

## Effect of Credit Analysis on Financial Performance of Microfinance Institutions in Eldoret Town, Kenya

### Author's Details:

<sup>(1)</sup> **Kelvin Chenya**-MSc. Finance Student, Department of Economics, Accounts, and Finance in the School of Business. Jomo Kenyatta University of Agriculture & Technology <sup>(2)</sup>**Dr. Jared Bitange Bogonko, Ph.D**-Senior Lecturer, Department of Economics, Accounts, and Finance in the School of Business Jomo Kenyatta University of Agriculture & Technology

### Abstract

*Microfinance institutions industry plays a vital role in the economy by giving loans to poor people with the aim of reducing poverty level hence economic growth. A major threat facing microfinance institutions is the increase of Non-Performing Loans (NPL) that leads to the collapse of microfinance institutions. The purpose of this research is to determine the effect of credit analysis on the financial performance of microfinance institutions in Eldoret town, Kenya. The study was founded on the 5C's model of client appraisal. The target population of the study was 25 licensed microfinance institutions in Eldoret town according to AMFI (Association of Microfinance Institutions). A sample of 240 respondents was selected based on proportionate sample size categorized into branch managers, senior credit officers and credit officers using stratified sampling and simple random sampling (SRS). The study used primary and secondary data. Questionnaires were used to collect primary data while secondary data was obtained from the annual performance of the respective institutions financial statements. Data was analyzed and presented using descriptive statistics and inferential statistics. Inferential statistics were used to analyze data using correlation, ANOVA while regression analysis was used to test the effect of the independent variable and dependent variable using statistical package for social sciences (SPSS) version 21. The findings revealed positive and significance relationship between the variable set at  $P < 0.05$ . Credit Analysis ( $\beta = 0.591$ ;  $p = 0.000 < 0.05$ ). The findings will be helpful to the microfinance institutions to be able to understand the effect of credit analysis on the financial performance of microfinance institutions, the credit department of microfinance institutions will be able to know the importance of implementing credit policy. It can be concluded that good credit analysis measures be put in place by MFI's because it influences financial performance hence good health.*

**Keywords:** Credit Analysis, Microfinance, Financial Performance

### Introduction

The Microfinance concept is dated 18th Century back. Microlending activity was first associated by the Irish loan Fund system which was started by Jonathan Swift, which attempted to make better the economic condition of Irish people. Microfinancing became famous in the 1970s. The first organization to get focus was the Grameen Bank; this was started by Professor Muhammad Yunus in the 1976's in the village of Jobra, Bangladesh. In 2006, Grameen Bank received the Nobel peace prize which was awarded for their contribution towards developing the microfinance system. According to Guinnane (2011), while the term microfinance is relatively new, the concept underlying it is not. There exist similarities, for example between contemporary microfinance institutions and the pioneering German Credit Cooperatives of the second half of the 19th century.

According to Harper (2003) microfinance have in common the extension of services to the people previously considered 'unbankable' because of high transaction costs of reaching them, low operating margins, the considered risks of loans and lack of borrowers collateral. Microfinance Institutions as organizations offers financial services to low income populations. The organizations offer loans to their members; others give insurance deposit and other financial services. Schreiner & Colombet (2001), microfinance is the effort to make better and to obtain small loans for the lower class looked down upon by Banks and access to deposits.

Microfinance Institutions (MFI's) in the United States of America (USA) accepted the microfinance movement in the 1980s and 1990s. Accion United States Network which is the American nonprofit making microfinance

organization has been the champion of the development of microfinance in the United States. According to Bernanke (2007), Accion began the activities of lending in Latin America in 1961. It has lent over \$180 million to more than 20,000 borrowers in 35 states hence expansion of economic development. This was essence because of the loan features like loan size, collateral and repayment terms which sounded typically flexible for the customers than a standard bank loan. Lending to small groups in the U.S. is riskier and even costly than extending credit to large firms. Laura (2018), without a startup credit, the lower class has lower chances of generating income in order to improve their financial status. MFI's in the U.S offer small loans roughly ranging from \$10-\$1,000 to poor people trying to start small businesses. One of the earliest microfinance institutions in the U.S was the Shore Bank Corporation, traced in Chicago in 1973. Off late, the American Recovery and Reinvestment Act of 2009 expanded microloan programs. In the year 2010, it was estimated that MFI's assisted over 347, 000 borrowers access loan, translating to more than \$164 million.

European Commission (2007) recommends a EUR 25,000 ceiling. Therefore, in Europe microcredit loans are less than Euro 25,000 which is meant for micro enterprises. The objective of microfinance is the lending of loans towards microfinance activities. As the microfinance industry is not fully integrated into mainstream banking, this industry faces a perfect storm since 2009 with the famous credit crunch. In Europe, microfinance Industry faces the losses and defaults. Deposit Taking Microfinance Institutions (DTM's) have recorded significant mass withdrawal of cash which had been saved to meet cash needs. According to Dayson & Vik (2013), microcredit providers will reduce credit risks by looking at the total exposure of the provider to any particular constituents of groups of loan seekers whose capability to repay back could as well be same. Bangladesh is one of the longest histories with microfinance; microfinance inception was to provide for the low income people in the rural areas. There is an increase in overlapping borrowers overdue. Yasuhiko (2011) overlapping borrowers are microfinance those who obtain loans from more than one institution and in the long run are able to manage, overlapping borrowing doesn't necessarily cause harm but more loans the borrower uses, the more likely they will default.

According to Shifting Paradigms (2018), the modern microfinance markets in South Africa started in the 1980s. The growth of the industry has been in four stages; pioneer stage which ran from the 1980s to 1994's, the break out stage which covered from 1995-1999, the consolidation stage ran from 2000 onwards. The growth of microfinance institutions could not be sustained due to few creditworthy borrowers. The maturity stage is about to be reached. According to Small Enterprise Foundation (2018), there is a higher loan size in South Africa than other emerging markets. MFI's tends to issue fewer loans and are less able to diversify their risk than their counterparts.

Evolution of microfinance in Ghana is dated back in 1955. The first credit union was established by Canadian Catholic missionaries. In the 20th century, Susu cropped up originating from Nigeria. Addae-Korankye (2014) carried research on the causes and control of loan rate of default in microfinance institutions in Ghana. The findings were the high interest rate, inadequate loan portfolios, poor loan appraisal, lack of monitoring and improper client selection lead to loan default. Mago (2013) asserted Zimbabwe microfinance concept is dated to the 1960s where individuals were put into groups to form savings club. In 1963 Catholic missionary came up with the Savings Development (SDM). This organization put more effort on women from the rural setting.

Ciccaglione (2014), microfinance and micro entrepreneurs form the platform of the Uganda economy with more than thirty three percent of working individuals employed by small businesses. Microfinance Institutions in Uganda provide services like deposits, insurance, credit and savings to poor households and small-entrepreneurs. Bashabe *et al.*, (2017) carried a study on credit risk management and financial performance of MFI's in Kampala, Uganda. The study revealed credit risk identification and credit risk appraisal has a strong positive relationship on the financial performance of MFI's and credit risk monitoring and credit risk mitigation have a moderate significant positive relationship on the performance of MFI's.

Microfinance institutions are a financial organization that offers financial services to the poor population. A bunch of authors, scholars, and organization has defined MFI's in different ways, but the bottom line, the definitions revolve around the same functions MFI's do. According to Armendariz & Morduch (2010)

microfinance presents a series of exciting probabilities for extending markets, fostering social change and reducing poverty. Microfinance in Kenya consists of microfinance facilities and regulations traced back mid 1990's. Microfinance Institutions in Kenya is under legislation Microfinance Act, 2006. They are categorized into two under section 3 of the microfinance Act (2006). First, deposit taking MFI's and non-deposit taking microfinance institutions which are termed as credit MFI's only. Deposit taking Microfinance Institutions under microfinance regulation 2008, are further classified into community MFI's authorized to carry out deposit taking business within a specified district, region or city provided approved by Central Bank of Kenya (CBK), and Microfinance Institutions authorized to undertake the activity of deposit taking countrywide

Microfinance Institutions in Kenya are under AMFI was registered in 1999 under the Societies Act by leading MFI's in Kenya. Currently, AMFI has 49 active institutional members 3 Banks, 3 Wholesale MFI's, 1 Sacco, 1 Development Institution, 11 Microfinance Banks and 30 Credit only Institutions. The MFI's are currently serving at least 6,000,000 poor and middle class household families. Microfinance Institutions plays a significant economic role, i.e., twenty percent employment. Microfinance (Deposit Taking Institutions) Regulations 2008 set out the regulatory, legal and supervisory framework for the microfinance institutions industry in Kenya. The microfinance Act 2006 came into effect from 02nd May 2008 and amended up to 1st January, 2014 Trust that permits single party to give resources or money to another party where that second party does not payback the first party on time hence generating into a debt but instead assures either to repay or return those resources or other materials of similar value in future is known as credit.

### Statement of the Problem

Microfinance Institutions industry plays a vital role in the economy by giving loans to poor people with the aim of reducing poverty level hence economic growth. Sani *et al.*, (2017) the study found out there is a relationship between microfinance institutions and poverty decrease at a significance level of 0.00. A major threat facing microfinance institutions is the increase of Non-Performing Loans (NPL's). Therefore, proper credit analysis is the prerequisite for financial stability. From the economic sector report published by Association of Microfinance Institutions (2017) figures out that value of the outstanding loan portfolio as at 31st Dec 2016 was Ksh. 87.4billion and as 30th June 2017 stood at 87.8billion representing an increase of NPL at 0.6 percent. Financial institutions face credit risks, and MFI's are not exempt from this. Therefore, proper and effective credit management is the key for a financial institution to be regarded as a going concern thus poor credit management is the major cause of microfinance institutions downfall. Hlupeko & Matanda (2015) carried out descriptive survey study on the collapse of microfinance institutions in Zimbabwe and found out 78% of uncollected loans lead to the collapse of the institutions. Addae-Korankye (2014) opined that sustainability of microfinance institutions largely rely on their effort to collect their loans as efficiently and effectively as possible. Increase NPL affect working capital and even leads to the collapse of MFI's. Credit analysis cannot be ignored by microfinance institutions. Therefore, in response to this problem, this research seeks to establish the effect of credit analysis on the financial performance of microfinance institutions in Eldoret town, Kenya. Thus this study hypothesized that;

*H<sub>0</sub>: Credit Analysis has no significant effect on the financial performance of microfinance institutions in Eldoret Town, Kenya.*

### Theoretical Framework

#### The 5 C's Model of Client Appraisal.

Pandey (2001) cited three C's of credit as a measure in setting standard namely; character, condition, and capacity that estimates the probability of default and its impact on the firm's management credit standards. Capital and character were introduced later. The 5C's Model of credit management is used by microfinance institutions to determine if a customer has the ability to repay the loan. The character of an applicant is normally

looked at when applying for a loan. A character can be grouped into a persona, cultural, economic and social factors. The psychological factor is determined by the inner feeling and not the physical appearance. Kwasi *et al.*, (2017) the use of the 5C's is among the techniques banks use in considering loan request. These elements have a universal application in credit evaluation to manage risks levels of borrowers.

The microfinance institutions may contemplate using this factor by learning and observing the applicant. The capability of a client repaying back the loan is determined, the groups the loan applicant associates with is also examined. The nature of the guarantors and types of groups will determine whether the loan applicant can be in a position to repay the loan. The lifestyle of an applicant, reference group, will tell if an applicant can qualify for a loan. Microfinance to be regarded as going concern, they need cash flow. Mersland & Strom (2014), asserted analysis of cash flow statements helps financial users of financial statements obtain the important information concerning cash movements out and in of the company as a going concern and the way the cash generated by the operation. Therefore, the borrowers must be analyzed to determine the capacity of loan repayment. Assets that an organization pledges against debt are termed as collateral. Therefore, collateral is security pledged for the payment of a loan. The types of collateral most lenders may accept range from a property like homes, cash secured loan, inventory financing, and invoice collateral and blanket liens.

An asset based loan can behave like a line of credit if you use accounts receivable and inventory as collateral. Typically, one can draw the line as invoice and inventory become available. As with a factory line, you can borrow up to 80 % of the value of your accounts receivable. Lenders consider capital the borrower puts towards an investment. To an extent borrower's contribution lowers the chances of loan default.e.g., borrowers who have a deposit for a home normally find it easier to obtain a mortgage than the borrowers without paying a deposit. Therefore, money invested in a business by a borrower is termed as capital, and this indicates how much the borrower has subjected to risk in case of business failure.

According to Kevin & Omagwa (2017) capital is the money invested in the business and is to show the level of how much is at risk should the company come to an end. It is determined by the analysis of the business financial statements with particular effort on the risks and the debt equity ratios and also looking at the customer business working capital position. Loan interest rate conditions and principal amount influences the lenders strong feeling to finance the borrower. How much the borrower intends to use the loan is referred to as conditions This model will assist microfinance institutions in credit analysis of a borrower's creditworthiness, this includes credit appraisal, credit scoring, analysis of credit agency reports of a borrower and the purpose of the loan.

### **Empirical Review**

Moti *et al.*, (2012) carried a study on the effectiveness of the credit management system on loan performance in the microfinance sector in Meru town, Kenya. Questionnaires were used to collect data from a respondent who was credit officers of the microfinance institutions. One of the findings was client appraisal has an effect on loan performance since computed p-value 0.003 is less than 0.05 at 95% confidence level. This study focused on the borrower's character, condition, capacity, cash flow statements, history of payment and the size of the business when appraising clients. The current study ought to fill the research gap by using 5C's of client appraisal, credit scoring, credit reference bureau and the purpose of the loan as a measure of credit analysis.

Njeru (2012) did a study on factors affecting loan delinquency in Microfinance Institutions in Kenya. A survey research design was used with the aid of questionnaires. Primary data was collected from 49 MFI's where census was carried out. The study found out there exist a positive and significant relationship between loan delinquency and microfinance institutions specific factor. The specific factors were MFI's Specific Factors and Self Help Group Specific Factors. The MFI's Specific Factors are corporate governance, loan process, and procedures. Self-Help Groups specifications are group governance and members screening process. MFI's Specific Factors are positive and significant  $t=5.016$  which relate to loan delinquency with estimated regression coefficient  $\beta=9.937288$ . SHG  $t$ -value  $=3.097$  and  $\beta=6.090383$ . This study generalized members screening

process where it didn't give more details. The current study filled the gap by the use of 5C's credit analysis, credit scoring, credit agency report and the purpose of the loan as the basis of customer screening before extending the loan facility.

Wanja and Jagongo (2017) carried out research on credit policy and financial performance of commercial banks in Kenya. The descriptive research design was used; questionnaires were given out to credit officers of 43 commercial banks. Drop and pick procedures was used. The study found out that credit information has a large effect on the bank's competitiveness; most commercial banks rely to a large extent on the borrower's credit history. Credit policy affects the performance of commercial banks positively. The research recommended banks need to develop credit policies that will give them a competitive advantage. Banks should also review their credit appraisal to be in a position to evaluate credit worth clients hence reducing the number NPL (non-performing loans). This study measured credit information by use of reliance on borrower's history, account movement, and person behavior. The current study filled the knowledge gap by adding the condition, capacity, collateral, and capital of the 5C's client appraisal and purpose of the loan when doing credit analysis.

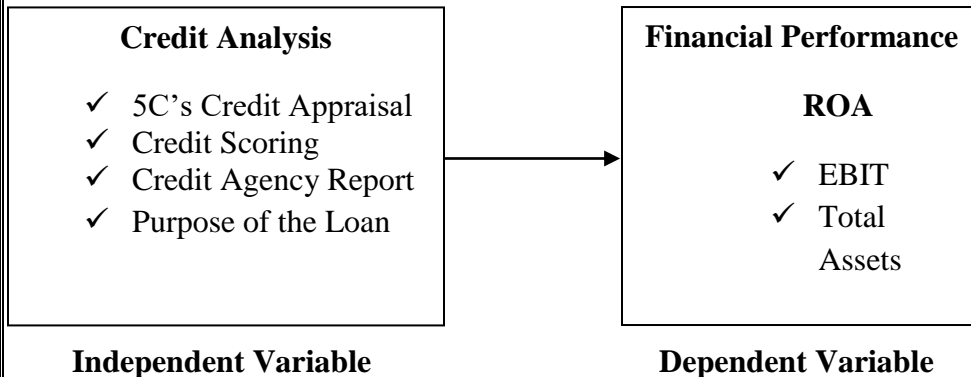
Ahmed & Malik (2015) carried research on credit risk management and loan performance: Empirical investigation of Microfinance Banks of Pakistan. Primary data was collected, and descriptive and inferential statistical technique was used, 157 managers of credit department of MFI's in Islamabad and Rawalpindi were targeted. The study found out that client appraisal has a positive and significant impact on loan performance. The study recommended secondary data be included in such studies to explore the influence of credit management on loan performance better, more dimensions of the credit management and increase in sample size to be achieved by taking more MFI's into the investigation. The study did not focus on the purpose of the loan and credit agency report, and it only employed primary data. The current study would like to fill the gap by exploring other factors like the purpose of the loan, credit agency report and utilization of both primary and secondary data.

Murthy and Mariadas (2017) carried out research on the factors contributing to loan repayment default among borrowers in MFI's in Shah Alam, Selangor in Malaysia. Data were collected by use of questionnaires which were administered to 120 loan borrowers of MFI's. The study found out nature of the business operation, the age of borrowers were the factors that contribute to default in repayment of the loan. Using Cronbach's Alpha, nature of business operated is 0.898, the age of borrowers is 0.906, and hence an average of all scales is 0.828. The reliable Alpha value is 0.7 hence reliably tested. The correlation coefficient between the nature of business operated and age of borrowers is 0.051 and 0.267 respectively. Finally, the output of the ANOVA has a significant value of 0.000 which is below 0.05. This study used only 120 as sample size. The respondents comprised only loan borrowers without selecting respondents from the microfinance who issue credit facility. Therefore, the current study used a sample size of 240 respondents who included branch managers, credit officers, and senior credit officers. This study focuses only on the nature of the business and the age of borrowers when analyzing worth credit customers. Therefore, the current study would like to add 5C's credit client appraisal, credit scoring, credit agency report and purpose of the loan when appraising loan borrowers.

Addae-Korankye (2014) carried research on the causes and control of loan delinquency in microfinance institutions in Ghana. Random Sampling on 25 MFI's and 250 clients was used. Questionnaires and interview guide were used to collected data. The findings were a poor appraisal, and improper client selection leads to loan default. Out of the 25 Microfinance Institutions sampled 10 MFI's which is 40% has less than 1-3 % default rate, 8 MFI's which is 32% has more than 3-6 % default rate, 4 MFI's which is 16% has more than 6-10% default rate and finally 3 MFI's which is 12% has more than 10 % default rate. This study generalized poor appraisal of clients. The current study used client appraisal as 5C's client appraisal, credit scoring, credit aging report and purpose of the loan as client appraisal before granting credit.

## Conceptual Framework

Chandran (2004) defined a conceptual framework as the representation of study variables showing the relationship between the dependent and independent variables. Oso & Onen (2009) Conceptual Framework is a scheme of concept (or variables) which the researcher operationalizes in order to achieve the set objectives. It is a diagrammatic or a schematic presentation of the theory. The theory is presented as a model where study variables and the relationship between them are expressed into a seen picture to explain the interconnections between dependent, independent and extraneous variables if any.



**Figure 1: Conceptual Framework**

### Credit Analysis

Ross *et al.*, (2017) opined that extending credit, an organization establishes how much energy to expend in trying to distinguish between customers who will honor to repay and customers who will default. The business employs many devices and procedures to establish the chances that customers will default, and, put together, these are called credit analysis. Horne & Wachowicz (2008), reducing credit standards may raise the level of demand which in turn should lead to higher turnover and profits. However, there is a cost of carrying the additional debtors as well as a high risk of bad debts losses. According to the Central Bank of Kenya (2018), there are three licensed CRB in Kenya namely Transunion Credit Reference Bureau LTD, Metropol Credit Reference Bureau LTD, and Creditinfo Credit Reference Bureau LTD. The payment pattern, default history is also observed. The data is submitted electronically by CRB on a monthly basis. The information is normally on one report which is easier for microfinance to review borrowers credit or loan application.

Sangare (2017) the banking industry is heavily dependent on information, often faced with a problem of asymmetry of information due to information opaqueness of borrowers. CIS (Credit Information Sharing) benefits the customer in that it is easier for potential clients to distinguish themselves from defaulters hence reputation maintained. Customers credit information from various lenders kept officially in a credit database for access by lenders and the customers, since CRB reports are available, it makes easier for customers and lenders to negotiate on credit terms, reduced paperwork for both parties, the unnecessary cost incurred to use 3rd party investigation is eliminated. CIS is important to the economy since it creates an opportunity for many customers to assess credit especially those with no tangible collateral. Credit evaluation is assessing the chances that a client will default the loan repayment.

### Financial Performance

It is the quantification of the overall financial health of a firm for a given period of time. According to Knight & Bertoneche (2001), the firm's financial statements show the usual beginning point for any act of assessing the financial performance. Maritim (2013), exposure to risk continue to be the greatest concern by microfinance

institutions in Kenya. Management should find an appropriate credit risk environment, operating under rational credit granting process to reduce the impact of the exposure on overall performance.

### Material and Methods

According to Saunders, Lewis & Thornhill (2007), research methods and research methodology are used interchangeably which refers to the tasks and procedures used to get and analyze data. This, therefore, includes observation, questionnaires, and interviews as well as both qualitative and (non-statistical) analysis technique quantitative (statistical).

### Research Design

Creswell (2013), asserted that research design is the systematic conditions arrangement for collection and analysis of data which aims at relevance combination to the purpose of research with the economy in the procedure; it is the conceptual structure within which the study is done. It consists of data collection, measurement, and data analysis. The researcher used correlation design and historical research design

### Target Population

According to Mugenda & Mugenda (2009), population refers to all the group of individuals, objects with common observable character or events. Cooper & Schindler (2014) target population refers to those people, events, or records that contain the required information and can answer the measurement questions and then establish whether a sample or a census is required. The target population of the study was 25 licensed Microfinance Institutions in Eldoret town, Kenya as at September 2018

### Sampling Frame

Kothari (2004), the sampling frame is the list of sources from which sample is to be taken and contains the names of all items of a universe (in a situation of finite). The researchers sampling frame was from 25 registered microfinance institutions in Eldoret town according to AMFI (2018)

### Sample Size and Sampling Technique

Neuman (2014) a sample is a small set of cases a scholar picks from a large pool and makes a broad statement to the population and sampling is done by selection of identical cases to find out in detail, and then use what we learn from them to understand a much large set of cases. Babbie (2013) argued that the main purpose of the sampling techniques is to allow researchers to make relatively few observations but get an accurate picture of a much larger population. Yamane (1967) formula was used to calculate the sample size at P is 5% and confidence level of 95% which give a sample size of 240.

### Research Instruments

Oso & Onen (2009), a research instrument alludes to the research tools to be used for collecting data and how those tools will be advanced. The study employed both secondary and primary data. According to Kaur et al., (2017) secondary data is the data which is collected by other than the user. Saunders *et al.*, (2007) reliability is the extent to which data collection techniques or technique will generate consistence results. Zinbarg (2005) recommended an alpha value of 0.70. The study measured the reliability of the questionnaire to determine its consistency in testing what they are intended to measure.

### Model Specification

$$Y = \alpha + \beta_1 CA + \varepsilon \dots\dots\dots \text{Equation 2}$$

Where; Y= Is the ROA

$\alpha$  =Is the Constant,  $\beta_1$ =Is the Beta Coefficient, CA = Is the Credit Analysis,  $\varepsilon$  =Is the Error Term

## Results and Discussions

The research targeted 25 Branch Managers, 75 Senior Credit Officers and 500 Credit Officers from the 25 MFI's making a total of 600 respondents. Random sampling was used to identify 10 Branch Managers, 30 Senior Credit Officers and 200 Credit Officers making a total of 240 respondents. Therefore, 240 questionnaires were issued to the 25 MFI's. The independent variable Credit Analysis, Alpha value recommended is a threshold of 0.7. Saunders *et al.*, (2007) reliability is the extent to which data collection technique value of or techniques will produce consistency findings.

## Descriptive Analysis

The respondents were provided with seven statements related to credit analysis to rate. The resulting analysis is as tabulated in Table 5 below

**Table 1: Credit Analysis**

Statement	Mean	Std. Dev.
The institution uses 5C's of credit which is character, capacity, collateral, capital, and condition of a borrower before issuing loan	4.58	0.76
Organization use credit scoring model to determine if a borrower is a creditworthiness	4.24	1.06
Institution analyses credit reference bureau (CRB) reports of the borrower(s) before extending loan facility	4.46	0.78
Organization confirms the purpose of the loan before granting a loan to a customer	4.27	0.99
Institution relies on account movement records before extending credit facility	4.01	1.06
Organization forecast the borrowers operating environment before extending the loan facility	3.95	1.34
The inspection should be done on the borrowers business premises as well as the facility subject to financing before granting loan facility	4.55	0.67
<b>Mean</b>	<b>4.29</b>	<b>0.95</b>

**Where** F represents Frequency, P represents Percentage, SD represent Strongly Disagree, D represent Disagree, UD represents Undecided, A represents Agree, and SA represents Strongly Agree. From the above Table 1, most of the respondents agreed that the 5C's of credit is used by the institutions on borrowers before issuing a loan at (Mean=4.58, Std. Dev.=0.76). These findings are in agreement with that of Moti *et al.*, (2012) character of a borrower has an effect on loan performance at Chi-Square ( $\chi^2 = 13.689$ , P-value  $0.003 < 0.05$ ), capacity ( $\chi^2=10.868$ , P-value  $0.012 < 0.05$ ) and collateral ( $\chi^2=21.888$ , P-value  $0.003 < 0.05$ ). However, the findings of the current study disagree with that of Moti *et al* (2012) where some of the findings capital ( $\chi^2=3.893$ , P-value  $0.143 > 0.05$ ) and condition ( $\chi^2=3.373$ , P-value  $0.185 > 0.05$ ). 98(49%) of the respondents strongly agreed and 82(41%) agreed making a total of 180(90%) of the respondents who rated positively to the statement that organization use credit scoring model to determine if a borrower is credit worthiness at(Mean=4.24, Std. Dev.=1.06). The results agree with that of Samreen *et al.*, (2013) the accuracy rate of credithe t scoring model for corporations was 100% more than the other model.

Respondents positively rated that credit reference bureau (CRB) reports of borrower(s) is analyzed before extending loan facility at(Mean=4.46, Std. Dev.=0.78), that organization confirms the purpose of the loan

before granting loan to a customer at (Mean=4.27, Std. Dev.=0.99), that institution relies on account movement records before extending credit facility at (Mean=4.01, Std. Dev.=1.06), organization forecasts the borrower's operating environment before extending the loan facility at (Mean=3.95, Std. Dev.=1.34). Lastly, respondents positively rated the statement inspection should be done on the borrower's business premises as well as the facility that is subject to financing before granting loan facility at (Mean=4.55, Std. Dev.=0.67). The overall mean is **4.29** and the standard deviation is **0.95**

### Correlation and multiple regression

In view of the output in Table 2, R is the simple correlation of 0.830 shows a strong positive correlation between credit analysis and financial performance of microfinance institutions.  $R^2$  is called the coefficient of determination and tells us how financial performance in MFI's is varied with credit analysis. An adjusted coefficient of determination 0.676 shows that credit analysis, in totality explain the 67.6 % of changes in financial performance. The result of the model adopted clearly explains there is a relationship of the variable of the study deemed to be satisfactory at 95% confidence level. Pearson's correlation (r) was used to find out the relationship between the variables to assess both the direction and strength. Correlation results showed that relationship between credit analysis was positive and statistically significant ( $r=0.830$ ,  $P=0.000<0.05$ ) Analysis of variance (ANOVA) was used to measure the differences in means between financial performance and its predictor variable as shown in Table 8 below. This was the purpose of testing the goodness of fit.

The research findings in Table 2 above indicate that the relationship between the independent variable and the dependent variable was statistically significant ( $F=51.076$ ,  $P$ -value of  $0.000<0.05$ ). This implies that the multiple regression model was good for data. Therefore, credit analysis has an effect on the financial performance of microfinance institutions. This research was conducted coefficient analysis from the multiple regression analysis. The results are as shown in Table 2 below.

The constant term implied that at zero credit analysis, the financial performance is at 1.036 units. Regression of coefficients results in Table 9 above shows that credit analysis has a positive and statistically significant effect on financial performance ( $\beta=0.591$ ,  $p=0.000$ ). The coefficient 0.591 implies that improvement in credit analysis by one unit increases financial performance by 0.591 units. These findings are similar to that of Ahmed & Malik (2015), Murthy & Mariadas (2017) and Addae-Korankye (2014) revealed there is a positive and statistically significant effect on performance.

**Table 2: Regression Coefficient Analysis**

	Unstandardized Coefficients		Standardized Coefficients			
	B	Std. Error	Beta	t	Sig.	correlation
(Constant)	1.04	0.20		5.09	0.00	
Credit Analysis	0.59	0.08	0.83	7.15	0.00	.830**
Indicator	Co-efficient					
R	0.83					
R Square	0.69					
Adjusted R Square	0.676					
Std. The error of the Estimate	0.512653					
F	51.076					
Sig.	.000b					

Dependent Variable: Financial Performance

## Testing Hypotheses using Multiple Regression Model

From the above results computed in Table 9 above, the research hypotheses were tested using the significance level of the coefficient. The aim of this was to accept or reject the null hypotheses.

*H<sub>01</sub>: Credit Analysis has no significant effect on the financial performance of microfinance institutions in Eldoret Town, Kenya.*

The research findings indicate that credit analysis is a significant predictor of financial performance ( $t=7.147$ ,  $P=0.000<0.05$ ). The study rejected the null hypothesis that credit analysis has no significant effect on the financial performance of microfinance institutions in Eldoret town, Kenya at a significance level of 5%. The research concluded that there is a significant relationship between credit analysis and financial performance of microfinance institutions in Eldoret town, Kenya.

From the t-test result of the regression coefficient, the independent variable is included in the regression equation. The variable is significant ( $P$  is less than 0.05) as indicated in multiple regression model Equation 4.1 below.

$$Y = \alpha + 0.591CA + \varepsilon \dots\dots\dots \text{Equation 3}$$

### Summary of the Study Findings

This section presents the summary of the study as per the specific objectives of the study. This was based on the outcome of the descriptive and inferential statistics results of the study. The target population of the study was branch managers, senior credit officers, and credit officers. Yamane 1967 formula was used to sample the population. Questionnaires were issued to the respondents after random sampling. Two hundred questionnaires were returned forty questionnaires were not returned. Twenty five microfinance institutions participated in the study.

The objective of this study was to find out the effect of credit analysis on the financial performance of microfinance institutions in Eldoret town, Kenya. Credit Analysis was measured by 5C's of credit appraisal, credit scoring, credit agency report and the purpose of the loan. It was established that credit analysis affects financial performance. The research findings indicate that credit analysis is a significant predictor of financial performance hence the null hypotheses Credit Analysis has no significant effect on the financial performance of microfinance institutions in Eldoret Town, Kenya is rejected

### Conclusions and Recommendations

Credit analysis was found to affect the financial performance of microfinance institutions in Eldoret town, Kenya. Good credit analysis measures put in place by any microfinance institution is important because it influences financial performance hence its good health. Therefore institution needs to embrace the 5C's of credit, use of credit scoring model, use of credit reference bureau reports, confirmation of purpose of the loan, account movements records, borrowers operating environment and borrowers operating environment affect the financial performance of microfinance institutions.

It was found that credit analysis has a positive and significant effect on the financial performance of microfinance institutions. The study recommended microfinance institution to emphasize the use of 5C' of credit when appraising customers, the institution to use credit scoring model to evaluate clients creditworthiness, the study also recommended the MFI's to be watchful on the intended purpose of the loan before granting credit facility and also MFI's should thoroughly screen the borrower's environment as well as the borrower's premises subject to financing.

### Area for further Research

From the findings of this study that shows credit analysis positively affect financial performance, the study recommends future research to incorporate variables like GDP (Gross Domestic Product), Inflation, interest rates and internal factors like microfinance size measured by the logarithm of the assets as moderators to finding out the moderating effect of on the credit analysis and financial performance

### References

- i. Addae-Korankye, A. (2014). *Causes and Control of Loan Default/ Delinquency in Microfinance Institutions in Ghana*. *American International Journal of Contemporary Research*, 4(12), 36-45
- ii. Ahmed, S. F., & Malik, Q.A. (2015). *Credit Risk Management and Loan Performance: Empirical Investigation of Microfinance Banks of Pakistan*. *International Journal of Economics and Financial Issues*, 5(2), 574-579, <http://www.econjournal.com>
- iii. Armendariz, B., & Morduch, J. (2010). *The Economics of Microfinance*. MIT Press, Cambridge, Massachusetts.
- iv. Babbie, E. (2013). *The Practices of Social Research*. (13th ed.), Belmont, BC: Wadsworth, Cengage Learning.
- v. Bashabe, S., Kalu O. E., & Amu, C. U. (2017). *Credit Risk Management and Financial Performance of Microfinance Institutions in Kampala, Uganda*. *Journal of Banking and Financial Dynamics*, 1(1): 29-35
- vi. Bernanke, B.S. (2007). *Speech from Federal Reserve, the Central Bank of the United States*, retrieved from <https://www.federalreserve.gov/newsevents/speech/bernanke20071106a.htm> on 15.07.2018 at 15:17 hours.
- vii. CBK (2018). *Credit Reference Bureaus*. Retrieved at <https://www.centralbank.go.ke/policy-procedures/licensing-procedures>
- viii. Chandran, E. (2004). *Research Methods: A Quantitative Approach with illustrations from Christian Ministries*. Nairobi: Daystar University.
- ix. Ciccuglione, K. (2014). *From Inclusion to Empowerment. The Political Implication of Microfinance*. *Honors Scholar Theses*.386
- x. Connely, L.M. (2008). *Pilot Studies*. *Medsurg Nursing*, 17(6), 411-2
- xi. Creswell J, W. (2013). *Research Design: Qualitative, Quantitative, and Mixed Methods Approaches*. (3rd ed).Sage Publications, Incl, London.
- xii. Dayson, K. & Vik, P. (2013). *European Code of Good Conduct for Microcredit Provision*, University of Salford (UK).
- xiii. European Commission (2007). *Expert Group Report: Regulation of Microcredit in Europe: European Printer*.
- xiv. Guinnane, T.W. (2011). *The Early German Credit Cooperative and Microfinance Organizations: Similarities and Differences*. In *the Handbook of Microfinance*. London- Singapore: World Scientific Publishing.
- xv. Harper, M. (2003). *Microfinance- Evolution. Achievements and Challenges*. London: ITDG Publishing, UK, 11-25.
- xvi. Hair, J.F., R.E Anderson, R.L. Totham & W.C. Black (2010). *Multivariate Data Analysis (5th ed.)*, Upper Saddle River, N.J Prentice Hall, 169-215
- xvii. Hertzog, M.A. (2008). *Considerations in Determining Sample Size for Pilot Studies*. *Research In Nursing & Health*, 31(2), 180-191.
- xviii. Hlupeko, D. & Matanda, E. (2015). *The Downfall of the Micro lending Business in Zimbabwe: Causes and Remedies*. *International Review of Research in Emerging Markets and the Global Economy (IRREM)*, An online International Research Journal, 4 (1), 487-499.
- xix. Horne, C.V. James, & Wachowicz, M. John. (2008). *Fundamentals of Financial Management*.

- a. (13th ed). Gosport, England: Ashford Colour Press Ltd.,
- xx. Kaur, B., Laveena., & Jindal, S. (2017). A Study of Debtor Management of an Indian Company. *Imperial Journal of Interdisciplinary Research*. 3(4), 1387-1392
- xxi. Kevin, M.G., & Omagwa, J. (2017). Debtors Management and Financial Performance of Selected Microfinance Institutions at Nairobi City County in Kenya. *International Journal of Scientific and Research Publications*, 7(12)
- xxii. Knight, Rory & Marc, Bertoneche. (2001). *Financial Performance*. Oxford; Butterworth-Heinemann, England
- xxiii. Kothari, C.R. (2004). *Research Methodology; Methods and Techniques*. (2nd ed.), New Age International (P) Limited Publishers: India.
- xxiv. Kwasi, W.P., Oteng, E. & Agyei (2017). Ranking the 5C's of Credit Analysis: Evidence from Ghana Banking Industry. *International Journal of Innovative Research and Advanced Studies*, 4(9), 78-80.
- xxv. Laura, R. (2018). The Future of Microfinance in the United States: Regulatory Reforms for Economic Prosperity. *Journal of Civil Rights and Economic Development*, 30(2).185-215
- xxvi. Mago, S. (2013). *Microfinance in Zimbabwe: A Historical Overview*. *Mediterranean Journal of Social Sciences*, 4(14), ISSN 2039-9340. 599-608
- xxvii. Maritim, K.M. (2013). *Relationship Between Credit risk Management Practices and Financial Performance Institutions in Kenya*. Unpublished MBA Dissertation, university of nairobi, nairobi.
- xxviii. Mersland, R., & R. Strom, R. Ø. (2014). *Microfinance Institutions, Financial and Social Performance*. New York: Palgrave Macmillan
- xxix. Moti, H.O., Masinde, J.S., Mugenda, N.G., & Sindani, M.N. (2012). Effectiveness of Credit Management System on Loan Performance: Empirical Evidence from Micro finance Sector in Kenya. *International Journal of Business, Humanities and Technology*, 2(6), 99-108
- xxx. Mugenda, O.M., & Mugenda, A.G. (2009). *Research Methods: Quantitative and Qualitative Approaches*. Nairobi: Acts Press.
- xxxi. Murthy, U., & Mariadas, P.A. (2017). An Exploratory Study on the Factors Contributing Loan Repayment Default among the Micro Finance Institutions in Shah Alam, Selangor, Malaysia. *International Journal of Business and Management*. 12(12), 242-250 retrieved from URL: <https://doi.org/10.5539/ijbm.v12n12p242>.
- xxxii. Neuman, W.L. (2014). *Social Research Methods: Qualitative and Quantitative Approaches*. (7th ed.). London, Edinburgh Gate.
- xxxiii. Njeru, W.B. (2012). Factors Affecting loan Delinquency in Microfinance Institutions in Kenya. *International Journal of Management Sciences and Business Research*. 12(1), 27-48
- xxxiv. Noman, A.H.M., Pervin, S., Chowdhury, M.M., & Banna, H. (2015). The Effect of Credit Risk on the Banking Profitability: A Case of Bangladesh. *Global Journal of Management and Business Research*, 15(3), 41-48.
- xxxv. Oso, W.K., & Onen, D. (2009). *A General Guide to Writing Research Proposal and Report: A handbook for beginning researchers*. Nairobi: Jomo Kenyatta Foundation.
- xxxvi. Pandey, I.M. (2001). *Management Accounting*. Vikas Publishing House: New Delhi.
- xxxvii. Ross, S.A., Randolph R.W., & Bradford, B.D. (2017). *Essentials of Corporate Finance*. (9th ed), 558-565, Mc Graw-Hill Education: NY10121 2 Penn Plaza, New York
- xxxviii. Samreen, A., & Zaidi, F.B. (2013). Design and Development of Credit Scoring Model for the Commercial Banks in Pakistan: Forecasting Creditworthiness of Individual Borrowers. *International Journal of Business and Social Science*, 3(17).
- xxxix. Sangare, K. (2017) Credit Risk and Banks Performance: Evidence from WAEMU Countries. *Journal of Economics and Finance*. 8(1), 05-11
- xl. Sani, A., Khan, M.S., Ahmed, H.R.N., & Aziz, B. (2017). Role of Microfinance Institutions in Poverty Reduction. *Imperial Journal of Interdisciplinary Research*. 3(2) 209-212

- xli. Saunders, M., Lewis, P., & Thornhill, A. (2007). *Research Methods for Business Students*. (4th ed). England: Pearson Education Limited
- xlii. Schreiner, M., & Colombet, H.H. (2001). *From Urban to Rural: Lessons for Microfinance from Argentina*. *Development Policy Review*, 19(3), 339-354
- xlili. Small Enterprise Foundation (2018). *Audited Financial Statements Reports*, Deloitte & Touche: South Africa. Retrieved from <https://www.sef.co.za>
- xliv. Shifting Paradigm (2018). *The Micro credit Sector in South Africa*. Retrieved from [www.shiftingparadigms.org](http://www.shiftingparadigms.org) on 16.07.2018 at 7:58 am
- xlv. Walliman, N. (2011). *Research Methods: The Basics*, Routledge Taylor & Francis Group, London and New York.
- xlvi. Wanja, D., & Jagongo, A. (2017). *Credit Policy and Financial Performance of Commercial Banks in Kenya: International Journal of Current Research*, ISSN 0975-833X 9(1), 45912-45918
- xlvii. Yasuhiko, Y. (2011). *The Current Situation of Microfinance in Bangladesh: A Growing Concern about overlapping Loan Problems- From a Field Visit to Rajshahi and Comilla*, Centre for Emerging Markets Enterprise, Student research submitted to the Fletcher School, TUFTs University
- xlviii. Yamane, Taro. (1967). *Statistics, An Introductory Analysis*. (2nd ed), New York: Harper and Row
- xlix. Zinbarg, M. (2005). *Research Methods: New Jersey: Person Publisher*