EFFECT OF PRUDENTIAL REGULATIONS ON FINANCIAL PERFORMANCE OF MICROFINANCE BANKS IN KENYA

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DECLARATION

This research project is my original work and has not been submitted for any award to any other college, institution or university

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DEDICATION

I dedicate this project to my family for their endless love, undying support and encouragement. Thank you for believing in me.

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LIST OF ABBREVIATIONS

CBK - Central Bank of Kenya

DTMI - Deposit Taking Microfinance Institutions

KWFT - Kenya Women Finance Trust

MENA - Middle East and North Africa

MFIs - Microfinance Institutions

MPI - Malmquist Productivity Index

NGOs - Nongovernmental Organizations

NPL - Nonperforming Loans

RIA - Regulatory Impact Assessment

ROA - Return on Assets

ROE - Return on Equity

SACCOs - Savings and Credit Cooperative Organization

SASRA - Sacco Societies Regulatory Authority

SMEP - Small and Medium Enterprise Program

TRWA - Total Risk Weighted Assets

ABSTRACT

Prudential regulations are instituted to prevent too much taking of risks by financial organizations and hence avert possible financial crises. The arguments that favor the prudential regulations on banks extend to MFIs, especially since depositors of an MFI are in a disadvantaged spot in comparison to clients at traditional banks. Most microfinance depositors possess only a small amount of money and a lack of success by MFIs would put them off from partaking in the financial system for an indefinite period. The study sought to determine the effect of prudential regulations on financial performance of microfinance banks in Kenya. The study employed a descriptive research design and the population of the study was made of the thirteen microfinance banks in Kenya as at 31st December 2017. The researcher's data was secondary in nature and covered a 5 years' time period covering 2013 to 2017. Analysis of the secondary data gathered was done by use of inferential and descriptive statistics. Inferential statistics entailed regression and correlation and was employed in determining the connection between the variables that are independent and aid in drawing conclusions. The results established that there was a positive and statistically significant relationship between capital adequacy and financial performance and that the relationship between liquidity and financial performance was positive and statistically insignificant while the relationship between loan loss provisions and financial performance of microfinance banks was negative and statistically significant. The results also established that there is a negative and insignificant relationship between asset quality and financial performance of microfinance banks and that firm size has a negative and statistically insignificant effect on financial performance while outreach had a positive and significant relationship with the financial performance of microfinance banks in Kenya. The study did not factor in macro-economic factors that may affect financial performance of MFI and these may be helpful in similar study in future that also analysis a longer period of time.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

The microfinance industry across the world had witnessed rapid growth and increasing profitability which has sparked calls for increased regulation (Yu, Damji, Vora & Anand, 2014). According to Nyanzu and Peprah (2016), in order to grow and serve more clients the use of regulated MFIs is essential as they have the ability to use private, unsubsidized funding sources to come up with capital. The arguments that favor the prudential regulations on banks extend to MFIs, especially since depositors of an MFI are in a disadvantaged spot in comparison to clients at traditional banks. Most microfinance depositors possess only a small amount of money and a lack of success by MFIs would put them off from partaking in the financial system for an indefinite period (Yu, Damji, Vora & Anand, 2014). The regulation of MFIs serves as a means to build the confidence of commercial banks in these institutions, which provides MFIs with a large portion of their funding (Cull, Demirguc-Kunt & Morduch, 2009).

The capital buffer theory of capital adequacy proposes that banks with high capital buffers try to maintain it while those with low buffers attempt to rebuild a suitable capital buffer by coming up with capital (Belém & Gartner, 2016). On the other hand, the shiftability theory of liquidity holds that by holding instruments of credit that have a ready secondary market which therefore acts as a type of liquidity reserve a bank can shield itself from huge withdrawals of deposit (Taiwo et al., 2017). The agency theory supports that bank regulations can be used to lower costs incurred by the agency and to mitigate the agency's problems between the organization's management and the

shareholders (Donnellan & Rutledge, 2016). The theory of portfolio regulation opines that so as to preserve the soundness and safety of the system to a point where they can meet their liabilities with ease its important to regulate the banks (Ikpefan, 2013).

The concept of micro-finance in Kenya is one the most developed in Africa, sub-Saharan region (Murigi & Thuo, 2018). Over the past 20 years, the Kenyan microfinance industry has gone through key transformations such as its growth from church based NGOs and a few donor dominations to a vibrant industry that continues to be driven by commercial sustainability (Muganga, 2010). Kenyan microfinance growth is as a result of a number of interrelated restraints on the finance and banking industry development. The constraints form the structure and composition of the finance and banking sector of Kenya. They include lack of proper governance and regulation this needs improvements that are of quality in finance and banking, the general conditions of the macro economy and practices by profit focused conservative commercial banking institutions (Alastair, 2015).

1.1.1 Prudential Regulations

Prudential regulation is defined as the set of legal rules or general principles that pursue as their objective, and is essential for efficient and stable performance of financial markets and institutions (Wood & Clement, 2015). It also means a set of legal rules or general principles whose aims are to ensure performance of markets and financial institutions are efficient and stable (Ali, 2015). Prudential regulations ensure the systems soundness and safety through placing constraints and bounds on financial intermediaries actions(Wood & Clement, 2015). When the whole financial system plus small deposits in

individual organizations are protected, regulation is said to be prudential (Cull, Demirguc-Kunt & Morduch, 2009).

Prudential regulation aims to safeguard the banks stability by introducing penalties that discourage organizations from taking too many risks (Yu, Damji, Vora & Anand, 2014). Prudential regulations entail setting up a framework of incentives and norms that are appropriate. Hence, financial institutions must operate by avoiding too many risks that could impact their performance. It aims to safeguard the financial health, soundness and stability of the system (Deng, Casu & Ferrari, 2014). Its goals are the ones taken as validations for financial system regulation, that is, safeguarding the small depositors and preserving the financial systems soundness and stability (Muganga, 2010). Depositors benefit from having safer depository institutions whereas economies profit through prudential regulations that are sound by having financial systems that are deeper and robust (Abrams, Collins & Porteous, 2010).

Prudential regulations on MFIs include requirements of minimum capital requirements and liquidity and loan-loss provisioning, (Yu, Damji, Vora & Anand, 2014). Capital adequacy requirements as calculated by the ratio of risk-weighted assets to equity establishes a MFIs maximum leverage level reachable on its businesses and thus restricts the risk amount an MFI can have in its portfolio (Lotto, 2018). Liquidity as measured using the liquidity ratio is a bank's ability to perform its obligations, mostly of depositors. Need for a liquidity minimum level is essential since it makes sure institutions have the ability to honor the withdrawals and obligations that are maturing, and to make sure that enough funds are accessible to create loans (Tanda, 2015). Loan-loss provisioning as measured using the loan loss provision ratio refers to the deductions made from the net

interest income of banks to provide for anticipated bad or non-performing loans (Tarullo, 2014).

1.1.2 Financial Performance

Financial performance is defined as the measure of the financial health of the organizations and shows the performance of the executive leadership of the company (Matar & Eneizan, 2018). Also means the level and rate of accomplishing financial objectivities. It includes the process of calculating the firm's results in operations and policies in terms of money (Abubakar, Sulaiman & Haruna, 2018). Financial performance also refers to measurement of appreciations, profits and earnings of institutions in value as evidenced by the entity's rise in share price. It principally shows results and outcomes of the business division that reflect the sectors overall financial health over a particular time period. It shows the entity's use of its resources to ensure the shareholders profitability and wealth is maximized (Naz, Ijaz & Naqvi, 2016).

Financial performance provides information that is fully complete to stakeholders and shareholders to encourage them in decision-making. Financial performance can be employed to compare industries in aggregation or assess alike companies in same industry (Ijaz, Naz & Naqvi, 2016). Good financial performance is associated with increase in profitability and growth. In banking sectors and other financial institutions, there are two important objectives; profit maximization and wealth maximization. In profit maximization, management uses all means available to them, which can lead to increase in firms profitability, while in wealth maximization management considers only decision which will increase the value of the shareholders (Foyeke, Iyoha & Ojeka,

2015). The higher the company's financial performance the more effective and efficient the company in using the resources and later contributes at the macro level in countries economy (Matar & Eneizan, 2018).

A firm's financial performance can be evaluated in regards to dividend growth, capital employed, asset base, sales turnover, profitability along with other measures (Matar & Eneizan, 2018). Financial performance measures can be divided into two major types: one, measures based on accounting like ROA, ROE or Sales Return and measures based on the market like the Tobin's Q ratio (Naz, Ijaz & Naqvi, 2016). This study will use the accounting based measure to determine financial performance. ROE shows the profit shareholders gain from the firm after all taxes and expenses. It calculates earnings of the firm following tax for every dollar put into the business. ROA shows the profit the firm gets on the assets after all taxes and expenses. It calculates earnings following tax for every dollar put in the firm's assets (Abubakar, Sulaiman & Haruna, 2018).

1.1.3 Prudential Regulations and Financial Performance

The prudential supervisory framework helps the financial system by acting as an early warning. Hence, the essential thing in the supervisory part is having accurate and effective supervisory indicators (Lotto, 2018). Prudential regulations are associated with financial behavior of banks and efforts to revive ailing and collapsing banks have always focused on tightening prudential regulations in an effort to curb financial crises in the banking division and promote financial stability in the whole system (Musabi & Mutua, 2018). The prudential regulatory costs however raise the firms initial set up costs, hence

leads to different competitive advantages for bigger banks, showing economies of scale, over lesser banks like MFIs (Yu et al., 2014).

The buffer theory of capital regulation proposes that regulations are developed to target formation of enough capital buffers. Regulations are created to lower the procyclical nature of loaning by encouraging the formation of counter cyclical buffer (Allen et al., 2016). The capital adequacy buffer theory also supports that banks need extra capital if deposits are not mobilized in full from the community as capital is more dependable, reliable and is employable in planning for the long term (Belém & Gartner, 2016). The shiftability theory of liquidity supports that capital from commercial banks takes in risk and inflates the risk bearing capacity of a bank. The absorption of risk proposition calculates that bigger ratios of capital are positively linked to levels of liquidity and improves the bank's ability to generate liquidity (Osuka & Osadume, 2013).

A study by Demirguc-Kunt, Morduch and Cull (2009) examined the institutions profitability implications and their outreach to women and small-scale borrowers and found supervision to be associated negatively with profitability and that it was linked with average loan sizes that were considerably larger and lower lending to women. Additionally, a research by Zhou (2010) came to a conclusion that, the macro-prudential framework is important in establishing regulations in banking that are aimed to achieve stability in the whole financial system through examining the reasons that cause failure in regards of maintaining a stable financial system despite of the micro-prudential regulations. This is done by examining micro-prudential regulation effects on the systemic risk in a cross-sectional aspect.

1.1.4 Microfinance Banks in Kenya

A microfinance bank business means the accepting from members of the public of money on current account and payment on and acceptance of cheques and the accepting from members of the public of money on deposit repayable on demand or at the expiry of a set period or following notice (CBK, 2015). The microfinance industry in Kenya consists of nearly 250 MFIs, 56 of these being registered with the Association of MFIs, an umbrella body (CBK, 2017). In Kenya as at December 2017 there were 13 deposits taking microfinance institutions. KWFT, Small and Medium Enterprise Programme, Rafiki Microfinance Bank, Century MFI, Sumac MFI bank limited, Uwezo MFI, Faulu Kenya amongst others are a few key players in the sector (King'ori, Kioko & Shikumo, 2017).

In Kenya, microfinance banks are regulated by the Microfinance Act of 2006which came into effect on 2nd May 2008, paved way for the licensing of Microfinance banks, which were previously referred to as Deposit Taking Microfinance Institutions (DTMs). The Act authorizes the CBK to supervise, regulate, and license the activities of Microfinance banks in Kenya (Murigi & Thuo, 2012). The management of regulations of Non-deposit taking MFIs was given to the Finance Minister under section 3(2) of the same Act though specific prudential regulations, CBK registered, established for the MFIs as DTMs organizations (Muganga, 2010).

The regulatory framework requires Microfinance banks to adhere to stringent capital, statutory, operational and financial reporting requirements. In regard to capital, Microfinance banks are required to maintain Core Capital to Total Risk Weighted Assets (TRWA) and Total Capital to TRWA ratios of 10% and 12% respectively. On statutory

requirements, the institutions are required to maintain a liquidity ratio of 20% at all times (Ali, 2015). Regulations put in place by the CBK aim to reduce the overall risk of microfinance banks include limits on loan size, restrictions on loans to insiders and restrictions on credit to certain sectors (Muganga, 2010).

1.2 Research Problem

Prudential regulations are instituted to prevent too much taking of risks by financial organizations and hence avert possible financial crises (Zhou, 2010). The buffer theory of capital adequacy supports that to lower the possibility of going below the legal capital requirements banks may opt to have in their control a buffer of more than enough capital (Ikpefan, 2013). The agency theory also supports that decisions on risk by an agent may be as a result of the oversight and regulations levels (Donnellan & Rutledge, 2016). However, characteristics of economies of scale are exhibited by regulatory costs and hence are in general expensive for smaller institutions of microfinance as compared to bigger banks (Yu et al., 2014). In the microfinance sector, regulation enables institutions of microfinance to grow into banks more fully, especially for those whose aim is deposit taking. However, suitable tradeoffs exist since following regulations and supervisions can be expensive (Cull, Demirguc-Kunt & Morduch, 2009).

In Kenya, the concept of microfinance has exclusively been put to work to ensure parties that were not included in the formal financial system earlier achieve financial inclusion (Ali, 2015). The microfinance division of Kenya however is not strong in comparison to its client's size and statistics indicate commercial banks are not included, the Kenyan microfinance division is not as strong and is relatively stagnant (Murigi & Thuo, 2012).

Majority of Microfinance banks in Kenya have made losses since the first institution was licensed by the Central Bank in 2009. For instance, in 2010, one out of the two licensed Microfinance banks made losses. In 2011, three out of the six licensed Microfinance banks made losses (King'ori, Kioko & Shikumo, 2017). In 2012, one out of the six licensed Microfinance banks made losses while in 2013, four out of the nine licensed institutions made losses. Between 2010 and 2016, out of the 13 institutions licensed, only two did not make any losses (CBK, 2017).

A number of researches have been conducted so as to examine the effect of regulations on performance of financial institutions. Lotto (2018) in Tanzania studied the impact of regulations of capital needs on bank operating efficiency and revealed that capital adequacy reinforce financial stability through provision of a bigger capital cushion though the study focused on commercial banks. Tanda (2015) examined the impacts of regulation of banks on the relation between risk and capital and found that regulation seems to influence decisions on risk and capital with the study focusing on commercial banks. Mahshid and Jouzdani(2011)studied the impact of regulation on soundness banking and revealed a significant and positive relation between bank soundness and regulation banking though the context of the study was commercial banks.

A study in Kenya by Ayodeji (2016) studied the impacts of regulations on commercial banks financial performance of and revealed an insignificant connection between regulations and commercial banks financial performance but the research focused on commercial banks. Musabi and Mutua (2018) investigated the influence of prudential regulations on Kenyan banks financial performance and found that prudential regulations positively influence the financial performance with the context of the study being

commercial banks. The reviewed studies indicate that most studies on the relationship between prudential regulations and performance focus more on commercial banks and not microfinance banks. This creates an empirical literature gap which this study intends to address by examining, what is the impact of prudential regulations on Kenyan banks microfinance financial performance?

1.3 Objective of the Study

To determine the effect of prudential regulations on financial performance of microfinance banks in Kenya

1.4 Value of the Study

The research will be of value to the management of any microfinance bank that may use the finding and recommendations of the study to assess whether prudential regulations influence the performance of their institutions. In addition, the management of microfinance institutions can use the findings to come up with policies on prudential guidelines and to ensure that they maximize the performance of their entities. The findings will also be of significance to policymaking entities like the CBK and the Kenyan government to develop strategic policy on prudential regulations and to assess whether the existing prudential regulations enhance the stability of microfinance banks. This study will enable researchers to identify areas for further research and will greatly benefit scholars and student in terms of knowledge on prudential regulations on financial performance of micro fiancé banks. Finally this study will add on to the existing theoretical and empirical literature on prudential regulations, financial performance and microfinance institutions.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This area provides the theoretical literature, the various determinants of microfinance banks financial performance, empirical studies, the conceptual framework and a summary of the reviewed literature.

2.2 Theoretical Review

The theoretical foundation of the study was made up of the buffer theory of capital adequacy, the shift ability theory of liquidity and the agency theory.

2.2.1The Buffer Theory of Capital Adequacy

This theory was created by Rob and Calem (1996) and postulates that so as to evade the regulatory cost due to breach of requirements of capital a bank that's heading towards the regulatory minimum capital ratio may have motivation to reduce risk and increase capital. The theory is founded on capital adequacy ratio volatility and also dependability and reliability on capital for planning in the long term (Belém & Gartner, 2016). According to the theory, capital is more dependable, reliable, and can be applied in planning for the long term hence the bank's ability to assemble sufficient deposits obviates the erosion of the capital base (Yu et al., 2014).

The buffer theory suggests that banks with capital that's higher than the minimum ratios of regulation should at all time increase the capital ratio and cut risk. This avoids a regulator penalty known as compliance penalty (Lotto, 2018). The theory suggests that banks may choose to hold a 'buffer' of excess capital to lower the chances of going

below the legal capital needed, more so if their capital adequacy ratio is very unstable. The capital buffer is the surplus capital held by a bank over the minimum capital needed (Belém & Gartner, 2016).

According to the theory, in the expectation that superior anticipated returns will aid them boost their capital inadequately capitalized banks May also feel the need to take more risk. Hence, the affiliation between profitability and capital adequacy can also be negative or positive in regards to the institutions risk taking behavior (Ikpefan, 2013). The theory also posits that to lower the probability of their capital going under the statutory requirements a banks can decide to have a capital buffer, primarily if the ratio is not steady at all. In times of financial crises, small capital banks may escalate systemic risk and therefore get in the way of financial stability. On the other hand, if banks are above the regulatory minimum capital and have buffer capital, capital requirements will then have a smaller effect on the behavior of the bank (Lotto, 2018). In relation to this research, the buffer theory expounds that capital adequacy as an important tool employed by banks to safeguard profitability and solvency is one of the riskiest businesses in the financial market

2.2.2 The Shiftability Theory of Liquidity

The shiftability theory of bank liquidity was created by Moulton (1918). This theory is founded on the assumption that assets in banks control are either to be sold to other investors or lenders or sold to central bank. A commercial bank would have the ability to cover the liquidity requirements if there are assets that can be sold (Taiwo et al., 2017). The theory posits that amongst the liquidity reserves are prime bankers acceptances,

commercial paper and treasury bills. These instruments have market due to their short-terms of capital certainty and maturity (Ikpefan, 2013). The shiftability theory emphasizes a bank's assets transferability, shiftability or marketability as a better guide or criterion for investing funds by banks (Osuka & Osadume, 2013).

This theory postulates that not only should assets be tied on self-liquidating bills, but should also be held in other shiftable open-market assets, like government securities. The thrust of the shiftability theory proposes banks liquidity depends on their ability to sell its assets at a predictable price to someone else. Therefore, for instance, it would be quite okay for a bank to grasp short-term open market investments in its portfolio of assets (Taiwo et al., 2017). The theory recognizes that marketability, shiftability or transferability of assets of a bank is a foundation for ensuring liquidity. In addition, this theory holds that security that's highly marketable and in banks possession is an excellent liquidity source (Belém& Gartner, 2016).

The shiftability theory supports that bank liquidity can be ensured by holding short term asset which can be converted in cash. According to the theory, in a situation where abank is cash strapped, it can sell its assets to a bank that's more liquid. Hence, the theory argues that the bank system runs better with smaller amount of reserves or long-term asset investments (Namazi, 2013). Under the shiftability theory, the banking system attempts to prevent liquidity crisis by allowing banks to always sell at prices that are good for them. That is, banks hold assets that are marketable and their convertibility will not be at a discount (Osuka & Osadume, 2013). With relation to this study, the theory supports that commercial banks lowers liquidity vulnerability to risk by having liquid assets that are in demand this affects financial performance.

2.2.3 Agency Theory

The agency theory also known as the principal agent theory was established by Meckling and Jensen (1976) so as to tackle limitations facing relations between agents and principals (Laiho, 2011).The agency relationship is defined as a contract where one party (principal) connects to another party (agent) so that they can undertake some service on their behalf. The principal employs a decision-making authority for the agents use. These agency problems come due to the impracticality of completely toning for all probable actions of an agent whose decisions impact his personal welfare and also the principals (Donnellan& Rutledge, 2016). The problems are also as a result of conflicts of interest among two parties to a contract, and hence, have a nature to be just about limitless creating agency costs that can be taken as shareholders value loss, as a result of corporate managers and shareholders interest divergences (Palia & Porter, 2007).

The agency theory posits that agents at times don't make decisions in the principal's best interest, as they may succumb to self-interest, opportunistic behavior. With such setbacks, agency theory reinforces the need for a separation of ownership and control in order to ensure management goals and the owners are in alignment (Palia & Porter, 2007). Therefore, bank regulations exist to manage asymmetric information which may be exposing the shareholders to certain risk not aware of but managers have all the information. Banks work with money, which is very tempting to fraud and other illegal practices such as financing terrorism groups so, separation of ownership and control results to different behaviors in the management team such as agency problem where management leaves the interest of shareholders and start working towards achieving their own interest (Namazi, 2013). Thus, in this study the agency theory supports that bank

regulation can be used to tame the behavior of manager and reduce agency problems associated with the separation of ownership.

2.3 Determinants of Financial Performance of Microfinance Banks

Financial performance of micro finance banks are affected by several factors. In this study we shall focus on prudential regulations, asset quality, micro finance size and outreach.

2.3.1 Prudential Regulations

The financial regulation goals are to help markets and institutions performance and workings of competitive market forces to be efficient (Wood & Clement, 2015). Prudential regulation is designed to protect the whole financial system, and also the small deposits safety in individual organizations. They also aim to lower failure risk by the depository organizations (Porteous, Collins & Abrams, 2010). Tanda (2015) explains that prudential regulations are enforced by the authorities so as to limit risk in banks due to the systems stability, to lower the possibility of default during tough times and ensure the banks are sound in ordinary times.

Prudential regulations are aimed at making sure financial soundness is available for financial intermediaries like microfinance institutions, banks among others. It also prevents instability in the financial system (Ali, 2015). Prudential regulation focuses on the safety and soundness of financial institutions (Wood & Clement, 2015). Porteous, Collins and Abrams (2010) posits that prudential regulations launch and put into effect minimum standards for carrying out deposit-taking trade in areas like the minimum capital requirements: a depository organization should keep up first loss cover to cover

depositors through putting enough capital and reserve in absolute or relative terms. Prudential regulations are measured through capital adequacy requirements, liquidity requirements and loss loan provisions.

2.3.2 Asset Quality

Asset quality is a bank management aspect and involves firm evaluation of an asset so as to ensure the size and level of credit risk linked to its operation is measured (Wood & Clement, 2015). On a bank's balance sheet it's to the left-hand side and focuses on the loan's quality which gives the bank its earnings (Abata, 2014). Lotto (2018) indicates that asset quality is measured by capacity to handle credit risk for a financial organization or bank. It shows the assets productivity and composition. Hence, it directly impacts the bank's profitability. Loan is the major commercial banks asset which creates their income (Lotto, 2018). The loans portfolio quality determines the bank's profitability. It bears directly on profitability of the bank. The decline in quality of asset of a bank affects its fiscal performance and operating and also the general financial system soundness where it's an entity (Abubakar, Sulaiman & Haruna, 2018).

The asset quality in particular, investments and loan assets, would largely rely on the banks system of risk management. The ratio of Nonperforming assets (loans) to total loans and advance (NPL) as an indicator of quality for the bank's assets (Abata, 2014). Credit risk is the prospective disparity in the intermediary's net income and in its equity value arising from the failure to or payment delays of the obligation. Kadioglu, Telceken and Ocal (2017) indicates that credit risk arises every time a financial intermediary gets an asset that earns, it presupposes the risk of default by the borrower, i.e., failure to pay

back the interest and principal regards to the contract. Asset quality is usually measured using the nonperforming loans ratio (NPLR).

2.3.3 Microfinance Size

Firm size describes how large or small of a company measured by its total assets or by its total capitalization (Taşkın, 2011). The business enterprise size influences different areas in the business, like the loyalty of customer, goodwill, patronage plus its responsiveness level to the stakeholders (Matar & Eneizan, 2018). Foyeke, Iyoha and Ojeka (2015) explain that size determines the shareholder's base in addition to the capital base. This update the stewardship levels anticipated from the business managers and the director's board.

The firm's size has the capability to affect its performance in financial terms with relation to the capital structure mix chosen (Abata, 2014). Bigger firms have a better position in capital markets to generate funds from external sources, as they do not mostly rely on internal financing sources (Abdulai & Tewari, 2017). According to Lotto (2018), larger banks enjoy diversification benefits associated with size since they can obtain financing for banks at negotiated costs that are lower and also are more resilient during disaster times as compared firms that are smaller. Therefore, they should perform better as compared to firms that are smaller and hence create more profit (Lotto, 2018). The size of an MFI is notably positively associated to its fiscal performance. Size is integrated to capture the diseconomies or economies of scale (Abubakar, Sulaiman & Haruna, 2018). MFI size is calculated by assets value.

2.3.4 Outreach

Microfinance outreach encompasses a wide concept range including MFIs clients and the number of borrowers. Outreach is the effort by MFls to provide microfinance services to the underserved people (Nyanzu & Peprah, 2016). The core goal of microfinance is to make sure there's a huge poverty decrease through sustainable organizations (Abata, 2014). Hence, MFIs that have success should achieve both the social goal of serving a lot more people who are poor and have the ability to maintain their business functions over a longer financial time period (Abdulai & Tewari, 2017). Outreach can be measured in breadth terms. This is denoted by the number of served clients, quantity of services which is denoted by total outstanding portfolio and total savings on deposit and depth which is denoted by the socio-economic client levels that MFls can get to (Taşkın, 2011).

2.4 Empirical Review

The empirical review of literature presents a discussion of studies in line with study objectives. In this study, we review international studies and local studies to facilitate in the identification of research gap that this study is at bridging.

2.4.1 International studies

Bougatef and Mgadmi (2016) assessed the effects of regulation pressures on behaviors of taking risk and capital by use of 24 banks located in the MENA area over the time from2004 to 2012. The results of the panel data methodology established that the failure of prudential regulations to lower incentives of taking risks by banks and capital increase. The study also revealed profitability of a bank to be positively linked with capitalization and a strong negative affiliation between risk and the size of bank.

Nyanzu and Peprah (2016) carried out a multilevel analysis on the relationship between regulation, outreach and sustainability of MFIs in Sub Saharan Africa. By use of panel data that was not balanced covering2002 to 2012 for thirty nations in Sub-Saharan Africa unbalanced panel, and use of multilevel estimation method, the research revealed how regulations aid in improving the breadth of outreach and sustainability however it doesn't improve outreach depth. Additionally, effects as a result of the country have major roles in activities of the MFIs. It is important for regulatory authorities to come up with ways to make MFIs financial standing stronger, also to ensure a stable environment that will increase microfinance social objectives achievements.

Haiyambo (2016) carried out an evaluation of the regulation of Namibian MFIs through the incorporation of the ROI methodology. The study performed a RIA analysis and discovered that regulation in general had an impact that's positive on the regulated MFIs activities, as observed in improvements seen in a lot of the indicators of its performance (portfolio quality, profitability, finance access and liquidity, given considerable increases in the borrowers and savers numbers) through the post-licensing time. The study came to a conclusion that though it's essential, regulation by itself might not be enough to drawing players with relevance to the microfinance division who will help develop it, with consideration to the Namibian economy structural weaknesses.

Kale, Eken and Selimler, (2015) studied the impacts of regulations, changes in macroeconomics, and political events on Turkish banks efficiency from 1997-2013. The study measured the changes in productivity in the whole division by use of the DEA-based Malmquist Productivity Index (DEA-MPI). The study revealed that macroeconomic environments that are new, mostly recent regulations had effects that

were positive on productivity and concluded that tighter regulation, restrictions, monitoring, serious supervision, extra capital, and new reforms impact positively on bank efficiency.

Deng, Ferrari and Casu (2014) examined the effects of re-regulation and deregulation on efficiency of banks in Asia by use of commercial banks from eight key economies in the region from 2001 to 2010. The research used an approach known as stochastic frontier then it went on to estimation of a deterministic meta-frontier to present 'true' bank cost efficiency measures estimates. The study revealed a positive and important effect on cost efficiency and progress in technology due to bank interest rates liberalization and the increase in presence of foreign banks have had a positive and considerable effect on technological progress and efficiency of cost. The study also found that prudential regulation might negatively influence the cost performance of a bank and recommended a framework of optimal regulation, policies whose objectives are to create financial stability without prevention of financial intermediation should be employed by policy makers.

Visković and Pečarić (2013) examined the impacts of prudential policy measures on financial stability in post-transition nations. The study employed the panel data analysis approach and sampled southeast and central European nations for the time from 1998 to 2010. The study established that prudential measures in general lowers the non-performing loans levels, profitability levels increase, liquidity of banking system is partially affected, but credit to deposit ratio does not improve. The study concluded that prudential measures have a positive impact on the banking system stability shown by

indicators of financial stability and prudential measures embody vital instruments of a central bank

Ganioglu (2007) studied how prudential regulation and bank supervision influence banking entities during crises. The findings established that regulation of capital was a key factor in crisis prevention, providing vital support to the propositions towards ensuring sure higher capital requirements. Nevertheless, the study revealed that more tight regulations of capital don't appear to lessen the moral hazard problem effects which are negative and are as a result of the generous system of deposit insurance. In addition, the study found that inflation had a major role in crisis generation and its role lowers to a huge level, when factors like supervisory and regulatory are considered.

2.4.1 Local Studies

Mohamed, Mutegi and Muriuki (2017) investigated the influence of CBK prudential guidelines on commercial banks performance. The study used descriptive research design and collected data using questionnaires. The study concluded that performance of commercial banks was highly affects by corporate governance, capital requirement, credit risk management, liquidity management. The research recommended that banks endeavor to be transparent to avoid penalties from the CBK.

Ndolo (2017) examined the impact of CBK regulations on the financial performance of listed commercial banks at the NSE. The study collected secondary data from the 11 listed banks in Kenya from 2012-2016. Using the regression model to analyze data, the study revealed that liquidity management regulation had insignificant positive affiliations with the performance of the listed Kenyan commercial banks while credit risk

management regulation had an insignificant negative relationship. The study also found that capital adequacy regulations had significant negative relationship with banks performance for studied period.

Buluma, Kung'u and Mungai (2017) examined the effect of regulations by SASRA on fiscal performance of Sacco's taking deposit in Kenya's Nyandarua County. By use of a census design, the research collected data from five SASRA licensed SACCOs and collected data using questionnaires. The findings revealed that SACCOs in Nyandarua County had fully complied with the SASRA regulations. The correlation results revealed that SASRA regulations improved financial performance of the SACCOs as calculated by ROA. The study recommended that SACCO managers should consider other factors alongside SASRA regulations in formulating policies governing the running of the SACCO's in Kenya.

Kahuthu (2016) examined the effect on Kenyan fiscal performance of credit co-operative societies and deposit taking savings as a result of prudential regulation. The research used comparative design and a linear regression model to ascertain the impact of prudential requirements on the SACCOs financial performance. The study revealed that core capital, credit management, membership growth and liquidity were not strong predictors of financial performance but after the prudential regulations they all became strong predictors. The study recommended that SACCOs follow prudential regulations so that they enjoy bigger business volumes and benefits as a result.

Lugaliki (2012) studied the effects of prudential regulations on the stability of Kenyan commercial banks. The research carried out a census study of the 44 Kenyan commercial banks and obtained secondary data since 1995 to 1998 (before prudential regulations were implemented) and also from 1999 to 2002 (following their implementation). The results revealed lower standard deviations for after implementation period as compared to time before implementation. The research concluded stability of Kenyan commercial banks improved after the1998implementations of prudential regulations.

2.5 Conceptual Framework

The conceptual framework therefore is a tentative explanation of a phenomena that a researcher is investigating relating to a conception or model of the study and items usually covered by questions such as what is going on with these things and why. The conceptual model for this study will comprise financial performance which will be the dependent variables while prudential regulations will be the independent variable. The research will also incorporate asset quality, size and outreach as the control variables as shown by figure 2.1

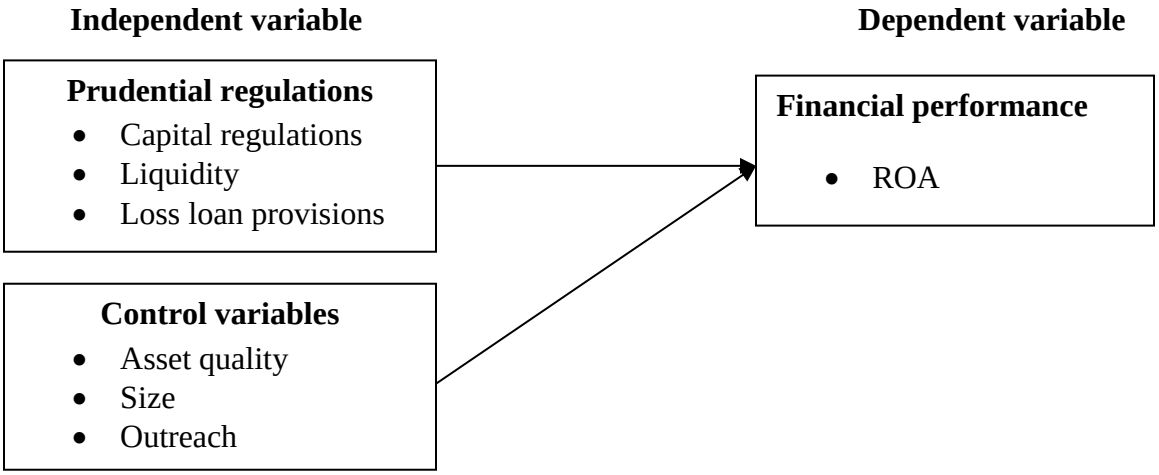

Figure 2.1: Conceptual Framework

Source: Author (2018)

2.6 Summary of the Literature Review

The study under empirical literature reviewed a number of studies among the Bougatef and Mgadmi (2016) who examined pressures on banks behaviors in taking risks and capital due to regulation with the study focusing on the commercial banks. Nyanzu and Peprah (2016) examined regulation versus outreach and sustainability of MFIs and not financial performance. Kale, Eken and Selimler, (2015) examined regulations and efficiency of banks with the focus being commercial banks while Deng, Casu and Ferrari (2014) examined deregulation and re-regulation on bank efficiency still focusing on commercial banks. Pečarić and Visković (2013) examined prudential policy and financial stability whereas Ganioglu (2007) examined prudential regulation and banking crises with both studies focusing on commercial banks.

In Kenya, Mohamed, Mutegi and Muriuki (2017) studied Central Bank of Kenya prudential guidelines and banks performance while Ndolo (2017) examined CBK regulations and performance of listed banks with both studies focusing on commercial

banks. Buluma, Kung'u and Mungai (2017) examined SASRA regulations and financial performance of Sacco's as well as Kahuthu (2016) who examined prudential regulation and financial performance of SACCOs but the focus of the studies was SACCOs. Finally,Lugaliki (2012) examined prudential regulations and stability of commercial banks with focus still being commercial banks. Based on the reviewed studies, majority of the existing studies on prudential regulations focus more on the banking sector but not on the microfinance banks which are also highly regulated by respective monetary authorities in their various countries.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section describes the design to be employed in the study, the research population, method of collecting data, test of assumptions under diagnostic test and the techniques of analyzing the collected data.

3.2 Research Design

A research design comprises of the strategy chosen in general to bring together the various study components in a way that's logical and coherent, thus, it ensures effective address of the problem being researched (Upagade & Shende, 2012). A research design displays the importance of essential research project parts and explains the involvement of each part in dealing with the key study questions. Additionally, a research design prescribes the method through which the research is to be designed, i.e. the method employed to undertake the study (Cooper & Schindler, 2009). This study employed a descriptive research design. Descriptive research design is basically an outline that guides the researcher when collecting, measuring and analyzing data and it the intent of research design is to guide the whole process of research. Furthermore, a descriptive research design endeavors in establishing the relationship that exist among variables and details the key features of the population.

3.3 Population of the Study

The population is explained as a collection of conditions, elements or causes, whether objects, individual or occurrences that conform to specific criteria and which we aim to

generalize research results (Saunders et al., 2009). The population of this study was made of the thirteen microfinance banks in Kenya as at 31st December 2017 as indicated in the Central Bank of Kenya website. Since the population is small and well defined, the study undertook a census of the 13 microfinance banks in Kenya.

3.4 Data Collection

The researcher's data was secondary in nature. The research obtained secondary data on capital adequacy, liquidity, loan loss provisions and financial performance from the annual banking supervision reports by the CBK. Additionally, secondary data on the microfinance banks assets quality, size and the breadth of was retrieved from the microfinance banks published financial statements. The data covered a 5 years' time period covering 2013 to 2017.

3.5 Diagnostic Tests

A number of diagnostic tests among them multicolinearity test, normality test, heteroscedasticity test and autocorrelation test were undertaken to assess the suitability of the regression model which was used for the study. The multicolinearity is a problem that occurs when variables are highly correlated. To assess for multicolinearity, correlations between the study variables was calculated and the variance inflation factors (VIF) was calculated where a VIF of more than 10 was considered an indication for multicolinearity. In case a variable is multicolinear, it was dropped from the study. Heteroscedasticity is referred as the absence of homoscedasticity and heteroscedasticity was assessed using residual graphs an incase the study variables failed the homoscedasticity the study used robust standard errors. Normality on the other hand was

tested using kurtosis and skewness while autocorrelations was assessed using Durbin Watson statistics. Incase of any non-normal variable the variable was transformed using logarithmic transformation. The study also conducted a unit root test in order to establish whether the variables are stationary or not. The unit root test was conducted using the Augmented Dickey Fuller (ADF) unit root.

3.6 Data Analysis

Analysis of the secondary data gathered was done by use of inferential and descriptive statistics. Descriptive statistics involved using central tendency measures, which included the minimum and maximum values, standard deviation, and mean was to be employed to summarize the collected data into meaningful term. Inferential statistics entailed regression and correlation and was employed in determining the connection between the variables that are independent and aid in drawing conclusions. The analysis was undertaken using the SPSS version 24

3.6.1 Analytical Model

The regression model was adopted as the analytical model for the study. The model was formulated as follows

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e$$

Where

Y = Financial performance measured using the return on assets (ROA)

X_1 = Capital requirement measured using the capital adequacy ratio, which is the ratio of total risk weighted assets (TWRA) to total capital

X_2 = Liquidity requirement measured using the liquidity ratio, which is the ratio of liquid investments to total loans and advances

X_3 = Loss loan provisions measured using the ratio of loan loss provisions to total loans and advances

X_4 = Asset quality measured using the nonperforming loans ratio, which is the ratio of nonperforming loans to total loans

X_5 = Size of the microfinance measured using the natural log of assets

X_6 = Outreach measured using the natural log of total loans and advances

β_0= Constant

β_1 - β_6 = Regression coefficients

e = Error term

3.6.2 Test of Significance

To assess the statistical importance of the research model the F statistics was used while to assess the statistical significance of the regression coefficients the t test was employed. Both the F and the t statistic were assessed at 95% level of confidence. The study also used the coefficient of determination (R square) to establish the variation of the dependent to independent variables.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the findings of the analyzed secondary data. The chapter presents the results of the response rate, descriptive statistics, diagnostic tests, correlation analysis, regression analysis and interpretation of the findings.

4.2 Response Rate

The population of this study was made of the thirteen microfinance banks in Kenya as at 31st December 2017 as indicated in the Central Bank of Kenya website. Since the population is small and well defined, the study undertook a census of the 13 microfinance banks in Kenya. Complete data was however obtained from 9 microfinance banks, which had been in existence for the 5 year considered by the study. The 9 banks made up a response rate of 69.2% which was deemed sufficient to carry out the research

4.3 Descriptive Statistics

Descriptive statistics comprising of the mean, minimum, maximum, standard deviation, skewness and kurtosis were used to summarize the study data into meaningful form. Table 4.1 shows the descriptive statistics results

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
ROA	45	-.269	.039	-.02538	.068820	-.163	2.243
Capital adequacy	45	-.150	3.100	.47596	.502078	.564	1.885
Liquidity	45	.090	2.170	.38760	.329849	.981	1.659
Loan loss provisions	45	.011	.443	.06971	.072935	.300	1.077
Asset quality	45	.028	.627	.18498	.147725	1.471	1.948
Firm size	45	4.382	10.383	7.22280	1.946934	.419	-1.344
Outreach	45	3.584	10.007	6.70596	2.023997	.390	-1.296

Source: Research Findings

Table 4.1 indicates that the mean value of ROA was -0.02538 with the minimum and maximum values being -0.269 and 0.039 while mean value for capital adequacy was 0.47596 with minimum and maximum values of -0.150 and 3.100 respectively. This indicate that some microfinance banks have a negative capital adequacy ratio with other having capital adequacy of more than 100%. The mean value for liquidity was 0.38760 with minimum and maximum values of 0.090 and 2.170 while loan loss provision had an average value 0.06971 with minimum and maximum values of 0.011 and 0.443 respectively. The results further indicate that the average value for assets quality was 0.18498 with minimum and maximum values of 0.028 and 0.627 while average values for firm size and outreach were 7.22280 and 6.70596 respectively. The kurtosis and skewness values indicate that the data is normally since the values lie within the recommended values of -3 and +3 respectively.

4.4 Diagnostic Tests

The study carried out several diagnostics test including the normality test, multicolinearity tests, linearity test, homogeneity of variances test and test for stationarity.

4.4.1 Normality Test

The Kolmogorov-Smirnov and Shapiro-Wilk tests were used to assess for normality of the study variables. Table 4.2 shows the results

Table 4.2: Normality Test

	Kolmogorov-Smirnov[a]			**Shapiro-Wilk**		
	Statistic	**Df**	**Sig.**	**Statistic**	**df**	**Sig.**
ROA	.119	45	.200*	.965	45	.306
Capital adequacy	.127	45	.155	.961	45	.225
Liquidity	.127	45	.155	.961	45	.225
Loan loss provisions	.140	45	.074	.960	45	.212
Asset quality	.130	45	.128	.941	45	.053
Firm size	.145	45	.069	.945	45	.073
Outreach	.165	45	.054	.897	45	.081

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Source: Research Findings

Table 4.2 show that the variables are normally distributed as indicated by all the P values, which are more than 0.05 both under the Kolmogorov-Smirnov and Shapiro-Wilk tests. This means that the assumption of normality has not been violated in the study.

4.4.2 Multicolinearity Test

Table 4.3 shows the tests for multicolinearity results

Table 4.3: Multicolinearity Test

	Collinearity Statistics	
	Tolerance	**VIF**
Capital adequacy	.503	1.988
Liquidity	.648	1.544
Loan loss provisions	.498	2.008
Asset quality	.506	1.977
Firm size	.310	3.115
Outreach	.251	3.984

Source: Research Findings

The collinearity statistics results on table 4.3 indicate that all the VIF values are less than 10 hence and indication that there is no multicolinearity among the study variables. This indicates that the assumption of multicolinearity has not been violated in the study.

4.4.3 Linearity Test

Linearity as assessed using a normal p-p plot of regression

Figure 4.1 shows the test of linearity results

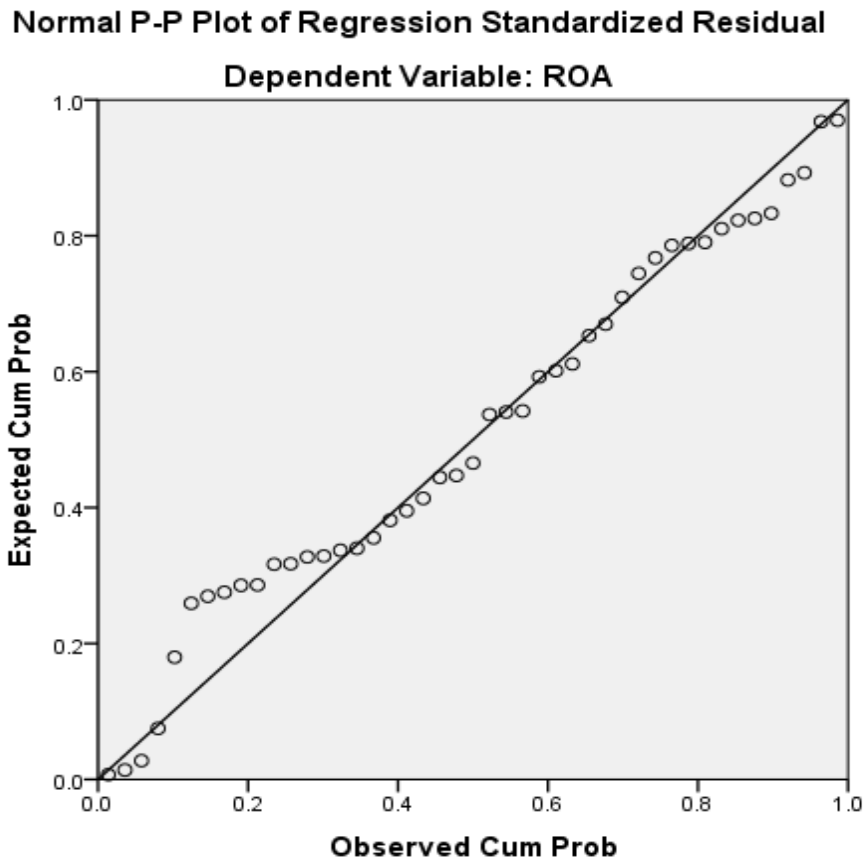

Figure 4.1: Linearity Test

Source: Research Findings

The linearity results on figure 4.1 shows that the assumption of linearity has not been violated as the data points have produced a line of best fit

4.4.4 Test of Homogeneity of Variances

To carry out this test a standardized residual graph was used. Figure 4.2 shows the homogeneity of variances results.

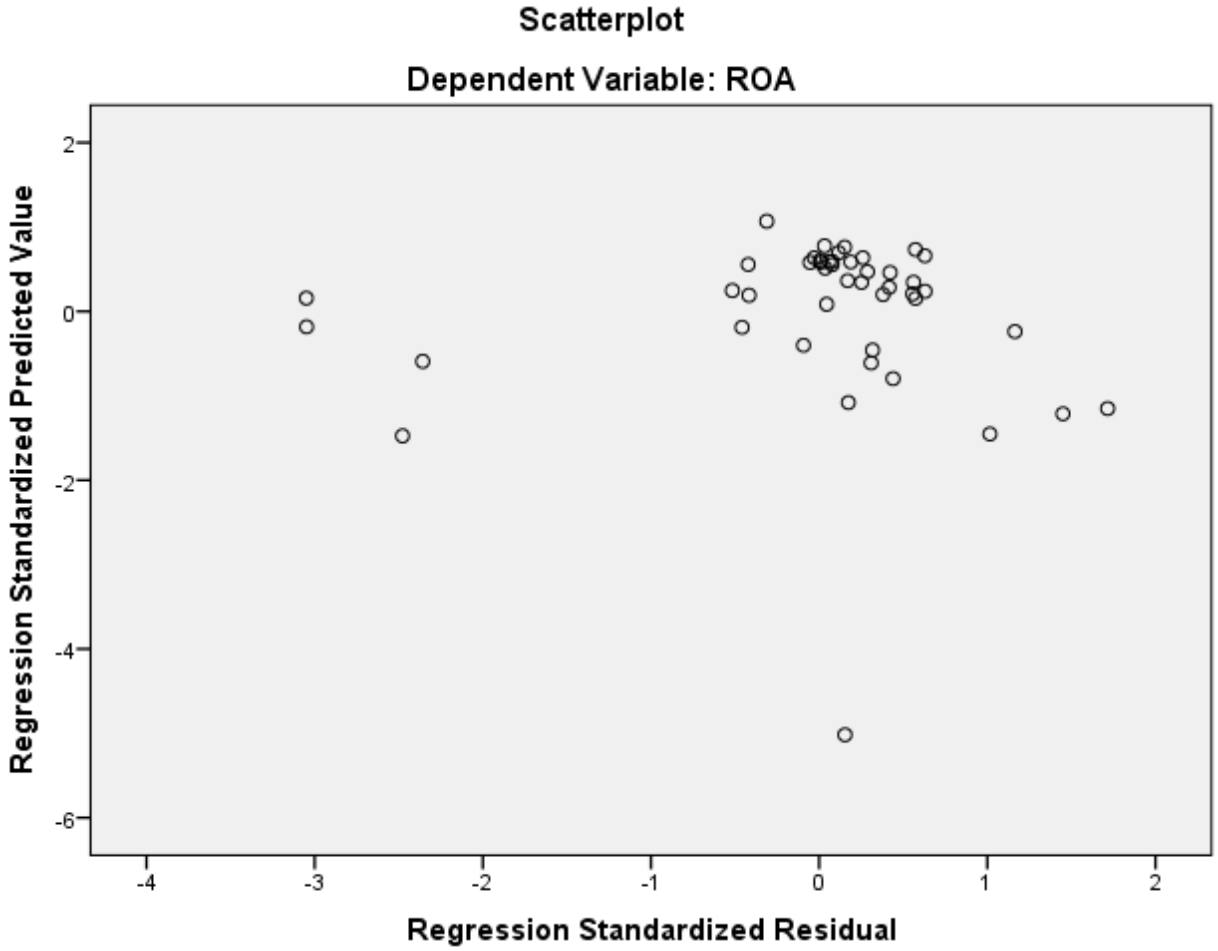

Figure 4.2: Standardized Residual Graph

Source: Research Findings

The standardized residual graph on figure 4.2 shows that the plotted data points converge at a specific point. This indicates that the assumption of homogeneity of variances has not been violated.

4.4.5 Test for Stationarity

The unit root test (stationarity test) was conducted using the Augmented Dickey Fuller (ADF) unit root. Table 4.3 shows the results

Table 4.4: Test for Stationarity

Variable		**Test statistic (t)**	**Asymptotic p-value**
ROA	Test with constant	-3.30251	0.01480
	With constant and trend	-3.32543	0.03211
Capital adequacy	Test with constant	-3.74559	0.00353
	With constant and trend	-3.7482	0.01928
Liquidity	Test with constant	-2.92097	0.04295
	With constant and trend	-2.95680	0.01446
Loan loss provision	Test with constant	-4.87522	0.000244
	With constant and trend	-4.86157	0.001559
Asset quality	Test with constant	-3.27539	0.01605
	With constant and trend	-5.70026	0.00000
Firm size	Test with constant	-7.47308	0.00000
	With constant and trend	-7.70178	0.00000
Outreach	Test with constant	-6.0011	0.00000
	With constant and trend	-6.07367	0.00000

Source: Research Findings

The Unit Root Test results on table 4.4 show that the study variables are stationary as indicated by asymptotic p-values, which are less than 0.05. This indicates that the assumption of stationarity has not been violated and the data is stationary.

4.5 Correlation Analysis

Correlation analysis was undertaken to determine the association among the research variables. Table 4.5 shows the results

Table 4.5: Correlation Analysis

	ROA	**Capital adequacy**	**Liquidity**	**Loan loss provisions**	**Asset quality**	**Firm size**	**Outreach**
ROA	1	.200					
Capital adequacy	.200	1					
Liquidity	.111	.455**	1				
Loan loss provisions	-.617**	-.109	-.040	1			
Asset quality	-.515**	-.084	.270	.589**	1		
Firm size	.343*	-.540**	-.298*	-.264	-.280	1	
Outreach	.395**	-.535**	-.309*	-.320*	-.323*	.992**	1

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

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

Source: Research Findings

The correlation results on table 4.5 shows that ROA had a weak and positive correlation with capital adequacy and also liquidity as indicated by the correlation coefficients of 0.200 and 0.111 respectively. The results also show that loan loss provisions and asset quality had a strong and negative correlation with ROA as indicated by the correlation coefficients of 0.617 and 0.515 respectively. The results further show that firm size and outreach had a weak and positive correlation with ROA as indicated by the correlation

coefficients of 0.343 and 0.395 respectively. The results further indicate all the correlation coefficients are less than 0.7 thus an indication that there is no multicolinearity among the research variables.

4.6 Regression Analysis

Regression analysis was carried out to establish the relationship between the independent variables and the study's dependent variable. The regression results were as follows

4.6.1 Model Summary

Table 4.6 shows the model summary results

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.811[a]	.658	.604	.043302	1.125

a. Predictors: (Constant), Outreach, Liquidity, Loan loss provisions , Asset quality, Capital adequacy, Firm size

b. Dependent Variable: ROA

Source: Research Findings

Table 4.6 shows that r square value is 0.658 which indicates that 65.8% of the variation in the dependent variable (financial performance) is explained by the independent variables (outreach, liquidity, loan loss provisions, asset quality, capital adequacy, firm size). The other 34.2% is explained by other factors not considered by the study and the error term. The Durbin Watson statistics of 1.125 lies between the recommended values of 1 and 3 thus an indication that the assumption of autocorrelation has not been violated.

4.6.2 ANOVA

The analysis of variance (ANOVA) results are shown by table 4.7

Table 4.7 ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.137	6	.023	12.190	.000[b]
	Residual	.071	38	.002		
	Total	.208	44			

a. Dependent Variable: ROA

b. Predictors: (Constant), Outreach, Liquidity, Loan loss provisions , Asset quality, Capital adequacy, Firm size

Source: Research Findings

The ANOVA results on table 4.7 indicate that the F statistics value of 12.190 is significant as indicated by the p value of 0.000<0.05. This indicates that the regression model is significant and fit to assess the relationship between the study variables.

4.6.3 Coefficients

The coefficient results are shown by table 4.8

Table 4.8: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.084	.043		-1.938	.060
	Capital adequacy	.044	.018	.319	2.387	.022
	Liquidity	.025	.025	.118	1.001	.323
	Loan loss provisions	-.395	.127	-.418	-3.113	.004
	Asset quality	-.035	.062	-.075	-.564	.576
	Firm size	-.048	.030	-1.350	-1.605	.117
	Outreach	.061	.030	1.784	2.048	.047

a. Dependent Variable: ROA

Source: Research Findings

The regression coefficient results on table 4.8 indicate that there is a positive and statistically significant relationship between capital adequacy and financial performance of microfinance banks. The findings further shows that the relationship between liquidity and financial performance of microfinance banks is positive and statistically insignificant and therefore dropped from the model. While the relationship between loan loss provisions and financial performance of microfinance banks is negative and statistically significant. The results also indicate that there is a negative and insignificant relationship between asset quality and financial performance of microfinance banks and that firm size has a negative and statistically insignificant effect on financial performance of microfinance banks and dropped from the model. The results finally indicate that outreach has a positive and significant relationship with the financial performance of microfinance banks in Kenya. From the results the following regression equation was formulated

$$Y = -0.084 + 0.044X_1 - 0.395X_3 - 0.035X_4 + 0.061X_6 + e$$

4.7 Interpretation of the Findings

The study results established a positive and statistically significant relationship between capital adequacy and financial performance of microfinance banks. This is an indication that capital adequacy significantly affects the financial performance of microfinance banks in Kenya. A study by Ndolo (2017) found that capital adequacy regulations had significant negative relationship with banks performance for studied period. Visković and Pečarić (2013) concluded that prudential measures had a positive impact on the banking system stability shown by indicators of financial stability and prudential measures embody vital instruments of a central bank. However, Kahuthu (2016) revealed

that core capital, credit management, membership growth and liquidity were not strong predictors of financial performance but after the prudential regulations they all became strong predictors.

The research results further revealed that loan loss provisioning had a negative and statistically significant relationship with microfinance banks financial performance. This finding indicates that loan loss provisioning significantly affects the financial performance of microfinance banks in Kenya. A study by Haiyambo (2016) discovered that regulation in general had an impact that's positive on the regulated MFIs activities, as observed in improvements seen in a lot of the indicators of its performance (portfolio quality, profitability, finance access and liquidity, given considerable increases in the borrowers and savers numbers) through the post-licensing time. Bougatef and Mgadmi (2016) revealed profitability of a bank to be positively linked with capitalization and a strong negative affiliation between risk and the size of bank.

Finally, the study found that outreach had a positive and statistically significant relationship with microfinance banks financial performance. The finding thus indicates that outreach significantly affects the financial performance of microfinance banks in Kenya. Abata (2014) supported that MFIs that have success should achieve both the social goal of serving a lot more people who are poor and have the ability to maintain their business functions over a longer financial time period

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter contains a summary of the study, the conclusions and recommendations based on the research findings, limitations of the research and suggestions for additional research

5.2 Summary

The objective of this study was to determine the effect of prudential regulations on financial performance of microfinance banks in Kenya. The theoretical foundation of the study was made up of the buffer theory of capital adequacy, the shift ability theory of liquidity and the agency theory. The study employed a descriptive research design and the population of the study was made of the thirteen microfinance banks in Kenya as at 31st December 2017. The researcher's data was secondary in nature and covered a 5 years' time period covering 2013 to 2017. Analysis of the secondary data gathered was done by use of inferential and descriptive statistics. Inferential statistics entailed regression and correlation and was employed in determining the connection between the variables that are independent and aid in drawing conclusions. Complete data was however obtained from 9 microfinance banks, which made up a response rate of 69.2% which was deemed sufficient to carry out the research.

The correlation results established that the mean value of ROA was -0.02538 with the minimum and maximum values being -0.269 and 0.039 while mean value for capital

adequacy was 0.47596 with minimum and maximum values of -0.150 and 3.100 respectively. The mean value for liquidity was 0.38760 with minimum and maximum values of 0.090 and 2.170 while loan loss provision had an average value 0.06971 with minimum and maximum values of 0.011 and 0.443 respectively. The results also established that the average value for assets quality was 0.18498 with minimum and maximum values of 0.028 and 0.627 while average values for firm size and outreach were 7.22280 and 6.70596 respectively.

The correlation results revealed that ROA had a weak and positive correlation with capital adequacy and liquidity and that loan loss provisions and asset quality had a strong and negative correlation with ROA respectively. The results revealed that firm size and outreach had a weak and positive correlation with ROA respectively.

The model summary results established that 65.8% of the variation in the dependent variable (financial performance) was explained by the independent variables (outreach, liquidity, loan loss provisions, asset quality, capital adequacy, firm size) and that the regression model is significant and fit to assess the relationship between the study variables. The regression coefficient results established that there was a positive and statistically significant relationship between capital adequacy and financial performance of microfinance banks and that the relationship between liquidity and financial performance of microfinance banks was positive and statistically insignificant while the relationship between loan loss provisions and financial performance of microfinance banks was negative and statistically significant. The results also established that there is a negative and insignificant relationship between asset quality and financial performance of microfinance banks and that firm size has a negative and statistically insignificant effect

on financial performance while outreach had a positive and significant relationship with the financial performance of microfinance banks in Kenya.

5.3 Conclusions

The research finding revealed that there was a positive and statistically significant relationship between capital adequacy and financial performance of microfinance banks. The study based on this finding concludes that capital adequacy significantly affects the financial performance of microfinance banks in Kenya.

The study findings established that liquidity had a positive and statistically insignificant relationship with financial performance of microfinance banks. The study based on this results concludes that liquidity does not significantly affect the financial performance of microfinance banks in Kenya.

The results of the study also found that loan loss provisioning had a negative and statistically significant relationship with microfinance banks financial performance. The study therefore concluded that loan loss provisioning significantly affects the financial performance of microfinance banks in Kenya.

In addition, the findings revealed that asset quality had a negative and statistically insignificant relationship with financial performance of microfinance banks. The study therefore concludes that asset quality does not have a significant effect on the financial performance of microfinance banks in Kenya.

The findings also established that firm size had a negative but statistically insignificant relationship with microfinance banks financial performance. The study therefore concludes that firm size does not have a significant impact on the financial performance of microfinance banks in Kenya.

The study results finally revealed that outreach had a positive and statistically significant relationship with microfinance banks financial performance. The study based on this finding concludes that outreach significantly affects the financial performance of microfinance banks in Kenya.

5.4 Recommendations

The study results led to the conclusion that capital adequacy significantly affects the financial performance of microfinance banks in Kenya. The study therefore recommends that the management of microfinance banks should ensure that they have adequate capital levels to ensure that they increase the microfinance banks financial performance.

The results of the study also led to the conclusion that liquidity does not significantly affect the financial performance of microfinance banks in Kenya. The study however recommends that the management of microfinance banks in Kenya should hold adequate liquidity to ensure that they meet there current obligations when they fall due.

The research based on the findings concluded that loan loss provisioning significantly affects the financial performance of microfinance banks in Kenya. The study based on this conclusion recommends that the management of microfinance banks should set aside adequate amount with regard to loan loss provision so that they can enhance their entities financial performance.

The study also concluded that asset quality does not have a significant effect on the financial performance of microfinance banks in Kenya. The study however recommends that the management of microfinance banks should develop effective credit risk management strategies to mitigate credit risk and boost the firms' financial performance.

The findings of the research led to the conclusion that that firm size does not have a significant impact on the financial performance of microfinance banks in Kenya. The study nevertheless recommends that the management of microfinance banks should invest in assets so that they can grow the sizes of their firms and enjoy the benefit of economies of scale, which is associated with firm size.

The study finally concluded that outreach significantly affects the financial performance of microfinance banks in Kenya. The study based on the conclusion recommends that the management of microfinance banks should develop effective strategies to ensure that they reach out more clients to lend to so that they generate interest income and enhance their performance.

5.5 Limitations of the Study

The study used secondary data, which was obtained from the microfinance banks financial statements for a period of 5 years. However, secondary data is always historical in nature and may not represent the current situation of the firms. Financial statements alone do not disclose the firms future prospects or customers decision to join or leave the micro finance.

The study did not incorporate the views of the management of the microfinance banks regarding financial performance and prudential regulations due to the use of secondary sources of data. The study also did not take into consinderation changes in the governance structure of the micro finance institution.

The study focused only on microfinance banks firms and excluded financial firms comprising of commercial banks, credit only micro finances and savings and credit cooperative societies. The findings therefore are only applicable to the targeted microfinance banks and may not be generalized to commercial banks, credit only micro finances and savings and credit cooperative societies. In addition, the context of the study was Kenya hence; the findings may not be applicable to microfinance banks in other countries.

Other factors affecting financial performance of the micro finance institution were not measured.

5.6 Suggestions for Further Research

The study focused on prudential regulations and their impact on microfinance banks financial performance. The study therefore did not focus on commercial banks, which are also subjected to similar prudential regulations by the central bank of Kenya. The study therefore recommends an assessment of the relationship between prudential regulations of commercial banks financial performance.

The study also used secondary data from the microfinance banks financial statements for a period of 5 years. However, the views of the microfinance bank management and the views of central banks directors who generally formulate the prudential regulations were not incorporate. A similar study incorporating these views should be undertaken.

The study also recommends a similar study but through the use of primary data so that the qualitative views can be incorporated. This will enable policy makers to restructure regulations to enable a good economic environment.

This study covered a period of five years only. To my opinion 5 years are not sufficient. The study recommends a similar study of a longer period of time. This will yield more objective results.

Finally I recommend a study to be carried out on other factors in micro economic environment that has an impact on financial performance of micro finance institutions. This will give more insight on the financial performance of micro finance institutions.

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APPENDICES

Appendix I: Data Collection Sheet

MFB No	Year	Net Income	Total assets	Capital adequacy	Liquidity	Loan loss provision	Total loans	Non performing loans
MFB 1	2017	104.216	25,330.880	0.200	0.260	232.000	16,958.000	2,849.000
	2016	49.143	27,403.032	0.200	0.300	188.360	17,954.979	1,454.342
	2015	120.661	25,229.552	0.210	0.310	165.150	16,583.682	502.920
	2014	298.946	20,319.958	0.230	0.240	132.000	14,488.000	498.000
	2013	165.683	12,419.216	0.100	0.230	69.510	8,724.915	332.342
MFB 2	2017	41.170	29,079.194	0.240	0.290	101.000	19,374.000	4,073.000
	2016	240.098	32,319.505	0.230	0.280	145.000	22,189.000	3,561.000
	2015	396.225	31,867.484	0.230	0.280	263.000	22,094.000	2,370.000
	2014	500.702	26,997.737	0.250	0.240	231.000	18,854.000	951.000
	2013	395.473	21,752.092	0.198	0.230	106.000	14,530.000	993.000
MFB 3	2017	(329.000)	6,727.000	0.110	0.190	91.000	2,856.000	1,705.000
	2016	(297.550)	7,326.817	0.170	0.120	238.000	3,661.000	1,063.000
	2015	29.461	7,728.524	0.210	0.530	83.000	4,270.000	503.000
	2014	21.000	3,679.000	0.240	0.350	38.000	3,418.000	306.000
	2013	9.000	1,838.000	0.270	0.420	24.000	1,866.000	183.000
MFB 4	2017	(120.000)	2,734.000	0.130	0.230	26.000	1,677.000	316.000
	2016	(134.000)	2,659.000	0.200	0.300	46.000	1,677.000	314.000
	2015	(1.000)	2,592.000	0.300	0.240	4.000	1,728.000	297.000
	2014	(97.000)	5,975.000	0.310	0.290	102.000	1,635.000	230.000
	2013	48.000	2,490.000	0.410	0.260	36.000	1,799.000	203.000
MFB 5	2017	(25.000)	354.000	0.470	0.540	5.000	218.000	77.000

	2016	(12.000)	362.000	0.580	0.360	7.000	244.000	73.000
	2015	(15.000)	397.000	0.590	0.400	7.000	257.000	59.000
	2014	3.000	378.000	0.790	0.810	2.000	184.000	35.000
	2013	(6.000)	337.000	0.600	0.670	1.000	161.000	29.000
MFB 6	2017	(12.000)	212.000	0.910	1.080	3.000	126.000	79.000
	2016	4.000	214.000	0.840	0.490	8.000	151.000	58.000
	2015	0.200	226.000	1.250	2.170	6.000	97.000	33.000
	2014	1.000	390.000	0.530	0.150	1.000	125.000	27.000
	2013	(2.000)	107.000	0.660	0.250	1.000	73.000	19.000
MFB 7	2017	(63.000)	288.000	(0.150)	0.269	3.000	103.000	55.000
	2016	(41.000)	225.000	0.140	0.090	4.000	107.000	20.000
	2015	(53.000)	197.000	0.276	0.334	22.000	79.000	35.000
	2014	(39.000)	231.000	0.384	0.261	8.000	107.000	15.000
	2013	(27.000)	164.000	0.600	0.244	3.000	82.000	16.000
MFB 8	2017	10.000	1,137.000	0.270	0.600	4.000	623.000	53.000
	2016	14.000	803.000	0.330	0.290	13.000	538.000	33.000
	2015	7.000	608.000	0.360	0.400	5.000	433.000	78.000
	2014	4.000	390.000	0.510	0.270	6.000	289.000	46.000
	2013	(11.000)	307.000	0.620	0.210	12.000	204.000	6.000
MFB 9	2017	16.000	406.000	0.500	0.210	2.000	325.000	29.000
	2016	7.000	351.000	0.580	0.270	2.000	271.000	11.000
	2015	7.000	184.000	0.790	0.280	3.000	142.000	9.000
	2014	2.000	137.000	1.450	0.570	2.000	84.000	6.000
	2013	1.000	80.000	3.100	0.634	1.000	36.000	1.000

Appendix II: Microfinance Banks in Kenya

1. Caritas Micro Finance
2. Century Deposit Taking Micro Finance
3. Choice Micro Finance
4. Faulu Deposit Taking Micro Finance
5. Kenya Women Finance Trust
6. Maisha Micro Finance
7. Rafiki Deposit Taking Micro Finance
8. Remu Deposit Taking Micro Finance
9. SMEP Deposit Taking Micro Finance
10. Sumac deposit Taking Micro Finance
11. U&I Deposit Taking Micro Finance
12. Uwezo Deposit Taking Micro Finance
13. Daraja Micro Finance

Source; Central Bank of Kenya

Appendix III: Microfinance Banks that data was collected

1. Caritas Micro Finance
2. Century Deposit Taking Micro Finance
3. Choice Micro Finance
4. Faulu Deposit Taking Micro Finance
5. Kenya Women Finance Trust
6. Rafiki Deposit Taking Micro Finance
7. Remu Deposit Taking Micro Finance
8. SMEP Deposit Taking Micro Finance
9. Sumac deposit Taking Micro Finance

Source: Central Bank of Kenya