EFFECT OF INTEREST RATE CAPPING ON CREDIT GROWTH

OF MICROFINANCE BANKS IN KENYA

BY

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DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any other institution or university other than the University of Nairobi for examination.

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This research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

First and foremost I dedicate this work to the Almighty God for giving me resources and the peace of mind to undertake this study. Secondly, to my whole family for their prayers, encouragement, support and understanding during the busy times that I had to work on this study. Thirdly, to my former employer (ILRI) for the sponsorship and flexible working hours that allowed me to attend classes. May God bless them abundantly.

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ABREVIATIONS AND ACRONYMS

AMFI   Association of Microfinance Institutions

ANOVA   Analysis of Variance

CAR   Cumulative Abnormal Returns

CBK   Central Bank of Kenya

CBR   Central Bank Rate

CMA   Capital Markets Authority

GDP   Gross Domestic Product

KCB   Kenya Commercial Bank

NSE   Nairobi Securities Exchange

SPSS   Statistical Package for Social Sciences

ABSTRACT

The study sought to establish the impact of interest rate capping on credit growth of microfinance banks in Kenya. The study adopted descriptive research design. The target population was 11 microfinance institutions authorized by the Central Bank of Kenya. Data was analyzed using descriptive analysis, correlation analysis and logit regression analysis. The correlation results indicated before interest rate capping asset quality and credit growth of microfinance banks are negatively and significantly related (r=-0.449, p=000). After interest rate capping, the relationship between asset quality and credit growth of microfinance banks remained negative and significant but worsened (r=-0.635, p=000). Logit results indicated that the model was statistically significant relationship between asset quality (p=0.0277, OR=2.212524) and credit growth of microfinance banks. The odds ratio OR=2.212524 implies that there is a significant difference on the effect of asset quality on credit growth of microfinance banks in Kenya a result of interest rate capping. Logit results indicated statistically significant relationship between liquidity (p=0.0021, OR=1.179336) and credit growth of microfinance banks. The odds ratio OR=1.179336 implies that there is a significant difference on the effect of liquidity on credit growth of microfinance banks as a result of interest rate capping. The model results indicated a statistically significant relationship between capital adequacy (p=0.003, OR=0.939876) and credit growth of microfinance banks. The odds ratio OR=0.939876 implies that there is a significant difference on the effect of capital adequacy on credit growth of microfinance banks as a result of interest rate capping. The study concluded that capital adequacy, asset quality, liquidity influences credit growth of microfinance banks. The study recommends that microfinance banks should invest in other lines of business for example product diversification and investments to supplement their income from core business. This will boost their stability and contribute to profitability. It further recommends that microfinance banks should make maximum use of their available resources for example assets to boost their profitability and effectively execute their core functions. Microfinance banks should comply with banking rules and regulations to avoid the increasing incidence of nonperforming loans and the regulatory authorities should regularly access the lending behavior of the banking industry. The study further recommends that microfinance banks should adopt sound financial risk management practices in order to promote profitability and create wealth to their shareholders. The study also relied on percentage change in loan book value as a measure of credit growth. It is important to note, however, that there are other indicators that can be used to measure credit growth. The indicators include loan delinquency, loan quality and net nonperforming loans. Future research should attempt to study the effects of interest rate capping on credit growth of microfinance banks while measuring credit growth using loan delinquency, loan quality and net nonperforming loans as indicators. The study focused only on microfinance banks. Commercial banks were sharply affected by the law introducing interest rate capping. Future research should involve commercial banks by specifically focusing on the effect of interest rate capping on credit growth of commercial banks. These may form a basis of comparison between the two segments of financial institutions.

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

In the financial intermediation process, microfinance banks play a very essential role. This is because they are important players in indirectly channeling funds from the lenders to the borrowers. This is through mobilizing deposits from both entrepreneurs and small scale enterprises that have surplus and avail these as credit facilities to potential borrowers who are mainly the small scale enterprises and entrepreneurs (Kinuthia, 2014). Equally, interest rates have been important in helping in the intermediation process between the savers and potential borrowers. Savers have surplus while the borrowers have deficit. The savers keep their money in the microfinance banks in order to earn the interest on their deposits while the institution lends this money in form of loans to earn interest. A cap in interest rates is likely to influence the growth of credit as it impacts on the cost of borrowing (Crowley, 2007).

This study was based on three theories, namely; the loanable funds theory of interest rates, the classical theory and the financial repression theory. Loanable funds theory argues that determination of the interest rates spread is founded on the market forces of demand and supply of the loanable funds. The interest rates are determined as the level at which demand and supply for loanable funds are equal and this goes against interest rate capping. Classical theory posits that the economy is viewed as being able to regulate itself. As a result, it applies savings and investments to establish the equilibrium interest rate obtainable from the point where the investments and the savings curves intersect

(Oost, 2002). Financial repression theory recognizes government direct control over the financial system and controlling the fiscal resources. Interest rate capping is one way in which the government can exercise this control.

In Kenya, the bill to cap interest rates was assented to law on the 24th August 2016. This move in regulating interest rates saw the introduction of interest rate capping on lending rates at 4.0 percent above the Central Bank Rate (CBR) and a floor on the deposit rates at 70 percent of the CBR (CMA, 2016). There have been arguments that interest rate capping restrictions could result in alternative lending by the financial institutions like lending to government and/or absolute withdrawal from specific locales for example rural areas or market segments that are expensive when the capping becomes unprofitable. The current study investigated whether the capping of interest rates in Kenya has affected growth of credit among microfinance banks.

1.1.1 Interest Rate Capping

According to Villegas (1982), an interest rate cap means a ceiling placed on rates of interest. It determines the highest rate on credits that a bank can charge its clients. Interest rate capping is a means of government controlling the financial sector. An interest rate cap can also be defined as interest rate that are acceptable to vary, but which can't exceed a declared interest cap. The interest rate can thus fluctuate up and down, but cannot at all go above the cap rate (Ariemba, Kiweu & Riro, 2015). Capping of interest rates indicates that, some lenders were restricted from issuing loans that attract a higher interest than the one accepted by law. This is mostly common when it comes to issues of transparency, limited disclosure need as well as low financial knowledge (Miller, 2013).

According to Miller (2013), many reasons make governments decide to employ interest rate caps and many of them are economic and political. One of the reason would be in order to support an industry which experiences a failure in market or in areas which need more financial resource. A market failure normally results from financial institutions being unable to make a difference between low risk and high risk clients or adverse selections, market information asymmetries and moral hazards. An interest rate cap is an important tool for supporting a sector till it gains the ability to sustain itself.

The capping of interest rates is also essential in protecting the public from exploitation from lenders, as well as protecting public interest through provision of affordable loans, thereby increasing investment and income flow. Also, the capping of interest rates is an avenue of considering all parties in lending, including low-income customers, hence a fight of social harm (OFT, 2010). Although it is theoretically easy, there is a large disparity in the ways or methods that the government initiates the capping of interest rates limits in loans. Many states are basing their own strategy on the religion related rules while others are using the flexible approaches that suit their economy. Some are just assumptions like, for instance no loans with interest rates exceeding say, 40% interest per annum, or 3% per month, instead of introducing a rigid rate that seem to be discriminative as well as exploitative. The sense of this is that, capping of interest rates with a rigid rate, also impact the economy at large extents, hence reducing the surplus, which is commonly used for investments (Helms & Reille, 2004).

1.1.2 Credit Growth

Credit growth represents an increase in the total value of all the loans held by a financial institution (Barnor, 2014). It can also be defined as the increase in the loans that a lender is owed, and is usually listed as an asset on the lender's statement of financial position (Khan & Sattar, 2014). Credits are among the most noteworthy yielding resources a bank can add to its asset report and they give the biggest part of income. In this regard, the banks are confronted with liquidity hazard since advances are progressed from assets saved by clients (Kithinji, 2010). Hamisu (2011) takes note that credit creation includes tremendous dangers to the borrower and the moneylender. The danger of the counterparty failing to satisfy his or her commitment as per the agreement on due date or at whatever time can greatly endanger the smooth operation of the business of a bank.

The total loans and advances are perceived to be the assets for financial institutions. As such the increased lending to the public by banks and microfinance banks directly implies the growth in the balance sheet for the bank and ultimately improved financial performance via increased interest income on the loans and advances by the bank. On the other hand, increased bank lending to the public implies welfare to the public via increased access to loans and advance that in turn increases their personal household consumption. As such the size of the bank, amount of demand deposits, the non – performing loans level as well as the level of the bank's capitalization all have a bearing in influencing resources available for lending to the public (Loderer, 2009).

There are no specific measures of a financial institution credit growth however going by the changes that occurs in the financial statements these are the financial position

statement and comprehensive income statement, one can determine whether the bank credit levels are increasing or not. The key indicators to establish the growth of credit level is increase in total assets which is given by increase in loans, advances and interest income (Loderer, 2009). This study measured credit growth using percentage change in loan book value in a given period.

1.1.3 Interest Rate Capping and Credit Growth

Diamond and Rajan (2006) holds that the cost of borrowing is reduced by low interest rate, which in turn drives the investment activities and high consumer durables purchase. Banks may also ease lending policy given an expectation that economic activities will strengthen, thereby boosting spending power by businesses and households. Low interest rate may trigger investing into stocks, raising households' financial assets. The impact of this may be increased consumer spending, making firms' investment projects more attractive. The main concern for the empirical analysis arises from the fact that banks heterogeneously react to changes in monetary policy. These varied responses by banks emanate from their diverse balance sheet dynamics. There are therefore other mechanisms that play an important role in influencing bank's lending activities despite change of policy on interest rate such as liquidity levels and bank size (Bolton & Freixas, 2006).

Since interest rates capping results in adverse biases and market distortion, financial institutions are more comfortable advancing loans to low risk clients which creates massive inefficiencies in the process of financial intermediation. Ramsey (2013) argues that this discrimination eliminates those in dire need of financial support due to being

considered high risk borrowers. However, financial institutions could still make profits despite the capping of interest rate by the government through venturing into other activities that generate income for example cost reductions and non-funded income. Interest rate capping restrictions may cause alternative lending by the financial sectors for example lending to the government or absolute withdrawal from specific locales like rural areas or market segments that are expensive when the capping becomes unprofitable (Helms & Reille, 2004).

According to Ariemba, Kiweu and Riro (2015) when the demand for money increases, interest rates throughout the economy gain an upward pressure. When the competition for money is little, interest rates reduce and for prospective borrowers, lower interest rates when the economic growth is low can assist reduce the long-term cost of borrowing. The loanable fund theory presupposes that the level of rates of interest influence the demand and supply of loans hence equilibrium interest rate determines the amount of loanable funds commercial banks will advance (Sen, 2015). Thus, the rise or fall of interest rates will affect loan uptake by borrowers (Mbogha, 2015).

1.1.4 Microfinance Banks in Kenya

The Microfinance Act (2006) was revised by removal of the term institution which was then substituted to Microfinance bank licensed under this Act. Microfinance bank is a company that is licensed to conduct Microfinance bank business. This kind of a bank is licensed by Central Bank of Kenya (CBK). Association of Microfinance Institutions (AMFI) seeks to increase the capacity of the Kenyan Microfinance industry. The formation of AMFI was intended to ensure a binding voice to lobby Kenya government

for better policies and to share information and experiences with both local and global actors. Microfinance Act, 2006 provides a supervisory and regulatory framework for Microfinance banks in Kenya. This act became active from 22 May 2008, its main role being licensing and supervision of Microfinance banks. It enables Microfinance banks to mobilise customer deposits from the public and lend money to gain interest income which is one of their core activities (CBK, 2015). The main aim of microfinance institutions is to ensure that poor households have adequate access to high-quality financial services for example credit, savings, insurance and fund transfers (Kavoo, 2013).

Over the last decade, Kenya has faced a rapid growth of Microfinance banks as a result of the adoption of new technology and financial innovation. This has led to the introduction of new products and services which has increased accessibility, flexibility and convenience of banking products and services. Financial liberalization has promoted competition in the banking sector through fair and equitable banking practices with a strong emphasis on access to banking services. Customer needs to keep on changing; banks are looking for better ways to address these needs by tailoring their products or services to meet such needs (Muronya, 2013). The introduction of interest rate capping in September 2016 regulated the rate at which microfinance banks can charge for loans and the amount they can pay for customer deposits.

1.2 Research Problem

The question of whether shifts in interest rates affect credit growth of firms has been widely examined in both academic and policy circles and there are proponents and

opponents of interest rate capping. Proponents argue that the introduction of interest rate ceilings guard the public interest through ensuring a reasonable and fair interest rate advanced on loans. In this context, an interest rate cap could also be beneficial in the sense that it limits credit access to some low-income and impaired consumers, since they mitigate social harm (OFT, 2010). On the other hand, opponents argue that although the good intentions, interest rate caps could actually cause harm to populations of low-income by causing price transparency to reduce and limiting their access to finance (Maimbo & Henriquez, 2014).

Over the last decade, Kenya has faced a rapid growth of Microfinance banks as a result of the adoption of new technology and financial innovation. This has led to the introduction of new products and services which has increased accessibility, flexibility and convenience of banking products and services. Financial liberalization has promoted competition in the banking sector through fair and equitable banking practices with a strong emphasis on access to banking services. However, the introduction of interest rate capping in September 2016 regulated the rate at which microfinance banks can charge for loans and the amount they can pay for customer deposits and many analysts have argued that this might affect the credit growth of banks and microfinance banks in Kenya.

Several studies have documented the effect of interest capping on different sectors of the economy. However, most of these studies have focused on the impact of capping on other variables apart from credit growth and have focused more on commercial banks. Robinson (2010) from his study found out that earnings of a bank are influenced by unexpected changes in lending interest rates. Nkwoma (2014) noted that interest rates'

deregulation in the Nigerian banking sector increased bank lending, which meant a high-profit margin for the banks. However, NKwoma (2014) and Zaman, et al., (2013) also cautioned against the lack of regulation to prevent banks from engaging in very risky ventures that might affect their liquidity.

In Kenya, Kiseu (2017) conducted a study on the impact of interest rate capping on the amount of credit issued by Kenyan commercial banks. The study found that the interest rate control did not significantly affect how commercial banks gave their loans. Murimi (2017) conducted a study on the impact of interest rate capping on retail credit growth on Kenya commercial banks. The findings of the study indicated that interest rate charged by commercial banks significantly affects credit growth. Othigo (2017) studied the effect of interest rate capping announcement on the stock returns of Kenya's listed commercial banks. His study found that interest rate capping has a significant negative impact on share returns. Kimunge (2017) explored the impact of interest rate capping on stock returns at the NSE and found out that interest rate capping had a cumulative negative impact on the stock returns for commercial banks listed at the NSE. From the foregoing, it is notable that there is no consensus on the impact of interest rate capping on credit growth of microfinance banks. In addition, the studies conducted locally have concentrated on commercial banks leaving a gap in the microfinance sector. The current study filled this research gap by answering the research question: What is the effect of interest rate capping on credit growth of microfinance banks in Kenya?

1.3 Research Objective

This study sought to establish the impact of interest rate capping on credit growth of Kenyan microfinance banks.

1.4 Value of the Study

The findings of this study may be used for future reference by researchers, students and scholars who seek to undertake studies on a similar or related area. This study may also benefit researchers and scholars to identify other fields of research by putting forward related topics which need further research as well as by the review of empirical studies to determine study gaps. This study has a great contribution to the banking sector's financial performance.

Potential investors as well as the existing ones in the microfinance industry may find this study useful in their investment undertakings. They shall be in a position to better appraise their investment targets and/or portfolios; and so proceed to make appropriate decisions. Fund managers and financial analysts could also draw insights from the study for similar reasons as the investors as well as in making appropriate client advises or recommendations.

To government and organizations such as the Central Bank, in the formulation and implementation of policies and regulations governing monetary policies and interest rates to ensure stable rates so as to promote economic growth and reduce its spiral effects on the economy. This may contribute to the advancement of monetary development and improvement of the economy.

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

The section aims at reviewing theories that form the foundation of this study. In addition, previous empirical studies that have been carried before on this research topic and related areas are also discussed. The other sections of this chapter include determinants of credit growth, conceptual framework showing the relationship between study variables and a literature review summary.

2.2 Theoretical Framework

Theoretical framework provides a foundation for understanding the theoretically expected relationship among the study variables and in this case interest rate and lending levels. The theories selected for this study are the loanable funds theory of interest rates, classical theory and financial repression theory.

2.2.1 Loanable Funds Theory of Interest Rates

This theory was developed by Fry (1995) and it argues that in the theory of the loanable funds, there is an assumption that the interest rates charged usually are subject to determination by two market forces which are the supply of loanable funds and demand for credit. This theory focuses more on interest rates determination and long term interest rates explanation.

Loanable fund is the money the investors and entities in the economy have saved and intend to lend it to the potential borrowers. By the use of market demand and supply for

loanable funds, the theory explains the interest rates on loans in the market. The supply for the loanable funds comes from the economic entities, government and individuals who opt not to spend but to save money for investing. Investors lending at an interest rate here is one way of investing. The demand for the loanable funds comes from the individuals and business who wants to finance their businesses and investments such as purchase of assets that increase in value with time e.g. Land. As a result, borrower's choice to finance their investments through acquiring the credit facilities creates the demand for the loanable fund (Rocha, 1986).

As per the theory, determination of the interest rates spread is founded on the market forces of demand and supply of the loanable funds. The interest rates are determined as the level at which demand and supply for loanable funds are equal. According to a research by Claeys and Vander (2008), loanable funds theory explains the determinants of interest rate spread, this is because if people do not save with the banks, there is insufficient supply of the loanable funds and the banks will not be able to lend or give credit facilities to the borrowers. As a result, there will be higher demand for the credit facilities than the supply of the loanable funds. This high demand leads to banks charging high interest rates. This has a resultant effect of widened interest rate spread. The loanable funds theory assumes that there is existence of a perfect competition within the market such that, neither a borrower nor the lender can determine the prices of the securities. Also, it assumes that there exist free mobility of the funds in the market. This theory is relevant to this study as it explains how the prevailing interest rates in the market are determined.

2.2.2 Classical Theory

The classical theory of the interest rates determination significantly relate to the classical theory of the economics. According to the classical theory, the economy is viewed as being able to regulate itself. As a result, it applies savings and investments to establish the equilibrium interest rate obtainable from the point where the investments and the savings curves intersect (Oost, 2002).

In the economy, individuals with surplus cash save their money in the banks as savings. This fund is available for borrowing by the economic entities that use the fund to invest in order to generate more income that will be saved in the banks as savings. If the savings exceed investments, it implies there is excess savings of the money than the investments. As a result, the interest rates drop until the borrowers can access the fund cheaper. Conversely, if the level of savings is less than the investments, the level of the interest rates will rise until it reaches the equilibrium point which is the point where the savers find the incentive or the reward to keep their money in the bank (Gelos, 2006).

When the interest rates increase, the savings in the economy increases due to the reward associated with the increased interest rate on savings. Additionally, as the rate of interest charged decreases, the cost that is carried in the borrowing also decreases leading to investments. When the savings increases, the lending rates decline which lead to increased investments from the ease of access of the money at a lower interest rate (Grenade, 2007). This theory aims at explaining how interest rates are determined in the market and so it is very relevant to the current study which focuses on interest rate capping.

2.2.3 Financial Repression Theory

The theory involves the implementation of policies that aim at enhancing government direct control over the financial system and controlling the fiscal resources. The government aim to reduce debt through channeling the funds to themselves. It does this through instituting a ceiling on the lending interest rates, directing the lending to the government and certain industries, regulating the movement of capital between countries and enhancing association that exist between the government and the banks (Gambacorta, 2004).

This has been criticized as it may lead to crowding out effect on the private sector. According to Roubini and Sala-i-Martin (1992), growth of the economy is restrained by the financial repression because the repression has negative consequences to the performance of the private sector. These negative consequences can be traced from the financial repression impact of generating inefficiency in capital allocation, lower rates of return to the savers and elevated costs of financial intermediation. This theory is relevant to the current study as it explains how government can interfere with the financial system by exercising direct control. Interest rate capping is one example of financial repression and so this theory forms a theoretical base for the current study.

2.3 Determinants of Credit Growth

Factors that influence growth can either be external or internal to the firms that define the level of output. The internal factors are different for each firm and determine its growth. These factors accrue due to managerial decisions of the board. External factors include; interest rates, exchange rate volatility, inflation, economic growth, money supply among

others. The internal factors include corporate governance, firm size, financial leverage, liquidity, management efficiency, capital, market power among others (Athanasoglou, Brissimis & Delis, 2005).

2.3.1 Interest Rates

The interest rate is considered the outlay of funds and an increase or a decrease in interest rate could influence the savings choice of the financiers (Olweny & Omondi, 2010). According to Rehman, Sidek and Fauziah (2009), the use of an interest cap causes microfinance institutions to decrease loans and provoke many of these foundations to abscond rural areas, as a result of high cost of production and rate of perils. This in turn will lead to slowed growth of the microfinance banks. The microfinance banks can mitigate this situation by skyrocketing fees and other levies to arrest the situation. According to Barnor (2014), unexpected change in interest rate influences investing decisions, thus investors make changes in their savings arrangement, generally from capital market to fixed profits securities.

According to Khan and Sattar (2014) interest rate affects growth either positively or negatively depending on its movement. A decrease in interest rate to the depositors and an increase in spread discourage savings. Increase in interest rate to the depositor adversely affects the investment. Banking sector is the most sensitive to changes in interest rate as compared to other sectors because the largest proportion of banks' revenue comes from the differences in the interest rate that banks charge and pays to depositors.

2.3.2 Inflation

Inflation affects lending levels of a bank positively or negatively depending on the ability of a bank to anticipate it. When a country anticipates inflation, banks adjust the rate of interest to ensure that revenues generated are higher than the cost of operation. Banks that do not anticipate inflation fails to make proper adjustment and as a result the cost of operations increases at a higher rate than revenue generated. An increase in interest rates as a result of inflation is expected to discourage borrowers from borrowing funds and this is likely to reduce the lending levels. Boyd, Levine and Smith (2001) reported a negative relationship between inflation and lending levels. However Ameer (2015) asserts that most studies have found a positive impact of inflation on lending levels.

2.3.3 Economic Growth

A growing economy exhibits positive GDP which raises demand for loans (Osoro & Ogeto, 2014). Any rise in economic output may raise expected cash flows and hence trigger a rise in the lending levels of banks with the reverse impact during recession being justified (Kirui et al., 2014). Existing empirical evidence indicate that the financial systems of advanced nations are more efficient (Beck et al., 2003). Banking sector development is also positively related to economic stability, monetary and fiscal policies. Countries with higher income have more advanced banking sectors compared to countries with low income (Cull, 1998).

Investors are mainly concerned with GDP reports since the overall economic health could be established through its measurement. The long run implication of healthy economic growth is higher corporate profits and improvement of bank lending levels leading to

long term growth while the short term implication is unpredictable market trends even during positive economic growth seasons (Beck et al., 2003).

2.3.4 Firm Specific Factors

Firm specific factors also have an effect on their financial performance as reviewed hereunder. Capital Adequacy Ratio (CAR) determines the ability of the firm to overcome situations that may threaten profits. According to Kamande (2017) the level of capital adequacy directly affects bank's lending levels by determining its ability to expand to risky areas. The higher the CAR, the lower the risk and the higher the profitability due to ability to absorb losses and minimize risk exposure. However, over reliance on the CAR might reduce bank profitability by reducing the need for deposits and other cheaper sources of capital leading to slowed lending levels. Banks therefore need to ensure they maintain a quality portfolio of these assets as it determines their lending levels (Dang, 2011).

Asset quality shows a bank's asset risk situation and financial strength. Asset quality forecasts the degree of credit risk among the dynamics which affects the health status of a bank. The value of assets controlled by a specific bank relies on the amount of credit risk, and the assets quality controlled through the bank also relies on liability to particular risks, tendencies on NPLs, and the cost-effectiveness of the debtors to the bank (Athanasoglou et al., 2005). Preferably, this ratio ought to be at a minimum. If the lending books are vulnerable to risk in a smoothly operated bank, this would be reflected by advanced interest margins. On the other hand, if the ratio decreases it entails that the risk is not being appropriately recompensed by margins.

Management efficiency influence lending levels and can be determined through organizational discipline, and quality of staff. It can be cited from various financial ratios for instance loan growth rate, earnings growth rate and total asset growth (Kapaya & Raphael, 2016). It can also be determined by the ration of operating expense to income which shows the degree of inefficiency. A higher increase in the operating expense than total income indicates that the management is inefficient.

The viability in the future of a firm depends on its ability to earn adequate returns by using its assets. The ability of a firm to earn enables it to increase funds, expand capital and improve its competitive position. The earning capability can be represented by net interest rate margin which shows the difference between the cost of interest bank's borrowed capital and bank income of interest received on loans and securities (Owoputi, Kayode & Adeyefa, 2014).

Firm failures have been associated with insufficient liquidity. Holding liquid assets can help a firm to generate higher returns. Murerwa (2015) asserts that there is a positive correlation between the adequate level of bank liquidity and lending levels. Liquid asset protect firms against deposits that might require on demand payment and thus firm liquidity minimizes risk. However, liquid assets reduce the amount of funds for lending which in turn reduces bank profitability and in essence growth indicating negative relationship between liquidity and lending levels.

Credit risks are the exposure faced by firms when customers fail to honor the debt obligations at maturity or due date. Banks are highly exposed to credit risk because the main purpose of bank existence is to grant credit facilities (Kapaya & Raphael, 2016).

Thus adequate management of credit is critical for lending and survival of banks and failure to manage it may lead to financial distress. Magweva and Marime (2016) posit that credit risk significantly influences the return on assets of the firms by affecting the interest income they generate. Credit risk negatively affects the lending levels both in short and long run by reducing available funds for lending.

2.4 Empirical Review

Empirical studies have been carried out both internationally and locally to establish the relationship between interest rates and credit growth, but these studies have produced mixed results.

2.4.1 Global Studies

Capera, Murcia and Estrada (2011) registered a depressing relationship between preventive restrictions on interest rates as well as financial depth in eighteen nations in Latin America for the duration between 1980 and 2008. In Nicaragua, for example, the use of an interest maximum made microfinance institutions decrease loans and provoked many of these foundations to abscond rural areas, as a result of high cost of production and rate of perils. They mitigated this situation by skyrocketing fees and other levies to arrest the situation since capping. In the case of Colombia, small firms are suffering due to high cost of transacting. However, currently, they are privileged since interest rates were capped, hence can now lend their products like microcredit. In Bolivia, when maximum interest rate was introduced in 2004, licensing of lending investments also went down.

Zaman et al., (2013) studied the effect of interest rate on the profitability of Pakistan's commercial banks. Twenty banks operating in Pakistan and listed in Karachi Stock formed the study's sample. Study design was cross-sectional, and the data sources included the indexed Karachi stocks based on return, audited financial reports of the banks, publications of the State Bank of Pakistan, Press publications, and media reports. The outcome of the study confirmed that interest rate, deposit with the other banks, investment, and loans. It was established the interest rate (a key tool of monetary policy) has a significant impact on the profitability of banks. An increase in interest rates causes a higher lending rate more than the deposit rate, that result in high profits because of high bank spread. A reduction in the interest rate causes the rate of deposit to move faster than the lending rate, which keeps the bank spread low.

McClain and Meier (2013) carried out a study in America to establish the costs and benefits of cap and trade and also examined some actual mechanics by which the system is expected to operate. Their study established that the caps decreased the financial institutions' profit which had an effect on the entire economy regarding developments. The capping law was also a hindrance to trade between America and other nations since the costs exceeded the benefits.

Teker and Alp (2014) investigated the causality relation between stock market and the rates of interest in Turkey, Brasil, China and Hungary. The study findings revealed that fundamental relationship, direction varies involving maturities and states such that the Hungary market showed a relationship that is causal between the stock market and rate of interest while the China market predicated a low causal relation. However, the findings

established that apart from Brazil, each returns on stock market are Granger cause of 3-month T-bill rates and the causality relationship of T-bonds between countries' indices returns is few, apart from Hungary.

Amarasinghe (2015) in the study, active association involving interest rates and stock price: Empirical Evidence from Colombo Stock Exchange utilized monthly data for a seven year period spanning 2007 – 2013 using all share price index data and interest rates. Granger Causality tests and regression analysis were conducted on the data after stationary tests using Augmented Dickey Fuller Tests. The study found that a significant correlation is present between interest rates and stock exchange prices. A depressing affiliation was there between the two variables in Colombo stock exchange. As the interest rates rose, the stock prices and returns declined. The context of this study was different from the current study.

2.4.2 Local Studies

Kiseu (2017) conducted a study on the impact of interest rate capping on the amount of credit issued by Kenyan commercial banks. The study period covered three quarters before and after the capping law came into effect. Descriptive and inferential statistics was employed in the study. The findings were that the interest rate control did not significantly affect how the commercial banks issued their loans. Although the study did find that some banks contracted their loan books after the law came into effect, such were not enough to shift the ground for the whole industry. However, it was also found that the growth of the credit wasn't drastic as the policy makers would have expected and only grew by 0.2% more compared to pre-capping period.

Murimi (2017) conducted a study on the impact of interest rate capping on retail credit growth on Kenya commercial banks. The study's population was all the 43 banks in Kenya. A bivariate regression analysis was utilized to determine the link between retail credit growth and capping of interest rates. The findings of the study indicate that interest rate charged by commercial banks significantly affects credit growth. Introduction of interest rate capping interferes with the market and hinders financial institutions from giving loan products to those at the market's lower end.

Othigo (2017) did a study on the effects of interest rate capping announcement on the stock returns of listed Kenya's commercial banks. This researcher utilized an event study methodology with an event window of 40 days and an estimation period of 30 days. Data was collected from NSE and NSE25 index was used as the benchmark for market prices. Using the market model ordinary least square regression and a 95% significance level, it was established that all financial institutions underperformed the market by registering negative CARs apart from KCB and Standard Chartered which exhibited negative CARs on the first day post the event. It was therefore concluded that interest rate capping has a significant negative effect on share returns.

Mbua (2017) investigated the impacts of the recent capping of interest rates by the CBK on the listed bank's shares at the NSE of Kenya. The study used an observational research design and checklists were used for data collection. The correlations between the various variables were established using inferential statistics. This study used a small population of eleven banks listed on the NSE and a census was conducted. Considering the lending rates made by investors on deciding whether to invest in bank shares, this

study established that a correlation that is negative exists between lending rates and stock prices in third and fourth quarters of 2015 and a positive one between lending rates and stock prices in third and fourth quarters of 2016. Upon effecting interest rate cap, the share prices of banks significantly dropped and this shows that interest rates significantly influence the decision on whether to invest in bank shares or not.

Kimunge (2017) executed a study to investigate the impact of interest rate capping on stock returns at the NSE. The study was an event analysis of the coming to law of interest rate capping on 14th September 2016. The study analyzed the reaction of stock returns of 11 listed commercial banks 30 days before the law came to action and 30 days after the law came to action. Analysis of the data was done with the aid of Microsoft's Excel (2013). T-test was carried out to establish the significance of interest rate capping on stock returns. The study found out that only 18.18% (Kenya Commercial Bank and CFC Bank) reacted negatively to the interest rate capping. All the other (81.82%) banks reacted positively. Further, the study found out 7 (63.64%) commercial banks recorded negative abnormal returns while 4 (36.36%) commercial banks recorded positive abnormal returns in reaction to the interest rate capping law. However, none of the abnormal returns were found to be statistically significant.

2.5 Conceptual Framework

The expected relationship between the study variables is best explained using a conceptual model. The conceptual model developed below shows how interest rate capping and credit growth of microfinance banks are related. The independent variable is interest rate capping while credit growth of microfinance banks is the dependent variable

which the study seeks to explain. The control variables characterized here are liquidity, asset quality and capital adequacy.

Figure 2.1: Conceptual Model

Independent Variables   **Dependent Variable**

| Interest Rate Capping |

| Credit Growth of MFI banks |
| % change in loan book value |

| <u>Sampled Control Variables</u> |
| • Liquidity |
| • Asset quality |
| • Capital adequacy |
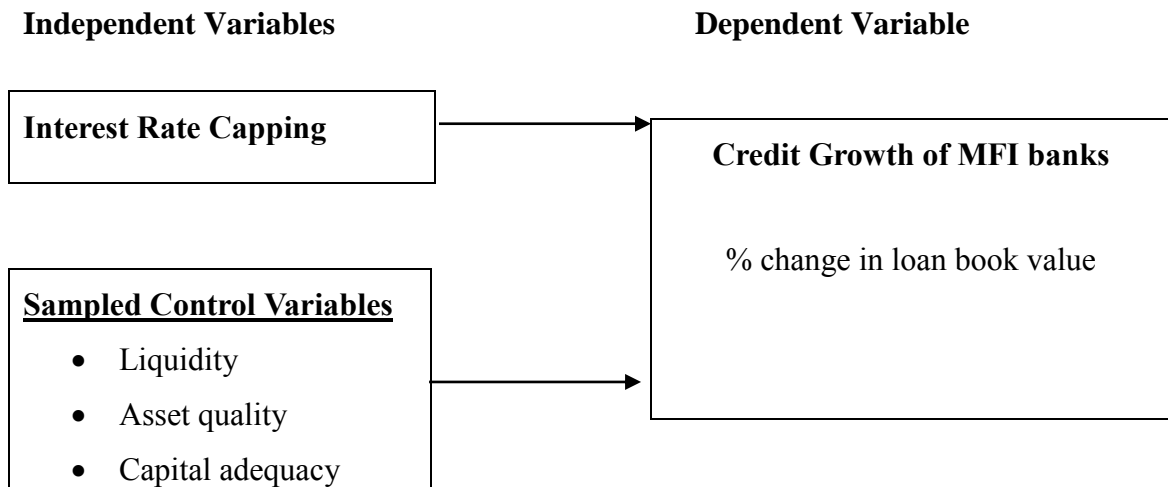
Source: Researcher (2018)

2.6 Summary of the Literature Review

The chapter has focused on the theories that form the foundation for this study. The theories discussed here are namely; the loanable funds theory of interest rates, classical theory and financial repression theory. The chapter has also focused on some of the factors that are expected to determine credit growth of microfinance banks. There have been previous studies carried out either in this area and/or related areas and their findings have been discussed under empirical review. From the empirical review, it is notable that the studies conducted locally have concentrated on commercial banks leaving a gap in the microfinance sector. What is the effect of interest rate capping on credit growth of microfinance banks in Kenya?

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

To establish the impact of interest rates on credit growth of microfinance banks in Kenya, a research methodology is necessary to outline how the research is carried out. This chapter has four sections namely; research design, data collection, diagnostic tests and analysis of data.

3.2 Research Design

The current study used a descriptive research design to examine the effect of interest rates on credit growth of Kenya's microfinance banks. Descriptive design was utilized as the researcher is interested in finding out the state of affairs as they exist (Khan, 2008). This research design is appropriate for the study as the researcher is familiar with the phenomenon under investigation but want to know more regarding the nature of associations between the variables of the study. In addition, a descriptive research aims at providing a valid and accurate representation of the study variables and this helps in responding to the research question (Cooper & Schindler, 2008).

3.3 Population

Population are all observations of interest from the entire collection such as people or events (Burns & Burns, 2008). The population for this study was all the 11 Microfinance banks that were in operation during the study period (See Appendix I).

3.4 Data Collection

Data was exclusively collected from a secondary source. The secondary data were

obtained from the microfinance banks financial reports and from the Central Bank of Kenya as it is a requirement for the microfinance banks to submit their reports to the regulator. The data to be obtained covered ten quarters, five quarters before the introduction of interest rate capping in August 2016 (April 2015 to June 2016) and five quarters after introduction of interest rate capping (October 2016 to December 2017). The specific data to be collected were; loan book value, current assets, current liabilities, risk weighted assets, capital, book value of total liabilities and non-performing loans.

3.5 Data Analysis

The data collected from the microfinance quarterly financial reports were organized in a manner that can help address the research objective. Statistical Package for Social Sciences version 22 was used for data analysis purposes. Both descriptive and regression analyses were done. In descriptive statistics, average was computed for each variable. In inferential statistics, both regression and correlation analysis were carried out. Correlation analysis involved determining the extent of relationship between the study variables while regression analysis involved establishing the cause and effect between the dependent and the independent variables. A logit regression model was utilized to establish the association between the dependent variable (credit growth of microfinance banks) and independent variables: Capital adequacy, liquidity, loan quality and interest rate capping which was represented by a dummy. This is because the logit model relates to binary outcomes.

3.5.1 Analytical Model

A logit regression model was used to explore the degree to which variation in the

dependent variable (credit growth of microfinance banks) is influenced by the variation in the independent variables. This was used to test significance of the independent variables in determining the variations in the dependent variable in both the pre and post interest rate capping periods. The following model was used;

$$Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + D + \acute{\varepsilon}$$

Where:

Y = Credit growth of a microfinance bank as measured by the percentage change in loan book value on a quarterly basis

α = y intercept of the regression equation

β_1, β_2, β_3 = are the slope of the regression

X_1 = Asset quality as measured using the ratio of non-performing loans to total loans on a quarterly basis

X_2 = Liquidity of a microfinance bank as measured by the change in current assets divided by current liabilities on a quarterly basis

X_3 = Capital adequacy of a microfinance bank as measured by the change in the ratio of total capital divided by risk weighted assets

D = Interest rate capping dummy which takes the value of zero (0) in the five quarters before interest rate capping and the value of one (1) in the five quarters after interest rate capping

ε = error term

3.5.2 Tests of Significance

The researcher carried parametric tests to establish the statistical significance of both the overall model and individual parameters. The Wald was used to determine the significance of the overall model and it was obtained from Analysis of Variance (ANOVA) while a z-value was used to establish statistical significance of individual variables.

CHAPTER FOUR

RESEARCH RESULTS AND DISCUSSION

4.1 Introduction

This section presents the study's findings and discussions. The findings presented are in line with the objectives of the study. The results were presented in tables form after the analysis of descriptive and inferential statistics were carried out.

4.2 Descriptive Statistics

The section shows descriptive results for the variables. Descriptive statistics used was conducted pre and post interest rate capping. The findings are shown in the table 4.1 below.

Table 4.1: Descriptive Statistics

	Interest capping	Asset quality	Liquidity	Capital adequacy	Credit growth
Mean	Pre	0.132885	0.788163	0.352949	3.878727
	Post	0.113065	0.743408	0.334714	2.786927
Std Dev	Pre	0.100869	0.605652	0.435578	1.860145
	Post	0.102237	0.630968	0.341156	1.549279

The descriptive results indicated that the average asset quality of microfinance banks in Kenya was 0.132885 pre interest rate capping and 0.113065 post interest capping. The standard deviation was 0.100869 pre interest rate capping and 0.102237 post interest rate capping indicating that asset quality varied during the measurement period as a result of interest rate capping. Asset quality deals with the evaluation of firm non-performing loans so as to enhance the measurement of the level and size of credit risk related to its operation.

The average liquidity of microfinance banks in Kenya before interest rate capping was 0.788163 and 0.743408 after interest rate capping. The standard deviation was 0.605652 pre interest rate capping and 0.630968 post interest rate capping indicating that liquidity varied during the measurement period as a result of interest rate capping. This indicates that after interest rate capping liquidity of microfinance banks reduced. Liquidity is the ability of the microfinance institution to meet its cash duties within a certain day and age. Liquidity of the microfinance banks fundamentally impacts the credit worth of the institution.

It was also established that average capital adequacy of microfinance banks in Kenya before interest rate capping was 0.352949. After interest rate capping, average capital adequacy of microfinance banks dropped to 0.334714. The standard deviation was 0.435578 pre interest rate capping and 0.341156 post interest rate capping indicating that capital adequacy varied during the measurement period as a result of interest rate capping. Capital adequacy influences the ability of a microfinance bank as far as meeting the time liabilities and various risks, for example, credit and operational risk. It helps cushion the microfinance bank against potential uncertainties.

The results show that the average credit worth of microfinance banks in Kenya measured as a percentage change in loan book value was 3.878727% pre interest rate capping and 2.786927% post interest rate capping. The standard deviation was 1.860145 pre interest rate capping and 1.549279 post interest rate capping indicating that credit growth varied during the measurement period as a result of interest rate capping. This implies that

interest rate capping led to a decrease in the total value of all the loans held by a financial institution.

4.3 Correlation Analysis

Correlation illustrates the association between variables (Levin & Rubin, 1998). It indicates the relationship between the predictor variables and outcome variable. Table 4.2 present the outcomes of analysis of correlation. Correlation analysis was conducted pre interest capping and post interest capping.

4.4.1 Pre and post interest rate capping correlation

Correlation analysis was conducted pre and post interest capping. Results of the study are presented below.

Table 4.2: Correlation

Interest rate capping	Credit growth	Asset quality	Liquidity	Capital adequacy
Pre				
Credit growth	1.000			
Asset quality	-0.449	1.000		
	0.000			
Liquidity	0.291	-0.122	1.000	
	0.007	0.376		
Capital adequacy	0.204	0.005	0.122	1.000
	0.036	0.971	0.373	
Post				
Post				
Credit growth	1.000			

Interest rate capping	Credit growth	Asset quality	Liquidity	Capital adequacy
Asset quality	-0.635	1.000		
	0.000			
Liquidity	0.137	0.152	1.000	
	0.025	0.113		
Capital adequacy	0.142	0.020	0.192	1.000
	0.065	0.839	0.044	

The correlation results indicated asset quality and credit growth of microfinance banks are negatively and significantly related before interest rate capping (r=-0.449, p=000). This relationship remained negative and significant but worsened after interest rate capping (r=-0.635, p=000). The outcomes concur with Himululi and Ndonji (2014) who directed an investigation to survey the financial performance of MFIs in Zambia and found that the poor resource quality prompted their poor financial performance. Before interest rate capping, the findings unveiled that liquidity and credit growth of microfinance banks are positively and significantly associated (r=0.291, p=007). However, after interest rate capping, this relationship deteriorated (r=0.137, p=025). The outcomes are in concurrence with Njeri (2014) who completed an examination to investigate the liquidity and financial performance of deposit taking microfinance institutions in Kenya and found a huge relationship among liquidity and financial performance of microfinance institutions. Nonetheless, the outcomes differ with Buseretse (2015) who completed an investigation to build up the impact of liquidity on

productivity of microfinance banks in Kenya and discovered that there is little negative connection among liquidity and benefit of microfinance banks in Kenya.

Before interest rate capping the correlation results showed that capital adequacy and financial Performance of Microfinance banks are positively and significantly associated (r=0.204, p=036). However after interest rate capping, this association weakened (r=0.142, p=065) The outcomes concur with King'ori, Shikumo and Kioko (2017) who directed an examination to look at the determinants of financial performance of Kenyan Microfinance banks and found a positive and statistically noteworthy connection between operational productivity, capital adequacy, firm size and financial performance. Nonetheless, the outcomes differ from that of Nderitu (2016) who set up that capital sufficiency and financial performance of microfinance banks are statistically insignificant.

4.4 Model Specification

Logit regression model was conducted to investigate the degree to which variation in the dependent variable (credit growth of microfinance banks) is influenced by the variation in the independent variables. This was used to test significance of the independent variables in determining the variations in the dependent variable in both the pre and post interest rate capping periods. The logit regression model is shown below.

Table 4.3: Logit regression model

Credit growth pre and post interest rate capping	Coefficient	Odds Ratio	Std. Err.	z	P>z	[95% Conf.	Interval]
Asset quality	-.10566	2.212524	0.041477	2.547	0.0277	0.184061	366.4298
Liquidity	0.164952	1.179336	0.035222	4.683	0.0021	0.625872	2.222235
Capital adequacy	0.06201	0.939876	0.0147685	4.199	0.003	0.347702	2.540586
_cons	-0.36345	0.695276	0.329149	-0.747	0.443	0.274911	1.758421

Wald chi2(4)   =   35.38

Prob > chi2   =   0.0113

Pre Pseudo R^2 =   0.4290

Post Pseudo R^2 =   0.3519

Before interest rate capping the logit regression model established that asset quality, liquidity and capital adequacy explained 42.9% of credit growth of microfinance banks in Kenya. However, after the introduction of interest rate capping in 2016, the explanatory power of asset quality, liquidity and capital adequacy reduced to 35.2%. This implies that interest rate capping has an adverse negative effect on credit growth of microfinance banks.

The overall model was statistically significant. The findings mean that the independent variables (liquidity, asset quality and capital adequacy) are good predictors of credit growth of microfinance banks. This concurred Wald statistic of 35.38 and a p value (0.0113) which is less than the 0.05 level of significance. The estimated model took the form below based on the results above;

$Y = -0.36345 - .10566X_1 + 0.164952X_2 + 0.06201X_3$

Where:

Y = Credit growth of microfinance banks

X_1 = Assets Quality

X_2 = Liquidity

X_3 = Capital Adequacy

4.5 Discussion of Research Findings

Model results indicated that asset quality has a negative and significant relationship with credit growth of microfinance banks in Kenya (β = -.10566, p=0.0277). This implies that unit rise in asset quality would lead to a subsequent drop in credit growth of microfinance banks by -.10566 units. The p value indicated statistically significant relationship between asset quality (p=0.0277, OR=2.212524) and credit growth of microfinance banks. The odds ratio OR=2.212524 implies that there is a significant difference on the effect of asset quality on credit growth of Kenyan microfinance banks before and after interest rate capping. The outcomes concur with Liu (2011) who broke down the effect of the CAMEL model variables on performance of Chinese financial institutions and discovered that asset quality has a critical and negative effect on the performance of banks. Notwithstanding, the outcomes differ with Nwosi and Lucky (2015) who set up that that there is critical connection between asset quality and profitability.

The model results further indicated that liquidity has a positive and significant relationship with credit growth of microfinance banks in Kenya (β = 0.164952,

p=0.0021). This implies that a unit rise in the liquidity of a microfinance bank would lead to a subsequent rise in credit growth of microfinance by 0.164952 units. The p value indicated statistically significant relationship between liquidity (p=0.0021, OR=1.179336) and credit growth of microfinance banks. The odds ratio OR=1.179336 implies that there is a significant difference on the effect of liquidity on credit growth of microfinance banks as a result of interest rate capping. The outcomes additionally concur with Muraguri (2013) who found a positive connection among liquidity and financial performance of Deposit Taking Saccos (DTS). The outcomes anyway differ with Lemara (2017) who completed an examination to decide the impact of liquidity on financial performance of deposit taking microfinance institutions (DTMs) in Kenya and discovered that there was immaterial connection among liquidity and performance of deposit taking microfinance institutions in Kenya.

Further, it was noted that capital adequacy has a positive and significant association with credit growth of microfinance banks in Kenya (β=0.06201, p=0.003). This implies that units increase in capital adequacy would result to improvement on credit growth of microfinance banks by 0.06201 units. The p value indicated statistically significant relationship between capital adequacy (p=0.003, OR=0.939876) and credit growth of microfinance banks. The odds ratio OR=0.939876 implies that there is a significant difference on the effect of capital adequacy on credit growth of microfinance banks as a result of interest rate capping. The results agree with Ezra (2013) examined the determinants of commercial banks profitability in sub-Sahara Africa and established that capital adequacy has a significantly positive effect on profitability of banks.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATION

5.1 Introduction

The study summary is presented in this chapter as well as that of key findings of the previous chapter. The conclusions drawn are also presented. This part likewise features the approach suggestions that microfinance banks can embrace to enhance their financial performance. Finally the section presents recommendations for further research that can be helpful to future researchers.

5.2 Summary

The study was seeking to establish the impact of interest rate capping on credit growth of Kenyan microfinance banks. The study adopted descriptive research design. The target population was 11 microfinance institutions authorized by the Central Bank of Kenya. Descriptive, correlation and logit regression analysis methods were applied in analyzing the data.

Descriptive results show that the average credit worth of microfinance banks in Kenya measured as a percentage change in loan book value was 3.878727% pre interest rate capping and 2.786927% post interest rate capping. This implies that interest rate capping led to a decrease in the total value of all the loans held by a financial institution.

It was also established that the average asset quality of microfinance banks in Kenya was 0.132885 pre interest rate capping and 0.113065 post interest capping. The correlation results indicated before interest rate capping asset quality and credit growth of microfinance banks are negatively and significantly related (r=-0.449, p=000). After

interest rate capping, this relationship remained negative and significant but worsened (r=-0.635, p=000). Logit results indicated that the model was statistically significant relationship between asset quality (p=0.0277, OR=2.212524) and credit growth of microfinance banks. The odds ratio OR=2.212524 implies that there is a significant difference on the effect of asset quality on credit growth of Kenyan microfinance banks as a result of interest rate capping.

The average liquidity of microfinance banks in Kenya before interest rate capping was 0.788163 and 0.743408 after interest rate capping. Before interest rate capping, the results found that liquidity and credit growth of microfinance banks are positively and significantly associated (r=0.291, p=007). However, after interest rate capping, the association between liquidity and credit growth of microfinance banks deteriorated (r=0.137, p=025). Logit results indicated statistically significant relationship between liquidity (p=0.0021, OR=1.179336) and credit growth of microfinance banks. The odds ratio OR=1.179336 implies that there is a significant difference on the effect of liquidity on credit growth of microfinance banks as a result of interest rate capping.

It was also established that average capital adequacy of microfinance banks in Kenya before interest rate capping was 0.352949. After interest rate capping, average capital adequacy of microfinance banks dropped to 0.334714. Before interest rate capping the correlation results showed that capital adequacy and Microfinance banks' financial Performance are positively and significantly associated (r=0.204, p=036). However after interest rate capping, this association weakened (r=0.142, p=065). The model results indicated a statistically significant relationship between capital adequacy (p=0.003,

OR=0.939876) and credit growth of microfinance banks. The odds ratio OR=0.939876 implies that there is a significant difference on the effect of capital adequacy on credit growth of microfinance banks as a result of interest rate capping.

5.3 Conclusion

A few conclusions which are imperative are made from the study results. The study presumes that asset quality has a negative and significant association with credit development of Kenyan microfinance banks. Asset quality involves the assessment of firm assets with the end goal to encourage the estimation of the level and size of credit risk related with its activity. Sustaining sound assets quality includes watchful loans granting that must be analyzed and banking rules complied to. As a determinant of profitability, poor assets quality influences the financial performance and the soundness of banking system.

A conclusion is made that liquidity has a positive and significant relationship with credit growth of microfinance banks. The essentialness of liquidity to organization performance prompts the conclusion that it decides the benefit level of organization. Liquidity is basic for existence of the organization. It chiefly affects financial costs decrease or development, changes in the business dynamic, and additionally it effects on organization risk level. The decisive significance of liquidity implies that it is imperative for organization advancement and in the meantime it is one of the basic endogenous elements which is in charge of the position of the company market.

In view of the results above, the study reasons that capital adequacy has a positive and significant relationship with credit growth of Kenyan microfinance banks. Banks capital

assumes an imperative job in keeping up the wellbeing and solidarity of banks and the security of banking system since it prevents any sudden misfortune that banks may confront.

5.4 Recommendations

The investigation suggests that microfinance banks ought to put resources into different lines of business for instance product diversification and speculations to enhance their income from the main business. This will support their solidness and add to profitability. It additionally prescribes that microfinance banks should make most extreme utilization of their accessible resources for instance assets to support their profitability and successfully execute their main functions.

Microfinance banks ought to agree to keeping money tenets and controls to maintain a strategic distance from the expanding occurrences of non-performing loans and the administrative experts ought to routinely get to the loaning conduct with an aim of managing non-performing loans. The credit strategies of the microfinance banks ought to be coordinated with the profitability destinations and sound credit culture ought to be presented.

The investigation built up that asset quality adversely influences financial performance of microfinance banks. Continuing sound assets quality includes watchful giving of loans that must be analyzed and consistence to keeping money rules. As a determinant of profitability, poor assets quality influences the financial performance and the soundness of the keeping money framework. The examination in this manner suggests usage of

financial advancements for example prescient displaying to check credit value of borrowers to guarantee that high estimation of non-performing loans is limited.

The investigation discovered that liquidity has a positive and noteworthy impact on financial performance of Kenyan microfinance banks. The examination prescribes that microfinance banks should expand their present assets in order to build their liquidity as it was discovered that an expansion in current proportion decidedly influence the financial performance. The investigation additionally suggests that there is requirement for microfinance banks to build their working income, through decrease of their credit reimbursement period with the end goal to emphatically impact their financial performance.

5.5 Contribution to Knowledge

The study found out that investment growth has an influence on microfinance banks' financial performance. Investment plays a vital part in driving development through increment in levels of profitability. The results contribute to financial Repression Theory. The study established that interest rate capping led to the decline of credit worth of microfinance banks in Kenya. These negative consequences can be traced from the financial repression impact of generating inefficiency in capital allocation, lower rates of return to the savers and elevated costs of financial intermediation. Interest rate capping is one example of financial repression and so this theory forms a theoretical base for the current study.

The investigation built up that liquidity impacts the credit worth of microfinance banks. The outcomes contribute to loanable funds Theory that express that Liquid assets are

simpler to offer. Clients go for assets which are highly liquid as they additionally maintain a strategic distance from banks with high liquidity risk, they do this by reserving up their cash in profoundly liquid banks. By distinguishing potential risks, microfinance foundation can gain ground as they deal with limiting odds of being engaged with risky tasks. In this way, by holding liquid assets with a prepared market, microfinance establishments can limit powerlessness to liquidity risk.

5.6 Limitation of the Study

The limitation that the researcher encountered in this study included inconsistency in retrieval of data and information from the microfinances published records. Some microfinance banks didn't post their financial information for some years. Nevertheless, this was overcome by adopting unbalance panel regression model.

The scope of the study was short. Interest rate capping was passed into law in Kenya in August 2016. The period was too short to collect sufficient data to establish the impact of interest rate capping on credit growth of microfinance banks in the country. However, this challenge was mitigated by collecting quarterly data through the study period.

The study focused on microfinance institutions in Kenya. As a result we may not generalize the findings to other financial institutions including commercial banks. The impacts brought by interest capping solely apply to microfinance banks covered in the study.

5.7 Suggestions for Further Research

Apart from capital adequacy, asset quality and liquidity, there are other critical factors influencing credit growth of microfinance banks. The factors include regulatory environment and management efficiency. Future research should include these variables.

The study also relied on percentage change in loan book value as a measure of credit growth. It is important to note, however, that there are other indicators that can be used to measure credit growth. The indicators include loan delinquency, loan quality and net non-performing loans. Future research should attempt to study the effects of interest rate capping on credit growth of microfinance banks while measuring credit growth using loan delinquency, loan quality and net non-performing loans as indicators.

The study focused only on microfinance banks. Commercial banks were sharply affected by the law introducing interest rate capping. Future research should involve commercial banks by specifically focusing on the effect of interest rate capping on credit growth of commercial banks. These may form a basis of comparison between the two segments of financial institutions.

The scope of the study was short. Interest rate capping was passed into law in Kenya in August 2016. The period was too short to collect sufficient data to establish the impact of interest rate capping on credit growth of microfinance banks in the country. Future research may involve extending study period to make more conclusive results.

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APPENDICES

Appendix I: List of Microfinance Banks in Kenya

1. Kenya Women Microfinance Bank

2. Rafiki Microfinance Bank Ltd

3. Faulu Kenya Microfinance Bank

4. SMEP Microfinance Bank Ltd

5. Remu Microfinance Bank Ltd

6. Century Microfinance Bank Ltd

7. Sumac Microfinance Bank Ltd

8. U&'I Microfinance Bank Ltd

9. Caritas Microfinance Bank Ltd

10. Daraja Microfinance Bank

11. Maisha Microfinance Bank

Source: CBK (2018)

Appendix II: Secondary Data Template

Microfinance	Year	Quarter	Asset quality	Liquidity	Capital adequacy	Dummy	Credit growth	Dummy
Kenya Women Microfinance Bank	2015	Q1	0.1003	0.34	0.1797766	pre	4.153	0
Kenya Women Microfinance Bank	2015	Q2	0.1247	0.36	0.1719113	pre	4.923	0
Kenya Women Microfinance Bank	2015	Q3	0.1805	0.31	0.1592169	pre	5.681	0
Kenya Women Microfinance Bank	2016	Q4	0.1993	0.32	0.5636574	pre	2.748	0
Kenya Women Microfinance Bank	2016	Q5	0.2002	0.32	0.1105611	pre	3.37	0
Kenya Women Microfinance Bank	2016	Q1	0.0597	1.23	0.2805611	post	4.085	1
Kenya Women Microfinance Bank	2017	Q2	0.0489	1.54	0.1911279	post	3.14	1
Kenya Women Microfinance Bank	2017	Q3	0.0293	1.41	0.1921686	post	2.922	1
Kenya Women Microfinance Bank	2017	Q4	0.0616	1.5	0.1365735	post	3.978	1
Kenya Women Microfinance Bank	2017	Q5	0.0592	0.89	0.1442107	post	3.09	1
Rafiki Microfinance	2015	Q1	0.1996	0.4	0.1056106	pre	3.652	0
Rafiki Microfinance	2015	Q2	0.2134	0.64	0.1003064	pre	3.489	0
Rafiki Microfinance	2015	Q3	0.2392	0.59	0.1341354	pre	3.793	0
Rafiki Microfinance	2016	Q4	0.2525	1.13	0.1291308	pre	5.131	0
Rafiki Microfinance	2016	Q5	0.2298	1.215	0.7515052	pre	4.183	0
Rafiki Microfinance	2016	Q1	0.0576	0.87	0.2562905	post	2.998	1
Rafiki Microfinance	2017	Q2	0.0458	0.8	0.2362905	post	2.947	1
Rafiki Microfinance	2017	Q3	0.0562	1.04	0.2416291	post	3.128	1
Rafiki Microfinance	2017	Q4	0.0484	0.85	0.311284	post	0.63	1
Rafiki Microfinance	2017	Q5	0.0456	3.6	0.5116116	post	1.5	1
Faulu Kenya	2015	Q1	0.0643	1.52	0.7917172	pre	1.15	0
Faulu Kenya	2015	Q2	0.079	0.91	0.164789	pre	0.63	0
Faulu Kenya	2015	Q3	0.2578	0.87	0.5317932	pre	2.2	0
Faulu Kenya	2016	Q4	0.2351	1.06	0.3841883	pre	2.72	0
Faulu Kenya	2016	Q5	0.2815	0.92	0.2315305	pre	2.82	0

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Faulu Kenya	2016	Q1	0.0841	0.92	0.2116802	post	1.49	1
Faulu Kenya	2017	Q2	0.0945	0.92	0.2116802	post	2.46	1
Faulu Kenya	2017	Q3	0.0743	0.91	0.3146874	post	0.33	1
Faulu Kenya	2017	Q4	0.0836	0.72	0.5914444	post	0.2	1
Faulu Kenya	2017	Q5	0.0835	0.7	0.361427	post	3.695	1
SMEP	2015	Q1	0.1511	0.56	0.2761277	pre	4.038	0
SMEP	2015	Q2	0.3313	0.46	0.2512756	pre	5.598	0
SMEP	2015	Q3	0.3521	0.4	0.7914933	pre	5.621	0
SMEP	2016	Q4	0.3765	0.444536	0.2313033	pre	5.431	0
SMEP	2016	Q5	0.386	0.243858	0.7613954	pre	5.396	0
SMEP	2016	Q1	0.0919	0.173847	0.7613604	post	3.754	1
SMEP	2017	Q2	0.0948	0.284173	0.1824333	post	3.867	1
SMEP	2017	Q3	0.3571	0.853401	0.232166	post	4.555	1
SMEP	2017	Q4	0.3507	0.523258	0.2221567	post	4.668	1
SMEP	2017	Q5	0.2123	0.273354	0.1720929	post	6.657	1
Remu Microfinance	2015	Q1	0.0393	0.232649	0.2178854	pre	1.21	0
Remu Microfinance	2015	Q2	0.07	0.422185	0.141938	pre	2.022	0
Remu Microfinance	2015	Q3	0.0762	0.262582	0.3315641	pre	1.969	0
Remu Microfinance	2016	Q4	0.0734	0.211838	0.5813115	pre	1.467	0
Remu Microfinance	2016	Q5	0.0686	0.672859	0.5810113	pre	1.338	0
Remu Microfinance	2016	Q1	0.2129	0.634281	0.8410126	post	6.352	1
Remu Microfinance	2017	Q2	0.191	0.252821	0.8211404	post	6.43	1
Remu Microfinance	2017	Q3	0.2224	0.244307	0.8311499	post	7.074	1
Remu Microfinance	2017	Q4	0.2363	0.244144	0.1428726	post	6.538	1
Remu Microfinance	2017	Q5	0.2528	0.244289	0.4222904	post	7.311	1
Century Microfinance	2015	Q1	0.0932	0.354429	0.7420482	pre	1.494	0
Century Microfinance	2015	Q2	0.0971	0.293589	0.2218307	pre	1.594	0
Century Microfinance	2015	Q3	0.0783	0.272905	0.1126915	pre	1.306	0
Century Microfinance	2016	Q4	0.0693	0.813417	0.8931749	pre	1.29	0
Century Microfinance	2016	Q5	0.0526	0.573831	1.5214732	pre	1.257	0
Century Microfinance	2016	Q1	0.2769	0.154203	0.9714035	post	7.7	1
Century Microfinance	2017	Q2	0.2947	0.2616	0.9713252	post	8.079	1
Century Microfinance	2017	Q3	0.0409	0.284367	0.5127472	post	3.886	1
Century Microfinance	2017	Q4	0.0415	0.31419	1.3114836	post	4.031	1
Century Microfinance	2017	Q5	0.0394	0.534482	1.7715375	post	4.193	1

Sumac	2015	Q1	0.0053	0.243012	0.8718542	pre	1.291	0
Sumac	2015	Q2	0.0052	0.43283	1.9516404	pre	1.291	0
Sumac	2015	Q3	0.0204	0.426922	1.9712544	pre	1.426	0
Sumac	2016	Q4	0.0094	0.33432	0.046921	pre	1.081	0
Sumac	2016	Q5	0.0228	2.172871	0.05919	pre	1.215	0
Sumac	2016	Q1	0.0403	0.283013	0.132816	post	3.639	1
Sumac	2017	Q2	0.0465	0.322723	0.102048	post	3.792	1
Sumac	2017	Q3	0.0477	0.692611	0.079089	post	4.278	1
Sumac	2017	Q4	0.0458	0.442828	0.195636	post	4.26	1
Sumac	2017	Q5	0.0486	0.674796	0.386232	post	4.247	1
U&I Microfinance	2015	Q1	0.0142	0.28449	0.076482	pre	1.205	0
U&I Microfinance	2015	Q2	0.0118	0.339839	0.047305	pre	1.143	0
U&I Microfinance	2015	Q3	0.0249	0.125533	0.004596	pre	1.351	0
U&I Microfinance	2016	Q4	0.031	0.348705	0.035899	pre	1.294	0
U&I Microfinance	2016	Q5	0.0211	0.474334	0.063866	pre	1.206	0
U&I Microfinance	2016	Q1	0.0656	0.293342	0.385782	post	4.266	1
U&I Microfinance	2017	Q2	0.0742	0.363342	0.307925	post	4.494	1
U&I Microfinance	2017	Q3	0.1321	0.27295	0.262051	post	4.625	1
U&I Microfinance	2017	Q4	0.0906	0.493037	0.325769	post	5.756	1
U&I Microfinance	2017	Q5	0.0726	0.731465	0.341426	post	7.026	1
Caritas	2015	Q1	0.0445	0.832808	0.028504	pre	4.949	0
Caritas	2015	Q2	0.0502	2.093133	0.045273	pre	5.03	0
Caritas	2015	Q3	0.0367	0.333401	0.040106	pre	1.69	0
Caritas	2016	Q4	0.0518	0.793195	0.038311	pre	4.17	0
Caritas	2016	Q5	0.0572	0.263437	0.040683	pre	3.12	0
Caritas	2016	Q1	0.0659	0.192982	0.375769	post	2.26	1
Caritas	2017	Q2	0.0613	0.234103	0.035452	post	2.87	1
Caritas	2017	Q3	0.0856	2.313875	0.048001	post	3.6	1
Caritas	2017	Q4	0.0816	1.615635	0.038705	post	4.94	1
Caritas	2017	Q5	0.0934	1.541412	0.029783	post	4.72	1
Daraja	2015	Q1	0.0681	1.211391	0.04386	pre	2.74	0
Daraja	2015	Q2	0.0694	1.08123	0.070897	pre	2.76	0
Daraja	2015	Q3	0.0733	2.241517	0.072853	pre	2.28	0
Daraja	2016	Q4	0.0768	1.251623	0.263394	pre	1.12	0
Daraja	2016	Q5	0.0749	1.269174	0.213198	pre	5.623	0

Daraja	2016	Q1	0.0873	1.114127	0.096919	post	0.3	1
Daraja	2017	Q2	0.0904	1.41	0.132033	post	5.609	1
Daraja	2017	Q3	0.2248	1.5	0.104475	post	2.248	1
Daraja	2017	Q4	0.2578	0.89	0.12209	post	2.395	1
Daraja	2017	Q5	0.2697	0.87	0.071747	post	2.425	1
Maisha Microfinance	2015	Q1	0.0645	0.8	0.2611	pre	3.093	0
Maisha Microfinance	2015	Q2	0.0617	1.04	0.192811	pre	3.253	0
Maisha Microfinance	2015	Q3	0.0436	0.85	0.197531	pre	2.987	0
Maisha Microfinance	2016	Q4	0.0412	3.6	0.251063	pre	3.229	0
Maisha Microfinance	2016	Q5	0.0664	0.92	0.357234	pre	3.06	0
Maisha Microfinance	2016	Q1	0.278	0.92	0.06063	post	2.575	1
Maisha Microfinance	2017	Q2	0.2943	0.91	0.131158	post	2.698	1
Maisha Microfinance	2017	Q3	0.2971	0.72	0.201969	post	2.733	1
Maisha Microfinance	2017	Q4	0.3058	0.7	0.111216	post	2.8	1
Maisha Microfinance	2017	Q5	0.3038	0.67	0.063168	post	3.086	1