

**EFFECT OF INTEREST RATES ON FINANCIAL PERFORMANCE OF DEPOSIT  
TAKING MICRO FINANCIAL INSTITUTIONS IN KENYA.**

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**DECLARATION**

I declare that this project is my original work and has not been presented for the award of a degree in any other university.

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**APPROVAL**

This project has been submitted with my approval as the University supervisor.

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## ABSTRACT

Microfinance institutions have grown faster since their origin, 1976 in Bangladesh; with the first being the Grameen bank. Countries like South Africa have also recorded consistent growth of microfinance institutions. In Kenya, deposit taking microfinance institutions have not been much effective because they possess internal issues such as interest rates that hinder their effectiveness. Studies show commercial banks account for 22.6% of the population while 17.9% is served by the microfinance institutions and 26.8% rely on the informal financial services and 32.7% of the population never relied on financial institutions for their savings and investment undertakings. Past studies have posted inconsistent and mixed results on interest rates and financial performance of deposit takings microfinance institutions and fluctuation of interest rates from time to time as other reviewed literature focused on the general performance of MFIs and lending institution. It is also evident that most of the studies focused generally on effect of interest rates on lending institutions which include all financial institutions. The purpose of this study was to determine the effect of interest rates on financial performance of deposit takings microfinance institutions in Kenya. Specifically the study sought to; determine the effect of customer loans interest rates on financial performance of deposit taking microfinance institutions in Kenya, assess the effect of deposit interest rates on financial performance of deposit taking microfinance institutions in Kenya and establish the relationship between interest rates and financial performance of deposit taking microfinance institutions in Kenya. The study was anchored on the micro credit, liquidity preference and classical theories and adopted correlational research design on 9 deposit taking microfinance institutions in Kenya which was done through census. The study used secondary panel data from 2013 - 2017 financial audited reports and findings were presented in tables. Findings of the study revealed that the model had a significance level of 0.000 which shows that the data is ideal for making conclusions on the population's parameter as the value of significance (p-value) < 5%. The study showed a significant negative effect of lending interest rates, deposit interest rates on the financial performance of the deposit takings microfinance institutions ( $R^2=.724$ ,  $p=.000$ ). (coeff. =-.181,  $p=.000$ ) a significantly negative effect of deposit rates on financial performance; a positive significance on effect of lending rates on financial performance (coeff. =.019,  $p=.032$ ). The study further revealed that there was a strong positive relationship between the study variables ( $R$  0.283,  $p = 0.144$ ) lending rates; ( $R=- 0.817$ ;  $p = 0.000$ ) deposit rates. The study concludes that holding lending interest rates to a constant zero, a unit increase in lending interest rates would lead to an increase in performance of the industry, unit increase. Holding deposit interest rates to a constant zero, a unit increase in deposit interest rates would lead to a decrease in performance. All the variables lending interest rate and deposit interest rates and in relation to performance was all positive. The study recommend lower lending and deposit interest rates to encourage borrowing/deposit and economic growth. The finding of the study is deemed useful to policy makers on improving the microfinance industry and other researchers with related academia interest.

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## **DEDICATION**

I dedicate this project to my family and friends for the support they gave me during the entire period of my study. Special gratitude to my loving Mum Benter Okise and Dad John Okise for their tireless effort towards ensuring that I get the best education in my life. To all MSC-Finance students in Maseno University who are interested in further studies on MFIs in Kenya for believing in pursuit of academic excellence and giving the best to the growth of MFIs in Kenya.

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### **Operational Definition of terms**

**Interest rate:** is the price a borrower pays for the use of money they borrow from a lender or fees paid on borrowed assets.

**Micro finance institutions:** It is an organization that provides financial services to low income individuals.

**Loans:** Refers to something that has been borrowed.

**Borrowers:** Refers to a person who has obtained funds from a business or individual which is required to be given paid back in a specified period of time in which he promises to repay.

**Return on Investment (ROI):** Ratio between net profit and cost of investment.

**Return on Capital (ROC):** Ratio that measures how a company is turning capital to profits.

**Return on Equity (ROE):** Ratio between Net income and shareholder Equity.

## **List of Acronyms and Abbreviations**

<b>CBK</b>	Central Bank of Kenya
<b>CPI</b>	Consumer Price Index
<b>KNBS</b>	Kenya National Bureau of Statistics
<b>NSE</b>	Nairobi Stock Exchange
<b>MFI</b>	Micro Finance Institutions
<b>ROE</b>	Return on Equity
<b>ROI</b>	Return on Investment
<b>DTMFI</b>	Deposit Taking Microfinance Institution
<b>AMFIs</b>	Association for Microfinance Institutions of Kenya

# CHAPTER ONE

## INTRODUCTION

This chapter explains the theoretical background of the study, statement of the problem, research objective, specific objectives, research hypothesis, scope of the study justification of the study.

### 1.1 Background of the Study

Interest rate is the amount charged by banks on loans from the borrowers usually measured by the difference between average interest rate earned on loans and average interest rate paid on deposits (Sologoub, 2006) Terms and conditions of interest rates differ by country limiting their comparability. If a bank pays depositors high interest rates and lends the deposited money out at high interest rate the difference between the two interest rates is referred to as interest rate spread. Interest rate is similar to net interest rate margin but difference in that its numerical number that institution earns if all assets are borrowed and invested Drake, Asset portfolio of institution (2002)

Gonzalez (2010) Studied on whether high interest rates charged by micro finance institutions are in fact exploiting the poor. This is due to the fact that these institutions provide poor households with a very small loan called micro credit to help them engage in productive activities or help them grow their small businesses. However, charging high cover costs is a key practice to any institution that intends to continue its operations beyond short term. Interest rates cover operational and financial costs in the process aimed to achieve the objectives of the MFI. Interest rates charged on loans by MFIs is justified as their main source of income for these institutions. MFIs claim that they have to provide financial services to poor people and have to face administrative cost that's why they charge such high rates Fernando (2006)

MFIs have grown faster since their origin 1976 in Bangladesh, with the first being the Grameen bank which was invented by Muhammad Yunus Hossain (1988). The first MFIs were welcomed with a lot of challenges as they provided loans to the poor who ended up defaulting because they offered no security for their loans Janda & Zetek, (2016) However, in Europe, MFIs managed to extend 5.6% gross loan portfolio despite much influence from macro-economic variables McKay & Pickens, (2010). In the last decades the population of

MFIs have dominated the financial sector. More than 3,000 MFIs have sprung up with more than 154 million customers Bauchet & Morduch, (2013).

Other studies also propose that MFIs started in Europe by Fredrick, (2010) who gathered farmers into small saving cooperatives. Jonathan swift afterwards evolved the microfinance into Irish loan fund. The idea afterwards spread across the world targeting the low income earners in the rural and urban setting (Kessy & Temu, 2010). Joseph Blatchford in south Africa raised US Dollars 90,000 and started ACCION which was a development program targeting the low income earners who wished to jumpstart their enterprises (Diniz, Jayo, Pozzebon, Lavoie, & dos Santos Foguel, 2014). Armendariz&Morduch, (2010), a group of people came up with an organization to help alleviate the poverty levels in Bangladesh and which was considered as the earliest form of microfinance. Yunus, (1970) of the Bangladesh Grameen Bank and Novak, (1972) of France are the well-known founders of microfinance institutions and led to eruption of many MFIs. MFIs provide savings and credit services to the poor and can also provide other financial services such as payment services. Other MFIs have even gone to the extent of providing social services which involves forming of self-development groups to train them on importance of savings and investments

In Kenya, microfinance was developed by Non-Governmental Organizations in collaboration with the government of Kenya ; these NGOs include World Bank, USAID Development, (2016)UNDP (Program)and later the commercial banks supported NGOs by financing the operations Mugo (2012). The government helped the MFIs to establish by providing an enabling environment and also setting a platform for donor support. Micro finance act became active in 2008 and by 2010; more than 24 MFIs had sprung providing \$1.5 billion loans to almost 1.5 billion active borrowers. According to CBK report 2015, equity bank had the largest share of business loans representing market share of 73.50% followed by Kenya women finance trust with a market share of 12.60%. Despite some few challenges MFIs in Kenya have continued to render their services to the poor at low interest rate.

Commercial banks account for 22.6% of the population while 17.9% is served by the Micro Finance Institutions and 26.8% rely on the informal financial services Rotich (2015).The report also indicated that 32.7% of the population never relied on financial institutions for their savings and investment undertakings. Through providing good

services to the poor some of the MFIs have undergone transformation to commercial banks like Equity Bank, KRep Bank, Kenya Women Finance Trust (KWFT) and Family Bank Mutua, (2006)

Kenya had followed different development paths in micro finance evolution as compared to other economies but with the main focus of providing credit facilities for Kenyan borrowers has been key. Deposit taking MFIs have developed in response to the widespread poverty in Kenya and the need to provide savings and funds for investment to people who were unable to secure loans through the conventional banking system. Failure of most MFIs to change to deposit taking MFIs has been attributed to tough conditions of CBK. The strict conditions have seen those that transform suffer a huge drop in their earnings discouraging other MFIs from converting. The reason behind converting to deposit taking was to allow MFIs to access cheaper funds which they could then lend to public at a lower rate rather than depending on expensive credit from commercial banks which force them to charge higher interest rates to their borrowers.

Since customers of deposit taking MFIs have lower income, MFIs products tend to be of smaller monetary amounts. These products include loans and savings. Micro loans are usually given for enterprise development Kenya, (2006) Focus on the poor deem deposit taking MFIs to use non-traditional methods such as group lending and pre-loan savings to increase loan sizes and guarantee ready access to future loans if present loans are fully paid.

Financial performance is the level of performance of business or investments over a specific period of time expressed in profits or loss (Wikipedia). Carton, (2004) Defines financial performance as the measure of financial state of organization that result from management decision. The outcome is not universal in nature but depend on the organization context hence selection of measures that represent performance of particular organization is done based upon the circumstance of the organization. It is mostly used as a measure of financial investments over a certain period in order to allocate the level of efficiency. Wild, (2002) States that financial ratio are usually calculated from accounting information and include liquidity ratios, debt ratios and profitability ratios. According to wild, liquidity ratio measures the availability of cash to pay off debt. Debt ratio also measures the firm ability to pay long term debt while profitability ratio measures the level at which firm uses its assets to generate revenue.

Micro Finance Institutions (MFIs) performance can be understood by measuring quantitative performance parameters over a given period of time. Investopedia (2010) defined financial performance as the measure of how a firm uses its assets to generate revenue. MFIs generate financial revenue from loans and other financial services in the form of interest fees, penalties, and commissions. Financial revenue also involves income from other financial assets such as investment income. Deposit taking MFIs also generate expenses apart from its operations through the defaulted loans by customers. Profitable firms earn positive returns and is weighed when the cost of income exceed the total expenses. The financial indicators usually include Return on Capital (ROC), Return on Investment (ROI), and Return on Equity (ROE). The financial indicators are calculated as follows;  $ROI = \text{Net profit} / \text{Total Investment}$ ,  $ROC = \text{Net profit} / \text{employed capital}$ ,  $ROE = \text{Net income} / \text{shareholder equity}$ .

Deposit taking MFIs charge low interest rates and have a bigger consumer base as compared to those financial institutions charging higher interest rates hence an increased financial performance. Interest rates represent average interest rates on all public guaranteed loans. Competitive interest rates on deposits encourage customers of deposit taking MFIs to deposit more. Adoption of deposit taking had a positive impact on financial performance of micro finance industry because the deposits are source of loanable funds to customers. There is a positive correlation between loans by deposit taking MFIs and amount of deposits received from the customer. If the institution has low amount of deposits, they could loan at low interest rates meaning that the number of borrowers will increase resulting to growth in profitability Mc Donald, (2010)

Empirical review Drake, Asset portfolio of institution, (2002), Gonzalez, (2010) show that the amount charged by banks on loans from the borrowers usually measured by the difference between average interest rate earned on loans and average interest rate paid on deposits which is had a positive effect on financial performance. Mugo, (2012), Mc Donald, (2010) show that there is a positive correlation between loans by deposit taking MFIs and amount of deposits received from the customer. McKay & Pickens, (2010), Bauchet & Morduch, (2013) MFIs managed to extend 5.6% gross loan portfolio despite much influence from macro-economic variables. Fredrick, (2010), Kessy & Temu, (2010) who gathered farmers into small saving cooperatives Diniz, Jayo, Pozzebon, Lavoie, & dos Santos Foguel, (2014), (Armendariz & Morduch, 2010), (Yunus, 1970) , Novak, (1972) a



group of people came up with an organization to help alleviate the poverty levels in Bangladesh through provision of loans at affordable rates. Contrary, Fernando, (2006), Hossain, (1988) Janda & Zetek, (2016) state that the first MFIs were welcomed with a lot of challenges as they provided loans to the poor who ended up defaulting because they offered no security for their loans thus negative results

From the previous studies it is evident that various authors have shown MFIs were developed to provide loans at fairer interest rates which have an impact on financial performance of microfinance institutions. They recognized that MFIs is crucial in both developed and developing countries like Kenya as it play vital role of lending money to small medium enterprises which in long run boost their earnings leading to rapid expansion hence economic growth. Mixed results are evident as some authors revealed that customer loans affect financial performance of deposit takings MFIs positively while some authors have contrary findings. However there is no clearer study showing the direct impact or effect of customer loans interest rates on the financial performance of MFIs thus showing a gap for further studies. Therefore, the objective of the study was to determine the effect of customer loans interest rates/lending rates on the financial performance of deposit taking MFIs in Kenya.

Interest rates refer to an amount that one pays for money or an asset borrowed Crowley, (2007). There are different forms of interest rates; fixed and compound interest rates which are charged on mortgage which is paid for money lent out for a house. Interest rates are charged as a percentage of the total principal by a lender. The interest rates in most countries which use a central government are determined by the Central Bank. In Kenya specifically, the interest rates are determined by the Central Bank of Kenya. The Central Bank of Kenya supports the determination of interest rates by market forces (2008, 2010), Tiernan & Burke, (2002) refers interest rate as the proportion of a loan that is charged as interest to the borrower, usually expressed as annual percentage of loan. High interest rates would mean higher borrowing costs. This would shy away potential borrowers from taking up loans fearing the huge repayments. Saunders, (1995) Shows that interest rates have influenced the flow of goods and services. The study points out those interest rates relate highly to present and future value of money.

Roberts, (2013) revealed that interest rate has a negative relationship with financial performance. Micro credits have a high transaction costs which translates into high interest

rates for the poor. The high interest rates from deposit taking MFIs are as a result of losses due to loans impairments and cost of monitoring borrowers. High interest rates could scare off potential borrowers (Roberts, 2013). Bernstein, (1996) Found out that developing countries have more liberalized interest rates which are determined by market forces. In Kenya interest rates determination is done by a monetary policy committee in CBK. Also (Lloyd, 2003) shows that the interest rates are anticipated due to the expected changes in price, therefore money loaned out must have should have increased money value so as to prevent losses.

Mwangi & Ouma, (2012) the microfinance Act 2006 defined the regulatory and supervisory framework for deposit taking microfinance institutions in Kenya. The Act proposed that Deposit Taking Microfinance establishments are authorized by the central bank of Kenya to mobilize savings from its customers. It is, therefore, expected that the microfinance industry will play a great role in deepening financial markets and providing access to financial services and products by majority of the Kenyans. As at June 2013 according to Central Bank of Kenya; Kenya has 9 deposit taking Microfinance institutions.

(Ahokposi, 2013) studied on the determinants of interest rate margins in ten Sub Saharan Africa countries was able to determine that the credit risk and operating inefficiencies explained the major variation in the interest rates. The study showed that changes in the interest rates were an indicator of banking sector inefficiency. This is also collaborated by Folawewo & Tennant, (2010) who also attributes those wide changes in interest rates is due to failure in financial intermediation. Hawtrey & Liang, (2008) study on bank interest margins identified that there are two dangers which are associated with the high interest: it may create general scarcity of money and as a result, restricted borrowing for consumer spending, construction, and business investment to cause or recession; and that certain sectors in the economy may fail leading to poor performance of the economy..

Leung & Wensheng, (2003) Investigated Hong Kong dollar risk premium using a study relating the Hong Kong dollar to the United States dollar. The objective of the study was to determine the effect of these two-dollar currencies to net interest margin. Using data from 1993 to 2001, the researchers were able to come up with results relating the different factors affecting the financial state of commercial banks. The results from this study showed a positive relation in that a rise in interest rate resulted to squeezed net interest rate and worsened the asset quality.

ECB (2010), Return on equity was seen to be a weak indicator of financial performance of commercial banks. Other indicators such as Net interest margin, ROA were seen to be necessary in order to develop a conclusion of financial performance of banks. All these factors are determined by interest rate margin which goes all along to show the importance of this concept under study in this research.

(Demirguc, 1995) Did a study on determinants of commercial bank interest margins and profitability using level data for 80 commercial banks in Europe in the years 1988 to 1995 the finding was that differences in interest margins and bank profitability reflect a variety of determinants, bank characteristics of commercial bank interest margins, macro-economic conditions and bank overall financial structure.

Rajeev, (2005) Studied if interest rates matter in financial performance. The study was done in Dhaka slum, Bangladesh. The data from reserve bank of Bangladesh was used to examine how sensitive borrowers are to increase interest rates on loans. The finding was that less wealth account holders are more sensitive to interest rates than relatively wealthier borrowers. Therefore, sensitivity of interest rate change was felt more by the poor and less by the rich.

Sudin, (2010) did a study on effects of conventional interest rates and rate of profit on funds deposited with Islamic banks in Malaysia. The findings contrary showed that interest rates increase led to a decrease on return on equity. He argued that interest rates charged by MFIs made customers to source funds from other lending institutions hence decreasing the returns from the institution.

(Mwangi, 2012) Also did a cross sectional research study and established that high interest rates charged on borrowing affected financial performance. He also found out that long term borrowing was expensive as it was perceived to be riskier than short term borrowing. He went further to conclude that customers who accepted the high interest rates were the ones likely to default whereas customers who championed for low interest rates had the likely hood to repay. MFIs at last found themselves lending money to the riskier borrowers who never paid back the amount borrowed.

Previous literature Leung & Wensheng (2003), Demirguc (1995) showed a positive relation in that a rise in interest rate resulted to squeeze net interest rate and worsened the asset quality. Rajeev (2005), Mwangi (2012) .Crowley, (2007), Tiernan & Burke,

(2002) established that high interest rates charged on borrowing affected financial performance. McDonald, (2010) Ahokpossi (2013), Folawewo & Tennant (2000), Hawtrey & Liang (2008) showed positive relationship between the deposit takings MFIs and interest rates. Bernstein (1996), Lloyd (2003) showed that developing countries have more liberalized interest rates which are determined by market forces. In contrast Sudin (2010) Fredrick (2010), Kessy & Temu, (2010), Diniz, Jayo, Pozzebon, Lavoie, & dos Santos Foguel, (2014) the findings contrary showed that interest rates increase led to a decrease on return on equity which is negative. Saunders (1995), (Roberts, 2013) revealed that interest rate has a negative relationship with financial performance.

Prior studies show a broad relationship between interest rates and performance of micro finance institutions. Most lending institutions are faced with a financial problem hence increasing interest rate. Mixed results are evident as some authors revealed that interest rates affect financial performance of MFIs positively while some authors have contrary findings. Few studies have not put together the two variables interest rates, customer loans and their effects on the performance of deposit takings MFIs. Therefore, the objective of the study was to establish the relationship of interest rates and financial performance of deposit taking MFIs in Kenya.

Deposit takings microfinance institutions that charge lower interest rates have a bigger consumer base compared to those that charge high interest rates leading to an increased financial performance. Interest represents the average interest rate on all new public and publicly guaranteed loans contracted during the year. Competitive interest rates on deposits encourage customers of DTFIs to deposit more. McDonald & Robert, (2010) The adoption of deposit taking has had a positive impact on the financial performance and profitability of nation-wide microfinance banks because the deposits are a source of loanable funds to the customers. Thus, there is a positive correlation between loan pricing by microfinance banks and the amount of deposit received from the customer's. If firms DTFIs have sufficient amount of deposit, they will be in a position to loan the clients at a lower interest rate, meaning the number of borrowers will increase resulting to growth in profitability McDonald, (2010).

One of the major indicators of the banking sector efficiency is the interest rate spreads; several studies have been able to identify that interest rates in Africa are high Brock & Rojas-Suárez, (2000); Gelos, (2006); Chirwa & Mlachila, (2004); Crowley, (2007). Kenya

is no exception from the high interest rate spreads. Other studies recent studies such as Ahokpossi (2013), who studied the determinants of interest rate margins in ten Sub Saharan Africa countries was able to determine that the credit risk and operating inefficiencies explained the major variation in the interest rates. The study showed that changes in the interest rates were an indicator of banking sector inefficiency. This is also collaborated by Folawewo & Tennant (2008) who also attributes those wide changes in interest rates is due to failure in financial intermediation. Hassan and Khan (2010) assert that when deposit rates rise, banks on average attract riskier investments which require a higher return on investment. They continued to assert that higher interest rates also made a lot of depositors to shy off from depositing. This is supported by Hamid (2011), who argued in his study on interest rate spread in developing countries that indicated non-deposit based funding is positively and significantly correlated to interest rate spreads. The study found evidence that the share of deposits in the foreign banks was negatively correlated to volumes of credit to the private sector. According to Hawtrey and Liang (2008) study on bank interest margins in fourteen countries from the period of 1987 to 2001, they identified that there are two dangers which are associated with the high interest spreads: it may create general scarcity of money and as a result, restricted borrowing for consumer spending, construction, and business investment to cause or recession; and that certain sectors in the economy may suffer a disproportionate share of the impact as a result of the high interest rates and create deposit shortages because of the high cost of funds. This would affect the small businesses which may fail due to lack of funds since these businesses operate within small profit margins.

Empirical review McDonald & Robert, (2010), McDonald, (2010) found that there is a positive correlation between loan pricing by microfinance banks and the amount of deposit received from the customers. Brock & Rojas-Suárez, (2000); Gelos, (2006); Chirwa & Mlachila, (2004); Crowley, (2007) show that one of the major indicators of the banking sector efficiency is the interest rate spreads on deposits; several studies have been able to identify that interest rates in Africa are high. Contrary to, Ahokpossi (2013) Folawewo & Tennant (2008) Hassan and Khan (2010) assert that when deposit rates rise, banks on average attract riskier investments which require a higher return on investment which is a negative result. Hamid (2011) Hawtrey and Liang (2008) the study found evidence that the

share of deposits in the foreign banks was negatively correlated to volumes of credit to the private sector.

Existing literatures shows diverse relationships between deposit interest rates and performance of micro finance institutions. Few studies have not put together the two variables deposit interest rates and their effects on the performance of deposit taking MFIs. Most deposit institutions are faced with increasing credit risk as the proportion of non-performing loans increase by charging a high-risk premium on the lending hence increasing interest rate while deposits remains constant. Macro-economic variables have an effect on interest rates and deposit taking microfinance institutions performance. Mixed results are evident as some authors revealed that deposits interest rates affect financial performance of deposit takings MFIs positively while some authors have contrary findings. Therefore, the objective of the study was to assess the effect of deposit interest rates on financial performance of deposit taking microfinance institutions in Kenya.

## **1.2 Statement of the problem**

Microfinance sector is very important in economic growth and development in Kenya. Micro finance institutions in Kenya offer diverse products and services ranging from loans to micro enterprises to individuals. Studies show commercial banks account for 22.6% of the population while 17.9% is served by the microfinance institutions and 26.8% rely on the informal financial services and 32.7% of the population never relied on financial institutions for their savings and investment undertakings. Previous studies sought to determine the influence of lending rate on the financial performance of Nigerian Deposit Money Banks between 2000 and 2010. It was reported that interest rates positively and significantly influenced the financial performance of deposit taking microfinance institutions in Kenya. Another study showed that increased interest rates in financial institutions results to reduced customer borrowing and loan repayment capacity leading to increased number of loan defaulters which is a negative relationship thus showing mixed results. Customer loans have not been previously studied in relation to deposit takings MFIs in Kenya. Moreover most of the reviewed literature focused on the general performance of MFIs and lending institution. It is also evident that most of the studies focused generally on effect of interest rates on lending institutions which include all financial institutions. Furthermore, few studies have not put together the two variables interest rates, customer loans interest rates, deposit interest rates and their effects on the

financial performance of deposit taking MFIs in Kenya. Relationship between interest rates and financial performance of deposit taking MFIs in Kenya is still limited. The study therefore sought to determine the effect of interest rates on financial performance of deposit taking microfinance institutions in Kenya.

### **1.3 Research Objective**

The main objective of the study was to determine the effect of interest rates on financial performance of deposit taking microfinance institutions in Kenya.

Specifically, the study sought to;

- i) Determine the effect of customer loans interest rates on financial performance of deposit taking microfinance institutions in Kenya.
- ii) Assess the effect of deposit interest rates on financial performance of deposit taking microfinance institutions in Kenya.
- iii) Establish the relationship between interest rates and financial performance of deposit taking microfinance institutions in Kenya.

### **1.4 Research hypothesis;**

H<sub>0</sub> Customer loan has no significant effect on financial performance of deposit taking MFIs in Kenya H<sub>0</sub>:  $\beta = 0$

H<sub>0</sub> There is no significant relationship between interest rates and financial performance of deposit taking MFIs in Kenya H<sub>0</sub>:  $\beta = 0$

H<sub>0</sub> deposit interest rates have no significant effect on financial performance of deposit taking MFIs in Kenya H<sub>0</sub>:  $\beta = 0$

### **1.5 Scope of the study**

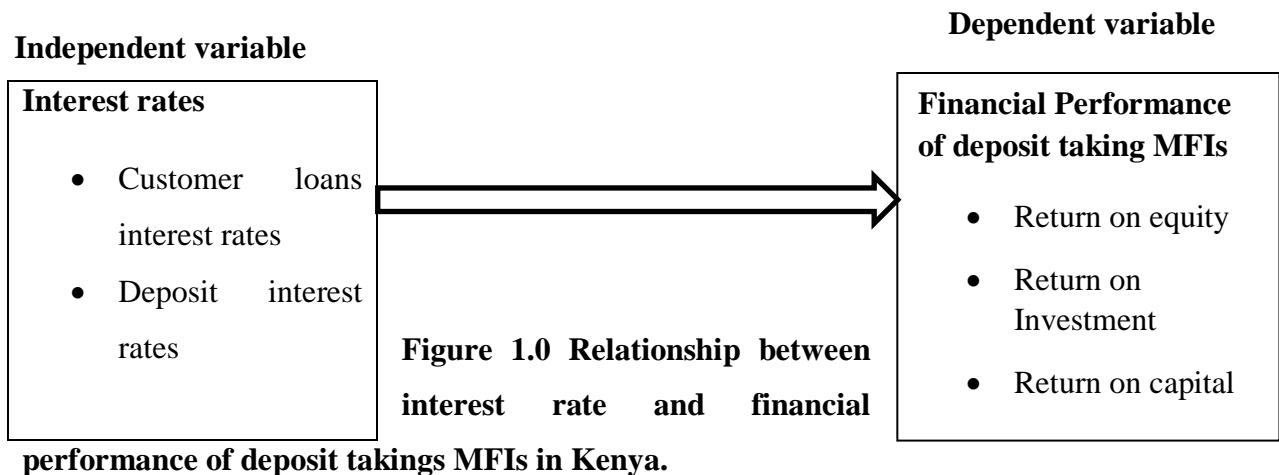
The scope of this study was examined in terms of subject, area and time scope. In terms of subject scope, this study was limited to broad area of finance and its subfields of banking. Garcia, Munn, & Woelfel, (2006) defined finance as the management of money and involves activities such as borrowing, saving, budgeting and lending. Area or geographical scope serves as the second aspect of scope in this study. The study focused on 9 deposit taking MFIs in Kenya. In terms of time scope, this study was cross sectional study which relied on secondary data from CBK on interest rates for the nine registered deposit taking micro finance institutions in Kenya. The data revolves from 2013 to 2017.

### 1.6 Justification of the study

This research was necessary because prior studies have shown a mixed result on the effect of interest rates on the performance of deposit taking micro finance institutions. No previous studies that have shown the effect of interest rates on financial performance of deposit taking micro finance institutions in Kenya. Also, the effect of interest rates on loans and deposits has not been studied. Knowledge gained from this study may be used by investors in saving decisions .This study therefore contributed to micro credit theory and classical theory of interest in two dimensions: first, by looking at the effect of interest rates on loans, deposits and financial performance of deposit taking MFIs in Kenya, secondly, the study provides new empirical evidence on the effect of interest rates on performance of deposit taking MFIs in Kenya.

### 1.7 Conceptual framework:

This is a set of general thoughts and doctrines obtained from related fields of investigation and utilized to arrange for a successive submission Smyth, (2004) describe possible links between variables. It enables the researcher to generate cognizance and appreciative of circumstances subject to presentation. In this study, the presented framework indicates the effect of interest rates on the performance of deposit taking MFIs as shown in figure. The independent variables be were interest rates, customer loans rates and deposit rates while the dependent variable was financial performance of deposit taking MFIs in Kenya.



Source Adapted from Keynes (2016)



## **CHAPTER TWO**

### **LITERATURE REVIEW**

#### **2.1 Introduction**

This chapter explains the theoretical review, variables concept and empirical literature review.

#### **2.2 Theoretical Review**

##### **2.2.1 Micro-credit theory**

Westover, (2008) explains the psychological component of the micro credit theory called as social consciousness-driven capitalism which he says has been advanced by most of enthusiastic promoter of micro finance; His theory argues that kinds of profit making private ventures that's cares about welfare of its customer can be considered. In other words, it is possible to develop capitalist enterprises that maximizes private profits subject to the fair interests of their customers Kandahar & Demopoulos, (2004).

The rationale of the theory is straightforward, although philanthropy is totally absent; capitalism is founded mainly on the basis that beings are selfish by nature. Thus, individuals interested in businesses are generally motivated by principle of profit maximization, with little for interest of their clients. This proposition is too limited to be a general model for capitalism however because it excludes individuals who are concerned about the welfare their fellow human beings. A more generalized principle would assume that all entrepreneurs will maximize both financial return or profit and social return. These assumptions created the groups of entrepreneurs Kandahar & Demopoulos, (2004) The first group consist of traditional capitalist who mainly maximize profits or financial returns. The second group consists of philanthropic organizations (like traditional micro credit NGOs and public credit agencies that mainly maximizes social returns). The third group consists of entrepreneurs who combine both rates in making their investment decisions under the additional constraint that financial return cannot be negative. This group includes microfinance enterprises that are treated as socially concern people and are microfinance which are to be treated as social consciousness driven capitalist enterprises. Microfinance theoreticians have advanced two theories their aims- an economic and psychological. Economic theory treats MFI as infant industries while Psychological theory differentiates

micro finance entrepreneurs from traditional money lenders by portraying them as “social consciousness driven people”. The essence of the economic argument is that success of any business venture, including MFIs is determined by entrepreneurs’ ability to determine appropriate services and profitability the study further asserts that it is possible to develop capitalist enterprise that maximize private profits. Their argument comes from the fact that most profit-making private ventures have shown to care about welfare of its customer. Contrary to developing a capitalist enterprise that maximize private profits, there is a potential tension that over emphasis on the capitalist market, may lead deposit taking MFIs moving away from its poverty reduction objective (Drake, 2004). This theory is relevant to the study as it focuses on the contribution of interest rates to lending institutions and customer’ social behavior which affect the financial performance of MFIs in Kenya.

### **2.2.2 Keynes liquidity preference theory**

Keynes (1936) mentioned the concept of liquidity preference theory in his book *The General Theory of Employment, Interest, and Money* discussing the connection between interest rates and supply/demand. Keynes defined liquidity preference theory as the rate of interest which is set in the employment model. In Keynes view, the primary way in which interest rates affects level of aggregate output is through effect of planned spending. Profit seeking organizations make investments in physical as long as they expect to earn more from the physical capital than from interest cost on loans to finance investments. Keynes believes that other factors which that influence demand on investment is monetary policy. He advocates that monetary policy should be directed in influencing the rate of interest. The liquidity theory looks at interest rate as the token paid for the inconveniences experienced for having to part with an asset whose liquidity is very high. It is the price that equilibrates the desire to hold wealth in the form of cash with the available quantity of cash. Interest rate is a function of income. Its primary role is to help mobilize financial resources and ensure the efficient utilization of resources in the promotion of economic growth and development. Liquidity preference theory looks at the interest rate as the token paid for inconveniences experienced for having to part with an asset whose liquidity is very high. It is a price that equilibrates the desire to hold wealth in the form of cash with the available quantity of cash, and not a reward of savings. Interest rate is a function of income. Its primary role is to help mobilize financial resources and ensure the efficient utilization of resources in the promotion of economic growth and development. Keynes

theory of interest is a general theory; it assumes that income and employment fluctuate constantly. Classical regard rate of interest to be equilibrating mechanism between saving and investment. Keynes regards changes in income to be the equilibrating mechanism between them. This theory discuss the impact of interest rates in a hypothetical economy why demand and supply of money and employment is key, therefore, it is relevant to this study as it explains the effects of interest rates on financial performance of microfinance institutions in Kenya.

### **2.2.3 The classical theory of interest**

Ricardo, J. S. Mill, Marshall and Pigou (1776 to 1870) developed classical theory of interest defines interest rate as the price of savings determined by demand and supply of loanable funds. It is the rate at which savings are equal to investment assuming the existence of a capital market. The loanable fund theory argues that interest rate is determined by non-monetary factors. It assigns no role to quantity of money or level of income on savings, or to institutional factors such as commercial banks and the government.

From the classical theory of interest, interest rates adjust fully to the expected rate of inflation leaving real interest rates unchanged. Fisher believed that there is a positive relationship between expected future price increases and interest rate. An increase in price increases the value of trade, resulting in an increase in demand for money and leading to an increase in interest rate. Fisher's theory is controversial, however, particularly when it is interpreted as suggesting a constant real interest rate. Kabubo, (1998) applying the classical theory shows that positive real interest rate are achieved when inflation is moving down and when they move up the prospects of keeping them are narrow, their study further argues that the spread between lending and deposit rates widened with liberalization, while the short-term rates increases at a faster rate compared with long-term rates resulting in a negatively sloped yield curve. (Frederick, 1986) contends that high interest rate is an effective tool for stopping high inflation.

(Fredric, 1986) While noting that interest rate is the price lender charge on borrowed funds, he further contends that the forces of demand and supply in the market would attain the market equilibrium interest rate. This position is in conformity with the classical economic theory thus supply side of this money market represent the supply of loanable funds while the demand side will represent the demand for loanable funds, therefore the interest

determination is at equilibrium at the point of intersection of the supply and demand curve. This study seeks to determine the factors that determine the interest rates of the MFIs. The MFIs give credit to the small entrepreneur and households who have high risk of defaulting with funds which are mainly borrowed from other financial institutions or donations from well-wishers. Classical financial institutions typically require the existence of collateral as security before granting loans to the customers. Classical theory assumes that an increase in the production of one thing must mean the withdrawal of some resources from the production of other things. If investment is to be increased, for example, this can only be done if resources are withdrawn from the production of consumer goods. Therefore, if people are to be induced to postpone their consumption or wait for the future enjoyment of their savings, the reward in the shape of interest must be paid. This theory is relevant to the study because it reveals other macro-economic factors affect the interest rates which eventually affects the financial performance of MFIs in Kenya.

#### **2.2.4 Interest rates concept**

Interest rates refer to an amount that one pays for money or an asset borrowed Crowley,(2017). There are different forms of interest rates; fixed and compound interest rates which are charged on mortgage which is paid for money lent out for a house. Interest rates are charged as a percentage of the total principal by a lender. The interest rates in most countries which use a central government are determined by the Central Bank. In Kenya specifically, the interest rates are determined by the Central Bank of Kenya. The Central Bank of Kenya supports the determination of interest rates by market forces Central bank of Kenya(2008) Tiernan & Burke, (2002) refers interest rate as the proportion of a loan that is charged as interest to the borrower, usually expressed as annual percentage of loan. High interest rates would mean higher borrowing costs. This would shy away potential borrowers from taking up loans fearing the huge repayments.

#### **2.2.5 Financial performance Concept**

Financial performance is a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues. This term is also used as a general measure of a firm's overall financial health over a given period of time, and can be used to compare similar firms across the same industry or to compare industries or sectors in aggregation Knight,(2010)

Performance seems to be conceptualized, operationalized and measured in different ways thus making cross-comparison difficult. Financial performance is however a subjective measure of how well a firm can use assets from its primary mode of business and generate revenues (Investopedia).

Financial Performance in broader sense refers to the degree to which financial objectives being or has been accomplished and is an important aspect of finance risk management. It is the process of measuring the results of a firm's policies and operations in monetary terms.

It is used to measure firm's overall financial health over a given period of time and can also be used to

compare similar firms across the same industry or to compare industries or sectors in aggregation Venanzi, (2011), FrichKohlar, (2012), The word 'Performance is derived from the word 'parfourmen', which means 'to do', 'to carry out' or 'to render'. It refers the act of performing; execution, accomplishment, fulfillment, etc. In border sense, performance refers to the accomplishment of a given task measured against preset standards of accuracy, completeness, cost, and speed. In other words, it refers to the degree to which an achievement is being or has been accomplished. "The performance is a general term applied to a part or to all the conducts of activities of an organization over a period of time often with reference to past or projected cost efficiency, management responsibility or accountability or the like". Thus, not just the presentation, but the quality of results achieved refers to the performance. Performance is used to indicate firm's success, conditions, and compliance. Financial performance refers to the act of performing financial activity. In broader sense, financial performance refers to the degree to which financial objectives being or has been accomplished. It is the process of measuring the results of a firm's policies and operations in monetary terms. It is used to measure firm's overall financial health over a given period of time and can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation

### **2.2.6 Deposit taking microfinance Institutions Concept**

In Kenya, the activities of micro finance date back to 1980's with activities of NGOs. In the 2000's also the mainstream banks have also entered the fight and created micro finance products Ochanda, (2012) Institute of Economic Affairs (2002) found that the micro-finance and micro-credit institutions in Kenya had followed different development paths but with the main focus of providing varying degrees of credit facilities for Kenyan

borrowers in both the rural and urban areas. MFIs had developed in response to the widespread poverty in Kenya and the need to provide financing and funds for investment to people who were unable to secure loans through the conventional banking system. According to Institute of Economic Affairs (2002), the rapid growth of institutions providing micro-credit services was illustrated by the finding that less than 10% of Kenya's enterprises had access to financing from the conventional banking channels by then. The constraint arose primarily from the fact that most of these enterprises had neither sufficient assets nor other property to enable them to post collateral. In spite of the constraint, there was immense demand for direct lending by small and medium sized enterprises. From the demand, various institutions have developed and tested specific methodologies towards their satisfaction (ibid).

### **2.2.7 Financial Performance of Deposit Taking Microfinance Institutions concept**

A profitable microfinance industry is vital in maintaining a stable micro- banking system. Low profitability weakens the capacity of Deposit takings MFIs to absorb negative shocks, which subsequently affect their solvency. Profitability of MFIs is determined by the way they are run given the environment in which they operate, risk management capabilities, their competitive strategies, quality of their management and levels of capitalization Laffont & Guessan, (2000). The share of the loan portfolio (as a percentage of total assets) devoted to financing income-generating activities for microenterprises and, possibly, SMEs must be above 70% of the total balance sheet. This ratio indicates that the MFI is focusing on its core business which is its most profitable activity Farrington & Abrams, (2002). The main area of expertise of an MFI remains its sound knowledge of its clients; when it moves away from this, it takes a risk and causes provisions to put pressure on its profitability. The cost of financial resources (equity, debts, grants and deposits) must be optimized by trying to give priority to deposits, which are often the cheapest resources. If this is not possible, the DTMFI should optimize the debt/equity leverage effect in order to avoid financing growth exclusively at the exorbitant cost of accrued income. Indeed, in this case it can only achieve a sufficient level of net income by charging high rates, which in turn will raise the level of equity so as to boost growth or at least not to curb it.

The weight of the return on capital – dividends – must be a specific focus. It will be more difficult to bear if the debt/equity ratio is not optimized Fehr & Hishigsuren, (2004). Financial performance of a firm normally originates from the financial position and structure of the firm. This information is derived from the financial statement which is the

yard stick to evaluate and monitor performance. Business executives use financial statements to draft a comprehensive financial plan that will maximize share-holders wealth and minimize possible risks that may pre-exist. Financial Statements evaluate the financial position and performance of a firm. These statements are prepared and produced for external stakeholders for example: shareholders, government agencies and lenders Rahaman, (2010). Financial performance measures how well a firm is generating value for the owners. It can be measured through various financial measures such as profit after tax, return on assets (ROA), return on equity (ROE), earnings per share and any market value ration that is generally accepted Pandey, (1985).The financial performance of financial institutions can be measured using a combination of financial ratios analysis, benchmarking, and measuring performance against budget or a mix of these methodologies. The financial statements of financial institutions commonly contain a variety of financial ratios designed to give an indication of the corporation's performance Oye, (2006). Most microfinance institutions may have to borrow from the market even at an exceptionally high rate during a liquidity crisis. This ultimately causes a decline in the firms' earnings. Moreover, a bank's further borrowing to meet depositors' demand may place the bank's capital at stake. Thus, debt to equity ratio will rise, affecting the bank's effort to maintain an optimal capital structure Muranaga & Ohsawa, (2002).

## **2.3 Empirical literature Review**

### **2.3.1 Customer Loans and Financial Performance of deposit taking MFIs in Kenya**

Nampewo, (2013)study on the determinants of interest rates charged on loans of the financial sector in Uganda used time series data and the findings shows that interest rates spread is affected positively by treasury bill rate and the non -performing loans. Ngugi, (2000)Studied interest rates spread and its effect on economy used time data series from 1993 to 1999.The study considered deposits, loans and Treasury bill rate. The findings showed that interest rate spread on loans was positively related with deposits but it was negatively related to loans. Ongweso, (2005)Studied the relationship of interest rates and non-performing loans in commercial banks in Kenya for the period 2000 – 2004, the findings were that there was a positive relationship between interest rates and non-performing loans whereby an increase in the interest rates resulted in a high non-performing loan. Bett, (2006)Studied the effects of lending interest rates on profitability

on savings, credit and cooperative societies in Kenya his findings were that lending interest rates of Saccos is positively correlated with profitability.

Kamau, (2007) Studied determinants of profitability of MFIs in Kenya by a survey method by use of secondary data. The findings were that profit before tax depended mainly on interest income, interest expense, shareholder funds, loans and advances to customers. Also, other determinants of profitability of microfinance institutions include provision for bad and doubtful debts and deposits and balances due from other financial institutions. In recent years, microfinance has received increasing attention in discussions about reducing poverty and stimulating economic development. Huge numbers of poor people face a difficult problem accessing Financial Market. They have little collateral reducing their credit worthiness and small loans made to poor people often resulted to high fixed costs, leading to lending to the poor become unprofitable business (Ray, 1998). Microfinance seeks to solve this problem. An impressive fact about the microfinance institutions is that they have shown high resilience financially in the face of stressful or slow economic conditions. Past research indicates that microfinance unlike commercial banks, have been able to contain economic downturns with little or no negative effects Krauss and Walter, (2006). They further pointed out that financial indicators of a large number of microfinance institutions actually, show little or no correlation with domestic interest changes. MFIs are also seen offering other than serving the poor, some of them same role as commercial bank and hence their financial performance is closely linked to number of factors.

Loans acquired to be put in long term capital investments are usually repaid in a series of monthly, semi-annual and annual repayments. The amount to be paid is usually obtained using various ways; equal total payments per period (amortization), equal payments over specified time period with a balloon payment due at the end to repay the balance and equal principal payments per time period. When the first method is used, the payment is inclusive of accrued interest on the unpaid balance together with some principal. The second way puts into consideration of accrued interest on the unpaid balance plus equal amount of principal and lastly the balloon method is meant to reduce the payment period Gutierrez and Dalsted, (2012). Interest can be categorized as either short-term or long term. Long term loans have interest rates which seem to be constant within the repayment period while the short term loans keeps on changing from time to time. Generally, interest rates for long-term loans tend to be lower as compared to shorter loans which are slightly



higher. Traditional finance theory puts it clear that as the loan size expands interest rate tend to rise in order to accommodate the increased risks associated with the loan. On the other hand, interest rates in local banks are well explained by the characteristics of the borrower. However, for international banks, interest rates are determined by considering the characteristics of operational factors. Interest rates are a major concern to both lenders and borrowers in any given financial institutions. Increased interest rates in financial institutions results to reduced customer borrowing and loan repayment capacity leading to increased number of loan defaulters Edakasi and Apunyo, (2011).

Empirical evidence Nampewo (2013) shows that interest rates spread is affected positively by treasury bill rate and the non -performing loans, Ongweso (2005), Bett (2006), Kamau, (2007) and Ray, (1998)(Kar& Swain, (2014)Found that there was a positive relationship between interest rates and non-performing loans whereby an increase in the interest rates resulted in a high non-performing loan. Kariuki and Ngahu (2016) Kariuki and Ngahu, (2016), Ndegwa, Waweru and Huka (2016), Mwangi (2014) connoted that there was a strong relationship between loan repayment and the interest rates charged by SACCOs. In contrast, Edakasi and Apunyo, (2011) show increased interest rates in financial institutions results to reduced customer borrowing and loan repayment capacity leading to increased number of loan defaulters which is a negative result.

Existing literatures shows diverse relationships between performing loans and performance of micro finance institutions. These results account for individual differences and add meaning to any other study variables. Few studies have not put together the two variables customer loans and their effects on the performance of deposit taking MFIs. Most lending institutions are faced with increasing credit risk as the proportion of non-performing loans increase by charging a high-risk premium on the lending hence increasing interest rate. Macro-economic variables have an effect on interest rates and deposit taking microfinance institutions performance. Mixed results are evident as some authors revealed that customer loans affect financial performance of deposit takings MFIs positively while some authors have contrary findings. Therefore the objective of the study was to determine the effect of customer loans interest rates on financial performance of deposit taking microfinance institutions in Kenya.

### **2.3.2 Interest Rate and Financial Performance of deposit taking microfinance institution in Kenya.**

The potential impact of interest rates on financial performance has been a great concern of the policy makers in various financial institutions and bankers. The earnings of deposit takings institutions and other financial institutions are greatly affected by uncertain changes in interest rates. Therefore, interest risk comes as a result of exposing the financial institutions profitability to volatile interest rates. Hence deposit takings institutions have a great challenge since they provide financial services to the poor and take care of their costs while aiming at escaping bankruptcy Mwangi, (2014). The firm's financial performance is highly influenced with risk and growth. The market value is conditioned with the company's results; therefore the company market value can be changed by the level of risk exposure Appiah, (2011). Kariuki and Ngahu (2016) conducted a study on effect of interest rates on loan performance of Microfinance Institutions in Naivasha Sub-County, Kenya. Using survey research design, the study connoted that there was a strong relationship between loan repayment and the interest rates charged by SACCOs. The study further revealed that the interest rates charged on the borrowed loan lead to loan defaulting which in turn leads to loan nonperformance. Customers also default in loan repayment because short term loans attract higher interest rates as compared to long term loans Kariuki and Ngahu, (2016).

Ndegwa, Waweru and Huka (2016) conducted a study that sought to determine the influence of interest rate on financial performance of Micro Financial Institutions (MFIS) in Imenti North Sub-county. This study adopted a descriptive survey research design. The study consisted of 42 correspondents from the 14 MFIS operating in Imenti North Sub County. Correlation and regression results revealed that interest charged by MFIs significantly influenced their financial performance. To ensure uptake of loans by DTSSs, the DTSSs should charge interest rates within the range being charged by commercial banks. Mwangi (2014) inquired into the influence of lending rates on financial performance MFIs in Kenya. Multivariate regression model was used to analyze the data. It was reported that the relationship between lending rates and financial performance of MFIs was strong and positive. This study further revealed that MFIs are mainly established to serve the poor populace by giving them cheaper credit. However, due to high interest rates charged by

MFIs hinder the poor from accessing credit which has resulted in poor financial performance of MFIs due to low uptake of loans.

Ridder (2010) conducted a study to determine whether the interest rates that were charged by MFIs were too high for the poor or not. It was revealed that due to high operational costs, MFIs are forced to charge high interest rates so that they can offset their expenses. However, Ridder (2010) argues that high interest rates work against the core purpose of establishing DTSSs which is to serve the poor. The study concluded that the high interest rates are not a true reflection of the profitability of the MFIs since the money is used to offset the high operational costs. Chikalipah (2014) conducted a study to determine the determinants of MFIs lending interest rates in SubSaharan Africa. This study utilized the unbalanced panel data comprising of 292 MFIs drawn from 34 SubSaharan African (SSA) countries between 2003 to 2011. Findings revealed that the following factors influence lending rates in SSA; finance costs, operating expenses, return on assets and inflation. Findings in this study did not reveal whether lending rates influenced MFIs financial performance or not. Therefore, there is need to conduct a study to determine the effect of interest rates on the financial performance of DTSSs. Onyekachi and Okoye (2013) sought to determine the influence of lending rate on the financial performance of Nigerian Deposit Money Banks between 2000 and 2010. To arrive at the conclusions, data econometrics and time series analysis were utilized. It was reported that bank lending rate positively and significantly influenced the financial performance of Nigerian deposit money banks.

Empirical evidence Gutierrez and Dalsted, (2012), Edakasi and Apunyo, (2011) Mwangi, (2014) Appiah, (2011) showed that increased interest rates in financial institutions results to reduced customer borrowing and loan repayment capacity leading to increased number of loan defaulters which is a negative relationship Ngugi (2000),Maina & Mwiti, (2016) and Krauss and Walter, (2006),(al., 2003) concluded that interest rates had a negative influence on performance of deposit taking micro finance institutions. In contrast to, Ridder (2010) concluded that the high interest rates are not a true reflection of the profitability of the MFIs since the money is used to offset the high operational costs. Chikalipah (2014) Onyekachi and Okoye (2013) reported that bank lending rate positively and significantly influenced the financial performance of Nigerian deposit money banks.

Existing studies show mixed results; for instance, some studies reveal that interest rate has positive relationship with financial performance while some show negative results. It is

also evident that the studies don't show more insight of interest rates and micro finance institutions and how they affect performance of MFIs. Most lending institutions are faced with increasing credit risk as the proportion of non-performing loans increase by charging a high-risk premium on the lending hence increasing interest rate. However there is no clearer study showing the direct impact or effect of interest rates on financial performance of deposit taking MFIs thus showing a gap for further studies. Therefore, the objective of the study was to establish the relationship between interest rates and financial performance of deposit taking MFIs in Kenya.

### **2.3.3 Deposit interest rates and financial performance of deposit takings microfinance institutions in Kenya.**

Interest rate spread refers to the interest rate that is charged by banks on borrowed money to a private sector customer less the interest rate to be paid by a financial institution for savings deposits (IMF, 2011). Terms and conditions for interest rates spread differ from country to country. The spread has an influence on how much deposits pays back as interest rates. There are several studies done in Africa in relation to interest rate such as Ndung'u and Ngugi (2000), Beck and Hesse (2006), Aboagye et al. (2008), Folawewol 11 and Tennant (2008), Ikhide (2009) these studies were done in different countries on different interest rate spread on deposits and how it affected various parts of the economies. Folawewol and Tennant (2008) did a study on the determinants of interest rate spread in 33 countries in Sub-Saharan Africa and were focusing on the macroeconomic variables. From their results they were able to show that interest rate spread is affected by several factors such as public sector deficits, deposits, level of money supply, and level of economic development, government borrowing, and population. A study by Ahokposi (2013,) which focused on a sample of 456 banks from 41 Sub-Saharan Africa countries showed interest margins on deposits were not sensitive to economic growth. In other countries outside the Sub-Saharan Africa countries such as Ghana, Aboagye et al. (2008) was able to find out that an increase in these factors: bank size, market power, staff costs, inflation, administrative costs, is risk averse and had an effect on interest margins. The study went further to determine that the increase of reserves of banks, management efficiency and central bank deposit rate had the effect of increasing the net interest margin in banks. Beck and Hesse (2006) in their study used a bank-level data set to study the high interest rates spread and margins from the Ugandan banking system. More specifically to

look into the factors which were behind the ever high interest rate spreads and the margins. From their findings, the foreign banks were found to have lower interest rate spreads. The study found that there was a significant relationship between the interest spread and privatization of the industry. Nampewo (2013) study on the determinants of the interest rate spread on deposits of the banking sector in Uganda used time series data and the findings show that the interest rate spread is affected positively by the Treasury bill rate, the bank rate, and the non-performing loans.

In Kenya there are few studies that aimed to examine the determinants of the interest rate spreads on deposits. These studies include Beck et al. (2010) they aimed to examine the developments in the Kenyan financial sector looking specifically at the stability, efficiency and outreach; the use of the interest rate spreads as a way for determining the efficiency in financial intermediation. They based their analysis on factors such as, deposits, loan loss provisions, overhead costs, and taxes. Ndung'u and Ngugi (2000) and Ngugi (2001) are some of the most commonly cited studies on explaining interest rate spread in Kenya. They used time series data from the years April 2007 to June 2010 to determine factors that explain interest rates spreads in the time. The factors that were considered were deposits, loans, Treasury bill rate and interbank rate. From the findings they were able to determine that interest rate spread was positively related with deposits but it was negatively related to loans. Ndung'u and Ngugi (2000) derived factors likely to explain the spread and empirically estimated an interest rate spread equation using monthly time series data for the period, while Ngugi (2001) extended the monthly time series data to December 1999. The factors considered by the former are deposits, loans, Treasury bill rate and interbank rate. They found that the spread was positively related with deposits but negatively related to loans.

Reviewed studies IMF, (2011) Ndung'u and Ngugi (2000), Beck and Hesse (2006), Aboagye et al. (2008), Folawewol 11 and Tennant (2008), Ikhide (2009) show that interest rate spread is affected by several factors such as public sector deficits, deposits, level of money supply, level of economic development, government borrowing, and population. Ahokpossi (2013,) Aboagye et al. (2008) showed that the increase of reserves of banks, management efficiency and central bank deposit rate had the effect of increasing the net interest margin in banks. Beck and Hesse (2006) Nampewo (2013) found that the interest rate spread is affected positively by the Treasury bill rate, deposit, the bank rate, and the

non-performing loans. Beck et al. (2010) Ndung'u and Ngugi (2000) and Ngugi (2001) found that interest rate spread was positively related with deposits but it was negatively related to loans. In contrast to, Ndung'u and Ngugi (2000) Ngugi (2001) found that the spread was positively related with deposits but negatively related to loans.

Prior studies show a broad relationship between interest rates spread on deposits and performance of micro finance institutions. For instance interest rate spread is affected by several factors such as public sector deficits, deposits, level of money supply, and level of economic development, government borrowing, and population. Mixed results are evident as some authors revealed that interest rates on deposits affect financial performance of DTMFIs positively while some authors have contrary findings. Therefore, the objective of the study was to assess the effect of deposit interest rates on the financial performance of deposit taking MFIs in Kenya.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter discusses the method used in gathering data, processing data and translating the collected data into meaningful information. The study adopted correlational research design. It also discusses target population size and data collection.

#### **3.2 Research design**

Research design refers to how data collection and analysis are structured in order to meet the research objectives through empirical evidence Cooper & Schindler, (2006). The study used correlational research design to determine the relationship of interest rates and financial performance. This advantage of this design is that the researcher is able to use various forms of data as well as incorporating human experience. It gives researchers the ability to look at what they are studying in various aspects and provides a bigger picture as opposed to other types of research design Kothari,( 2004).

#### **3.3 Study Area**

The study was based in Kenya. The country is situated in Eastern Africa. It is located within the coordinates of 1°00'N 38°00'E. It covers an area of 582,650 km<sup>2</sup> and a population of over 40 million people as per 2009 national census.

#### **3.4 Target population**

The study considered target population of 9 existing deposit taking micro finance institutions in Kenya registered with AMFIs. Deposits taking micro finance institutions were chosen because they offer both credit and saving services. This section represents a list of all population members who are eligible for sampling, and may include individuals, households or institution Zikmund&Babin, (2012). The study used census where all the 9 deposit taking micro finance institutions operating in Kenya and registered by AMFIs were considered.

#### **3.5 Data collection methods and Source**

The study used secondary data from the 9-deposit taking micro finance institutions registered with AMFIs. The data was sourced from the company's websites and central bank of Kenya. This included the financial statements and annual reports from the period

2013 to 2017. This research proposal aimed to determine the effect of Interest rates on financial performance of deposit takings MFIs in Kenya. It utilized Secondary data. Data for interest rates for each month from the year 2013 to 2017 were collected and this involves all the annual average figures for the period under study.

### **3.6 Data Procedure**

The study involved secondary data in order to complete the objectives. Data for the nine deposit taking MFIs were tabulated in the data collection sheet. Data covered the periods from 2013 to 2017. This period is chosen because of the occurrence in terms of interest rates capping and was very objective in analyzing the effects of the changes.

### **3.7 Diagnostic test**

This study carried out various diagnostic tests to establish whether the assumptions of the multiple regression are satisfied which refer to; distribution of random variable, relationship between explanatory variables and error term. The tests included; normality test, autocorrelation and multicollinearity. The established the highest correlation coefficient among the independent variables is 0.283 hence the study concludes that multicollinearity is absent. The Durbin Watson test also showed value of 1.373 which is within the required range hence there is no autocorrelation.

### **3.8 Data analysis and presentation.**

Multiple regression and Pearson product moment correlation analysis were used to assess the effect of the variable on the outcome in the study. Correlations analysis was used to measure the association between the variable and quantitate the strength of their relationship. Regression analysis was adopted to determine the effects of independent variables on dependent variable and predict the value of one variable based on the value of one or more other variables. Research findings were presented using frequency distribution tables.



## Model Specification

The broad objective of this research is to determine the effects of interest rates on financial performance of deposit takings microfinance intuitions in Kenya. The data used for the purpose of this study were obtained from the Central Bank of Kenya website. A multivariable linear regression model was used where by

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

Y= performance (ROI) (ROE)

X1= interest rates

X2=loans

X3=deposits

$\varepsilon$  = is the error term

$\beta_1$  to  $\beta_3$  are the marginal effect of the independent variables,  $\beta_0$  is the constant term.

## CHAPTER FOUR:

### DATA ANALYSIS, RESULTS & DISCUSSIONS

#### 4.1 Introduction

This chapter presents the findings of the study, by data analysis, results and discussions on MFIs within Kenya. The research sought to assess the performance of deposit takings MFIs in Kenya within a five-year period; from 2012 to 2017. The data was collected on Return on Assets, Return on Equity, lending rates and deposit rates. To achieve the study's objective, the data obtained was analyzed through multiple linear regression analysis.

#### 4.2 Descriptive Statistics

Table 4.1 summarized the statistics main variables that have been included in the model including mean, standard deviation and skewness.

**Table 4.1: Descriptive Statistics**

		<b>ROA-Non- Current Assets (Net Income/Total Assets) (%)</b>	<b>ON RETURN EQUITY Income/Shareholde</b>	<b>Lending Rate charged(%)</b>	<b>Deposit Rates</b>
N	Statistic	4	4	4	4
Minimum	Statistic	.00	.02	13.66	6.42
Maximum	Statistic	.06	.37	18.30	8.26
Mean	Statistic	.0257	.1564	16.7650	7.6129
Std. Deviation	Statistic	.01752	.09893	1.42614	.51281
Skewness	Statistic	.540	.353	-1.299	-.638
	Std. Error	.441	.441	.441	.441

**Source: Field data**

The results showed that return on assets (ROA) had a mean of 2.57, a maximum of 6, a minimum of 0 and standard deviation of 1.752. This depicts that all the deposit takings MFIs have been making profits within the five year period, none of the deposit takings MFIs made loss as the values for the minimum (this represents the list profit made, and a negative value would mean a loss, but in this instance the findings indicate that the minimum had a positive value indicating a profit). This shown by standard deviation value lower than the mean value depicts a low variability in performance. ROA had skewness of 0.54. This depicts a positively skewed distribution. Return on Equity (ROE) had a mean of 15.64, a maximum of 37, a minimum of 2 and standard deviation of 9.89. This shown by standard deviation value lower than the mean value depicts a low variability in performance. ROE had skewness of 0.353. This depicts a positively skewed distribution.

Lending interest rate had a mean of 16.7650, minimum of 13.66, maximum of 18.30 and a standard deviation value of 1.42614. This shows that on average, the deposit taking MFIs charged high interest rates of 16.765%. Some deposit takings MFIs charged lending rates as high as 18.3% while others charged as low as 13.66%. There was less variability in lending interest rate charged from one deposit taking MFIs or from one period to the next given a standard deviation value of 1.42614%. Lending interest rate had skewness of -1.299 this point to a negatively skewed distribution.

Deposit interest rate had a mean of 7.6129, minimum of 6.42 and maximum of 8.26 and a standard deviation of 0.51281. This shows that on average, the MFIs charged high deposit rates of 7.6129%. Some MFIs charged deposit rates as high as 8.26% while others charged as low as 6.42%. There was less variability in deposit interest rate charged from one MFI or from one period to the next given a standard deviation value of 0.51281%. Skewness of -.638 points to a negatively skewed distribution.

### 4.3: Multicollinearity test

#### Correlation Matrix

Correlations		Performance	Deposit rates	Lending rates
Performance	Pearson Correlation	1	-.817**	.283
	Sig. (2-tailed)		.000	.144
	N	28	28	28
Deposit rates	Pearson Correlation	-.817**	1	-.056
	Sig. (2-tailed)	.000		.778
	N	28	28	28
Lending rates	Pearson Correlation	.283	-.056	1
	Sig. (2-tailed)	.144	.778	
	N	28	28	28

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

#### Source: Field data

The absence of multicollinearity in the data collected is one of the fundamental assumptions of multiple linear regressions. Multicollinearity is a phenomenon where the independent variables are highly correlated with each other. Multicollinearity is tested in two ways; variance inflation factor which provides an index that measures how much the variance of a given regression is of an estimated regression coefficient is increased because of collinearity and correlation matrix. When computing a matrix of Pearson's bivariate correlations among the independent variables, the magnitude of the correlation coefficients should be a lesser amount than 0.8. The highest correlation coefficient among the independent variables is 0.283 hence we conclude that multicollinearity is absent.

#### 4.4: Autocorrelation test

##### Durbin-Watson Test

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##### Model Summary

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Model	R	R Square	Adjusted Square	R Std. Error of the Estimate	Durbin-Watson
1	.851 <sup>a</sup>	.724	.702	.06319	1.373

---

a. Predictors: (Constant), Lending rates, Deposit rates

b. Dependent Variable: Performance

##### Source: Field data

The Durbin Watson test was used to check for autocorrelation. Autocorrelation is the degree of similarity of between a given time series and a lagged version of itself which can lead to undervalues of the standard error. The Durbin Watson test reports a test statistic with a value from 0 to 4 where 2 is no autocorrelation, where the statistic is less than two there is positive autocorrelation and where greater than 2 there is negative autocorrelation. A rule of thumb is that test statistic values in the range 1.5 to 2.5 are relatively normal and those outside of this range could be cause for alarm Field, (2009). In this case, the Durbin Watson test value is 1.373 which is within the required range hence there is no autocorrelation.

#### 4.5 Pearson Correlation Analysis

The study also carried out Pearson correlation analysis to designate the correct linear connection among dependent and independent variables; which assisted in shaping the relationship in the representation. Trying to find which variable best explained the relationship between lending rate and financial performance as measured ROA. It also helped in deciding which variable(s) to drop from the equation given low linear relationship or multi- collinearity.

**Table 4.4: Correlation Matrix**

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	Lending rates	Deposit rates
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	Pearson Correlation	.283*	-.817*
Performance	Sig. (2-tailed)	.144	.000
	N	4	4

**Source: Research Findings**

From the Table 4.2, the findings show that there was optimistic significance correlation among performance and lending interest rate given correlation value (R) of 0.283 at p = 0.144. The deposit interest rate also had positive significant correlation with Performance. The values of the coefficients were as follows: Deposit interest rate (R =- 0.817; p = 0.000). This shows a strong association between deposit interest rates and performance. This is consistent with Ndegwa, Waweru and Huka (2016) conducted a study that sought to determine the influence of interest rate on financial performance of Micro Financial Institutions (MFIS) in Imenti North Sub-county. Correlation and regression results revealed that interest charged by MFIs significantly influenced their financial performance.

**4.6 : Regression analysis**

**Table 4.3 Model Summary**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics	Sig. F Change
1	.851 <sup>a</sup>	.724	.702	.06319	.724	.000

**Source: Field data**

The model had a R value of 0.851 which depicts a good linear relationship between predicted and explanatory variables. The model was also strong owing to R-square values of 0.724. This depicts that the independent variables explains 72.4% of the changes in performance. From the finding in the adjusted R squared the study found that 70.2% variation on performance of the deposit taking MFIs could be accounted for by lending interest rates and deposit interest rates. From the correlation coefficient, the study found that there was a strong positive relationship between the study variables. This is consistent with (McDonald & Robert, 2010) which showed that the adoption of deposit taking has had a positive impact on the financial performance and profitability of nation-wide

microfinance banks because the deposits are a source of loanable funds to the customers. Thus, there is a positive correlation between loan pricing by microfinance banks and the amount of deposit received from the customer's. The study found evidence that the share of deposits in the foreign banks was negatively correlated to volumes of credit to the private sector.

**Table 4.6: Analysis of Variance (ANOVA)**

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

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.262	2	.131	32.758	.000 <sup>b</sup>
	Residual	.100	25	.004		
	Total	.361	27			

a. Dependent Variable: Performance

b. Predictors: (Constant), Lending rates, Deposit rates

**Source: Field data**

From the ANOVA statistics, the processed data, which is the population parameters, had a significance level of 0.000<sup>b</sup> which shows that the data is ideal for making a conclusions on the population's parameter as the value of significance (p-value ) is less than 5%. The significance value was less than 0.05, an indication that the model was statistically significant. The study further revealed that lending interest rates and deposit interest rates significantly affected the performance of the deposit takings MFIs which is consistent with Hamid (2011), who argued in his study on interest rate spread in developing countries that indicated non-deposit based funding is positively and significantly correlated to interest rate spreads.

**Table 4.7: Regression Coefficients**

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

Model		Unstandardized		Standardized	t	Sig.
		Coefficients				
		B	Std. Error	Beta		
	(Constant)	1.238	.237		5.219	.000
1	Deposit rates	-.181	.024	-.803	-7.632	.000
	Lending rates	.019	.009	.239	2.266	.032

a. Dependent Variable: Performance

**Source: Field data**

$$Y = 1.238 - 0.181 X_1 + 0.019 X_2 + 0.237$$

From this regression equation it was revealed that holding lending interest rates and deposit interest rates to a constant zero, performance of the deposit takings MFIs would be at 1.238, a unit increase in lending interest rates would lead to an increase in performance of the industry by a factor of 0.019, unit increase in deposit interest rates would lead to a decrease in performance of the by a factor of -0.181. At 5% level of significance and 95% confidence level, lending interest rates had a 0.000 *p* value; deposit interest rates showed a 0.032 *p* value. Overall lending interest rates had the greatest effect on the performance of the deposit takings MFIs. The study used the following regression analysis to determine the effect of lending interest rates and deposit interest rates on the performance of the deposit takings MFIs  $Y = 1.238 - 0.181 X_1 + 0.019 X_2 + 0.237$  from the regression analysis, the study found that there was a positive relationship lending interest rates, deposit interest rates and the performance of the deposit takings MFIs. This is inconsistent with Beck and Hesse (2006) in their study used a bank-level data set to study the high interest rates spread and margins from the Ugandan banking system. The study found that there was a significant relationship between the deposit interest rates and financial performance of the industry. The study is also consistent with Nampewo (2013) study on the determinants of the interest rate spread on deposits of the banking sector in Uganda used time series data and the findings show that the deposit interest rates affected positively the performance of the MFIs. The study is in contrast to Ndung'u and Ngugi (2000) and Ngugi (2001), they used time series data from the years April 2007 to June 2010 to determine factors that explain interest rates spreads in the time. The factors that were considered were deposits, loans, Treasury bill rate and interbank



rate. From the findings they were able to determine that interest rate spread was positively related with deposits but it was negatively related to loans. The same to Ndung'u and Ngugi (2000) derived factors likely to explain the spread and empirically estimated an interest rate spread equation using monthly time series data for the period, while Ngugi (2001) extended the monthly time series data to December 2009. The factors considered by the former are deposits, loans, Treasury bill rate and interbank rate. They found that the spread was positively related with deposits but negatively related to loans.

## **CHAPTER FIVE: SUMMARY, CONCLUSION & RECOMMENDATIONS**

### **5.1 Introduction**

This chapter five focuses on the summary, research outcome, conclusion and recommendations that results of the study meant to sought. The study had intended to determine effect of lending and deposit interest rates on the performance of deposit taking MFIs.

The researcher then present the major limitations faced in the course of this study and the recommendations for further research and for the policy and practice.

### **5.2 The Study Summary**

The research employed annual secondary data on lending interest rates, deposit interest rates, ROE and ROA, which were obtained from deposit taking MFIs' financial performance from the CBK. The study covered a period from June 2013 to October 2017 and the analysis of data was done using multiple linear coefficient matrix, regression models and Anova analysis.

Lending interest rate had a mean of 16.7650, minimum of 13.66, maximum of 18.30 and a standard deviation value of 1.42614. This shows that on average, the deposit taking MFIs charged high interest rates of 16.765%. Some deposit takings MFIs charged lending rates as high as 18.3% while others charged as low as 13.66%. There was less variability in lending interest rate charged from one deposit taking MFIs or from one period to the next given a standard deviation value of 1.42614%. Lending interest rate had skewness of -1.299 this point to a negatively skewed distribution. There was optimistic significance correlation among performance and lending interest rate given correlation value (R) of 0.283 at  $p = 0.144$ . Regression equation it was revealed that holding lending interest rates to a constant zero, performance of the deposit takings MFIs would be at 1.238, a unit increase in lending interest rates would lead to a increase in performance of the industry by a factor of 0.019, unit increase. At 5% level of significance and 95% confidence level, lending interest rates had a 0.032  $p$

Deposit interest rate had a mean of 7.6129, minimum of 6.42 and maximum of 8.26 and a standard deviation of 0.51281. This shows that on average, the MFIs charged high deposit rates of 7.6129%. Some MFIs charged deposit rates as high as 8.26% while others charged as low as 6.42%. There was less variability in deposit interest rate charged from one MFI or from one period to the next given a standard deviation value of 0.51281%. Skewness of -.638 points to a negatively skewed distribution. The deposit interest rate also had positive significant correlation with Performance. The values of the coefficients were as follows: Deposit interest rate ( $R = -0.817$ ;  $p = 0.000$ ). This shows a strong association between deposit interest rates and performance. Regression equation it was revealed that holding deposit interest rates to a constant zero, performance of the deposit takings MFIs would be at 1.238, a unit increase in deposit interest rates would lead to a decrease in performance of the by a factor of -0.181. At 5% level of significance and 95% confidence level, deposit interest rates had a 0.000  $p$  value; Overall deposit interest rates had the greatest effect on the performance of the deposit takings MFIs.

The correlation matrix for the two variables shows that there are good correlations between individual independent variables and deposit taking MFIs' performance. All the correlation coefficient between all the variables lending interest rate and deposit interest rates and in relation to performance was all positive. The positive coefficient for all the variables implied that increase in any of the three variables would yield positive results on performance and vice versa. From the correlation matrix, deposit interest rate ( $p = .000$ ) was found to be significant in explaining deposit taking MFIs performance better than lending interest rates ( $p = .144$ ) All the variables led to positive financial performance. The explanatory variables explain 72.4% ( $R^2$  on the regression summary model) of the variation in the dependent variable. Jointly, all the variables were found to be significant as depicted from the F-statistic ( $p = .000$ ).

The findings show that there was optimistic significance correlation among performance and lending interest rate given correlation value ( $R$ ) of 0.283 at  $p = 0.144$ . The deposit interest rate also had positive significant correlation with Performance. The values of the coefficients were as follows: Deposit interest rate ( $R = -0.817$ ;  $p = 0.000$ ). This shows a strong association between deposit interest rates and performance.

## 5.4 Conclusion

The study concludes that on average, the deposit taking MFIs charged high lending interest rates. Some deposit takings MFIs charged lending rates as high while others charged as low. There was less variability in lending interest rate charged from one deposit taking MFIs or from one period to the next given a standard deviation at a given value as shown in table 4.1. Lending interest rate had a negatively skewed distribution. There was optimistic significance correlation among performance and lending interest rate. Regression equation it was revealed that holding lending interest rates to a constant zero, a unit increase in lending interest rates would lead to an increase in performance of the industry, unit increase.

The study further shows that on average, the MFIs charged high deposit rates. Some MFIs charged deposit rates high while others charged low. There was less variability in deposit interest rate charged from one MFI or from one period to the next given a standard deviation at a value shown in table 4.1. Deposit rates had a negatively. Regression equation it was revealed that holding deposit interest rates to a constant zero, a unit increase in deposit interest rates would lead to a decrease in performance.

The correlation matrix for the two variables shows that there are good correlations between individual independent variables and deposit taking MFIs' performance. All the correlation coefficient between all the variables lending interest rate and deposit interest rates and in relation to performance was all positive. The positive coefficient for all the variables implied that increase in any of the three variables would yield positive results on performance and vice versa.

FIs' ability to improve informational irregularities between borrowers and lenders will highly depend on the three variables that formed the core of this analysis. Performance measures the improvement of this relationship is highly depending on the two variables that form the basis of this analysis. As indicated by the findings, all two factors directly related to performance, hence indirectly related to the relationship between borrowers and lenders. Hence, for any deposit taking MFI to be effective; better rate of lending and better deposit rates is highly key to attaining exemplary deposit taking MFIs financial performance.

The literacy works regarding financial precautions regarding non-credit worthy customers gives the suggestion to the commercial financial institutions such banks with inclusion of deposit taking MFIs. That they should have a robust pre-screening and monitoring of borrowers, in their bid to mitigate the impacts immoral hazard on their part and the part of the customer so that they curb the selection problems caused by false information being provided by the borrowers or the lender.

#### **5.4 Recommendation**

The study recommends lower lending interest rate encourage borrowing and economic growth i.e. the lower the interest rate, the higher the profit expectation as business are expected to pay certain percentage of the money borrowed (little) as interest for fund borrowed. Conversely, the higher the rate of interest the less the profit expectations in line with objective.

The study further recommends lower deposit interest rate to encourage deposits and economic growth i.e. the lower the deposit interest rate, the higher the profit expectation as business are expected to pay certain percentage of the money borrowed (little) as interest for fund borrowed.

The study further recommends that deposit takings MFIs should cautiously manage their interest rate and deposit to improve their performance since it has a positive effect on their performance and recommends for income source diversification

In general, the interest rate capping regulation enforced in the last few months by the CBK will greatly assist attainment of growth and advancement of deposit taking MFIs. It will encourage borrowing on the part of the customers. This will eliminate short-term interest rate changes that have been a norm by most financial institutions in their bid to attract customer. This has always a thoughtful issue among shareholders of the deposit takings MFIs whose action needs a thorough and precedence analysis before any decision can be made. The findings clearly suggested that the main determinants of MFIs profitability in terms performance are interest rate and deposit interest rates.

The study is of the view that MFIs in Kenya need to thorough have deep segmentation of their clients and the decide of on amicable rating of charging the interest and deposit rates taking into accounting the regulation by CBK capping the level of interest rates.

Ineffective policies on lending and deposit rates of interest have the repercussion of increasing the interest and deposit rates and consequently performance of the institution.

### **5.5 Limitations of the Study**

There were number issues proving to be limiting factors to the smoothing execution of this study. These factors were notably as the following, the use of secondary data from deposit takings MFIs in computing the descriptive, inferential and correlational as were found without any further modification or verification. The validity of data was assumed to have met the minimum threshold without any verification for the use in this study. Hence the result of the study relied heavily in the validity of the data which was not tested priori to commencing the project. Finally, the results from this study are only applicable to other MFIs and may not be generally commercial banks and other financial institutions that are not deposit taking.

### **5.6 Areas for Further Research**

On the study it recommends future studies be carried on the association of lending rates and performance of MFIs. The study also recommends future studies on the effects of deposit rates on performance of MFIs.

Future studies can also use primary data such as interviews and focused group discussion that would better help in capturing qualitative information that cannot be quantitatively captured in financial statements.

Finally, future studies could also look at the interest rate spread over a longer duration of time to capture market imperfection.

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Evidence from Kumasi Metropolis

## **Appendix I: Deposit taking MFIs in Kenya Retrieved December**

2015 <https://www.centralbank.go.ke/>

### **Faulu Microfinance Bank Ltd**

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Website: [www.faulukukenya.com](http://www.faulukukenya.com)

Physical Address: Faulu Kenya House, Ngong Lane -Off Ngong Road Date Licenced: 21st May 2009

Branches: 32

### **Kenya Women Microfinance Bank Ltd**

Postal Address: P. O. Box 4179-00506, Nairobi

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Pilot Line: 070 - 3067000

Email: [info@kwftdtm.com](mailto:info@kwftdtm.com)

Website: [www.kwftdtm.com](http://www.kwftdtm.com)

Physical Address: Akira House, Kiambere Road, Upper Hill,

Date Licensed: 31st March 2010

Branches: 29

### **SMEP Microfinance Bank Ltd**

Postal Address: P. O. Box 64063-00620 Nairobi

Telephone: 020-3572799/2055761, 2673327/8, 0711606900

Email: info@smep.co.ke [info@smep.co.ke](mailto:info@smep.co.ke)[info@smep.co.ke](mailto:info@smep.co.ke)

Website: [www.smep.co.ke](http://www.smep.co.ke)

Physical Address: SMEP Building - Kirichwa Road, Off ArgwingsKodhek Road Date

Licensed: 14th December 2010

Branches: 7

### **Remu Microfinance Bank Ltd**

Postal Address: P. O. Box 20833-00100 Nairobi

Telephone: 2214483/2215384/ 2215387/8/9, 0733-554555

Email: [info@remultd.co.ke](mailto:info@remultd.co.ke)[info@remultd.co.ke](mailto:info@remultd.co.ke)[info@remultd.co.ke](mailto:info@remultd.co.ke)

Physical Address: Finance House, 14th Floor, Loita Street Date Licensed: 31st December  
2010

Branches: 3

### **Rafiki Microfinance Bank Ltd**

Postal Address: 12755-00400 Nairobi

Telephone: +254-020-2166401/0730 170 000/0730 170 500

Email: [info@rafiki.co.ke](mailto:info@rafiki.co.ke)

Website: [www.rafiki.co.ke](http://www.rafiki.co.ke)

Physical Address: : Rafiki House, Biashara Street

Date Licensed: 14th June 2011

Branches: 17

### **Uwezo Microfinance Bank Ltd**

Postal Address: 1654-00100 Nairobi

Telephone: 2212919, 0703591302 / 9

Email: [info@uwezodtm.com](mailto:info@uwezodtm.com)

Website: [www.uwezodtm.com](http://www.uwezodtm.com)

Physical Address: Rehani House, 11th floor, Koinange Street

Date Licensed: 08 November 2010

Branches: 2

### **Century Microfinance Bank Ltd**

Postal Address: P. O. Box 38319 – 00623, Nairobi

Telephone: +254-20-2664282, 6768326, 0722168721, 0756305132

Email: [info@century.co.ke](mailto:info@century.co.ke)

Physical Address: KK Plaza 1st Floor, New Pumwani Road, Gikomba

Date Licensed: 17th September 2012

Branches: 1

### **Sumac Microfinance Bank Ltd**

Postal Address: P. O. Box 11687-00100, Nairobi

Telephone: 020-2212587, 2210440, 2249047, 0738637245, 0725223499

Fax: (254) 2210430

Email: [info@sumacdtm.co.ke](mailto:info@sumacdtm.co.ke)

Website: [www.sumacdtm.co.ke](http://www.sumacdtm.co.ke)

Physical Address: Consolidated Bank House 2nd Floor, Koinange Street

Date Licensed: 29th October 2012

Branches: 3

**U&I Microfinance Bank Ltd**

Postal Address: P.O. Box 15825 – 00100, Nairobi

Telephone: (254) 020 2367288, 0713 112 791

Fax: (254) 2210430 Email: [info@uni-microfinance.co.ke](mailto:info@uni-microfinance.co.ke)

Website: <http://uni-microfinance.co.ke/uni-microfinance/>

Physical Address: Asili Complex Building 1st Floor, River Road Date

Licensed: 8th April 2013

## APPENDIX: II RESEARCH PLAN

<b>ACTIVITY</b>	<b>DURATION</b>	<b>FROM</b>	<b>TO</b>
Conceptualization	1 month	March 2019	April 2019
Proposal development	2 months	May 2019	July 2019
Data collection	1 week	Sept. 1, 2019	Sept 10,2019
Data analysis	1 week	Sept 12, 2019	Sept 19, 2019
Report submission	1 day	Sept 2019	Sept 2019



### APPENDIX III: RESEARCH BUDGET

<b>EXPENDITURE</b>	<b>QUANTITY</b>	<b>APPROXIMATE AMOUNT</b>
Binding charges	6	2,000
Travelling expenses		15,000
Reams of paper	4	2,000
Airtimes		3,000
Printer	1	8,000
<b>TOTAL</b>		<b>30,000</b>

APPENDIX IV: MAP OF KENYA



## Appendix V: Data collection instrument

### Interest rates

#### a) Customer loans/ credit interest rates

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<b>Credit interest rates</b>	2017	2016	2015	2014	2013
Faulu Microfinance Bank Ltd					
Kenya Women Microfinance Bank Ltd					
SMEP microfinance bank					
Remu Microfinance Bank Ltd					
Rafiki Microfinance Bank Ltd					
Uwezo Microfinance Bank Ltd					
Century Microfinance Bank Ltd					
Sumac Microfinance Bank Ltd					
U&I Microfinance Bank Ltd					

#### b) Deposit interest rates

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<b>Deposit interest rates</b>	2017	2016	2015	2014	2013
Faulu Microfinance Bank Ltd					
Kenya Women Microfinance Bank Ltd					
SMEP microfinance bank					
Remu Microfinance Bank Ltd					
Rafiki Microfinance Bank Ltd					
Uwezo Microfinance Bank Ltd					
Century Microfinance Bank Ltd					
Sumac Microfinance Bank Ltd					
U&I Microfinance Bank Ltd					

**APPENDIX VI: DEPOSIT TAKING MICROFINANCE INSTITUTIONS DATA**

YEAR	MONTH	MICRO FINANCE INTEREST RATES (%) 1/			
		Deposit	Savings	Lending	Overdraft
2012	JAN	7.66	1.62	19.54	20.38
	FEB	8.01	1.69	20.28	20.53
	MAR	8.01	1.72	20.34	20.53
	APR	9.04	1.58	20.22	20.27
	MAY	8.42	1.59	20.12	20.41
	JUN	7.88	1.46	20.3	20.36
	JULY	8.25	1.66	20.15	19.96
	AUG	7.85	1.58	20.13	20.31
	SEP	7.4	1.55	19.73	19.8
	OCT	6.86	1.6	19.04	19.13
	NOV	8.71	1.58	17.78	18.77
	DEC	6.8	1.6	18.15	17.79
2013	JAN	6.51	1.65	18.13	17.97
	FEB	6.29	1.61	17.84	17.68
	MAR	6.54	1.42	17.73	17.54
	APR	6.39	1.45	17.87	17.71
	MAY	6.53	1.53	17.45	17.6
	JUNE	6.65	1.73	16.97	16.92
	JULY	6.59	1.64	17.02	17
	AUG	6.36	1.67	16.96	16.89
	SEP	6.55	1.64	16.86	16.42
	OCT	6.43	1.63	17	16.96
	NOV	6.61	1.58	16.89	16.5
	DEC	6.65	1.58	16.99	16.51
2014	JAN	6.55	1.56	17.03	16.82
	FEB	6.57	1.49	17.06	16.88
	MAR	6.61	1.56	16.91	16.44
	APR	6.48	1.53	16.7	16.44
	MAY	6.42	1.54	16.97	17.85
	JUN	6.56	1.5	16.36	15.88
	JUL	6.59	1.33	16.91	17.12
	AUG	6.51	1.5	16.26	16.2
	SEP	6.64	1.51	16.04	15.79
	OCT	6.64	1.55	16	15.77
	NOV	6.72	1.52	15.94	15.66
	DEC	6.81	1.85	15.99	15.86
2015	JAN	6.65	1.58	15.93	15.95
	FEB	6.68	1.53	15.47	15.67
	MAR	6.63	1.53	15.46	15.68

	APR	6.6	1.9	15.4	15.52
	MAY	6.55	1.48	15.26	15.1
	JUN	6.64	1.85	16.06	15.67
	JUL	6.31	1.37	15.75	16.05
	AUG	6.91	1.5	15.68	15.98
	SEP	7.28	1.71	16.82	16.61
	OCT	7.54	1.68	16.58	16.81
	NOV	7.39	1.32	17.16	17.44
	DEC	8.02	1.56	18.3	18.48
2016	JAN	7.57	1.56	18	18.45
	FEB	7.49	1.4	17.91	18.25
	MAR	7.17	1.35	17.87	18.14
	APR	6.89	1.49	18.04	18.08
	MAY	6.44	1.59	18.22	18.2
	JUNE	6.78	1.6	18.18	18.09
	JULY	6.64	1.67	18.1	17.84
	AUG	6.42	1.68	17.66	17.96
	SEP	6.94	3.78	13.86	13.74
	OCT	7.82	6.08	13.73	13.48
	NOV	7.65	6.52	13.67	13.49
	DEC	7.33	6.37	13.66	13.49
2017	JAN	7.2	6.09	13.66	13.3
	FEB	7.65	6.81	13.69	13.32
	MAR	7.12	5.89	13.61	13.29
	APR	6.97	5.67	13.61	13.3
	MAY	7.07	5.85	13.71	13.44
	JUN	7.15	5.63	13.66	13.38
	JUL	7.43	6.4	13.7	13.65
	AUG	7.67	5.94	13.65	13.66
	SEP	7.66	6.43	13.69	13.65
	OCT	8.01	6.92	13.71	13.68
	NOV	8.07	6.93	13.68	13.6
	DEC	8.22	6.91	13.64	13.54
2018	JAN	8.26	6.97	13.65	13.61
	FEB	8.25	7.01	13.68	13.75
	MAR	8.16	6.85	13.49	13.4
	APR	8.17	6.72	13.24	13.29
	MAY	8.08	6.64	13.25	13.3
	JUN	8.04	6.6	13.22	13.23
	JUL	8.01	6.53	13.1	13.16
	AUG	7.78	6.52	12.78	12.9
	SEP	7.76	6.33	12.66	12.52
	OCT	7.63	5.7	12.61	12.42
	NOV	7.41	5.38	12.55	12.11

	DEC	7.41	5.13	12.51	12.17
2019	JAN	7.34	5.14	12.5	12.15
	FEB	7.28	5.16	12.47	12.13
	MAR	7.22	5.05	12.51	12.13
	APR	7.17	4.75	12.5	12.15
	MAY	7.2	4.71	12.47	12.13
	JUNE	7.19	4.77	12.47	12.12

1/ The weights correspond to each microfinance market share in either deposit liability in the case of deposit interest rates or loans and Advances in the case of lending rates.

\* Provisional

Source: Central Bank of Kenya