysis. Tools used were mean, standard deviation and percentages. Statistical Package for Social Sciences (SPSS) version 25 was used for the above since it can analyze a huge amount of data in a short time and is simple to use. The organization and presentation of data were done using tables

### 3.6 Operationalization of Variables

According to Smyth (2004), cited by Tab operationalization is coming up with an idea that explains something. The table below shows how the variables of this study were operationalized.

**Table 1: Operationalisation of variables**

Objectives	Variable		Indicator	Measure- ment Scale	Data Col- lection	Data Analy- sis
	Independent variable	Depend- ent varia- ble				
To examine the effect of borrower characteristics on non-performing loans in Microfinance Banks in Nairobi, Kenya.	Age  Gender  Financial Literacy	Nonperforming loans in Microfinance Banks in Nairobi, Kenya.	Young, Middle age, Old  Male Female Married/singles  Education level	Ordinal	Questionnaire	Descriptive
To examine the effect of business characteristics on non-performing loans in Microfinance Banks in Nairobi, Kenya.	Age  Size  Activity	loan delinquency and default among borrowers of Microfinance Banks in Nairobi, Kenya.	<2 years, 2-5 years, 5-10 years, >10 years  Small scale Large scale Manufacturing, trade, service, agriculture	Ordinal	Questionnaire	Descriptive

<p>To examine the effect of loan characteristics on non-performing loans in Microfinance Banks in Nairobi, Kenya..</p>	<p>Size  Interest  Loan Term  Loan type</p>	<p>loan delinquency and default among borrowers of Micro-finance Banks in Nairobi, Kenya.</p>	<p>Small, medium, large  High, low  Short-term, medium-term, long-term  Group, individual</p>	<p>Ordinal</p>	<p>Questionnaire</p>	<p>Descriptive</p>
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## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION

#### 4.1 Introduction

In this chapter, the researcher presents the findings of the study and data analysis. The data was presented in the form of tables, frequencies and percentages where applicable.

##### 4.1.1 Response Rate

The study targeted all 13 microfinance banks. Of the 13, only 7 agreed to participate in the study. From a sample size of 65 respondents, 31 filled in and returned the questionnaires making a response rate of 47.69%. This response rate was slightly low and failed to conform to Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for analysis and reporting; a rate of 60% is good and a response rate of 70% and over is excellent.

#### 4.2 Demographic Information

This section gives the gender of the staff, position held by the staff and years the respondents have worked in the firm.

##### 4.2.1 Gender of the respondents

The study sought to establish the gender of the management staff in the MFBs. The findings were as shown in the table below:

**Table 2: Respondent Gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	19	61.3	61.3	61.3
	Female	12	38.7	38.7	100.0
	Total	31	100.0	100.0	

The findings revealed that 61.3% of respondents were male while 38.7% were females. This implies that among the respondents, there are more male than females, and this is further evident as shown by the percentages in the table.

#### 4.2.2 Position Held

It was important to establish the position held by the respondents. The findings were as shown in the table below:

**Table 3: Position held at firm**

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Business Development Officer	1	3.2	3.2	3.2
Credit analyst	5	16.1	16.1	19.4
Credit manager	10	32.3	32.3	51.6
Credit officer	5	16.1	16.1	67.7
Head of credit	1	3.2	3.2	71.0
Recoveries officer	8	25.8	25.8	96.8
Senior credit officer	1	3.2	3.2	100.0
Total	31	100.0	100.0	

From the findings, 3.2% of the respondents indicated that they were business development officers, 16.1% were credit analysts, 32.3% were credit managers, 16.1% were credit officers, 3.2% percent were heads of credit, 25.8% were recoveries officers and 3.2% were senior credit officers.

#### 4.2.3 Length at firm

Data on the years the respondents have worked in their firm in the table below:

**Table 4: Duration of service**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Less than 5 years	25	80.6	80.6	80.6
	Between 6-10 years	6	19.4	19.4	100.0
	Total	31	100.0	100.0	

From this data, 80.6% had worked in the company for less than 5 years, while 19.4% have worked in the company between 6-10 years. This shows that the respondents have sufficient knowledge and experience in loan performance.

### **4.3 Borrower Characteristics**

The borrower characteristics analysed were age, gender and level of education (financial literacy), as well as the extent to which these factors affect loan repayment. The findings are as shown in the table below:

#### **4.3.1 Age**

On whether the age of the borrower affected the possibility of loan repayment, the findings were as shown in the table below:

**Table 5: Analysis of borrower age**

<b>AGE</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
To which extent have you found that borrowers between the age of 18-35 are likely to default/be delinquent in loan repayment?	31	3.871	0.92166
To which extent have you found that borrowers between the age of 35-50 are likely to default/be delinquent in loan repayment?	31	2.5161	0.72438
To which extent have you found that borrowers between the age of 50-65 are likely to default/be delinquent in loan repayment?	31	2.0645	0.72735
To which extent have you found that borrowers above the age of 65 are likely to default/be delinquent in loan repayment?	31	2.8387	1.67525

From the data above it can be seen that borrowers between age 18-35, as shown by the mean of 3.871, are highly likely to have non-performing loans. This data was supported by comments on the fact that the lack of job security, peer pressure and overall inexperience are what make default rates high for individuals in this age group.

Those next most likely to have nonperforming loans are those above age 65 as shown by the mean of 2.8387, indicating moderate likelihood of having non-performing loans. Further explanations in the open-ended section indicates that this age group performs poorly in loan repayment due to low funds after retirement.

Those between age 35-50 were reported to have low to moderate likelihood of having non-performing loans. Further explanations in the open-ended section explained that people within this age bracket are diligent in loan repayment due to job security, experience, maturity and responsibility to family.. Finally, those least likely to have nonperforming loans were borrowers aged 50-65, as shown by the mean of 2.0645, indicating low likelihood of default. Further explanations in the open-ended section further explained that people within this age bracket are diligent in loan repayment due to experience and maturity. Fewer family obligations also create extra disposable income that can then be used to repay loans.

### 4.3.2 Gender

On whether the gender of the borrower affected the possibility of loan repayment, the findings were as shown:

**Table 6: Analysis of borrower gender**

<b>GENDER</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
To which extent have you found that single female borrowers are likely to default/be delinquent in loan repayment?	31	2.8387	1.03591
To which extent have you found that married female borrowers are likely to default/be delinquent in loan repayment?	31	2.1613	0.45437
To which extent have you found that single male borrowers are likely to default/be delinquent in loan repayment?	31	3.2258	1.02338
To which extent have you found that married male borrowers are likely to default/be delinquent in loan repayment?	31	2.6452	0.87744

From the data collected single male borrowers were reported to have the highest level of default compared to their female counterparts and fellow married men. This is indicated by the mean of 3.2258. Single female borrowers were next most likely to have nonperforming loans as indicated by the mean of 2.8387, which indicated moderate levels of default. Married male borrowers were found to have low to moderate levels of default indicated by the mean of 2.6452. Finally, married women were reported to be the least likely to have nonperforming loans, with a mean of 2.1613.

From the open-ended section, married women were generally said to be better payers than men, especially married women. Among the reasons for this is that women fear pressure from the banks, and they are generally better organised than men. It was also reported that women are better at repaying group loans, whereas men are better at repaying individual loans.

### 4.3.3 Financial literacy

On whether the age the borrower affected the possibility of loan repayment, the findings were as shown:

**Table 7: Analysis of levels of financial literacy**

<b>FINANCIAL LITERACY</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
To which extent have you found that borrowers who have primary school level education are likely to default/be delinquent in loan repayment?	31	2.9355	1.09348
To which extent have you found that borrowers who have secondary school level education are likely to default/be delinquent in loan repayment?	31	2.7742	0.66881
To which extent have you found that borrowers who have tertiary level education are likely to default/be delinquent in loan repayment?	31	2.6452	0.98483
To which extent have you found that borrowers who have done a personal finance course are likely to default/be delinquent in loan repayment?	31	2.129	0.80589

From the data above, individuals who only got to primary level of education were found to have moderate levels of default, but comparatively, they were more likely to default payment compared to people who had achieved higher levels of education. This is indicated by the mean of 2.9355. Following them are those who only got to secondary level of education were found to have a mean of 2.7742. Next are those at tertiary level with a mean of 2.6452, and finally those who had done a personal finance course with the least likelihood of having a nonperforming loan.

In the open-ended section, respondents reported that the higher the education level the better their repayment habits. This is due to better understanding of loan clauses and policies, better knowledge on budgeting and a need to protect their reputation.

From the above data, given the fact that none of the means went above 3, it can be concluded that education has no significant influence on likelihood of loan non-performance.

#### 4.4 Loan Characteristics

The loan characteristics analysed were loan size, loan interest, loan term, loan type (group or individual) and loan security, as well as the extent to which these factors affect loan repayment. On whether the loan characteristics affected the possibility of loan repayment, the findings were as shown:

##### 4.4.1 Loan size

On whether the loan size affected the possibility of loan repayment, the findings were as shown:

**Table 8: Analysis of loan size**

<b>LOAN SIZE</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
To which extent have you found that loan size significantly influences loan delinquency/default among borrowers in your MFB?	31	4.0968	0.74632
<b>INDIVIDUAL BORROWING (Individual Loans)</b>			
To what extent have you found that individual borrowing significantly influences loan delinquency and default among borrowers in your MFB?	31	3.2258	1.33441
To which extent have you found that borrowers who take small loans (Ksh 5,000-100,000) are likely to default/be delinquent in their loan repayment?	31	3.3548	1.17042
To which extent have you found that borrowers who take medium loans (Ksh 100,000-500,000) are likely to default/be delinquent in their loan repayment?	31	3	0.68313
To which extent have you found that borrowers who take large loans (above Ksh 500,000) are likely to default/be delinquent in their loan repayment?	31	2.9355	1.03071
<b>GROUP BORROWING (Business Loans)</b>			
To what extent have you found that group borrowing significantly influences loan delinquency and default among borrowers in your MFB?	31	3.6452	1.11201

To which extent have you found that borrowers who take small loans (Ksh 50,000-1,000,000) are likely to default/be delinquent in their loan repayment?	31	3.129	0.99136
To which extent have you found that borrowers who take medium loans (Ksh 1,000,000-50,000,000) are likely to default/be delinquent in their loan repayment?	31	3.129	0.88476
To which extent have you found that borrowers who take large loans (above Ksh 50,000,000) are likely to default/be delinquent in their loan repayment?	31	3.4516	0.7229

From the data analysed, it was found that loan size has a highly significant influence on loan non-performance as indicated by the high mean of 4.0968.

Under individual loans, it was found that individual borrowing has a high significance to loan performance as indicated by the mean of 3.2258. Among individual loans, Small loans of between KES 5,000-100,000 are more likely to be defaulted compared to the rest shown by the mean of 3.3548. Those between KES 100,00-500,000 are also highly nonperforming, as indicated by the mean of 3, whereas loans above KES 500,000 are low to moderately likely to be defaulted..

Under group loans, Loans above KES 50,000,000 were highly likely to be defaulted given the mean of 3.4516. This may be due to the fact that the higher the loan amount, the longer the loan term, and hence the likelihood of laxity due to long periods.

#### 4.4.2 Loan Interest

On whether the loan interest affected the possibility of loan repayment, the findings were as shown in the table below:

**Table 9: Analysis of loan interest**

<b>LOAN INTEREST</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
To which extent have you found that loan interest significantly influences loan delinquency/default among borrowers in your MFB?	31	3.7742	1.45395
To which extent have you found that borrowers who take loans with relatively low interest (10-15%) are likely to default/be delinquent in their loan repayment?	31	2.3871	0.71542
To which extent have you found that borrowers who take loans with high interest (above 15%) are likely to default/be delinquent in their loan repayment?	31	3.6129	1.08558

From the data analysed, it was found that loan interest has a high significant relationship with loan non-performance as indicated by the mean of 3.7742. Low interest loans were found to have low likelihood of non-performance, as indicated by the mean of 2.3871. This may be due to their affordability because of the low interest rates. Comparatively however, loans with high interest were found to be highly nonperforming as indicated by the mean of 3.6129, which may be because of the high cost of paying back the loan.

#### 4.4.3 Loan Term

On whether the loan term affected the possibility of loan repayment, the findings were as shown in the table below:

**Table 10: Analysis of loan interest**

<b>LOAN INTEREST</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
To which extent have you found that loan term significantly influences loan delinquency/default among borrowers in your MFB?	31	4.129	0.84624
To which extent have you found that borrowers who take short term loans (less than 1 year) are likely to default/be delinquent in their loan repayment?	31	2.4194	1.11876
To which extent have you found that borrowers who take long term loans (more than 1 year) are likely to default/be delinquent in their loan repayment?	31	3	0.8165

From the data analysed, it was found that loan term has a high influence on loan non-performance as indicated by the high mean of 4.129. Short term loans are less likely to be non-performing as shown by the low mean of 2.4194. On the other hand, long term loans were more likely to be defaulted as indicated by the mean of 3. This can be evidenced by the fact that longer loan terms may lead to laxity, and hence a higher likelihood of default.

#### 4.4.4 Loan Security

On whether the loan interest affected the possibility of loan repayment, the findings were as shown in the table below:

**Table 11: Analysis of loan security**

<b>LOAN SECURITY</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
To which extent have you found that borrowers who take secured loans are likely to default/be delinquent in their loan repayment?	31	2.3226	0.90874
To which extent have you found that borrowers who take unsecured loans are likely to default/be delinquent in their loan repayment?	31	4.0968	1.04419

Secured loans were less likely to be defaulted as indicated by the mean of 2.3226, whereas unsecured loans had a high likelihood of default as indicated by the high mean of 4. This is due to the fact that something of value to the borrower acts as a motivator to repay the loan whereas lack thereof does not inspire commitment to repay the loan.

#### 4.5 Business Characteristics

The business characteristics analysed were size of business, age of business and type of industry the business operates in, as well as the extent to which these factors affect loan repayment. On whether the business characteristics affected the possibility of loan repayment, the findings were as shown below:

##### 4.5.1 Size of Business

On whether the business size affected the possibility of loan repayment, the findings were as shown in the table below:

**Table 12: Analysis of size of business**

<b>SIZE OF BUSINESS</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
To which extent have you found that size of the business significantly influences loan delinquency/default among borrowers in your MFB?	31	3.8065	0.94585

From the data analysed it was found that the business size was highly likely to influence loan performance as indicated by the high mean of 3.8065.

#### **4.5.2 Age of business**

On whether the age of the business affected the possibility of loan repayment, the findings were as shown in the table below:

**Table 13: Analysis of age of business**

<b>AGE OF BUSINESS</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
To which extent have you found that age of the business significantly influences loan delinquency/default among borrowers in your MFB?	31	4.4516	0.67521
To which extent have you found that businesses that have been in operation for less than 2 years are likely to default/be delinquent in their loan repayment?	31	3.5484	1.05952
To which extent have you found that businesses that have been in operation for between 2-5 years are likely to default/be delinquent in their loan repayment?	31	3.0323	0.87498
To which extent have you found that businesses that have been in operation for between 5-10 years are likely to default/be delinquent in their loan repayment?	31	2.4194	0.88597
To which extent have you found that businesses that have been in operation for more than 10 years are likely to default/be delinquent in their loan repayment?	31	2.1935	1.01388

Business age was found to have a very significant influence on loan performance as indicated by the mean of 4.4516. Businesses in operation for less than 2 years were found to have the highest level of loan non-performance as indicated by the mean of 3.5484. Those operating for between 2-5 years were found to have a mean of 3.0323, also indicating high likelihood of non-performing loans. This is because such businesses may not be as stable, hence may not have steady income to repay the loan.

Businesses in operation for between 5-10 years and above 10 years were less likely to have non-performing loans as indicated by the means of 2.4194 and 2.1935 respectively. Such businesses are more stable and are hence able to generate steady cashflows which can then be used to repay the loans.

#### 4.5.3 Type of Business

On whether the type of business affects loan performance, the analysis is shown below:

**Table 13: Analysis of type of business**

<b>TYPE OF BUSINESS</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>
To which extent have you found that businesses in the manufacturing industry are likely to default/be delinquent in their loan repayment?	31	3.2903	0.78288
To which extent have you found that businesses in the service industry are likely to default/be delinquent in their loan repayment?	31	2.7742	0.84497
To which extent have you found that businesses in the agriculture industry are likely to default/be delinquent in their loan repayment?	31	3.3548	1.01812
To which extent have you found that businesses in the trade industry are likely to default/be delinquent in their loan repayment?	31	2.9355	0.92864

Businesses operating in agriculture and manufacturing were found to be highly likely to be defaulted as shown by their means of 3.3548 and 3.2903 respectively. Loans in agriculture

were reported by respondents to be the most defaulted since farmers are not assured of sales after harvest. On the other hand, businesses operating in the trade and service industry were less likely to have non-performing loans as indicated by the means of 2.9355 and 2.7742 respectively.

## CHAPTER FIVE

### SUMMARY OF FINDINGS, DISCUSSIONS, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presented the key data findings, discussion of the findings, conclusions and recommendations addressing the causes of non-performing loans in microfinance banks in Nairobi, Kenya.

#### 5.2 Discussions of key findings

This section discusses the key findings of the research in detail and comparing these findings to literature. Given the data was collected from a 5-point Likert scale, any factor found to have a mean of 3 and above were considered to have a highly significant relationship with loan non-performance, and hence the following discussions:

##### 5.2.1 Borrower Characteristics and Nonperforming Loans

From the findings of this research, the borrower characteristics of age and gender were found to have significant influence on loan performance. Under age, it was found that those between age 18-35 perform the worst in loan repayment due to factors such as lack of job security, peer pressure and overall inexperience are what make default rates high for individuals in this age group. They are followed by those above age 65 due to low funds after retirement.

Those between age 35-50 were reported to have low to moderate likelihood of having non-performing loans due to job security, experience, maturity and responsibility to family.. Finally, those least likely to have nonperforming loans were borrowers aged 50-65- people within this age bracket are diligent in loan repayment due to experience and maturity. Fewer family obligations also create extra disposable income that can then be used to repay loans.

In a study done in Kyrgyzstan by The Microfinance Centre for Central Asia (2011), it was found that the young people (ages 20-34) as well as the old (ages 55+) had the best repayment rates. Conversely, those in their middle ages (35-55) have lower repayment rates since they are trying to cater for both their families and to repay the loan.

Contrary to this, Gebremedhin (2010) suggests the opposite, his defense being that young people are still at the start of their careers and professions, and hence may not be able to have

a steady enough income to support consistent repayment. Those in their middle ages (between 35-55) are at the prime of their career and hence can repay loans more efficiently.

Under gender, it was found that single male borrowers were reported to have the highest level of default compared to their female counterparts and fellow married men. Single female borrowers were next most likely to have nonperforming loans. Married male borrowers were found to have low to moderate levels of default and finally, married women were reported to be the least likely to have nonperforming loans. Women were generally found to be better payers than men, especially married women. Among the reasons for this is that women fear pressure from the banks, and they are generally better organised than men. It was also reported that women are better at repaying group loans, whereas men are better at repaying individual loans.

In studying gender, several studies show women as better at loan repayment. In a local study by Mwaka (2017), he suggested that women are more diligent in loan repayment. This may be due to several factors; they respond faster to coercion than men, they are part of credit groups and table banking groups. Evans & Winston (2008) from Ghana also did a study that showed that single, college educated women had lower probabilities of defaulting loan repayment compared to men and married women.

Under financial literacy the study found that no significant relationship exists between financial literacy and nonperforming loans. This is contrary to a local study by Ombongi (2015), it was found that a high level of financial literacy contributes to a decrease in loan default and hence improves loan and portfolio performance. Ombongi (2015), further citing (Chan et. al. 2000) puts across the fact that higher financial literacy and knowledge about loan systems, policies and procedures leads to higher compliance thus lower loan delinquency/default rates, and hence better performing loans and portfolios.

### **5.2.2 Loan Characteristics and Nonperforming Loans**

The findings of this study revealed that loan size has a highly significant influence on loan non-performance. Under individual loans, it was found that individual borrowing has a high significance to loan performance. Among individual loans, small loans of between KES 5,000-100,000 are more likely to be defaulted Those between KES 100,00-500,000 are also highly nonperforming, whereas loans above KES 500,000 are low to moderately likely to be defaulted. Under group loans, loans above KES 50,000,000 were highly likely to be defaulted. This may

be due to the fact that the higher the loan amount, the longer the loan term, and hence the likelihood of laxity due to long periods.

It was also found that loan interest has a high significant relationship with loan non-performance. Low interest loans were found to have low likelihood of non-performance. This may be due to their affordability because of the low interest rates. Comparatively however, loans with high interest were found to be highly nonperforming, which may be because of the high cost of paying back the loan. In a study in Tanzania Muganyizi (2015) citing (Morduch, 1999) suggests that generally, MFB loans have high interest (40-60%) compared to the conventional 10-15% offered by traditional banks. In Kenya, MFB loan rates are averaged at 20% (Central Bank of Kenya, 2018), which is high, meaning that there is a high possibility of default.

Loan term was also found to have a high influence on loan non-performance. Short term loans are less likely to be non-performing. On the other hand, long term loans were more likely to be defaulted. This can be evidenced by the fact that longer loan terms may lead to laxity, and hence a higher likelihood of default. From the data collected, secured loans were reported to perform better than unsecured loans. Bragg (2010), cited by Mulili (2013) indicated that short time frames reduce the risk of non-repayment to the bank. Larger loans generally have more loan repayment problems than smaller loans.

### **5.2.3 Business Characteristics and Nonperforming Loans**

From the data analysed it was found that the business size was highly likely to influence loan performance as indicated by the high mean of 3.8065. From this perspective, it has been studied that larger businesses are less likely to default loans, hence have better performing loans. Thus, portfolios with loans from larger companies are more likely to be lucrative in comparison to a portfolio consisting of smaller businesses (Maigua, 2015).

Business age was found to have a very significant influence on loan performance as indicated by the mean of 4.4516. Businesses in operation for less than 2 years were found to have the highest level of loan non-performance as indicated by the mean of 3.5484. Those operating for between 2-5 years were found to have a mean of 3.0323, also indicating high likelihood of non-performing loans. This is because such businesses may not be as stable, hence may not have steady income to repay the loan. Businesses in operation for between 5-10 years and above 10 years were less likely to have non-performing loans as indicated by the means of 2.4194 and 2.1935 respectively. Such businesses are more stable and are hence able to generate steady

cashflows which can then be used to repay the loans. Maigua (2015) suggests that businesses that have been in operation for a long time, due to their experience and stability, are less likely to default their loans. This is further supported in a local study done by Nguta (2013), it was observed that businesses that had been running for less than two years had a 52.4% default rate. Those that had been running for two to five years had a 44.2% default rate Those in operation for between five to ten years had a 78.6% default rate. Finally, for businesses in operation for more than ten years, default was a 0%.

Businesses operating in agriculture and manufacturing were found to be highly likely to be defaulted as shown by their means of 3.3548 and 3.2903 respectively. Loans in agriculture were reported by respondents to be the most defaulted since farmers are not assured of sales after harvest. On the other hand, businesses operating in the trade and service industry were less likely to have non-performing loans as indicated by the means of 2.9355 and 2.7742 respectively. Under type of business, findings were that the manufacturing industry had a 67.9% default rate, the service industry had a 64% default rate, agriculture 58.3% and the trade sector recorded the least (34.9%) cases of loan repayment defaults.

### **5.3 Conclusions**

In conclusion, the study reveals that there exists a significant relationship between business characteristics and non-performing loans in microfinance banks in Nairobi, Kenya. Hence before giving businesses loans, microfinance banks should look at a business' ability to repay the loan by looking at the business income, as well as the seasonality of the business.

The study also concludes that there is a significant relationship between borrowers' characteristics and non-performing loans in microfinance banks in Nairobi, Kenya. Hence before giving businesses loans, microfinance banks should screen the potential borrowers to be able to sift through those who are likely and able to pay, and those who are not. This will also make sure that they use the loans for the intended purpose. The banks should also monitor borrowers after granting them the loans to make sure the borrowers can pay back their loans. The study further concludes that there is a significant relationship between loan characteristics and non-performing loans in microfinance banks in Nairobi, Kenya.

## 5.4 Recommendations

From the findings and conclusion, the study recommends that:

1. Microfinance Banks should have rigorous screening processes to ensure that only credit worthy individuals and businesses gain access to loans.
2. Credit officers and recovery managers should mandatorily follow up with borrowers on loan utilization and repayment. This will enable them to closely monitor loan performance, such that non-performing loans can be easily identified, and corrective measures taken.
3. Training borrowers on loan clauses, how to calculate repayment instalments monitor, personal finance management and saving will reduce default rates.
4. Banks can introduce a merit system to award/motivate those that pay on time. Rewards can be in the form of a rebate or discount.

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**APPENDIX I**  
**INTRODUCTION LETTER**

Faith Gichuki,  
P.O. BOX 54878,  
Nairobi, Kenya.

Email: [faith.gichuki@strathmore.edu](mailto:faith.gichuki@strathmore.edu)

Phone: 0770250460

Dear Respondents,

I am an undergraduate student at Strathmore university doing a research on “Causes of Nonperforming Loans in Microfinance Banks in Nairobi, Kenya” which is a requirement to the award of Bachelor of Commerce (Finance Specialisation). I have been authorised by both my university and your organisation to conduct this study. I am therefore kindly asking for your assistance by participating in filling out the questionnaire below. Kindly make sure all questions are answered and all appropriate fields filled. Participation in filling the questionnaire is voluntary. The information collected will be treated as confidential. Anonymity will also be maintained as no personal information will be collected. This research is for academic purposes only. At your request, a summary of the results will be sent to you.

Thank you.

Yours faithfully,

Faith W. Gichuki

**APPENDIX II**  
**QUESTIONNAIRE**

Questionnaire serial number: \_\_\_\_\_

**SECTION A: DEMOGRAPHIC INFORMATION**

1. Please indicate your gender:

Male                       Female

2. Please indicate your position at your firm: \_\_\_\_\_

3. How many years have you worked with your firm?

Less than 5 years                                       Between 6-10 years

Between 11-15 years                                       Above 15 Years

**SECTION B: BORROWER CHARACTERISTICS**

4. Does the age of the borrower significantly influence loan performance among borrowers in your MFB? (Kindly tick the relevant box)

Yes                       No

Please \_\_\_\_\_ explain:

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5. On a scale of 1-5 where 5= a very high extent, 4= a high extent, 3=a moderate extent, 2= a low extent and 1= no extent, please rank your level of agreement with each question by ticking the relevant box.

	1	2	3	4	5
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To which extent have you found that borrowers between the age of 18-35 are likely to have non-performing loans?					
To which extent have you found that borrowers between the age of 35-50 are likely to have non-performing loans?					
To which extent have you found that borrowers between the age of 50-65 are likely to have non-performing loans?					
To which extent have you found that borrowers between the age of 65 and above are likely to have non-performing loans?					

6. Does the gender of the borrower significantly influence loan performance among borrowers in your MFB? (Kindly tick the relevant box)

Yes                       No

Please \_\_\_\_\_ explain:

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7. On a scale of 1-5 where 5= a very high extent, 4= a high extent, 3=a moderate extent, 2= a low extent and 1= no extent, please rank your level of agreement with each question by ticking the relevant box.

	1	2	3	4	5
To which extent have you found that single female borrowers are likely to have non-performing loans?					
To which extent have you found that married female borrowers are likely to have non-performing loans?					

To which extent have you found that single male borrowers are likely to have non-performing loans?					
To which extent have you found that married male borrowers are likely to have non-performing loans?					

8. Does the financial literacy level of the borrower significantly influence loan performance among borrowers in your MFB? (Kindly tick the relevant box)

Yes  No

Please explain:

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9. On a scale of 1-5 where 5= a very high extent, 4= a high extent, 3=a moderate extent, 2= a low extent and 1= no extent, please rank your level of agreement with each question by ticking the relevant box.

	1	2	3	4	5
To which extent have you found that borrowers who have primary school level education are likely to have non-performing loans?					
To which extent have you found that borrowers who have secondary school level education are likely to have non-performing loans?					
To which extent have you found that borrowers who have tertiary level education are likely to have non-performing loans?					
To which extent have you found that borrowers who have done a personal finance course are likely to have non-performing loans?					

**SECTION C: LOAN CHARACTERISTICS**

10. Do loan characteristics significantly influence loan performance among borrowers in your MFB? (Kindly tick the relevant box)

Yes                       No

Please \_\_\_\_\_ explain:

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11. On a scale of 1-5 where 5= a very high extent, 4= a high extent, 3=a moderate extent, 2= a low extent and 1= no extent, please rank your level of agreement with each question by ticking the relevant box.

	1	2	3	4	5
To which extent have you found that loan size significantly influences loan performance among borrowers in your MFB?					
To which extent have you found that loan interest significantly influences loan performance among borrowers in your MFB?					
To which extent have you found that loan term significantly influences loan performance among borrowers in your MFB?					
To which extent have you found that borrowers who take secured loans are likely to have non-performing loans?					
To which extent have you found that borrowers who take unsecured loans are likely to have non-performing loans?					

To which extent have you found that borrowers who take loans with relatively low interest (10-15%) are likely to have non-performing loans?					
To which extent have you found that borrowers who take loans with relatively high interest (above 15%) are likely to have non-performing loans?					
To which extent have you found that borrowers who take short term loans (less than 1 year) are likely to have non-performing loans?					
To which extent have you found that borrowers who take long term loans (more than 1 year) are likely to have non-performing loans?					
INDIVIDUAL BORROWING					
To which extent have you found that individual borrowing significantly influences loan performance among borrowers in your MFB?					
To which extent have you found that borrowers who take small loans (Ksh 5,000- Ksh 100,000) are likely to have non-performing loans?					
To which extent have you found that borrowers who take medium loans (Ksh 100,001-Ksh 500,000) are likely to have non-performing loans?					
To which extent have you found that borrowers who take large loans (Ksh 500,000 and above) are likely to have non-performing loans?					
BUSINESS LOAN CHARACTERISTICS (group lending)					
To which extent have you found that group borrowing significantly influence loan performance among borrowers in your MFB?					

To which extent have you found that businesses that take small loans (Ksh 50,000- Ksh 1,000,000) are likely to have non-performing loans?					
To which extent have you found that businesses that take medium loans (Ksh 1000,001-Ksh 50,000,000) are likely to have non-performing loans?					
To which extent have you found that borrowers who take large loans (Ksh 50,000,000 and above) are likely to have non-performing loans?					

**SECTION D: BUSINESS CHARACTERISTICS**

12. Does the type of business the borrower engages in significantly influence loan performance among borrowers in your MFB? (Kindly tick the relevant box)

Yes                       No

Please \_\_\_\_\_ explain:

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13. On a scale of 1-5 where 5= a very high extent, 4= a high extent, 3=a moderate extent, 2= a low extent and 1= no extent, please rank your level of agreement with each question by ticking the relevant box.

	1	2	3	4	5
To which extent have you found that the size of the business the borrower engages in significantly influences loan performance among borrowers in your MFB?					
To which extent have you found that the age of business the borrower engages in significantly influences loan performance among borrowers in your MFB?					

AGE CHARACTERISTICS					
To which extent have you found that the business that have been in operation for less than 2 years are likely to have non-performing loans?					
To which extent have you found that the business that have been in operation for 2-5 years are likely to have non-performing loans?					
To which extent have you found that the business that have been in operation for 5-10 years are likely to have non-performing loans?					
To which extent have you found that the business that have been in operation for more than 10 years are likely to have non-performing loans?					
TYPE OF BUSINESS					
To which extent have you found that businesses in manufacturing industry are likely to have non-performing loans?					
To which extent have you found that business in the service industry are likely to have non-performing loans?					
To which extent have you found that business in the agriculture industry are likely to have non-performing loans?					
To which extent have you found that business in the trade industry are likely to have non-performing loans?					

**THANK YOU!**

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