THE EFFECT OF CHANGE IN BASE LENDING RATE ON GROWTH OF MICROFINANCE BANKS IN KENYA

BY

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DECLARATION

This Research Project is my original work and has not been submitted for a degree in any other university.

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This Research Project has been submitted with my approval as the university supervisor.

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DEDICATION

I dedicate this work to my wife Dr. Hannah Wambui and my son Austin Irungu for their invaluable support in my studies. To my dad Mr. David Machua and mum Mrs. Fresiah Machua. I love you all for giving me the courage and determination to carry on. God Bless You.

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LIST OF ABBREVIATION

CBK- Central Bank of Kenya

MFIs-Microfinance Institutions

NPLs-Non Performing Loans

DTMs-Deposit Taking Microfinance

SMEP-Small and Medium Enterprise

SME-Small and Medium Enterprises

SSA- Sub-Saharan African

US-United States

SPSS- Statistical Package for Social Sciences

ABSTRACT

For the past few years, central bank of Kenya through the monetary committee has actively changed base lending rate from time to time. This has mostly been attributed by inflation and exchange rate. Subsequently the no of microfinance bank have risen from one in year 2009 to twelve by 31st may 2015. The objective of this study was to find out whether there exists a relationship between change in base lending rate and the growth of microfinance banks in Kenya. The study involved collecting and analyzing secondary data from Central Bank of Kenya, individual microfinance banks and the Association of Microfinance Institutions in Kenya. Purposive sampling was used to select nine microfinance banks that were used in the study. The reference period was from 2010-2014. Ordinary least squares regression model was used in this study where testing was done at α=0.05 level of significance. The study showed that there is a statistically significant negative relationship between both based lending rate and management efficiency and microfinance institutions growth. On the contrary, the study showed that there is statically significant positive relationship between credit terms and growth of microfinance banks. The study recommends that individual MFIs should endeavor to vary their loan products so as increase their gross loan portfolio by attracting more borrowers even when CBK lending rates are high. The fact that data was collected from existing data bases may bias the study findings and thus the results of this study cannot be generalized to other commercial banks or other MFIs in other parts of the world. Future studies could employ primary data in carrying out a similar study for comparison purposes. There is also need to conduct other studies on credit lending MFIs and Sacco's to check whether the base lending rates have similar effects on their growth.

CHAPTER ONE

INTRODUCTION

1.1 Back Ground of the Study

In Kenya base lending rate has constantly been fluctuating time to time. Questions have been raised on the impact it have on financial sector. According to Pettinger (2012) base lending rate is a minimum interest rate on which financial institutions base the rates they use for lending. These loans, which are priced at the discount rate, are often structured as secured loans to alleviate pressure in reserve markets. It helps to reduce liquidity problems for banks and assists in assuring the basic stability of financial markets. Roley & Troll (1984) classified base lending rate into three rates. The primary credit rate is a short-term rate charged for the most financially secure financial institutions. The secondary credit rate is a short rate that is charged for financial institutions that do not qualify for the primary rate. The seasonal credit rate is charged for debt obligations that last up to 9 months. The Federal Reserve may lower the discount rate and/or make temporary changes to the terms of the loans in order to make the discount window a more attractive source for financial institutions to borrow from in times of financial distress.

In Kenya base lending rate is controlled by Central Bank of Kenya (CBK) through monetary policy committee. Finance Act (2011) states that no interest rate should exceed four percent of the base lending rate of the central bank. This implies that commercial banks do not have full control of the interest rate they charge their borrowers. Central bank rate is therefore very crucial in loan absorption in Kenya. The possible causes of increase in discount rate are inflation, depreciation of local currency and to attract foreign cash inflows, (Paul, 2005).

1.1.1 Base Lending Rate

Pettinger (2012) defines base lending rate as minimum interest rate on which financial institutions base the rates they use for lending. It is credit facility in which financial institutions go to borrow funds from the Federal Reserve. These loans which are priced at the discount rate are often structured as secured loans to alleviate pressure in reserve markets. It helps to reduce liquidity problems for banks and assists in assuring the basic stability of financial markets. This helps is avoiding any potential financial crisis.

According to Roley & Troll (1984), Federal Reserve Bank has three rates that it charges financial institutions for using the discount window. The primary credit rate is a short-term rate charged for the most financially secure financial institutions. The secondary credit rate is a short rate that is charged for financial institutions that do not qualify for the primary rate. The seasonal credit rate is charged for debt obligations that last up to nine months. The discount rate charged for primary credit (the primary credit rate) is set above the usual level of short-term market interest rates. This is because primary credit is the Federal Reserve's main discount window program; the Federal Reserve at times uses the term "discount rate" to mean the primary credit rate.

The discount rate on secondary credit is above the rate on primary credit. The discount rate for seasonal credit is an average of selected market rates. Discount rates are established by each Reserve Bank's board of directors, subject to the review and determination of the Board of Governors of the Federal Reserve System. The discount rates for the three lending programs are the same across all reserve banks. The Federal Reserve may lower the discount rate and/or make temporary changes to the terms of the loans in order to make the discount window a more attractive source for financial institutions to borrow from in times of financial distress (Roley & Troll, 1984).

Mbao *et al* (2014) asserted that, the impact of different policy approaches to reduce lending rates depends on how banks determine the interest rates that they charge. If high lending rates are primarily a reflection of high costs of doing business, as one survey has indicated, then measures to reduce these costs could be the most effective response. If, however, high interest rates are a consequence of insufficient competition, other more appropriately targeted measures may be justified.

In Kenya base lending rate is determined by CBK through its monetary policy committee. The decision to increase or decrease the lending rate is dependent on inflation rate, exchange rate etc. Increase on credit borrowing rate has a ripple effect on the interest rate charged by commercial bank and other depository financial institution. According to Kiva (2015) microfinance normally generate revenue through lending credit; therefore the issue of interest rate is very crucial to microfinance. However some microfinance institutions that are not dependent on CBK and commercial bank may react differently.

1.1.2 Growth of Microfinance

According to Kiva (2015) Microfinance is a general term to describe financial services to low income individuals or to those who do not have access to typical banking services. Microfinance is also the idea that low-income individuals are capable of lifting themselves out of poverty if given access to financial services. Microfinance is the supply of loans, savings, and other basic financial services to the poor. As these financial services usually involve small amounts of money - small loans, small savings, the term "microfinance" helps to differentiate these services from those which formal banks provide. Poor people save all the time, although mostly in informal ways. They invest in assets such as gold, jewelry, domestic animals, building materials, and things that can be easily exchanged for cash. They may set aside corn from their harvest to

sell at a later date. They bury cash in the garden or stash it under the mattress. They participate in informal savings groups where everyone contributes a small amount of cash each day, week, or month, and is successively awarded the pot on a rotating basis. Some of these groups allow members to borrow from the pot as well. The poor also give their money to neighbors to hold or pay local cash collectors to keep it safe.

Fernando (2006) noted that high interest rates charged by microfinance institutions have been have been a hindrance to their growth since they came into existence. The borrowers of MFIs have to contend with the additional funds demanded by the MFIs to cater for the extra risk which is most cases is default risk. This has a negative effect on the growth of the MFIs .Credit unions and lending cooperatives have been around hundreds of years. The pioneer of modern microfinance is Mohammad Yunus, who began experimenting with lending to poor women in the village of Jobra, Bangladesh during his tenure as a professor of economics at Chittagong University in the 1970s. Since then, innovation in microfinance has continued and providers of financial services to the poor continue to evolve, (Emily, 2013). Today, the World Bank estimates that about 160 million people in developing countries are served by microfinance (Kiva, 2015).

In Kenya, the Microfinance institutions can be traced back before independence. The colonial Government did not provide credit facilities to the African people and hence informal credit groups were formed within the societies in rural settings. According to Microfinance Act (2006) microfinance is the business receiving money by way of deposits and interest on deposits which is lend to others or used to finance the business, or providing loans or other facilities to micro or small enterprises and low income households. Microfinance sector in Kenya comprises of about 250 MFIs, with only 62 of these being registered with their umbrella body, Association of

Microfinance institutions (AMI).Only twelve of these are licensed by CBK to take deposits. The remaining institutions are unregulated by the Central Bank and offer microfinance services in combination with other services (Microfinance (amendment Act), 2013).

1.1.3 Relationship between Change in Base Lending Rate and Growth of Microfinance

When base lending rates increase commercial banks increases their interest rates on loans and mortgages. This therefore discourages many people from seeking credit facility to finance long term and short term projects leading to slowed economic growth. Taherizadeh (2001) noted that increase in central bank rate leads to higher cost of borrowing. This is because commercial banks and other depository and lending institution transfer the cost to the borrower. The effect of increased base lending rate is therefore easy to tell the direction of lending for the case of commercial banks. However, the case may not be the same for microfinance since most of them are not controlled by CBK and many small and medium sized borrowers may opt to turn to MFIs due to better credit terms.

The increased interest rates may therefore drive people away from formal sector to informal financial sector where they can obtain credit cheaply and easily. Suppose this was the case informal financial sector would therefore experience more growth during the periods of increased credit lending rate. This phenomenon may be true to some extent, however considering that some microfinance institutions borrow from commercial bank to lend to their customers, they may also increase their lending rate to match their cost of borrowing from commercial banks. This may lead to uneven growth between different microfinance institutions depending on their major source of funds.

1.1.4 Microfinance Institution in Kenya

Kenya's microfinance sector comprises of nearly 250 MFIs, with only 62 of these being registered with their umbrella body, Association of Microfinance institutions (AMI). Only twelve of these are licensed by CBK to take deposits. The remaining institutions are unregulated by the Central Bank and offer microfinance services in combination with other services (Microfinance (amendment Act), 2013). The Microfinance Act (2006) and the Microfinance (Deposit Taking Institutions) Regulations (2008) issued thereunder sets out the legal, regulatory and supervisory framework for the microfinance industry in Kenya. The principal object of the Microfinance Act is to regulate the establishment, business and operations of microfinance institutions in Kenya through licensing and supervision. The Act enables Deposit Taking Microfinance Institutions licensed by the Central Bank of Kenya to mobilize savings from the general public, thus promoting competition, efficiency and access. Microfinance industry therefore plays a pivotal role in deepening financial markets and enhancing access to financial services and products by majority of the Kenyans.

1.2 Research Problem

The success of MFIs largely depend on the effectiveness of their credit management systems because these institutions generate most of their income from interest earned on loans extended to small and medium entrepreneurs, (Moti et al,2012). Therefore the growth of people borrowing is very vital in the growth of MFIs. Many small and medium entrepreneurs prefer MFIs for credit due to their low interest and ease of getting credit. The Central Bank Annual Supervision Report, 2010 indicated high incidence of credit risk reflected in the rising levels of non-performing loans by the MFIs in the last ten years, a situation that has adversely impacted on their profitability.

This trend not only threatens the viability and sustainability of the MFI's but also hinders the achievement of the goals for which they were intended which are to provide credit to the rural unbanked population and bridge the financing gap in the mainstream financial sector. While many researchers have carried out general studies on effect of increased credit lending rate on performance of commercial banks in Europe, Asia and parts of Africa, there have not been specific studies on the relationship between increase in credit lending rate and the growth of MFIs.

Kagwe (2008) concluded by stating that because of the ability of microfinance to reach and serve clients more effectively, MFIs that meet their own costs and raise their own sufficient capital are best suited to attract and serve the large financially excluded adult population in Kenya. According to Gardner *et al.* (2005) Interest rates determine the profitability of Commercial Banks among other factors. High interest rates have remained a macroeconomic problem that has been difficult to eliminate. According to Economic observers high interest rates are regressive to the economic development of the country. Stiglitz & Weiss (1981) pointed out that attempt to charge higher interest rate negatively affects the quality of a bank's loan because of incentive and adverse selection effects. There is rise in the overall riskiness of the portfolio of assets. Rising interest rates reduces the returns on all projects and makes less risky projects unprofitable. Firms react by switching to more risky projects as interest rates rise. Secondly, MFIs like banks have to screen borrowers. This is because at a high borrowing interest rate, borrowers may be less worried about the prospect of nonpayment (adverse selection effect). This implies that the rational profit maximizing MFIs will practice credit rationing which defeats the assumption generally made in financial liberalization literature, that of interest rate liberalization eliminating credit rationing.

Mang'eli (2012) in his research study points out that interest rate spread affect the performance of commercial banks, as it increase the cost of loans charged on the borrowers, regulations on interest rates have far reaching effects on performance of financial institutions since they determine the interest rate spread in banks and also help mitigate moral hazards incidental to performance of commercial banks, credit risk management technique remotely affects the value of a bank's interest rate spread as Interest rates are benchmarked against the associated non-performing loans (NPLs) and NPLs is attributable to high cost of loans. Despite MFIs having a leeway of charging high lending interest rates which makes them record impressive financial performance some banks are actually reporting losses or very small margins despite the fact that they are being controlled by the same regulatory body CBK. According to Ngumi (2014) a strong relationship exists between lending interest rates and financial performance of DTMs. He recommends that deposit taking microfinance (DTMs) should judiciously manage their interest rate to improve their financial performance since it has a positive effect on their financial performance and also recommends for income source diversification

Credit lending and effective management of credit is key to the growth of MFIs (Hippolyte, 2005). Successful MFIs have managed to maintain high levels of lending and loan recovery rates, generally over 95%. Many borrowers results to increased revenue through the payment of interest charged on money borrowed. These trigger a wave of funds from funding agencies and the subsequent inflow from a variety of social investors which they could use to expand their operations. While many MFIs continue to enjoy growth due to slow expansion of formal sectors ,interest rates charged by formal sector will be also be vital to their growth since it may encourage or discourage small and medium investors who may turn to or away from MFIs for

credit. Does change in base lending rate have any effect in the growth of microfinance banks in Kenya?

1.3 Research Objectives

To investigate the effect of change in base lending rate by CBK on the growth of microfinance banks in Kenya.

1.4 Value of the Study

This research will be of the following practical value: The study will help CBK monetary policy committee in policy formulation aimed at controlling and regulating interest rates in Kenya. This will be achieved by sending more light to what exactly happens to other depository financial institutions that are not directly controlled by CBK during the times of increased base lending rate. This will help create a balance when effecting changes in central bank rate by avoiding changes that do more harm than good to the general economy.

The study will be important to management of various deposits taking microfinance by taking advantage of changes in interest rate to enhance their growth. Most importantly is the evaluation by management on how effective they are responding to the challenge of interest rate volatility in their institution. Management of MFIs that do not rely on CBK or commercial banks for funds can take advantage of increased base lending rate by other depository institution to lobby for more customers by giving cheap loans.

To researchers and academicians this study will create a platform for further research study on related topics and also act as a resourceful tool for other academicians who intend to undertake the same topic in their area of specialization.

This research study will also help to highlight other important variables that affect the growth of microfinance institution that require further research. This may be focusing of other variables that have effect on the growth of microfinance institutions in Kenya. More work need to be done on other variables such as credit term, leverage, economic cycles and management performance.

The research will help the Government in enacting policies that are friendly to the growth of microfinance aimed at eradicating poverty and increase revenue to government through collection of more taxes.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter is concerned with the review of literature related to the study, the theoretical review, determinant of growth in microfinance, empirical review and the conceptual framework. In the literature, it reviews other authors' works on credit lending rate and growth microfinance. The last section is the summary of the literature which points out the research gaps on the empirical studies done.

2.2 Theoretical Review

This section sheds light on the theoretical framework supported by different authors' views on lending interest rates and the various theories of lending interest rates.

2.2.1 Market Segmentation Theory

This theory was first developed by Culbertson (1957). It asserts that, long term and short term security markets are independent and there is no causal relationship. Supply and demand forces in different maturity segments of market determine rate for that particular segment. The theory assumes that investors have strict maturity preferences. In this case pension funds with long term liabilities would invest in similar bonds while banks would operate in a shorter horizon. This implies existence of "separated" market segments each having interest rate determined by its own supply-demand interaction.

Auerbach (1988) indicated that the yield curve is constructed by connecting the equilibrium points. This theory asserts that securities of different maturities are poor substitutes for one another since they do not belong to the same market segments. Lasher (2008) stated that each market segment has its own supply and demand picture with independent set of forces pushing the curves back and forth, meaning that market interest rate in each segment is independently determined and not related to the market rate in other segments.

Kinyura (2011) found out that market segmentation theory is based on institutional practices being followed by commercial banks, microfinance institutions, insurance companies, and investment trusts. According to him market segmentation theory overlooks the fact that there is an overlap between the markets. In case of Kenya most MFIs target youth groups and women group in their target customer profile with geographical location in mind. The loans are given for varying maturity periods as well as prices in terms borrowing interest rates. The study seeks to identify the rationale of the market segmentation theory on the relationship between the base lending by commercial banks and MFIs in times of rising and or falling base lending rate. Small and medium sized borrowers will prefer to borrow from MFIs when base lending rate increases, on the other hand the big and corporates borrowers will not access credit from MFIs even during periods of increased base lending rate due huge amount of money involved that may not be in reach of MFIs.

2.2.2 Classical Theory of Interest Rates

According to Gorder (2008) the classical theory of interest rates applies the classical theory of economics to determining interest rates. It defines the interest rate as the element that equates savings to investment. It compares the supply of savings with the demand for borrowing. The

equilibrium rate is calculated by determining the curves intersection point of supply and demand curve. Thus if savings are greater than investments the interest rate drops until they reach equilibrium and vice versa, if savings are less than investment the interest rate increases until the reward for savings encourages increased savings rates causing the market to again reach equilibrium.

According Keynes (1936), interest rates definitely influences the marginal propensity to save. He concludes that the rate of interest should be at a point where the demand curve for capital at different rates intersects the savings curve at a fixed income level. The study seeks to identify the rationale classical theory of interest rate on the growth of microfinance banks in relation to credit lending. However the classical theory of interest rates fails to account for factors besides supply and demand that may affect interest rates such as the creation of funds, the importance of income and wealth and changes in the primary borrowers in an economy.

2.2.3 Loanable Funds Theory

This theory was developed by Swedish economist Knut Wicksell (1851-1926). The theory holds that interest rates are determined by supply of loanable funds and demand for credit and that there exists an inverse relationship between the loanable funds and the interest rates. If both the demand and Supply of loanable funds change, the resultant rate would depend on the magnitude of movement of the demand and supply of the loanable funds. In this theory the demand of loanable funds originates from domestic business, consumers, governments and foreign borrowers.

According to Gorder (2008) the supply is generated by domestic savings, dispersion of money balances money creation in the banking system and foreign lending. With these factors

determining long-term interest rates, short term interest rates are decided by financial and monetary conditions in the economy. The study seeks to identify the rationale of the liquidity preference theory on the relationship between the money supply in form of loans by MFIs in times of rising and or falling lending rate, and the growth of the lender. The borrowers will only invest where the returns on their investment profile exceed the borrowing rates, when it is short of this the borrower may abandon the investment or source for interest free fund such as family borrowing.

2.3 Determinants of Growth of Microfinance institutions

The growth of an MFI is influenced by various factors such as credit term, lending interest rates, leverage, and size of the firm, economic growth and risk. Credit term refers to the conditions under which an MFI advances credit to its customers. The credit terms specify the credit period and interest rates. Credit period is the period of time in which the credit is granted. The length of the credit period is influenced by Collateral value, Credit risk, the size of the account and market competition (Ross *et al.*,2008).when credit terms are perceived to be good by many borrowers ,more will be borrowed which will translate to overall growth of MFIs

Economic cycle or business cycle refers to economy-wide fluctuations in production or economic activity over several months or years. According to Pandey (2008) fluctuations occur around a long-term growth trend, and typically involve shifts over time between periods of relatively rapid economic growth and periods of relative stagnation or decline. The economic cycles also play an important role on MFI's choice of issuing or not issuing loans.

Leverage also has an influence on firms' performance. Stiroh (2008) noted that entities with higher profit rates will remain low leveraged because of their ability to finance their own

sources. On the other hand, a high degree of leverage increases the risk of bankruptcy of companies. Total assets are considered to positively influence the company's financial performance, assets greater meaning less risk (Barton & Gordon, 1987).

The size of the company can have a positive effect on financial performance because larger firms can use this advantage to get some financial benefits in business relations. Large companies have easier access to the most important factors of production, including human resources, (Akhigbe & McNulty, 2005). Large organizations are also able to get cheaper source of funds to enable them to be competitive. Such funds however, come with conditions which can be easily met by large organizations.

2.4 Empirical Literature

Chikalipah (2012) investigated what influences microcredit interest rates using unbalanced panel data of 292 microfinance organizations drawn from 34 Sub-Saharan African (SSA) countries over the period 2003 to 2011. The study examined how Microfinance-specific, Institutional and macroeconomic factors impact on the setting of microfinance lending interest rates. The empirical findings provide evidence that finance costs, operating expenses, return on assets and inflation largely drive microfinance lending interest rates in SSA. The study identified an inverse relationship between quality of institutional setup and microfinance lending interest rates. Even though the study sample purely focused on microfinance operating in SSA and considers the main determinants of lending interest rates at firm, institutional and macroeconomic level, the study has one limitation, the study did not include additional aspect of the impact interest rates ceiling would have in their analyses. What truly influences microfinance lending interest rates in Sub-Sahara Africa (SSA). Therefore, more studies need to be done to send more light on

the impact of interest rates ceiling on MFI financial performance and the setting of lending interest rates.

Amelie (2009) examined the impact of microfinance institutions on development in an empirical setting, and therewith aims at filling a gap in econometric assessments of microfinance institutions. He used data of MFIs operating in selected African and Asian countries and chooses an average savings and loan balances per client as proxies for development, he found out that there is a significant positive impact of microfinance institutions on development. Microcredit is the most robust mechanism to enhance development in recent years. While an MFI's size is mostly irrelevant, its experience was found to be especially enhancing for the amount of credit granted to the poor. Savings was found to be the best estimator for development in recent years. He further found that while African development is generally in arrears compared to Asia, there is no statistical evidence for differences in the marginal impact of microfinance institutions subject to geographical positions. In conclusion he found environment to have an independent positive impact of microfinance institutions on development in low-income countries

According to a study that was carried out by Wensheng (2003) on the impact of interest rate shocks on the performance of the banking sector, he found out that a rise in the Hong Kong dollar risk premium, signified by a widening of the spread between Hong Kong dollar and US dollar interest rates, would influence banks' profitability mainly through its impact on asset quality that affects provisioning charges and net interest margin. The objective of his study was to establish the impact of interest variation on the bank performance where he sampled two banks and analyzed data from 1992 to 2002 a period of ten years.

Vogelgesang (2001), sought to establish the impact of microfinance loans on productivity and growth of the clients' enterprises. The analysis used secondary data obtained from Caja Los Andes, a leading microfinance provider in Bolivia. The results showed that the clients put the additional funds to good use. Clients with a higher number and a higher average size of prior loans are found to have higher growth rates than other clients. A cross-sectional analysis of sales revenues showed that clients with prior loans generate higher sales revenues than others for a given asset level. The study is important in emphasizing the importance of loan to the growth of small and medium sized enterprises. Saunders & Schumacher (2000) in a study in six European countries and the US using data from 614 banks for the period 1988 to 1995, found out that the regulatory requirements and interest rate volatility had significant effects on bank interest rate margin across these countries.

Okibo & Njagi (2014) investigated the effects of MFIs on poverty reduction. The study focused on PAWDEP located in Kiambu District as a case study. It intended to cover credit facilities provided by the MFI and clients perception on income improvement and/or reduced poverty levels. The study used descriptive survey design with target population of 9 staff/administrators and 46 clients or recipients of PAWDEP. The study employed stratified sampling technique to select staff of the selected MFIs and clients. Both qualitative and quantitative data analysis methods were used. The study revealed that PAWDEP as a microfinance institution has been providing microfinance services to different groups of women - productive or active poor and that the institution uses various strategies to deliver its services such as granting small loans to women to help them start businesses, grow their businesses and educate their children. To enhance client’s business skills to use credit and establish market channels for their products, the study recommends that microfinance institutions like PAWDEP can arrange mechanisms to

improve technical and business skills of the poorest through training and loan utilization. The study also recommended that MFIs should put in place micro-insurance schemes which could help clients to pool risk or share losses.

Ngumi (2014) sought to establish whether there exists a relationship between lending interest rates and the financial performance of Deposit Taking Microfinance Institutions in Kenya. The study involved collecting secondary data from Central Bank of Kenya, individual Deposit Taking Microfinance Institutions and the Association of Microfinance Institutions in Kenya. Data for nine DTMs was analyzed for five years (2009-2013) using multivariate regression model. The study found out that a strong relationship exists between lending interest rates and financial performance of DTMs. Lower 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 However the study did not provide information on the trend of growth and did not show whether changes in base lending rate affect MFIs growth.

Zachary (2013) sought to evaluate the effect of interest rates on demand for loans by SMEs in Nairobi County. The study employed a correlation research design and data was collected using a semi-structured questionnaire from SMEs in Nairobi County. A total of 50 questionnaires were administered to various SMEs but the researcher managed to obtain 48 completed questionnaires representing a response rate of 96%. Data was analyzed using the Statistical Package for Social Sciences (Version 17.0) computer package. Both descriptive and inferential statistics were used. The research findings revealed that there was a very strong positive relationship (R= 0.932) between demand for credit, interest rate, annual profit and owner's equity. The study also

revealed that 86.9% of demand for credit by SMEs in Nairobi County could be explained by interest rates. The findings further revealed that effective interest rates, annual profits and owners‟ equity explained demand for loans in that order. From the finding of this study it is evident that interest rate are one major factor that contribute to demand for loan in Nairobi. A broader study is therefore needed in other regions in the country to find out whether the same trend exists or not.

Njeri *et al* (2013) conducted a study to determine the key factors that determine the growth of the microfinance institutions. The target population was the people that participated in these MFI's which in many cases were found to be women groups middle and low income earners in Voi, more concentration was mainly on the individuals groups that were registered with the SMEP in Voi. The method used for this research was exploratory survey and data was collected using questionnaires, observation and interviews. Sampling technique was used and results analyzed qualitatively and quantitatively in terms of descriptive statistics. Pie charts, bar charts and frequency distribution tables were incorporated in data presentation. It was found that the married and the youth of the nation are more involved in the Microfinance sector than any other age group making the industry to grow very fast due to the demand that the youth are putting on the sector in demand for greater proceeds and investments. Further findings found MFO's performing poorly at the long run due to high default.

Moti *et al* (2012) conducted an assessment of the effectiveness of credit management systems on loan performance of microfinance institutions. The main focus was to establish the effect of credit terms, client appraisal, credit risk control measures and credit collection policies on loan performance using a descriptive research design. The respondents were the credit officers of the MFIs in Meru town. Collection policy was found to have a higher effect on loan repayment.

However their study did not cover the effectiveness of credit referencing on loan performance of MFIs.

2.5 Summary of Literature Review

The literature reviewed shows that the debate on microfinance is inconclusive on the impact of base lending rate to the growth of microfinance in Kenya. Chikalipah (2012) investigated what influences microcredit interest rates using unbalanced panel data of 292 microfinance organizations drawn from 34 Sub-Saharan African (SSA) countries over the period 2003 to 2011. However the study did not include additional aspect of the impact interest rates ceiling in his analyses. What truly influences microfinance lending interest rates in SSA. Therefore, more studies need to be done to send more light on the impact of interest rates ceiling on MFI financial performance and the setting of lending interest rates. It should be noted that the varying conclusions in the text may be accounted for by differences in the methodology used to measure the impact, among other biases. Conducting such a study is justified by the increased rate of fluctuation of the credit lending rate by the CBK and the big role played by microfinance in eradicating poverty.

Njeri *et al* (2013) conducted a study to determine the key factors that determine the growth of the microfinance institutions. Their research finding dwelled more on demographics as the major factor determining the growth of microfinance. Considering the fact that microfinance mostly depends on lending to generate revenue other factor such as lending interest rate and macroeconomic factor such as discount window cannot be ignored when assessing the growth of microfinance.

This study is justified by a research finding that was conducted by Zachary (2013) which sought to evaluate the effect of interest rates on demand for loans by SMEs in Nairobi County. The study found out that, interest rates, annual profits and owners‟ equity explained demand for loans in that order. However the study did not show how interest rate impacted on the growth of microfinance and more so credit lending rate imposed by CBK.

Ngumi (2014) sought to establish whether there exists a relationship between lending interest rates and the financial performance of Deposit Taking Microfinance Institutions in Kenya. He found out that a relationship exist whereby low lending interest rate translates to better performance of deposit taking microfinance. However his study did not show the trend of growth with increase or decrease of lending interest rate in terms of new branches being opened or new microfinance being registered.

The studies done so far in this area have focused mainly on the relationship between interest rates and financial performance by Ngumi (2014) and Chikalipah (2012), other studies on this area have focused on interest rate and demand for loans Zachary (2013). From the overview of these studies, it is apparent more studies needs to be done in this area of research by looking at growth in a broader way other than financial performance i.e. expansion by opening new branches or new microfinance institution coming up. It is thus imperative that the gaps be filled hence the study set to answer the following question. What is the effect of change in base lending rate on the growth of microfinance in Kenya?

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the overall methodology that the researcher used to carry out the study. This includes the research design, target population, sample design, and data collection procedure. Data analysis procedure and presentation is also presented in this chapter.

3.2 Research Design

Descriptive design was used in this research. A descriptive study is one in which information is collected without changing the environment (nothing is manipulated). Descriptive studies are conducted to demonstrate associations or relationships between naturally occurring variables in the world. Descriptive studies are usually the best methods for collecting information that demonstrate relationships and describe the situation as it exists (Cooper and Schindler, 2006). Descriptive study is used to describe characteristics of a population or phenomenon being studied. It does not answer questions about how/ when/why the characteristics occurred. Rather it addresses the "What" question hence descriptive research was found to be in tandem with the research question which sought to answer the question. What is the effect of increase in credit lending interest rates on the growth of MFIs in Kenya?

3.3 Population

The target population of this study comprised of 9 microfinance banks regulated by CBK and registered by AMFIs as at 31st December 2014. Out of the 12 registered microfinance banks by June 2015 by CBK only 9 were registered by 31st December 2014. Kenya's microfinance sector comprises of nearly 250 MFIs, with only 62 of these being registered with their umbrella body,

Association of Microfinance institutions (AMI). The remaining institutions are unregulated by the Central Bank and offer microfinance services in combination with other services (Microfinance (amendment Act), 2013).

3.4 Data Collection

The study used secondary data obtained from the following sources; Data on credit lending rate trends for the last five years from CBK. Annual financial statements and banking supervision reports on the microfinance banks under consideration was obtained from the CBK. Secondary data on the total asset held by depository financial institution was obtained from CBK. Data on monthly financial statements were obtained from individual microfinance banks under study. Finally the study also used secondary data from the Association of Microfinance Institutions in Kenya (AMFIs) on the growth and performance of the registered MFIs. The study adopted a period of five years from 2010-2014.

3.5 Data Analysis

The study used multivariate regression model to determine the relationship between the dependent and the independent variables. The study used Statistical package for Social Sciences-SPSS version 22, to aid in data analysis. Descriptive statistics and ordinary least squares regression model was used in the study. Ordinary least squares regression model suits this study as it is depicted to be a valid method where stable relationships are shown across a given variable over several periods. This method was successfully applied by Kanwal and Nadeem (2013) in their study on the impact of macroeconomic variables on the profitability of listed commercial banks in Pakistan.

3.5.1 Analytical model

A multivariate regression model was used in this study; $Yt = \alpha + \beta_1 X1 + \beta_2 X2 + \beta_3 X3 + \varepsilon$

Yt = Growth of microfinance banks in period t

X_1 = Increase base lending rate

X_2 = Credit terms

X_3 = Management Efficiency

βi = Co-efficient of variable *i* that measures the responsiveness of a unit change in Y for a unit change in *i*

ε = Error term

Where;

Yt = Growth of microfinance banks in period t as measured by gross loan portfolio

α = the regression constant

X_1 =change in base lending rate as measured by CBK.

X_2 = Credit terms as measured by loan lending interest rate

X_3 = Management Efficiency as measured by administrative expenses/assets

3.5.2 Test of Significance

The Pearson product moment coefficient (R) was used to establish the association between the variables (growth of microfinance institutions and base lending rates) based on the population data. A co efficient of determination (R^2) was performed to determine how much of the dependent variable comes about as a result of the independent variable being tested.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

Chapter four presents the findings of the study. The section begins by presenting the descriptive statics, then the regression model. At the end of the section a discussion of the results is provided. The study sought to establish the effects of change of base lending rates on the growth of microfinance banks in Kenya. The study assessed nine microfinance institutions in Kenya which were selected based on the fact that they were the only registered MFIs by CBK by December 2014 in Kenya. The reference period for the study was 2010 to 2014. Data was collected on gross loan portfolio as an indicator of growth of microfinance institutions. CBK base lending rates data was also collected as well as loan interest rates for the various MFIs, and the administrative expenses over assets data.

4.2 Descriptive statistics

The summary of the statistics used in the model is presented in Table 4.1. The descriptive statistics presented are the means, the standard deviation, kurtosis and skewedness. The maximum and the minimum values for the selected variables are also included.

Table 4.1: Descriptive statistics

Statistic	Minimum	Maximum	Mean	Std. Deviation	Skewedness		Kurtosis	
						Std. Error		Std. Error
Gross loan portfolio	$17,589	$2.E8	$1.73E7	$33,189,733.861	.447	.845	-1.841	1.741
CBK rate	6	16	9.90	3.454	1.754	.845	3.772	1.741
Management efficiency	6.51	8.72	7.5517	.95753	.150	.845	-2.635	1.741
Interest rates	7.40	28.0	16.6833	5.77665	-.892	.845	-1.142	1.741

Source: (Machua, 2015)

The results revealed that the minimum Gross loan portfolio was about $17 million while the maximum was about $200 million for all the MFIs studied. The mean Gross loan portfolio was about 173 million with a standard deviation of about 33 million. The results thus reveal that irrespective of the MFI, positive growth was recorded over the five year period within which the study is based. However, there were significant inter-institutional variations as depicted by high standard deviation meaning that the growth was not uniform while institutions had recorded very strong positive growth with maximum loan portfolio standing at about 200 million, some recorded a low value of 100 million. The data shows only a slight skewedness of 0.447 and a

negative kurtosis. It therefore means that the data was had a positive skew and much of the data collected inclined towards the negative side of the mean value.

The mean CBK lending rate was 9.9 for the five years. The minimum rate was 6 while the highest value was 16.0. The data had a standard deviation 3.454, a skewedness of 1.1754 and a kurtosis value of 3.772. The results thus imply that in some years, the CBK lending rates were too low while in others it was high. The low value of standard deviation shows a variation among the years. The values of the skewedness show that the distribution of the data had a slight positive skew and was relatively flat. Much of the data however inclined towards the positive side of the mean value.

Data on administrative expenses over assets was collected to give information on management efficiency. From the study, the minimum value was 6.51% while the maximum value was 8.72%, the mean value was 7.55% and a standard deviation of 0.96%. This implies that among the various MFIs, management efficiency was low at 6.5 while in others it was high at 8.7%. Nonetheless, the variation was small among the MFIs as depicted by the standard deviation. The mean value of 7.55% indicates that many MFI had controlled their administrative costs as a ratio of their asset making them more efficient. This can be associated with the fact that no MFIs endeavor to reduce their expenses in regard to their asset base which enhances management efficiency. The distribution had a skewedness of 0.15 and a kurtosis of 2.86, which implies that the data collected, approached normal distribution but much of it was on the negative side of the mean value.

The interest rates charged on various loans was used to measure credit term efficiency. For the MFIs under study, the highest interest rate any institution charged on their loans was 28% while

the lowest was 6%. The mean interest rate was 16.99 and the standard deviation was 5.77. The distribution had a negative skewedness of a 0.892 and a kurtosis of -1.152. The information indicates that irrespective of the MFI, the interest rates charged on various loan products were high. Regardless, there are some institutions that charged very low interest rates on their products. However, some charged extremely high rates for their products. The distribution is negatively skewed and much of the data is distributed towards the left side of the mean.

4.3 The regression analysis

Ordinary least squares regression method was used in the study. The model of the study was specified as $Y_t = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$,

where Y_t is the growth of microfinance banks in period t as measured by gross loan portfolio held by microfinance in period t; X_1 is the change in base lending rate as provided by CBK; X_2 is the credit terms as measured by loan interest rate for various MFIs; X_3 is the management Efficiency as measured by administrative expenses over assets; and βi is the co-efficient of variable *i* that measures the responsiveness of a unit change in Y for a unit change in, while ε is the error term.

The results of the model summary are as shown in table 4.2 and table 4.3

Table 4.2: Model Summary for OLS model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			
					F Change	df1	df2	Sig. F Change
1	.914[a]	.836	.590	$21,263,089.944	3.394	3	2	.236

a. Predictors: (Constant), interest rates, CBK loan lending rates , Administrative expenses/assets

Source: (Machua, 2015)

The analysis gave 0.836 values for the R square and an F statistic of 3.394. The strong value of the R square tells implies that the specified model strongly explains the association between the variables in the model. The F statistics obtained p=3.394>p=0.05 implies that indeed there exists a strong positive association between the changes in base lending rate and microfinance growth in Kenya. R square value of 0.836 is proof enough that the specified model explains the association between dependent variable which is growth of microfinance in Kenya and independent variables which are; change in base lending rate, credit term, and management efficiency. A strong positive relationship between growth in microfinance in Kenya and change in base lending rate is clearly shown by F statistic value obtained 3.394>p=0.05. From the findings, change in base lending rate positively affects the growth of microfinance banks in Kenya.

Table 4.3: Coefficients of the model

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B (‘000000)	Std. Error	Beta		
1	(Constant)	178.7	8.152E7		2.192	.160
	CBK loan lending rates	-414.9	2.887E6	-.432	-1.437	.287
	Administrative expenses/assets	-898.3	1.291E7	-.259	-.696	.558
	Interest rates	619.4	2.179E6	1.078	2.842	.105

a. Dependent Variable: Gross loan portfolio

Source: (Machua, 2015)

Table 4.3provides the coefficients of the study which can be put into the specified model. Inserting the coefficients in the model gives:

Y_t= 178700000-414900000X_1-898300000X_2 + 6194000X_3+ ε,

From the model it can be noted that CBK loan lending rates and administrative expenses over assets (management efficiency) both have a negative effect on gross loan portfolio of the MFIs. However, interest rates (credit terms) have a positive influence on growth of MFIs. Assuming all other factors are constant, increasing the CBK lending rates, by one percent leads to a decline in gross loan portfolio by about 414 million. Conversely, lowering the CBK lending rates would cause the MFI to increase their gross loan portfolio by a similar margin. On the same note, it

administrative expenses over assets were to increase by one percent, the gross loan portfolio of any MFI would decline by 898.3 million. The converse is also true, where reducing the value of administrative expenses over assets by one percentage point would increase the value of gross loan portfolio by the same amount. The effect of individual MFI loan lending rates on growth is however positive. Increasing the value of interest rates (credit term) by one percent would lead to an increase in growth (gross loan portfolio) by about 6.19 million. Thus for MFIs to remain profitable, they should endeavor to enhance their credit terms while reducing their administrative expenses over assets.

4. 3 Summary of the findings

The study sought to investigate the effects of base lending on growth of MFIs in Kenya. The base lending rate as provided by CBK has been shown to have a negative effect on growth of MFIs. The study used the gross loan portfolio as an indicator and a measure of microfinance growth. The gross loan portfolio was shown to decline in the years when the base lending rate was high. Nonetheless, the variation between MFIS in regard to gross loan portfolio was high as indicated by the standard deviation. The minimum gross loan portfolio was about $17 million while the maximum was slightly above 200 million. The regression model showed a strong negative relationship between these two variables.

The study revealed that when the bank lending rates increased by one percentage point, the gross loan portfolio declined by about $414 million. On the other hand, if the base lending rate were to decline by one percentage point, then the gross loan portfolio would increase by a similar margin. Thus, it can be asserted that for MFIs to show positive growth, then the base lending rates should remain low. Since MFIs rely on loans to consumers to make profits, when the CBK lending rates increase, MFIs are forced to transfer the burden to the consumer. The consumer on

the other hand shies away from taking loans and therefore the gross loan portfolio of any given MFI declines. This leads to negative growth on the MFIs. On the contrary, when the CBK lending rates are low and thus favorable, more consumers are likely o take up loans which increase the gross loan portfolio for the MFI translating to growth.

The study also employed the loan lending rates offered by the MFIs to assess credit efficiency. The minimum loan lending rates was about 7% and the maximum was about 28% the variation was due to the nature of the loan the MFI was extending to its consumers. For instance some MFIs extended low cost education loans to their customers. On the other hand, MFI extend business loans to their customers. However, such loans attracted high interest rates. This could be viewed as a bank's strategy to remain profitable by diversifying their loan services to target a wide range of clientele. The regression model revealed a strong positive relationship between loan lending rates and gross loan portfolio. Thus as MFIs increase their interest rates to their customers, their gross loan portfolios increase. Specifically, one unit increase in loan interest rates extended by MFIs cause the gross loan portfolio to increase by $6.19 million.

Assuming other factors remain constant, the MFIs may choose to increase their loan interest rates by giving consumers loans at higher interest rates but increase the repayment period. This makes the MFIs gross loan portfolio to go high and thus explaining our unexpected observation. This is so because the MFIs have no control over CBK lending but have control over their own rates and credit terms. In addition, MFIs could have diversified their loan products so as to increase their customers base and allow more people to take different loan types thereby ensuring that the gross loan portfolio stays up even when CBK lending rates increase.

The current study used management efficiency as a variable that may also affect MFIs growth. Administrative expenses over assets were the main indicator used to reflect management efficiency. From the study, it was observed that many MFIs scored highly on this indicator with minimum value being 6.51 and maximum value being 8.72. The variation between MFIs on this respect was significantly low as illustrated by the low value of standard deviation of about 0.9. The regression model showed a strong positive association between management efficiency and growth of MFIs. As MFI management becomes more efficient, more growth is experienced. This is as a result of proper allocation of resources (assets) in an efficient manner to enhance growth of MFI. When costs of operation are high, they are converted to liabilities and transferred to the consumers in terms of loan interest rates and other expenses. These may hinder consumers' willingness to take loans with said MFIs. The result is that gross loan portfolio of the MFIs will decline and the result is that growth will be hindered.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This section gives a summary of the main study findings, conclusions and recommendations. The section begins by presenting the overview of the entire study and the main results obtained. Based on the study findings, the second part of this section draws conclusion. Finally, the third section gives recommendations based on the conclusions.

5.2 Summary

The study used secondary data from various data sources to achieve its objective. Data was collected for nine MFIs in Kenya from 2010 to 2014. The main data used was annual data obtained from the MFIs websites and the CBK. The data was analyzed with the aid of statistical package for social science version 22. A regression model was used to show the association between the study variables with MFI growth (measured by gross loan portfolio) being the dependent variable and CBK lending rates, management efficiency (measured using administrative expenses over asset) and credit efficiency (measured by interest rates on loans) being the independent variables. The association was tested at 95% degree of confidence.

The study showed that the mean CBK loan lending rate was 9.9%, where the minimum rate was 6% and the maximum was 16%. The study also revealed that the mean gross loan portfolio was about $ 17.3, million with the maximum gross loan portfolio being and about $200 million and the minimum being about $17 million. Individual lending rates were also assessed. The results also revealed that the minimum loan lending rates from MFIs was 7.4% while the maximum was 28. The mean value in this respect was 16.6. Thus, it can be noted that MFI endeavored to keep

their lending rates high as this is the major way through which they generate their profits. Management efficiency as measured by administrative expenses over assets was also a major variable of the study. The results showed that many MFIs had high management efficiency. The minimum value was 6.51 while the maximum was 8.72 with a mean of 7.55. It can therefore be noted that in general, MFIs endeavored to keep their management efficiency high.

After the analysis, the model of study was fitted with coefficients of the study. The resultant model was of the form $Y_t = 178700000 - 414900000X_1 - 898300000X_2 + 6194000X_3 + \varepsilon$. The value of R square was 0.89 meaning that the model strongly represents the interaction between the variables of study at 95% degree of confidence. Thus, CBK lending rates and management efficiency have a negative effect growth of MFIs while MFI interest rates have a positive effect on the same.

5.3 Conclusion

The relationship between base loan lending rate and growth of MFIs was the main aim of the study. The base lending rates offered by CBK dictates the loan interest rates that the MFIs will extend to their customers and potential customers. Thus, when the CBK base lending rate is high, the growth of microfinance institutions may be hindered. This is so because the MFIs have to offload that burden on the customers. By so doing, the consumers may avoid taking loans thereby reducing the gross loan portfolio of the MFI. Thus CBK lending rates affect MFI's growth negatively. Nonetheless, since the MFIs do not have control over the CBK base lending rates, the MFIs are forced to device their own method of remaining profitable and continue with their positive growth. One way that MFIs have been doing this is by diversifying their products. Thus although the CBK lending rates affect growth of MFIs negatively, they remain on an upwards growth trend even when the CBK rates are unfavorable by using other means.

Interest rates extended on loans to consumers are significant to the performance of MFIs globally. MFIs alter the loan lending rates on various products they extend to consumers so as to remain profitable. However, increasing this value uncontrollable also has a negative effect on the consumers. Since consumers want loans that have low interest rates, the MFIs use interest rates as their tool for attracting many customers while at the same time remaining profitable. This scenario presents a dilemma for management where the base lending rate does not change significantly or is high. The growth of gross loan portfolio can thus be used as a key indicator of the growth of MFI. When CBK lending rates increase, MFI are forced to transfer that burden to the consumers resulting in declining gross loan portfolio. This happens through increased saving as consumers are discouraged from taking more loan or new clients taking loans. However, since MFIs are also business entities which a competition in mind, they have to increase their rates while retaining their customers so as to increase their gross loan portfolio. One avenue that could have been used is varying the time they are extending the loans. So if the repayment period is increased, it acts as a motivation for consumers to take more loans thereby increasing the gross loan portfolio of the MFIs.

For MFI's growth to be sustained, the CBK lending rates should be lower for MFIs so that they can attract many clients. However, in the event that the CBK rates cannot be altered, the MFIs rely on reducing their expenditure and increasing their assets. That way, that ratio remains significantly low. This acts as concrete solution to the problem of management efficiency and credit efficiency. Thus many MFIs endeavor to keep that value as low as possible in order to remain profitable and increase their growth. This can be done through working on the administrative expenses over assets, a variable that has been shown to negatively affect MFI growth in this study. The study pointed out that there is a direct relationship between lending

interest rates and growth of microfinance. The main avenue through which this might have occurred is by diversifying their loan products to capitalize on economies of scale even when the lending rates are unattractive to consumers.

5.4 Recommendations for policy

The study revealed that some MFIs charge very high interest rates on various products. Such high rates deter consumers from taking loans which are the key drivers of the profits and growth of MFIs. Assessing customer's worthiness is critical to ensuring that MFIs maintain and sustain their growth patterns. To cushion customers, there need to be in place a regulatory mechanism that gives the MFIs a floor and a ceiling loan lending rate. This will help in cushioning customers against exploitative MFIs who may tend to take advantages of high base lending rates from CBK to exploit customers. In addition, since MFIs tend to deal with the poor, sometimes these people are ignorant to such dynamics as changes in base lending rates. Consequently, every MFI should be compelled to educate their customers on the impact of varying base lending rates on the interest rates charged on the existing loan principal.

Since CBK lending rates are dictated by various factors some of which are not domestic, the MFIs should endeavor to have mechanisms in place to cushion their customers especially on outstanding principal. This way, the MFIs will continue to maintain its market share and encourage more borrowers to come on board when the CBK rates are not favorable. CBK on the other hand should have a policy on public awareness and full disclosure of information so that consumers can check their loan rates against the recommended CBK rates. There also has to be mechanisms in CBK to ensure checks and balances on interest rates extended to consumers. Such high values as 28% should be regulated as they are commensurate with the CBK base

lending. Such rates allow some MFIs to operate like commercial banks making them exploitative to the poorest of the poor who rely on them.

Administrative expenditure should be kept to a minimum at all cost. This variable was shown to affect the growth of MFIs strongly and therefore, MFIs should put policy frameworks to help them reduce administrative expenditure. Instead, they should endeavor to raise their asset base i to continuously reduce the administrative expenditure over asset ratio. This way the effect of this variable on growth will be reduced significantly. Although the value was kept to a minimum in the study, there need to be more effort to reduce it further. One way to do would be to take stock of all assets and resources and converting redundant ones to useful forms. For instance loan officers would be hired on contract basis so that they are only hired when the CBK interest rates is encouraging more people to take loans. On the contrary, when the rates is discouraging and the gross loan portfolio is low due to maybe high lending rates from CBK, then MFIs could terminate or suspend these contracts.

The CBK could regulate the ceiling and floor lending rates so as to enhance regulated growth of MFIs in Kenya. If left uncontrolled, MFIs may increase their lending rates to high rates in order to keep up with the growth in the banking industry. This may have a negative effect on the consumers who rely on such services and loan products.

5.5 Limitations of the Study

The study has a number of limitations. To begin with, the study was conducted only on nine MFIs in Kenya. Among the MFIs, some data was missing especially due to lack of proper documenting. Thus, in some instances, the study used only the most readily available data. This attribute of the data collected hindered manipulation of the data. To help reduce errors, the study

used data in which most of the MFIs had all the data or almost 75% of the data was available. To that effect, the results of this study can only be generalized only with respect to the studied variables for the sampled MFI. Thus generalizing the results to other financial institutions in Kenya and beyond is not possible.

Secondly, the data was obtained from various sources in summary form. The study relied purely on reports provided by the MFIS on their websites or other trusted sources. Such information may suffer from lack of authenticity are in some cases the values may be misleading. The researchers therefore cannot validate the data used since it was not firsthand information from the MFIS. Thus, if the data had been altered during publication to the relevant secondary sources, the researcher did not any evidence that that data was accurate or otherwise. The researcher could therefore not validate or authenticate the data used and therefore the results are purely based on already computed data for the MFIs.

Time a major constraint in this study. For proper results from such a study, a time series study would have helped unearth inconsistencies among MFIs and in different years. If the study were to be conducted for a long time, the data would be collected by the researcher from the respective MFIs. The researcher would have ample time to go through financial records of each MFI in person on year to year basis. That way, the data collected would not be limited to the MFIs.

5.6 Recommendation for further research

The study recommends further research to look at the effect of base lending rates on other financial institutions such as commercial banks, pure credit MFIs and SACCOs. Such studies would useful for triangulation purposes. Such a study would be conducted using time series data

obtained on quarterly basis form the MFIs. This will send more light on the effect of credit lending rate on the growth of depository financial institution.

A study would be carried out in future with a different design. Such a study could use a cross sectional survey design or a longitudinal survey where specific MFIS would be followed for a long time. In such a study, quantitative and qualitative data can be obtained and can help in explaining other variables. For instance, a study would be conducted on MFIs, and then variables such as loan lending rates could be checked from the customers. The reason for choosing MFIs over commercial banks despite them offering as high interest rates as commercial banks would also be uncovered.

The study recommends that a similar study be undertaken in future when uniform data on the variables can be obtained. Due to the fact that different microfinance banks under study have been registered at different times for the last five years, the data used for this study was not uniform in regards to periods of study.it is therefore important and necessary to carry out a repeat of the study in future with more uniform data. This would send more light on the relationship between the dependent and independent variables.

Finally future studies could incorporate as many indicators of each variable in this study as possible and employ different test procedures and analysis methods. Issues loan interest rates as perceived by clients, opinion of employees on growth of MFI could also be captured. Since the data collected would be first hand some biases would be eliminated.

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APPENDICES

Appendix I: List of the Registered DTMs in Kenya as of 31st May 2015.

1. Faulu Kenya DTM ltd
2. Kenya Women Finance Trust DTM Limited
3. SMEP Deposit Taking Microfinance Limited
4. Remu DTM Limited
5. Rafiki Deposit Taking Microfinance
6. UWEZO Deposit Taking Microfinance Limited
7. Century Deposit Taking Microfinance Limited
8. SUMAC DTM Limited
9. U&I Deposit Taking Microfinance Limited
10.Daraja Microfinance Bank Limited
11.Caritas Microfinance Bank Limited
12.Choice Micro Finance Bank Limited

Source: Central Bank of Kenya Website

Appendix 2 Data collection instrument

SECTION I

1. Name of the MFI_____
2. Year founded_____
3. Year registered with CBK_____

SECTION II: Financial information and data for MFI

	2010	2011	2012	2013	2014
CBK lending rates					
MFI lending rates					
Gross loan portfolio					
Administrative expenses over assets					