NON-PERFORMING LOANS AND FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA

BY

KITONYI, JOYCE MWONGELI

A Dissertation Submitted to the Faculty of Business and Communication Studies in Partial Fulfillment of the Requirements for the Award of a Master of Business Administration (MBA) from St. Paul's University.

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DECLARATION

This Dissertation is a product of my own work and is not the result of anything done in collaboration. It has not been previously presented to any other institution for an academic award. I agree that this dissertation may be available for reference and photocopying, at the discretion of the college.

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DEDICATION

I commit the dissertation to Mum Naumi Kitonyi for her prayers and sacrifice made in educating me, my spouse Samuel Waime and children Maxwell, Esther and Adrian for their love and moral support.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
BSC	Balanced Score Cards
CAR	Capital Adequacy Ratio
CBK	Central Bank of Kenya
CDR	Credit to Deposit Ratio
CLA	Cost per loan Asset
CLAR	Cost per Loan Asset Ratio
CRM	Credit Risk Management
DTMs	Deposit Taking Microfinance
EBIT	Earnings before Interest & Tax
GDP	Gross DomesticProduct
IBT	Income before Tax
LLP	Loan Loss Provision
LLPR	Loan Loss Provision Ratio
MFB	Micro Finance Banks
MFIs	Micro Finance Institutions
MSE's	Micro and Small Enterprises
NIM	Net Interest Margin
NPLR	Non- Performing Loan Ratio
NPLs	Non- Performing Loans
ROA	Return on Assets
ROAA	Return on Average Assets
ROAE	Return on Average Equity
ROE	Return on Equity
ROS	Return on Sales
SACCO's	Savings and Co-operative Societies
SASRA	Sacco Societies Regulatory Authority
SMEP	Small and Micro Enterprise Program
SPSS	Statistical Packages for Social Science
US	United States

DEFINATION OF OPERATIONAL TERMS

Non-Performing Loans: Refers to a sum of borrowed money upon which the debtor has not made the scheduled payments for a specified period(Banerjee, Karlan & Zinman, 2015)

Financial Performance: It is a measure of how well a MFI uses assets from its primary mode of business to generate revenues. The common indicators of financial performance are; profits, return on investment, return on assets, value added and margins among others(Banerjee, Karlan & Zinman, 2015). This study used ROA as the performance measure.

Micro-Finance Institutions: Are financial institutions that offer financial instruments like loans, savings, insurance and other products that are designed only to the unbanked especially the low-income households as well as micro and small enterprises (MSEs), providing an enormous potential to support the economics of the poor and thus contribute to poverty alleviation (Tchuigoua, 2015).

Loan-Loss Provision: Is a non-cash expense that is used to create or increase the loan-loss allowance on the balance sheet. The expense is calculated as a percentage of the value of the gross loan portfolio that is at risk of default(Nobanee, Ellil & Abraham, 2017).

ABSTRACT

Financial institutions all over the word encounter extensive exposure to defaulted loans. In this regard, it is prudent for MFIs to design viable mechanisms of credit or default management. Scholars in various areas of economics, finance and business continue to accord a significant attention to financial performance due to its role to firm's competitiveness. The purpose of this research was to investigatenon-performing loans and financial performance of microfinance institutions (MFIs) in Kenya. The specific aims of the study were: to assess the effect of non-performing loan ratio (NPLR),examine the effect of loan loss provision (LLP), evaluate the effect of cost per loan asset ratio (CLAR), and establish the effect of credit to deposit ratio (CDR) on financial performance of microfinance institutions in Kenya. The study used secondary data specifically, the annual published financial statements and other financial records from Central Bank of Kenya (CBK). Other secondary sources included books, journals, online reading and other resource materials based on financial performance and non -performing loans. The study was guided by moral hazard theory, modern portfolio theory, stakeholder's theory and financial accelerator theory. Descriptive research design was used in the study and utilized cross -sectional data for period between years 2013 to 2017. Selected four MFIs operating in Kenya licensed to accept deposits and perform lending business formed the target population of the study and census method was used to select study sample. To establish non-performing statistics, Microsoft Excel and SPSS software's were used. Also, regression analysis of the SPSS was used to establish the effect of non-performing loans (NPLs) on financial performance of MFIs in Kenya. Overall, the study established that financial performance of MFIs is significantly and positivelyaffected by non-performing loans in various proportions despite loans being the main asset that generates income. The study recommended need for better credit or loan management systems. For instance, MFIs should rely heavily on the report of credit worthiness of borrowers provided by reference credit bureaus and proper business assessment before decisions to lend. Additionally, it is prudent to hire competent staff to manage the credit process. A furtherstudy should be undertaken on this area using both primary and secondary data and focus on one MFIs and increase sample size.

CHAPTER ONE
INTRODUCTON

1.1 Background of the Study

The emergence ofmicrofinance as a support to mainstream financial services provision hasbecome indeed a sigh of great relief for mostpeople and institutions that are often unable to partake in the formal financial sector even though its (microfinance) advent has also instigated some challenges (Chortareas, Logothesis, Magkronis, Zekente, 2016). Microfinance has built a solid track record of 130 million clients as a critical tool in the fight against poverty although this is less than 20% its potential market among the world's three billion unbankedor poor (KPMG, 2016).

MFIs' main business is to furnish credits and advances and to act as depositories of public savings. They generate income by collecting interest on loans and interest or dividends payments from the securities they own (Laryea, Ntow-Gyamfi & Alu, 2016). Loans, therefore, are the major output provided by the MFIs, but it is a risk output (EL-Maude, Abdul-Rahman & Ibrahim, 2017). Hence, MFIs usually want loans to be performing. The quality of credit determines the performance of the MFIs. For this reason, managing the credit risk should be given special emphasis, as the quality of credit risk management influences the success or failure of financial institutions (Kadioglu, Telceken & Ocal, 2017). Thus, the likelihood that MFIs will underperform, loose depositors or even collapse if the monies they loan out are not paid back by borrowers is high.Therefore,non-payment of loans which leads to non-performing loans constantly affects their performance in terms of finance to run their lending operations.

Essentially, non-performing consists of four aspects, namely, non-performing loan ratio, loan loss provision ratio, cost to asset ratio and credit to deposit ratio. As such, this study attempted todetermine these non-performing loan (NPL) situations on the financial performance of Micro-Finance Institutions (MFIs) focusing on four firms within the country.Some of the loans disbursed by the MFIs become overdue and at long last becoming a bad debt, which eventually affect the overall financial performance of the institution. In addition, a study investigated by Jameel(2014) on the reasons for bank failures denoted that asset quality is an important parameter and sign of insolvency, and that before the downfall of the institutions there is huge

level of NPLs. Therefore, in managing and controlling the lending portfolios, the study suggested bank management should give enough attention to the loans disbursed to customers.

In order to understand the effect of non-performing loans on financial performance in the context of this study, global and regional perspectives are discussed. In developed countries, for instance, Spanish and Greek banks, there has been a declining financial performance due to loan default (NPLs).The global financial crisis which originated in the US in 2007/08 was the result of the default of subprime mortgages. Specifically, high levels of NPLs in the financial statement, has adversely affectedbanks' operation in terms of liquidity, profitability, servicing capacity, lending capacity and ability to raise additional capital (Messai & Jouini, 2013).

In Pakistan also, the amount of NPLs are increasing gradually from 10% to 14% (Crowley, 2014). For instance, the MFI sector in Vietnamin 2014 - 2015 suffered major loan repayment crisis as a result of irregular loan supervision and follow-up (Lebovics, Hermes &Hudon, 2016). The portfolio at risk in these MFIs was at 19 percent despite many write offs while the No Pago group advocated for a moratorium law that allowed debtors a 10 year amortization period with a very low interest rate (less than 8 percent). This greatly reduced the total portfolio granted by MFIs to the poor in Vietnam.

In the United Kingdom, the loan arrears rose from 1 percent to 6 percent as a result of low remittances over a period of 3 years in 2015 among MFIs (Chossudovsky, 2015). Basically, this was attributed to poor appraisal mechanisms. Eventually, this led to 'high levels of cross-and over-indebtness' among MFIs, due to advanced loans given without following the laid down procedures (increasing maximum loan amounts and widening loan purposes and introducing new products).

Similarly, dos Santos, Gori Maia and da Silveira, (2016) noted that in 2013MFIs in Brazil found themselves in a crisis on delinquency. This crisis was as a result of multiple borrowing by clients facilitated by 'overheated lending environment created by lack of good skills and judgment on the part of the lender amongst the many MFIs and unknown number of unregistered lenders'. A similar crisis was experienced India in 2016 where poor appraisal led to a number of borrowers

committing suicide over indebtedness as a result of rising debt stress among thousands of clients which led to high default rates and the government had to step in and regulate the MFI sector (Shylendra, 2018).

Likewise, MFIs in Pakistan in 2010 experienced difficulties in loan recovery in the sector after heavy monsoon rains caused havoc in the country that resulted in people losing property, raw materials, tools and work spaces which affected means of livelihood and experienced difficulties in meeting their loan obligations (Sheikh & Sadaqat, 2015). In a similar fashion, Bosnia and Herzegovina MFI sector experienced a rapid rate of growth from 2012 – 2014 but later suffered high loan default due to weak risk assessment systems (Rehman, Moazzam &Ansari, 2015).

According to Akinlo and Emmanuel (2014), in Nigerian banking sector, its economy growth and development is greatly hit by NPLs. Ethiopia has 27,000 MFIs registered by National Bank of Ethiopia and massive default has been reported among them which threatened their operations until provision of inputs for credit by government was eventually stopped (Ayele, 2015). According to Ayele (2015), loan default among MFIs in Ethiopia is said to be a tragedy as it leads to system failure in implementing appropriate lending strategies and credible credit policies. The MFIs provide microcredit through group lending to the rural smallholders to narrow the gap between the demand and supply of credit (Mohummed & Wencong, 2016).

In Ghana, at the close of 2015, only about eight per cent of MFIs' outstanding loans were classified as non-performing, on average terms. The figure then marginally climbed to 10 per cent in 2016. However, by the close of 2017, it had steeply jumped to about 13 per cent, all on average terms(George,2018). Correspondingly, this is attributed to poor appraisal, ineffective training on proper funds management and lack of good skills and judgment on the part of the lender among other.

In South Africa, MFIs provide financial assistance to cooperative groups organized by farmers since groups have common goals and interests (Azad, Munisamy, Masum &Wanke, 2016). The researchers' further states, for the last three decades, these MFIs have been successful in granting loans but the trend has been worrying due to high default rate. Banwo and Onokala (2015)

observed that in Nigeria, 75 percent of government sponsored loans disbursed by MFIs, 59 percent were loan defaulters. In 1988-90, in Benin, all three commercial banks collapsed, 80 percent of the bank's loans portfolio were nonperforming, and in Cameroon, nonperforming loans portfolio reached 60-70 percent in 1993 and five commercial banks were closed and three others were restructured (Nobanee, Ellil & Abraham, 2017).

Angola, the region's biggest crude oil producer, 23 per cent of MFIs sector outstanding loans were classified as non-performing by the close of 2017, up from 17 per cent at the close of 2015 (Oppong,2015). Such surge in MFIs loan non-performance is closely linked to weak lending policies and poor loan monitoring mechanisms. In Tanzania, most rural MFIs suffer from weak internal control systems and high non-performing loans because of ineffective loans management (Zhu, 2018). The same challenges were experienced in Uganda's MFIs on the number of loans disbursed and very little attention given over the effectiveness of those loans borrowed by clients (Serwadda, 2018).

There are various theories which have been put forward to explain the effect of NPLs on financial performance, namely the moral hazard theory, modern portfolio theory, stakeholder theory and financial accelerator theory. According to moral hazard theory developed by Diamond (1984), a party to a transaction has hidden intention to undertake unexpected risk in an endeavor to gain from the other party before the agreement is accomplished by providing misleading information to the lender.

On the other hand, Penrose originally pioneered the stakeholders' theory and was later refined by Freeman (1984). Stakeholders' theory argues that there are other agents who are affected by decisions and actions taken by MFIs. This theory further notes that MFIs have a social responsibility hence they should make decisions and take actions which are in the best interest of the affected parties (Breuer, 2006). This study is also underpinned by modern portfolio theory (MPT) which was developed by Markowitz (1952). MPT deals with finance and investments and explains the benefit of diversification, where investors should maximize their returns through diversification in different assets.

The financial accelerator theory proposed by Gertler and Bernanke (1989) explains how small economic shocks have large effect on the borrowing and lending activities. It is based on the interplay between the external finance premium and the economic agent's net worth that arises due to asymmetric information between borrowers and lenders. These theories are relevant to the study hence the researcher adopted them.

In the recent past, Manyauanda (2014) argues that Kenyan MFIs have experienced rapid increase in the level of NPLs hence leading to liquidity problems. The liquidity problem has led to performance issues of MFIs in Kenya such as declined deposits. Defaulted loans are those risk assets not making revenue and have not been repaid for at least ninety days (Ugoani, 2015; Guy, 2011). Some studies have found out NPLs causes liquidation of financial organizations and thus eventually affect the entire wealth (Kane & Rice, 2011; Mombo, 2013; Manyaunda, 2014).

Essentially, financial crisis occurs due to letting NPLs go unresolved. To control NPLs, it is important for financial institutions to identify and understand its roots cause (Richard, 2011) and also institute mechanism of monitoring the behavior of borrowers. In his research Manyuanda (2014) describes financial performance as the subjective measure of an organization to engage its resources to make income. It is the general measure of firms' financial health for a given period of time. In management, financial performance is a very important aspect and cannot be ignored since it is central to the survival of any business enterprise (Mombo, 2013).

1.1.1 Non –Performing Loans

According to MFI Act (2008), non-performing loans refer to all loans in the portfolio that do not generate income for more than 90 days and are disclosed as supplemental financial information. In addition, Manyuanda (2014) describes non-performing loans as those assets in the organization which are no longer generating income. Also, Kavata (2016) further describes NPLs as a credit facility which the principal amount and interest have remained past due for a specific period of time. The researcher also referred non-performing loans as non-performing assets. Non-performing loans reflects how profitable a financial institution is, hence decrease in the ratio of non-performing loans shows improvement in the asset quality of microfinance institutions (Stuti & Bansal, 2013).

According to Kavata (2016) non-performing loans in loan portfolio affect liquidity, profitability and solvency position of financial institutions. The researcher further stated that financial crises are closely associated with non-performing loans. NPLs reduce microfinance net worth and make it difficult to invest funds in risky projects and it lowers microfinance risk taking capacity (Warue, 2013). A study by Adhikary (2013) pointed out that, non-performing loans occur due to lack of effective monitoring and supervision by the bank, weak legal infrastructure, lack of effective lenders recourse and poor or lack of effective debt recovery strategies. Similarly,Warue (2013) adds that NPLs are caused by a number of wrong economic decisions by management of the firm, inflation and plain bad luck.

NPLs can be measured by the value of non-performing loans divided by the total value of the loan portfolio. Higher delinquency ratios indicate that a firm is not recovering the loan disbursed as expected (Chossudovsky, 2015). Another measure of non-performing loans is by use of non-performing loans coverage ratio (NPLR) which refers to the ratio of allowance for probable loses on non-performing loans to total non-performing loans (Kavata, 2016). NPLR is computed as provision of losses in non-performing loans over total non-performing loans. The government has also put policy measure by licensing of credit reference bureaus in order to manage the NPLs and secure confidence in the financial system (Bloem & Gorter, 2001).For the purpose of this study, non-performing loan ratio, loan loss provision ratio, cost to asset ratio and credit to deposit ratio were proxies of NPLs among MFIs.

1.1.2 Financial Performance

Financial performance is an objective gauge of how skillfully an organization can utilize its resources to make income (Mombo, 2013). Similarly, Manyuanda (2014) defines financial performance as the general measure of an organization overall financial status over certain period. Operating income can be used to measure organizations with same features or weigh industries in aggregate. Budget execution thus cannot be ignored because it is an important aspect of financial management and it is central to health and survival of any business organization.

A business organization can easily close down its operations if it does not have a sound financial performance (Mombo, 2013). It is of great importance to any organization and should be evaluated frequently since it helps the management in planning smoothly for their cash flow. Future investment helps through the set systems to assess and ensure availability of liquidity and measure the level of profitability for decision making. Financial performance can be measured using various ways namely by return on sales (ROS) which shows how much do the company earn in relation to its sales. Return on assets (ROA) determines the capacity of an organization to make use of its assets and return on equity (ROE) which reveals what return investors take for their investments (Chenge & Bichanga, 2017).

The business ability to meet its financial obligation as they arise is determined by liquidity measures. Most MFIs use ROA to measure their performance since it gives investors an idea of how effective the MFIs is in converting the money it invests into net income. As such the current study will model its measurement or determination of financial performance on ROA.The microfinance institutions regulatory authority requires all registered MFIs to maintain a liquidity ratio of not less than 15%. Another type of financial performance measure is the solvency measure which determines the amount of borrowed capital used in an organization relative to the owners' equity capital invested an organization. This solvency measure indicates an organization ability to repay all its debts if all the assets were sold (Vogiazas & Nikolaidou, 2014).In this respect, this study used ROA to determine financial performance of MFIs in Kenya.

1.1.3 Non Performing Loans and Financial Performance

Financial performance of an organization is affected by NPLs because loans are the main investment of an organization that is needed to generate revenue. If loans given out to customers are not recovered together with interest, it shows that more resources will be needed for the provision for NPLs and the organization will incur additional costs for financing recovery efforts (Oloo, 2014). According to Harelimana (2017), NPLs affect future stream of profits since they hinder the interest earnings and further necessitates an opportunity forgone of venturing in some profit-making schemes. Similarly, Kavata (2016) noted NPLs have an element of making a choice to forgo best alternative of non interest earning loans that could have been ploughed in elsewhere and provide good income. Again, Harelimana (2017) further noted NPLs are time

consuming and involve efforts of the bank management hence banks have to accommodate and cope with. Financial institutions facing NPL's challenge have an adverse effect in its credit rating and further reduce the chances to co-financing and amalgamation with other banks. Therefore, huge amounts of NPLs affect financial institution profitability and can threaten the survival of the commercial bank.

In addition, Mombo (2013) argues that loan loss provision and costs per loan asset consume large portion of the profits earned by microfinance institutions hence their financial performance become retardant. An organization level of NPLs determines how that organization profitability will be because it forms the biggest portion of the discrepancy in the revenues of the financial organizations (Lelgo & Obwogi, 2018). According to Warue (2013) there exist a contrast link between NPLs and financial performance in an organization. The researcher further states that, when NPLs are high in an institution, the financial performance of that organization is low and when NPLs are low in an organization that financial performance of that organization is high. Similarly, Kavata (2016) noted that increase in NPLs hits banks' profitability directly since it has a negative effect returns on assets (ROA).

1.1.4 Microfinance Institutions

According to Mombo (2013) MFIs are financial instruments like loans, savings, insurance and other financial products that are designed only to the poor. Mombo has further noted that the creation of such institutions in the economy was for the economic benefit of the poor and to mitigate poverty. The microfinance act was established in May 2008, its main aim was to manage and control the formation, business and undertaking of MFIs in Kenya through licensing and monitoring. Through its establishment, a number of micro-finance institutions were permitted to apply for license in order to enable them take deposits from members and general public.

A study by Oloo (2014) noted that over the last few years there has been a rapid rise in NPLs in the MFIs and this has led to an increase in debt exposure which has a negative impact on the level of corporate liquidity of the firms. MFIs in Kenya face a challenge of creating a balance between achieving financial growth and contributing towards poverty reduction hence this may

expose the firms to credit risk. MFIs offer lending services known as micro credit (Kavata, 2016). The micro credit enables the borrowers to be involved in viable income generating activities that makes them to accumulate savings and improve their living standards.

The micro finance Acts has grouped MFIs into three categories, depending on the type of registration namely Deposit Taking Microfinance institutions (DTMs) that are allowed to take deposits from their customers and are controlled by the central bank of Kenya (CBK, 2017); lending non-deposit institutions such as non-registered MFIs , saving and credit co-operative societies (SACCOs) which are regulated by Societies Regulatory Authority (SASRA) and informed organizations, such as club pools and financial services associations. The Kenya's microfinance sector comprises of nearly 250 MFIs, with only 56 registered under the Association of Microfinance Institutions and only thirteen (13) regulated microfinance banks (CBK, 2017).

MFIs in Kenya just like other MFIs in the world provide credit facilities to their members/customers in order to develop and grow their businesses for profit motive. On weekly or monthly basis, members contribute deposits and the accumulated deposits make members to qualify for loans either through a group or individual. For members to qualify for a loan, they should have made several deposits as savings to the MFIs whereby a formula is used to calculate the amount of loan to be granted to the member, this varies from one MFI lending policy to another (Ozurumba, 2016). The member's guarantors and shares are used to secure the loans given out to members however sometimes the loans given out are not recovered as expected leading to non-performing loans (Bosire & Gathogo, 2012).

1.2 Research Problem

MFIs play a key role in poverty reduction by increasing access to financial services and products among the low-income households in the developing countries. In fact, MFIs are formed with a purpose of strengthening and encouraging direct involvement of groups and individuals in well-grounded businesses and upgrading their social and economic status by providing sustainable financial and social support. However, poor performance has continued to hit the banking sector despite the intermediation (Mung'aho, Ondiek, & Odhiambo, 2016); (Warue, 2013).

According to central bank of Kenya (CBK) 2017 report, Kenya's microfinance sector loss hit to $7.31 million as at December 2017, compared to 2016, which recorded $ 3.77million thus contributing to huge reduction of financial income. The sector which posted profits in 2015/2016 period also had non- performing loans increase by 25.6% from $73.71 million to $99.1 million. Deposits by customers dropped to $394.16 million from $401.98 million for previous period 2015/2016. The increased NPLs affected the capital base which had risen to $104 million as at December 2016, dropped to $98.1 million this pushed CBK to put a requirement of $600,000 as the core capital. MFIs are faced with challenges which include cap on interest rates and changing market dynamics thus leading to credit risk which has contributed to increased NPLs, reduced reliance on deposits and increased reliance more on expensive borrowed funds (CBK, 2017).

NPLs affect earnings of MFIs in Kenya by decreasing ROA which is a measurement of financial performance (Kavata, 2016). MFIs are constrained in decreasing NPLs that affect financial performance of MFIs in Kenya. Despite actions taken to minimize NPLs, they have persisted to rise and MFIs have recorded a rise in NPLs (Wangai, Bosire & Gathogo, 2014). Financial institutions obtain income from interest charged on loans hence if non-performing loans are reduced; the institution will benefit and get high profits leading to growth and development of the organization (Manyuanda, 2014).MFIs success is rooted on its performance and quality of the assets it possesses.

Despite poor performance among MFIs in Kenya, little empirical evidence exists on non-performing loans and financial performance in the country. A study examined by Wangai, Bosire and Gathogo (2014) on effects of NPLs on financial performance of Micro Finance Banks (MFB) in Nakuru town -Kenya, indicated that credit risk negatively affected financial performance of MFI's in Nakuru town. Another study carried out by Manyuanda (2014) on the effect of NPLs on the financial performance of SACCO's in Nairobi county- Kenya, reflected that there is a strong association between non-performing loan ratio and ROA. Similarly, Kavata (2016) examined the effect of NPLs on profitability of commercial banks in Kenya and the findings indicated that non-performing loans negatively affect profitability of commercial banks in Kenya.

A study by Fawad and Taqadus (2013) investigated the explanatory power of bank on determinants of NPLs in Pakistan banking sector. The study findings indicated that financial performance of banks in Pakistan is affected by non-performing loans. In Rwanda also, Harelimana (2017) carried out a study on the effect of non-performing loans management on financial performance of commercial banks. The study findings indicated that non-performing loans affects the financial performance of banks in Rwanda.

In spite of such studies among,on NPLs and financial performance in different context with a varied regulatory, economic and cultural set up, where to the knowledge of the researcher little study has been conducted on the effects of non-performing loans on financial performance of MFIs in Kenya. The research therefore,intended to fill this knowledge gap by investigating the effect of non-performing loans and financial performance of MFIs in Kenya.

1.3 Research Objective

1.3.1 General Objective

The objective of the study was to determine the effect of non-performing loans on financial performance of MFIs in Kenya.

1.3.2 Specific objectives were:

i. To assess the effect of non-performing loan ratio on financial performance of micro finance institution in Kenya.
ii. To examine the effect of loan loss provision on financial performance of microfinance institutions in Kenya.
iii. To determine the effect of cost per loan asset ratio on financial performance of microfinance institutions in Kenya.
iv. To establish the effect of credit to deposit ratio on financial performances of microfinance institutions in Kenya.

1.4 Research Questions

(i) What is the effect of non-performing loan ratio and financial performance of microfinance institutions in Kenya?

(ii) What is the effect of loan loss provision on the financial performance of micro-finance institutions in Kenya?

(iii) What is the effect on cost per loan ratio on financial performance of microfinance institutions in Kenya?

(iv) What is the effectof credit to deposit ratio on financial performance of microfinance institutions in Kenya?

1.5 Justification of the Study

The purpose of the dissertation was to examine the effect ofnon-performing loans and financial performance of MFIs in Kenya. While NPLs in relation to areas such as performance, organization structure among others has been identified and studied in previous research in the context of bigger firms, there is a little knowledge about the effect of non-performing loans on financial performance of MFIs in Kenya. Undeniably, the broad topic of performance in relation to NPLs has received attention, but NPLs on financial performance is not the focus of that attention.

MFIs have become very crucial in poverty alleviation and provision of financial services to the unbanked hence needs more attention than ever before. As such, the results of this study may provide insight into how NPLsaffect MFIs hence provide best practices. Equally, non-performing loanshave had worse and damaging repercussions on firms and therefore it is necessary to give closer scrutiny of this issue to avoid such eventualities to MFIs which serve an enormous percentage of society.

The study was conducted on MFIs in Kenya. The choice of the study area was due to the fact that very little study has been done in the country to the knowledge of the researcher. Besides, most of the MFIs in Kenya are not doing well, which therefore required a study to ascertain the causes as well as recommendations to address the issue.

1.6 Significance of the Study

The study is anticipated to be useful in expanding the existing strands of literature on NPLs and financial performance. It is expected to be of help to the future researchers as a point of

reference. Similarly, the study is expected to be helpful to different government agencies involved in making by laws of MFIs in Kenya; in implementing the various measures they have put in place and to ensure compliance to provisioning and loan asset reporting. The relevant bodies could employ the research findings to establish guidelines that would help in managing NPLs in MFIs in Kenya. On the same note, this studyshould enable the financial consultants to know the responsiveness of ROA to NPLs and be able to make their financial advice to micro finance institutions and other stakeholders.

In addition, the study is meant to be useful to all MFIs in Kenya at large in evaluating the effectiveness of managing NPLs. The management of MFIs will be enabled to identify the gaps in monitoring and controlling of non-performing loans and adjust accordingly. This study should enable the executives to find and understand in-depth of how NPLs affect the institutions financial performance and enable them to engage the betterloan-performing strategies.

1.7 Scope of the Study

The research problem was to identify the effect of NPLs on financial performance of microfinance institutions in Kenya. The dependent variable was financial performance, whereas non- performing loans was the independent variable.Non- performing loan ratio, loan loss provision ratio, cost per asset and credit to deposit ratio were the independent sub-variables. The study used panel secondary data for a period of 5 years (2013-2017) and was restricted to selected four (4) MFIs in Kenya. The MFIs surveyed included, Faulu- Kenya, Kenya Women Microfinance Bank, Small and Micro Enterprise Program (SMEP) and Rafiki Microfinance Bank.

1.7 Limitation of the Study

Like most previous, the present study had all the preliminary undertakings to ensure the objectivity, authenticity and enduring nature of the examination, yet some limitations were experienced. The study is delimited to investigating the effect of NPLs on financial performance of microfinance institutions in Kenya, hence may ignore other critical factors that may have affected the financial performance among MFIs in the country. In addition, the study is confined

to Kenya hence the findings of the study may not be generalizable across the world due to contextual factors.

Likewise, NPLs among the selected 4 MFIs having their unique dynamics might not be a true representation of financial performance in Kenya. Similarly, the study used secondary data and utilized financial indicators in determining the effect of NPLs on financial performance of MFIs; however, there could be non-financial indicators of performance like balanced score card (BSC). In addition, to obtain secondary data there was a lot of bureaucracy due to sensitivity of the MFIs matters hence it was time consuming.

1.8 Chapter Summary

This chapter examined the background to the research problem by breaking the issue into sub-themes (objectives) and cites various instances of loan default around the world, regionally and relate the same to the local scope of the study. Also, discussed in this chapter was statement of the problem, research objectives and questions. Further, justification, significance and scope of the study as well as limitations to the study, were given attention.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter presents theoretical foundation, empirical literature review, summary of the literature review, gaps and conceptual framework.

2.2 Theoretical Literature Review

Theoretical literature introduces and describes the theory that explains why the research problem under study exists. Theories are formulated to explain, predict, and understand phenomena and, in many cases, to challenge and extend existing knowledge within the limits of critical bounding assumptions. Without theoretical literature, the structure and vision for a study is unclear, much like a house that cannot be constructed without a blueprint. By contrast, a research plan that contains theoretical literature allows the dissertation study to be strong and structured with an organized flow from one chapter to the next (Ravitch & Riggan, 2017). The current study applied moral hazard theory,modern portfolio theory, stakeholders' theory and financial accelerator theory.

2.2.1 Moral Hazard Theory

Moral hazard theory was born by Diamond (1984). This theory is based on moral hazard which refers to the condition leading to risk where a party (the borrower) gives false and misguiding information on financial statement assets, liabilities or credit ability, or has a hidden intention to take uncommon risks in an effort to gain revenue before the parties settles their contract. In many occasions as cited by Wangai et al., (2014), a party to a transaction may not enter into the contract in allegiant, thus resulting to misleading information on his books of account.

The moral hazard may result from asymmetric information between the financial institution and the customer thus making it difficult to differentiate between a bad and a prospective borrower (Richard, 2011). In many occasions, customers referred to as the borrower may fail to honor the agreement with the bank in good faith thus giving misguiding report about financial status or

credit worthiness. According to Mohaddes, Raissi and Weber (2017), moral hazard problem has led to notable collection of NPLs resulting from generous government guarantees.

Moral hazard theory was applicable for this study because both the borrower and financial institution intentionally fail to disclose vital information related to lending and borrowing contract. MFIs with low capital may respond to the moral hazard motive by hiking the exposure of their loan portfolio (Wangaiet al., 2014). MFIs should avoid moral hazard incentives like low equity since these incentives aggravate NPLs in order to mitigate losses caused by NPLs. In addition, affected financial systems and financial intermediation require accurate information about borrower and the venture the credit is used for (Chege & Bichanga, 2017).

2.2.2 Modern Portfolio Theory (MPT)

This theory was originally advanced by Markowitz (1952) and is among significant economic theories concerned with money and wealth making since it weighs the advantages of diversification called "not keeping all your eggs in one basket". As an investment theory, it explains how investors could optimize their wealth and reduce their exposures through introduction of different products in various portfolios. In 1958, Tobin elaborated portfolio theory further by including analysis of risk-free investments. This enabled to impact portfolios on the efficient frontier. Both Markowitz (1952) and Tobin (1958) implied maximum portfolio of risk securities components are achievable and can be known, given future returns projections and suitable co-variance matrix of share returns.

According to Atamnkeng and Nzongang (2012), the portfolio theory approach is commonly applicable and acts a vital task to financial institution performance studies. The management of MFI's should make decisions on the portfolio management and the desired portfolio composition based on policy decision which are determined by firm such as quantity of return on all assets held in the assorted investments, the risk linked with possession of every financial asset and the magnitude of the investment (Kavata, 2016).

In order to mitigate and minimize risk in loans which lead to NPLs (default), MFI's should consider diversifying their investment portfolio and thus relevant for this study. The revenue

diversification theory concept matches the portfolio theory conceptualization indicating investors can minimize certain exposures through portfolio diversification. Through portfolio diversification, MFIs will reduce NPLs and have increased return on asset since diversification provides a firm with less turbulent income, economies of scope and scale and the potential to leverage managerial efficiency across product (Kavata, 2016).

2.2.3 Stakeholders Theory

The stakeholder theory was pioneered by Penrose (1952) and later refined by Freeman (1984). The stakeholder theory argues that apart from shareholders, there are numerous agents (groups) that have interest in running and management of corporations called stakeholders and are affected by decisions made by MFIs. Stakeholders include investors (shareholders), employees, customers, managers, creditors, suppliers, government and the community at whole. The stakeholders' theory asserts that business organizations which include microfinance institutions and banks have an obligation to the society and thus necessitates them to factor the interest of all stakeholders affected by their actions.

Further according to this theory, the management should consider all parties affected by its action in addition to shareholders when making decisions in regards to the organization. Top management is challenged through stockholder's achievement appraisal, to review broadly organization wealth creation from the view of the stakeholders who are key participants in organization growth. The appraisal achievement accords management with required report which helps management in upgrading their administration style and work keenly with all respective parties in their locations for business expansion. A study by Freeman, Harrison, Wicks, Parmar and De Core (2014) noted stakeholder theory postulates that the goal of any institution should always be the prosperity of the organization and its key stakeholders.

A number of people have interest in stakeholder theory as a subject of investigation. A detailed evaluation of corporate governance has been provided byBreuer(2006) with a specific focus on stakeholder theory. The authors noted the existence of many parties interacted in the well-being of the firm and that these groups often had an emulating interest. On one hand, are the

shareholders who may welcome investment in high yielding but risky projects. This may not go well with the credit provider especially when the company is in the verge of bankruptcy.

Stakeholder's theory was applicable to the current study, since one of the stakeholders to MFIs is the customers who borrow loans. They are the source of income to the firms through borrowing the firm cash for investment in exchange (Berman, Andrew, Kotha & Thomas, 2015). When the customer fails to pay their installment on due date due to reasons like loan over pricing, level of NPLs raises hence poor financial performance of the MFIs.

2.2.4 Financial Accelerator Theory

This theory was advanced by Bernanke and Gertler (1989) and seeks to explain how small economic shocks have large effect on the lending and borrowing business. It pegs on the interaction between economic agent's net worth and the external finance premium that occurs due to asymmetric information between lenders and borrowers. This theory presents that the less the amount of borrower's wealth contribution to the project the more the borrower's interest will diverge from the interest of the supplier of the external fund.

According to financial accelerator theory borrowers are more eager to undertake riskier projects which have high probability for huge profits and also those contributing to low gains (Bernanke, Gertler & Gilchrist, 2015). These projects favor the borrower since the firm losses in the case when the projects return is low or limited to zero by legal regulations. From the lenders point of view, these projects are unfavorable for they bear all or most of the costs in the case of low projects returns. Due to economic shocks the theory further indicates that the borrowers may not be in a position to borrow and are likely to stop repayments of their loans hence eventually leading to non-performing loans (Bernanke et al., 2015).

This theory was relevant because microfinance institutions should be alert on the economic trends and make wise decisions during the time of loan appraisal, carry out proper and thorough business assessment, and also set clear policies and monitoring to avoid bad debts. Microfinance institutions need to enhance their control by considering tangible collaterals, or lend secured loans in case the borrower defaults.

2.3 Empirical Review

This section presents previous studies conducted in the area of current study. It is from the review of empirical literature that the research hypotheses have been developed for further investigation.

2.3.1 Non-performing Loan Ratio and Financial Performance

Non-performing loan ratio (NPLR) denotes the total default loans over total outstanding loans and advances. NPLR mainly reflects financial institutions credit risk (Gizaw, Kebede and Salvaraj, 2015). Various studies have examined the relationship between non-performing loan ratio and performance of various business entities across the world. Definitely, these studies might not have conceptual similarity with the current study but at least, they shade light on the relationship between non-performing loans and different dependent variables therein.

A study by Alshatti (2015) examined on effect of non-performing loan ratio on financial performance of 13 Jordanian commercial banks for the period 2005 to 2013. Using panel data the study revealed that credit risk has a positive effect on financial performance on Jordan banks and further capital adequacy ratio (CAR), credit interest to credit facilities and the leverage ratio do not affect the profit of the banks measured by ROE implying other variables effect on bank profitability, hence need to carry out the current study.

Another study by Hasan and Wall (2014) analyzed the determinants of bank loan loss allowance for samples in US banks and non-US banks in 21 nations for a period between 2003- 2010. The fundamental determinants (non-discretionary) included non-performing loans and discretionary determinants used income before the loan loss provision. Using data techniques to analyze, the study revealed that high amount of NPLs is linked with bulk levels of loan loss provision reserve. However, some variable like net charge offs reflected fundamental factor in US analysis are not a significant factor for non-US banks. The current study seeks to find out if there is a contextual gap and has narrowed the study to one nation for a 5 years period.

A similar study by Boudriga, Boulila and Jellouli (2011) to analyze the cross-countries determinates of non-performing loans and the potential impact of regulatory factors on credit risk

exposure employed aggregate, financial economic and legal environmental data for a panel of 59 countries for period 2002-2006. The study showed that higher loan loss provision tends to reduce the levels of impaired loans with eventual severe financial performance consequences.

A study by Bloem and Gorter (2001) examined the relationship between non-performing loan ratio and financial performance. The study established that unstable NPLR affected financial performance of financial institutions. They also indicated that poor management, poor supervision, overoptimistic assessments of creditworthiness during economic booms and moral hazards resulting from generous government guarantees could also lead to loan default.

Locally, in Kenya, Wangai et al.,(2014) performed a research study on effect of non- performing loans on financial performance of microfinance banks (MFBs) at Nakuru town. The study used primary data on 66 credit and management staff for specific period September to October 2014, and was guided by credit risk measured by NPLR; macroeconomic factors like inflation and growth rate formed the control variables. Pilot testing was done prior to the main study, descriptive and inferential statistics was applied to analyze the data.

Finding from the study revealed that increase in credit risk would significantly reduce the financial performance of MFBs. However, the study did not show sufficiently how financial performance will be measured, thus the current study intends to fill the gap by using ROA to measure performance. On the same note, the study was investigated for a particular point of time September and October hence the current study intends to expand the time frame and utilize secondary data.

A study aimed to investigate credit risk management and profitability of 43 commercial banks in Kenya by Kithinji (2013) for the period 2003 to 2008 measured credit risk by NPLR and profitability was proxied by ROA. Using panel data techniques, the study revealed that huge profits of commercial banks are not affected by the amount of credit and NPLs but other variables impact on profits. Thus, the current study will explore other variables like; liquidity measured by credit to deposit ratio; operational risk factors measured by cost per loan asset ratio to assess the effect of NPLs on MFIs profitability.

Study byMombo (2013) investigated the effect of NPLs on financial performance of deposit taking MFIs in Kenya using data set for 7 MFBs for a period of 5 years. NPLRs, rate of loan repayments and operational costs measured NPLs and performance was measured by ROA. Using data analysis techniques, the study established that NPLs account for the percentage of profitability in the MFIs. However, the variables show a 64.6% of the profitability where NPLs and operations cost has great significant implying other factors effect MFI performance hence need to conduct the current study.

2.3.2 Loan Loss Provision and Financial Performance

Loan loss provision (LLP) is that cost allocated for unrecovered debts and loan installments. LLP covers significant loan losses like customer defaults and bad loans. Financial institutions with anticipation of high equity losses may give higher provisions to loan loss in order to minimize returns fluctuations and build up their solvency (Ahmad, Takeda & Thomas, 2010).

A study byMendoza and Rivera (2017) conducted a secondary data based on quantitative approach of 576 rural banks on the relationship between loan loss provision ratio proliferation and financial performance. The study observed loan loss provision ratio proliferation negatively affected financial performance of financial firms. The authors advised much importance be placed on the lender's role in ensuring good decisions relating to the granting of loans in order to minimize credit risk.

Also, the above study share sentiments of Hasan and Wall (2014) who examined a relationship between non-performing loans with loan loss provision reserve. Using secondary data, the study revealed that high amount of NPLs is linked with bulk levels of loan loss provision reserve. The study recommended viable intervention and preventive credit management systems to reverse the NPL proliferation among financial institutions.

The above studies, however, contradict the findings of Lata (2014) which showed a negative significant relationship between the two variables. Annor and Obeng (2017) established a statistically significant negative relationship between asset ratio and the profitability of a bank. Equally, the results are in contradiction to Kodithuwakku (2015) study which explored the

relationship between credit risk management and performance of 8 commercial banks in Sri Lanka for a five year period from 2009 to 2013 and revealed that non-loan loans provisions have a negative impact on the financial performance of the institutions.

In Uganda, Serwadda (2018) analyzed the impact of credit risk management on the financial performance of 20 commercial banks for a period of 2006-2015. ROA was used to measure the bank performance, while NPLs, LLP to total loans and growth in interest earnings measured credit risk. Using panel data estimation techniques, the study indicated banks performance is inversely influenced by NPLs and that credit risk management impact on the performance of Ugandans banks.

Study by Muriithi, Waweru and Muturi (2016) aimed at assessing the effect of credit risk on financial performance of 43 commercial banks in Kenya for a period between 2005 and 2014. Credit risk was measured by capital to risk weighted assets, loan and advances ratios, assets quality and loan loss provision while financial performance was computed by ROE. Using panel data technique, the study indicated that credit risk has a negative and significant relationship with bank profitability, further the study showed poor asset quality to total asset relates to poor bank performance both in short and long run. However, the current study shall use return on asset to measure performance of MFIs in Kenya.

2.3.3 Cost per Loan Asset and Financial Performance

Cost per loan asset (CLA) is average cost per loan disbursed to borrowers and is denoted by dividing total operating costs by total loans amounts. There are mixed results from the empirical studies on the effect of cost per loan asset (CLA) on financial institution profitability. Using pooled data for 14 commercial banks in Nepal, Bhattarai (2016) examined the effect of NPLs on the profitability of commercial banks for the period 2010 to 2015. NPL was measured by NPLR and cost per loan asset ratio, performance on the other hand was measured by ROA and ROE, while firm size, GDP growth rate and inflation rate formed the control variables.

Using panel data estimation techniques, the study indicated NPL has a negative effect measured by ROA whereas NPLs has a positive effect measured by shareholders returns- ROE.

Moreover,cost per loan asset has a positive significant association with bank profitability as measured by ROA. However, this study was carried in Nepalese context with a varied regulatory, cultural and economics set up; the current study will use ROA to measure performance of MFIs in Kenya.

A similar study by Pondel (2012) explored on impact of credit risk management on financial performance of 31 commercial banks for a period of 11 years (2001-2011) in Nepal. Various parameters including default rate, cost per loan assets and capital adequacy ratio measured the credit risk whereas profitability was proxied by ROA. Using data techniques, the study showed negative but statistically insignificant association between CLA ratio and bank achievement measured by ROA. However, default rate was the most predictor of banks performance and had an inverse impact. The current study sought to fill the contextual gap by conducting effect of NPLs on financial performance of MFIs.

Panta(2018)investigated the bank-specific and macroeconomic determinants of non-performing loans on profitability. The study used secondary data of 7 joint ventures from the year 2006 to 2017 with a fixed effect panel model. The bank-specific variables taken are capital adequacy, net interest margin, the size of banks measured by total assets and loan to deposit ratio. Similarly, the macroeconomic variables include GDP growth, inflation and loan concentration of the banking industry measured by the Herfindahl-Hirschman Index. The study finds the net interest margin (NIM) has a positive and significant effect while the bank size has a negative and significant relationship. However, the macroeconomic variables do not relate. Furthermore, when the net interest margin, bank size & non-performing loan are used as an independent variable, its significant effect is seen with the profitability.

Another study by Kurawa and Garba (2014) aimed at evaluation of the effect of credit risk management (CRM) on the profitability of Nigerian banks for the period from 2002 to 2011. The study aimed to discover the extent to which default rate (DR), cost per loan asset (CLA) and capital adequacy ratio (CAR) influence profitability measured by ROA. Using least square regression technique, the study findings established that CRM measured by default rate, cost per loan asset and capital adequacy ratios have significant positive effect on profitability of Nigerian

banks. Thus, the current study tends to fill the contextual gap by utilizing cross sectional and time series data as opposed to pooled least regression model to establish the effect of NPLs on financial performance of MFIs in Kenya.

A study to investigate on the impacts of credit risk management on the financial performance of commercial banks in Kenya by Musyoki and Kadubo (2012), ten banks were sampled for a period of 7 years (2000-2006). Default rate, bad debt cost and cost per loan asset were used as proxies to CRM, whereas profitability was computed by ROA .Using data techniques, the results revealed that all the parameters (default rate, bad debt cost and cost per loan asset) have statistically and negative impact on financial performance of banks with default rate being major predicator of banks financial performance. The current study sought to evaluate the effect of NPLs on MFIs financial performance and determine if there is any variation in the findings.

2.3.4 Credit to Deposit Ratio and Financial Performance

Credit to deposit ratio (CDR) is used frequently as statistical way to measure liquidity in a financial institution. A study by Patil (2018) interested with audit risk on public and private banks performance used panel data of 40 commercial banks (24 public and 16 private) for a period of 16 years (2000-2015). Gross non-performing asset ratio, loan loss allowance to total advances, credit to deposit ratio and loan loss advances to assets were the proxy for credit risk whereas deposits and bank size measured by natural logarithm of assets formed the control variables. ROA, ROE, and NIM were used for measure performance.

Using data technique, the study revealed a positive and significant relationship between loan loss allowance and ROE, ROA and NIM. Similarly, credit to deposit ratio positively influenced the banks performance measured in all the parameters. However, loan loss allowance to non-performing assets inversely and significantly influences all the 3 performance indicators. However, the current study will use a specific parameter ROA to measure financial performance and apply a smaller database and with specific characteristics like nature of clientele, liquidity infrastructure underlying the MFI operation.

Another study examined in Malaysia by Tumin and Said (2011) aimed to determine the impact of bank specific factor on effect of credit risk and financial performance on 26 commercial banks for a period of 6 years. Credit risk was measured by liquidity, bank size and capital asset. Performance was measured by Return on Asset (ROA) and return on equity (ROE). The study results implied ratios employed have different effect on performance, with liquidity measured by credit to deposit ratio having no relationship with bank performance. On contrary, this study was performed in a developed country -Malaysia with different economic and regulatory background and set up.

A study by Bichanga and Chege (2017) examined NPLs and financial performance using data set of 44 commercial loans in Kenya for the period 2011 to 2015. NPL was measured by bank size, liquidity, operating costs and capitalization bank ratio while ROA measured performance. Using data analysis techniques, the study indicated that NPLs have a significant effect on financial performance and in specific bank factors including bank size, capitalization and operating cost. In addition, liquidity measured by credit to deposit ratio has statically insignificant effect on financial performance. However, this study was performed on commercial banks set up, thus the current study shall be carried on MFIs to find out if there is any significant.

In Pakistan, a study by Hamza (2017) on impacts of CRM on banks performance was carried for a period 2005-2014 on 13 commercial banks. Using pooled regression model bank performance was proxied by ROA and ROE, while CRM was measured by LLPR, CAR, liquidity ratio, NPLR, loan and advances ratio and bank size. The study results indicated that CRM is inversely associated with bank performance measured by ROA and ROE and have significant impact. However, this study was conducted in a developed country and therefore the current study sought to use panel data to carry out investigation on MFIs in Kenya.

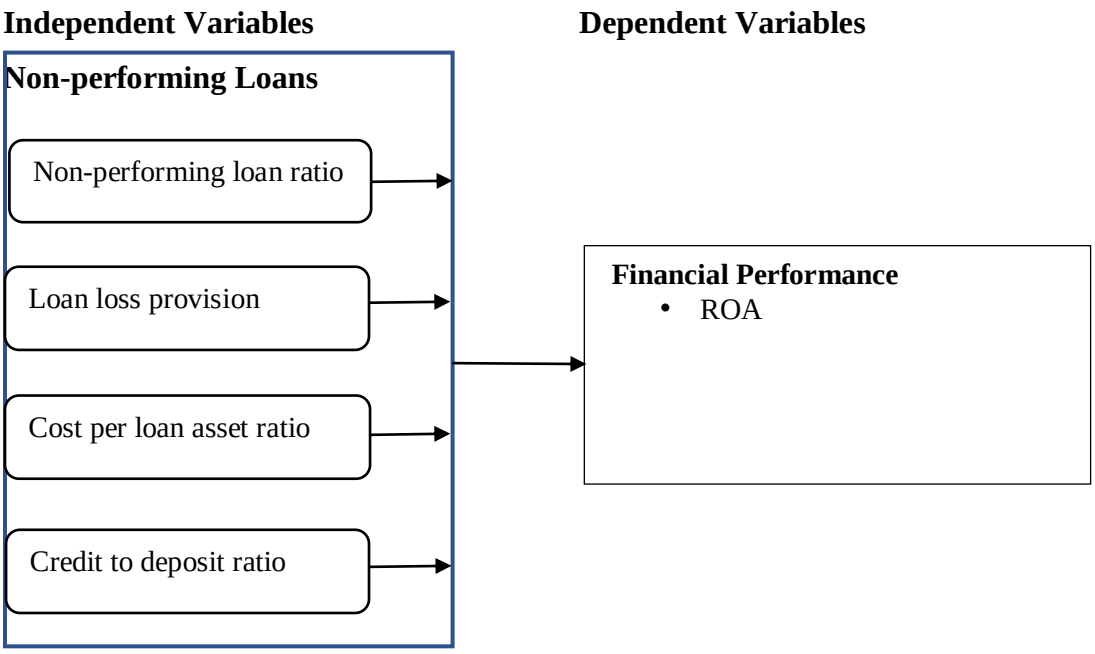
These findings are an important confirmation of Bernstein (1996) results that revealed that non-performing loans significantly affect costs and thus determine the financial performance of an organization. Further Abreu and Mends (2002), Ferdi (2005), Fitriani (2010) and Rasiah (2010) found that there is a positive and significant relationship between loan deposit ratioand bank profits. However, this finding is in direct contradiction to another study in Malaysia by Tumin

and Said (2011) who concluded that credit to deposit ratio have no relationship with bank performance.

A study by Gathuni, (2015) on the effectiveness of credit management system on financial performance on microfinance sector in Kenya and examined 70 credit officers of the 14 microfinance institutions registered and operating in Meru town .They used a Chi-square and found that top management involvement in formulating credit terms does not affect financial performance, a high involvement of credit officers had a significance effect on financial performance.

2.4 Conceptual Framework

Basically, the conceptual framework is a diagrammatically representation of variables and how they relate. The conceptual framework indicates the association between the dependent variable (financial performance) and the independent variables (NPLs) under study. It is developed from the literature review discussed above and presented in the Figure 2.1 below.



Source: Author, 2019

Figure 2.1: Conceptual Framework

The framework above explains the relationship between the independent and dependent variables in the current study. NPLR, loan loss provision ratio, cost per asset ratio and credit to deposit ratio were used to measure NPLs, the independent variable. The dependent variable was financial performance which was proxied by ROA. The study used ROA since it gives investors a good idea of how effective the MFIs are converting the money it invests into net income. In the event NPLR, loan loss provision ratio, cost per asset ratio and credit to deposit ratio were not favorable, there is non-financial performance and the reverse is true.

2.5 Literature Review Summary and Gaps

From the different literature discussed it was evident that both theoretical concepts and empirical studies subsists on NPLs and financial performance that affect a number of financial institutions including commercial banks & MFIs, with commercial banks being largely affected. However empirical review indicated varied outcomes on effect of NPLs and financial performances of various financial institutions. From the studies mentioned, some confirm NPLs effect on the financial performance of organizations especially commercial banks. Review of the literature generally agreed that apart from credit risk, there are other variables like liquidity, default rate, loan loss provision, management practices towards NPLs and CLA that have effect on institution sustainable performance.

From the empirical studies on effect of NPLs and financial performance majority have shown focus on commercial banks leaving MFIs a gap for researchers to carry out studies. Similarly, many of the studies are from varied context with different economic, regulatory and culture set-up and close in Kenya, few studies a knowledge gap to be filled. This study was therefore aimed at bridging the gap in the field of study on effect of NPLs and financial performance of MFIs in Kenya.

The study focused on the following financial theories in the course of the study, moral hazard theory, modern portfolio theory, stakeholders' theory and financial accelerator theory. MFI specific ratios affecting performance applied in the study are non-performing loan ratio, loan and loss provision ratio, cost per asset ratio and credit to deposit ratio.

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

A research methodology is a systematized interrogative and survey either by hypothesis formation or scientific testing of any investigation by adhering to standard rules and procedures (Fusch & Ness, 2015). In this chapter, the researcher presents a discussion on the research methodology that was adopted in investigating the effect of non-performing loans on the financial performance of microfinance institutions in Kenya. Among the pertinent issues that are discussed include the research design; the target population; the techniques that were employed to arrive at the sample size; data collection methods and the techniques to be adopted in analyzing the data that was collected.

3.2 Research Design

Research design is a framework that shows how issues under investigation are solved (Kothari & Gang, 2014). According to Upagade and Shende (2012) it is an outline for data assembling, measurement and analysis. Descriptive survey design of selected registered and regulated micro finance institutions operating in Kenya was applied. A descriptive survey is a design that involves establishing what is happening as far as a particular variable is concerned. Author Mugenda and Mugenda (2003) suggested that descriptive studies are simple and easy to conduct. This design fitted the current study for it enabled the researcher to also use quantitative data in trying to examine the effect of NPLs and financial performance of MFIs in Kenya.

3.3. Target Population

Population as Sekaran (2015) defines, is a group of people or things of interest that the researcher wishes to investigate. Target population also known as the theoretical population, has varying characteristics and it refers to the entire group of individuals or objects to which researchers are interested in generalizing the conclusions (Kihn & Ihantola, 2015). The study

population is the population that is derived from the target population to which the researchers use for smooth conducting of research and can apply their conclusions. It is from the study population that researchers draw their samples (Galvan, 2015).

For this study, the target population wasselectedMFIs operating in Kenya. Although currently there are 13registered DTMs, only four (4) microfinance institutions which included Faulu Microfinance Bank Ltd, Kenya Women Microfinance Bank Ltd, Rafiki Microfinance Bank Ltd and SMEP Microfinance Bank Ltd (CBK, 2017) were the study population. This is because, the present study set a threshold of having been in operation as at 31st December 2017, having been in operation for at least five years (2013-2017)for a MFI to be considered for the study.

This was based on the express understanding thata MFI must have been operating for a while, can undoubtedly exhibit the effect of non-performing loan tendencies on financial performance. The DTMs were specifically selected because they are large in their operations and obtaining secondary data was indeed easier because there was availability of published financial reports. The study population therefore, compromised the 4 MFIs operating in Kenya. The study took a period of six months between January –June2019.

3.4 Census Distribution

Since the selected number of MFIs in the target population was small, the whole study population of four(4) DTMs in Kenya that are listed in appendix v was studied. In this case the researcher conducted a census.A census is a systematic method that collects and records the data about the members of the population(Ravitch & Riggan, 2017). A census is an attempt to list all elements in a group and to measure one or more characteristics of those elements. The census is alternately known as a complete enumeration survey method.

A census can provide detailed information on all or most elements in the population, thereby enabling totals for rare population groups or small geographic areas. One of the major advantages of census method is the accuracy as each and every unit of the population is studied before drawing any conclusions of the research. When more and more data are collected the degree of correctness of the information also increases. Also, the results based on this method are

less biased. The choice of this sampling technique was as a result of ease in data collection exercise which is appropriate for this type of a study.

3.5 Data Collection and Procedure

The study made use of secondary data exclusively. Secondary data refers to descriptions or summaries by other people, other than the original researcher. They are accounts of events which were created well after the actual event occurred. Secondary sources are based on primary sources. By assessing, repackaging and distributing information, secondary sources make the information more accessible. The procedure of collecting secondary data involved using a secondary data collection schedule which sourced data from the annual bank reports from the sampled 4 MFIs in Kenya. Other procedures utilized included data acquisition from the internet and reading about theories and models from online libraries and relevant journals.

This was a quantitative study in nature and included data collected on the levels of non-performing loans,loan loss provision, cost of loan, credit to deposit ratioand ROA of the 4microfinance institutions in Kenya. The researcher visited the CBK website and collected the secondary data using an appropriate data collection sheet designed in appendix vi. This data was obtained from CBK MFIs annual published financial statements for the purpose of obtaining the levels of non-performing loans, and analyze financial performance of the microfinance institutions.

In order for the study to be comprehensive enough, secondary data for five years was collected from 2013 to 2017 of published financial statement of the selected 4 MFIs in Kenya. The panel data collected was quantitative in nature and comprised of data levels of NPLs, total loans disbursed, MFIs earnings, total assets, total deposits and loan loss provisions.

3.6 Data Analysis

Data analysis is the mathematical treatment of quantitative and/or qualitative data so as to obtain the desired statistical measurements. According to Zikmund et al. (2010), data analysis refers to the application of reasoning to understand the data that has been gathered with the aim of determining consistent patterns and summarizing the relevant details revealed in the

investigation. It is extracting significant variables and detecting anomalies and testing any assumptions (Kombo & Tromp, 2009).

Data analysis procedures include; determination of descriptive statistics, statistical modeling and statistical inference. Collectively, these statistical procedures enable the analyst to establish the various characteristics of data, and the relationships between variables so as to be able develop statistically significant relationship and forecasting models. Essentially, this culminates in drawing of valid conclusions and meaningful recommendations.

Data collected was cleaned, coded and analyzed through the aid of Statistical Packages for Social Science (SPSS version 21) to produce data output for interpretation. Specifically, the researcher used descriptive statistics to determine non-performing loan ratio, loan loss provision ratio, cost to asset ratio and credit to deposit ratio. The study alsomade use of regression analysis and correlation to determine the effect of NPLs on the financial performance of MFIs in Kenya. Multiple linear regression model was successfully used in establishing the effect of non-performing loans on the financial performance of MFIs in Kenya. In order to conduct the regression analysis, the following model was instrumental. Data realized was presented in form of graphs and tables to ease understanding.

3.7 Analytical Model

Multiple linear regression model was applied, as was also applied by Kavata, (2016) to establish the effect of non-performing loans on profitability of commercial banks in Kenya. Performance computed by return on assets (ROA) was the dependent variables, while NPLR, loan loss provision ratio, cost per asset and credit to deposit ratio formed the independent variables.To conduct the regression analysis the following model was conducted;

$$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Where;

Y = Financial performance computed using Return on Assets (ROA)

β_0= Constant defines value of performance without inclusion of predictor variables.

β_1 - β_4 = Beta regression co-efficient of variables; measured the rate of change of dependent variable as a function of changes in the independent variable.

X_1 = Non-performing loans ratio, computed as total defaulted loans over total loans and advances.

X_2 – Loan loss provision ratio computed as pretax income plus loan loss provision over net charge -offs.

X_3 – Cost per loan asset ratio computed as total operating cost over total income/ revenue.

X_4-Credit to debit ratio computed astotal loans over total customer deposits

ε – Error term reflecting other factors that influence financial performance and are unexplained by the variables above.

3.9 Piloting of the Research Instrument

Pilot study is a little trial intended to test coordination and accumulate data preceding a bigger report, so as to improve the instrument's quality and proficiency (Fletcher, Massis and Nordqvist, 2016). It can uncover insufficiencies in the plan of a proposed examination or system and these would then be able to be tended to before creatures, time and assets are exhausted on huge scale ponders (Ravitch & Riggan, 2017).

A pilot is largely about necessary and useful in providing the groundwork in a research project. To pilot test the data–collection procedures, the secondary data collection sheet (appendix vi) was administered to Faulu Microfinance Ltd in Kenya to validate the content of the tool by adjusting areas deemed inadequate. As a result, required changes were fulfilled before the toll was administered to the selected four MFIs under study.

3.9.1 Validity of Data Collection Instrument

For research secondary data collection sheet to meet its purpose, it ought to be reliable and valid. Reliability criterion refers to the internal stability as well as consistency of the instrument. Validity, on the other hand, refers to the extent to which an instrument measures what it is set out to measure. Validity refers not only to what the instrument measures but also to how well it does it. It is whether what one is measuring is what one intended to measure; hence unreliable data is invalid since reliability assures validity (Stage & Manning, 2015). Validity is the degree to which an assessment measures what it is supposed to measure (Kihn & Ihantola, 2015).

The secondary data collection sheet was verified for validity of all the possible dimensions of the research topic to ensure it correctly determined or measured the intended measurement, notwithstanding theresponse time. The validity is greatly influenced by how the instrument is administered and was therefore to be compared against a gold standard. The secondary data collection sheet was pre-tested on Faulu MFI to determine whether it attained what it was intended to measure. As a result, adjustments were made on the secondary data collection sheet items and necessary corrections done.

3.9.2 Reliability of Data Collection Instruments

Reliability is about stability, consistency and dependability of data; this is when the measurement is not only accurate but also trustworthy, in such a way that somebody else using the same measuring instruments should obtain same or similar results. Simply put, a research tool that is reliable instrument is one, which if constant produces the same outcomes if used with same respondents on different occasions.

Testing of the reliability of the scale is very important as it shows the extent to which a scale produces consistent results if measurements are made repeatedly. This is done by determining the association in between scores obtained from different administrations of the scale. If the association is high, the scale yields consistent results, thus it is reliable. Cronbach's alpha is the most widely used method. It may be mentioned that its value varies from 0 to 1 but, satisfactorily value is required to be more than 0.6 for the scale to be reliable (Marshall & Rossman, 2015).

In the present study, Cronbach's alpha scale was used as a measure of reliability. Therefore, the researcher carried out a statistical test for reliability using Cronbach's Alpha. To that end a score of 0.76 and above the acceptable threshold (0.70) was obtained hence the instrument was deemed reliable (Ravitch & Riggan, 2017).Specific items in the secondary data collection sheet were redesigned to measure the same concept and presented differently in two or more different questions and obtained responses correlated, a manner similar to the equivalent-form technique of reliability testing.

3.10 Ethical Issues

Ethical issues are norms for conduct that distinguish between acceptable and unacceptable behavior during research (Fletcher, Massis & Nordqvist, 2016). The major ethical issues in conducting research include, informed consent, beneficence (do not harm subject), respect for anonymity and confidentiality, and respect for privacy. The researcher adhered to the ethical issues during the study where the secondary data that was used was only for research purposes.

In addition, the researcher followed the right channels to obtain any required information without any form of bribery or incentives in exchange for data and information. This was achieved through seeking authorization from the relevant bodies/organizations and acquiring the relevant permits to carry out the research.

The researcher dealt only with the authorized and bona fide office bearers for information gathering. Any documents obtained during the study were wholly returned to the MFIs after the research or as agreed upon between the parties. The researcher also ensured high levels of integrity during the whole period of conducting the research.

CHAPTER FOUR

DATA ANALYSIS, INTERPRETATION, PRESENTATION AND DISCUSSION

4.1 Introduction

This chapter presents data analysis and interpretation. Specifically, it gives results of the analysis where the researcher used published MFIs annual reports from CBK for the years 2013-2017. The main aim of this study was to establish the effect of non-performing loans on the financial performance of MFIs in Kenya. The study targeted to collect secondary data obtained from CBK on thepublished financial statements of the fourselected microfinance institutions. The findings enabled the researcher to make conclusion of the study on the entire industry of MFIs in Kenya.

The data collected was edited and organized to ensure relevancy, standardization and completeness in readiness for analysis. To determine the patterns revealed in the data collected regarding the selected variables, data analysis was guided by the objectives of the research. The researcher used computer excels and SPSS in data analysis which enabled the results to be processed and presented in form of figures and tables for various variables of interest and for easy understanding and interpretation. Both descriptive and inferential statistics was used to analyze the data and measure interrelationships between the variables.Specifically, descriptive statistics were computed in terms of ratios and percentages. On the other hand, inferential statistics which included regression model and ANOVA were utilized to determine relationship between non-performing loans and financial performance of microfinance institutions.

4.2 The Effect of Non-Performing Loans on MFIs Financial Performance

In order to establish the effect of non-performing loans on financial performance of MFIs in Kenya, data was thematically analyzed in tandem with the study constructs or objectives. To achieve this, each objective was separately analyzed maximizing descriptive statistics such as percentagesto determine its intensity. In the current study, non-performing loans ratio, loan loss provision ratio, cost per loan asset ratios and credit to deposit ratios were the research variables or objectives while financial performance was the dependent variable. Thereafter, each construct was related to dependent variable that is financial performance using inferential statistics such as

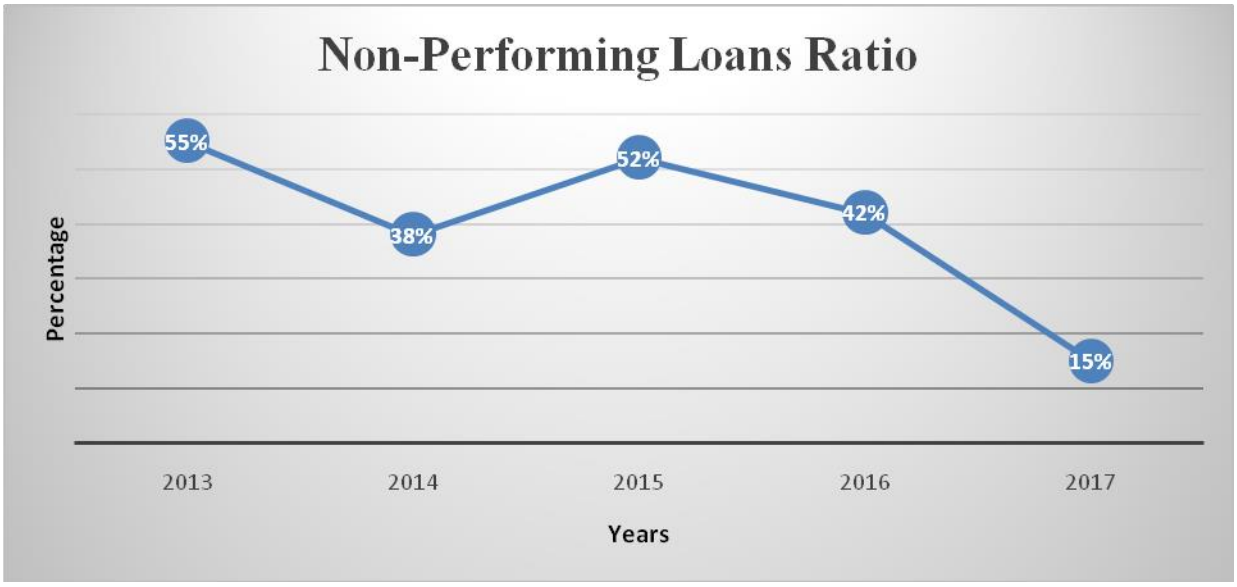
correlations, regression and ANOVA to determine the type and strength of relationship. The next section of the chapter explains the analysis carried out on each objective and the results attained.

4.2.1 Non-Performing Loans Ratios and MFIs Financial Performance

Non-performing loan ratio is a key determinant of the financial performance of MFIs. Any kind of business that endeavors to excel financially has to carefully build a non-performing loan ratio manageably low and develop concrete and sound strategies and policies to continually sustain the low levels. This was done in view of ensuring concern about the level of NPLs that is total defaulted loans in MFIs in Kenya**.**In effect, these ensure a strong loan performing culture that guarantees ready capital for growth and upward financial performance.

To that end, the first objective sought to determine the effect of non-performing loan ratio on financial performance of the fourMFIsin Kenya from 2013 to 2017. The annual report data ofthe 4 MFIs in Kenya for a five year period was computed in SPSS and results are shown in Figure 4.1.

Figure 4.1: Average Trends of Non-Performing loans Ratios for Period 2013-2017



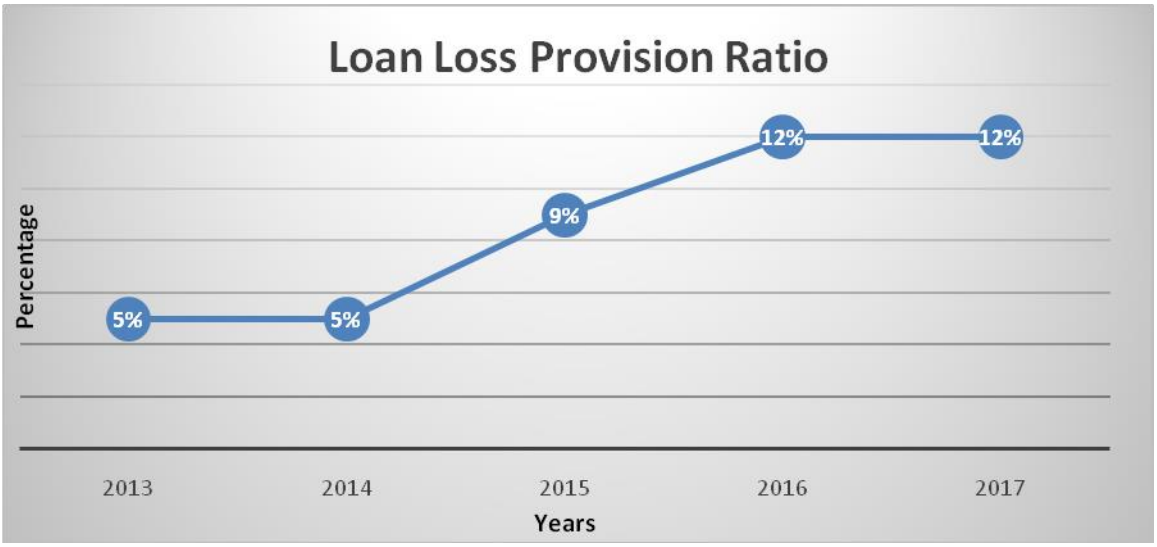
The study findings in figure 4.1 indicates that total defaulted loans among the MFIs in Kenya was highest in the year 2013 and 2015 in which the MFIs reported NPLs ratio of 55% and 52% respectively. The study findings also indicate that 2017 had the lowest of 15% while the year

2016 and 2014 had 42% and 38% respectively. The findings reveal high non-performing ratios among most MFIs in Kenya. The implication of the findingsis that non-performing loan ratio exists and although it has been decreasing yearly, the ratio pattern of 55% to 15% is significant. As such, non-performing loans is a concern that needs attention despite the declining.

4.2.2 Loss Provision Ratio and MFIs Financial Performance

Loan loss provision ratio tends to point to the fact that a financial institution expects substantial losses in terms of loan default. In view of establishing the MFIs ability to respond to loan losses, the second objective sought to determine the effect of loan loss provision ratio on financial performance of the four MFIs in Kenya from 2013 to 2017. The annual report data from the 4 MFIs was computed in SPSS and results achieved as shown below.

Figure 4.2: Average Trends of Loan Loss Provision Ratio for Period 2013 to 2017



The study findings in figure 4.2 indicate that the LLP ratio among the MFIs in Kenya was highest in the year 2016 and 2017 in which the MFIs reported LLP ratio of 12% in both years. The study findings indicate that 2015 had 9% while the years 2013 and 2014 had the same percentages of 5%.

The levels of loan loss provision ratio as expressed in percentages increased as the years progressed. This is an indication that the microfinance institutions continued to set aside more

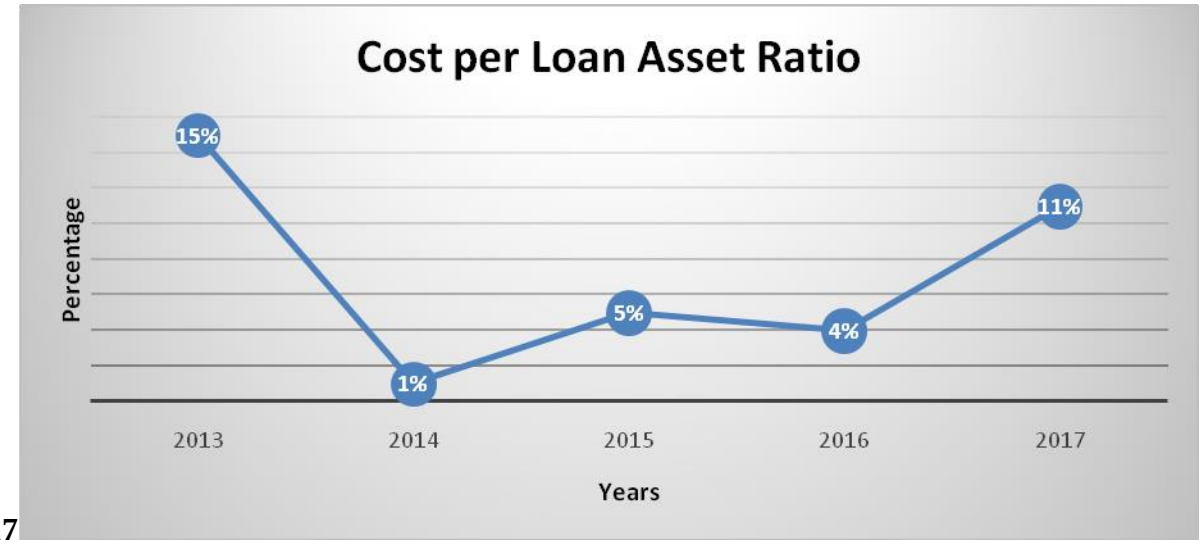
money for loan loss provision as a result of high amounts of loan default. Yet the amount should have been utilized for other investments hence affected the financial performance of the MFIs.This increase rate is of great concern to the MFIs for it affects the survival of micro finance institutions.

4.2.3Cost per Loan Asset Ratio on MFIs Financial Performance

The NPLs, especially when it is deemed lost, is the greatest threat to the profitability and survival of any financial institutions especially MFIs. When it is lost, it will hinder MFIs from achieving their set target and can also lead to organisational failures. MFIs' management recognises the fact that mitigating the occurrence of the risk of non-performing loans can only come from the institution of pragmatic credit administration policy and the policy must incorporate risk assessment and follow up mechanism.

Capital adequacy as an ingredient of credit risk measure depicts the extent to which shareholders' funds cover non-performing loans. That is why the third objectiveof this study endeavoured to ascertain the cost incurred on the loan assets disbursed by the four MFIs in Kenya from 2013 to 2017. The findings in figure 4.3 below indicate the average trends from 2013 to 2017 on cost per loan asset ratios for the five-year period.

Figure 4.3: Average Trends of Cost per Loan Asset Ratio from 2013 to 2017

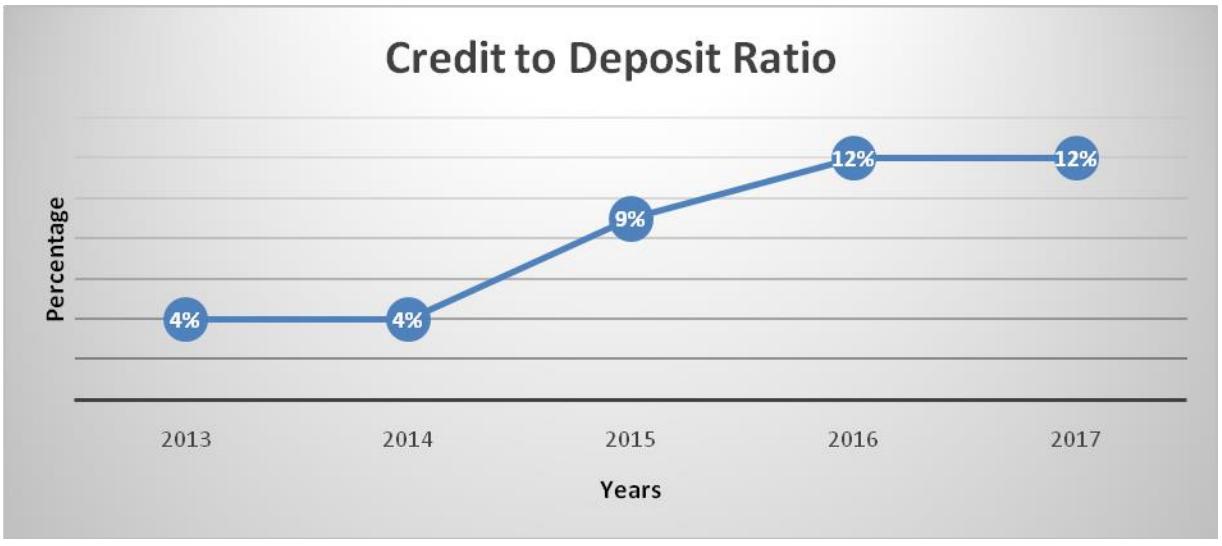


The study findings in figure 4.3 indicate that the CLA ratio among the MFIs in Kenya was highest in 2013 at 15% and lowest in 2014 at 1% while it was reported to be 5% in 2015, 4% in 2016 and 11% in 2017. Accordingly, the findings show unstable cost per loan asset ratio among the MFIs with oscillations thereby causing instability in loan management. Results revealed that non-performing cost have a significant and effect on the performance of MFIs, as such costs eat into ROA and other capital bases if the situation persists. The implication is that MFIs spend massively on risks emanating from costs of NPLs.

4.2.4 Credit to Deposit Ratio on MFIs Financial Performance

CDR is a useful instrument to determine bank liquidity, and by extension, itinfluences the profitability of the banks. The bank profit is based on the interest charged against the deposits; it means the profit is generated through the positive difference between interest of loans and interest on deposits. The study desired to determine the ratio/ percentage of credit to deposit among MFIs with a view of establishing and measuring the liquidity levels in MFIs in Kenya as exhibited in Figure 4.4 below.

Figure 4.4: Average Trends of Credit to Deposit Ratio for period 2013 to 2017



The study findings in figure 4.4 indicate that the credit to deposit ratio among the MFIs in Kenya was highest in the year 2016 and 2017 at 12% and lowest in 2013 and 2014 in which it was reported to be both at 4%. The study findings indicate that 2015 had 9%. Overall, CDR kept increasing from one year to another. The implication is that the MFIs in Kenya liquidity level

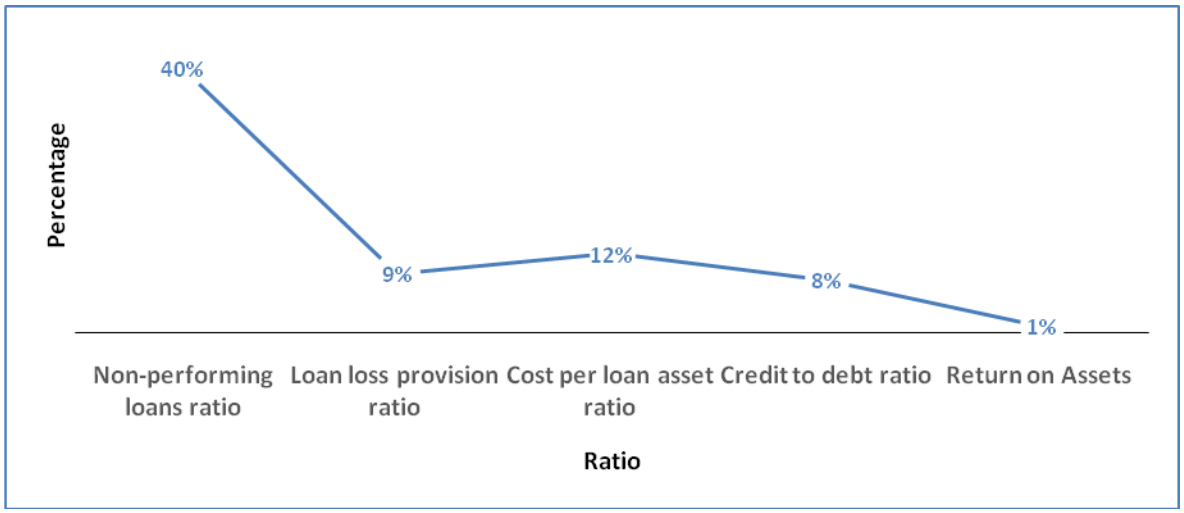
cannot sustain loaning due to the increasingly high credit to deposit ratio. The CDR kept increasing from year to the other instead of assuming a steady medium ratio suitable for both lending and ROA.

A high loan to deposit ratio indicates two things; first, the bank is issuing out more of its deposits in the form of interest-bearing loans and secondly, the bank generates more income. Here the problem is failure in repayment of loan, in such a case the MFIs liable to repay the deposit money to their customers, so if the ratio is too high puts the bank at high risk. Alternatively, a very low ratio means bank is at low risk, on the same time it is not using assets to generate income.

4.2.5Non-Performing Loans on MFIs Financial Performance

The study aimed to assess the performance ratios among the MFIs in Kenya.This was to establish the average annual industry performance for the years 2013 to 2017 as shown in Figure 4.5 below.

Figure 4.5Average Annual Industry Performance Ratios



From the study findings in figure 4.5 above, it indicates that the average annual industry performance ratios in Kenya for the last 5 years was at 40% for non-performing loans ratio,9% for loan loss provision ratio, 12% for cost per loan asset ratio,8% for credit to deposit ratio and 1% for return on assets. From the trends of the variables under study it is clear that NPLRs has

the highest percentage of 40% which is a concern to the MFIs, and this affected the cost per loan asset ratio as well.

4.3. Regression Analysis.

Multiple linear regression analysis was performed on the data for each year, and for all years combined. These yielded four multiple linear regression models based on the objectives under study, that were very useful in comparison, clarification and confirmation of the relationships as well as the general results. This enabled the researcher to be in a position to determine the effect, or lack of effect of the non-performing loans on the financial performance of the MFIs in Kenya.

Regression analysis is a statistical modeling technique used to identify meaningful, stable relationships among sets of data. The application of these analytical procedures is based on the premises that, in the absence of known conditions to the contrary, relationships among the variables may reasonably be expected to exist. Regression measures the casual relationship between one dependent and one independent variable. Multiple regression analysis measures the effects of multiple independent variables on one dependent variable.

The study conducted inferential analysis using Pearson correlation coefficient, ANOVA and regression analysis. The researcher sought to determine the effect of non-performing loans on financial performance of MFIs in Kenya between periods of years 2013 to 2017. ANOVA was used to test the hypothesis that the means among independent variables (factors) and dependent variables (return on assets) is equal, and to show the significance of the association between the four variables. Correlation coefficient was used to test linear dependence (association) between return on assets and the individual independent variables (non-performing loans ratio, loan loss provision ratio, cost per loan asset ratio and credit to deposit ratio).

Regression analysis was used to measure the relationship between individual independent variables and the dependent variable when they act together. The regression analysis was of the form:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

Substituted as;

$$ROA = \beta_0 + \beta_1 NPLR + \beta_2 LLPR + \beta_3 CLAR + \beta_4 CDR + \varepsilon$$

Whereby ROA is return on assets as a measure of financial performance, NPLR is nonperforming loans ratio, LLPR is the loan loss provision ratio, CLAR is cost per loan asset ratio and CDR is credit to debit ratio which form the independent sub-variables under study.β_0 is the regressions constant, β1, β2, β3 and $\beta_4$are the model coefficients for each variable under study (NPLR, LLPR,CLAR &CDR) respectively, while ε (error term); is the model significance produced from the ANOVA statistics (f-significance) reflecting other variables that are included in the study and effect on the financial performance of MFIs.

Variables that were considered for the study were non-performing loans ratio, loan loss provision ratio, cost per loan asset ratio and credit to debit ratio for independent variable while dependent variable was represented by return on asset ratio. The collected data was used to determine the MFIs financial performance as the ratio of earnings before interest and tax to total asset value measured using ROA while NPLR measured as a ratio of total defaulted loans to total loans portfolio and advances disbursed, LLPR computed as a ratio of pretax income plus LLP to net charge offs, CLAR measured by total operating cost over total income and CDR computed as total loans and advances over total customer deposits where applied as independent variables. This was analyzed by use of SPSS as below.

Table 4.1 Regression Coefficients [a]

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
(Constant)	1.052	1.733		.607	.606
Non-performing loans Ratio	.298	.558	.315	.053	.647
Loan loss provision ratio of MFIs	.065	1.415	.050	.046	.968
The cost to asset ratio of MFIs	.506	.770	.552	.658	.578
The credit to deposit Ratio MFIs	.026	.466	.033	.057	.960

a. Dependent Variable: Financial Performance of Microfinance Institutions

Source:Research findings

The regression coefficients of theregression model Table 4.1aboveshowsa relationship between the independent variables and the dependent variable. The model generated is given as Y (Financial Performance of MFIs) = 1.052+.298 (NPLs Ratio) + .065 (LLP ratio of MFIs) + .506 (CLA ratio of MFIs) + .026 (CDR of MFIs). Hence, the regression equation established was: $Y = 1.052 + .298X_1 + .065X_2 + .506X_3 + .026X_4 + e_{it}$. Implicitly, the regression coefficients of theregression model reveal the existence of varying relationships between the independent variables and the dependent variable.

First, holding at 95% confidence level to a constant zero, financial performance of MFIs would stand at 1.052 and a unit increase in NPLs ratio holding constant the other variables under study , would result to an increase in financial performance of MFIs by a factor of 0.298with a significant level of 0.647. Put in other terms, NPLs ratio influence financial performance of MFIs by 29.8%. The interpretation is that there is a positive relationship between NPLs and financial performance of MFIs in Kenya. This means NPLs ratio affect financial performance of MFIs in Kenya thereby answering the first research question of this study that sought to assess the effect ofNPL ratio and financial performance of MFIs in Kenya.

Secondly, a unit increase in loan loss provision ratio of MFIs would causean increase in financial performance by a factor of 0.065with a significant level of 0.968. The interpretation is that there is a positive relationship between loan loss provision ratio and financial performance of MFIs in Kenya. This means LLR affects financial performance of MFIs in Kenyaby 6.5% thereby answering the second objective of this study that sought to examine the effect ofLLR and financial performance of MFIs in Kenya.

Thirdly, the statistics also indicate that a unit increase incost per loan asset ratioof MFIs in Kenya would give rise toan increase in financial performance by a factor of 0.506 with a significant level of 0.578. The interpretation is that there is a positive relationship between CAR and financial performance of MFIs in Kenya. This indicatescost to asset ratio affects financial performance of MFIs in Kenyaby 50.6% thereby answering the third research question of this

study that sought to determine the effect ofcost to asset ratioand financial performance of MFIs in Kenya.

Lastly, a unit increase in CDR of MFIs would lead to unit increase in financial performance of MFIs by factors of 0.026with a significant level of 0.960. The interpretation is that there is a positive relationship between credit to deposit ratio and financial performance of MFIs in Kenya. This means credit to deposit ratiosignificantly affects financial performance of MFIs in Kenya by 2.6%thereby answering the forth research question of this study that sought to establish the type of relationship between CDR and financial performance of MFIs in Kenya.

The findings further indicate that all the coefficients are positively correlated and are significant at 0.05 significant level given that the p-value (0.000) is less than alpha (0.05). Analysis of data using regression model has been used previously by Aduda (2011) in a study which investigated the relationship between executive compensation and firm performance in the Kenyan banking sector. Also Oloo (2014) used regression analysis in a study on the empirical analysis of interest rates spread in Kenya while Khawaja and Musleh (2007) used regression analysis to identify the determinants of interest rates spread in Pakistan.

Table 4.2 Model Summary

The table below 4.2 illustrates the strength of the overall association between ROA and the independent variables and does not predict about individual variables on how an explanatory variable is associated with the dependent variable (ROA). R is the correlation coefficient or determination which showed the relationship between the study variables. R squared was used to show how the regression line predicts the estimates of the mean and determine distance from the actual values. In addition, R squared or the coefficient of determination explains the variation in the dependent variable resulting due to change in the dependent variables.

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.879[a]	.773	.320	1.495

a. Predictors: (Constant), The credit to deposit Ratio MFIs, Non-performing loans Ratio MFIs, The cost to asset ratio of MFIs, Loan loss provision ratio of MFIs

The study findings in Table 4.2 show that R square is 0.773 indicating that 77.3% of the variation in the financial performance of MFIs are caused by the independent variables (credit to deposit ratio, non-performing loans ratio, cost to asset ratio and loan loss provision ratio) indicating that 22.7% of other factors not accounted in the study affect the financial performance of MFIs in Kenya. From the findings, the study found that there was a strong positive relationship between the study variables as shown by .879 of 87.9%. The adjusted R squared was 0.320. This demonstrates that there was a change of 32% in financial performanceas a result of the changes NPLR, LLP, CLA and CDR at 5% level of significance. This was a demonstration that 32% changes in competitive advantagecould be explained by joint effect of NPLR,LLP,CLA and CDR.

Table 4.3 Analysis of Variance - ANOVA[a]

To test the statistical significance of the models as well as their adequacy for prediction, Analysis of Variance (ANOVA) was performed on an entire model together with t-tests on the individual predictor variables. ANOVA was used to check simultaneous comparison between two or more means, thus testing if a significant relationship exists between the variables under study. This helped in bringing out the significant of the regression model.

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	15.245	4	3.811	1.705	.000[b]
	Residual	4.469	2	2.235		
	Total	19.714	6			

a. Dependent Variable: Financial performance of MFIs in Kenya.

b. Predictors: (Constant), Credit to deposit ratio of MFIs, non-performing loans ratio of MFIs, cost to asset ratio of MFIs & loan loss provision ratio of MFIs

From the ANOVA statistics in table 4.3 above, the data has significance of 0% (.00), an indication that the data was ideal for conclusion drawn on the parameters of the study population. The F critical at 5% level of significant was 0.000. Since the F calculated is (1.705) was above the Fcritical, then the overall model was found to be significant. This shows that sample data used was ideal for making conclusions about the target population as it is less than 5%, since the

probability was 0.000. This is an indication that NPLR, LLP, CLA and CDR significantly influenced financial performance.

Table 4.4 Correlations Matrix

The study sought to establish the association between individual independent variables and return on assets as a measure of performance as presented in the table below:

		Non-performing loans Ratio	Loan loss provision ratio	Cost to asset ratio	Credit to deposit ratio	Financial Performance
Non-performing loans Ratio	Pearson Correlation	1	.810*	.705	.719	.768*
	Sig. (2-tailed)		.027	.077	.068	.044
	N	4	4	4	4	4
Loan loss provision ratio of MFIs	Pearson Correlation	.810*	1	.914**	.815*	.837*
	Sig. (2-tailed)	.000		.004	.025	.019
	N	4	4	4	4	4
The cost to asset ratio of MFIs	Pearson Correlation	.705	.914**	1	.739	.844*
	Sig. (2-tailed)	.000	.004		.058	.017
	N	4	4	4	4	4
The credit to deposit Ratio MFIs	Pearson Correlation	.719	.815*	.739	1	.708
	Sig. (2-tailed)	.000	.025	.058		.075
	N	4	4	4	4	4
Financial Performance of Microfinance Institutions	Pearson Correlation	.768*	.837*	.844*	.708	1
	Sig. (2-tailed)	.000	.019	.017	.075	
	N	4	4	4	4	4

*. Correlation is significant at the 0.05 level (2-tailed).

Source: Research findings

Overall, the statistics in the correlation matrix Table 4.4 shows a very good linear relationship between ROA and NPLs given correlation co-efficient of 0.768 thus 76.8%. It can also be deduced that 77.3% of the changes in MFIs ROA is brought about by NPLR, LLPR, CAR and

CDR. The findings also revealed that NPLs ratio is significant in explaining NLPs ratio with financial performance. The interpretation is that there is strong association between non-performing loan and financial performance of MFIs in Kenya.

First, the findings found a very good linear relationship between non-performing loans ratio of MFIs given correlation co-efficient of 0.768 thus 76.8%. It can also be deduced that 76.8% of the changes in MFIs ROA is brought about by non-performing loans ratio. The findings also revealed that non-performing loan ratio is significant at 5% given its significant was (0.044) in explaining non-performing loans ratio with financial performance of MFIs in Kenya. The interpretation is that there is significant strong association between non-performing loans ratio and financial performance of MFIs in Kenya.

Secondly, the statistics found a very good linear relationship between loan loss provision ratio of MFIs and financial performance given correlation co-efficient of 0.837 thus 83.7%. It can also be deduced that 83.7% of the changes in MFIs ROA is brought about by LLPR. The findings also revealed that loan loss provision ratio is significant (0.019) in explaining loan loss provision ratio with financial performance of MFIs in Kenya. The interpretation is that there isa strong and significant association between loan loss provision ratio and ROA.

Thirdly, the findings found a very good linear relationship between cost to asset ratio of MFIs given correlation co-efficient of 0.844 thus 84%. It can also be deduced that 84.4% of the changes in MFIs ROA is brought about by the cost to asset ratio. The findings also revealed that the cost to asset ratio is significant (0.017) in explaining the cost to asset ratio with financial performance of MFIs in Kenya. The interpretation is that there is strong association between cost to asset ratio and financial performance of MFIs in Kenya.

Finally, the findings found a very good linear relationship between CDRof MFIs given correlation co-efficient of 0.708 thus 70.8%. It can also be deduced that 70.8% of the changes in MFIs ROA is brought about by the credit to deposit ratio. The findings also revealed that the credit to deposit ratio is significant (0.075) in explaining the credit to deposit ratio with financial performance of MFIs in Kenya. The interpretation is that there is strong association between credit to deposit ratio and financial performance of MFIs in Kenya.

4.4 Discussion of the Findings.

This section gave attention to the discussion of the findings in relation with the previous studies examined in the literature review section. To achieve this, the discussion was organized along the key study sub-themes as clearly stated in the research objectives. Essentially, this part attempted to relate the current study variables to the previous studies reviewed. Categorically, the four study variables, namely, non-performing loan ratio, loan loss provision ratio, cost per loan asset ratio and credit to deposit ratio.

4.4.1 Non-performing Loan Ratio and Financial Performance of MFIs in Kenya

In the first place, the study demonstrated that non-performing loan ratio was unstable with extreme swings of high and very low ratio. A good NPLR should be medium for better lending and high loan repayment. Additionally, regression and correlation showeda significant positive relationship between non-performing loans ratio and financial performance of MFIs in Kenya. Bloem and Gorter (2001) had similar findings that unstable NPLR affected financial performance of organizations. They also indicated that poor management, poor supervision, overoptimistic assessments of creditworthiness during economic booms and moral hazards resulting from generous government guarantees could also lead to loan default. Also, this study share sentiments of Hasan and Wall (2014) who revealed that high amount of NPLs is linked with bulk levels of loan loss provision reserve.

4.4.2 Loan Loss Provision Ratio and Financial Performance of MFIs in Kenya

On the second research objective, the study established increasing loan loss provision ratio over the five-year period. Besides, the findings revealed a strong positive relationship between the loan loss provision ratio and MFIs financial performance in Kenya. This finding to some extent is contrary to the theoretical expectation of negative relationship between the two variables. The possible reason for this result is the tendency of MFIs to transfer costs associated with loan default to other customers.

In some cases, Kenyan MFIs interest rate on loan is as high as 25% per annum (excluding other administrative charges). This high rate is used as a buffer to mitigate the huge non-performing

loans from other customers in their books. The study is in agreement with the Alshatti (2015) who reported a significant positive impact of credit management (represented by the ratio of non-performing loans to gross loans) on financial performance (ROA) of the banks.

On contrary, Mendoza and Rivera (2017)observedloan loss provision ratio proliferation negatively affected financial performance of firms. The authors advised much importance be placed on the lender's role in ensuring good decisions relating to the granting of loans in order to minimize credit risk. This finding is consistent with that of Serwadda (2018) who analyzed the impact of credit risk management on the financial performance of 20 commercial banks for a period of 2006-2015 in Uganda and found that loan loss provision and banks performance are inversely related.

This result on the second objective, however, contradicts the findings of Lata (2014) which showed a negative significant relationship between the two variables. Annor and Obeng (2017) established showed a statistically significant negative relationship between asset ratio and the profitability of a bank. Equally, the results are in contradiction to Kodithuwakku (2015) study which explored the relationship between credit risk management and performance of 8 commercial banks in Sri Lanka for a five year period from 2009 to 2013 and revealed that non-loan loans provisions have a negative impact on the financial performance of the institutions.

4.4.3 Cost per Asset Loan Ratio and Financial Performance of MFIs in Kenya

Concerning the third objective, the cost per loan asset ratios for the five-year period showed that CLA ratio among the MFIs in Kenya was characterized with instability as the ratios swagfrom highs and to lows. On running regression and correlation, the study established a positive relationship between the cost to asset ratio and financial performance of MFIs in Kenya. These findings confirm the position held by Bemstein (1996) who indicated that the level of NPLs is a significant determinant of the level of bank costs as well as the estimates of scale economies in banking. The author further asserts that the cost curve of banks with high levels of NPLs have the standard U-Shape with the optimal point.

This is a confirmation that NPLs had a significant impact on financial performance of the DTMs in Kenya. This also confirms the findings by Warue (2013) who carried out a study on the effect of NPLs on the financial performance of commercial banks in Kenya and established that NPLs were important determinants since during the early years of the study there was a high amount of non-performing loans and this resulted to very low ROA. However later years showed a different trend where ROA was higher and the NPLs were low. This is in line with the studies done by Kurawa and Garba (2014) who established that CRM measured by cost per loan asset ratios have notable positive effect on profitability of Nigerian banks.

4.4.4 Credit to Deposit Ratio and Financial Performance of MFIs in Kenya

On the fourth objective, an increasing credit to deposit ratio was observed among MFIs in Kenya. Also, regression and correlation established a positive relationship between the CDR and financial performance of MFIs. This is in line with studies conducted by Abreu and Mends (2002), Ferdi (2005), Fitriani (2010) and Rasiah (2010) found that there is apositive and significant relationship between the ratio of the loan to deposit ratio and bank profits. However, this finding is in direct contradiction to another study in Malaysia by Tumin and Said (2011) who concluded that credit to deposit ratio have no relationship with bank performance.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter gives the summary of the study findings, conclusions and the recommendations. The chapter provides further recommendations for the policy makers, practitioners and for future studies that can be applied by the appropriate MFIs in Kenya to ensure productiveness on regulation of non-performing loans effectively in order to enhance financial performance.

5.2 Summary

The study sought to determine whether, for the past five years, NPLs has any effect on the financial performance of MFIs in Kenya. The research sought specifically to: evaluate the effect of NPLR, examine the effect of LLP, determine the effect of cost per loan asset and to establish the effect of credit to deposit on financial performance of MFIs in Kenya. Secondary panel data of selected 4 MFIs in Kenya was used as the sample size and descriptive and inferential statistics of the SPSS version 21 were used to analyze the collected data.

On the first objective, the study established that non-performing loan ratio kept increasing from one year to another. On whether NPLR had any effect on the financial performance of MFIs in Kenya, the study demonstrated that NPLR had a significant relationship with financial performance of MFIs in Kenya. Basically, the study established that non-performing loan ratio had a positive effect on financial performance of MFIs in Kenya.

Secondly,the study revealed an increasing trend of loan loss provision ratio as expressed in percentages increased as the years progressedamong MFIs in Kenya. On whether LLPR had any effect on the financial performance of MFIs in Kenya, the research findings established that loan losses affected financial performance of MFIs in Kenya positively. The results in the study findings indicate that there is a direct association linking the financial performance of financial institutions and the loan loss provision ratios. An increase in LLP ratios leads to a negation in ROA of micro-financial institutions. Loan loss provision ratio tends to point to the fact thatMFIs in Kenyaprovides a substantial loss in expectation of loan default.

On the third objective, the findings on cost per loan asset ratios for the five-year period showed the MFIs in Kenya was characterized with instability as the ratios with oscillated between the highs and to lows. On whether cost per loan asset ratios had any effect on the financial performance of MFIs in Kenya, the research findings established that cost per loan asset ratios affected financial performance of MFIs in Kenya positively.

The studyon fourth objective, sought to establish the ratio percentage of credit to deposit among the MFIs with view of establishing and measuring the liquidity levels in MFIs in Kenya. From the study findings it was discoveredthat credit to deposit ratio kept increasing from one year to another. On whether CDR had any effect on the financial performance of MFIs in Kenya, the research findings established that CDR affected financial performance of MFIs in Kenya positively.

5.3 Conclusion

The purpose of the study was to determine effect of the non-performing loan on financial performance ofselected 4 MFIs in Kenya. A six-month period was used for the study. Among the limitations of the study were; the study utilized secondary data,considered financial indicators yet there could be other non -financial indicators, again NPLs among the selected 4 MFIs having their unique dynamics might not be a true representation of financial performance in Kenya and last but not least considered four variables namely; NPLR, LLPR, CLAR and CDR to determine effect of non- performing loans on MFIs financial performance. A survey design was adopted.

The choice of the study area was due to the fact that very little study has been done in the country to the knowledge of the researcher. Besides, most of the MFIs in Kenya are not doing well, which therefore required a study to ascertain the causes as well as recommendations to address the issue.The sampling technique used was the censustype. Data was sourced from CBK annual financial reports of MFI and other related information. The collected datawas processed using SPPS version 22and analyzed using inferential tools namely,regression, and correlation. The findings were presented in form of tables and graphs. Generally, it can beconcluded based on the results obtainedthatNPLs positively affectMFIs in Kenya.

On the first objective, the study concluded that non-performing loan ratio kept increasing from one year to another. Also, the study concluded that non-performing loan ratio had a significant relationship with financial performance of MFIs in Kenya. Basically, the study established that non-performing loan ratio had positive effect on financial performance of MFIs in Kenya.

Secondly, the study concluded that there was an increasing trend of loan loss provision ratio as expressed in percentages increased as the years progressed among MFIs in Kenya. Also, the study concluded that loan loss provision ratio significantly affected financial performance of MFIs in Kenya positively as the MFIsprovided a substantial loss in expectation of loan default.

Thirdly, thestudy concluded that the cost per loan asset ratio for the five-years under study on MFIs in Kenya, was characterized with instability as the ratios with oscillated between the highs and to lows. Additionally, it was concluded that the cost per loan asset ratios significantly and positively affected financial performance of MFIs in Kenya. Further, the study concluded that the credit to deposit ratio kept increasing from one year to another. Cost to loan asset is the variable which had the highest influence of 50.6% on financial performance as compared to the other variables.

Finally, on the fourth objective, the study concluded that credit to deposit ratio among the MFIs kept on increasing from one year to another.From the research findings it was concluded that credit to deposit ratio significantly affected financial performance of MFIs in Kenya and positively.

The study therefore, concludes that there is strong positive relationship between, non-performing loan ratio, loss provision ratio, cost to loan asset ratio, credit to deposit ratio and financial performance of microfinance banks in Kenya. Therefore, it can be concluded that non-performing loans had a significant correlation with financial performance of MFIs in Kenya in the positive way.

5.4 Recommendations

5.4.1 Recommendations for the Practitioners and Policy Makers

The findings and eventual conclusions of the current study evolved commensurate recommendations to the relevant stakeholders for consideration in enhancing non-performing loans towards improved financial performance of MFIs in Kenya. First, the study recommends credit management systems to reverse the non-performing loan ratio which kept increasing from one year to another.

Secondly, in view of loan loss provision that increased as the years progressedto be upturned by designing intervention and preventive loan management mechanisms. To control and avoid the unstable cost per loan asset ratios for the five-year period, the study recommends that the cost of lending the loan assets should be monitored with view of optimizing loan portfolios. Further, to mitigate credit to deposit ratios upward trend, MFIs should come up with adequate control measures which are vital to vet and avoid borrowers who have negative credit histories.

Similarly, the researcher recommends sharing of information amongst MFIs industry to lock out the multi funded borrowers and the defaulters from further access to loans. It is vital to consider hiring competent staff and perform frequent training to evaluate the best ways to apply in order to reduce the NPLs and work efficiently for the MFIs. Also, the study recommends that credit to deposit ratio be reduced and leveraged and encourage the MFIs to utilize the retained earnings and customer savings for lending. This is because high percentage of credit to deposit ratio holds more loan assets with borrowers which can affect the liquidity of the MFIs.

Furthermore, highly profitable MFIs can utilize their earnings for growth in their asset base and manage their operations effectively. Besides, the study recommends that MFIs to rely heavily on the report of credit worthiness of borrowers provided by reference credit bureaus and proper business assessment before decisions to lend to their customers are made. In addition, MFIs should rely on the customer's cash flow for credit approval and monitoring procedures. This will help in improving the quality of loan asset hence reduce NPLs.

Likewise, for growth purpose MFIs should embrace equity financing through issue of shares and fund through retained earnings.Finally, the study further recommends that various government regulatory agencies be involved in helping MFIs in Kenya in implementing the various banking guidelines and measures to ensure compliance with NPL management guidelines and loan asset reporting.

5.4.2Recommendations for Future Study

The researcher proposesa further study to be undertaken on this area using both primary and secondary data, focus on one MFIs and increase sample size.

REFERENCES

Ahmad, A., Takede C., & Thomas, S. (2010). Bank loan loss provisions: A reexamination of capital management, earnings management, and signaling effects. *Journal of Accounting and Economic,28*(1), 1-25.

Akinlo, O. & Emmanuel, M. (2014). Determinnats of non-performing loans in Nigeria. *Journal of Business Management, 2*(2),11-22.

Alshatti, A. (2015).The effect of credit risk management on financial performance of the Jordanian commercial banks. *Investment Management and Financial Innovation Journal.12*(1), 338-345.

Annor, E. S., & Obeng, F. S. (2017). Impact of credit risk management on the profitability of selected commercial banks listed on the Ghana stock exchange. *Journal of Economics, Management and Trade, 20*(2), 1-10.

Berman, S.L., Andrew, C., Kotha, S. J. & Thomas, M. (2015). Does stakeholder orientation matter? The relationship between stakeholder management models and firm performance. *Academy of Management Journal, 42*(5), 488-506.

Bhattarai, Y. R. (2016). Effects of non-performing loan on the profitability of commercial banks in Nepal; *International Journal of Business & Management,* 4, 435-442.

Bichanga, J,. & Chege, L. (2017). Non- performing loans and financial performance of banks; An empirical study of commercial banks in Kenya; *International Journal of Management and Commerce Innovations, 4* (2) 909-916.

Bloem, A. M., & Gorter, C. N. (2001). *The treatment of non-performing loans in macroeconomic statistics*. IMF working paper WP/01/209.

Boudriga, A., Boulila, N., & Jellouli, S. (2015). *Does bank supervision impact non-performing loans; Cross- country determinants using aggregate data?* University of Tunis, ESSEC and DEFI. MPRA paper No. 18068.

Breuer, J. B. (2006). Problem bank loans, conflicts of interest, and institutions. *Journal of Financial Stability, 2*, 266-285.

Central Bank of Kenya, (2017). *Bank Supervision Annual Report 2016*. Nairobi: Central Bank of Kenya

Central Bank of Kenya, (2016). *Bank Supervision Annual Report 2015*. Nairobi: Central Bank of Kenya

Central Bank of Kenya, (2015). *Bank Supervision Annual Report 2014*. Nairobi: Central Bank of Kenya

Central Bank of Kenya, (2014). *Bank Supervision Annual Report 2013*. Nairobi: Central Bank of Kenya

Central Bank of Kenya, (2013). *Bank Supervision Annual Report 2012*. Nairobi: Central Bank of Kenya

Chortareas, G., Logothesis, V., Magkronis, G., &Zekente, K-M. (2016). The effects of banking supervision on central bank preferences: Evidence from a panel data. Economics Letters, 140,11-13.

Collins, N. J & Wanjau, K. (2014). The effects of interest rates spread on the level of non-performing assets; a case of commercial banks in Kenya. *International Journal of Business and Public Management 1*(1), 56-101.

Crowley, J. (2014). Interest rate spreads in English speaking African countries. *International Monetary Fund Working Paper.* Washington D.C: International Monetary Fund.

EL-Maude, J. G., Abdul-Rahman, A., & Ibrahim, M. (2017). Determinants of non-performing loans in Nigeria's deposit money banks. Archives of Business Research, 5(1), 74-88.

Fawad, A., & Taqadus, B. (2014). Explanatory power of bank specific variables as determinants of non-performing loans:evidence from Pakistan banking sector. *World Applied Sciences Journal, 22* (9), 1220- 1234.

Felix, A.T., & Claudine, T.N. (2011). *Bank performance and credit risk management*. (Unpublished Masters Dissertation in Finance), University of Skovde, Sweden.

Freeman, E., Harrison, S., Wicks, C., Parmar, B., & De Core, S. (2014). *Stakeholder theory: The state of the art*. Cambridge, U. K: Cambridge University Press.

Freeman, R.E. (2014). *Strategic management: A stakeholder approach revisited*. Boston, M.A: Pitma.

Gautam, R. (2018). Impacts of non-performing loans on profitability of Nepalese commercial banks. *National Journal of Arts, Commerce & Science Research Review,1*(5), 59-64.

Gitaru, M., Kebede, M., & Selvaraj, S. (2015). The impact of credit risk on profitability performance of commercial banks in Ethiopia. *African Journal of Business Management9* (2), 59-66.

Guy, K. (2011). Non-performing loans. *Research and Economic Analysis, 37* (1)10.

Hamza, S. M. (2017). Impacts of credit risk management on banks performance; A case study in Pakistan banks. *International Finance Journal,* 9(1).

Hassan, I., & Wall, L. D. (2014). Determinants of the loan loss allowance. Some cross-country comparison. *The Financial Review, 39*(1), 192-152.

Hennie, V. G. (2009). *Analysis and managing banking risk. A framework for assessing corporate governance and financial risk, 2nd edition*. Washington DC: World bank publications.

Herelimana, J.B. (2017). *The effect of non-performing loans management in financial performance of commercial banks in Rwanda*. *A case study of Ecobank, Rwanda.* (Unpublished Master's Thesis), University of Rwanda, Kigali.

Kadioglu, E., Telceken, N., & Ocal, N. (2017). Effect of the Asset Quality on the Profitability. *International Journal of Economics and Finance, 9*(7), 60-68.

Kane, E.J., & Rice, T. (2011). Bank runs and banking. Lessons for African policy makers. *Journal of Money, Credit and Banking, 26*(1).

Kargi, H. S. (2015). *Credit risk and the performance of Nigerian banks*. (Unpublished Master's Thesis). Ahmadu Bell University, Zaria.

Kithinji, A. M. (2010). Credit risk management and profitability of commercial banks in Kenya. School of Business & Nairobi University, *Journal of Research in Commerce and Management, 1*(1), 37-44.

Klein, N. (2014) Non performing loans in CESEE: Determinants and impact on macroeconomic performance. *Journal of Banking and Finance,* 234-249.

Kothari, C.R., & Gang, W. (2014). *Research methodology: methods and techniques.* New Delhi: New Age International (P) Limited Publishers.

KPMG (2016). *European debt sales, Loan portfolio advisory, Portfolio Solutions Group*, KPMG International.

Kurawa, J. M., & Garba, S. (2014). An evaluation of the effect of credit risk management on the profitability of Nigerian Banks. *Journal of Modern Accounting and Auditing,1*(1), 104-115.

Laryea, E., Ntow-Gyamfi, M., & Alu, A. A. (2016). Nonperforming loans and bank profitability: Evidence from an emerging market. *African Journal of Economic and Management Studies, 7* (4), 462-481.

Lelgo, K. J., & Obwogi, J. (2018). Effect of financial risk on financial performance of micro finance institutions in Kenya. *International Academic Journal of Economics and Finance, 3*(2), 357-369.

Manyuanda, M. O. (2014). *The effects of non-performing loans on the financial performance of savings and credit co-operative societies in Nairobi County, Kenya*. (Unpublished Dissertation MBA). University of Nairobi. Nairobi.

Markowitz, H. (1952). Portfolio selection. *The Journal of Finance, 12* (7),77-91.

Messai, S., & Jouine, F. (2013) . Micro and macro determinants of non-performing loans *International Journal of Economics and Financial Issues, 3*(4), 852-860.

Mitchell, W., Shaver, J. M., & Yeung, B. (2004). Foreign entrant survival and foreign market share Canadian MFIs' experience in United States medical sector markets. *Strategic Management Journal, 15*(7), 555-567.

Mohaddes, K, M Raissi & A Weber (2017). *Can Italy grow out of its NPL overhang? A panel threshold analysis, IMF Working Paper*, WP/17/66, Washington DC, March .

Mombo, C. A. (2013). *The effects of Non-performing loans on the financial performance of deposit taking micro finance institutions in Kenya*. University of Nairobi. Retrieved from https://www.uombi.ac.ke

Mugenda, O.M., & Mugenda, A.G. (2003). *Research methods qualitative and quantitative approaches.* Nairobi: Acts Press.

Mung'aho, A.K., Ondiek, B.A., & Odhiambo, A. (2016).Non-performing loans and financial performance of Kenya women finance trust in Kenya. *International Journal of Multidisciplinary and Current Research*: Masinde Muliro Univeristy.

Muriithi, J.G, Waweru, K. M., & Muturi, W.M. (2016). Effect of credit risk on financial performance of commercial banks- Kenya. *Journal of Economics and Finance, 7*(4), 72-83.

Musyoki, D., & Kadubo, A. S. (2011). The impact of credit risk management on financial performance of commercial banks in Kenya. *InternationalJournal of Business Management 2*(2),72-80.

Muturi, W.M., Waweru, K.M., & Muriithi J. G (2016). Effects of credit risk on financial performance of commercial banks Kenya. *Journal of Economics and finance, 7,* 72-83.

Oloo, O. (2014). *The banking survey East Africa. Think business*. Nairobi

Ozurumba, B. A.(2016). Impact of non-performing loans on the performance of selected commercial banks in Nigeria. *Research Journal of Finance and Accounting, 7*(16), 95-109.

Patil, R. M. (2018). Credit risk and public and private Banks' performance in India. A panel approach. *Journal of Arts, Science and Commerce, 9*(2) 34-43.

Panta, B.(2018). Non-performing loans & bank profitability: Study of joint venture banks in Nepal. *International Journal of Sciences: Basic and Applied Research (IJSBAR),42*(1)151-165.

Paudel, R.P. (2012). The impact of credit risk management on financial performance of commercial banks in Nepal. *International Journal of Arts and Commerce, 1*(5), 9-15.

Richard, E. (2011). Factors that cause non-performing loans in commercial banks in Tanzania and strategies to resolve them. *Journal of Management Policy and Practice 12* (7), 50-58.

Sakarau, (2015). *Research methods of business. A skill building approach.* New Delhi: Wiley India PVT limited.

Serwadda, I. (2018). Impact of credit risk management systems on the financial performance of commercial banks in Uganda. *Acta Universitatis Agriculturae et Silviculturae Mendelianae Brunensis,66*(6), 1627-1635.

Tobin, J. (1958).Liquidity preference as behaviour towards risk.*Review of economic studies 25*(1), 65-86.

Tumin, H. M., & Said, M.R. (2011). Performance and financial ratios of commercial banks in Malaysia and China. *SSRN Electronic Journal, 7*(2), 601- 612.

Ugoani, J. N. (2016). Non performing loans portfolio and its effect on bank profitability in Nigeria. *Independent Journal of management and production, 7*(2), 303-319

Upagade, V., & Shende, A. (2012). *Research methodology 2nd edition.* S. Chad and Company Ltd. Ram Nagar, New Delhi.

Vogiazas, S.D., & Nikolaidou, E. (2014). Investigating the determinants of non-performing loans in the Romanian banking system: An empirical study with reference to the Greek crisis. *Economic Research International Journal, 4*(1) 67-72.

Wangai, D. K., Bosire, N., & Gathogo, G. (2014). Impact of non-performing loans on financial performance of microfinance banks in Kenya. A survey of microfinance banks in Nakuru town; *International Journal of Science and Research*, 3.

Warue, B. N. (2013). The effects of bank specific and macroeconomic factors on nonperforming loans in commercial banks in Kenya: A comparative panel data analysis. *Advances in Management & Applied Economics, 3*(2), 135-164.

Appendix I: Introduction Letter

ST. PAUL'S UNIVERSITY

Private Bag 00217 LIMURU, KENYA
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BOARD OF POSTGRADUATE STUDIES

National Commission for Science, Technology and Innovation
Off Waiyaki Way, Upper Kabete
P.O Box 30623, 00100
Nairobi, KENYA.

Dear Sir/Madam,

RE: KITONYI JOYCE MWONGELI - MBAMKS610215

This is to confirm that the above named is a final year student of St. Paul's University registered for Master of Business Administration.

The final year consists of a major research work leading to a dissertation comprising 20,000 words. The student's selected topic is:

EFFECT OF NON PERFORMING LOANS AND FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS IN MACHAKOS

The research will take place in MACHAKOS County from March 2019 to May 2019.

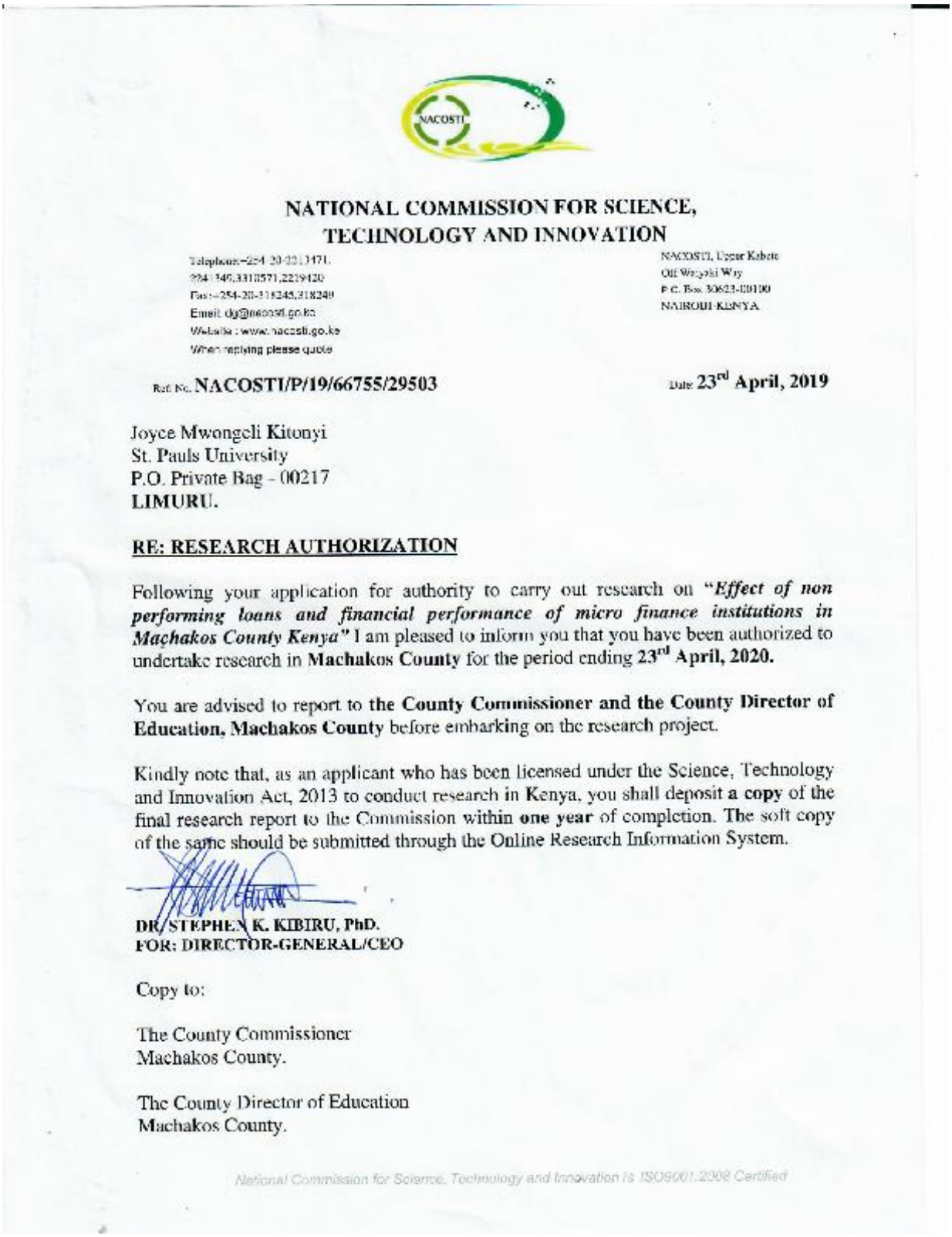
Kindly grant the student the required permit.

Yours Faithfully,

Dr. Sammy Githuku
Director, Postgraduate Studies

BOARD OF POSTGRADUATE STUDIES ST. PAUL'S UNIVERSITY 28 FEB 2019 KENYA P.O. PRIVATE BAG - KIKUYU

Appendix II: Research Authorization Letter



NATIONAL COMMISSION FOR SCIENCE,
TECHNOLOGY AND INNOVATION

Telephone: +254-20-2213471,
254-145,3310571,2219420
Fax: +254-20-318245,318249
Email: dg@nacosti.go.ke
Website : www.nacosti.go.ke
When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref No. NACOSTI/P/19/66755/29503

Date 23rd April, 2019

Joyce Mwongeli Kitonyi
St. Pauls University
P.O. Private Bag - 00217
LIMURU.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Effect of non performing loans and financial performance of micro finance institutions in Machakos County Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Machakos County** for the period ending **23rd April, 2020.**

You are advised to report to **the County Commissioner and the County Director of Education, Machakos County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

DR. STEPHEN K. KIBIRU, PhD.
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The County Commissioner
Machakos County.

The County Director of Education
Machakos County.

National Commission for Science, Technology and Innovation is ISO9001:2008 Certified

Appendix III: Authorization Letter- Ministry of Education

MINISTRY OF EDUCATION
STATE DEPARTMENT OF EARLY LEARNING AND BASIC EDUCATION

Telegrams: "**SCHOOLING**" Machakos
Telephone: Machakos (
Fax: Machakos
Email –cdemachakos@yahoo.com
When replying please quote

OFFICE OF THE
COUNTY DIRECTOR OF
EDUCATION
P.O. BOX 2666-90100,
MACHAKOS

MKS/ED/CDE/R/4/VOL.3/48 **15th May, 2019**

Joyce Mwongeli Kitonyi
St. Pauls University
P.o Box Private Bag-00217
LIMURU.

RE: RESEARCH AUTHORIZATION.

Reference is made to the letter from National Commission for Science, Technology and Innovation Ref: **NACOSTI/P/19/66755/29503** dated **23rd April, 2019.**

You are hereby authorized to carry out your research on, **"Effect of non performing loans and financial performance of micro finance institutions in Machakos County Kenya"** for a period ending **23rd April, 2020.**

COUNTY DIRECTOR OF EDUCATION
MACHAKOS
15 MAY 2019
P.O. Box 2666-90100 MACHAKOS

NANCY AFANDI
FOR: COUNTY DIRECTOR OF EDUCATION
MACHAKOS

Appendix IV: Authorization Letter – County Commissioner

THE PRESIDENCY

MINISTRY OF INTERIOR AND COORDINATION OF NATIONAL GOVERNMENT

Telephone: 21009 and 21983 – 90100
Email Address:countycommasaku@gmail.com
Fax No. 044-21999

OFFICE OF THE
County Commissioner
P.O. Box 1 - 90100
MACHAKOS.

When replying please quote:

REF NO.CC/ST/ADMS/9VOL.1/90 **DATE:** 15th May, 2019

Deputy County Commissioners
MACHAKOS COUNTY

RE: AUTHORIZATION RESEARCH – JOYCE MWONGELI KITONYI

The National Commission for Science, Technology and Innovation has authorized the below named researcher to carry out a research on "***Effects of non-performing loans and financial performance of micro finance institutions in Machakos Co***" in Kenya for the period ending **23rd April, 2020.**

Please be notified and accord her the necessary assistance.

COUNTY COMMISSIONER
MACHAKOS
Box 1 MACHAKOS

ELIJAH OMOYO
For: COUNTY COMMISSIONER
MACHAKOS

Appendix V: List of Registered Selected MFIs in Kenya

1. Faulu- Kenya
2. Kenya Women microfinance bank
3. SMEP
4. Rafiki microfinance bank

Appendix VI: Data Collection Sheet

Year		1	2	3	4	5
Return on asset	**EBIT**					
	Total assets					
Non-performing loan ratio	**Total defaulted loans**					
	Total loans and advances					
Loan loss provision ratio	**IBT+ Loan loss provision**					
	Net charge offs					
Cost per loan asset ratio	**Total operating costs**					
	Total revenue					
Credit to deposit ratio	**Total credits**					
	Total deposits					