

# Influence of Non-Accounting Information on Credit Decisions of Microfinance Banks in Kenya

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## ABSTRACT

Supporting the operation and administration of microfinance banks over a lengthy of time is becoming a rather difficult and challenging concern for microfinance banks in developing countries. Among other issues, their customers' non-performing loans greatly affect the microfinance banks profitability, leading to failure to sustain themselves over a reasonable length of time. This calls for proper credit management by the microfinance banks, 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. This study assessed the influence of non-accounting information that is utilized by microfinance banks in making lending decisions. 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. In this study the main data collection instrument used was questionnaires which were carefully designed, tested and evaluated to assure validity of the research instrument. 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. 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.

**Key words:** Non-Performing Loans, Credit History, Credit Utilization, Financial Literacy, Credit Decisions

## 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 & 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 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 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 & Posadas, 2020). According to Erkens, Paugam & Stolowy (2015), non-accounting information includes any type of data reported by the company, other than their finances. In addition, non-accounting information is a system of information that does not necessarily derive from the accounting system and is not related to financial and economic data (Huynh, 2014). 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). In this study, the definition by Tarquinio & Posadas, (2020) was adopted. This is because it both defines what non-accounting information is, and links it to its usefulness in decision making which is the focus of this study.

Credit Decision is the totality of decisions made by the management of an institution in relation to its Credit Risk Management. The concept of credit decisions is founded on the principles of financial risk management, in which case financial institutions strive to ensure that credit worthy borrowers are given loans (Rehman, Noor, Bilal & Asif, 2019). Banks all throughout the world have integrated credit risk management strategies into their credit decision-making processes. According to the findings of an investigation conducted by Macaulay (2008) on the adoption of credit risk management Khan practices in the United States, more than ninety percent of the financial institutions operating in that nation have utilized the Khan procedures. poor credit risk policies continue to be the primary cause of significant issues within the banking sector.

As a result, effective credit risk management has come to receive a greater amount of attention in recent years. This is mostly due to the fact that poor credit risk policies are the primary cause of increased focus. In addition, in order for banks to effectively manage credit risk, both globally across their portfolios and locally inside individual credit transactions, they need to be able to make educated credit decisions. An empirical study regarding the implementation of credit decision policies by commercial banks was commissioned by the Bank of Jamaica and carried out by that institution. The institution's credit culture as well as its ethical standards are reflected in its credit policies, which create the foundation for lending. In order for policies to be effective, they need to be communicated in a timely manner, implemented at all levels of the organization using suitable procedures, and amended on a regular basis in response to shifting conditions. The estimation of aggregate exposures to counterparties for the purposes of control and reporting, concentration restrictions, and risks/reward returns can be made possible through the measurement of the risks that are associated with each credit transaction.

In Kenya, a research conducted in Kenya by Korir (2012) showed that poor credit decision was only second to bad management as a factor in the failure of financial institutions. Idarus (2012) revealed that perception played the most significant role in determining which aspect of risk management was the most important in Kenya. According to Korir (2012), in Kenya there was a total of 14 bank failures in the year 1993 alone. The Central Bank of Kenya produced risk management recommendations in acknowledgment of the substantial risks that are associated with the banking industry. The goal of these guidelines was to provide direction to all financial institutions regarding the minimal requirements for a risk management framework and strategy. It has broken the dangers that financial organizations face down into nine categories, which are as follows: strategic risk; credit risk; liquidity risk; interest rate risk; price risk; foreign exchange rate risk; operational risk; reputation risk; and regulatory risk. According to Knight (2013), banks are able to make projections on the typical level of credit losses they might fairly expect to encounter.

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). 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 or 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). 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).

In practice, microfinance banks 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 while 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.

In addition, Siahaan and Rusiadi (2018) showed 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.

## **Objective of the Study**

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

## **Specific Objectives**

1. To determine the effect of credit history on credit decision making among microfinance banks in Kenya.
2. To determine the effect of credit utilization on credit decision making among microfinance banks in Kenya.
3. To examine the influence of financial literacy on credit decision making in microfinance banks in Kenya.

## **THEORETICAL REVIEW**

The theories which underpinned this study include equilibrium theory of credit rating, agency theory, theory of planned behavior and decision-making theory. 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.

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 as 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.

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 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. This is one of the theory's assumptions. Another assumption of the theory is that individuals act rationally, based on the mentioned components.

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 predictors 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.

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.

## **Empirical Review**

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

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.

Osano and Languitane (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.

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

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. 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. The target population included 78 respondents. The research design used was descriptive statistics. Methods of collecting data were questionnaires and interview schedules. This study concludes that there is a significant relationship between loan utilization and the loan repayment among customers of commercial banks in Kenya. The study also concludes that there is a significant relationship between individual borrowers' factors and the loan repayment among customers of commercial banks in Kenya. The study further concludes that there is a significant relationship between loan factors and the loan repayment among customers of commercial banks in Kenya. The study recommends that commercial banks need to have mandatory supervision borrowers on loan utilization and repayment.

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

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.

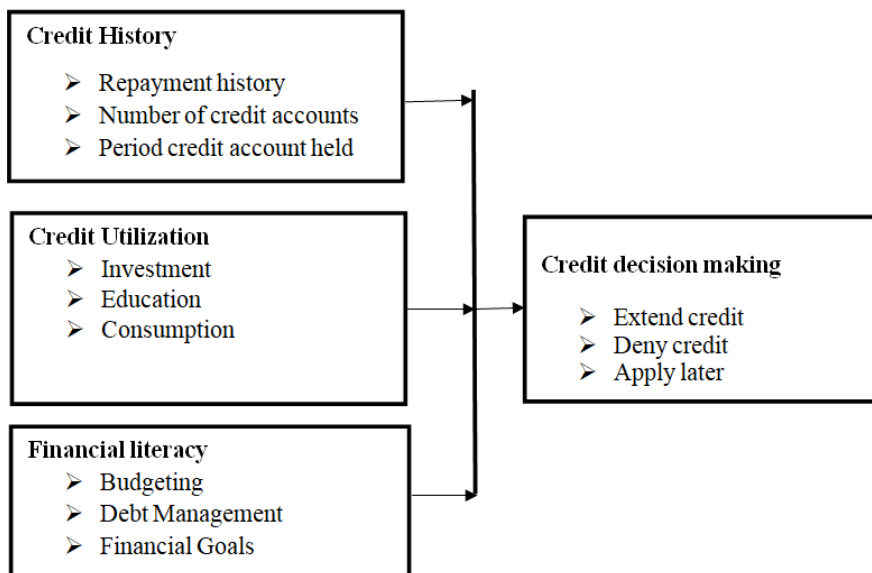
Mutegi, Njeru and Ongesa (2015) have studied finance and its impact on repaying loans to small and medium enterprises. The specific objectives of the study were to determine the extent to which accounting, debt management skills and budgeting had a significant effect on the repayment of loans. The study 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.

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.

Angaine and Waari (2014) examined the factors that had an impact on loan repayment in small financial institutions. 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. (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.

### Conceptual Framework



### RESEARCH METHODOLOGY

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. The study was done on the 14 MFBs regulated by the Central Bank of Kenya (CBK, 2021). In this study, the sampling frame was 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) as obtained from the HR department for each of the MFBs.

The sample size was determined through a formula, in this case, Yamane formula:

$$n = N / (1 + Ne^2)$$

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

$$n = 169 / (1 + 169 (0.05)^2)$$

$$n = 119$$

Stratified random sampling was used to select 119 respondents from a target population of 169. 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. The study focused on structured questionnaires for easier analysis.

Primary data was collected 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 introduce the researcher and explain the purpose of the study. 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, valid and consistent. The study used both descriptive and non-descriptive statistics. Descriptive statistics were analyzed in terms of frequency, percentage, average and standard deviation while non-descriptive statistics will be analyzed inferentially. 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:

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

Where:

**Y** = Credit Decision Making

**X<sub>1</sub>** = Credit history

**X<sub>2</sub>** = Credit utilization

**X<sub>3</sub>** = Financial literacy

**β<sub>0</sub>** = Constant term

**β<sub>1</sub>** = regression coefficients for X<sub>1</sub>

**β<sub>2</sub>** = regression coefficients for X<sub>2</sub>

**β<sub>3</sub>** = regression coefficients for X<sub>3</sub>

$\beta$  = the error term

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

## DATA ANALYSIS, FINDINGS AND DISCUSSION

### Descriptive analysis

#### Credit History

Statement	N	Min.	Max.	Mean	Std. D.
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). 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). 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). 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).

#### Credit Utilization

Statement	N	Min.	Max.	Mean	Std. D.
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
<b>Valid N (listwise)</b>	<b>106</b>				

The descriptive findings show that loan diversion is a major cause of loan default (mean=4.2925, standard deviation=0.89408). In addition, it was shown that clients with large families are more likely to divert their loans (mean=4.6698, standard deviation=0.78947). 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).

### Financial Literacy

Statement	N	Min.	Max.	Mean	Std. D.
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). 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).

**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	4.434	1.1128
Time taken for approval of credit facility depends on available information	106	1.00	5.00	4.641	0.80698
Prospective clients with some history of default are mostly advised to apply later	106	1.00	5.00	4.556	0.84041
Clients with poor credit history are mostly denied facility by MFBs	106	1.00	5.00	4.717	0.75283
Clients with good repayment history have their credit approved on time	106	1.00	5.00	4.566	0.88392
The organisation depends on alternative available information for credit decisions	106	1.00	6.00	4.434	0.92601
<b>Valid N (listwise)</b>	<b>106</b>				

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). 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).

**Correlation Analysis**

		Credit Decisions	Credit History	Credit Utilization	Financial Literacy
<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

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.

### Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		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

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. The analysis of variance 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.

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

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%.

### DISCUSSION OF THE FINDINGS AND CONCLUSION

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.

From the correlation results, it was shown that that there was a strong, positive and significant Pearson correlation between credit history and credit decisions. 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).

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 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. 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.

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.

In addition, the correlation results showed that there was a strong positive and significant Pearson correlation between Financial Literacy and credit decisions. Thus, the current study concludes that potential borrowers with high financial literacy are likely to have better chance of credit approval. Just like Norvilitte *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.

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