

**DETERMINANTS OF LOAN REPAYMENT DEFAULT IN MICRO-FINANCE  
INSTITUTIONS IN KENYA**

**BY  
TABITHA WARIGIA MAIGUA  
D63/81715/2015**

**RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILMENT OF THE  
REQUIREMENTS FOR AWARD OF THE DEGREE OF MASTERS IN  
SCIENCE FINANCE AND INVESTMENT  
UNIVERSITY OF NAIROBI**

**NOVEMBER 2017**

## DECLARATION

This research project is my original work and has not been presented for award of any degree in any other university or college

Signature .....

Date .....

**Tabitha Warigia Maigua**

**D63/81715/2015**

This research project has been submitted for examination with my approval as the University of Nairobi supervisor.

Signature .....

Date .....

**Prof. Josiah O. Aduda**

**Lecturer Department of Finance and Accounting**

## **DEDICATION**

I dedicate this project to God the almighty my strong pillar, my source of inspiration, wisdom knowledge and understanding. I also dedicate this work to my parents and siblings for their encouragement, motivation, and support throughout the study period.

## **ACKNOWLEDGEMENT**

The success and final outcome of this research project required a lot of guidance and assistance from many people and I am extremely privileged to have got this along the completion of my project. All that I have done is only due to such supervision and assistance and I would not forget to thank them.

I am grateful to God the almighty for giving me the strength to successfully conduct my research and for sustaining my efforts which many a times did oscillate.

I would also wish to thank my mum and dad for their encouragement and motivation and it is through this that I have always tried to ensure that I finish everything I start. I also greatly thank my siblings for their spirited inspiration every day to become better and achieve more.

I owe my deep sense of gratitude to my respected and learned project guide Prof. Josiah. O. Aduda for the valuable help and guidance, I am thankful to him for the encouragement he has given me in completing this project.

I am heartily thankful to my MSC classmates who contributed directly or indirectly to the success of my research project. I am grateful for their support and constant encouragement throughout the entire study period.

## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>ii</b>
<b>DEDICATION.....</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>iv</b>
<b>LIST OF FIGURES .....</b>	<b>viii</b>
<b>LIST OF TABLES .....</b>	<b>ix</b>
<b>LIST OF ABBREVIATIONS .....</b>	<b>x</b>
<b>ABSTRACT.....</b>	<b>xi</b>
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Study background.....	1
1.1.1 Loan Repayment Default.....	2
1.1.2 Determinants of Loan Repayment.....	3
1.1.3 Microfinance Institutions in Kenya .....	4
1.2 Research Problem.....	5
1.3 Study objectives .....	6
1.4 Value of the Study.....	6
<b>CHAPTER TWO .....</b>	<b>8</b>
<b>LITERATURE REVIEW .....</b>	<b>8</b>
2.1 Introduction .....	8
2.2 Theoretical Literature Review.....	8
2.2.1 Agency Theory .....	9
2.2.2 Women’s Empowerment Theory.....	10
2.2.3 The Theory of Delegated Monitoring of Borrowers .....	11
2.3 Determinants of Loan default.....	11
2.3.1 Borrowers Characteristics.....	11

2.3.2 Loan Characteristics .....	12
2.3.3 Business Characteristics .....	12
2.3.4 Institutional/lenders Characteristics .....	12
2.4 Empirical Review .....	13
2.5 Conceptual Framework .....	15
2.6 Summary of Literature Review .....	17
<b>CHAPTER THREE .....</b>	<b>18</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>18</b>
3.1 Introduction .....	18
3.2 Research Design .....	18
3.3 Population and Sample.....	18
3.4 Data Collection.....	18
3.4.1 Primary Data.....	19
3.5 Data Analysis .....	19
3.5.1 Methods .....	19
3.5.2 Analysis Model.....	19
3.6 Data Validity and Reliability.....	20
3.7 Operationalization of Variables .....	21
<b>CHAPTER FOUR.....</b>	<b>23</b>
<b>DATA ANALYSIS, PRESENTATION AND INTERPRETATION .....</b>	<b>23</b>
4.1 Introduction .....	23
4.1.1 Response Rate.....	23
4.2 Demographic Information .....	23
4.3 Lenders' Characteristics .....	25
4.4 Borrowers' Characteristics .....	27
4.5 Loan Characteristics .....	29
4.6 Business Characteristics .....	31
4.7 Loan repayment default.....	33

4.8 Regression Analysis .....	33
4.9 Summary of Findings and Discussion.....	35
<b>CHAPTER FIVE.....</b>	<b>38</b>
<b>SUMMARY, CONCLUSION AND RECOMMENDATIONS .....</b>	<b>38</b>
5.1 Summary .....	38
5.2 Conclusions .....	39
5.3 Recommendations .....	39
5.4 Limitation of the Study .....	40
5.5 Suggestion for Further Study .....	41
<b>REFERENCES.....</b>	<b>42</b>
<b>APPENDICES .....</b>	<b>45</b>
Appendix I: Letter of Introduction.....	45
Appendix II: Questionnaire for Loan officers and loan borrowers.....	46

## LIST OF FIGURES

Figure 2.1: Determinants of loan defaults and its effects ..... **Error! Bookmark not defined.**

## LIST OF TABLES

Table 3. 1: Operationalization of variables.....	<b>Error! Bookmark not defined.</b>
Table 4. 1: Gender of the respondents .....	<b>Error! Bookmark not defined.</b>
Table 4.2: Duration of Service .....	<b>Error! Bookmark not defined.</b>
Table 4.3: Duration of banking with MFI.....	<b>Error! Bookmark not defined.</b>
Table 4.4: Types of Accounts Held.....	<b>Error! Bookmark not defined.</b>
Table 4.5: Amount of Time taken for the Loan to be approved... <b>defined.</b>	<b>Error! Bookmark not defined.</b>
Table 4.6: Statements on lenders' characteristics .....	<b>Error! Bookmark not defined.</b>
Table 4.7: Lenders characteristics and Loan Repayment default <b>defined.</b>	<b>Error! Bookmark not defined.</b>
Table 4. 8: Age of the Borrower .....	<b>Error! Bookmark not defined.</b>
Table 4. 9: Statements on Borrowers Characteristics ....	<b>Error! Bookmark not defined.</b>
Table 4. 10: Borrowers' characteristics and Loan Repayment default..... <b>Bookmark not defined.</b>	<b>Error!</b>
Table 4. 11: Effect of Loan characteristics on Loan Repayment Default .....	<b>Error!</b> <b>Bookmark not defined.</b>
Table 4. 12: Statements on loan Characteristics .....	<b>Error! Bookmark not defined.</b>
Table 4. 13: Statements on loan Characteristics .....	<b>Error! Bookmark not defined.</b>
Table 4. 14: Business characteristics and Loan Repayment default... <b>not defined.</b>	<b>Error! Bookmark not defined.</b>
Table 4. 15: Statements on loan repayment default.....	<b>Error! Bookmark not defined.</b>
Table 4. 16: ANOVA <sup>b</sup> .....	<b>Error! Bookmark not defined.</b>
Table 4. 17: Fitness Test for the Overall Model .....	<b>Error! Bookmark not defined.</b>
Table 4. 18: Regression Analysis Results.....	<b>Error! Bookmark not defined.</b>

## **LIST OF ABBREVIATIONS**

<b>AMFI-K</b>	:	Association of Micro Finance Institutions-Kenya
<b>CBK</b>	:	Central Bank of Kenya
<b>MB</b>	:	Member Based
<b>MFI</b>	:	Micro Finance Institutions
<b>NGO</b>	:	Non-Governmental Organizations

## **ABSTRACT**

The purpose of this survey was to determine the loan repayment determinants examine the determinants defaults in MFI(microfinance institutions) in Kenya. Specifically the research sought to establish the effect of lenders, characteristics, borrowers' characteristics, loan characteristics and business characteristics on repayment of loan default in MFI(microfinance institutions) in Kenya. A CSD(cross-sectional design) was used to collect information from a sampled population which represented a larger population of the study area. The target population of this research study was 49 MFIs operating and registered in Nairobi County in Kenya as per the AMFI-K 2016 Annual Report. These MFIs are regulated and licensed by CBK under the microfinance Act of 2006 and the Microfinance Regulations for Deposit Taking MFIs of 2008. The study used a census method and involved all the MFIs based in Nairobi County. The study applied purposive sampling technique to select one loan officers from every institution and one customer from the MFIs giving a sample size of 98 respondents. Questionnaires were used to gather primary data that was analyzed using regression model and SPSS(statistical package for social sciences software). The study showed that there was a significant relationship between lenders characteristics, borrowers' characteristics, loan characteristics and business characteristics and loan repayment default in microfinance institutions in Kenya. However, loan characteristics had an insignificant relationship with loan repayment default. It was concluded that there was a significant relationship between lenders characteristics, borrowers' characteristics, and business characteristics and the repayment of loans among clients in Kenya. The survey saw it fit that MFIs require supervision for the repayment and utilization of loans. MFIs should apply CRM(credit risk management) that is effective and efficient and that ensures that loans are given in a way that their payable by the owners. They should pool together and create a CIB(credit information bureau) to act as a reference platform as the loan is disbursed. MFIs should finally apply strict policies loans advancements to make sure their given to those able to pay back and to make sure that insider lending and other moral hazards don't occur.

## CHAPTER ONE

### INTRODUCTION

#### 1.1 Study background

Microfinance is explain as, financial services such as insurance funds, savings accounts and credit provided to low-income and poor/disadvantaged people in order to increase their income and consequently improve their living standards (Karlan & Valdivia, 2011). Microfinance is seen as a tool to reduce income inequality, creating room for low-income citizens to participate in the economy. In addition, since its initiation, there has been a significant downward trend in income inequality (Hermes, 2014). Today, microfinance businesses have mushroomed in almost all urban and semi-urban populations in Kenya. The reason behind the gradual but speedy growth can be traced back to 2011 when the government of Kenya laid down initiatives to motivate business growth in the fulfilment of vision 2030.

In Kenya, microfinance is majorly used as a way of providing affordable loan and small credits to finance small projects to help the youth and women improve their livelihood (Waithera, 2008). Since the initiation of micro-finance institutions, there has been a notable shift of focus to not only providing finance to the informal sector but also allocating enough resources towards the low-income citizens. In the last four years, numerous microfinance institutions have erupted such as table banking. Table banking is an organized group of people, mostly consisting of low-income earners, who do both contributions and borrowing together each time they meet (Omino, 2005). According to Omono, (2005), the emergence of such microfinance institutions epitomizes undeniable success of microfinance. In this kind of setup, the group members make the repayment pledge in case an individual fails to repay his/her loan. The loan repayment is done in installments at the frequency of group meeting such as fortnight, monthly or weekly. A repayment that has not been made in time is called a delinquent while a default is repayment that hasn't bee paid. not been made total is said to be in default. If an one

doesn't make their individual payment its upon the members of the group to raise the money.

Although there are a number of reasons to term micro-finance a success despite the challenges it faces. Since the initiation of poverty alleviation program like the provision of subsidized credit in late 1990's, very little achievements have been realized, not only in Kenya but also across Africa. The rapid proliferation of MFIs that is directly linked to low loan repayment rate of up to 50 per cent has drawn a lot of criticism. According to Howard et al, (2006), the effects of low loan repayment rate have outpaced the capacity of some developing countries to pass reasonable regulatory actions. Howard further says that although this has improved the flexibility of the industry and fueled its growth, it has also rendered borrowers with little financial knowledge susceptible for financial exploitation by unscrupulous and incompetent lenders. For example, in 2005, Kenyan market regulators closed akiba MFI on the basis that it was taking client's deposits unlawfully.

### **1.1.1 Loan Repayment Default**

The definition of loan repayment default may vary depending on MFIs policy. According to Pearson, Fund & Bureau, (2006), loan repayment default is a risk presented to an institution by a borrower by failing to pay at least three installments within a period of one month. This provides an indication of increased risk that a borrower will certainly fail to make all the repayments and eventually failing to repay the loan. Similarly, Phillips and VanderHoff, (2004) cited in Woradithee (2011) defines loan repayment default as a failure to repay the interest and/or principal of a loan by a borrower when the debt is due. This means that if an individual or institution fails to make an interest payment on a loan borrowed at a predetermined time or as specified in the loan contract, then the person or the institution is in default. Usually, a person or institution in default is likely to lose any property that was presented as collateral for the loan.

Loan repayment usually has a devastating effect on both the borrower and the institutions that issue the loans. For the borrowers, loan repayment default may not only result in a loss of their properties in the name of collateral but also make it difficult for them to

access future loans or borrow again. On the other hand, for institutions that provide loans, loan repayment default is a very expensive and may result in serious financial constraints and even straight losses.

### **1.1.2 Determinants of Loan Repayment**

Default on acquired assets could emerge from ominous conditions that may influence the capacity of the borrower to reimburse as pointed out by Stiglitz and Weiss (1981) referred to in Wanyoko (2012). The most widely recognized explanations behind the presence of defaults are the accompanying: if the money related organization isn't kidding on reimbursement of credit, the requestors are not willing to reimburse at that point advance; the budgetary establishment's staffs are not dependant to investors to make a benefit; customers' lives are frequently brimming with eccentric emergencies, for example, ailment or passing in the family; if advances are too huge for the business money needs, additional assets may go toward individual utilize; and if advances are given without the best possible assessment of the business. Wakuloba (2005) referred to in Fadahunsi, Ferali and Schemit, (2014) in her examination on the reasons for default in Government smaller scale credit programs distinguished the fundamental driver of default as poor business execution, redirection of assets and household issues.

Breth and Okello (1999) and (2010) respectively argued that there are a number of factors such as institutional and social economic. Many socio-economic and institutional factors influencing loan repayment rates. The primary factors from the lender side are high collections frequency, tightened controls, good information management, incentives for loan officer. Loan officer incentives and good follow ups. Moreover, the size and development of advance, financing cost charged by the moneylender and timing of credit dispensing have additionally an effect on the reimbursement rates (Okeke et al., 2007 referred to in Karlan and Valdivia, 2014). The main variables from the borrowing party side incorporate financial qualities, for instance, sexual orientation, instructive level, conjugal status and family unit pay level and associate weight in mass based plans. This examination delimited itself to borrowers' attributes, advance qualities, business attributes, business attributes and banks qualities. The capacity to put the advance into beneficial utilize will rely on the borrowers' trademark which may take different social

monetary measurements including sex, wage level, the family estimate, instructive level and age.

Business characteristics entails business location, years in operation among others. The right location depends on the type of the business and the target customers. Prime locations lead to increased sales volumes and as a result increased revenues. Businesses located in the prime areas of their target market tend to have high loan repayments than those not strategically located. Businesses located in close proximity to town centers tended to have high loan repayments than otherwise (Angaine & Waari 2014 cited in Nawai & Shariff (2017)). The age of business relates to how long the business has been in existence as well as the experience in terms of years in the business for the entrepreneur. Previous studies reveal that businesses that have been in operation for less than one year are susceptible to low loan repayments than businesses that existed in more than one year. Concerning loan characteristics, the length of time (credit period) for which credit is extended greatly affects loan repayment. Loans are structured in a way that enables them to be repaid in regular installments over the loan term or at the end as a lump sum given the borrowers cash flows. (Ledgerwood 2013). Credit period is the length of time for which credit is extended which ranges from three months to five years for many MFIs.

### **1.1.3 Microfinance Institutions in Kenya**

In Kenya, microfinance institutions are classified into two groups. The first group is the Non-Governmental Organizations (NGOs) while the second group is member-based (MB) microfinance institutions. Member Based microfinance institutions include SACCOs and banking institutions. For non-governmental MFIs, loans are given to groups and the group member themselves acts as social collateral in case a member defaults. This class of MFI also gives loans to individuals clients who provide substantive collateral in what is called individual lending methodology. However, the individuals must be members of registered groups. In addition, members of the registers groups must save in their respective groups. The savings acts as loan insurance fund. Today, this type of microfinance institution also provide loans for individuals who are not members of the registered groups but are able to provide loan collateral and their financial history can be traced.

Moreover, banking institutions in Kenya, especially the commercial banks are now offering microfinance services. Banks such as K-Rep (Now Sidian Bank), Faulu bank, Jamii Bora Bank and Family Bank, offer microfinance services. This research will concentrate on the NGO-MFIs because of its lending methodology, that is, group and individual lending. The NGO-MFIs also provide a clear picture of loan default than other classes of MFIs.

## **1.2 Research Problem**

Controlling non-performance of advances is extremely basic for both the performance of an individual Microfinance foundation and the economy's financial environment. Kenya has encountered managing an account issues coming full circle in real bank disappointments (37 fizzled banks as at 1998) after the crisis of; 1986 to 1989, 1993 to 1994 and 1998 (Kithinji and Waweru, 2007; Ngugi, 2001 referred to in Pasha and Negese, 2014). The crisis was predominantly credited to non-performing advances (NPLs).

Numerous studies have been carried out globally and locally on the factors that influence loan repayment in various business sectors. Internationally, studies by Bassem (2008), Al-Sharafat et al (2013) and Mensah et al. (2013) examined the determinants of loan repayment to other sectors like the agriculture and the farming sectors and most of their emphasis was on group lending as opposed to individual lending. A study by Makorere (2014) examined the factors affecting loan repayment behaviour in Tanzania and established that many FI(financial institutions) still face a problem of high balances by defaulters caused by unpaid loans. In Kenya, a study by Kibosia (2012) cited in Kodongo and Kendi (2013) examined the relationship between non-performing Loans associated with SME sector and its determinants among commercial banks in Kenya. Njangiru et al. (2014) also analyzed the loan sustainability and repayment and issues of government initiatives of micro credit in the county of murang'a. In addition, Kulundu (1990) cited in Kamanza (2016) tested the factors affecting performance of loan repayment by smallholder farmers with a major aim of proposing measures that can help in improving

the smallholder credit repayment performance. Further, Matheka (2013) cited in Kamanza (2016) also investigated the causes of the high rates of default in the repayment of Constituency youth enterprise funded loans among youth groups in Kitui central constituency and established various factors, which influence loan repayment.

Most the above studies focused on different sectors like the small-scale farming and agricultural sectors, group lending which is carried out by Saccos as opposed to individual lending by all financial institutions like commercial banks and government funds whose repayment terms are lenient compared to those of financial institutions. Most of the available literature is based on other sectors other than the MFIs and thus few studies exist on the determinants of loan repayment in MFIs in Kenya. It is against this background this study sought to fill the existing contextual and conceptual gaps and investigate the determinants of loan repayment default in Kenya with special focus on MFIs in Nairobi County.

### **1.3 Study objectives**

The main aim of this research was to test the determinants of loan repayment defaults in microfinance institutions in Kenya.

### **1.4 Value of the Study**

First, this research survey will deliver knowledge on determinant of loan repayment defaults and assist future research on loan default in MFIs. The research outcome would also provide a reference to researchers who wish to conduct further studies on issues surrounding loan repayment default in an attempt to give a deeper understanding on the same.

Secondly, this research will also help MFIs and banks to have a model that can effectively predict the likelihood of loan default thus help in reducing the chances of borrowers defaulting in loan repayment. This would further enhance the overall growth existence and survival of MFIs which is currently threatened by the level of loan default rates putting into considering that such loan defaults in MFIs greatly weakens its financial operations. In addition the study will also help the MFIs and banks offering

microfinance services to identify potential risks concerning loan provision. Finally, yet importantly, this research will also serve as a tool to loan officers in making decisions on loans, monitoring and managing the portfolio of loans and risks and highlighting loans that require more attention.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

All the literature that is related to this study is presented in this chapter. The chapter is classified into four sections. From section one to four containing definitions, theoretical literature, an overview of Kenyan microfinance policy and the conceptual framework of the study.

#### **2.2 Theoretical Literature Review**

The definition of microfinance differs from one scholar to another. Their differences based on the type of financial services and loan provided to clients; and kind of people received the service. For example, Robinson, (2001) defines Micro-finance as the financial services provision including, insurance , microcredit, savings, leasing and transfers in small relative transactions for small businesses and households that earn small incomes. Similarly, Banerjee et al. (2015) define Microcredit as the providence of soft loans and cash to smaller enterprises and households meant for business improvement. Literature treats microcredit and microfinance interchangeably, but there is a difference between them. Altay, (2007) depicts microcredit as small loans where microfinance is suitable where MFIs offer the loans with other monetary administrations. In this manner, microcredit is a segment of microfinance since it includes the arrangement of credit offices to poor, however microfinance also includes noni acknowledged extra money related administrations, for instance, protection, reserve funds, installments and pensions.

However, this study defines microfinance as the financial service provider for low income earners living in rural and urban areas and who can not access soft loans from other sectors of finance e.g commercial banks. Micro credits never the less are the dominant fincial providers in the wide range of institutions that offer financial services. The loans given by these micro finance institutions differ geographically and have a maturity rate of less than a year.

### **2.2.1 Agency Theory**

Agency theory is the study of how actors of the economy make contractual agreements based on the asymmetric information available (Shapiro, 2005). The representation of a decision-making behavior when presented with various circumstances and finally marking the optimal is the standard way of practicing agency theory. This strength of this theory lies in the ability to find theoretical ways to motivate agents to make the right decisions even under the insurance contract. The procedure has been used in agency theory framework and in several typical situations known as adverse selection moral hazard.

In adverse selection models, the characteristic of the agent is not open to the principal. Adverse selection is defined as market processes the buyers, sellers have access to asymmetric information, and undesired results occur. On the other hand, in moral hazard model, the access to various information is granted to the principals, and the principals verify the agents' actions.

The relationship between agency theory and the chances of a borrower failing to make loan repayment is so important for this research study to overlook. The information available on both the microfinance institution and the borrowers created opportunities for some borrowers when their loan creditworthiness is close to zero. This study recognizes the relationship between Agency theory and the likelihood of borrowers to default their loan obligations. Information asymmetry between the Microfinance Institutions and their borrowers leads to some borrowers to acquire loan even when the probability of repayment is low.

In normal situations, borrowers are expected to choose actions that result into additional cost when there is additional program management. Normally, it is expected that the borrower will choose actions such that the additional benefit of each action equals its additional cost. This is not the same when there is no perfect information about the borrower. In addition, the borrower does not take full responsibility of loan defaults if there is no collateral. The lender is not also in a position to specify perfectly how their

borrowers should run their business. This is because some of the borrowers' actions are costly to obtain.

In this research study, MFIs are the principals while borrowers are the agents who have been given the loan and are expected to repay the loan according to the rules and requirements of the respective MFI. The inability to of the MFIs to extract borrowers' information about socioeconomic life, experience and general business as a whole may result in loan repayment default. Moreover, the study proposes that in some instances, the loan supervisors, who become Agents of MFIs, fail to meet the interest of MFIs to ensure that borrowers are well scouted and signals the principal for any sign of default for immediate measures. This study will also use the agency theory that supports the MFIs to provide loans to customers without full financial information on the borrower.

### **2.2.2 Women's Empowerment Theory**

King et al (2001) developed women Empowerment Theory in 2001. The theory established that countries or societies with high gender inequality are known to have very slow economic growth and a higher rate of poverty. This theory is also backed up by the research that shows that most of the successful microfinance institutions, especially in the developing countries are those that are integrated with social services that increase the borrower's wealth and empower them as well.

This explains why most of the international donors, NGOs and local governments focus more on the women and empowerment programs and poverty reduction schemes. Empowerment is a system used in economics, sociology, public health and anthropology. Nevertheless the meaning and definition of the word means the same in all disciplines. The capacity of a woman to make Paramount decisions for themselves, their children and families is the base of women empowerment. The ability to influence and control ones life both socially and economically is one of the approaches taken to strengthen empowerment. empowerment can be looked from different perspectives of interpersonal and economic control. Women empowerment is all about decision making, access to credit and control over income. Birth control and decision making is considered highly in the empowerment process (Malhotra et al., 2002).

Malhitra(2002) believes that women get the heaviest burden when it comes to a poor environment since they lack jobs,education limited social mobility and ,formal sector income.he believes that if only women would acquire better education, economic well being,health, improvement in their status in society and family then women would become better. In a latlrge number of countries women don't have control or even power over their own bodies.the above entirely leads to off the charts fertility rates and diminished birth control.according to research high population is caused by such incidents where there is no control over birth rates.in order for a nation to control its fertility rate women's ,economic and social status needs to be changed with the intervention of MFIs.

### **2.2.3 The Theory of Delegated Monitoring of Borrowers**

The theory is mainly grounded on reducing the cost incurred to monitor information available about a borrower which is useful for resolving incentive problems between a borrower and a lender. Monitoring of a borrower by a financial institution involves gathering of enough information about the borrower before and after lending out the loan. It includes screening of advance candidates inspecting the borrower's progressing reliability and guaranteeing that the borrower clings to the terms of the agreement. A financial institution such as a MFI has privileged information in this process especially since in such institution the borrower is usually required to have their current account being operated by the specific financial institution they are seeking these loan facilities from. The MFI can thus be able to asses he inflow of incomes and outflow of expenditures in an attempt to monitor these borrowers. This is most relevant in the case of MFIs and is linked to their role in the payment systems (Mathew and Thompson, 2008).

## **2.3 Determinants of Loan default**

### **2.3.1 Borrowers Characteristics**

Borrowers/Individual characteristics are factors that are specific to a borrower that may influence loan repayment. They include for instance age, gender, income level, credit use experience, type of business and the amount of investment (Nawai & Sharrif, 2010). In addition other studies indicate that other factors that may also influence a borrower's

ability to pay his/her loan include; business factors, borrower's attitude towards their loan, other loans acquired from other institutions, amount of loan received, business experience and family background (Nawai and Sharrif, 2013).

### **2.3.2 Loan Characteristics**

Loan Characteristics are factors that are specific to the loan facility being offered that may influence loan repayment. They include: the size of the loan, period of repayment, value of collateral, number of instalments for the loan repayment instalment number, application costs and interest charged on loan/cost of borrowing. Karlan and Valdivia (2014) established that there is a significant increase in loan defaults what's more, various determinants influenced advance default key among them financing costs, kind of advance, reimbursement period and monetary conditions have additionally added to credit defaults.

### **2.3.3 Business Characteristics**

Business/Firm characteristics are those factors specific to the firm or business that the loan facility will be invested into that may influence loan repayment. They include for instance possession structure, sort of firm, the separation between the area of the firm and that of the loaning bank. The measure of advance endorsed or got, that is the advance size, could positively affect reimbursement execution (Phillips and VanderHoff, 2014).

### **2.3.4 Institutional/lenders Characteristics**

Institutional/Lenders characteristics are those factors that are within the financial institution issuing out the loan facility that may have an effect on loan repayment. They incorporate; time slack between advance application and payment, financing cost, capacity to approach business data and preparing on credit utilize, agreeable enrollment and punishment for delay to aggregate gatherings. Notwithstanding this Korankye (2014) likewise settled that extra reasons for advance default incorporate insufficient advance sizes, poor evaluation, absence of checking, and shameful customer determination and he prescribed that budgetary organizations need clear and successful credit arrangements and techniques that should be clung to (Rhyne, 2001).

## **2.4 Empirical Review**

Bichanga, (2013) cited in Fadahunsi et al., (2014) researched on the loan default causes in Trans Nzoia County microfinance institutions. His general objective was to determine the reasons for loan repayment default in Trans Nzoia County. He further narrowed his objective into finding out how non-supervision of borrowers by the MFIs in the county affected the rate of loan repayment default. In addition, he also studied how the staggering economic growth in the county affected borrowers in loan repayment and how the diversion of loans from their intended purpose results into loan repayment default. A target population of 200 microfinance institutions and 400 borrowers and a sample population of 150 borrowers selected. He collected data using questionnaires that are semi structured and structured and analysis done using both qualitative and quantitative techniques. The study found that lack of supervision by the MFIs affects loan repayment default. He further found out that lack of knowledge (or training) on how to manage loans also affected the rate of loan repayment default. However, this study did not look at the extent of loan repayment default in Kenya. The study also did not cover all the determinants of loan repayment default in Kenya. This study filled this gap by finding out the extent of loan repayment default in microfinance institutions in Kenya.

Nguta and Huka, (2013) cited in Kanyari and Namusonge (2013) conducted a study to find out factors that affect loan repayment default in microfinance institutions. The researchers used Imenti North District as their case study. The data was collected from both formal and informal microfinance institutions in Imenti North District. The data was collected using random sampling. The researchers sampled both the beneficiaries of microfinance loans and microfinance institutions' officials. A total of 400 respondents were used in the study. In addition, the researchers used both structured and unstructured questionnaire to collect data from the respondents. The research found that the manufacturing sector recorded about 67 percent of loan repayment default. The service industry and agricultural sector also followed closely at about 64 percent and 58 percent respectively. The research also found that businesses that had been in an operation for a long time are less likely to default.

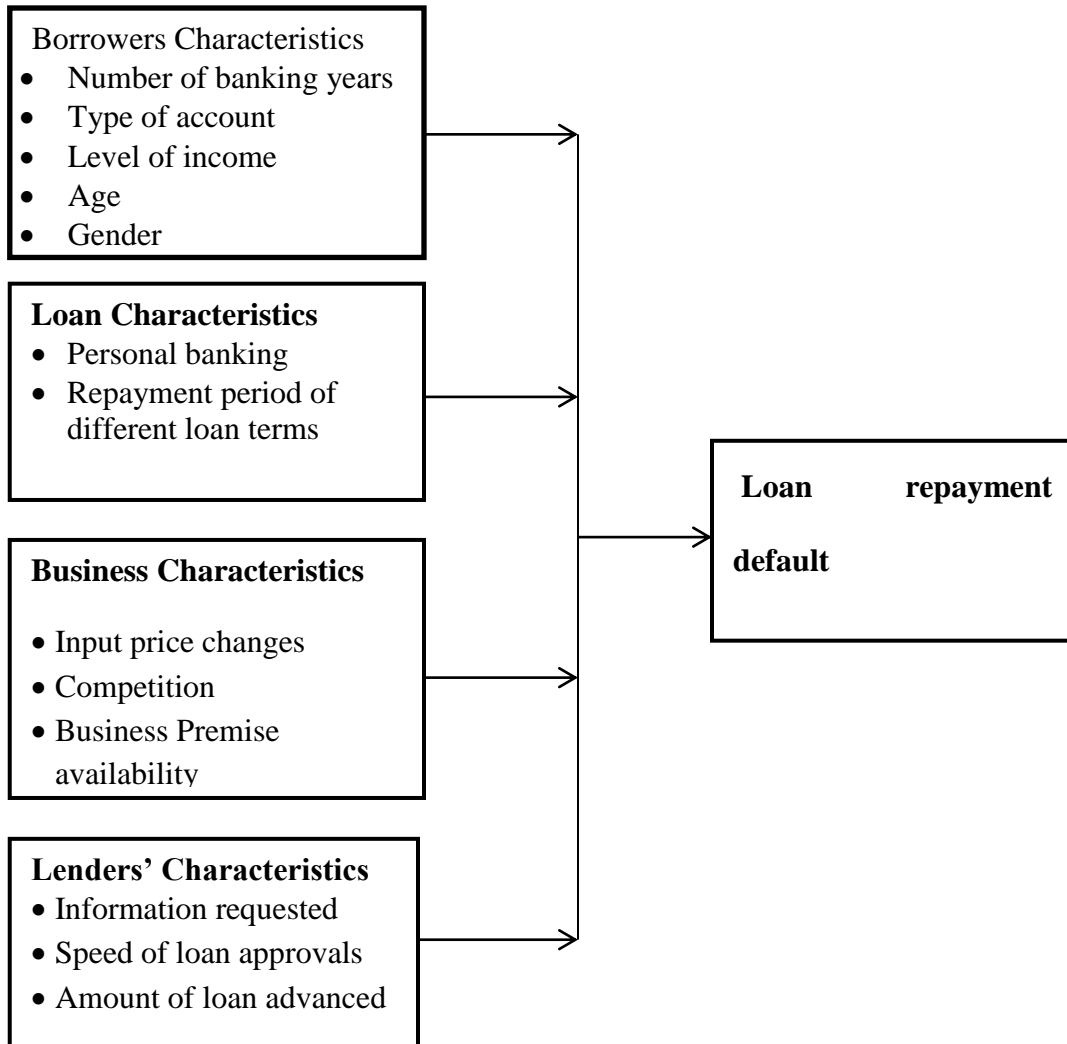
The research concluded that the factors that affect loan repayment default arise from the characteristics of the business. The researchers further concluded that loan repayment default is influenced by age of the business, a number of employees the business has, type of the business and the amount of profit that the business generated. However, the researchers did not explain how they arrived at the number of samples that they used. The population of all the beneficiaries of microfinance loans in Imenti North District was not mentioned. Moreover, this research did not investigate the likelihood of loan repayment default in microfinance institutions.

Munyua (2016) cited in Nawai and Shariff (2017) conducted a similar study on the factors influencing loan repayment default on microfinance in Kenya. In his research, Munyua used a case study of Kirinyaga County in the Central part of Kenya. The study classified microfinance institutions into two classes, formal and informal. Formal microfinance institutions are those that are guided by a well-established framework while informal microfinance institutions are those that are not guided by any law. The dependent variable was the factors influencing loan repayment default in Kirinyaga County while the independent variables were loan diversion, financial management practices, loan collection procedures and the amount of money an individual can borrow at the same time. Munyua (2016) used women-group microfinance institutions in his research, both formal and informal. The researcher divided his population into various strata before picking a sample of 30 percent from each stratum. The total sample population used in the study was 300. The researchers then collected data using both structured and semi-structured questionnaire. The researchers then analyzed his data both quantitatively and qualitatively and used the frequency table to present the summary of his data. The research found that lack of enough regulations and policies are the main reason for loan repayment default in Kirinyaga County. The research also sighted poor loan collection procedures as another factor influencing loan repayment default. The researchers also found that most of the loans borrowed are not used for the purposes proposed during borrowing. Most borrowers divert the loans from their intended purposes to a different purpose. According to the research findings, this factor affects loan repayment default in Kirinyaga County. Although the research conducted by Munyua (2016) used reasonably good statistical standards, the research concentrated more on the

Kirinyaga County. The researchers also used informal microfinance institutions, which may not have clear loan repayment records and procedures. Though the study was relevant to the current study, the study focused on Kirinyaga county while this study focus is on Nairobi County.

## **2.5 Conceptual Framework**

As per Fraenkel and Wallen, (2003) referred to in Nguta and Huka (2013) there are two imperative measures for variable choice; to start with, the factors ought to have huge coefficients and add to the clarification of the needy variable's difference. Second, the factors ought to have a nearby relationship with included factors. The central point generally utilized as a part of credit scoring models incorporate the borrowers pay, age, sex, instruction, occupation, boss sort, district, time at display address, private status, conjugal status, home telephone, insurance esteem, advance term, time with bank, number of advances, and current record (Thomas, Crook and Edelman, 2017). This study groups these variables into borrowers' characteristics, financial institution's characteristics loan characteristics and business characteristics.



**Figure 2. 1: Determinants of loan repayment defaults**

## **2.6 Summary of Literature Review**

This chapter has explained the literature review on microfinance institutions as well as theories behind this research. The empirical review has also elaborated that most of the studies were carried out in different regions. Most of these studies also established that there are different factors influencing loan default in microfinance institutions in Kenya, most of which are significant based on the context of the study. The reviewed studies have confirmed that loan default is catastrophic in most microfinance institutions. A number of studies conducted their research on factors that affect loan repayments with a special focus on the rural areas whose major economic activity is agriculture. Similar studies need to be carried out in the urban areas as well. Other studies done in Kenya focused on determinants of loan repayments among commercial banks and microfinance Institutions. However, microfinance institutions have been evolving with time to become like banks although founded upon microfinance institutions principle. They are known as deposit taking micro finances or microfinance banks currently standing at 12 in Kenya. They had been given little attention by previous studies and thus the study aimed to address the gap.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter explains the methodological processes, which are necessary to achieve the study objective. The chapter is subdivided into different sections, starting with an introduction. The other sections are research design, population, sample, data collection, data analysis and data validity.

#### **3.2 Research Design**

A research design refers to the general plan detailing how a researcher intends to answer research questions. Research design is the plan for conducting the entire research involving data collection, measurement and analysis. A cross-sectional design was utilized to gather data from the population sample to get a general picture the way things are in the field of study (Pasha and Negese, 2014). This study used this design because the data gathered were from a number of participants with varied characteristics and demographics. Additionally it is economical to conduct in terms of time.

#### **3.3 Population and Sample**

The target population of this research study was 49 MFIs operating and registered in Kenya as per the AMFI-K 2016 Annual Report. These MFIs are licensed and regulated by CBK under the microfinance Act of 2006 and the Microfinance Regulations for Deposit Taking MFIs of 2008, The choice of using MFIs in Nairobi was because this is where most of the headquarters are based therefore proving a good population. The target respondents were the loan borrowers and the loan officers from every MFIs. The study used a census method and involved all the MFIs based in Kenya. The study applied purposive sampling technique to select one loan officers from every institution and one customer from the MFIs giving a sample size of 98 respondents (49 loan officers and 49 loan borrowers).

#### **3.4 Data Collection**

In this study, the types of data that was used is primary data. The data collection for the data type is explained herein.

### **3.4.1 Primary Data**

Primary data were directly extracted from the borrowers and key informants during a field survey using questionnaires. The data were collected from Managers or their equivalent to obtain details on business characteristics. This because they are considered to be involved with decision making within MFI's. On the other hand data were collected from loan borrowers to obtain details on borrower's characteristics. The questionnaires included open and closed ended questions/ structured and unstructured questions and were administered through drop and pick method to respondents.

## **3.5 Data Analysis**

### **3.5.1 Methods**

Descriptive statistics such as arithmetic means, frequencies and percentage compositions were employed in order to identify the extent to which the loan repayment defaults affected microfinance institutions. The grouping and organization of data were done using frequency distribution. This showed the number of observations in their corresponding percentage composition and categories to calculate each category's proportion. For cases that are based on two or more variables, a cross-tabulation were used to join the frequency distributions.

### **3.5.2 Analysis Model**

Several statistical models are available for the assessment of factors affecting loan repayment default. These include linear probability models, discriminant analysis, logit models and probit models. Multivariate regression model was used to determine the factors leading to the likelihood of loan repayment default since it uses historical data.

#### **3.5.2.1 Estimation of the Model**

In this study, the regression model used in had one variable being considered an explanatory variable, and the other variable being considered a dependent variable. The regression model was as follows: Borrower characteristics X (independent variables) and loan defaults Y (dependent variable). The regression equation was:

$$Y = a + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where: Y will be the dependent variable- Loan Default.

$\beta_1$ - Will be the regression co-efficient of independent variable.

$X_1$ - borrower characteristics.

$X_2$ - Institutional characteristics.

$X_3$ - loan characteristics.

$X_4$ - Lender/Institutional characteristics.

$\varepsilon$  - Error term.

Data in connection to the variables expressed in the condition above was broke down through utilization of Microsoft exceed expectations, rates, classifications, implies and other focal propensities. Tables were utilized to abridge reactions for encourage examination and encourage correlation. This created quantitative reports from the subjective data gathered through arrangements, rates, and measure of focal propensity. Cooper and Schindler, (2003) takes note of that the utilization of rates is vital for two reasons; first they streamline data by diminishing every one of the numbers to range in the vicinity of 0 and 100. Second, they make an interpretation of the data into standard shape with a base of 100 for relative correlations. What's more univariate and inferential measurements is to be utilized at 95% certainty level; this gave the speculation of the elements. Relapse investigation, illustrative and inferential measurements were utilized to examine the data and set up the connection between the free and the needy variables.

### **3.6 Data Validity and Reliability**

Reliability is the level at which the research results are consistent and accurate over time to represent the total population under study and whether the same result can be produced using a similar methodology (Joppe, 2004). To ensure reliability, the researcher asked same questions from more than 6 people. On the other hand, reliability is the accuracy of instruments used in the study (Golafshani, 2003 cited in Woradithee, 2011). To ensure reliability in this study, the researcher developed a questionnaire in consultation and recommendation of the supervisor. The questionnaire was then tested in a pilot study before deployment into the field.

### **3.7 Operationalization of Variables**

As indicated by Smyth (2004), operationalization is concocting or contradicting a thought or clarification. Operation model or configuration recognizes each of the arrangement of the legitimate advances, factors, and expected collaborations - conquering any hindrance from the earliest starting point to the finish of the aggregate procedure by which the examination is reliant upon. In this study the dependent variables was loan repayment default whereas the independent variables were borrowers', loan, business and lenders characteristics.

**Table 3. 1Operationalization of variables**

Objectives	Variables		Indicators	Measurement/l evel of scale	Type of analysis
	Independent	Dependent			
Determinants of loan repayment default in MFIs in Kenya	Lender characteristics	Loan repayment default	Amount of time taken for loan approval Location	Nominal	Descriptive
	Borrower characteristics	Loan repayment default	Age, Gender, Educational Background borrower Experience	Nominal	Descriptive
	Loan characteristics	Loan repayment default	Coast of loan facilities Type of loan/security provided Amount of loan extended Month/period when loan	Nominal	Descriptive
	Business characteristics	Loan repayment default	Premise location Operation costs	Nominal	Descriptive

## CHAPTER FOUR

### DATA ANALYSIS, PRESENTATION AND INTERPRETATION

#### 4.1 Introduction

This chapter exhibits the discoveries of the investigation, analysis of data and introductions of real discoveries. To demonstrate the relationship among the different factors, the data was displayed as tables, frequencies and percentages where pertinent.

##### 4.1.1 Response Rate

The study focused on a sample size of 98 respondents from which 72 (35 loan borrowers and 37 loan officers) filled in and returned the questionnaires. The response to rate was 73.4%. This response rate fits in with Mugenda and Mugenda (1999) stipulation that a response rate of 50% is adequate for investigation and revealing; a rate of 60% is great and a response rate of 70% and over is outstanding.

#### 4.2 Demographic Information

##### Demographic Information for Loan officers

This section presents demographic information of the staff including gender, position held in the Micro Finance Institution and duration of service.

##### 4.2.1 Gender of the Respondents

The study sought to establish the gender of the loan officers in the MFIs under study. The findings were as shown in the Table 4.1.

**Table 4. 1: Gender of the respondents**

	Frequency	Percentage
Male	30	80.6
Female	7	19.4
<b>Total</b>	<b>37</b>	<b>100.0</b>

The findings revealed that 80.6% of respondents were male while 19.4% were female. This implies that there are more male than female credit officers in MFIs in Nairobi.

#### 4.2.2 Duration of Service

The study sought to establish the length of time the respondents had been working in their respective MFIs. The results are shown in the Table 4.2.

**Table 4. 2: Duration of Service**

	<b>Frequency</b>	<b>Percentage</b>
Below 5 years	2	6.40
6-10 years	12	32.30
11-15 years	18	48.30
Above 16 Years	5	13.00
<b>Total</b>	<b>37</b>	<b>100.00</b>

With regard to the loan officers' duration of service, 48.3% of the respondents indicated that they had worked with their respective MFIs for between 11-15 years 32.3% of the respondents indicated between 6-10 years, 13.0 % of the respondents indicated above 16 years while 6.4% indicated below 5 years. This implies that the respondents had a good understanding and vast experience on the subject being researched on.

#### Demographic Information for Customers

##### 4.2.3 Duration of banking with MFIs

The customers were asked to indicate their duration of banking with their respective micro finance institution.

**Table 4. 3: Duration of banking with MFI**

	<b>Frequency</b>	<b>Percentage</b>
Below 5 years	4	14.0
6-10 years	26	74.0
11-15 years	3	7.0
Above 16 Years	2	5.0
<b>Total</b>	<b>35</b>	<b>100.00</b>

The results in table 4.3 show that 74% of the customers had banked with their respective MFIs for between 6-10 years, 14% indicated below 5 years, 7% indicated between 11-15 years while 5% indicated above 16 years.

#### **4.2.4 Types of Accounts Held at MFIs**

The customers were asked to indicate the types of accounts they held. Their results are shown in Table 4.4.

**Table 4. 4: Types of Accounts Held**

	<b>Frequency</b>	<b>Percentage</b>
Current Accounts	12	35.0
Savings Accounts	17	47.0
Both current and savings	5	13.0
Fixed Deposit Account	1	5.0
<b>Total</b>	<b>35</b>	<b>100.00</b>

Table 4.4 shows that 47% of the customers indicated that they held savings accounts, 35% of the customers indicated that they held current accounts 13% indicated they held both current and savings accounts while 5% indicated they held fixed deposit accounts.

### **4.3 Lenders' Characteristics**

This section presents findings on the amount of time taken for a loan to be approved, firm features, several statements on lenders characteristics and extent that the Bank factors affect loan repayment.

#### **4.3.1 Amount of Time Taken For the Loan to Be Approved**

The study sought to find out whether the amount of time taken for the loan to be approved affected loan repayment possibility. The findings are shown in Table 4.5.

**Table 4. 5: Amount of Time taken for the Loan to be approved**

	Frequency	Percentage
Yes	70	97.3
No	2	2.7
<b>Total</b>	<b>72</b>	<b>100.00</b>

The results in Table 4.5 show that 97.3% of the credit officers indicated that the amount of time taken for the loan to be approved affected loan repayment possibility while 2.7% of the respondents indicated that the amount of time taken for the loan to be approved did not affect loan repayment possibility.

#### 4.3.2 Statements on Lenders' Characteristics

The study sought to establish the level of agreement to which MFIs characteristics affected the loan repayment of customers. The results are shown in Table 4.6.

**Table 4. 6: Statements on Lenders' Characteristics**

	D		N		A		M	SD
	F	%	F	%	F	%		
The amount of information provided by the applicant	0	0	3	4.2	69	95.8	3.96	.201
The speed of loan approvals in the institution affects	1	1.4	1	1.4	70	97.2	3.94	.371
The amount of loan advanced	0	0	1	1.4	71	98.6	4.19	.432
The loan repayment period	0	0	1	1.4	71	98.6	4.31	.493
<b>Mean</b>							<b>4.10</b>	<b>.375</b>

According to the findings, Majority 71(98.6%) of the respondents agreed that the amount of loan advanced affected loan repayment (mean = 4.19; SD = 0.432). Majority 71(98.6%) of the respondents agreed that the loan repayment period (mean = 4.31; SD =

0.493). Majority of the respondents 69(95.8%) agreed that the amount of information provided by the applicant affected loan repayment (mean = 3.96; SD = 0.210). The respondents agreed that the speed of loan approvals in the institution affected loan repayment (mean = 3.94; SD = 0.371).

### 4.3.3 Lenders characteristics and Loan Repayment default

The respondents were asked to indicate the extent to which lenders characteristics affected loan repayment, the results are shown in Table 4.7.

**Table 4. 7: Lenders characteristics and Loan Repayment default**

	Frequency	Percentage
Very great extent	63	87.3
Great extent	5	6.9
Moderate extent	2	2.8
No extent	2	2.8
<b>Total</b>	<b>72</b>	<b>100</b>

From the findings, 87.3% of the respondents reported that lenders characteristics affected loan repayment at the institutions to a very great extent, 6.9% of the respondents indicated that lenders characteristics affected loan repayment to a great extent, 2.8% indicated to a moderate extent and no extent respectively.

## 4.4 Borrowers' Characteristics

### 4.4.1 Age of the Borrower

The loan officers were asked whether the age the borrower affected the possibility of loan repayment. The findings are shown in the Table 4.8.

**Table 4. 8: Age of the Borrower**

	Frequency	Percentage
Yes	32	87.3
No	5	12.7
<b>Total</b>	<b>37</b>	<b>100.00</b>

The findings revealed that 87.3% of the loan officers reported that the age the borrower affected the possibility of loan repayment while 12.7% of the respondents indicated that the age of the borrower did not affect the possibility of loan repayment.

#### 4.4.2 Borrowers Characteristics

The study sought to establish whether borrowers' characteristics affected loan repayment behavior and ability. The credit officers cited that that: age, gender, profession of the borrower, education background, income level, nature of business operated, borrower's experience, location of business operations and amount of loan taken affected loan repayment behavior and ability.

#### 4.4.3 Statements on Borrowers Characteristics

The loan officers were asked to give their opinion regarding various statements on borrowers' characteristics and loan repayment. The results are presented in the Table 4.9.

**Table 4. 9: Statements on Borrowers Characteristics**

	<b>D</b>		<b>N</b>		<b>A</b>		<b>M</b>	<b>SD</b>
	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>		
The kind of collateral pledged as security for the loan	0	0.0	5	13.5	32	86.5	4.1	.595
The number of years the customer has banked with the institution	0	0.0	0	0.0	37	100.0	4.3	.463
The type of account a customer maintains with the institution affected the ability to repay loan	0	0.0	1	2.7	36	97.3	4.2	.479
Higher income earners have better loan repayment than low income earners	0	0.0	5	13.5	32	86.5	3.9	.347
Older borrowers have better repayment than younger borrowers	0	0.0	0	0.00	37	100.0	4.2	.435
Borrowers with higher education have better success repaying their loans	0	0.0	3	8.1	34	91.9	3.9	.277
Women borrowers have lower default rates	3	8.1	31	83.8	3	8.1.	3.0	.408

than male borrowers								
---------------------	--	--	--	--	--	--	--	--

N = 37

According to Table 4.9, the loan officers agreed that the number of years the customer has banked with the institution determined loan repayment default (Mean = 4.3; SD = 0.463). The loan officers agreed that the type of account a customer maintains with the institution affected the ability to repay loan (Mean = 4.2; SD= 0.479), they also agreed that older borrowers had better repayment than younger borrowers (Mean = 4.2; SD = 0.435). Higher income earners have better loan repayment than low income earners (Mean = 3.9; 0.347). Loan officers did not give any opinion concerning the statement that women borrowers had lower default rates than male borrowers (mean = 3.0; SD = 0.429).

#### 4.4.4 Borrowers' characteristics and Loan Repayment default

Loan officers and loan borrowers were asked to indicate the extent to which borrowers' characteristics affected loan repayment, the results are shown in Table 4.10.

**Table 4. 10: Borrowers' characteristics and Loan Repayment default**

	Frequency	Percentage
Very great extent	33	45.8
Great extent	12	16.7
Moderate extent	18	25.0
Less extent	5	6.9
No extent	4	5.6
<b>Total</b>	<b>72</b>	<b>100</b>

From the findings, 33(45.8%) of the respondents reported that borrower's characteristics affected loan repayment at the institutions to a very great extent, 18(25.0%) indicated moderate extent, 12(16.7%) indicated to a great extent while a few 4(5.6%) indicated to a no extent.

#### 4.5 Loan Characteristics

This section presents data findings on the loan characteristics and their effects on loan repayment at the institution.

#### 4.5.1 Loan Characteristics

Loan borrowers were asked to indicate the loan features affecting the level of loan repayment at the institutions. Majority of the respondents indicated that interest rates charged on the loan, Proportion of negotiation fees, maturity period of the loan, grace period before repayment starts, type of loan (Fixed/ variable interest) and amount of credit advanced affected the level of loan repayment.

#### 4.5.2 Effect of Loan characteristics on Loan Repayment

Both loan officers and loan borrowers were asked to indicate the extent to which loan characteristics affected loan repayment. The results are shown in Table 4.11.

**Table 4. 11: Effect of Loan characteristics on Loan Repayment Default**

	Frequency	Percentage
Very great extent	37	51.4
Great extent	27	37.5
Moderate extent	6	8.3
Less extent	1	1.4
No extent	1	1.4
<b>Total</b>	<b>72</b>	<b>100</b>

The study revealed that 37(51.4%) of the loan officers indicated that loan characteristics had an effect on loan repayment to a very great extent, 27(37.5%) indicated great extent, a few 1(1.4% indicated to no extent.

### 4.5.3 Statements on Loan Characteristics

The study asked loan officers to establish the respondents' levels of agreement on various statements regarding loan characteristics and loan repayment. These are presented in the Table 4.12.

**Table 4. 12: Statements on loan Characteristics**

	<b>D</b>		<b>N</b>		<b>A</b>		<b>M</b>	<b>SD</b>
	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>		
Personal banking loans have lower default rates than corporate banking loans	8	21.6	18	48.6	11	29.7	3.0	0.928
Long term loans are easily repaid compared to medium term loans	17	45.9	14	37.8	6	16.2	3.7	0.740
Long term loans are easily repaid compared to short term loans	0	0	15	40.5	22	59.5	3.7	0.626
Medium term loans are easily repaid compared to short term loans	0	0	17	45.9	20	54	3.5	0.505

N = 37

According to Table 4.13, the loan officers agreed that long term loans are easily repaid compared to medium term loans (Mean = 3.7; SD = 0.740), long term loans are easily repaid compared to short term loans (Mean = 3.7; SD = 0.626). The loan officers also agreed that medium term loans were easily repaid compared to short term loans (Mean = 3.5; SD = 0.505). The loan officers did not give any opinion concerning the question that personal banking loans had lower default rates than corporate banking loans (Mean = 3.0; SD = 0.928).

### 4.6 Business Characteristics

The loan borrowers were asked to indicate the extent to which business related characteristics led to failure to repay loans.

#### 4.6.1 Loan borrowers response on loan Characteristics

**Table 4. 13: Statements on loan Characteristics**

	<b>D</b>		<b>N</b>		<b>A</b>		<b>M</b>	<b>SD</b>
	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>		
Increase in business operation costs	1	2.9	5	14.3	29	82.9	4.0	0.685
High competition/low sales	7	20	0	0	28	80.0	3.8	0.994
Decline in profits	0	0	1	2.86	34	97.1	4.2	0.490
Lack of business premise	11	31.4	19	54.3	5	14.3	2.7	0.938

N = 35

From the research findings, it was established that decline in profits and increase in business operation costs led to failure to repay loans (Mean = 4.2; SD = 0.490) and (Mean = 4.0; SD = 0.685). The loan borrowers also agreed that high competition/low sales led to failure to repay loans (Mean = 3.8; SD = 0.994). Lastly, the respondents were neutral that lack of business premise led to failure to repay loans (Mean = 2.7; SD = 0.938).

#### 4.6.2 Business characteristics and Loan Repayment default

The respondents were asked to indicate the extent to which business characteristics affected loan repayment, the results are shown in Table 4.14.

**Table 4. 14: Business characteristics and Loan Repayment default**

	<b>Frequency</b>	<b>Percentage</b>
Very great extent	12	16.7
Great extent	32	44.4
Moderate extent	17	23.6
Less extent	9	12.5
No extent	2	2.8
<b>Total</b>	<b>72</b>	<b>100</b>

The study revealed that 32(44.4%) of the loan officers indicated that loan characteristics had an effect on loan repayment to a great extent, 12(16.7%) indicated great extent, a few 2(2.8% indicated to no extent.

#### 4.7 Loan repayment default

Both loan borrowers and loan officers were asked to indicate their opinion regarding various statements on loan repayment default.

**Table 4. 15: Statements on loan repayment default**

	<b>D</b>		<b>N</b>		<b>A</b>		<b>M</b>	<b>SD</b>
	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>	<b>F</b>	<b>%</b>		
Customers voluntarily fail to repay loans	1	1.4	22	30.6	49	68.1	3.8	0.725
Customers involuntarily fail to repay loans	7	9.7	15	20.8	50	69.5	3.7	0.822

N = 72

From the research findings, the respondents agreed that customers voluntarily fail to pay loans (Mean = 3.8; SD = 0.725).

#### 4.8 Regression Analysis

This section presents the results after performing a multiple regression analysis, regression analysis is a set of statistical process for estimating the relationships among variables.

##### 4.8.1 ANOVA Analysis for the Overall Model

The ANOVA analysis in Table 4.16 presents the influence of all the independent variables on loan repayment default in MFIs in Kenya. The results presented a p-value of 0.003 which was less than 0.05. This indicated that the model was statistically significant in explaining the impact of the independent variables on loan repayment default in MFIs in Kenya. It is therefore concluded that the independent variables had significant combined effects on loan repayment default in MFIs in Kenya.

Table 4. 16: ANOVA<sup>b</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.900	4	1.475	4.498	.003 <sup>b</sup>
	Residual	21.975	67	.328		
	<b>Total</b>	<b>27.875</b>	<b>71</b>			
a. Dependent Variable: Loan Repayment Default						
b. Predictors: (Constant), Business characteristics, loan characteristics, lenders characteristics and Loan borrower characteristics						

#### 4.8.2 Goodness of Fit Model Summary

The significance of the model was reaffirmed by the goodness of fit tests in Table 4.16, whereby the coefficient of determination (R square) of 0.797 affirmed that the model clarified 89.3% of the variation or change in the dependent variables. The balanced R square of 0.785 did not have a noteworthy effect since the model now clarified 78.5% of the variations. The coefficient of determination (R square) of 0.797 demonstrated that the model clarified 79.7% of the variations in the dependent variable.

**Table 4. 17: Fitness Test for the Overall Model**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.893 <sup>a</sup>	.797	.785	.57765

#### Coefficient of Determination

The study conducted a multiple regression analysis and from the above regression model, holding (lenders, characteristics, borrowers' characteristics, loan characteristics and business characteristics) constant at zero, loan repayment will be 5.336. A one percent increase in lenders characteristics will lead to 0.199% decrease in loan repayment default; also a 1% increase in borrowers' characteristics will lead to 0.129 decreases in loan repayment default. Further, a 1% increase in loan characteristics will lead to 0.136% increase in loan repayment default and lastly a 1% increase in business characteristics will lead to 0.191% decrease in loan repayment default.

From the findings in Table 4.18, lenders characteristics and business characteristics had a significant relationship with loan repayment default ( $p < 0.05$ ) at 95% level of confidence. Loan borrowers' characteristics had a significant relationship with loan repayment default ( $P < 0.1$ ) at 90% level of significance. Loan characteristics had an insignificant relationship with loan repayment default ( $P > 0.05$ ) and ( $P > 0.1$ ) at both 95% and 90% level of confidence.

**Table 4. 18: Regression Analysis Results**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.336	.619		8.623	.000
	Lenders characteristics	-.199	.090	-.242	-2.205	.031
	Loan borrower characteristics	-.129	.076	-.252	-1.691	.095
	loan characteristics	.136	.111	.176	1.228	.224
	Business characteristics	-.191	.073	-.305	-2.625	.011
a. Dependent Variable: Loan Repayment Default						

#### 4.9 Summary of Findings and Discussion

This section presents a summary of the findings as per the results presented in chapter four. The study established that loan borrowers' characteristics determined loan repayment default by customers of MFI in Kenya at 90% level of confidence. The age the borrower and number of years the customer had banked with the respective MFIs, the kind of collateral pledged as security for the loan and the type of account a customer maintained determined the rate of loan repayment. According to Stiglitz and Weiss (2011) cited in Kanyari and Namusonge (2013) found borrowers related factors such as age, education level, income level and gender determined loan repayment default. They suggested that the MFIs should screen the borrowers and select the "great" borrowers from the "terrible" borrowers and screen the borrowers to ensure that

they utilize the credits for the expected reason. This is vital to ensure the borrowers can pay back their advances.

The study revealed an insignificant relationship between loan characteristics and loan repayment among customers of MFIs in Kenya at both 95% and 90% level of confidence. Interest rates charged on the loan, proportion of negotiation fees, maturity period of the loan, grace period before repayment starts, type of loan (Fixed/ variable interest) and amount of credit advanced determined the level of loan repayment. This finding disagree with Karlan and Valdivia (2014) established that there is a significant increase in loan defaults and determinants of loan default comprised of type of loan, interest rates, economic condition and repayment period.

The study showed there is a significant relationship between business characteristics and loan repayment default among customers in MFIs in Kenya at both 90% and 95% level of confidence. Business characteristics such as increase in operational cost, high competition/low sales determined ability to repay loans. According to Derban et al. (2005) cited in Fadahunsi et al (2014) the reasons for non-repayment could be gathered into three fundamental regions: the inalienable attributes of borrowers and their organizations that make it improbable that the advance would be reimbursed. Second, are the attributes of lending establishment and reasonableness of the credit item to the borrower, which make it improbable that the advance would be reimbursed. Third, is methodical hazard from the outer factors, for example, the financial, political and business condition in which the borrower works.

Lastly, the study showed there is a significant relationship between lenders characteristics and loan repayment default among customers in MFIs in Kenya at both 90% and 95% level of confidence. Lenders characteristics such as the amount of information provided by the applicant, the speed of loan approvals in the institution, the amount of loan advanced and the loan repayment period determined ability to repay loans. This findings agree with Oke et al. (2007) cited in Fadahunsi, Ferali and Schemeit (2014) that lenders factors determined the ability of a borrower to repay loan. The authors cited that while assessing an independent venture for an advance, banks in a perfect world get a kick out

of the chance to see a two-year working history, a steady administration gathering, an attractive specialty in the business, a development in piece of the pie, a solid income, and a capacity to acquire here and now financing from different sources as a supplement to the advance. Most banks will require an entrepreneur to set up an advance proposition or finish an advance application. The bundle of materials gave to a potential moneylender ought to incorporate a thorough strategy for success, in addition to nitty gritty organization and individual budgetary articulations.

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Summary

The main objective of this research was to examine the determinants of loan repayment defaults in microfinance institutions in Kenya. Specifically the study sought to establish how lenders characteristics, borrowers' characteristics, loan characteristics and business characteristics determined loan repayment default in micro-finance institutions in Kenya. The study was guided by three theories namely: agency theory, women empowerment theory and theory of delegated monitoring of borrowers. The study reviewed studies on lenders characteristics, borrowers' characteristics, loan characteristics and business characteristics. A cross-sectional design was used to collect information from a representative population sample from the list to obtain an overall picture as it stands in the area of study. The target population of this research study was 49 MFIs operating and registered in Nairobi County in Kenya as per the AMFI-K 2016 Annual Report. The study used a census method and involved all the MFIs based in Nairobi County. Purposive sampling technique was used to select one loan officers from every institution and one customer from the MFIs giving a sample size of 98 respondents. Questionnaires were used to gather primary data that was analyzed using regression model and statistical package for social sciences (SPSS) software.

The study results showed that there was a significant relationship between borrowers' characteristics and loan repayment among customers of MFI in Kenya. It was also established that the age the borrower, the number of years the customer has banked with MFIs, the kind of collateral pledged as security for the loan and the type of account a customer maintains affected the rate of loan repayment. The analysis results showed that loan characteristics affected loan repayment among customers of MFIs in Kenya. Interest rates charged on loans, proportion of negotiation fees, maturity period of the loan, grace period before repayment starts, type of loan (Fixed/ variable interest) and amount of credit advanced affected loan repayment default at MFIs. There was a significant relationship between business characteristics and loan repayment default among customers in MFIs in Kenya. Increase in input prices had the highest level of

influence followed by high competition/low sales. Lack of business premises had the least influence on failure to repay loans.

## **5.2 Conclusions**

This section present study conclusion drawn from the findings: The study concludes that lender' characteristics determined loan repayment default in MFIs in Kenya. The amount of time taken for the loan to be approved affected loan repayment possibility, the amount of loan advanced, the loan repayment period, the speed of loan approvals in the institution, the amount of information provided by the applicant were lenders characteristics that determined loan repayment default at the institutions to a very great extent.

The study established that borrowers' characteristics determined loan repayment among customers of MFI in Kenya. Age the borrower, the number of years the customer has banked with MFIs, the kind of collateral pledged as security for the loan and the type of account a customer maintains determined the rate of loan repayment to a very large extent.

Loan characteristics were found to determine loan repayment among customers of MFIs in Kenya. Characteristics such as interest rates charged on the loan, proportion of negotiation fees, maturity period of the loan, grace period before repayment starts, type of loan (Fixed/ variable interest) and amount of credit advanced determined loan repayment default at MFIs to a very great extent.

Business characteristics were found to determine loan repayment default among customers in MFIs in Kenya. Factors such as increase in input prices, high competition/low sales and lack of business premises determined loan repayment default to a great extent.

## **5.3 Recommendations**

From the findings and conclusion, the study recommends that MFIs need to have mandatory supervision borrowers on loan utilization and repayment. Such supervision will enable the MFIs monitor the performance of borrowers closely done. Also training

of borrowers before and after receiving loans should be done focusing on areas such as business management, book keeping and savings. Such measures will bring down the rate of defaulters.

The study also recommends that MFIs should apply efficient and effective credit risk management that will ensure that loans are matched with ability to repay, no or minimal insider lending, loan defaults are projected accordingly and relevant measures taken to minimize the same. The study further recommends that MFIs should pool together and establish a credit information bureau to which reference can be made before a loan is disbursement.

Moreover, the study recommends that to mitigate the repayments problems, a close relationship between lender and borrower can be applied through monitoring, business adviser and regular meeting. Besides that the lender can introduced reward system to those that paid on time such as rebate or discount. Finally, the study recommends that MFIs should also apply rigorous policies on loan advances so as loans are awarded to those with ability to repay and mitigate moral hazards such as insider lending and information asymmetry.

#### **5.4 Limitation of the Study**

The researcher encountered various limitations; firstly, the respondents hindered access to information sought by the study. The main limitation of study was the inability to include all the MFIs in Kenya.

Secondly the researcher encountered problems of time as the research was undertaken in a short period which limited time for doing a wider research especially when carrying out the research across the selected MFIs which facilitated the generalization of the study findings.

Thirdly, the respondents were reluctant in giving information fearing that the information sought would be used to intimidate them or print a negative image about them or the company. The researcher however handled the problem by carrying an introduction letter

from the University and assured them that the information they were to give was to be treated with confidentiality and it be used purely for academic purposes.

### **5.5 Suggestion for Further Study**

While this study successfully examines the variables, it also presents rich prospects for several other areas to be researched in future.

The present study was only confined to a MFIs. It would however be useful to carry out a similar study across heterogeneous financial institutions such as Banks and SACCOs.

It would be useful to carry out the same type of research across East Africa and beyond and see whether the same results would be replicated. This is because studies have shown that in developing nations especially in Africa the banking industry is dominated by commercial banks.

The study also recommends the following areas for further research:

- Causes of loan failures - to broadly assess the institutional, behavioral and environmental aspects from both the lenders' and borrowers' perspective;
- Borrowers' characteristics and their capacity for credit management.

## REFERENCES

- Altay, A. (2007). The challenge for global women poverty: Microfinance (or microcredit) as a solution for women poverty in Turkey. In Papers of the Annual IUE-SUNY Cortland Conference in Economics (pp. 4-21). Izmir University of Economics.
- Arch, G. (2005). Microfinance and development: Risk and return from a policy outcome perspective. *Journal of Banking Regulation*, 6 (3), 227-245.
- Attanasio, O., Augsburg, B., De Haas, R., Fitzsimons, E., & Harmgart, H. (2014). Group lending or individual lending? *Evidence from a randomised field experiment in Mongolia* (No. SP II 2014-303). WZB Discussion Paper.
- Banerjee, A., Duflo, E., Glennerster, R., & Kinnan, C. (2015). The miracle of microfinance? Evidence from a randomized evaluation. *American Economic Journal: Applied Economics*, 7(1), 22-53.
- Chen, L. H., & Kang, F. S. (2010). Integrated inventory models considering the two-level trade credit policy and a price-negotiation scheme. *European Journal of Operational Research*, 205 (1), 47-58.
- Fadahunsi, A., Ferali, W., & Schemeit, R., S. 2014. *The growth of small enterprises: Towards a Research Agenda*, *American Journal of Economics and Business Administration*, 8 (13), 230-278 .
- Golafshani, N. (2003). Understanding reliability and validity in qualitative research. *The qualitative report*, 8 (4), 597-606.
- Hermes, N. (2014). Does microfinance affect income inequality?. *Applied Economics*, 46 (9), 1021-1034.
- Kamanza R. M. (2016). Causes of Default on Micro - Credit among Women Micro - Entrepreneurs in Kenya.A Case Study of Women Enterprise Development Fund (Wedf) Msambweni Constituency- Kenya. *Journal Of Economics And Finance* 3 (6), 32-52.
- Kanyari, J. W. & Namusonge, G. S. (2013). Factors that influence the Kenya youth entrepreneurs toward Youth Enterprise Development Fund: A case study of Gatundu South District, Kenya. *International Journal of Education and Research*. 2 (3), 23-42.

- Karlan, D., & Valdivia, M. (2014). Teaching entrepreneurship: Impact of business training on microfinance clients and institutions. *Review of Economics and statistics*, 93(2), 510-527.
- Kodongo O. & Kendi L.G. (2013) Individual lending versus group lending: An evaluation with Kenya's microfinance data, *Review of Development Finance* 3, (2), 99–108.
- Mokogi, J. G. (2013), *Effect of Microfinance lending on financial performance of Microenterprises*, University of Nairobi, Kenya.
- Mugira, T. G. (2012). *Factors influencing repayment of Youth Enterprise Development Fund Loans in Kasarani district, Nairobi, Kenya*. University of Nairobi.
- Nawai N. & Shariff M. N. M. (2017) Determinants of Repayment Performance in Microcredit Programs: A Review of Literature. *International Journal of Business and Social Science*. 1 (2 ), 152-161.
- Nguta M. H. & Huka G. S. (2013). Factors Influencing Loan Repayment Default in MicroFinance Institutions: The Experience of Imenti North District, Kenya. *International Journal of Applied Science and Technology* 3, (3), 80-84.
- Okello, A. M. (2010). *Factors influencing growth of SMEs owned and managed by youth in Rachuonyo South District, Kenya*. University of Nairobi: Nairobi, Kenya.
- Omino, G. (2005). *Regulation and supervision of Microfinance Institutions in Kenya*. Central bank of Kenya.
- Pasha S. A. M. & Negese, T. (2014). Performance of Loan Repayment Determinants in Ethiopian Micro Finance – An Analysis. *Eurasian Journal of Business and Economics*, 7 (13), 29-49.
- Pasha S. A. M. & Negese T. (2014). Performance of Loan Repayment Determinants in Kenyan Micro Finance – An Analysis. *Eurasian Journal of Business and Economics* 7 (13), 29-49.
- Pearson Jr, R. V., Fund, R. H. L., & Bureau, T. C. (2006). *Causes of default among housing micro loan clients*. FinMark Trust Rural Housing Loan Fund, National Housing Finance Corporation and Development Bank of Southern Africa, South Africa.
- Phillips, R. A., & VanderHoff, J. H. (2014). The conditional probability of foreclosure: An empirical analysis of conventional mortgage loan defaults. *Real Estate Economics*, 32(4), 571-587.

- Rhyne, E. (2001). *Mainstreaming microfinance: How lending to the poor began, grew, and came of age in Bolivia* (No. 332.1 R4.). Bloomfield, CT: Kumarian Press.
- Robinson, M. (2001). *The microfinance revolution: Sustainable finance for the poor*. World Bank Publications.
- Shapiro, S. P. (2005). Agency theory. *Annual review of sociology*, 31.
- Thomas, L., Crook, J., & Edelman, D. (2017). *Credit scoring and its applications*. Society for industrial and Applied Mathematics.
- Waithera, A. N. (2008). *Institutional Adoption of Sustainable Technologies in Developing Countries: Uptake of Improved Biomass Stoves in Kenyan Schools* (Doctoral dissertation, University of Auckland).
- Wanyoko, P. (2012). *Influence of Youth Enterprise Development Fund on youth Empowerment in Kieni, East District, Nyeri County, Kenya*, unpublished.
- Woradithee W. (2011). *Financial Sustainability of Microfinance- A Zero Default Case Study of the Chanthaburi Province Savings Group*. Unpublished Master's Thesis of the Swedish University of Agricultural services.

**APPENDICES**

**Appendix I: Letter of Introduction**

Tabitha Warigia Maigua  
Nairobi University,  
P.O. Box 71535 - 00100, Nairobi,  
Kenya  
Date: .....

The General Manager,  
.....  
P.O. Box.....  
Nairobi

Dear Sir/Madam,

**RE: REQUEST FOR COLLECTION OF RESERCH DATA**

I am a post graduate student (MSC finance - Accounting and Audit option) from Nairobi University, undertaking a research on “Determinants of loan repayment default in micro-finance institutions in Kenya”. Your firm has been identified to participate in this study through your managers who would be requested to voluntarily fill the attached questionnaire.

I guarantee any information provided will be held in confidence and shall only be utilized for the purpose of this academic study. No study firm or respondents will be named in the study, its findings or recommendation. The study will have direct benefit to the study firms and the researcher is will share the findings and recommendation to the firm that will wish to read the final report

Yours Faithfully,

Tabitha Warigia Maigua

**Appendix II: Questionnaire for Loan officers and loan borrowers**

I am a postgraduate student at Nairobi University. I would be grateful if you would answer questions herein. The information will be treated confidentially and will only be used for the purpose of the research. Please respond to questions by ticking (✓) against the appropriate information and writing appropriate answer in blank spaces. Don't write your name or that of the company anywhere on the questionnaire interview.

**SECTION A: DEMOGRAPHIC INFORMATION**

1. Name of the institution (optional).....
2. Gender  
     Male                                   [ ]                                   Female                                   [ ]
3. Duration of service?  
     Below 5 years                           [ ]                                   6 year to 10 years                           [ ]  
     11 year to 15 years                           [ ]                                   Over 15 years                           [ ]

**SECTION B: FACTORS AFFECTING LOAN REPAYMENT**

**Part A: Lenders Characteristics (LC) (both loan officers and loan borrowers)**

4. Does the amount of time taken for the loan to be approved affect loan repayment possibility? Yes                           [ ]                                   No                                   [ ]
5. Please use the point scale below to indicate your level of agreement by ticking each one of the given statement.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

		1	2	3	4	5
LC1	The amount of information provided by the applicant					
LC2	The speed of loan approvals in the institution affects loan repayment default					
LC3	The amount of loan advanced					
LC4	The loan repayment period					

6. Indicate the extent to which lenders characteristics affect loan repayment.

Very great extent      [ ]      Great extent      [ ]  
 Moderate extent      [ ]      Little extent      [ ]  
 No extent      [ ]

**Part B: Borrowers characteristics (BC) (Loan officers only)**

7. Does borrowers age affect loan repayment possibility?

Yes      [ ]      No      [ ]

8. Please use the point scale below to indicate your level of agreement by ticking each one of the given statement.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

	<b>Opinion</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
BC1	The kind of collateral pledged as security for the loan					
BC2	The number of years the customer has banked with the institution					
BC3	The type of account a customer maintains with the institution affected the ability to repay loan					
BC4	Higher income earners have better loan repayment than low income earners					
BC5	Older borrowers have better repayment than younger borrowers					
BC6	Borrowers with higher education have better success repaying their loans					
BC7	Women borrowers have lower default rates than male borrowers					

9. Indicate the extent to which lenders characteristics affect loan repayment.

Very great extent      [ ]      Great extent      [ ]

Moderate extent                          Little extent                      
 No extent                                                   

**Part C: Loan Characteristics (BCh) (Loan officers only)**

10. Indicate loan features affecting the level of loan repayment at the institutions?

.....  
 .....  
 .....

11. Indicate the extent to which loan characteristics affect loan repayment.

Very great extent                  Great extent                      
 Moderate extent                      Little extent                      
 No extent                                               

12. Please use the point scale below to indicate your level of agreement by ticking each one of the methods in the given statements.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

		1	2	3	4	5
BCh1	Personal banking loans have lower default rates than corporate banking loans					
BCh2	Long term loans are easily repaid compared to medium term loans					
BCh3	Long term loans are easily repaid compared to short term loans					
BCh4	Medium term loans are easily repaid compared to short term loans					

**Part D: Business Characteristics (BuC) (Loan borrowers only)**

13. Please use the point scale below to indicate your level of agreement by ticking each one of the given statement.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

	<b>Opinion</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
BuC1	Increase in business operation costs					
BuC2	High competition/low sales					
BuC3	Decline in selling price					
BuC4	Lack of business premise					

**Section C: Measures of Loan repayment default**

1. Please use the point scale below to indicate your level of agreement by ticking each one of the given statement.

1	2	3	4	5
Strongly disagree	Disagree	Neutral	Agree	Strongly agree

	<b>Opinion</b>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
LRD1	Customers voluntarily fail to repay loans					
LRD2	Customers involuntarily fail to repay loans					

*Thank you for your feedback*

### Appendix III: Regression Analysis Output

```
FREQUENCIES VARIABLES=VAR00018 q2 q3 q4 q5 q6 q7 VAR00001 VAR00002 VAR00003 q8 q9
q10 VAR00004 VAR00005 VAR00006 VAR00007 VAR00008 VAR00009 q11 q12 q13 VAR00010
VAR00011 VAR00012 q14 VAR00014 VAR00015 VAR00016 q15 VAR00017
/STATISTICS=STDDEV MEAN
/ORDER=ANALYSIS.
```

### Frequencies

		Notes
Output Created		27-NOV-2017 12:39:22
Comments		
Input	Data	C:\Users\USER\Desktop\Tabitha input.sav
	Active Dataset	DataSet6
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	72
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on all cases with valid data.
Syntax		FREQUENCIES VARIABLES=VAR00018 q2 q3 q4 q5 q6 q7 VAR00001 VAR00002 VAR00003 q8 q9 q10 VAR00004 VAR00005 VAR00006 VAR00007 VAR00008 VAR00009 q11 q12 q13 VAR00010 VAR00011 VAR00012 q14 VAR00014 VAR00015 VAR00016 q15 VAR00017 /STATISTICS=STDDEV MEAN /ORDER=ANALYSIS.
Resources	Processor Time	00:00:00.05
	Elapsed Time	00:00:01.08

**Statistics**

		Business characteristics	Gender	Duration of service	Duration of banking service	Types of accounts held
N	Valid	72	37	37	35	35
	Missing	0	35	35	37	37
Mean		3.5972	1.1892	2.7027	2.0857	1.8571
Std. Deviation		1.00225	.39706	.77692	.65849	.77242

**Statistics**

		Time taken for a loan to be approved	LC1	LC2	LC3	LC4	extent to which lenders characteristics affected loan repayment
N	Valid	72	72	72	72	72	72
	Missing	0	0	0	0	0	0
Mean		1.0278	3.9583	3.9444	4.1944	4.3056	4.7639
Std. Deviation		.16549	.20123	.37110	.43245	.49330	.75978

**Statistics**

		Age of the borrower	BC1	BC2	BC3	BC4	BC5	BC6
N	Valid	37	37	37	37	37	37	37
	Missing	35	35	35	35	35	35	35
Mean		1.1351	4.0811	4.2973	4.2162	3.8649	4.2432	3.9189
Std. Deviation		.34658	.59528	.46337	.47930	.34658	.43496	.27672

**Statistics**

		BC7	Loan borrower characteristics	loan characteristics effect	BCh1	BCh2	BCh3
N	Valid	37	72	72	37	37	37
	Missing	35	0	0	35	35	35
Mean		3.0000	3.9028	4.3611	3.0270	3.7027	3.6757
Std. Deviation		.40825	1.22371	.81024	.92756	.74030	.62601

**Statistics**

		BCh4	BuC1	BuC2	BuC3	BuC4	LRD1	LRD2
N	Valid	37	35	35	35	35	72	72
	Missing	35	37	37	37	37	0	0
Mean		3.5405	4.0000	3.8000	4.2286	2.6571	3.7917	3.8056
Std. Deviation		.50523	.68599	.99410	.49024	.93755	.62658	.79857

**Frequency Table**

**Business characteristics**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No extent	2	2.8	2.8	2.8
	less extent	9	12.5	12.5	15.3
	moderate extent	17	23.6	23.6	38.9
	Great extent	32	44.4	44.4	83.3
	very great extent	12	16.7	16.7	100.0
	Total	72	100.0	100.0	

**Gender**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	30	41.7	81.1	81.1
	Female	7	9.7	18.9	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**Duration of service**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 5 years	2	2.8	5.4	5.4
	6-10 years	12	16.7	32.4	37.8
	11-15 years	18	25.0	48.6	86.5
	above 16 years	5	6.9	13.5	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**Duration of banking service**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Below 5 years	4	5.6	11.4	11.4
	6-10 years	26	36.1	74.3	85.7
	11-15 years	3	4.2	8.6	94.3
	above 16 years	2	2.8	5.7	100.0
	Total	35	48.6	100.0	
Missing	System	37	51.4		
Total		72	100.0		

**Types of accounts held**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	CA	12	16.7	34.3	34.3
	SA	17	23.6	48.6	82.9
	both CA and SA	5	6.9	14.3	97.1
	Fixed account	1	1.4	2.9	100.0
	Total	35	48.6	100.0	
Missing	System	37	51.4		
Total		72	100.0		

**Time taken for a loan to be approved**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	70	97.2	97.2	97.2
	No	2	2.8	2.8	100.0
	Total	72	100.0	100.0	

**LC1**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	3	4.2	4.2	4.2
	A	69	95.8	95.8	100.0
	Total	72	100.0	100.0	

**LC2**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	1	1.4	1.4	1.4
	N	1	1.4	1.4	2.8
	A	70	97.2	97.2	100.0
	Total	72	100.0	100.0	

**LC3**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	1	1.4	1.4	1.4
	A	56	77.8	77.8	79.2
	SA	15	20.8	20.8	100.0
	Total	72	100.0	100.0	

**LC4**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	1	1.4	1.4	1.4
	A	48	66.7	66.7	68.1
	SA	23	31.9	31.9	100.0
	Total	72	100.0	100.0	

**extent to which lenders characteristics affected loan repayment**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No extent	2	2.8	2.8	2.8
	Moderate extent	2	2.8	2.8	5.6
	Great extent	5	6.9	6.9	12.5
	Very great extent	63	87.5	87.5	100.0
	Total	72	100.0	100.0	

**Age of the borrower**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Yes	32	44.4	86.5	86.5
	No	5	6.9	13.5	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BC1**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	5	6.9	13.5	13.5
	A	24	33.3	64.9	78.4
	SA	8	11.1	21.6	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BC2**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	26	36.1	70.3	70.3
	SA	11	15.3	29.7	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BC3**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	1	1.4	2.7	2.7
	A	27	37.5	73.0	75.7
	SA	9	12.5	24.3	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BC4**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	5	6.9	13.5	13.5
	A	32	44.4	86.5	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BC5**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	A	28	38.9	75.7	75.7
	SA	9	12.5	24.3	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BC6**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	3	4.2	8.1	8.1
	A	34	47.2	91.9	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BC7**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	3	4.2	8.1	8.1
	N	31	43.1	83.8	91.9
	A	3	4.2	8.1	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**Loan borrower characteristics**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No extent	4	5.6	5.6	5.6
	less extent	5	6.9	6.9	12.5
	moderate extent	18	25.0	25.0	37.5
	Great extent	12	16.7	16.7	54.2
	very great extent	33	45.8	45.8	100.0
	Total	72	100.0	100.0	

**loan characteristics effect**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	No extent	1	1.4	1.4	1.4
	less extent	1	1.4	1.4	2.8
	moderate extent	6	8.3	8.3	11.1
	Great extent	27	37.5	37.5	48.6
	very great extent	37	51.4	51.4	100.0
	Total	72	100.0	100.0	

**BCh1**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	3	4.2	8.1	8.1
	D	5	6.9	13.5	21.6
	N	18	25.0	48.6	70.3
	A	10	13.9	27.0	97.3
	SA	1	1.4	2.7	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BCh2**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	17	23.6	45.9	45.9
	A	14	19.4	37.8	83.8
	SA	6	8.3	16.2	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BCh3**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	15	20.8	40.5	40.5
	A	19	26.4	51.4	91.9
	SA	3	4.2	8.1	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BCh4**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	17	23.6	45.9	45.9
	A	20	27.8	54.1	100.0
	Total	37	51.4	100.0	
Missing	System	35	48.6		
Total		72	100.0		

**BuC1**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	1	1.4	2.9	2.9
	N	5	6.9	14.3	17.1
	A	22	30.6	62.9	80.0
	SA	7	9.7	20.0	100.0
	Total	35	48.6	100.0	
Missing	System	37	51.4		
Total		72	100.0		

**BuC2**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	7	9.7	20.0	20.0
	A	21	29.2	60.0	80.0
	SA	7	9.7	20.0	100.0
	Total	35	48.6	100.0	
Missing	System	37	51.4		
Total		72	100.0		

**BuC3**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	1	1.4	2.9	2.9
	A	25	34.7	71.4	74.3
	SA	9	12.5	25.7	100.0
	Total	35	48.6	100.0	
Missing	System	37	51.4		
Total		72	100.0		

**BuC4**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	SD	6	8.3	17.1	17.1
	D	5	6.9	14.3	31.4
	N	19	26.4	54.3	85.7
	A	5	6.9	14.3	100.0
	Total	35	48.6	100.0	
Missing	System	37	51.4		
Total		72	100.0		

**LRD1**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	N	23	31.9	31.9	31.9
	A	41	56.9	56.9	88.9
	SA	8	11.1	11.1	100.0
	Total	72	100.0	100.0	

**LRD2**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	D	7	9.7	9.7	9.7
	N	10	13.9	13.9	23.6
	A	45	62.5	62.5	86.1
	SA	10	13.9	13.9	100.0
	Total	72	100.0	100.0	

```

REGRESSION
/MISSING LISTWISE
/STATISTICS COEFF OUTS R ANOVA
/CRITERIA=PIN(.05) POUT(.10)
/NOORIGIN
/DEPENDENT q15
/METHOD=ENTER q8 q11 q12 VAR00018.

```

## Regression

		Notes
Output Created		27-NOV-2017 12:40:36
Comments		
Input	Data	C:\Users\USER\Desktop\Tabitha input.sav
	Active Dataset	DataSet6
	Filter	<none>
	Weight	<none>
	Split File	<none>
	N of Rows in Working Data File	72
Missing Value Handling	Definition of Missing	User-defined missing values are treated as missing.
	Cases Used	Statistics are based on cases with no missing values for any variable used.
Syntax		REGRESSION /MISSING LISTWISE /STATISTICS COEFF OUTS R ANOVA /CRITERIA=PIN(.05) POUT(.10) /NOORIGIN /DEPENDENT q15 /METHOD=ENTER q8 q11 q12 VAR00018.
Resources	Processor Time	00:00:00.02
	Elapsed Time	00:00:00.39
	Memory Required	2812 bytes
	Additional Memory Required for	
	Residual Plots	0 bytes

**Variables Entered/Removed<sup>a</sup>**

Model	Variables Entered	Variables Removed	Method
1	Business characteristics, loan characteristics effect, extent to which lenders characteristics affected loan repayment, Loan borrower characteristics <sup>b</sup>		Enter

a. Dependent Variable: LRD1

b. All requested variables entered.

**Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.893 <sup>a</sup>	.797	.785	.57765

a. Predictors: (Constant), Business characteristics, loan characteristics effect, extent to which lenders characteristics affected loan repayment, Loan borrower characteristics

**ANOVA<sup>a</sup>**

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	5.900	4	1.475	4.498	.003 <sup>b</sup>
	Residual	21.975	67	.328		
	Total	27.875	71			

a. Dependent Variable: LRD1

b. Predictors: (Constant), Business characteristics, loan characteristics effect, extent to which lenders characteristics affected loan repayment, Loan borrower characteristics

**Coefficients<sup>a</sup>**

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.336	.619		8.623	.000
	extent to which lenders characteristics affected loan repayment	-.199	.090	-.242	-2.205	.031
	Loan borrower characteristics	-.129	.076	-.252	-1.691	.095
	loan characteristics effect	.136	.111	.176	1.228	.224
	Business characteristics	-.191	.073	-.305	-2.625	.011

a. Dependent Variable: LRD1