

**INFLUENCE OF NON-ACCOUNTING INFORMATION ON CREDIT DECISIONS OF  
MICROFINANCE BANKS IN KENYA**

**BY:**

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## **DECLARATION**

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made and author duly acknowledged.

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## ABSTRACT

This study assessed the influence of non-accounting information that is utilized by microfinance banks in making credit lending decisions. The objectives that guided this study included: to determine effect of credit history on credit decision making among microfinance banks in Kenya; to establish the influence of credit utilization on credit decision making among microfinance banks in Kenya; and to investigate how financial literacy influences credit decision making among microfinance banks in Kenya. The research was underpinned by four theories namely; equilibrium theory of credit rating, agency theory, theory of planned behaviour and decision making theory respectively. The study adopted a quantitative methodology in which case data was gathered using structured questionnaires. The study population was 169 staff comprising of credit sales officers, risk officers, credit managers and branch managers drawn from different Micro-Finance Bank head offices. A sample of 119 determined using Yamanes formula was selected using stratified random sampling, where the population was segregated into strata based on designation of the officers. In this study the main data collection instruments that were used were questionnaires which were carefully designed, tested and evaluated to assure validity of the primary data. Descriptive as well as inferential statistics were used by the study where the descriptive statistics were analysed in the form of frequency, percentages, mean, and standard deviation while the inferential statistics were analysed in the form of Spearman correlation and regression analysis. Tables, charts and graphs were used to present the analysed data. The descriptive results show that most micro finance banks have an internal credit rating system. Also, the results showed that microfinance banks have access to credit reference bureau reports which compile credit information, public record data and identity information. Furthermore, the microfinance banks are sometimes forced to monitor the investment made using loans to reduce diversion. The results further showed that loans meant for investments have low risk of defaults. In addition, it was shown that the clients with history of diverting the loan to non-productive investments are not approved for loans. Concerning new clients, the results showed new clients starting investments are required to provide business plan. The correlation analysis showed that credit history, credit utilization and financial literacy significantly and positively influence credit decision in microfinance banks in Kenya. These findings were confirmed by the regression analysis where credit history, credit utilization and financial literacy each registered a positive and significant beta coefficient. The study made the conclusion that financial literacy, credit utilization and credit history were very instrumental in credit decision making among the microfinance banks in Kenya. It is therefore recommended that microfinance banks keep information about both current and potential borrowers which may be useful on decisions concerning credit to customers. Also, credit utilization was found to be significantly related to credit decisions, thus microfinance banks should monitor whether the credit facility to the customers are used for the intended purpose and use this information for future decisions on credit worthiness of the potential borrower. On further studies, this study recommends that similar research be done using other variables to establish which other factors have impact on the credit decisions among microfinance banks in Kenya.

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## **DEDICATION**

I dedicate this research project to my children and parents.

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## ACRONYMS AND ABBREVIATIONS

|              |   |
|--------------|---|
| <b>CBK</b>   | Central Bank of Kenya                   |
| <b>CG</b>    | Corporate Governance                    |
| <b>CRM</b>   | Credit Risk Management                  |
| <b>DVF</b>   | Diversification                         |
| <b>HDG</b>   | Hedging                                 |
| <b>MFB</b>   | Microfinance Bank                       |
| <b>RCC</b>   | Rural Credit Cooperatives               |
| <b>SACCO</b> | Savings And Credit Co-Operative Society |
| <b>SMEs</b>  | Small and Medium Enterprises            |
| <b>SPSS</b>  | Statistical Package for Social Sciences |
| <b>TPB</b>   | Theory of planned behavior              |

## OPERATIONAL DEFINITION OF TERMS

|                                   |  |
|-----------------------------------|--|
| <b>Credit Decision Making</b>     | It is the totality of decisions made by the management of an institution in relation to its Credit Risk Management (Boushnak, Rageb, Ragab & Sakr, 2018).  |
| <b>Credit History</b>             | It is a record of how a potential borrower has managed the repayment of previous credit/debts from financial institutions (Odhiambo & Ndede, 2019).  |
| <b>Credit Utilization</b>         | It measures the amount of credit used to finance a specific event or activity (Salisu, Tanko, Adewumi, Yisa & Omobaba, 2021).  |
| <b>Financial Literacy</b>         | It is the set of skills and knowledge that gives an individual good understanding of financial concepts such as budgeting, investing, borrowing, taxation, and personal financial management (Amisi, 2012).                                      |
| <b>Non-accounting information</b> | Relates to information extracted outside of the annual financial statements. That is, information other than the company's balance sheet, income statement, cash flow statement, and change in equity and notes (Shan, Taylor and Walter, 2008). |

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background to Study

To avoid credit facilities that will end up being non-performing, banks should always pay attention to the principles of providing credit facilities (Ritonga, Hasibuan and Siyahan, 2018). This involves the use of sound credit judgments. Credit decision is an important step in the credit origination process in which the lender decides to proceed with lending (Mahmood, Algadi & Ali, 2008). The concept of credit decisions is based on the principles of financial risk management, in which case financial institutions strive to ensure that loans are given to creditworthy borrowers (Rahman, Noor, Bilal & Asif, 2019). Banks often use expert systems to determine the creditworthiness of potential customers, both companies and individuals. The speed with which the bank can respond to requests is much faster if the bank uses an expert system instead of relying on human advisors to make the necessary calculations and judgments.

According to Segal (2019), it is very important for lenders i.e. financial institutions to critically understand the concept of the five C's in order to make appropriate credit decisions. These principles (5C's) include; capacity, capital, conditions, character, and collateral. The concept of capacity is anchored on the foundations of ability to repay the loan on the side of borrowers within the proposed terms and amount (Kou, Peng, Alsaadi & Herrera-Viedma, 2019). For the context of business applications, it is important to be clearly demonstrated from the review of financial performance that past cash flow statements should give evidence of the ability to finance loan requirements (Chao *et al.*, 2019). Capacity is also determined through a detailed analysis of the amount and number of debt obligations a borrower has that are outstanding as at the time of applying

for a new loan; this has to be compared with income streams that are expected in each month when repayments are due (Kou *et al.*, 2019).

The second principal is capital and it is founded on the premise of analyzing the level of borrowers' capital in determining their creditworthiness. Further, analysis of capital in the case of business entities must show the level of personal commitment in terms of investments into an organization, value of assets, retained earnings, and other interests controlled by owners of businesses (Kou, Lin & Chen, 2016). Ideally, capital is seen by lenders as an additional source of loan repayment, should the revenues be interrupted for any eventualities (Li, Kou & Peng, 2016).

The third principle is the concept of conditions which is founded on the premise of the specific terms of the loan itself. Precisely, this takes into consideration any economic conditions that are likely to affect borrowers (Zhang, Kou & Peng, 2019). In the case of corporate borrowers, conditions such as the overall economic weaknesses or strengths and the specific purpose for which the loan is being sought are considered (Li *et al.*, 2016). Although this principle is mostly applied to the context of business borrowers, individuals also get assessed based on the specific need for the funds. The fourth criterion on credit decision making is character, which is also established on the reputation of the borrowers in terms of their financial records and matters. The main approach is to assess past behaviors in order to form a basis for predicting future behaviors respectively (Brown, 2014).

The fifth principle or criterion is collateral, and this refers to the assets that are pledged as security by a borrower. These are assessed to determine whether they can sufficiently be used to recover the loan if it is defaulted (Aruwa & Musa, 2014). Applicants for loans with collateral are regarded as secured and they are given priority by financial institutions over the unsecured loans (Antonakis, Bendahans, Jacquart & Lalive, 2014). But of great importance is that financial institutions measure collateral quantitatively based on their market value as well as qualitatively

based on how easily they can be liquidated if need be (Zhang *et al.*, 2019). In banking practice, all loan applications are considered and evaluated on merit factors. This entails checking the credit worthiness of borrowers, whether institutions or individuals, in order to map out the risk levels involved in extending such credit facilities (Chao, Kou, Peng & Alsaadi, 2019).

The bottom-line fact is that credit decisions look at numerous aspects of borrowers from non-accounting information point of view. This has made the interest in corporate disclosure of non-accounting information to grown gradually since the early 1990s. This non-accounting information is considered by stakeholders (shareholders, institutional investors, customers) to be relevant in assessing the long-term ability of the firm to survive and succeed (Arvidsson, 2011). The term non-accounting information refers to additional information provided by individuals or organizations that are not mandatory, but useful in decision making (Tarquinio and Posadas, 2020). The main reason for using both the accounting and non-accounting information about potential borrowers is that the decision to grant a loan must be based on the ability to repay the loan (Huynh, 2014). Focusing on non-accounting information, the major factors that a majority of financial institutions value are the borrower's payment history, length of credit history, credit usage, credit mix, or newly opened credit accounts (Lauer, 2017).

Credit history comes out as the most important element of creditworthiness. In this case, the financial institution examines the frequency of past repayments to see if a payment was missed (Bluhm, Ludger & Wagner, 2018). The most important factor considered is your credit history. This is determined by the total period or period a person has borrowed and represents about 15% (Garrett, 2012). Timely payment behavior leads to a positive score and non-payment, a negative score (Brigo & Massimo, 2019). In fact, lenders usually worry about the ability of a borrower's ability to pay back their funds and whether this will be done on time as the credit period expires. For most of the financial institutions studied, the loan payment history takes approximately 35% of the total score (Murphy,

2017). Therefore, this shows it's got the biggest impact on the decision whether to lend or to decline a borrower's loan application (Serigny & Olivier, 2015).

Basically, credit history considers the borrower's average of all accounts as well as new accounts (Horsley & Arnold, 2016). It's generally believed that longer duration of the credit history indicates better reliability and hence higher score (Mario, 2013). In addition to credit history, the other information that is non-accounting and that is checked is the credit mix, with various components of the interviewed credit portfolio accounting for 10% of the total score (Hudson, 2012). Borrowers can take out loans for a variety of purposes, including: B. school fees, cars, mortgages, credit cards, and other products that make up the loan portfolio which determine the loan structure i.e. the mix. A large number of different types of credit accounts can be an indication of how people manage their credit products.

Credit utilization is a ratio calculated on the basis of the total loan products used by the borrower when applying for another loan (Darrell & Kenneth, 2015). This is calculated by dividing the sum of revolving credits currently in use by the individual by the sum of all revolving credit limits (Cornett & Saunders, 2006). Basically, the report focuses on how often the applicant's total credit limits are used. The importance of this is to get an understanding of the potential borrowers' level of trustworthiness with regards to non-monetary funds (Finlay, 2009). Also, if it is found that the borrower has used more than 30% of all the credit limit that is available to them, this will impact negatively on them. Credit utilization ratio represents about 30% of non-accounting information when evaluating a borrower's credit worthiness from the perspective of a financial institution (Logemann, 2012).

Another most important non-accounting information required by lenders is the financial literacy of the prospective borrower. Financial literacy evaluates consumers' understanding of

financial products and concepts, financial risks and opportunities, ability to make informed decisions, knowledge of where to seek help, and ability to take other financial actions that are effective to improve their well-being in terms of finances (Miller et al., 2009). Wachira and Kihiu (2012), opine that financial literacy enables decision-making processes including timely payment of bills and proper debt management, improving the creditworthiness of prospective loan borrowers. It was widely hoped that improved financial literacy would help overcome the challenges of advanced credit markets.

### **1.1.1 Microfinance Banks**

A Microfinance Bank (MFB) is a bank dedicated to extending microloans to individuals, businesses and organizations in low-income regions. Microfinance is the provision of financial services to a poor population that traditionally lacks access to financial services of conventional financial institutions (Mutambanadzo, Bhiri & Makunike, 2013). They are progressively a central source of credit for the poor in many countries (Anderson, 2015). Today, MFBs have become the leading source of financial services for entrepreneurs and small businesses that lack the ability to access commercial banks financing. These include making small loans and micro loans to the poor, especially those residing in rural regions, at complete interest rates with no collateral and repayable in recurring installments. Mostly, MFBs target the productive poor in urban and rural areas.

Although MFBs have been accepted globally as one of the credible tools to help alleviate poverty and offer financial inclusion (Chmelíková & Redlichová, 2020), developed economies, for example Sweden, the United States and Japan, and the developing countries, which include most of Latin America and the Southeast Asia and economies in transition have significant crises related to non-performing loans from MFBs. This causes MFBs to face many challenges and these challenges affect their operations and productivity (Ousombangi, 2018). Sustainability is a major challenge facing MFIs (Muhammad, 2010). Maintaining MFBs functioning and administration over a long period of time is becoming increasingly challenging, difficult and a big concern for MFIs in

developing countries (Zeller & Sharma, 2000; Muhammad, 2010). Among other factors, the non-performing loans of their clients' affect the MFIs profitability by leading to un-sustainability over a period of time (Zeller & Sharma, 2000).

In Kenya, MFBs are dedicated to extending microloans to individuals, businesses and organizations in low-income regions. The Microfinance Act (2006) and the Microfinance Regulations (2008) establish regulatory, legal and supervisory framework for the Kenyan microfinance industry (Association of Microfinance Institutions, 2013). Kiawa and Kalui (2015), believe that around 18% of investment capital that is private in Kenya comes from MFBs mainly from individuals and small business entities to create small and medium-sized enterprises (SMEs), agricultural land purchase, housing, educational support among other financial needs.

The Microfinance Act (2006) and the Microfinance Regulations (2008) are the legislations that establish the regulatory, legal as well as the supervisory framework for the Kenyan microfinance industry (Association of Microfinance Institutions, 2013). Through the Microfinance Act 2006 and Microfinance Regulations 2008, CBK was given the mandate to develop a vibrant, efficient, stable and robust microfinance banking sector through the regulation and supervision of MFBs (Central Bank of Kenya, 2018). The need for a vibrant, efficient, stable and robust microfinance banking industry was necessitated by the need to ensure that the poor and the lacking in access have access to banking services. Anand & Kanwal, (2011) believe that the Micro-Finance Bank is one of the facilities that can be used to build poor peoples' capacity. These are people largely not catered for by commercial banks and other mainstream credit institutions. MFBs can direct them to being self-reliant through providing financial services such as savings, credit and insurance that they otherwise could not access.

Since licensing the first MFB in Kenya in 2008, licensed micro finance banks have grown in number to 13 in a span of less than 10 years. These 13 MFBs had over 114 branches as of December 2017 (CBK 2018). These MFBs have provided a platform for expanding and deepening access to financial services across Kenya in urban and rural areas. These microfinance banks according to CBK (2021) include; Caritas Microfinance Bank Limited, Century Microfinance Bank Limited, Choice Microfinance Bank Limited, Daraja Microfinance Bank Limited, Faulu Microfinance Bank Limited, Kenya Women Microfinance Bank Limited, Rafiki Microfinance Bank Limited, Remu Microfinance Bank Limited, SMEP Microfinance Bank Limited, Sumac Microfinance Bank Limited U & I Microfinance Bank Limited, Uwezo Microfinance Bank Ltd and Maisha Microfinance Bank Limited.

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### **1.1.2 Non-Accounting Information and Credit Decision**

In practice, financial institutions make use of non-accounting information to determine whether to qualify or disqualify an individual who has applied for financing to reinforce the accounting information (Ross, 2018). Empirically, studies have shown that non accounting information has significant effect on credit decision. For instance, a study by Wafula, Mbithi and Mutua (2016), revealed that the poor financial performance of microfinance banks is caused by non-performing loans. They recommended that MFBs should make proper credit decisions based both financial and non-financial information of the potential borrowers. Furthermore, Wanjiru (2016) stated that the

most important considerations for the performance and sustainability of microfinance banks include, but are not limited to credit risk management and non-performing loans.

Siahaan and Rusiadi (2018) sought to establish the influence of accounting and non-accounting information on credit decision in Bank Mandiri Medan branch of Imam Bonjol. The results of the study show that accounting information is not fully influential on credit decision making while the non-accounting information that influences bank credit decisions is the guaranteed value and experience of the prospective debtor leader. Shan, Taylor and Walter (2008) attempted to determine the role of non-accounting information in understanding stock return volatility. Overall, our results highlight the relevance of information beyond what is contained in current financial statements to analysts' forecasts.

Locally, Kioko, Kingori and Shikumo (2017) established that microfinance banks in Kenya provide an important reliable force for increasing economic performance and activities, particularly for low-income workers, thus being an important vehicle for eradication of poverty. Despite this significance, these banks often face numerous challenges and competition from large and established commercial banks due to the growth of the banks' microloan activities. This is due to the differences between commercial banks and microfinance banks in terms of financial performance, firm size, capital adequacy and operational efficiency (Kioko *et al.*, 2017).

From these studies, the success of MFBs often depends on effectiveness with which the credit function of the organization is managed; if done effectively, repayment rates are improved and this leads to greater profitability (Sifunjo & Simiyu, 2014). This makes the credit decision an important step in the credit decision where the lender decides to proceed with the granting of the credit. Relevant information comes from all sources available from the various departments when making a loan decision. This information should come from both accounting and non-accounting sources.

## **1.2 Statement of the Problem**

While MFBs are very useful for the population that is less privileged in the society, these organizations face numerous challenges which affect their functioning and profitability (Ousombangi, 2018). These MFBs make wrong credit decisions due to insufficient information about this population, leading to issuing of loans which later turn out to be non-performing. The sustainability of the MFBs becomes such a challenge (Muhammad, 2010). For this reason, the operation and administration of MFBs over a lengthy period of time has become a rather difficult and challenging concern for MFBs in developing countries (Muhammad, 2010) as their customers' non-performing loans greatly affect the MFBs profitability, leading to failure to sustain themselves over a reasonable length of time (Zeller & Sharma, 2000). This calls for proper credit management by the MFBs, thus need to manage and formulate policies related to credit risk management. One method is to put in place suitable credit approval methods aimed at reducing loan default rates.

Due to loan default rates, majority of MFBs have registered low growth rates, even with some operating in losses and decline in their general growth. For instance, the Central Bank of Kenya Report (2018) indicates that total assets for MFBs declined by 4.6 percent since they stood at KSh. 69 Billion in December 2017 from a position of KSh. 72 Billion in December 2016. In addition, profits for the period ended December 2015 declined from KSh. 549 Million to losses of KSh. 377 Million and KSh. 731 Million for the period ended December 2016 and 2017 respectively. This was blamed on the increase in the amount of non-performing loans, which according to CBK reports (2018) stood at KSh. 5.7 billion in December 2017 and grew to KSh. 7.1 billion in December 2020. These losses continued in 2021 post Covid-19 as non-performing loans rose to KSh. 7.1 billion in December 2021 (CBK, 2021).

The evidence aforementioned in view of CBK reports is backed by empirical evidence on non-accounting information and credit decision making. For example, Mugwe and Oliweny (2013)

found that sharing of credit information history influenced banks' profitability in a positive and significant way while Boushnak, Rageb, Ragab, and Sakr (2018) provide evidence that the availability of Credit Bureau Reports had a large impact on credit decisions for lending SMEs in Egypt. In Ethiopia, Asfaw, Bogale and Teame (2016) found that poor credit assessment as well as weak monitoring of credit accounts are the major reasons why Non-performing loans arise in Development Bank of Ethiopia while in Kenya, Wanjiku and Muturi (2017) used binary logistic model and showed a negative relationship between financial literacy on loan repayments. From these studies, available non-accounting information is likely to influence the credit decision making among MFBs. For instance, some studies have indicated that financial literacy positively influences loan repayments while others showed that the sharing of credit information history influenced banks' profitability in a positive and significant manner.

These aforementioned studies provide good insight into effect of non-accounting information on credit decision making among MFBs. However, these studies only give empirical evidence that non-accounting information is key determinant of credit decision making but did not link the non-accounting information with credit decision making among MFBs creating a contextual gap. Some of the studies were done in others sectors, an indication of a contextual gap. Other studies, though related to non-accounting information used performance as the dependent variable meaning that there was a conceptual gap. Further, some studies only stated that non-accounting information affect credit decision making, but did not state the significance and direction of the relationship, creating an empirical gap. The current study sought to bridge these gaps establishing the effect of non-accounting information on credit decisions in microfinance banks in Kenya.

### **1.3 Research Objectives**

The current study was guided both by general and by specific objectives. The general objectives were derived from the research topic while the specific objectives were derived from the independent variables.

#### **1.3.1 General Objective**

The main objective of this study was to evaluate the effect of non-accounting information on credit decisions in microfinance banks in Kenya.

#### **1.3.2 Specific Objectives**

The specific objectives guiding the conduct of this research were as below;

- i. To determine the effect of credit history on credit decision making among microfinance banks in Kenya.
- ii. To determine the effect of credit utilization on credit decision making among microfinance banks in Kenya.
- iii. To examine the influence of financial literacy on credit decision making in microfinance banks in Kenya.

### **1.4 Research Questions**

The research was guided by the following set of research questions;

- i. What effect does credit history have on credit decision making among microfinance banks in Kenya?
- ii. What effect does credit utilization have on credit decision making among microfinance banks in Kenya?

- iii. How does financial literacy influence credit decision making among microfinance banks in Kenya?

## **1.5 Justification of the study**

The study may be of great significance to several stakeholders including the microfinance institutions in Kenya, the researcher, and academicians respectively.

### **1.5.1 Microfinance Banks**

Firstly, since the study focused on the Kenyan MFBs, these entities may highly benefit from the study as they may have an understanding on the factors they should concentrate on while evaluating loan applicants for credit approval.

### **1.5.2 Future Research**

Secondly, the study outcomes may significantly be of relevance to the academia world as it may prove to be an important milestone that may help bridge the gap that is there in existing literature. It may also contribute valuable additional knowledge on the topic of study. Further, it may provide recommendations for future studies, which may act as research topics for future researchers. To the customers, the study may enable them to understand some of the qualities that MFBs consider while approving the credit to the customers.

### **1.5.3 Policy makers**

The findings of the current study may be useful to different stakeholder and regulators. For instance, The CBK may find these strengths and weaknesses useful in setting guidelines to MFBs on how to improve their loan approval decisions. Also, the findings may be used by investors wishing to buy shares with these banks as they may be able to learn some of the risks associated with their investment in these MFBs.

## **1.6 Scope of the Study**

The scope of the study is limited to MFBs in Kenya, registered and regulated by the Central Bank of Kenya (CBK). The independent variables were credit history, credit utilization and financial literacy, and these are presumed to influence credit decisions among the MFBs in Kenya. The study collected primary data related to the study variables aforementioned from the head offices of 14 MFBs.

## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter gives opportunity to the researcher to explore various theoretical frameworks that underpin the current research while appreciating the work of other researchers who have focused on related topics to the current research, in order to develop a conceptual framework for the study.

#### **2.2 Theoretical Review**

Theories are the postulates that attempt to explain phenomena and the relationships between different variables. In theoretical review, the theories which underpinned this study include equilibrium theory of credit rating, agency theory, theory of planned behavior and decision making theory respectively as discussed in the subsections that follow.

##### **2.2.1 Equilibrium Theory of Credit Rating**

The theory of general equilibrium dates back to the 1870s, most notably the work of the French economist Walras in his 1874 work; *Elements of Pure Economics* (Walras, 1874). The theory reached its modern form with the work of Lionel McKenzie (McKenzie, 2008). Walras, (1874) developed the theory to explain how supply, demand and prices in an economy are inter-related where there are more interacting markets. The theory attempts to show that these interactions result into general equilibrium.

In credit risk management, the equilibrium theory of credit rating is founded on the tenets of the theory of lending, in which case lenders have to provide loans to borrowers who have demonstrated the ability to repay, thus, bringing into equilibrium the demand for loans and the willingness to extend such loans to borrowers (supply) as opined by Langohr and Patricia (2010). In

view of this theory, credit rating is a fundamental and important aspect to be considered while making decisions with regard to a firm's capital structure since the associated discrete cost depends on different ratings (Jorgenson, 2012). The same argument can be extended beyond firms to individual borrowers. As a matter of fact, the general equilibrium theory in economics makes attempts of explaining behavior of demand and supply with regard to the prices of commodities (Jerie & Rimmer, 2018). In the context of credit, the price can be considered to be the interest charged on borrowers, which should be based on the credit rating of individual or corporate borrowers. Important to note is that in the economy, there are various players that interact in the market, a similar scenario in the financial market (Eaton, Eaton & Allen, 2009). For instance, credit rating agencies play an integral role as part of the players in lending in helping the financial institutions such as the Microfinance banks to establish the credit scores for all the borrowers in order to be able to make informed decisions as to whether to extend loans or not.

In contrast to the general equilibrium theory, partial equilibrium theory offers the opportunity for the decision makers to analyse the economy partially or in respect to a particular part of the economy, by holding other factors constant (Mitra-Kahn, 2008). Both general equilibrium and partial equilibrium can be applied in the current study; however, partial analysis is directly linked since credit rating is concerned about financial soundness of organizations and individuals which is a partial determination of economy. For instance, putting emphasis on non-accounting factors influencing credit decision making as a form of partial analysis of lending decisions, which is the scope of the current research. In this case, the prediction accuracy of credit worthiness of the clients will highly depend on the independence of various non-accounting factors.

The essence is to allow the lending firm to predict the repayment ability of the individual or firm that borrows in determining the probability of default. The application of this theory in the current study supports one of the study objectives as it postulates how credit history enables

microfinance institutions to make informed decisions so as to reduce associated lending risks. The theory guides objective one, to establish the relationship between credit history length and credit decision making among microfinance banks in Kenya.

### **2.2.2 Agency Theory**

The agency theory was proposed by Jensen and Meckling (1970) to explain and solve problems in the relationship between corporate executives and their agents. According to Kitsou (2013), the 20<sup>th</sup> century marked the start of the decline of the family business. As the size of the company grows, the complexity of management and the openness of capital become necessary, sometimes blurring the line between private wealth and corporate assets. There is a need to hire competent personnel to carry out the daily activities of the company. This leads to agency relationships as explained by the agency theory. Relationship occurs when two parties engage in an association in which one party (principal) delegates some decisions or tasks/work to another (the agent) to act on behalf of the principal (Ozcan & Eisenhardt, 2009).

The theory is based on the assumption that each party is acting in its own self-interest. Furthermore, it is assumed that there is an information asymmetry between the principals and that agents are more risk averse than principals. Two problems that potentially come up from these assumptions arise in agency relationships: these are; a) agency problem and b) risk-sharing problem (Xingxing, 2012). The problem of risk sharing arises due to the different attitudes towards risk between the agent and the principal which leads to disagreements about the actions the agent must take on behalf of the principal. On the other hand, the agency problem arises when agents pursue objectives that differ from the objectives of the principals.

Agency theory is based on the possible problems that usually emerge between principals and agents (Hirst & Bebchuk, 2019). In the context of financial institutions, the principals include the

shareholders or the owners, as well as the depositors who provide their funds to be used in lending out. In this case, agency dilemma or problem exists in the sense that the decisions that must be made by the managers of microfinance banks must take into consideration the interests of the principals (Garrone *et al.*, 2013). Thus, management teams in microfinance institutions constitute the agents, who must act in fiduciary capacity for the principals by making economically sound decisions when determining who to extend credit to and who to deny. As a matter of fact, the main source of income for microfinance banks is lending, constituting the primary business activities that managers should put emphasis on. If by any reason managers are motivated to act in their own interests, it is highly likely that they will make decisions leading to huge losses and this will create agency problems (Voorn *et al.*, 2019).

The theory determines who in the economy, receives or accesses credit and the different uses such financing is directed into (Frank and Goyal, 2011). The application of this theory in this study is relevant in the sense that credit decision making should be supported by economically analysed facts such as considering both accounting and non-accounting information in extending loans to borrowers. For instance, the managers who are the agents must clearly establish the purpose for which the credit is intended for. This is because empirical studies as well and theoretical studies have shown that loan diversion is key determinant of loan defaults. Establishing the purpose for the credits is meant to cushion the managers against any potential crises with the shareholders resulting from loan defaulters. The theory therefore guides objective two, to determine the effect of credit utilization on credit decision making among microfinance banks in Kenya.

### **2.2.3 Theory of Planned Behavior**

Theory of Planned Behavior (TPB) was proposed by Ajzen, (1985). Ajzen's view was to incorporate perceived behavioral control into TPB (Belch & Belch, 2004). According to Ajzen (1991), thoughtful behavioral control is to the degree to which a someone believes they can do something. TPB has been

used in studies on the relationship between beliefs, attitudes, moral objectives and behavior in different spheres of society. The domains include; advertising, public relations, advertising campaigns, health care, sports management, and sustainability, among others (Cunningham & Kwon, 2003). It is a mental theory that associates beliefs with morals. Theory holds that there are three basic components, namely; attitude, thoughtful principles, and thoughtful moral control, together shape the moral goals of the individual. Next, TPB's policy is that the purpose of morality is the closest decision of human behavior in society.

According to the TPB, if a person measures the recommended behavior as positive (i.e the attitude) and if believes that other important people want the person to do that (normal), the intent (motivation) to do that behavior will be greater and it will be possible for the person to do that behavior. Independent attitudes and practices are closely linked with the purpose of behavior; moral purpose is related to real behavior (Sheppard, Hartwick & Warshaw, 1988). Human behavior is guided by some considerations: three of these are; moral beliefs, common beliefs, and dominant beliefs. In their various contexts, moral beliefs express a positive or negative attitude toward morality, common beliefs are translated into a straightforward practice, and dominant beliefs are concerned with thoughtful moral control. According to Ajzen (2002), behavioral attitudes, subordinate behavior and perceived behavioral control lead to the formation of a moral purpose. In particular, perceived behavioral control is thought to affect not only the actual behavior, but also indirectly for the purpose of behavior (Noar & Zimmerman, 2005).

Experts have strongly criticized this theory since it overlooks the person's needs before taking action, a need that can affect behavior regardless of the attitude expressed. One limitation is that it does not cover theoretical role that the emotions of people play in the development of goals and decision-making. In addition, many studies on TPB are consistent. Some scholars suggest additional evidence from randomized trials to help improve theoretical performance (Sniehotta, 2009). In

addition, Sussman and Gifford, (2019) experimental studies challenged the notion that goals and behaviors are the result of attitudes, social norms, and perceived behavioral control. They refer to that connection between three key factors: attitudes; social norms; and visual behavioral control.

In TPB Ajzen (2008) describes an attitude as a level of positive or negative attitudes or behavioral assessments in question. Findings from a previous study revealed that different factors influence attitudes and, in particular, attitudes toward debt. In addition, financial independence level has been found to have an influence on college students' perceptions of credit card debt (Kennedy & Wated, 2011). Norvilite et al. (2006) argued that financial information is one of the strongest and most volatile predictor of debt. This theory is useful in this study as MFB management is required to determine the level of financial literacy of borrowers; studies predict a positive relationship between financial literacy and loan repayment. Theory then pursues a third objective, to determine the impact of financial information on credit decision-making between Kenya's smaller financial banks.

#### **2.2.4 Decision Making Theory**

Decision making theory was first introduced by Herbert Simon in 1948. Decision making is made up of two sections. The first, is the actual making of a decision while the second involves the action or implementation of that decision. Herbert Simon says that decision making is extremely important to an organization. Decisions must be made correctly and in a timely manner to prevent the organization's goal from becoming vain. Decision-making theory emphasizes decisions made under conditions of uncertainty (Steele & Stefánsson, 2015). The specific area of choice under conditions of uncertainty is the determinant of the nature of the decisions that will be made (Habibi, Cheong, Lipniacki, Levchenko, Emamian & Abdi, 2017).

In essence, decision makers focus heavily on the expected value when various decision alternatives are taken, thus selecting the choices that have the greatest returns (Habibi *et al.*, 2017).

The proponents of decision theory make some fundamental hypotheses: the value of the various results for the institution can be expressed in terms of a common scale; and b. the most generally beneficial strategy is one which minimizes average loss or maximizes the average gain or both.

When managers are faced with numerous actions and options in decision making, they evaluate each of the options based on the risks involved, the returns expected, and the overall implication in the performance of the organizations (Clemen & Reilly, 2014). For instance, in the case of microfinance institutions, lending is a mandatory alternative if entities have to achieve better financial performance since it is the main source of revenue. However, who to lend to is a critical decision making process which makes credit lending a very fundamental and imperative process. The application of decision making theory in this study supports all the objectives of the study as each of the non-accounting parameters are important in evaluating the credit worthiness of the borrowers, thus, guaranteeing the microfinance institutions the desired level of ability to pay. Additionally, this supports the maxims of agency problem since if credit worthy customers are the only ones receiving credit from financial institutions, it means that default level is significantly reduced, hence, reduction in the agency problems within an organization. The theory supports the dependent variable.

## **2.3 Empirical Review**

This section critically reviews published researches that have been conducted in the past on the area of research by pointing out their areas of convergence and divergence as provided in the sub-sections that follow. The reviews were then summarized and research gaps established thereafter.

### **2.3.1 Credit history and credit decision making**

Osano and Languitone (2016) evaluated the limits of SMEs (small and medium enterprises) to access credit systems in the Mezam Division located in the North West Province of Cameroon. Data were obtained from more than 294 companies using a two-step sampling method. Descriptive statistics and

log regression analysis were used to perform data analysis. The results show that 5.8% of small and medium enterprises receive only bank loans and 92.2% receive financing from informal credit sources. Log analysis has shown that access to legal credit is determined by the level of education of the business owner or manager, the longevity of the business, and the availability of collateral. Although the results of Osano et al. (2016) highlight the factors that determine MFB access to credit, the findings may not be as helpful to Kenyan MFBs as have been the case in Cameroon creating a content gap. The current study aims to close the gap by conducting a credit history study effect to satisfy local MFBs.

Boushnak, Rageb, Ragab and Sakr (2018) sought to determine the factors influencing the SME loan debt decision: a study by the National Bank of Egypt. A case study strategy and measurement methods were used. The data was collected in a systematic 313 questionnaires and answered by employees of the National Bank of Egypt at risk of debt and marketing. The findings provide evidence that the receipt of Credit Bureau Reports had a significant impact on SME lending decisions. The results of the study revealed a framework for developing a credit risk assessment process, which would reduce uncertainty and time spent on a loan decision and which could have a positive impact on the country's economic development. Boushnak, et al. (2018) conducted their research in Egypt, where laws related to the provision of credit reports may be significantly different from those in Kenya, hence the need for this study to close the content gap.

Mugwe and Oliweny (2013) aimed at assessing credit information sharing impact on the operation of commercial banks in Kenya. The data collected includes the total amount of non-performing loans, total assets, total interest income, equity, total assets and pre-tax profits of 43 commercial banks in Kenya between 2005 and 2014 annually. The study accepted the design of the relationship study. The results of the study were that returns on equity, return on assets and residual interest all tended to be higher after the approval of the Credit Reference Bureaus (2010-2014)

compared to the decline in the pre-credit information system (2005) in 2009). From 2010 to 2014, the underperforming interest rate also remained below 5% and the residual interest rate was more than 6% over the same period. The downgrade model was found to be well defined and it was found that sharing the history of credit information had a positive impact and had a significant impact on the profitability of banks. Research has used the operation of a commercial bank as a dependent variable, which creates an intellectual gap. Current research seeks to close the gap by using a credit decision as a dependent variable.

Odhiambo and Ndede (2019) seek to find the effect of credit sharing procedures on the financial performance of commercial banks in Kenya. The researcher made use of descriptive research design and the target population was five banks operating in Nairobi, including KCB, Equity Bank, Family Bank, Cooperative Bank, and Barclays Bank. Primary data was collected using a questionnaire and secondary data using financial statements for the operations of these banks over the past 5 years. Data were analyzed using descriptive statistics. The study found that the accuracy of the information, loan rates and customer credit reports were positively correlated with the financial performance of commercial banks. Also, the sharing of credit history information has led commercial banks to make more loans based on their reputation, to eligible customers, thereby enhancing their profits. When more detailed information on a consumer's credit history is more readily available, it significantly reduces the cost of access to the credit market for new lenders, increases competition and lowers credit prices. The study was conducted on commercial banks, which provide services to middle class clients compared to MFBs that provide banking services to the poor. This creates a contextual gap; which current research seeks to close.

Kisengese (2014) examined the impact of credit bureau on non-performing commercial bank loans in Kenya. The research project for this study was a descriptive survey while the number of interested people included 43 financial institutions operating in the Kenyan city of Nairobi. Of the 43

banking institutions only 30 were selected for sampling using cluster samples. Key data was collected through the management of open and closed questionnaires for respondents. The results noted that all banks have problems with non-performing lending. The sharing of customer credit information has had an impact on NPLs as it has helped banks refuse permanent loans; which covers the entire credit history of other credit providers. Good information can increase credit approval by commercial banks. The study was conducted on commercial banks, which are very different from MFBs in terms of governance and control, which creates a situation gap. The current study aims to close the gap by conducting MFB-focused research in Kenya.

Maroria, (2015) aimed at exploring the impact of credit referencing on non-performing loans among MFIs in Kenya. Descriptive research methodology was applied where secondary data were collected through narratives from published financial statements of MFIs in Kenya between the years 2006 to 2014 and this data was useful in identifying variables and predictive constructs that were crucial in the analysis. The researcher used t-test and regression analysis to analyze the data and establish the relationship between credit referencing and NPL. Studies have found that years after the introduction of CRB (2011-2014) saw an average reduction of 2% in the level of NPLs hence positive significant impact of CRB on NPLs during the study period. The more credit information is shared between the MFIS and the CRB, the lower the number or amount of non-performing loans. The study was done on MFI, which rarely use the CRB information creating a contextual gap. The current study will be done on MFBs to bridge the contextual gap.

### **2.3.2 Credit Utilization and Credit Decision Making**

Salisu, Tanko, Adewumi, Yisa and Omobaba (2021) investigated the effects of credit utilization on the productivity of small-scale cowpea farmers in selected local government areas in Indonesia. Data was obtained from 212 respondents comprising 98 credit and 114 non-credit users through the administration of a questionnaire. Data were analyzed using descriptive statistics, ordinary least

square (OLS) regression, data envelopment analysis (DEA) and additive multiplicative dummy variable approach (AMDVA). The results specifically revealed that access to credit had a significant effect on the productivity of agitation farmers at the  $P \leq 0.01$  probability level. Delayed distribution and unavailability of banks in communities were found to be major problems limiting farmers' access to credit. The study was done in Indonesia creating a contextual gap. The current study will be on MFBs in Kenya to bridge the gap.

Achoja (2020) looks at evidence of loan disparity in Nigeria as it affects the production of poultry farms as well the necessity to extend financial advisory services. Two hundred forty respondents were selected randomly by use of a multi-step method. Quantity and quality data were obtained mainly using a questionnaire. Parametric and non-parametric mathematical tools were used to analyze the data. The results of the study revealed that a good percentage of the farmers surveyed (86.67%) received loans and exchanged loans. In addition, loan deviations have been shown to be an important determinant of the non-repayment rate of a poultry business loan ( $P < 0.05$ ). Achoja's (2020) study focuses on poultry farmers in Nigeria, creating a situation gap. The current study will serve as a bridge as it will provide books to be used locally.

Asfaw, Bogale and Teame (2016) seek to identify key factors affecting the Development Bank of Ethiopia's non-performing loans, Central Region. The descriptive research design was used and the data was collected primarily from a primary source using a questionnaire from borrowers and staff in the region. The second data was also used to review the annual reports, bulletins, manuals, policies and procedures issued by the bank. The results of the study show that poor credit rating and debt monitoring are a major factor in the occurrence of NPLs in the Ethiopian Development Bank. On the other hand, poor consumer credit culture, consumer lack of knowledge about the business in which they are trading, intentional repayment, debt diversification, and project management issues have been identified as major causes of invalid loan details. The study used non-performing loans,

which occur after a credit decision is made, as a dependent variance, which creates a psychological gap. Current research seeks to close the gap by using a credit decision as a dependent variable.

Menza and Shibru (2017) seek to identify factors influencing the diversification of small loan loans at Kucha Woreda. Descriptive statistics and a multi-model model were used to analyze the collected data. The study found that of the total number of households in the sample, 67 (51.1%) did not convert loans while the remaining 64 (48.9%) diverted loans for other purposes. Of this, 46 (35.1%) were transferred to non-productive investments and 18 (13.7%) were seen to be diverted to sectors that were more productive. Various logistics models have been used to identify factors that contribute to loan deviations. The results show that the purpose of the loan, the interdependent relationships, the monetary and the borrower's perception of repayment have statistically significant mathematical implications for diversifying investment opportunities that are more productive than diversifying loans. A study by Menza *et al.* (2017) used a multi-entry model, while the current study seeks to use a retrospective model more frequently to close the operational gap.

Musah, Enu-Kwesi and Koomson (2014) examined the effects of a borrower's mark on a student loan repayment program in the Credit with Education program launched in the city of Tamale. Data for the various categories collected from 375 borrowers were analyzed using a systematic regression model. Research results show that payments are influenced by age, market access and the amount of loans received, but negatively on the size of the borrower house. The study was based on secondary (partial) data, which may not give the current state of affairs. The current study aims to close the methodical gap by using basic data, which can help find specific concepts more clearly.

Ochung (2013) sought to investigate factors affecting loan repayment among customers of commercial banks in Kenya with specific reference to Barclays Bank of Kenya Limited in Kenya. The target population consisted of 78 respondents. The research design used was descriptive statistics.

The methods of data collection were questionnaire and interview schedule. This study concludes that there is a significant relationship between loan utilization and loan repayment among customers of commercial banks in Kenya. The study also concludes that there is a significant relationship between factors of individual borrowers and loan repayment among customers of commercial banks in Kenya. The study was done on commercial banks which have established credit management mechanisms, creating contextual gap. The current study seeks to bridge the gap by doing a similar study on MFBs.

### **2.3.3 Financial literacy and Credit Decision Making**

Angaine and Waari (2014) examined the factors that had an impact on loan repayment in small financial institutions in Malaysia. A descriptive survey was conducted where targeted 39 loan officers and 5280 MFI clients. Aimed at the count of 39 lenders and a sample of 360 interviewed members of the registered group members. Equivalent sampling and simple random sampling were used in sample selection. Data were collected using questionnaires and interviews and analyzed using both descriptive and non-descriptive statistics. The study found that the level of education was a factor in the number of people contributing to the loan repayment. Business factors that influence loan repayment include: duration of operation, type of business and business management. Angina *et. el* (2014) focused on MFIs that can be controlled by CBK, creating a content gap. The current study aims to close the gap by focusing on MFBs in Kenya.

Baidoo, Yusif, and Ayesu (2020) examined the potential impact of financial information on repayment in Ghana. The study was based on baseline data and used binary probit regression in analysis. The results reveal a good and important relationship between financial literacy and creditworthiness. This means that improving financial information greatly improves the repayment of loans, which in turn ensures the sustainability of financial institutions. Borrowing quality of education also plays a key role in repaying loans. Based on these findings, the study sheds new light on how to improve loan repayment to ensure a flexible banking sector. However, the study focuses

on Ghana, creating a situation gap. This study aims to close the gap by focusing on the effects of financial information on debt decision making at the local level.

Wanjiku and Muturi (2017) have studied the impact of financial awareness on loan repayment. The study used a binary entry model in which the researcher assessed the probability of the respondent being delayed in repaying a loan. The results showed that all independent variables were significant in the study as they showed a p value of less than 0.05. The results showed a negative relationship between independent variance and the likelihood that the respondent would be delayed in retaliation. Wanjiku *et al.* (2017) used a binary entry model, creating a performance gap. The current study aims to close the gap by using a recurring model to study the impact of financial information on debt decision making.

Girma (2021) attempted to assess the impact that financial information had on loans, to assess the effect of debt management information on loans, to assess the impact of financial information on loans in the research area and to assess the current state of SACCO debt. The study has a number of contributions, both for SACCOs in identifying the impact of financial information on loan performance and for members in understanding their financial experience in saving and repaying loans. Girma (2021) focuses on SACCOs that can be controlled by CBK, creating a content gap. The current study aims to close the gap by focusing on MFBs in Kenya.

Mutegi, Njeru and Ongesa (2015) have studied finance and its impact on repaying loans to small and medium enterprises. The specific objectives of the study were to determine the extent to which accounting, debt management skills and budgeting had a significant effect on the repayment of loans. The study was conducted at SMEs in Ngara, Nairobi County. Thirty (30) of the 300 (300) SMEs formed by Equity Bank participated in the study. The data collection tool was a self-regulatory questionnaire for duplication and selection. The results showed that the four skills mentioned above

significantly determine the ability of SMEs to repay loans. Mutegi, et al. (2015) SMEs are targeted as respondents, and current research will direct the MFB debt department as respondents.

Amisi (2012) sought to establish the effect of financial literacy on investment decision making by pension fund managers in Kenya. A modified Likert scale questionnaire was developed divided into three parts. The first part covers demographic variables. The second part identifies Some Financial Literacy Factors Affecting Investment Decisions by Pension Fund Managers in Kenya. The third part is devoted to the factors of behavioral finance. Target population of all 16 fund managers were used in Kenya. The results show that financial literacy of the fund managers is below the required level. A significant effect was observed of financial literacy level on making investment decisions by fund managers. The study used investment decision making as dependent variable creating conceptual gap. The current study will use credit decision making as dependent variable.

## **2.5 Summary of Literature**

Osano and Languitone (2016) shown that access to legal credit is determined by the level of education of the business owner or manager, the longevity of the business, and the availability of collateral while Boushnak, Rageb, Ragab and Sakr (2018) revealed a framework for developing a credit risk assessment process, which would reduce uncertainty and time spent on a loan decision and which could have a positive impact on the country's economic development. In addition, Achoja (2020) revealed that loan deviations have been shown to be an important determinant of the non-repayment rate of a poultry business loan ( $P < 0.05$ ). The study by Osano, *et al* (2016) was done in Cameroon while that of Boushnak, *et al.* (2018) was conducted in Egypt. Lastly, the study by Achoja's (2020) study focused on poultry farmers in Nigeria. Clearly, these studies creates contextual gap where this study sought to bridge the gap by conducting a local study.

Mugwe and Oliweny (2013) found that sharing the history of credit information had a positive impact and had a significant impact on the profitability of banks while Odhiambo and Ndede (2019) found that the accuracy of the information, loan rates and customer credit reports were positively correlated with the financial performance of commercial banks. Also, Ochung (2013) found that there is a significant relationship between factors of individual borrowers and loan repayment among customers of commercial banks in Kenya. These studies were done on commercial banks which have established credit management mechanisms, creating contextual gap. The current study seeks to bridge the gap by doing a similar study on MFBs.

Asfaw, Bogale and Teame (2016) show that poor credit rating and debt monitoring are a major factor in the occurrence of NPLs in the Ethiopian Development Bank while Amisi (2012) show that financial literacy of the fund managers is below the required level. A significant effect was observed of financial literacy level on making investment decisions by fund managers. The study by Asfaw, *et al* (2016) used non-performing loans, which occur after a credit decision is made, as a dependent variable while that of Amisi (2012) the study used investment decision making as dependent variable creating conceptual gap. The current study will use credit decision making as dependent variable to bridge these gaps.

Menza and Shibru (2017) show that the purpose of the loan, the interdependent relationships, the monetary and the borrower's perception of repayment have statistically significant mathematical implications for diversifying investment opportunities that are more productive than diversifying loans while Musah, Enu-Kwesi and Koomson (2014) show that payments are influenced by age, market access and the amount of loans received, but negatively on the size of the borrower house. In addition, Wanjiku and Muturi (2017) showed a negative relationship between independent variance and the likelihood that the respondent would be delayed in retaliation. Wanjiku *et al.* (2017) used a

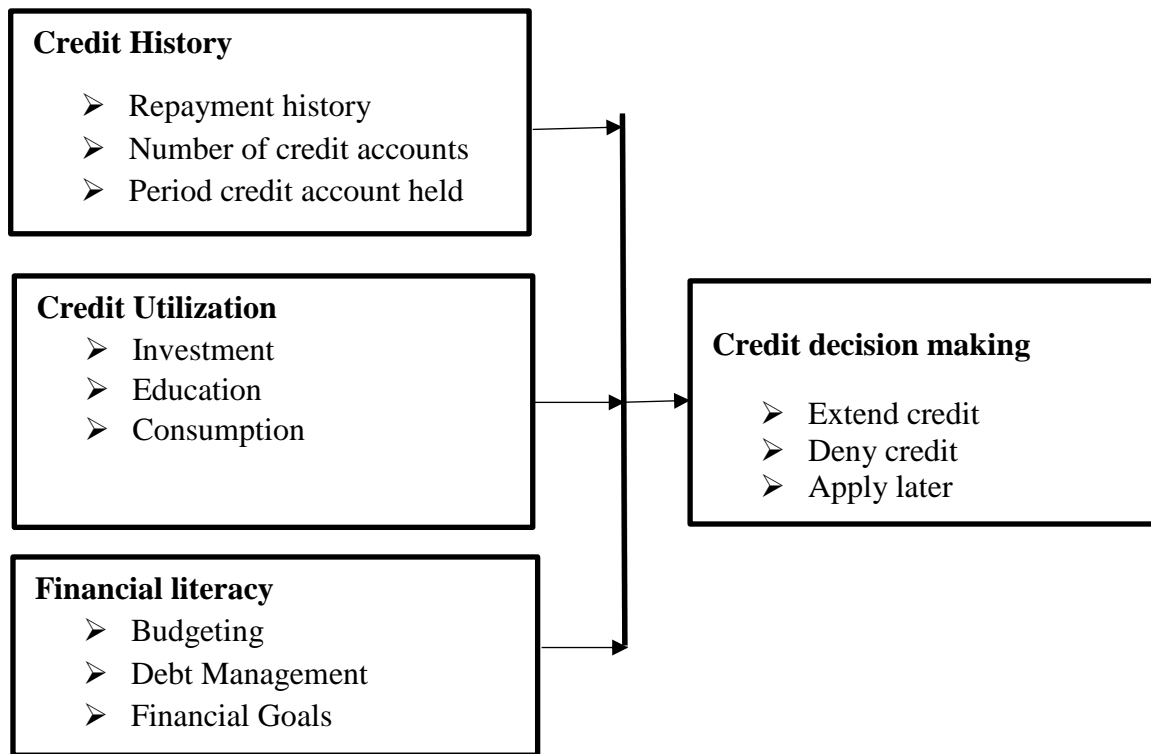
binary entry model, creating a methodological gap. The current study aims to close the gap by using a recurring model to study the impact of financial information on debt decision making.

## **2.6 Conceptual Framework**

The conceptual framework is a set of general ideas and principles taken from relevant fields of inquiry to be used to structure a subsequent presentation (Kombo & Tromp, 2009). It includes the independent variable that is the presumed cause of changes in the dependent variable and the dependent variable that the researcher wishes to explain (Kothari, 2004). The independent variables under consideration includes credit history, credit utilization and financial literacy while the dependent variable will be credit decision making. The measures for credit history will be repayment history, number of credit accounts and period credit account held whereas those of credit utilization will be investment, education and consumption. Further, the indicators for financial literacy will be budgeting, debt management and financial goals. Lastly, credit decision making will be measured in terms of extension of credit facility, denying of credit application and decision to allow future application.

## Independent variable

## Dependent variable



*Figure 2.1: A Conceptual Framework*

## 2.7 Operationalization of Variables

Operationalization means turning abstract concepts into measurable observations (Inguane, Gallego-Ayala, & Juárez, 2013). The variables of concern in the proposed research are credit decision making, credit history, credit utilization and financial literacy. These variables cannot be directly measured hence the need to identify measurable indicators to take the place of the variables. The measurements of the variables will be operationalized by the 5-point Likert Scale. The diagram below presents operationalization of the variables presented on the conceptual framework above.

**Table 2.1:** Operationalization of Variables

| <b>Category</b> | <b>Variable</b>        | <b>Measurement</b>   | <b>Operationalization</b> | <b>Hypothesized direction</b> |
|-----------------|------------------------|--|---------------------------|-------------------------------|
| Dependent       | Credit Decision Making | Extend credit application<br>Deny credit application<br>Apply later          | 5-point likert scale      | Positive                      |
| Independent     | Credit history         | Repayment history<br>Number of credit accounts<br>Period credit account held | 5-point likert scale      | Positive                      |
| Independent     | Credit utilization     | Investment<br>Education<br>Consumption                                       | 5-point likert scale      | Positive                      |
| Independent     | Financial literacy     | Budgeting<br>Debt Management<br>Financial Goals                              | 5-point likert scale      | Positive                      |

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**Source:** (Author, 2022)

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

The research methodology is to analyze the principles of the methods, rules and documents employed by the researcher (Mugenda & Mugenda, 2012). This chapter outlines the materials used in this study. Some of these include the design of the study, the target population, the sampling and sampling process, the research tool, the validity and reliability of the research tool, the data collection process and the data analysis.

#### **3.2 Research design**

Creswell (2013) states that research design is the style of data collection, the tools used for data collection, the way tools are used and the way information is analyzed. The study used descriptive research design. According to Mugenda and Mugenda (2013), descriptive research aims to establish characteristics related to specific events, outcomes, situations or type of behavior. Descriptive design was used in this study for its adequacy in establishing relationships between variables and simplifying data collection to determine human population. Descriptive research is particularly relevant to this study because in the research the researcher collected information about the state of the subject without modifying any of the variables.

#### **3.3 Target population**

Population is a group of people or elements with similar characteristics that the researcher intends to research in order to find hypotheses or mathematical conclusions (Cooper & Schindler 2001). In addition, Mugenda and Mugenda (2012) define a target population as a whole group of people, events

or objects with a common physical feature that the researcher intends to discover and combine the results of its symptoms for decisions. The study was done on the 14 MFBs regulated by the Central Bank of Kenya (CBK, 2021). The target population was the credit sales officers, risk officers, credit managers and managing director/chief executive officers from the head office of each of the MFB. In total, the target population comprised of 169 officers.

**Table 3.1: Target Population**

| <b>Department</b>                          | <b>Population</b> |
|--|-------------------|
| Credit Sales Officers                      | 89                |
| Risk Officers                              | 37                |
| Credit Managers                            | 29                |
| Managing Director/Chief Executive Officers | 14                |
| <b>Total</b>                               | <b>169</b>        |

### **3.4 Sampling Frame**

A sampling frame is a list of the entire target population from which a sample is obtained (Dzwigol, 2018). In this study, the sampling frame will be the entire list of 169 officers which includes Credit Sales Officers (89), Risk Officers (37), Credit Managers (29) and Managing Directors/Chief Executive Officers (14).

### **3.5 Sample size and Sampling Technique**

A sampling technique involves a method that is used to obtain a small portion of the population from the entire target population which is believed to be representative or to have the characteristics of the

entire population (Dzwigol, 2018). However, before that, the sample size was determined. Creswell (2014) stresses that the sample size selected by the researcher should be able to provide sufficient information about the population and one that can be easily analyzed. To obtain favorable results, a sample should be at least 30 elements (Kombo and tromp 2006). The sample size was determined through a formula, in this case, Yamane formula. Nayak and Singh (2021) suggest that if the target population is finite, a formula can be used to determine the sample size. Yamane formula below was adopted for this study;

$$n = \frac{N}{1 + Ne^2}$$

Where:

n is the sample size

N is the population of the study which is 169

e is the error term set at 5% in this study

Substituting the values in the formula as shown below

$$n = \frac{169}{1 + 169 (0.05)^2}$$

$$n = 119$$

Stratified random sampling was used to select 119 respondents from a target population of 169. Thus the population was classified into strata based on the designation of the officers. A sample of 119 participants were randomly and proportionately selected from each stratum using the formula  $n/N$  where n is the sample size and N is the target population.

Table 3.2: Sampling Technique

| <b>Department</b>                          | <b>Target population</b> | <b>Sample population</b> |
|--|--------------------------|--------------------------|
| Credit Sales Officers                      | 89                       | 63                       |
| Risk Officers                              | 37                       | 26                       |
| Credit Managers                            | 29                       | 20                       |
| Managing Director/Chief Executive Officers | 14                       | 10                       |
| <b>Total</b>                               | <b>169</b>               | <b>119</b>               |

### 3.6 Research Instrument

The choice of the data collection tool is determined by the type and availability of the data required to answer the research questions. In data collection, the researcher is supposed to describe the main methods for collecting data from subjects (Maxwell 2012). For this study, the main tools that was used for data collection was questionnaire. According to Mellenbergh (2008), questionnaires can be structured, unstructured or semi-structured. A structured questionnaire is a type of interview in whereby the interviewer poses a specific set of predefined questions while in an unstructured questionnaire nothing limits the answers of an interviewee. A semi-structured questionnaire includes a combination of closed and open questions.

These questionnaires were carefully designed, tested and evaluated to ensure the validity of the primary data. This is in agreement with Hox and Boeije (2005) who found that both questionnaires and respondents can influence the response collected by a researcher. The study focused more on closed-ended questions for easier analysis. As Krosnick (2018) points out, open-ended questions add to the cost of a study and are difficult to analyze, thus requiring respondents more time. The

questionnaires used were five Likert scales (from strongly agree to strongly disagree). Questionnaires are advantageous as data collection tools as they allow faster data collection speeds, have low or no cost requirements, and higher objectivity levels than many alternative methods of primary data collection tools.

### **3.7 Validity and Reliability of the instrument**

Validity is related to the fact that research measures what it sets out to measure (Golafshani, 2003). The degree to which a tool performs what it is designed for and the scale of what it is supposed to measure. As a process, validation involves the collection and analysis of data to check the accuracy of a tool. There are three types of verification, authentication, conditional validation, and legitimacy of content. The validity of a condition compares testing with other standards or outcomes (conditions) that are already considered valid while the validity of the construction refers to the degree to which the performance of the theory developed by the theory equals construction as defined in theory. Content validity is a form of non-statistical verification that involves systematic evaluation of content testing to determine whether it includes a sample representing the behavioral domain to be measured (Anastasi & Urbina, 1997). This study will use the appropriateness of content, which is a standard measurement tool that provides adequate input into the subject being studied. In order to determine the relevance of the content and make changes to the search tools, discussions and discussions were conducted with the administrator.

On the other hand, the reliability of a tool is the rate at which a research tool produces consistent results each time or gives similar data after repeated testing (Cooper & Schindler, 2003). Instrument reliability is the reliability, consistency or reliability of the test. Cronbach's Coefficient Alpha method were used to measure the internal consistency of research tools. Cronbach's Coefficient Alpha is an appropriate scale measurement tool for measuring internal consistency in descriptive

search, as recommended by Cohen, Manion, and Morrison (2007). Cronbach's Alpha calculations will be performed using the Social Sciences Statistics Package (SPSS Version.24).

### **3.8 Data collection process**

Accurate and validated data is required to allow the researcher to consider and answer research questions and this depends on the data collection process. A data collection process is the process of collecting and measuring information about the variables intended for a fixed system. According to Mugenda and Mugenda (2013), data collection is the process by which information is obtained from a selected research topic. As mentioned, primary data was used for the purposes of this study as well as to achieve the objectives. Primary data was collected through the management of research tools after requesting approval from the National Commission for Science and Technology (NACOSTI) and the KCA graduate school.

A letter of release from the KCA graduate school was delivered to respondents to familiarize them with the entire research process. The researcher verified the confidentiality of respondents with the information provided and approve the date of data collection. Using the study assistants, the researcher administered a questionnaire for the sample participants. Due to the busy nature of the respondents, the researcher used drop ad pick method. Sufficient time was given to participants to answer the questions; after which they were collected in one week.

### **3.9 Data analysis and analysis**

Data analysis is the process of evaluating, cleaning, modifying and modeling data for the purpose of obtaining useful information, drawing conclusions and supporting decisions (Meta, 2014). After all the data had been collected, the researcher proceeded to clean up the data, which includes identifying incomplete or incorrect responses. According to Shamoo and Resnik (2003) the various analytical

processes provide a hypothetical drawing of dynamic variables in the data and differentiate the occurrence of interest in existing statistical variables in the data. This was adjusted to improve the quality of the responses. The data was encoded and integrated into the IT system for analysis using the Social Sciences Mathematical Package (SPSS).

Thereafter, the researcher ensured that the information obtained is accurate, consistent and consistent. The study will use both descriptive and non-descriptive statistics. Descriptive statistics were analyzed in terms of frequency, percentage, average and standard deviation while nonsensical statistics will be analyzed in terms of Spearman's correlation with regression analysis. The chi-square independence test was performed at a 95% confidence level to establish quantitative data. Tables, graphs and graphs will be used to present the analyzed data. To measure the effect of independent variables to dependent variable, the estimated model used was as below:

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

Where:

$Y$  = Credit Decision Making

$X_1$  = Credit history

$X_2$  = Credit utilization

$X_3$  = Financial literacy

$\beta_0$  = Constant term

$\beta_1$  = regression coefficients for  $X_1$

$\beta_2$  = regression coefficients for  $X_2$

$\beta_3$ = regression coefficients for  $X_3$

$\varepsilon$  = the error term

### **3.10 Diagnostic Test**

The purpose of diagnostic research is to assess how well a diagnostic test can confirm and/or rule out certain characteristics in a sample (Glasser, 2014). Rommel (2013) stated that diagnostic tests address the numerous types of predispositions that might occur in a study aimed at examining accuracy. The purpose of the intake test was to verify whether or not the researcher could proceed with the regression model of the study. Various hypotheses have been tested regardless of whether they existed or not. Two tests were considered in this study: normality and multicollinearity tests.

#### **3.10.1 Normality Test**

This study assumes that the data is normally distributed. McInnes (2018) states that the normality test determines whether the sample data was extracted from a population that is normally distributed. The normality test is usually used to determine whether a particular data set is modeled by a normal distribution (Doornik & Hansen, 2008). The normality test for this research will be performed using the shapiro wilk statistic. Priyatno (2017) stated that the decision criteria on the test are where the significance level  $> 0.05$ , then null hypothesis that the data was obtained from a population that is normally distributed cannot be rejected.

#### **3.10.2 Multicollinearity Test**

This is the case of multiple regression in which the predictive variables are highly correlated themselves (Paul, 2006). Cohen *et al.*, (2013) defined multicollinearity as an incident in which two or more predictive variables in a multiple regression model have a high degree of correlation. The aim is to gain an understanding of how various independent variables affect the dependent variable.

Multicollinearity is usually a matter of degree, not of presence or absence. Multicollinearity was verified using the variance inflation factor (VIF). Generally, VIF values greater than 10 show the existence of multicollinearity.

### **3.10.3 Heteroscedasticity Test**

According to Jameson (2014), heteroscedasticity describes information with uneven variability throughout a set of second, forecaster variables. Box *et al*, (2011) opined that heteroscedasticity occurs when the variance of a variable, observed in a given period of time are not even. The existence of heteroscedasticity is a major concern in regression analysis and the analysis of variance, as it invalidates statistical tests of significance that assume that the modelling errors all have the same variance. In regression, an error is the position of a point from the regression line. In this study, scatterplot was employed to test for heteroscedasticity. When using the scatterplots, if the residuals become much more spread out as the fitted values get larger creating a “cone” shape, it shows is a sign of heteroscedasticity.

### **3.10.4 Linearity Test**

Linearity assumption accurately estimates the relationship between dependent and independent variables scatter plot graph was used to test linearity assumption. It is a requirement in the correlation and linear regression analysis. Good research in the regression model there should be a linear relationship between the free variable and dependent variable. Decision-making process in the Linearity Test. In the linearity test, the null hypothesis states that the relationship is linear, against the alternative hypothesis that it is not linear. When the test p-value is small, you can reject the null hypothesis and conclude that the relationship is nonlinear.

## CHAPTER FOUR

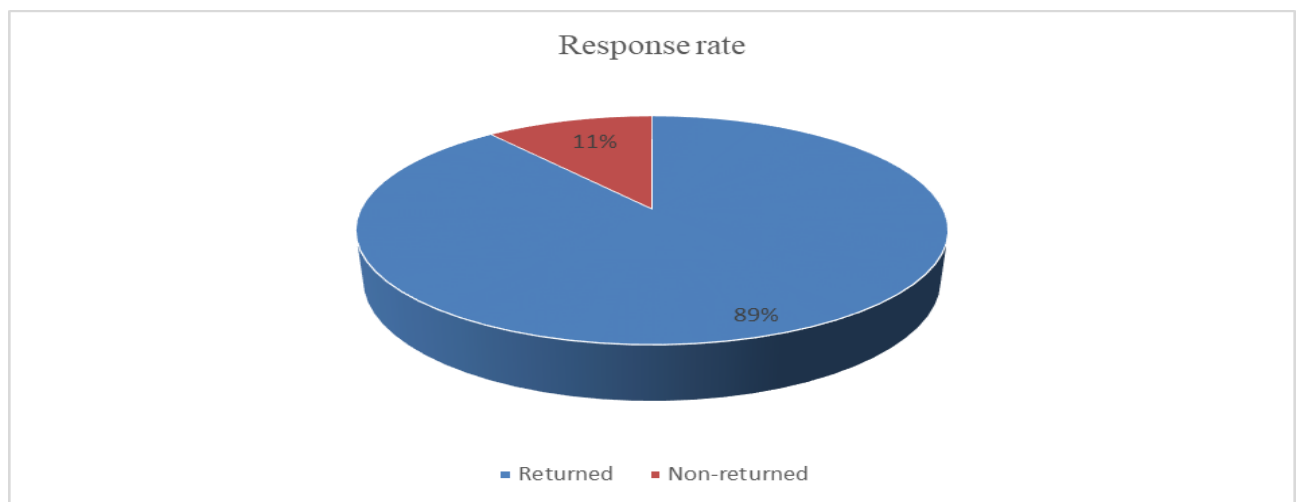
### DATA ANALYSIS, FINDINGS AND DISCUSSION

#### 4.1 Introduction

This chapter gives the results by evaluating data reliability and presenting the summary statistics for research whose objective was to study the influence of non-accounting information on credit decisions of microfinance banks in Kenya. Specifically, the chapter entails response rate, demographic analysis, descriptive statistics, inferential statistics and diagnostics tests.

#### 4.2 Response rate

Using research assistants, the researcher, distributed a total of 119 questionnaires to different officers including credit sales officers, risk officers, credit managers and managing director/chief executive officers of different MFBs in Kenya. After two weeks, the questionnaires were collected for analysis. Figure 4.1 below shows the response rate.



**Figure 4.1:** Response Rate

Out of 119 questionnaires distributed to the respondents, 106 questionnaires were fully filled and returned representing a response rate of 89%. The remaining 11% either never responded at all, or they partially filled their questionnaires. According to Kothari (2014), a response rate of 60% and above is good while over 70% was very good and thus a response rate of 89% was considered adequate for subsequent data analysis. The response rate was also analyzed in form of the designation of the respondents where the respondents were asked to indicate their current designation in the MFB under the study. The results are as shown in figure 4.2.

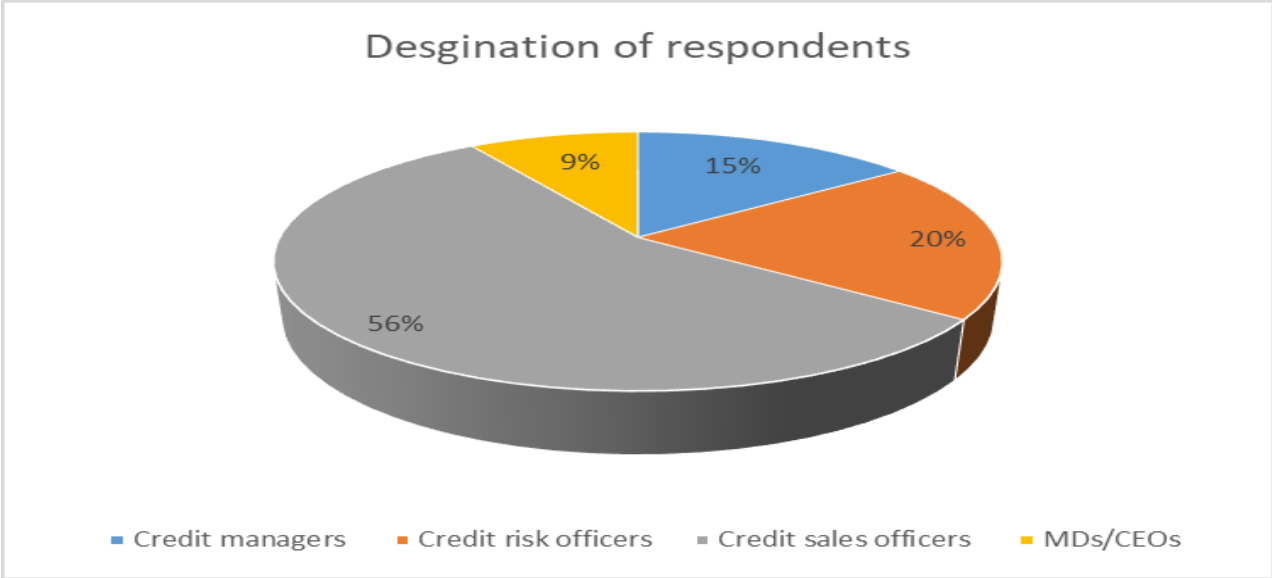


Figure 4.2: *Current Designation of Respondents*

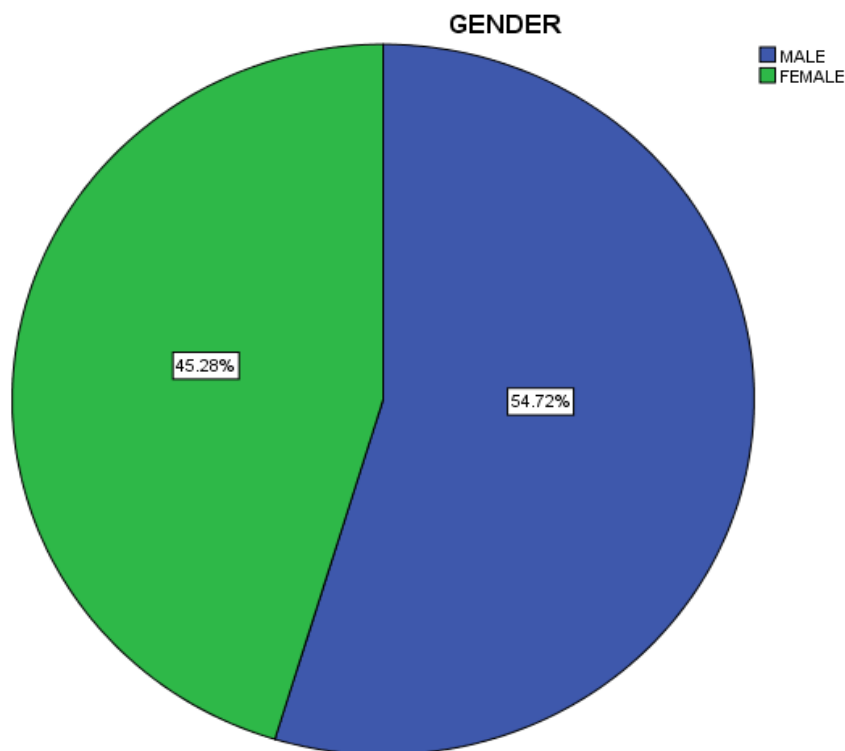
From the results in figure 4.2 above, it was established that out of the 106 respondents who fully filled and returned the questionnaires, majority (56%) were credit sales officers with minority (9%) being managing directors/CEOs. Also, these results show that 15% of the respondents were credit managers while 20% were the credit risk officers. These officers are directly involved in the credit decision making process and therefore they were chosen to respond to the questionnaires because they could give honest and truthful opinion about the credit decision process in their respective MFBs. The different designations were selected to also ensure different perspective from the respondents.

### 4.3 Demographic Analysis

The researcher sought to have the demographic characteristics of the respondents before getting the major results. The demographic factor studied included the gender of the respondents and the educational level of the respondents.

#### 4.3.1 Gender Distribution of the Respondents

The respondents were required to state their gender. Data on gender may be useful to policy makers in making some decision related to gender. The responses from the 106 respondents who filled and returned their questionnaires was recorded in figure 4.3 below.



*Figure 4.3: Gender distribution of the respondents*

The findings on gender distributions shows that 54.72% of the respondents were male while 45.28% were female. The results indicated that the majority of employees in banking sector are male. This agree with the Kenya National Bureau of Statistics (KNBS) Census Report (2019), that in urban areas

more men are employed as compared to women with men enjoying 54.4% of employment share against women's 45.6% in different urban centers across the country. However, on average, women enjoy 50.2% of the working population across the country surpassing the half mark and leaving the remaining 49.8% to men. This shows that most women choose to look for jobs in rural area as opposed to the urban centers while their male counterparts search for jobs in urban areas.

### 4.3.2 Years of Experience

It was also necessary to establish the number of years of experience of respondents who participated in the study. The respondents were required to state the time period they have worked the different microfinance banks across the country and the results were presented in figure 4.3. The duration the officers have worked in the industry was relevant because the longer an officer has worked in credit, the more likely they are to give honest as well as accurate feedback on the questionnaire statements.

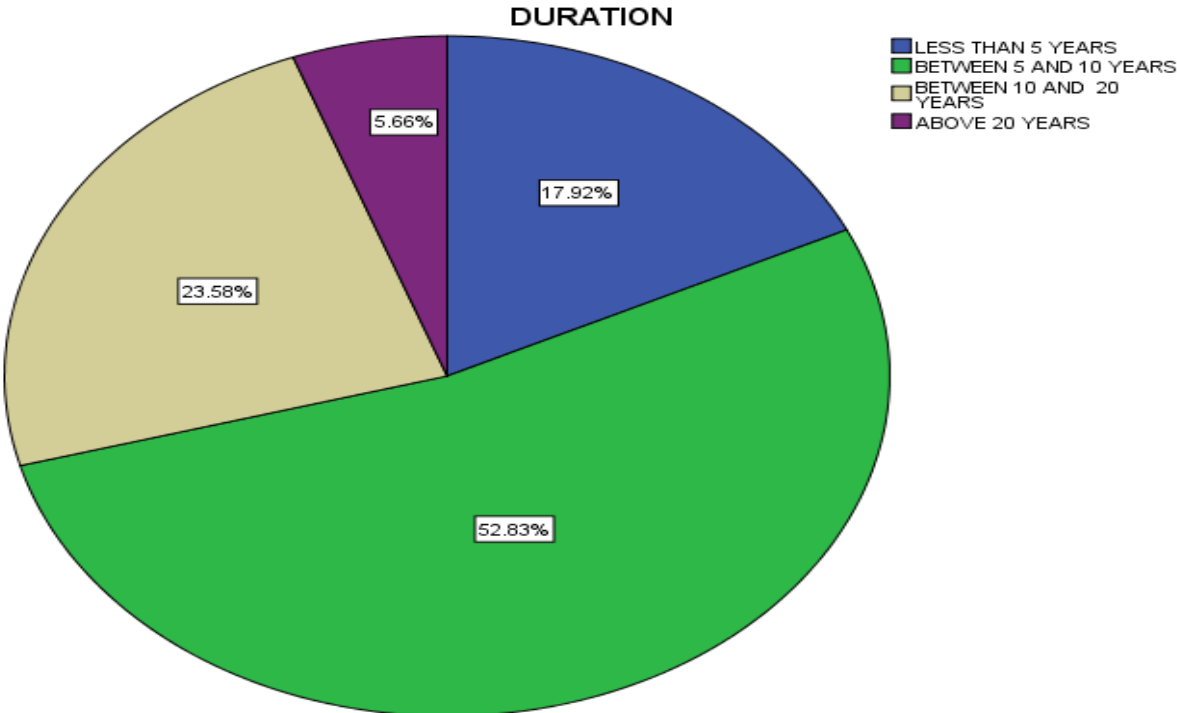


Figure 4.4: Years of Experience

The results presented showed that out of 106 respondents, majority (52.83%) had between 5 and 10 years of experience. Also, the results showed that 17.92% had less than 5 years of experience with 23.58% having between 10 and 20 years of experience. Furthermore, only 5.66% had above 20 years. These results show that only about 17% of the total respondents had less than 5 years of experience, meaning that more than 83% had over 5 years of experience. They could therefore give honest and valid opinion concerning the statements in the questionnaire.

#### **4.4 Study Variables**

The findings are derived from a Likert scale in the questionnaires where the respondents were supposed to indicate their level of agreement or otherwise with a given statement. The descriptive statistics was done based on each independent variable and objective.

##### **4.4.1 Credit History**

The first objective of the study was to determine the effect of credit history on credit decision making among microfinance banks in Kenya. The results from 106 respondents based on a 5-point Likert scale questionnaire are shown in table 4.1.

**Table 4.1: Credit History**

| <b>Statement</b>   | <b>N</b>   | <b>Min.</b> | <b>Max.</b> | <b>Mean</b> | <b>Std. D.</b> |
|--|------------|-------------|-------------|-------------|----------------|
| Micro finance has an internal credit rating system   | 106        | 2.00        | 5.00        | 4.2736      | .71091         |
| Credit reference bureau complies credit information, public record data and identity information                     | 106        | 1.00        | 5.00        | 4.6604      | .75450         |
| We've an access to credit report for individual customers from credit reference bureau                               | 106        | 1.00        | 5.00        | 4.6509      | .80525         |
| we request credit of prospective borrowers from credit other lenders who already dealt with applicant                | 106        | 1.00        | 5.00        | 4.5660      | .86210         |
| our knowledge of a borrower likelihood to repay is not precise and must be inferred based upon available information | 106        | 1.00        | 5.00        | 4.6132      | .84595         |
| The bank does not solely rely on information provided by applicant but must verify this information                  | 106        | 1.00        | 5.00        | 4.6321      | .84319         |
| <b>Valid N (listwise)</b>  | <b>106</b> |             |             |             |                |

The descriptive results show that most micro finance banks have an internal credit rating system (Mean=4.2736, Standard Deviation=0.71091). The mean was accompanied by moderate standard deviation an indication that the responses from 106 respondents had moderate variations. They slightly gave varying answers concerning the internal credit rating system. Also, the results showed that MFBs have access to credit reference bureau reports (mean=4.6509, standard deviation=0.80525) which comprise credit information, public record data and identity information (mean=4.6604, standard deviation=0.75450). The respondents moderately differed on their view about access of credit information.

In addition, the finding showed that MFBs requests for credit information of prospective borrowers from other lenders who already dealt with an applicant (mean=4.5660, standard deviation=0.86210). Though the respondents agreed with the statement, they differed among themselves as their answers were different. The with the respondents also indicated that if an MFB does not have enough knowledge of a borrower’s likelihood to repay, the credit worthiness must be inferred based upon available information (mean=4.6132, standard deviation=0.84595). Lastly, it was found that MFBs do not solely rely on information provided by the applicant but must verify this information (mean=4.6321, standard deviation=0.84319).

#### 4.4.2 Credit Utilization

The second objective of the study was to determine the effect of credit utilization on credit decision making among microfinance banks in Kenya. The results from 106 respondents based on a 5 point Likert scale questionnaire are shown in table 4.2.

**Table 4.2:** Credit Utilization

| <b>Statement</b>  | <b>N</b> | <b>Min.</b> | <b>Max.</b> | <b>Mean</b> | <b>Std. D.</b> |
|---|----------|-------------|-------------|-------------|----------------|
| Loan diversion is a major cause of loan default   | 106      | 1.00        | 5.00        | 4.2925      | .89408         |
| Clients with large families are more likely to divert their loans                                     | 106      | 1.00        | 5.00        | 4.6698      | .78947         |
| Sometimes we are forced to monitor the investment made using loans to reduce diversion                | 106      | 2.00        | 5.00        | 4.6698      | .65787         |
| loans meant for investments have low risk of defaults   | 106      | 1.00        | 5.00        | 4.5755      | .88316         |
| Clients with history of diverting the loan to non-productive investment are not approved for the loan | 106      | 1.00        | 5.00        | 4.4811      | .92819         |

|   |     |      |      |        |        |
|---|-----|------|------|--------|--------|
| Approval of credit meant for local consumption must be backed by collateral | 106 | 1.00 | 5.00 | 4.6415 | .79509 |
|---|-----|------|------|--------|--------|

**Valid N (listwise) 106**

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The descriptive findings show that loan diversion is a major cause of loan default (mean=4.2925, standard deviation=0.89408). The moderate standard deviation is an indication that the respondents gave similar responses. In addition, it was shown that clients with large families are more likely to divert their loans (mean=4.6698, standard deviation=0.78947). The mean of 4.6698 accompanied by a standard deviation of 0.78947 shows that the respondents agreed with the statement but disagreed among themselves. Furthermore, the MFBs are sometimes forced to monitor the investment made using loans to reduce diversion (mean=4.6698, standard deviation=0.65787). The results further showed that loans meant for investments have low risk of defaults (mean=4.5755, standard deviation=0.88316). The descriptive statistics further showed that the clients with history of diverting the loan to non-productive investment are not approved for the loan (mean=4.4811, standard deviation=0.92819). Lastly, the respondents agreed that the approval of credit meant for local consumption must be backed by collateral (mean=4.6415, standard deviation=0.79509). The findings showed that, though the sampled population strongly agreed that approval of credit meant for local consumption must be backed by collateral, the respondents differed among themselves as few said that the approval of credit is not backed by collateral as indicated by moderate standard deviation.

**4.4.3 Financial Literacy**

The third objective of the study was to examine the influence of financial literacy on credit decision making in microfinance banks in Kenya. The results from 106 respondents based on a 5 point Likert scale questionnaire are shown in table 4.3.

**Table 4.3: Financial Literacy**

| <b>Statement</b>  | <b>N</b>   | <b>Min.</b> | <b>Max.</b> | <b>Mean</b> | <b>Std. D.</b> |
|---|------------|-------------|-------------|-------------|----------------|
| Clients are supposed to provide break down of how they intend to use credit facility          | 106        | 2.00        | 5.00        | 4.6792      | .66971         |
| Clients with budgeting literacy are likely to repay their loans promptly                      | 106        | 1.00        | 5.00        | 4.3679      | 1.08079        |
| Clients with accounting background are likely to repay their loans promptly                   | 106        | 1.00        | 5.00        | 4.6321      | .83181         |
| Education background of a client is very key when making credit decision                      | 106        | 1.00        | 5.00        | 4.5094      | 1.08008        |
| Clients with existing businesses must always provide financial records before approving loans | 106        | 1.00        | 6.00        | 4.5094      | .95862         |
| New clients starting investment are required to provide business plan                         | 106        | 1.00        | 5.00        | 4.3679      | .79673         |
| <b>Valid N (listwise)</b>   | <b>106</b> |             |             |             |                |

The descriptive findings show that MFBs demand the potential borrowers provide break down of how they intend to use credit facility (mean=4.6792, standard deviation=0.66971). Further, the results show that clients with budgeting literacy are likely to repay their loans promptly (mean=4.3679, standard deviation=1.08079). The high standard deviation is an indication that though the respondent agreed with the statement, they differed among themselves concerning the statement as they gave varying answers. Though the findings show that the sampled population agree that clients with budgeting literacy are likely to repay their loans promptly, there are some who were of contrary opinion as indicated by the standard deviation of 1.08079. Additionally, these results from the 106

respondents shows that clients with accounting background are likely to repay their loans promptly (mean=4.6321, standard deviation=0.83181). The respondents said that education background is very key when making credit decision (mean=4.5094, standard deviation=1.08008). The results also show that clients with existing businesses must always provide financial records before approving loans (mean=4.5094, standard deviation=0.95862). Lastly, the results show that new clients starting investment are required to provide business plans (mean=4.3679, standard deviation=0.79673). The moderate standard deviation shows that though the respondents agreed with the statement, there are some who said that a business plan is not a must for a new client with new business.

#### 4.4.4 Credit Decision

The dependent variable was credit decision. The results from 106 respondents based on a 5 point Likert scale questionnaire are shown in table 4.4.

**Table 4.4:** Credit Decision

| Statement   | N   | Min. | Max. | Mean   | Std. D. |
|---|-----|------|------|--------|---------|
| Clients with poor credit history are required to be guaranteed by a person with better credit history | 106 | 1.00 | 5.00 | 4.4340 | 1.11286 |
| Time taken for approval of credit facility depends on available information                           | 106 | 1.00 | 5.00 | 4.6415 | .80698  |
| Prospective clients with some history of default are mostly advised to apply later                    | 106 | 1.00 | 5.00 | 4.5566 | .84041  |
| Clients with poor credit history are mostly denied facility by MFBs                                   | 106 | 1.00 | 5.00 | 4.7170 | .75283  |
| Clients with good repayment history have their credit approved on time                                | 106 | 1.00 | 5.00 | 4.5660 | .88392  |

The organisation depends on alternative available information for credit decisions

|     |      |      |        |        |
|-----|------|------|--------|--------|
| 106 | 1.00 | 6.00 | 4.4340 | .92601 |
|-----|------|------|--------|--------|

**Valid N (listwise) 106**

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The findings show that clients with poor credit history are required to be guaranteed by a person with better credit history (mean=4.4340, standard deviation=1.11286). Though the mean indicates that respondents agreed with the statement, the standard deviation shows that there was discrepancy on the answers given by the respondents. In other words, the respondents disagreed among themselves. The research findings also showed that time taken for approval of credit facility depends on available information concerning the potential borrower (mean=4.6415, standard deviation=0.80698). The findings further showed that prospective clients with some history of default are mostly advised to apply later (mean=4.5566, standard deviation=0.84041). It was also shown that clients with poor credit history are mostly denied facility by MFBs (mean=4.7170, standard deviation=0.75283). The respondents also showed that clients with good repayment history have their credit approved on time (mean=4.5660, standard deviation=0.88392). Lastly, the results showed that the organization depends on alternative available information for credit decisions (mean=4.4340, standard deviation=0.92601).

#### **4.5 Statistical Assumptions**

Statistical tests rely upon certain assumptions about the variables used in the analysis where if these assumptions are not met the results may not be valid (Osborne and Waters (2014)). It was therefore important to pretest for these assumptions for validity of their results. In this research, normality test and multicollinearity test were checked prior to data analysis.

##### **4.5.1 Normality Test**

Normality test was done to check if the data was coming from a normally distributed sample or population. Shapiro Wilk statistic test was used in this study to test the normality of data. Priyatno

(2017) mentioned that decision-making criteria on the test are if the significance level  $> 0.05$ , then the null hypothesis that the data came from a normally distributed population cannot be rejected. Results of the normality test are presented in table 4.5.

**Table 4.5: Normality Test**

|                    | Shapiro-Wilk |     |      |
|--------------------|--------------|-----|------|
|                    | Statistic    | Df  | Sig. |
| Credit history     | .710         | 106 | .100 |
| Credit utilization | .754         | 106 | .071 |
| Financial literacy | .690         | 106 | .066 |

From the results, it was shown that the Shapiro Wilk statistic for the Credit history was 0.700 and a p-value of 0.100. Also, it was established that Credit utilization had the Shapiro Wilk statistic of 0.754 and a p-value of 0.071. Lastly, financial literacy had Shapiro Wilk statistic of 0.690 and a p-value of 0.066. Since the p value were found to be greater than the chosen alpha level, the null hypothesis that the data came from a normally distributed population cannot be rejected as suggested by Razali and Wah (2011). It was therefore concluded that the data came from a sample drawn from normally distributed population.

#### **4.5.2 Multicollinearity Test**

In statistics, multicollinearity is a phenomenon in which one predictor variable in a multiple regression model can be linearly predicted from the others with a substantial degree of accuracy (O'Brien 2007). Multicollinearity was assessed in this study using the Variance Inflation Factor. As a rule of thumb, VIF values greater than 10 shows the existence of multicollinearity. The results are as shown in table 4.6.

**Table 4.6:** Multicollinearity test

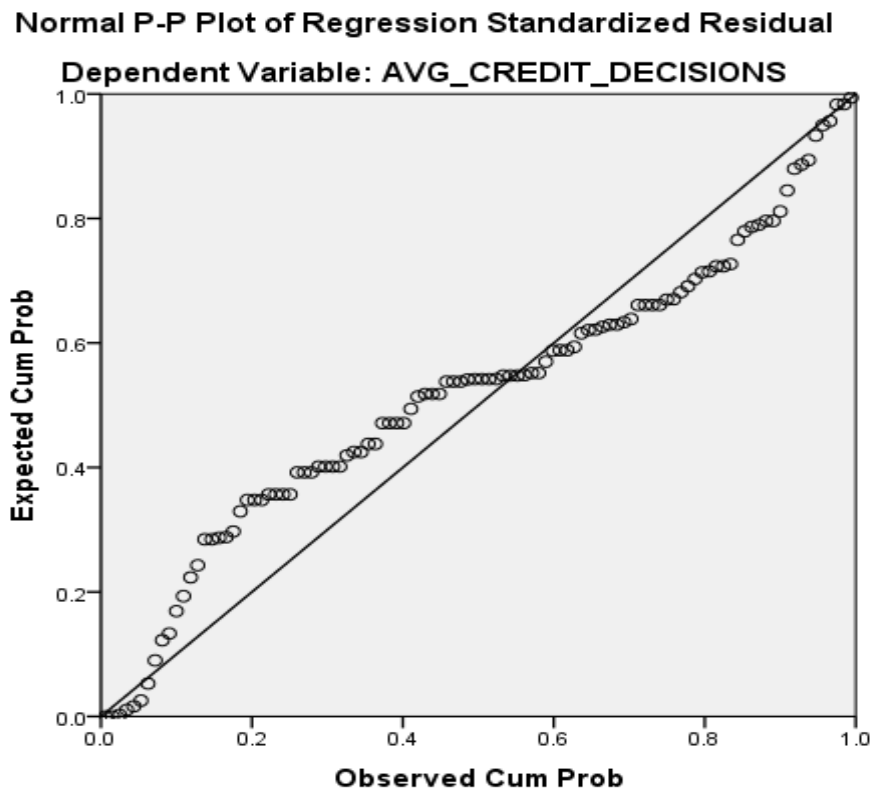
|              |                    | <b>Collinearity Statistics</b> |            |
|--------------|--------------------|--------------------------------|------------|
| <b>Model</b> |                    | <b>Tolerance</b>               | <b>VIF</b> |
| 1            | Credit history     | .295                           | 3.395      |
|              | Credit utilization | .322                           | 3.108      |
|              | Financial literacy | .370                           | 2.701      |

a. dependent variable: credit decisions

The results show that Credit history had VIF value of 3.395 while credit utilization had a VIF value of 3.108. Lastly, financial literacy had a VIF value of 2.701. According to Field (2009) VIF values in excess of 10 is an indication of the presence of multicollinearity where it inflates the standard errors and confidence intervals leading to unstable estimates of the coefficients for individual predictors. Since all VIF for the three independent variables were less than 10, there is no multicollinearity and thus regression analysis was conducted to determine the effect of the three independent variables on credit decisions.

#### **4.5.3 Linearity and Homoscedasticity Test**

The linearity test is an assumption tests in linear regression using the ordinary least square (OLS) method. The objective of the linearity test is to determine whether the distribution of the data of the dependent variable and the independent variable forms a linear line pattern or not? The linearity assumption must be fulfilled because the regression used is linear regression.



*Figure 4.5: Linearity Test*

Based on the scatter plot graph, we can see that the data distribution forms a linear trend line. The linear line is formed from the bottom left to the top right (positive linear line). The data distribution forms a positive linear trend. Based on the results of the linearity test using a scatter plot, it was concluded that the regression model has fulfilled the linearity assumption. Therefore, it was correct to use linear regression.

## **4.6 Model Fitting**

### **4.6.1 Correlation analysis**

The correlation coefficients range from -1 for a perfect negative relationship to +1 for perfect positive relationship through zero for no relationship. Table 4.7 presented a pair wise results of the variable correlated which were independent variables and dependent variable.

**Table 4.7:** Correlations matrix

|                           |                     | <b>Credit<br/>Decisions</b> | <b>Credit<br/>History</b> | <b>Credit<br/>Utilization</b> | <b>Financial<br/>Literacy</b> |
|---------------------------|---------------------|-----------------------------|---------------------------|-------------------------------|-------------------------------|
| <b>Credit Decisions</b>   | Pearson Correlation | 1                           | .772**                    | .779**                        | .804**                        |
|                           | Sig. (2-tailed)     |                             | .000                      | .000                          | .000                          |
|                           | N                   | 106                         | 106                       | 106                           | 106                           |
| <b>Credit History</b>     | Pearson Correlation | .772**                      | 1                         | .799**                        | .765**                        |
|                           | Sig. (2-tailed)     | .000                        |                           | .000                          | .000                          |
|                           | N                   | 106                         | 106                       | 106                           | 106                           |
| <b>Credit Utilization</b> | Pearson Correlation | .779**                      | .799**                    | 1                             | .739**                        |
|                           | Sig. (2-tailed)     | .000                        | .000                      |                               | .000                          |
|                           | N                   | 106                         | 106                       | 106                           | 106                           |
| <b>Financial Literacy</b> | Pearson Correlation | .804**                      | .765**                    | .739**                        | 1                             |
|                           | Sig. (2-tailed)     | .000                        | .000                      | .000                          |                               |
|                           | N                   | 106                         | 106                       | 106                           | 106                           |

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

The correlation results showed that there was a strong positive and significant Pearson correlation between credit history and credit decisions ( $r=0.772$  and  $p=0.000<0.05$ ). This shows that availability of credit history from potential borrowers would lead to increased chances of credit approval. Also,

it was established that credit utilization had a strong and significant Pearson correlation coefficient with Credit Decisions ( $r=0.779$ ,  $p=0.000<0.05$ ). This is an indication that better credit utilization is likely to lead to higher chances of credit approval. Lastly, it was shown that there exists a strong positive Pearson correlation coefficient between financial literacy and credit decisions ( $r=0.804$  and  $p=0.000<0.05$ ). This means that potential borrowers with high financial literacy have higher chances of credit approval.

#### 4.6.2 Model Summary

The model summary consists of R. value, R square value, Adjusted R Square Value, and a standard error of the estimate. The values obtained were recorded in table 4.8 as shown below.

**Table 4.8:** Model Summary

| Model | R                 | R Square | Adjusted R Square | Std. Error of the Estimate |
|-------|-------------------|----------|-------------------|----------------------------|
| 1     | .857 <sup>a</sup> | .735     | .727              | .34240                     |

**a. Predictors:** (Constant), Financial Literacy, Credit Utilization, Credit History

**b. Dependent Variable:** Credit Decisions

Regression model summary shows that the correlation coefficient of R was 0.857 and R square was 0.735. An R squared of 0.735 shows that the model contributes to 73.5% variations in credit decision in MFBs in Kenya. The remaining 26.5% can be explained by other variables not in the current model.

#### 4.6.3 Analysis of Variance

The analysis of variance was done to generate the f- statistic which is used to test significance of R. That is, analysis of variance was conducted to test goodness of fit in the model. The results are shown in table 4.9.

**Table 4.9:** Analysis of Variance

| <b>Model</b> |            | <b>Sum of Squares</b> | <b>df</b> | <b>Mean Square</b> | <b>F</b> | <b>Sig.</b>       |
|--------------|------------|-----------------------|-----------|--------------------|----------|-------------------|
| 1            | Regression | 33.100                | 3         | 11.033             | 94.110   | .000 <sup>b</sup> |
|              | Residual   | 11.958                | 102       | .117               |          |                   |
|              | Total      | 45.058                | 105       |                    |          |                   |

a. Dependent Variable: Credit Decision

b. Predictors: (Constant), Financial Literacy, Credit Utilization, Credit History

Table 4.9 showed the p value of F value (94.110) was  $0.000 < 5\%$  which implied that the model was statistically significant at 5%. These results show that financial literacy, credit utilization and credit history were significant in explaining the influence of non-accounting information on credit decisions in microfinance banks in Kenya. The model summary was fit to predict the variations of credit decision with the variations in financial literacy, credit utilization, credit history.

#### **4.6.4 Regression Coefficients**

The multivariate regression model is generally used to establish whether a relationship exists between variables. This mathematical equation is used to explain the relationship while other variables were adjusted with random variables to predict the variations in dependent variables. The results were then presented in table 4.10 below.

**Table 4.10: Regression Coefficients**

| Model              | Unstandardized |            | Standardized |  | t     | Sig. |
|--------------------|----------------|------------|--------------|--|-------|------|
|                    | Coefficients   |            | Coefficients |  |       |      |
|                    | B              | Std. Error | Beta         |  |       |      |
| 1 (Constant)       | .078           | .293       |              |  | -.267 | .790 |
| Credit history     | .241           | .108       | .210         |  | 2.229 | .028 |
| Credit utilization | .365           | .109       | .300         |  | 3.340 | .001 |
| Financial literacy | .415           | .083       | .422         |  | 5.029 | .000 |

a. Dependent Variable: Credit Decisions

The fitted model was  $Y = -0.078 + 0.241X_1 + 0.365X_2 + 0.415X_3$

The results show a constant term ( $\beta_0$ ) of -0.078 and insignificant p-value of 0.790. The indication of these results is that in absence of credit history, credit utilization and financial literacy the credit decisions will be 7.8%. Also, the results show that credit history had a beta coefficient ( $\beta_1$ ) of 0.241 which was statistically significant at 5% alpha level ( $p=0.028<0.05$ ). These results indicate that increasing the use of credit history by 1 unit, keeping all the other independent variables would lead to improved chances of credit approval by 24.1%. Further, it was shown that credit utilization had a significant beta coefficient ( $\beta_2$ ) of 0.365 ( $\beta_2=0.365, p=0.001<0.05$ ). These results imply that improved credit utilization would results to increased chances of credit approval by 36.5%. Lastly, financial literacy had a significant beta value of ( $\beta_3$ ) of 0.415,  $p=0.000<0.05$ ). This implies that increase in financial literacy by 1 unit would lead to increased chances of credit approval by 41.5%.

## **4.7 Discussion of the Findings**

The discussions based on the findings from each of the three objectives is done and comparison with other empirical research done in this area of credit management. The discussions are done for both descriptive and regression findings.

### **4.7.1 Credit History and Credit Decision**

The descriptive results show that most micro finance banks have an internal credit rating system. In addition to this internal credit rating system, these MFBs also have access to credit reference bureau reports which comprise credit information, public record data and identity information. According to Odhiambo and Ndede (2019), availability of the credit report significantly reduces the cost of access to the credit market for new lenders, increases competition and lowers credit prices.

The correlation analysis was performed to show the strength and direction of relationship between the variables. From the correlation results, it was shown that that there was a strong, positive and significant Pearson correlation between credit history and credit decisions. Earlier studies had similar findings. For instance, Kisengese (2014) found that the sharing of customer credit information has had an impact on NPLs as it has helped banks refuse permanent loans; which covers the entire credit history of other credit providers while Maroria, (2015) found that years after the introduction of CRB (2011-2014) there was an average reduction of 2% in the level of NPLs hence positive significant impact of CRB on NPLs during the study period. These findings are therefore in agreement with other empirical studies.

### **4.7.2 Credit Utilization and Credit Decision**

The descriptive findings show that loan diversion is a major cause of loan default. This agrees with findings for a similar study by Achoja (2020) who argued that loan deviations have been shown to be an important determinant of the non-repayment rate of a poultry business loan. In addition, it was

shown that clients with large families are more likely to divert their loans. With studies by Menza *et al.* (2017) showing that 35.1% of the loan diverted are transferred to non-productive investments with 13.7% been diverted to sectors that were more productive, the chances of loan default are likely to be high for the customers of most MFBs.

The findings also show that MFBs frequently monitor the credit utilization by the customers as poor credit rating and debt monitoring are a major factor in the occurrence of NPLs (Asfaw, Bogale & Teame, 2016). Both the regression and correlation analysis showed that credit utilization and credit decision have significant positive relationship. The borrowers who use their loan for intended purpose are more likely to repay their loan back than those who divert their loans to other uses. These findings are similar to earlier findings by other researchers. For instance, Ochung (2013) showed that there is a significant relationship between loan utilization and loan repayment among customers of commercial banks in Kenya.

#### **4.7.3 Financial Literacy and Credit Decision**

The descriptive findings show that MFBs demand the potential borrowers provide break down of how they intend to use the credit facility. Further, the results show that clients with budgeting literacy are likely to repay their loans promptly. The respondents said that education background is very key when making credit decision. Specifically, those with accounting background are likely to repay their loans promptly. These results agree with earlier results by Angaine and Waari (2014) who examined the factors that had an impact on loan repayment in small financial institutions and found that the level of education was a factor in the number of people contributing to the loan repayment.

The correlation results showed that there was a strong positive and significant Pearson correlation between Financial Literacy and credit decisions. Baidoo, Yusif, and Ayesu (2020) had earlier established that quality of education also plays a key role in repaying loans meaning that those

borrowers with higher academic qualification are more likely to repay their loan than their counterparts who have low academic qualification. Also, the results support the argument by Mutegi, *et al.* (2015) that the SMEs with accounting, debt management skills and budgeting significantly determine the ability of SMEs to repay loans.

## **CHAPTER FIVE**

### **SUMMARY, CONCLUSIONS AND RECOMMENDATIONS**

#### **5.1 Introduction**

This chapter covers summary, conclusions and recommendations based on the objectives. The recommendations were done to policy makers, practitioners and also to the scholars. The summary shows how the dependent variable and independent variables relate.

#### **5.2 Summary of Findings**

This sub section gives the summary of the findings based on the objectives. The summary shows how the dependent variable was affected by change in each of the independent variable. The dependent variable was credit decision while the independent variables were: financial literacy, credit utilization and credit history. Generally, the model showed that the three independent variables have significant impact on credit decisions by MFBs in Kenya.

##### **5.2.1 Credit History and Credit Decision**

The descriptive results show that most micro finance banks have an internal credit rating system. Also, the results showed that MFBs have access to credit reference bureau reports which compiles credit information, public record data and identity information. The findings further showed that MFBs request for credit information of prospective borrowers from other lenders who already dealt with the applicant. The respondents also indicated that if an MFB does not have enough knowledge of a borrower's likelihood to repay, the credit worthiness must be inferred based upon available information. It was further found that MFBs do not solely rely on information provided by applicant but must verify this information. Lastly, the correlation analysis shows that credit history and credit

decision were significantly and positively correlated. These findings were confirmed by the regression analysis which had a positive and significant beta coefficient.

### **5.2.2 Credit Utilization and Credit Decision**

From the descriptive statistics, it was shown that loan diversion is a major cause of loan default. In addition, it was shown that clients with large families are more likely to divert their loans. Furthermore, the MFBs are sometimes forced to monitor the investment made using loans to reduce diversion. The results further showed that loans meant for investments have low risk of defaults. In addition, it was shown that the clients with history of diverting the loan to non-productive investment are not approved for the loan. The respondents agreed that the approval of credit meant for local consumption must be backed by collateral. The results on descriptive statistics were supported by the findings on inferential statistics. The correlation analysis established a strong positive and significant correlation coefficient between credit utilization and credit decision. Further, the regression analysis showed that credit utilization had a significant positive beta coefficient.

### **5.2.3 Financial Literacy and Credit Decision**

From the descriptive statistics, it was shown that MFBs demand that potential borrowers provide a breakdown of how they intend to use credit facility. Further, the results show that clients with budgeting literacy are likely to repay their loans promptly. These results further show that clients with accounting background are likely to repay their loans promptly. In addition, the respondents said that the clients with education background very key when making credit decision. The results also show that clients with existing businesses must always provide financial records before approving loans. Concerning new clients, the results show new clients starting investments are required to provide business plans. Lastly, the correlation results showed that financial literacy and credit decision had a strong positive and significant Pearson correlation coefficient. The regression analysis established a significant and positive beta coefficient for the financial literacy.

### **5.3 Conclusions**

The study made the conclusion that financial literacy, credit utilization and credit history were very instrumental in credit decision making among the MFBs in Kenya. The model shows that the three independent variables contribute to 73.5% variations in credit decision in MFBs in Kenya, with the remaining 26.5% been explained by other variables not in the current model. This study concludes that in the absence of any of these variables, credit decision making is likely to be difficult and most probably lead to risky decisions.

#### **5.3.1 Credit History and Credit Decision**

The inferential results have shown that credit history had a significant positive relationship with credit decision making, results which were confirmed by the regression analysis. This study concludes that sound credit history for the potential borrower is likely to lead to higher chances of credit approval by the MFBs in Kenya. The findings support the equilibrium theory of credit rating that is founded on the tenets of the theory of lending, in which case lenders have to provide loans to borrowers who have demonstrated the ability to repay, thus, bringing into equilibrium the demand for loans and the willingness to extend such loans to borrowers (supply) as opined by Langohr and Patricia (2010).

#### **5.3.2 Credit Utilization and Credit Decision**

Through inferential statistics, the findings suggested that credit utilization has positive correlation with credit decision. Furthermore, credit utilization had a significant beta coefficient as shown by the regression results. This study concludes that customers whose previous credit utilization was in line with intended purpose are likely to have their credit requests approved. The findings support the agency theory because just like the agency theory determines who in the economy, receives or accesses credit and the different uses such financing is directed into (Frank and Goyal, 2011), the management of the MFBs monitor the credit utilization by the borrower to know the borrowers likely to divert their loan which increases the risk of default.

### **5.3.3 Financial Literacy and Credit Decision**

Financial literacy and credit decision had a strong and significant positive correlation coefficient. The findings further showed that financial literacy had a significant and positive beta coefficient. Thus, the current study concludes that potential borrowers with high financial literacy are likely to have better chance of credit approval. Just like Norvilite *et al.* (2006) argued that financial information is one of the strongest and most volatile predictors of debt, the findings of this study agree that the financial literacy is key determinant of the credit decisions.

### **5.4 Recommendations**

This study concluded that credit history has a positive impact on credit decision. It is therefore recommended that MFBs keep information about both current and potential borrowers which may be useful concerning credit decisions about the customers. Also, credit utilization was found to be significantly related to credit decision, thus MFBs should monitor whether the credit facility to the customers is used for the intended purpose and use this information for future decisions on credit worthiness of the potential borrower. Lastly, it was concluded that potential borrowers with high financial literacy are likely to have high credit approval. It is therefore recommended that various institutions, both government and non-governmental organizations educate people on basic financial literacy to enable them access credit facilities from MFBs. In addition, the ministry of education should upgrade the school curriculum to accommodate basic financial literacy lessons to enable the learners gain significant financial literacy.

### **5.5 Suggestion for Further Studies**

The current model could only account for 73.5% variations in credit decision making, meaning that remaining percentage is as a result of other factors not in this study.

The current study recommends that similar research be done using other variables to establish which other factors have an impact on credit decisions among MFBs in Kenya. This study focused on MFBs, a similar study can be done on commercial banks to establish if these factors will have the same impact on credit decision ins these banks.

## REFERENCES

- Achoja F.O. (2020). Loan diversion and effect on the growth of small-scale poultry farms in Nigeria. *Scientific Papers. Series "Management, Economic Engineering in Agriculture and rural development"*, Vol. 20 ISSUE 3, PRINT ISSN 2284-7995, 25-32.
- Anderson, N. J. (2015) P. (2014). *Customer Relation Management (CRM), (7th Ed.)*. Sultan Chads & Sons publishers, New York, USA.
- Andreades, A. (2013). *History of the Bank of England*. Rutledge.
- Angaine F. and Waari D. N. (2014). Factors Influencing Loan Repayment in Micro-Finance Institutions in Kenya. *Journal of Business and Management, Volume 16, Issue 9.Ver. III (Sep. 2014), PP 66-72*
- Antonakis, J., Bendahans S., Jacquart, P. & Lalive, R. (2014). *Causality and endogeneity: Problems and solutions*. New York: Oxford University Press.
- Aruwa, S. & Musa, A. (2014). Risk components and the financial performance of deposit money banks in Nigeria. *Int J Soc Sci Entrepreneurship, 1(11):514–522*.
- Asfaw A. S., Bogale H. N. and, Teame T. T. (2016). Factors affecting Non-performing loans of Development Bank of Ethiopia, Central Region. *International Journal of Scientific and Research Publications, Volume 6, Issue 5, May 2016*
- Baidoo, S., Yusif, H & Ayesu, E (2020). Improving Loan Repayment in Ghana: Does Financial Literacy Matter? Afribary. Retrieved from <https://afribary.com/works/loan-repayment-and-financial-literacy-cogent-econ-and-finance-2022>
- Beach, D. & Rasmus, B. (2016). *Causal Case Study Methods: Foundations and Guidelines for Comparing, Matching, and Tracing*. Ann Arbor, MI: University of Michigan Press.

- Bluhm, C., Ludger, O. & Wagner, C. (2018). *An Introduction to Credit Risk Modeling*. Chapman & Hall/CRC.
- Boushnak, E., Rageb, A., Ragab, A. and Sakr, M. (2018) Factors Influencing Credit Decision for Lending SMEs: A Case Study on National Bank of Egypt. *Open Access Library Journal*, 5, e4996.
- Brigo, D. & Massimo, M. (2019). *Risk Neutral Pricing of Counterparty Risk*. Risk Books.
- Brown, M. (2014). *Credit risk management*. Edinburgh, Edinburgh Business School, Heriot-Watt University.
- Cansino, S. & Giovanni, C. (2020). Credit Decision Making and Information Requirements. *Research Result Practice*, [http://dx.doi.org/10.15665/dem.v18i\(1\).2140](http://dx.doi.org/10.15665/dem.v18i(1).2140).
- Central Bank of Kenya (2020). List of Licensed Microfinance Bank Institutions in Kenya. Accessed online on 21<sup>st</sup> January 2021 from: <https://www.centralbank.go.ke/wp-content/uploads/2016/06/Directory-of-Licenced-Microfinance-Banks.pdf>.
- Central Bank of Kenya (2021). Bank Supervision & Banking Sector Reports. Retrieved from <https://www.centralbank.go.ke/reports/bank-supervision-and-banking-sector-reports/>
- Chao, X., Kou, G., Peng, Y. & Alsaadi, F. (2019). Behavior monitoring methods for trade-based money laundering integrating macro and micro prudential regulation: a case from China. *Technology Economic Development Journal*, 25(6): 1081-1096.
- Coghlan, D. & Mary, B. (2014). *The Sage Encyclopedia of Action Research*. Thousand Oaks, CA: Sage.

- Cornett, M. & Saunders, A. (2006). *Financial Institutions Management: A Risk Management Approach, 5th Edition*. McGraw-Hill.
- Creswell, J. W. and Creswell, D. J. (2018). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*, 5th edition. Thousand Oaks, CA: Sage.
- Darrell, D. & Kenneth, J. (2015). *Credit Risk: Pricing, Measurement, and Management*. Princeton University Press.
- Finlay, S. (2009). *Consumer Credit Fundamentals (2nd ed.)*. Palgrave Macmillan.
- Gachora, S. (2015). The Effect of Credit Information Sharing On Loan Performance in Commercial Banks in Nairobi County. *International Journal of Arts and Entrepreneurship* 4 (3), 116-134.
- Garrett, J. (2012). *Why Is It Important To Know My Credit Score?* Know My Credit Score.
- Girma G. (2021). Financial literacy and its effect on loan repayment performance the case of Weltane Ambo Saccos Union of West Shoa Zone Oromia Regional State Ethiopia.
- Gorard, S. (2013). *Research Design: Creating Robust Approaches for the Social Sciences*. Thousand Oaks, CA: Sage.
- Horsley, S. & Arnold, C. (2016). *New Rules to Ban Payday Lending Debt Traps*. National Public Radio.
- Hudson, M. (2012). *Entrepreneurs: From the Near Eastern Takeoff to the Roman Collapse within the Invention of Enterprise: Entrepreneurship from Ancient Mesopotamia to Modern Times*. Princeton University Press,
- Huynh, F. (2014). *US Credit Quality Continues to Inch Forward*. FICO /blog.

- Jaffe, S. & Jessica, L. (2014). *Capital of Capital: Money, Banking, and Power in New York City*. Columbia University Press.
- Kioko, C., Kingori, S. & Shikumo. D. (2017). Determinants of financial performance of micro-finance banks in Kenya. *Research Journal of Finance and Accounting*, 8(16).
- Kioko, M. (2014). Influence of credit Information Sharing on Performance of Deposit Taking SACCOs in Kenya. *The strategic Journal of Business and Change Management*, 3, 10-21
- Kipyegon, L. R. (2011). Relationship between Credit Information Sharing and Performance of Banks in Kenya. *Unpublished MBA project*: University of Nairobi.
- Kisengese W. K. (2014). The Impact of Credit Information Sharing On the Level of Non - Performing Loans of Commercial Banks in Kenya. *Unpublished MBA Project*, United States International University Africa.
- Kou, C., Peng, Y., Alsaadi, F. & Herrera-Viedma, E. (2019). Machine learning methods for systemic risk analysis in financial sectors. *Technol Econ Dev Econ*:1–27.
- Kou, D., Lin, C. & Chen, Y. (2016). Pairwise comparison matrix in multiple criteria decision making. *Technol Econ Dev Econ*, 22(5):738–765.
- Lauer, J. (2017). *Creditworthy: A History of Consumer Surveillance and Financial Identity in America*. New York: Columbia University Press.
- Leedy, P. D. & Jeanne, E. O. (2013). *Practical Research: Planning and Design*, Tenth edition. Boston, MA: Pearson.
- Li, G., Kou, G. & Peng, Y. (2016). A group decision making model for integrating heterogeneous information. *IEEE Trans on Syst, Man, and Cybern: Syst.*, 48(6):982–992.

- Logemann, J. (2012). *The Development of Consumer Credit in Global Perspective: Business, Regulation, and Culture*. New York: Palgrave Macmillan.
- Mario L. (2013). *The Ancient near East: History, Society and Economy*. Rutledge.
- Mburu, I. M., Mwangi, L. W., & Muathe, S. M. (2020). Credit Management Practices and Loan Performance: Empirical Evidence from Commercial Banks in Kenya. *International Journal of Current Aspects in Finance, Banking and Accounting*, 2(1), 51-63.
- McKenzie, L. W. (2008). "General Equilibrium". *The New Palgrave Dictionary of Economics*. pp. 1–27. doi:10.1057/978-1-349-95121-5\_933-2. ISBN 978-1-349-95121-5.
- McNiff, J. (2014). *Writing and Doing Action Research*. London: Sage.
- Menza m. and Shibru S. (2017). Empirical Analysis of Factors Affecting Loan Diversion of Microfinance Group Borrowers: The Case of Omo Microfinance Kucha Sub-branch, Southern Ethiopia, *Journal of Economics and Sustainable Development*, Vol.8, No.11, 2017
- Morgan, S. (2020). *How Can Banks Bring Business Credit and Lending Services into the 21st Century?* Accessed online on 14<sup>th</sup> January 2020 from: <https://www.finextra.com/blogposting/18292/how-can-banks-bring-business-credit-and-lending-services-into-the-21st-century>.
- Mugwe M. W. & Oliweny T. (2013). The Effect of Credit Information Sharing on The Performance of Commercial Banks in Kenya, *International Journal of Business and Commerce* Vol. 5, No.03: [41-63].
- Munene, J.R. (2012). The Perceived Impact of Credit Reference Bureaus in Accessing Finance By Small And Medium Enterprises (Smes) In Kenya.
- Murphy, S. (2017). *Other People's Money: How Banking worked in the Early American*. Republic.

- Musah M., Enu-Kwesi F. And Koomson F. (2014). Effects of Borrower Characteristics On Loan Repayment in The Credit with Education Programme in The Tamale Metropolis of Ghana. *Journal of International Academic Research for Multidisciplinary*, Volume 2, Issue 9, October 2014.
- Mutegi, H.K., Njeru, P.W., & Ongesa, N.T. (2015). Financial literacy and its impact on loan repayment by small and medium entrepreneurs.
- Odhiambo, F., & Ndede, F. (2019). Credit Information Sharing Practices and Financial Performance of Commercial Banks in Kenya. *International Journal of Current Aspects*, 3(VI), 67-82. <https://doi.org/10.35942/ijcab.v3iVI.79>.
- Osano, H. and Languitane, H. (2016) Factors Influencing Access to Finance by SMEs in Mozambique: Case of SMEs in Maputo Central Business District. *Journal of Innovation and Entrepreneurship*, 5, Article No. 13. <https://doi.org/10.1186/s13731-016-0041-0>
- Rehman, Z., Noor, M., Bilal, S. & Asif, M. (2019). Impact of risk management strategies on the credit risk faced by commercial banks. *Financial Innovation Journal*, 5(44); 1-17.
- Ross, K. (2018). *Here's What Your Credit Score Is According to an Experian Executive*. The Street.
- Saunders, M., Lewis, P. & Thornhill, A. (2014). *Research Methods for Business Students, 6th edition*. Pearson Education Limited.
- Segal, T. (2019). *Understanding the Five Cs of Credit*. Retrieved online on 14<sup>th</sup> January 2021 from: <https://www.investopedia.com/ask/answers/040115/what-most-important-c-five-cs-credit.asp>.
- Select Statistical Services (2021). Population Proportion: Sample Size. Accessed online on 20<sup>th</sup> May 2021 from: <https://select-statistics.co.uk/calculators/sample-size-calculator-population-proportion/>.

- Servigny, A. & Olivier, R. (2015). *The Standard & Poor's Guide to Measuring and Managing Credit Risk*. McGraw-Hill.
- Suroso, S., Utama, A., Rahima, P. & Sari, A. (2018). Influence of Accounting and Non-accounting Information on Credit Decision. *International Journal of Civil Engineering and Technology*, 9(12):526-535.
- Vogt, W. P., Dianna, C. G., & Lynne, M. H. (2012). *When to Use What Research Design*. New York: Guilford.
- Wafula, D.Mbithi, S. & Mutua, N. (2016). Influence of Financial Performance on Financial Sustainability of Microfinance Institutions in Kenya. *Research Gate Publications*, 1(1).
- Walras, L. (1874). *Elements of Pure Economics*. Irwin. ISBN 978-0-678-06028-5. Scroll to chapter-preview links.
- Wanjiku J. K and Muturi W. (2017). Effect of Financial Literacy On Loan Repayment; A Case of Ecumenical Churches Loan Fund, Kenya, *International Journal of Social Sciences and Information Technology*, Vol III Issue II, May 2017
- Wanjiru. W. (2016). *Microfinance Institutions in Kenya*. Strathmore University; 1-39.
- Zhang, H., Kou, G. & Peng, Y. (2019). Soft consensus cost models for group decision making and economic interpretations. *Eur J Oper Res*, 277(3):964–980.

## APPENDICES

### Appendix I: Introduction Letter

**Susan Mumbi Mungai**

P.O Box 28670 – 00200,

Nairobi

To the respondent

#### **RE: QUESTIONNAIRE**

The above named is a final year student at KCA University. In order to fulfil the requirements of the school, I am undertaking research on **INFLUENCE OF NON-ACCOUNTING INFORMATION ON CREDIT DECISIONS IN MICROFINANCE BANKS IN KENYA**. You are among the chosen respondents of my study. I hereby ask you to kindly respond to the questionnaire to the best of your knowledge. Confidentiality of the information given will be guaranteed.

Your cooperation will be highly appreciated.

Yours Sincerely,

**Susan Mumbi Mungai**

## Appendix II: Questionnaire

Please tick in the appropriate box as well as fill in the blank spaces provided for those questions. Use the space at the back of this questionnaire if you need more space for your responses.

### SECTION A: BIO DATA

Kindly answer all the questions either by ticking in the boxes or writing in the spaces provided

1. Gender

Male ( )

Female ( )

2. How long have you been in current designation?

Less than 5 years ( )

Between 5 and 10 years ( )

Between 10 and 20 years ( )

Above 20 years ( )

### SECTION B: CREDIT HISTORY

1. Evaluate the following statements and tick under the choices below, where appropriate in relation to credit history.

**Where: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 - Agree or 5 - Strongly Agree**

| Statements   | 1 | 2 | 3 | 4 | 5 |
|--|---|---|---|---|---|
| The micro finance has an internal credit rating system.  |   |   |   |   |   |
| Credit reference bureau compiles credit information, public record data, and identity information, |   |   |   |   |   |

|  |  |  |  |  |  |
|--|--|--|--|--|--|
| We've an access to credit report for individual customers from credit reference bureau                                 |  |  |  |  |  |
| We also request for credit of prospective borrower from other lenders who already dealt with the applicant             |  |  |  |  |  |
| Our knowledge of a borrower's likelihood to repay is not precise and must be inferred based upon available information |  |  |  |  |  |
| The bank does not solely rely on information provided by the applicant but must verify this information                |  |  |  |  |  |

### SECTION C: CREDIT UTILIZATION

5. Evaluate the following statements and tick where appropriate under the choices below

**Where: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 - Agree or 5 - Strongly Agree**

| Statements  | 1 | 2 | 3 | 4 | 5 |
|---|---|---|---|---|---|
| Loan diversion is a major cause of loan default   |   |   |   |   |   |
| Clients with large families are more likely to divert their loans   |   |   |   |   |   |
| Sometimes we are forced to monitor the investments made using the loans to reduce chances of loan diversion to non-productive investments |   |   |   |   |   |
| Loans meant for investments have low risk of defaults   |   |   |   |   |   |
| Clients with history of diverting the loan to non-productive investments are not approved for the loans.                                  |   |   |   |   |   |
| Approval of credit meant for local consumption must be backed by collateral   |   |   |   |   |   |

### SECTION D: FINANCIAL LITERACY

6. Evaluate the following statements and tick where appropriate under the choices below in relation to financial literacy.

**Where: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 - Agree or 5 - Strongly Agree**

| <b>Statements</b>  | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|--|----------|----------|----------|----------|----------|
| New clients aiming at starting an investment are always required to provide business plan for their prospective business when applying for credit facility |          |          |          |          |          |
| Clients with existing businesses must always provide their financial records before approving their loans  |          |          |          |          |          |
| The clients are supposed to provide a breakdown of how they intend to use the credit facility before advancing the facility to them                        |          |          |          |          |          |
| Clients with budgeting literacy are likely to repay their loans promptly   |          |          |          |          |          |
| Clients with accounting background are likely to repay their loans promptly  |          |          |          |          |          |
| Educational background of the prospective client is very key when making credit decision concerning the client   |          |          |          |          |          |

**SECTION E: CREDIT DECISIONS**

7. Evaluate the following statements and tick where appropriate under the choices below in relation to credit decisions.

**Where: 1 – Strongly Disagree, 2 – Disagree, 3 – Neutral, 4 - Agree or 5 - Strongly Agree**

| <b>Statements</b> | <b>1</b> | <b>2</b> | <b>3</b> | <b>4</b> | <b>5</b> |
|-------------------|----------|----------|----------|----------|----------|
|                   |          |          |          |          |          |

|   |  |  |  |  |  |
|---|--|--|--|--|--|
| The organization depends on the alternative available information for credit decisions                          |  |  |  |  |  |
| Clients with good repayment history mostly have their credit application approved on time                       |  |  |  |  |  |
| Clients with poor credit history are mostly denied credit facility by MFBs                                      |  |  |  |  |  |
| Prospective clients with some history of default are mostly advised to apply later                              |  |  |  |  |  |
| Time taken for the approval of credit facility depends on the available information concerning the applicant    |  |  |  |  |  |
| Sometimes clients with poor credit history are required to be guaranteed by a person with better credit history |  |  |  |  |  |

### Appendix III: Budget

| <b>Research item</b>             | <b>Cost (Kshs)</b> |
|----------------------------------|--------------------|
| Cyber services                   | 15000              |
| Travelling expenses              | 5000               |
| Internet/Wi-Fi expenses          | 5000               |
| Telephone expenses               | 5000               |
| Data Analysis and report writing | 25000              |
| <b>Total</b>                     | <b>55000</b>       |

**Appendix IV: Work Plan**

| <b>TASK DESCRIPTION</b>     | <b>SEP.-2022</b> | <b>OCT. -2022</b> | <b>NOV.-2022</b> | <b>DEC. -2022</b> |
|-----------------------------|------------------|-------------------|------------------|-------------------|
| Proposal writing            |                  |                   |                  |                   |
| Questionnaire design        |                  |                   |                  |                   |
| Proposal defence            |                  |                   |                  |                   |
| Data collection             |                  |                   |                  |                   |
| Data analysis               |                  |                   |                  |                   |
| Findings and report writing |                  |                   |                  |                   |
| Submission of report        |                  |                   |                  |                   |

**Appendix V: List of Licensed Microfinance Banks in Kenya**

|   | <b>Microfinance</b>                   | <b>Date Licensed</b> |
|---|---------------------------------------|----------------------|
| 1 | Caritas Microfinance Bank Limited     | 02.06.2015           |
| 2 | Century Microfinance Bank Limited     | 17.09.2012           |
| 3 | Choice Microfinance Bank Limited      | 13.05.2015           |
| 4 | Daraja Microfinance Bank Limited      | 12.01.2015           |
| 5 | Faulu Microfinance Bank Limited       | 21.05.2009           |
| 6 | Kenya Women Microfinance Bank Limited | 31.03.2010           |
|   |                                       |                      |

|    |                                  |            |
|----|----------------------------------|------------|
| 7  | Rafiki Microfinance Bank Limited | 14.06.2011 |
| 8  | Key Microfinance Bank Limited    | 31.12.2010 |
| 9  | SMEP Microfinance Bank Limited   | 14.12.2010 |
| 10 | Sumac Microfinance Bank Limited  | 29.10.2012 |
| 11 | U & I Microfinance Bank Limited  | 08.04.2013 |
| 12 | Uwezo Microfinance Bank Limited  | 08.11.2010 |
| 13 | Maisha Microfinance Bank Ltd     | 21.05.2016 |
| 14 | Muungano Microfinance Bank PLC   | 30.10.2019 |