

**LIQUIDITY MANAGEMENT AND FINANCIAL PERFORMANCE OF  
MICROFINANCE INSTITUTIONS IN KENYA**

**ALEX MURIITHI NJUE**

**A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF  
THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER  
OF BUSINESS ADMINISTRATION IN THE UNIVERSITY OF EMBU**

**DECEMBER, 2020**

## DECLARATION

This research project is my original work and has not been presented for a degree or any other award.

Signed: .....

Date: .....

**Alex Muriithi**

Reg. No. D530/1009/2013

Department of Business and Economics

University of Embu

This research project has been submitted for examination with our approval as the University supervisors.

Signed: .....

Date: .....

**Dr. Samuel Nduati Kariuki**

Department of Business and Economics

University of Embu

Signed: .....

Date: .....

**Dr. Duncan Mugambi Njeru**

Department of Business and Economics

University of Embu

## **DEDICATION**

To all my family members for their love, support and encouragement when the challenges seemed endless and always reminding me to complete my studies and above all being patient with me.

## **ACKNOWLEDGMENT**

A project like this is never the work of one person alone. The contributions made by many different people, in their own special and unique ways, have made the completion of this project possible. I would like to thank firstly God Almighty for the wisdom, financial support and patience given unto me during this project and throughout my life. Especially, I wish to sincerely thank Dr. Samuel Nduati Kariuki and Dr. Duncan Mugambi for their unwavering support and assistance during the period of this research project. Am truly thankful for their professional guidance, advice and words of encouragement received from them. I cannot express my gratitude in written words for my entire family, whose support and encouragement has been by strength and anchor. Your help has earned a special place in the archives of my heart. You are all appreciated.

## TABLE OF CONTENTS

<b>DECLARATION.....</b>	<b>ii</b>
<b>DEDICATION.....</b>	<b>iii</b>
<b>ACKNOWLEDGEMENT.....</b>	<b>iv</b>
<b>LIST OF TABLES .....</b>	<b>vii</b>
<b>LIST OF APPENDICES .....</b>	<b>i</b>
<b>LIST OF FIGURES .....</b>	<b>ii</b>
<b>ABBREVIATIONS AND ACRONYMS.....</b>	<b>iii</b>
<b>DEFINITION OF TERMS.....</b>	<b>iv</b>
<b>ABSTRACT .....</b>	<b>v</b>
<b>CHAPTER ONE .....</b>	<b>1</b>
<b>INTRODUCTION.....</b>	<b>1</b>
1.1 Background of the Study .....	1
1.2 Statement of the Problem .....	11
1.3 Objective of the Study.....	12
1.4 Research Hypothesis .....	13
1.5 Scope of the Study.....	13
1.6 Significance of the Study .....	13
1.7 Limitations of the study.....	13
<b>CHAPTER TWO .....</b>	<b>15</b>
<b>LITERATURE REVIEW .....</b>	<b>15</b>
2.1 Introduction .....	15
2.2 Theoretical Review.....	15
2.3 Empirical Review of Literature .....	18
2.4 Conceptual Framework .....	26
2.5 Summary of Literature Review .....	26
2.6 Research Gaps .....	27
<b>CHAPTER THREE.....</b>	<b>28</b>
<b>RESEARCH METHODOLOGY .....</b>	<b>28</b>
3.1 Introduction .....	28
3.2 Research Design .....	28

3.3 The Target Population .....	28
3.4 Data Collection Instruments .....	28
3.5 Data collection Procedures .....	29
3.6 Pretesting of Research instruments .....	29
3.7 Data Processing and Analysis .....	29
3.8 Diagnostic tests .....	31
<b>CHAPTER FOUR.....</b>	<b>32</b>
<b>RESEARCH FINDINGS AND DISCUSSIONS.....</b>	<b>32</b>
4.1 Introduction .....	32
4.2 Response Rate .....	32
4.3 Results of Pre-test.....	32
4.4 Background information of the respondents .....	32
4.5 Descriptive statistics.....	35
4.6 Correlation Analysis.....	48
4.7 Panel Regression Analysis .....	49
<b>CHAPTER FIVE .....</b>	<b>52</b>
<b>SUMMARY, CONCLUSION AND RECOMMENDATIONS.....</b>	<b>52</b>
5.1 Introduction .....	52
5.2 Summary of the Findings .....	52
5.3 Conclusion.....	53
5.4 Recommendations .....	55
5.5 Suggestions for Further Research.....	56
<b>REFERENCES.....</b>	<b>58</b>
<b>APPENDICES .....</b>	<b>63</b>

## LIST OF TABLES

Table 3. 1:Table of study variables and objectives .....	31
Table 4. 1: Cronbach Alpha Reliability Tests .....	32
Table 4. 2: Whether the Respondent is Male or Female .....	33
Table 4. 3: Respondents Length of Service .....	34
Table 4. 4: Respondents Level of Education .....	35
Table 4. 5: Multi Collinearity Test Results .....	35
Table 4. 6: Results of the Kolmogorov-Smirnov test for Normality .....	36
Table 4. 7: Results of the Breusch-Pagan Test for Heteroscedasticity .....	36
Table 4. 8: Results of the Durbin-Watson for Autocorrelation.....	37
Table 4. 9: Asset Quality and Financial performance Parameters .....	38
Table 4. 10: Descriptive Statistics for Asset Quality from Secondary Data .....	40
Table 4. 11: Aspects of Maturity Gap Affecting Financial Performance of MFIs .....	41
Table 4. 12: Descriptive Statistics for Maturity Gap from Secondary Data .....	42
Table 4. 13: Aspects of Capital Adequacy Affecting Financial Performance of MFIs .....	44
Table 4. 15:Descriptive Statistics for Return on Equity from Secondary Data .....	46
Table 4. 16: Panel Power Correlation Table between the Independent Variables and Dependent Variables.....	48
Table 4. 17: Regression Coefficients .....	49

## **LIST OF APPENDICES**

Appendix I: Microfinance Institutions in Kenya List of Microfinance Institutions in Kenya	63
Appendix II: Questionnaire.....	64
Appendix III: Secondary Data Review Guide .....	69



## LIST OF FIGURES

Figure 2. 1: Conceptual framework on the effects of liquidity management on the financial performance of MFIs in Kenya .....	26
Figure 4. 1: The variability of asset quality of MFIs in Kenya, 2012-2016 Secondary Data	40
Figure 4. 2: The variability of Maturity gap of MFIs in Kenya Secondary Data, 2012-2016 .....	43
Figure 4. 3: The variability of Capital Adequacy of MFIs in Kenya, 2012-2016.....	46
Figure 4. 4: The variability of ROE of MFIs in Kenya, 2012-2016 .....	47

## **ABBREVIATIONS AND ACRONYMS**

AMFI	Association of Microfinance Institutions
CBK	Central Bank of Kenya
EPS	Earnings per Share
FI	Financial Institutions
GDP	Gross Domestic Product
MFIs	Microfinance institutions
MSE	Micro and Small Enterprises
NGOs	Non-Governmental Organizations
PAT	Profit after Tax
ROA	Return on Assets
ROE	Return on Equity
ROI	Return on Investment
SASRA	Sacco Society Regulatory Authority

## **DEFINITION OF TERMS**

Liquidity	Investment in current assets and current liabilities which have a life of one year or less and is important for a firm's day to day operations
Liquidity Management	The process of devising and monitoring short term assets and short term liabilities in and out of the business, current assets within the business, and current liabilities held by an MFI at a particular time
Financial Performance.	This is the yardstick of the outcome of an MFI's undertakings, procedures and policies in monetary terms
Asset Quality	Bank loan portfolio and credit quality, thus an indicator of credit risk in banks credit risk is the uncertainty that an asset or a loan becomes inoperable in the case of outright default or the risk of delay in the servicing of the loan Credit risk can have crippling effect thus leading to insolvency.
Maturity Gap.	Difference between short term receivables and short term payables at both current and future dates thus creating a maturity mismatch between assets and liabilities creating liquidity risk.
Capital Adequacy	Amount of own fund available to support the MFI business and act as a cushion in case of adverse situations. Level of capital required by banks to enable them to withstand risks they are exposed to cushion against the potential losses and cover the bank's debtors

## **ABSTRACT**

Liquidity management is one of the most important duties in any company and thus it cannot be overlooked. Sound liquidity management is integral for financial institutions stability and profitability since deteriorating liquidity management is the most recurrent cause of poor financial performance. In many financial institutions, the biggest risk is lending money and not getting it back leading to liquidity problems as most MFIs in Kenya have no access to a lender of the last resort which is the Central Bank of Kenya. The study investigated the effect of liquidity management on the financial performance of MFI's in Kenya. Secondary data on the study variables were deduced from the audited financial statements of the MFIs under consideration. The data was obtained from the CBK website, CBK's Annual Supervision reports and also the AMFI annual reports for 5 years from 2012-2016. The desired population of the research consisted of all the twenty-six MFIs in Kenya that were members of AMFI and available at the CBK website. Primary data was collected using questionnaires whereas the secondary data involved analysis of the audited financial statements. The study used both descriptive and inferential statistics to evaluate the data. In descriptive analysis mean, and standard deviation of the responses was analyzed whereas, under inferential statistics, Pearson correlation, panel power correlation and regression analysis were adopted. The analysed data indicated that liquidity management practices fundamentally influenced the financial performance of MFIs in Kenya. The asset quality and maturity gap had a negative but insignificant effect on financial performance whereas capital adequacy had a positive and significant effect on the financial performance of MFIs. The study proposes that MFIs should strive to manage their loan portfolio to reduce delinquent loans as they reduce the MFIs profits, bank advances to customers should also be managed not to exceed customer deposits to reduce the liquidity gap. Management should develop strategies for liquidity management in MFIs. Similarly, capital adequacy enabled the MFIs to absorb shocks that may occur within the financial markets and should be managed to prevent MFIs from financial instability to improve financial performance.

# CHAPTER ONE

## INTRODUCTION

### 1.1 Background of the Study

Microfinance institutions (MFIs) have been accepted globally as a tool for poverty alleviation and financial inclusion of low-income earners. The microfinance sector has reached more than one hundred and thirty-three million poor people from three thousand three hundred and sixteen MFIs worldwide by the end of the year two thousand and six, out of which 69.85% were among the poorest and 85.2 % were women (Harris, 2007). MIX (2009) indicated that between the year two thousand and five to two thousand and seven, borrowers outreach grew at a persistent rate of 26% across all regions, along with the loan portfolio which grew faster at a rate of 47%. At a regional level, the MFIs in Eastern Europe and Central Asia grew by 38% while the Middle East and North Africa credit outreach was the quickest as it grew by 41%. Asia had the greatest numbers which amounted to 12 million borrowers.

The Micro-finance theory has been in existence for centuries in various regions of the globe for instance, “susus” in Ghana, “tandas” in Mexico, “tontines” in West Africa and “pasanaku” in Bolivia. One of the earliest and longest-serving micro-credit organization providing small loans to rural poor dwellers with no collateral was the Irish loan fund system started in the early 1700s by Jonathan swift. His concept began slowly in the 1840s and became a widespread institution of about 300 branches all over Ireland in less than ten years. The main aim of his idea was to advance small loans at interest for short periods. However, the pioneering of modern microfinance is often credited to Dr. Mohammad Yunus, who began experimenting with lending to poor women in the village of Jobra, Bangladesh during his tenure as a professor of economics at Chittagong University in the 1970s. Microfinance sectors in the Middle East, North Africa, Eastern Europe and Central Asia, are reasonably small since the microfinance idea started much later in these regions (Gonzalez & Rosenberg, 2006).

At a regional level, the MFIs in Eastern Europe and Central Asia grew by 38% while the Middle East and North Africa expanded credit outreach was the quickest by 41%. Asia had the greatest numbers which amounted to 12 million borrowers. In Africa, the components of the microfinance sector are widespread and examples include Ghana

which has the 'Susu' scheme which is one of Africa's most ancient traditional banking systems which have over the years been the mode of fund mobilization for initiation, sustenance and in some cases development of micro and small businesses, particularly micro-enterprises (Basoah, 2010). "Susu" as one of the microfinance schemes in Ghana is thought to have originated from Nigeria and spread to Ghana in the early twentieth century (Basoah, 2010). It is an informal financial identification for daily or weekly collection of deposits which is most rampant on the West African markets (Basoah, 2010). "Susu" is an informal financial identification for daily or weekly deposit collection which can be illustrated as a form of banking because it is a system of trading in money. It involves daily, a weekly and monthly collection of a fixed amount of funds that are made available to the owners after a specified period or when required or to members of the scheme within the scheme at a fee (Basoah, 2010).

In Kenya, the microfinance sector is one of the most dynamic in Sub-Saharan Africa. It includes a variety of financial institutions forms and a fairly large branch network to serve the poor. However, the regulation of microfinance activities in Kenya started in the year two thousand and six. The absence of regulation allowed innovations to take place and MFIs were set up easily without any restrictions, such as minimum capital requirements therefore the microfinance industry thrived in that environment (Nyaga, 2008). Following the enactment of the microfinance act on 2<sup>nd</sup> May two thousand and eight, several existing MFIs applied for licenses to let them take deposits from members and the general public. The major purpose of the microfinance act was to regulate the establishment, business and operations of MFIs in Kenya through licensing and supervision. Most of the MFIs in Kenya are self-regulated and rely heavily on international donor support which poses a legal challenge (CBK 2011). By 2010 there were 24 large microfinance banks in our country.

In Kenya, there has been a great increase in non-performing loans in deposit-taking MFIs over the last two decades; this has led to a rise in liquidity management problems, this negatively affects the investment decisions of the organization leading to the poor financial performance of the organization (AMFI, 2013). The microfinance industry in Kenya has experienced major transformations over the past twenty years, growing from a fledgling concern dominated by a few donors and church-based NGOs to a vibrant industry increasingly driven by commercial sustainability. Generally, the

providers of microfinance services in Kenya can be clustered into three broad categories, notably; formal, semi-formal and informal institutions with the level of formality defined by the degree of regulation.

Financial service providers are very important in any economy. Their function is very much similar to that of blood Arteries in the human body because they pump financial resources for economic growth from the depositories to where they are required (Shanmugan and Bourke, 1992). MFIs are key providers of financial information to the economy. They play a crucial role in emerging economies where borrowers have no access to capital markets. There is enough proof that well-functioning financial institutions accelerate economic growth, while poorly functioning Financial Institutions impede economic progress and exacerbate poverty (Barth et al., 2004).

### **1.1.1 Liquidity**

No universally accepted definition has been fronted on liquidity, some scholars have defined it as the ability of a firm to ensure the availability of funds to meet its short term obligations. In the business of financial institutions, it can also be defined as its capacity to fund an increase in assets and meet both expected and unexpected cash and collateral obligations at a reasonable cost and without incurring unacceptable losses. The opposite of liquidity is liquidity risk which from the financial institution is its inability to meet its obligations when they fall due (George, 1999).

Liquidity is the term mostly used to illustrate how easy it is to change both fixed and current assets to cash. The most liquid short term asset and what everything else is compared to is cash. This can be explained by the fact that it can be used easily and immediately. Assets that can be converted to cash quickly are important to have in times of crisis or emergency because they are readily converted into cash. Without liquid cash can become tied up in areas that are difficult to cash out of and even more difficult to assess for actual cash value. During times of financial need, large financial institutions close down, making it difficult for their customers to access the cash they need to buy basic needs like food, gasoline and other emergency supplies (Chaplin, Emblow & Michael, 2000).

Liquidity is also described as the ability of a financial institution to meet all cash payment obligations as they fall due (The Basle Committee, 2008). These goals can either be met by drawing from cash holding, by using current cash inflows, by borrowing cash or by converting liquidity assets into cash with little or no loss in value (Joachim, 2007). Hence Liquidity management is an integral aspect of every financial organization that means to pay the current obligations of its undertakings as a going concern. This obligation is the operation and financial expenses that are short term in nature but with longer maturity periods. Liquidity management, therefore, requires the strategic injection or withdrawal from the market or circulation of the amount of liquidity depending on the desired level of current reserves and money without affecting the profit-making ability and operations of the MFIs (Agbada & Osuji, 2013).

When inspecting the financial health of a financial institution or firm there are four different categories of ratios that the investigator will consider. These ratios are categorized into liquidity ratios, financial leverage ratios, efficiency ratios, and profitability ratios. The most common liquidity ratios as used by financial institutions include ratios concerning receivables, inventory, working capital, current ratio, and acid test ratio. Other ratios related to the liquidity of a firm deal with the liquidity of its receivables and inventory. The ratios examining the liquidity of a firm's receivables are days' sales in receivables, accounts receivable turnover, and account receivable turnover in days (Chaplin et al., 2000).

Liquidity management is inversely related to the performance of banks (Bassey, 2015). A liquidity management crisis was evident in the global financial crisis of 2007–08 (Dullien, 2010). This was the worst financial crisis raising fundamental questions about liquidity management (Basel Committee on Banking Supervision, 2013). During the crisis, banks were hit hardest by liquidity management pressures cutting back sharply (Basel Committee on banking supervision, 2013). Major commercial banks like Lehman Brothers collapsed. Other banks were bailed out by the governments. The impact on the stock market was very severe as stocks shed prices (Basel Committee on Banking Supervision, 2013). In many areas the economy faced a huge financial blow, resulting in house evictions, foreclosures and prolonged unemployment (Basel Committee on Banking Supervision, 2013). The crisis underscored the role of liquidity management in commercial banks (Basel Committee on Banking Supervision, 2013).



### **1.1.2 Financial performance**

The importance of financial performance in MFI's cannot be overlooked as it touches corporate sustainability in today's business environment cannot be overemphasized. Financial performance specifies the extent to which the financial objectives of an organization are accomplished. It measures the results of a firm's performance in monetary terms. Financial Institutions develop the best financial and non-financial designs and implement them to have a competitive advantage over their competitors. It is from this competitive edge that an institution upgrades its financial performance through which a firm can meet its short-term obligations such as payments and long-term obligations such as wealth creation to its shareholders. Poor financial performance of any firm negatively affects the image of the firm hence its attraction to would-be investors which may lead it to insolvency and eventual collapse of the said institution (Amalendu & Sri, 2011).

The financial performance of a firm normally emanates from its financial position and structure. The information is borrowed from the financial statement which is the measuring rod to examine and monitor performance. Business managers use financial statements to develop comprehensive financial plans that will maximize shareholders' wealth and minimize possible risks that may pre-exist. Financial Statements calculate the financial situation, position and performance of a financial institution. These statements are processed and generated for both internal and external stakeholders for example shareholders, government agencies and lenders (Rahaman, 2010).

MFIs generate financial revenues from issuing loans and other financial services through means like interest fees, penalties, and commissions. Financial revenue also comprises income from other financial sources, such as investment income. An MFI's financial undertakings also generate various expenses, from general operating expenses and the cost of borrowing to provisions for the potential loss from irrecoverable loans. Profitable financial institutions earn a positive net income this means therefore that their operating income exceeds the total expenses that they have incurred to generate the revenue.

Various partners of a company will examine the company performance from a different perspective. These partners will include shareholders, managers, creditors, tax authorities, Government agencies and other users who have an interest in the financial performance of a company. Shareholders spend in an institution to generate

value from their investment. Economical use of financial assets by institutions is a key aspect by the management to achieve good financial performance. To examine the financial performance of an institution, financial statements are used where groups of ratios are evaluated as per the need and specification of the user. Some commonly used financial performance indicators which can be generated from financial statements include Profit after tax(PAT), Return on Assets (ROA), Return on Equity (ROE) and Earnings per Share (EPS).

Micro Finance Institutions engage in a complex and competitive Macro and Microenvironment where conventional banks and other financial institutions are players. For MFIs to survive in the market, performance is principal to attract shareholders who are the core financiers. By having efficient management that MFIs will meet their operational obligations translating to contented stakeholders' consequently good financial performance (Adebayo et al., 2011). Better financial performance is therefore the lifeblood of successful firms since it can pay the daily operational costs and have a surplus which is shared with its shareholders this portion to share is derived from its profit. Examiners measure the financial performance and other indicators that show the financial well-being of the firm by use of financial statements, records and reports.

### **1.1.3 Interplay between Financial Performance and Liquidity Management**

Financial performance is the outcome of a firm's policies and undertakings expressed in monetary terms. It is also the result of different activities undertaken by an organization. Common examples of financial performance indicators consist, of operating income, earnings before interest and taxes, and net asset value (Cole, 2004). There are two major reasons why organizations should have financial performance measurement. The first is to produce financial statements at the right time. The second is to provide statistical information about the performance of the scheme, which must be used to improve that performance, (Johnson & Scholes, 2007).

Financial statements examine the financial stand and achievement of a firm. These statements are prepared and composed of both internal and external partners. These internal and external partners will include shareholders, government agencies and lenders (Rahaman, 2010). The financial performance of business entities is an area that has generated a lot of Focus, attention, comments and interests from both financial

experts, researchers, the general public and the management of corporate entities. To examine the financial performance of firm financial statements are examined where different ratios are evaluated as per the need and requirements of the users.

Liquidity levels demonstrate an institution's capability to fund an increase in both long term and short term assets and meet financial their daily financial obligations and needs when they mature. Liquidity is the capacity of a bank to fund increases in assets and meet obligations as they become due, without incurring unacceptable losses (Basel Committee on Banking Supervision, 2013). Therefore, efficient and effective liquidity management is crucial if the continuity and success of firms are to be assured. According to the Banking Act (2014) and CBK Prudential Guideline (2013), an institution shall maintain such minimum holding of liquid assets as the CBK may from time to time determine. Kenyan banks are therefore required to maintain a statutory minimum of twenty percent (20%) of all its deposit liabilities, matured and short-term liabilities in liquid assets by the CBK and since most MFIs operate as Banks they are no exception. Liquidity refers to investment in short-term assets and short-term liabilities which mature within one year or less and is therefore important for a firm's day-to-day operations (Kesimli & Gunay, 2011) how management manages these two aspects is crucial for the continuity of any microfinance banks.

Liquidity is calculated using a liquidity ratio which is computed by dividing current liabilities over current assets. According to Athanasoglou & Gioka (2000), Commercial bank regulators expect commercial banks to hold a certain level of liquid assets. This is aimed at ensuring that commercial banks have adequate liquidity to deal with bank runs. MFIs becomes liquid if it can accumulate enough cash and its capacity to raise funds from different sources to meet its financial needs and demands on time. When an MFI is faced with financial constraints, it might be forced to raise extra funds through borrowing or disposing of a part of its current assets in form of liquid assets like cash and cash equivalents. This might create an impression among partners that the bank is making some arrangements to sell bad assets off. Thus, attract lower prices for liquid assets which might open the bank's income to loss from liquid assets sales (Barros, Ferreira & Willians, 2007).

Cash administration is the procedure and means of devising and regulating cash inflows and cash outflows into and out of the firm, cash flows within the firm, and cash balances held by a firm at various points in time Nyabwanga (2011). Effective cash administration involves the ascertainment of the optimal cash to hold by considering the trade-off between the cost foregone of holding too much cash and the trading cost of holding too little cash (Ross *et al.*, 2008). There is a need for careful planning and controlling cash flows over time to evaluate the optimal cash to hold. A company with good liquidity management practices will therefore be able to take advantage of the available investment opportunities, trade and cash discounts and lower interests charged on borrowings. Therefore, there is a connection between liquidity management, investment opportunities and financial performance. Liquidity management is also an important component of the monetary policy of a Nation. To check the flow of liquidity and to an extension the stability of the economy of Kenya, CBK will monitor the liquidity administration of various commercial banks in the country. To attain this goal therefore CBK will enforce cash reserve ratio restrictions to commercial banks. These regulations have seen the smooth operation of financial institutions hence stable economies (CBK, 2011)

Beginning from the 1960s, individuals and financial institutions operating in the financial markets were affronted with harsh changes in the economic environment such as inflation and changes in interest rates rising sharply and therefore it became harder to predict, a situation that changed demand conditions in financial markets. The rapid development in computers knows how to changed supply conditions. Further, financial regulations became more and more burdensome. Financial institutions found that many of the old methods and tactics of doing business were no longer viable; the financial services and products they were offering to the public were no longer selling (McNamee and Selim, (1999). Many financial intermediaries found that they were no longer able to acquire funds with their traditional financial instruments, and without these funds, they would soon be out of operation. To withstand the changing environment, financial institutions had to research and come up with new products and services that would meet customer requirements, preferences and prove viable economically, a process referred to as financial engineering. The financial innovation that occurs suggests that there are three basic varieties of financial innovation:

responses to changes in demand conditions, responses to changes in supply conditions, and avoidance of regulations (Ball and Shivakumar 2004).

#### **1.1.4 Microfinance Institutions in Kenya**

Microfinance is the idea or concept of availing a variety of financial services to low-income persons and households as well as micro, small and medium enterprises using specially designed methodologies that will ensure sustainability for the lenders and lead to an improvement in the standard of life for the consumers. This provides an enormous potential to support the economic activities of the low-income people and thus contributes to poverty alleviation. Microfinance refers to the small-scale financial services that involve mainly credit and savings services to the poor (Robinson 2001).

The challenges facing most MFIs are the limited capacity of the MFIs in terms of employees, management and existing financial gaps in the funding needs to meet the growing demand for financial services' needs, due to the continued success and rapid growth of microfinance. Competition has increased in the microfinance industry as new entrants join the industry. Since the 1980's the microfinance industry has seen many firms collapse and exit from the industry due to threats posed by the external environment and also due to internal weaknesses of the firms, examples of companies that exited the industry include Rural and Urban finance limited. At the same time, the industry has evidence of firms like Faulu DTM limited, Kenya Women Finance Trust Limited and Equity Bank limited have grown from small companies to huge industry players. Major commercial in the sector banks has also presented competition in form of products and services which are designed for the same market.

After the enactment of the Microfinance Act on Second May Two thousand and eight, several current MFI's applied for licenses to let them take deposits from members and the general public. The main aim of the Microfinance Act was to monitor the establishment, business and operations of MFI's in Kenya through licensing and supervision. Two thousand and ten there were twenty large MFI's in Kenya. Currently in Kenya today, there has been a sharp increase in delinquent loans in deposit-taking Microfinance institutions over the last few years; this has led to an upsurge in liquidity issues, this negatively impacts the investment decisions of the firm leading to the poor financial performance of the firm (AMFI, 2013).

Liquidity ratios equip MFI managers with information regarding its financial resources and whether there is a need to obtain additional financing. Liquidity management has become a serious concern and challenge for most Microfinance institutions in Kenya. High competition for consumer deposits, a wide array of funding products in wholesale and capital markets together with technological advancements have changed the funding and risk management structure. When a Microfinance institution holds enough liquid resources to fund its strategic plans, it needs no further financing to follow up those investments as it will fund them internally.

The ability to use institutional credit and other financial services for poverty eradication in Kenya is quite important. About eighteen million people, or sixty percent of the population, are poor and mostly out of the reach of formal banking services or cannot access formal banking services hence the need for Micro Finance Institutions. According to the National Micro and Small Enterprise Baseline Survey of 1999, close to 1.3 million MSEs are employing nearly 2.3 million people or 20% of the Country's total recruitment and contributing 18% of overall GDP and 25% of non-agricultural GDP. Despite this significant contribution, only 10.4% of the MSEs get credit and other financial services. The formal banking sector in Kenya over the years has viewed the informal sector as volatile and not commercially profitable (Omino, 2005).

Microfinance institutions having good asset quality, strong earnings and sufficient capital base may fail if they not maintaining adequate liquidity. To achieve high financial performance, Microfinance institutions should be able to deal with the ever-changing monetary policy that shapes the overall liquidity direction and the Microfinance institution's transactional requirements and repayment of short term borrowing and finances. There are a variety of other risks faced by financial institutions that negatively impact financial performance which may include but are not limited to credit risk, operational risk and interest rate risk, which may end up in the form of liquidity risk. Furthermore, liquidity ratios are at times requested by Microfinance institutions when they are assessing a loan application. When a customer or client wishes to acquire a loan, the lender may require you to maintain a certain minimum liquidity ratio in case of financial institutions, as part of the loan arrangement

also the Credit Reference Bureau may be called upon to give an applicant's credit status.

## **1.2 Statement of the Problem**

### 1.3

Generally, in Kenya, there has been an exponential increase in delinquent loans in deposit-taking MFIs over the last few years. This has led to an increase in liquidity problems in MFIs thus negatively impacting the investment decisions of MFIs leading to poor financial performance (AMFI, 2013) since they are not able to meet a majority of their financial obligations. The original cause of liquidity risk is the maturity imbalance between assets and liabilities. The majority of the assets are funded by deposits most of which are short-term in nature with a possibility to be called at any time leading to an imbalance between short-term assets and short-term liabilities. This imbalance can be evaluated with the aid of the maturity gap between assets and liabilities.

A higher liquidity gap might create liquidity risk for most MFIs in Kenya (CBK, 2013). According to Gibson and Nyabwaga *et al.*, (2011), in their study on the effect of working capital management practices on the financial performance they postulate that working capital management routines were low amongst small-scale firms as the bulk of them had not envisaged formal working capital management practices. The findings also postulate that there is a positive relationship between working capital management practices and financial performance. The study was undertaken by Gibson (2012) attempted to investigate the factors that determine the financial performance of the 30 MFIs that are registered and regulated by the AMFI. The study focused on twenty-eight different variables. With this study, the weighted influence of a particular determinant is hard to establish. The studies undertaken have been broad and focusing on a wide range of issues without narrowing down to specifics like the study by Gibson (2012). Most of the studies carried out advocates for further research on the factors that have continued to cause poor financial performance of MFIs in the Sub-Saharan region which has a higher poverty index. Most of the evidence regarding MFIs' performance largely focuses on the developed economies and the findings are not necessarily relevant to the sub-regions needs and Kenya in particular.

In two thousand and sixteen (2016) Kenya experienced cases of banks closing, merging and others rebranding. A recent example being Chase bank that closed on April seven two thousand and sixteen, after suffering a bank run and had to close shop until Kenya Commercial Bank came to its rescue to put it back. The imperial bank also went under liquidation and had to close its operations. This has brought a lot of anxiety and uncertainty in the financial market especially the banking and microfinance sector. Moreover, in Kenya, unlike banks, MFIs do not have access to the lender of last resort that is the CBK. Consequently, in times of market difficulties and financial constraints, they have nowhere to get cash from. This makes them more prone to liquidity shortage, and no matter how small the liquidity need is or how small the microfinance enterprise is, lack of liquidity can cause great damage to any microfinance bank. It is against this background that the study desired to examine the effects of liquidity management on the financial performance of MFIs in Kenya.

### **1.3 Objective of the Study**

This section covered the general and specific objectives.

#### **1.3.1 General Objective**

To evaluate the effects of liquidity management on the financial performance of MFIs in Kenya.

#### **1.3.2 Specific Objectives**

1. To evaluate the effect of asset quality on the financial performance of MFIs in Kenya.
2. To evaluate the effect of the maturity gap on the financial performance of MFIs in Kenya.
3. To evaluate the effect of capital adequacy on the financial performance of MFIs in Kenya.



## **1.4 Research Hypothesis**

$H_{01}$ : Asset quality does not affect the financial performance of MFIs in Kenya.

$H_{02}$ : The maturity gap does not affect the financial performance of MFIs in Kenya.

$H_{03}$ : Capital adequacy does not affect the financial performance of MFIs in Kenya.

## **1.5 Scope of the Study**

The research was conducted in all the twenty-six MFIs in Kenya registered under the microfinance Act 2008 and approved by CBK. The research focused on asset quality, Maturity gap and capital adequacy for five years (2012-2016).

## **1.6 Significance of the Study**

The study is of benefit to MFIs as they would use the research findings to develop liquidity management strategies to enable MFIs to improve their financial performance. The study would also be useful to the institutions of higher learning in the extension of academic knowledge for the benefit of all the academicians. The study also would have policy implications and recommendations which can be used by Government policymakers in structuring policies to create an enabling environment to enable MFIs to operate in the country more efficiently. County Governments and National Government would benefit as a whole in the sense of regulation adherence, member fund protection and ensuring the institution contributes towards the achievement of vision 2030. The study would also impact the Government of Kenya's big four agenda as MFI's can be used to loan members to enable in achieving this agenda.

## **1.7 Limitations of the study**

The study concentrated on MFIs operating in Kenya and that had audited financial statements from 2012-2016. The study may be limited by the sample size as all the MFIs studied operated in Kenya. The research findings, therefore, are only applicable to MFIs in Kenya and may not be generalized to other countries. Different countries have different economic environments and what works in one economy may not work in another country.

Also, the information contained in the audited financial statements for the five years had to be standardized for the information to be presentable and data analysis be carried out since the original intention of the data was not for this study therefore the accuracy of the data in analyzing the findings of the result. The study dealt with data for five years this period may differ from data collected in other periods such as during an economic recession or an economic boom also in cases of war or political upheaval putting this into consideration the results would be different in other economic environments therefore decisions to take will be determined by many other factors, therefore, liquidity management and financial performance may differ from time to time. The study was also limited to MFIs whereas other financial institutions are also affected in their liquidity management since MFIs make only a small percentage of the financial market and therefore cannot be used as a representation of the entire financial sector. The study also considered the influence of liquidity management on the financial performance of MFIs in Kenya, however, other salient factors significantly affect the financial performance of these MFIs liquidity is therefore not the only factor affecting the financial performance of MFIs in Kenya.

The research was conducted out for 5 years from 2012 to 2016, this period may not be adequate or enough to conclude major economic fluctuations may influence the Economic performance of the MFI and therefore wrong deductions or conclusions may have been arrived at during carrying out the study.

## CHAPTER TWO

### LITERATURE REVIEW

#### 2.1 Introduction

This chapter involved locating, reading and evaluating previous studies, observations and opinions available relating to liquidity management and financial performance. It examined the theoretical review, empirical review of literature, conceptual framework, a summary of the literature review and the research gaps.

#### 2.2 Theoretical Review

The study was anchored in three theories namely; liability management theory, liquidity preference theory and commercial loan theory of liquidity. These theories provide literature on the relationship between liquidity management and financial performance.

##### 2.2.1 Liability Management Theory

Liability management theory focuses on banks issuing liabilities to meet liquidity needs as postulated by Diamond and Rajan (2001). Liquidity and liability management are closely related. One major facet of liquidity risk control is the development of a prudential level of liquid assets. Asset and liability management is one of the major risk management measures at any bank. It is one of the essential tools for decision making that sets out to maximize stakeholder value. It is crucial to track the external factors of the asset and liability management in the market to remain in the long term and to prepare for negative effects. According to Goddard *et al.*, (2009) Banking sector analysis could be the instrument used to measure the sustainability of the country's financial sector.

Asset liability management is the administration of the total balance sheet changes and it involves quantification of risks and conscious decision making about the asset-liability structure to maximize the interest earnings within the framework of perceived risks. The main aim of asset-liability management is not to eliminate risk, but to manage it in such a way that the risks of net interest income are minimized in the short

run and the economic value of the organization is protected in the long run. The liability management theory objective involves controlling the risks of net income, net interest margin, capital adequacy, liquidity risk and ensuring an acceptable balance between profitability growth and risk (Diamond & Rajan, 2001).

The advocates of this theory postulate that, through proper Asset Liability Management, liquidity, profitability and solvency of banks can ensure that commercial banks manage and reduce risks like credit risk, liquidity risk, interest rate risk and currency risk. The liabilities of a bank have different categories of varying costs, depending on the tenor and maturity pattern. Similarly, these comprise different classes with different returns depending on the maturity and volatility factors. The mainstay of this theory is the matching of liabilities and assets (SBP, 2010). This theory will aid in understanding how MFIs in Kenya balance assets and liabilities as most of their members will require periodic loans to carry out their business so as they issue out loans they have to strike a balance with the demand deposits of members who may opt to use their deposits instead of loans.

### **2.2.2 Liquidity Preference Theory**

The theory was proposed and developed by John Maynard Keynes in 1936. Keynes described liquidity preference theory as individuals' value money for both the transaction of current business and its use as a store of wealth Bilbow (2005). Thus, they will sacrifice the ability to earn interest on liquid cash that they want to spend in the present, and that they want to have it on hand as a precaution. On the other hand, when interest rates increase, they become willing to hold less cash for these purposes to earn a profit. Elgar (1999) postulated that one needs money. After all, one has expenditure plans to finance, or is speculating on the future path of the interest rate and finally, because one is uncertain about what the future may have in store so it is advisable to hold some fraction of one's resources in the form of pure purchasing.

In the study "The general theory of employment, interest and money" Keynes (1936) identified three reasons why liquid cash is important, the speculative motive, the precautionary motive and the transaction motive. Money needed by Microfinance institutions for their daily activities to complete economic transactions is known as the

demand for money for transaction motives and is usually depends on the size of the income, time gap between the receipts of income and spending habits. While the Precautionary motive postulates that when MFIs want to keep some liquid money to meet some unforeseen emergencies, contingencies and accidents while speculative motive is when the MFIs keep cash with them to take advantage of the changes in the prices of bonds and securities. The banks' liquidity preference approach suggests that MFIs pursue active balance sheet policies instead of calmly accommodating the demand for credit therefore this theory will aid in explaining how MFIs hold money to meet the liquidity needs of its members against the three motives of holding cash.

### **2.2.3 Commercial Loan Theory of liquidity**

Short-term loans given to finance the sale of goods from the initial producer to the final consumer are the most liquid loans the bank can make Mishkin, Stern and Feldman (2006). These are self-liquidating loans because the goods being financed will soon be sold. The loan finances a transaction and the transaction itself avails the borrower with the funds to repay the bank. Adam Smith described these loans as liquid because of their aim and their collateral was liquid. The goods move quickly from the producers through the distribution channel to the retailers and then they are bought by the ultimate cash-paying consumer (Comptroller of the Currency, 2001). An MFI bank needs a higher degree of liquidity in its assets.

The liquidity of assets refers to the luxury and certainty with which it can be turned into cash. In general, the liabilities of a bank are large concerning its assets because it holds a small fraction of its assets in form of liquid cash. But its liabilities are payable on demand or within short notice. Hence the bank must hold a sufficiently large fraction of its assets in the form of cash and liquid assets for profitability. If Microfinance institutions keep liquidity at its highest, the profit of that particular bank will be low as it will not be able to take advantage of opportunities in the market. Conversely, if it ignores liquidity and aims at earning more such an option will be detrimental for the bank. Thus in administering its investment portfolio a bank must ensure a balance between the purpose of liquidity and profitability. The equity must be attained with a relatively high degree of safety. This is because banks are imposed with several constraints that limit the size of earnings from assets they can acquire (Brunnermeier & Yogo, 2009).

The proponents of this theory include Adam Smith and they argue that the most liquid of assets is cash. The next most liquid assets are deposits with the central bank, treasury bills and other short-term bills issued by the central and state governments and large firms, and call loans to other banks, firms, dealers and brokers in government securities. The less liquid assets are the various types of loans to customers and investments in long-term bonds and mortgages. Thus the principal sources of liquidity of a bank are its borrowings from the other banks and the central bank and the sales of the assets. But the amount of liquidity which the bank can have depends on the availability and cost of borrowings.

If a Firm can borrow large amounts of liquid cash at any time without difficulty and at a low cost (interest rate), it will keep very little liquid assets. However, if it is risky to borrow funds or the cost of borrowing is high, the bank will hold more liquid assets in its portfolio (Crowe, 2009). A fully matched position is ideal however this is not observable in reality, because of the different goals of a bank and its customers, nor is it favorable due to its negative effect on profitability; a reasonable degree of mismatch enhances profitability (Crowe, 2009).

### **2.3 Empirical Review of Literature**

The determinant of Financial Performance is summarized by capital adequacy, asset quality, management efficiency, earnings performance and liquidity management. Financial performance, asset quality, maturity gap and capital adequacy will be explained in this section as per the literature reviewed.

#### **2.3.1 Financial Performance**

Financial performance is the outcome of a firm's practices and applications in monetary terms. It is also the result of different activities undertaken by an organization. Common examples of financial performance indicators comprise operating income, earnings before interest and taxes, and net asset value (Cole, 2004). There are two major reasons why organizations should have financial performance measurement. The first is to produce financial statements at the right time. The second is to avail statistical feedback about the achievement of the scheme, which must be used to improve that performance, (Johnson & Scholes, 2007). Financial Statements examine the financial status and achievement of a firm. These statements are prepared

and composed for external stakeholders which will include shareholders, government agencies and lenders (Rahaman, 2010). The financial performance of business entities is an area that has generated a lot of attention, comments and interests from both financial experts, researchers, the general public and the management of corporate concerns. To examine the financial performance of an institution, financial statements are examined where different ratios are evaluated as per the needs of the users.

Financial performance is the outcome of a firm's policies and operations in monetary terms. It is also the result of different activities undertaken by an organization. Financial performance indicators include operating income, earnings before interest and taxes, and net asset value Matolcsy and Wright (2011) evaluated a firm achievement using a return on assets which is  $EBIT / \text{average total assets}$ , return on equity that is  $\text{net profit/equity}$ . Yasser *et al.*, (2011) used return on equity and profit margin for the measurement of firm performance. Market-based evaluators of companies' achievement were done by Shah *et al.*, (2011) where financial reporting perspective was measured by return on equity (ROE) and return on investment (ROI) which is  $\text{net result plus interest over equity plus total debt}$ .

Financial performance evaluates how well a firm is generating value for the shareholders. It can be examined using various financial measures such as profit after tax (PAT), return on assets (ROA), return on equity (ROE), earnings per share (EPS) and any market value ration that is generally accepted (Pandey, 1985). The financial performance of financial institutions can be examined using a combination of financial ratios analysis, benchmarking, and measuring performance against a budget or a mix of these methodologies. The financial statements of financial institutions commonly contain a variety of financial ratios designed to explain the corporation's performance (Oye, 2006).

According to Nyabwaga *et al.*, (2011), in their study on the effect of working capital management practices on the financial performance they postulate that working capital management practices were low amongst small scale enterprises as the majority had not taken up formal working capital management practices and also the study confirms that there is a positive relationship between working capital management practices and financial performance. Neupane and Subedi (2013) did a study on the determinants of

banks' liquidity and their impact on the financial performance of selected commercial banks in Nepal. A multivariate linear regression model was used to examine how each of the dependent variables relates to return on Asset. Among the statistically compelling factors affecting banks' liquidity included capital adequacy, bank size and growth rate of the gross domestic product harmed financial performance whereas, liquidity, the premium paid by borrowers had a positive impact on financial performance. Therefore, the impact of bank liquidity on financial performance was non-linear.

Sanghani (2014) examined the effect of liquidity on the financial performance of non-financial institutions listed at the Nairobi Securities Exchange (NSE). Secondary data was collected from NSE and multiple regression analysis was used in the data evaluation. The study affirms that liquidity positively influences the financial performance of non-financial companies listed at the NSE. The study found that current liabilities over current assets positively influence the financial performance of non-financial firms and also showed that an increase in operating cash flow ratio positively influence the financial performance of non-financial companies listed at the NSE. The study recommended that there is a need for non-financial companies listed at the NSE to increase their current assets to increase their liquidity as it was found that a rise in the current ratio positively affects the financial performance. The financial performance of a firm can be viewed from many angles like profitability, dividend growth, sales turnover and return on investments among others. However, there is still debate among scholars regarding how the performance of entities should be measured and the factors that affect the financial performance of companies (Liargovas & Skandalis, 2008).

### **2.3.2 Asset Quality**

The ratio of provision for bad debts to loan advances to customers is adopted as a proxy for asset quality. This measure reflects changes in the health of the bank loan portfolio and credit quality. Thus, it is also an indicator of credit risk in banks. Credit risk is the risk that an asset or a loan becomes irrecoverable in the case of outright default, or the risk of delay in the servicing of the loan (Heffernan, 1996). Credit risk can have a crippling effect thus leading to insolvency (Bessis, 2002). The higher the provision for bad debt to loan advances ratio, the higher the credit risk and the higher



the accumulation of unpaid loans and interest. Additionally, the present value of the asset declines, thereby undermining the solvency of a bank. According to Kosmidou (2008), poor asset quality can harm a bank's profitability by reducing interest income revenue.

Asset affects the profitability of a financial institution. Assets comprise, among others, current assets, credit portfolio, fixed asset, and other investments. A loan is a major asset from which income is generated. The quality of the loan portfolio determines profitability. The highest risk of facing a financial institution is the losses derived from delinquent loans (Dang, 2011). Thus, nonperforming loan ratios are the best surrogates for asset quality. Low nonperforming loans to total loans show that a healthy portfolio of a financial institution. The lower the ratio the better the bank performing (Sangmi & Nazir, 2010). Results from a study by Ongaki (2012) showed that there is a positive association between profit ratio and asset quality ratio. An increase in asset quality ratio leads to an increase in profit margin. The firm's asset is another bank-specific variable that influences the financial performance of the firm. The bank asset comprises among other current assets, credit portfolio, fixed asset, and other investments. Often a growing asset (size) is related to the period of existence of the firm. Mostly loan of the financial institution is a key asset that generates the major share of the bank's income (Jeanne & Svensson, 2007).

The survival of financial institutions is typically in jeopardy when their assets become impaired, so it is important to check indicators of the quality of their assets in terms of overexposure to specific risks trends in non-performing loans and the health and profitability of borrowers (Mwangi, 2012). A firm's asset is a variable that affects the financial performance of the firm. The bank asset includes among other current assets, credit portfolio, fixed asset, and other investments. More often than not the loan of the financial institution is a key asset that generates the major share of the bank's income (Jeanne & Svensson, 2007). A loan is the major generator of income for most financial institutions. The quality of loan portfolio determines the liquidity of a firm to a great extent most financial institutions will develop a wide variety of loan products to cater to the needs of its customers it is this wide variety of loan products that will constitute its loan portfolio. A financial institution whose customer's the default on their payment

may face cash flow problems, which eventually upsets its liquidity position. These assets mostly demand interest payments such as loans and investment portfolios.

Advancement of Loans is the major asset of most financial institutions from which they make income. The variety and quality of the loan portfolio influence the financial performance of the firm. The loan portfolio quality has an important impact on the financial performance of the firm. A review or evaluation assessing the credit risk associated with a particular loan product against assets will show the level of risks available. These assets usually demand interest payments such as loans and investment portfolios. How efficient management is in controlling and monitoring credit risk can also affect what kind of credit rating is given (Kashyap, Rajan & Stein, 2002).

### **2.3.3 Maturity Gap**

The main cause of liquidity risk is the maturity imbalance between assets and liabilities. The majority of the assets are funded by deposits most of which have a lifespan of one year or less with a possibility to be called at any time. This situation is known as the imbalance between assets and liabilities or liquidity gaps. This imbalance created by these assets and liabilities at any one time or period can be examined with the help of the maturity gap between assets and liabilities. For this study, the maturity gap will be measured as banks advances to customers over customer deposits. A higher liquidity gap might create liquidity risk for most MFIs in Kenya (CBK, 2013). Maaka (2013) found that the profitability of the commercial bank in Kenya is negatively affected due to an increase in the liquidity gap and leverage.

The maturity shift of short-term deposits into long-term loans makes banks susceptible to liquidity risk (Basel Committee on Banking Supervision, 2008). The market liquidity risk refers to the inability to sell assets at or near the fair value, and in the case of a relevant sale in a small market; it can emerge as a price slump Brunnermeier & Pedersen (2009). According to Goodhart (2008), there are two basic features of liquidity risk and they are maturity transformation (the maturity of a bank's liabilities and assets) and the inherent liquidity of a bank's asset (the extent to which an asset can be sold without incurring a significant loss of value under any market condition). As such, the two facets of a bank's liquidity are associated. Banks do not need to be

worried about the maturity transformation if they have the assets that can be sold without bearing any loss.

The liquidity of the firm is a key determinant of the firm's financial performance. Liquidity risk can be measured by two main methods: liquidity gap and liquidity ratios. The liquidity gap is the difference between assets and liabilities at both present and future dates. Liquidity is the amount of capital that is available for investment and spending. Capital includes cash, credit and equity. Most of the capital is credit rather than cash. That's because of the large financial institutions that do most investments prefer using borrowed money (Jeanne & Svensson, 2007). At any date, a positive gap between assets and liabilities is equivalent to a deficit. Liquidity ratios are various balance sheet ratios which should identify main liquidity trends. These ratios reflect the fact that the firm should be sure that appropriate, low-cost funding is available in a short time. This might involve holding a portfolio of assets than can be easily sold cash reserves, the minimum required reserves or government securities

Whereas, banks having assets that are going to be matured in a shorter period may have less need to keep the liquid assets. This increases the demand of depositors creating liquidity risk. This may cause the failure of a given bank or even the entire banking system due to the contagion effect (Diamond and Rajan, 2005). High liquidity increases the leverage and a highly leveraged bank may turn into the consumer of liquidity from the provider with a significant liquidity gap, the banks may have to borrow from the market even at a higher rate thereby pushing up the cost of borrowing therefore when paying for those liabilities a MFIs may be faced with serious liquidity shortage. With the capping of interest rates by the CBK, it means that MFIs will be affected by the law as there is a maximum rate that they cannot exceed this will affect the liquidity gap as the targeted asset (loan interest) from the loan issued is reduced it means that that liability will not generate as much as expected.

### **2.3.4 Capital Adequacy**

The ratio of equity to total assets is employed as a measure for any financial institution's capital adequacy. This measures the percentage of the total assets that are financed with equity capital. Capital adequacy, therefore, describes the sufficiency of the amount of equity that can absorb shocks that financial institutions may experience. It is expected that the higher the Equity to Asset ratio, the lower the need for external funding and therefore the higher the profitability of the financial institution. Also, the well-capitalized financial institution faces a lower cost of going bankrupt which reduces their cost of funding (Kosmidou, 2008). Banks with higher capital to asset ratio are treated as relatively secure and tend to have a better margin of cushion, remaining profitable even during difficult economic times. Conversely, the financial institution with lower capital adequacy is considered riskier compared to the highly capitalized banks.

Capital adequacy is a determinant of MFIs' financial performance that is computed as a ratio of total equity to total assets. The capital structure of MFIs consists of retained profit, shareholders' funds and reserves. These elements influence MFI's financial performance owing to its influence on leverage and risk. Assets of MFIs can be funded using either debt or capital. However, financing through debt is very risky as opposed to financing through capital putting into consideration MFIs exposure to credit and liquidity risks. The explanation for this is that, in an event that MFIs experience loss as a result of creditor defaulting or liquidity challenges, the MFIs must still service its debts (Berlin & Mester, 2007). Relatively, an MFIs with adequate capital can take a high risk that emanates from credit and liquidity risks. Claeys & Vennet (2008) argue that banks require a strong capital base in the developing countries to cope with the financial crises and protect depositors when a bank undergoes bankruptcy and liquidity distress. Charlene (2005) notes that commercial banks with have higher equity levels can minimize their cost of capital which might have a positive impact on profitability. According to Basel II and III accord, frequently majority banks insolvencies are a result of credit losses and thus commercial banks should have a high-quality capital to absorb a loss to cope with the stress period.

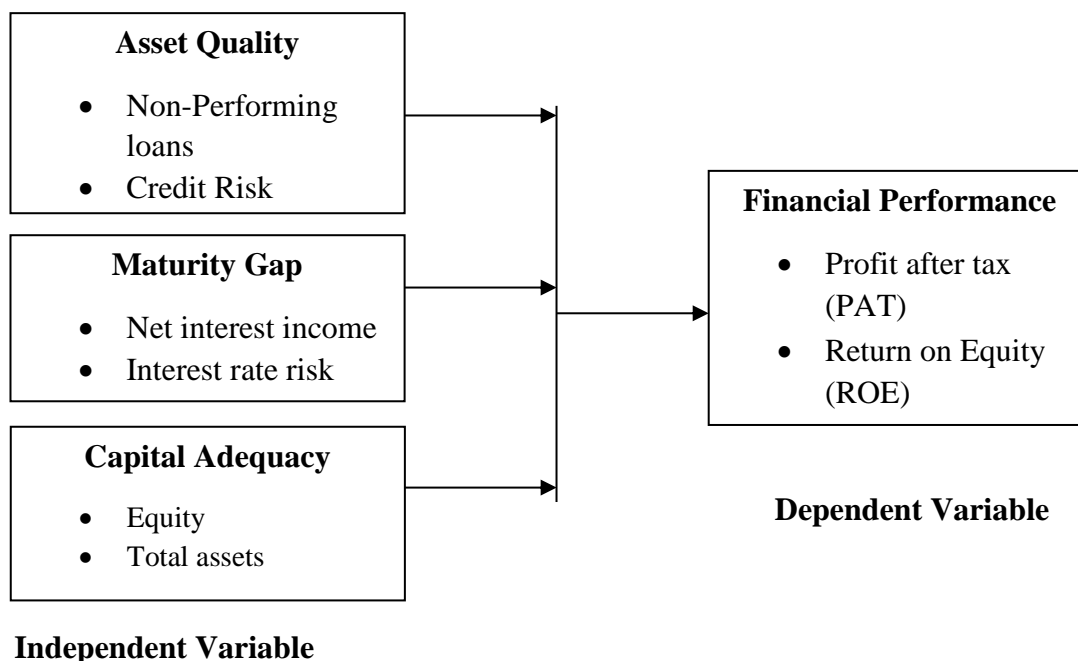
Neupane and Subedi (2013), in their study on the determinants of banks' liquidity and their impact on the financial performance of selected commercial banks in Nepal. A multivariate linear regression model was applied to examine how each of the dependent variables was associated to return on asset (ROA). Among the statistically compelling factors affecting banks' liquidity included capital adequacy, bank size and growth rate of the gross domestic product harmed financial performance whereas, liquidity premium paid by borrowers had a positive effect on financial performance. Therefore, the effect of bank liquidity on financial performance was non-linear.

Kimari (2013) followed a cross-sectional survey research design where the population for this study was all heads of credit risk management function in the 215 deposit-taking SACCOs that are under supervision by SASRA. The researcher took advantage of probability sampling using simple random sampling where every element of the population had an equal chance of being picked. Both Primary and secondary data were used for the study. The data analysis method was based on Pearson correlation analysis and a multiple regression model whereby the dependent variable was the financial performance of the SACCOs which was measured using the return on equity (ROE) whereas the independent variables were capital adequacy, asset quality, management efficiency, earnings and liquidity. The research results showed that there was a positive relationship between credit risk management and financial performance of deposit Taking MFIs and SACCOS in Kenya.

The capital ratio has long been used as a valuable measure for evaluating capital adequacy and it shows the general safety and financial wellbeing of financial institutions. In most cases, well-capitalized banks are generally exposed to lower expected costs of financial distress and such an advantage will then be translated to the financial performance of the firm. A firm that portrays a strong capital base can take advantage of profitable investments that can yield high returns and rewards in the future (Holmstrom & Tirole, 2000). The capital ratio is used to protect depositors and promote the stability and effectiveness of financial systems around the globe. Most financial analysts will use two types of capital that are tier one capital and tier two capital. Tier one capital, which can absorb losses without a bank being required to stop trading, and tier two capital, which can take in losses in the event of winding-up and so provides a less cushion of protection to depositors (Kashyap, Rajan & Stein, 2002).

## 2.4 Conceptual Framework

In this study, the framework presupposes that financial performance will be the dependent variable, while the independent variables are asset quality, maturity gap and capital adequacy, as shown in Figure 2.1.



**Figure 2. 1: Conceptual Framework on the Effects of Liquidity Management on the Financial Performance of MFIs in Kenya.**

## 2.5 Summary of Literature Review

Liability management theory focuses on banks issuing liabilities to meet expected or unexpected liquidity needs therefore it means that when an MFIs issues liabilities to the members to raise immediate cash these liabilities with time will mature and will need to be paid back to those whose purchased the liabilities, therefore, it is important for the MFIs to ensure that the money they received was put into the use it was intended for so that cases do not arise where monies for certain projects was misappropriated and when their call times are up they have not generated any income.

Liquidity preference theory postulates that liquidity of MFIs is affected since banks will need money for the transaction motive as they will need liquid money to carry out their daily operations like paying bills therefore they will hold some liquid money with them similarly because of unforeseen emergencies they need to set aside some liquid

money for emergencies, contingencies and accidents in the finance market there lots of investments opportunities which the MFIs can invest in so it will be forced to keep some liquid cash to take advantage of these investment opportunities this is the speculative motive of holding cash, therefore, their liquidity preference is determined by either the speculative, transactional or precautionary need.

Commercial loan theory of liquidity asserts that MFIs will have dealings with its clients dealing mainly with money whereby a customer may come in at any time and request for money to undertake a project or finance a business deal therefore they need assets either with themselves or other banks that they can easily convert to cash to enable them to meet their demand however they should strike a balance between the interest of MFI (Managers) and those of its borrowers so that the MFIs does not lose out on investment opportunities or customers lack money for their needs.

## **2.6 Research Gaps**

From the literature review, there are indications that there still exist barriers to healthy financial performance which includes unrecoverable loans, capital adequacy, a mismatch between asset and liabilities. However, the literature review reveals that most studies done on liquidity management and financial performance have been conducted mainly for the banking sector and there are limited studies that have specifically focused on the microfinance sector, which is also equally important for economic growth and poverty alleviation especially to those who cannot afford mainstream banking services. Therefore, the present study will explore the effect of liquidity management on the financial performance of MFIs in Kenya.

## **CHAPTER THREE**

### **RESEARCH METHODOLOGY**

#### **3.1 Introduction**

This chapter defines the framework for the research design, target population, sampling technique, sampling frame, sample size, instruments used, pretesting of research instruments and data processing and analysis.

#### **3.2 Research Design**

The study followed a longitudinal study design to help in understanding the effect of liquidity management on the financial performance of MFIs in Kenya answering the “what” question of the study. The study followed longitudinal study, Longitudinal study design was useful for this study as it aided in observation of the analyzed data collected from the population and the cause-effect of the independent variable on the dependent variable since the nature of research also relied on secondary data of published financial reports of MFIs in Kenya. Data for five years from year two thousand and twelve to year two thousand and sixteen was used.

#### **3.3 The Target Population**

The target population for this study comprised twenty-six (26) MFIs in Kenya registered by CBK as provided in Appendix 1. The study only considered MFIs which had full financial statements from two thousand and twelve to two thousand and sixteen. The researcher adopted a census where all the twenty-six (26) MFIs in Kenya were studied. The unit of analysis was a microfinance institution.

#### **3.4 Data Collection Instruments**

The research study used both secondary data and primary data since the nature of the data is quantitative. Secondary data and the study variables were deduced from the audited financial statements of the MFIs under consideration. The data was obtained from the CBK, CBK’s Annual Supervision reports and also the AMFI annual reports the data sources for five (5) years from (2012-2016) depending on data availability. A questionnaire was administered to respondents in MFIs. Four questionnaires were therefore administered in each MFI making a total of one hundred and four



questionnaires administered using the drop and pick method in each of the twenty-six (26) MFI's. Each questionnaire was divided into six sections namely general information, asset quality, maturity gap, capital adequacy and financial performance indicators. Responses will then be captured on a five-point Likert scale.

### **3.5 Data collection Procedures**

Both Primary and secondary data were used in the study. Primary data was collected through the use of a self-administered questionnaire. The questionnaire was designed to have both open-ended and closed-ended questions. Secondary data was obtained from MFIs' financial statements. Secondary data from the CBK reports were reviewed for completeness and consistency to carry out statistical analysis.

### **3.6 Pretesting of Research instruments**

One approach of examining for reliability is the internal consistency method, this method avails a unique estimate of reliability for the given test administration. The most popular internal consistency reliability estimate is given by the Cronbach alpha which is expressed as  $\alpha = \frac{Np}{1+p(N-1)}$ , where N equals the number of items and p equals the mean inter-item correlation. To base the validity of the research instrument, the opinions of experts in the area of study was sought. This was to enable the necessary modification and revision of the research instrument to enhance validity.

### **3.7 Data Processing and Analysis**

The data collected was analyzed, for the study objectives, using both descriptive and inferential statistics. The data collected was checked to avoid any errors, omissions and ensure consistency. The data was then coded into logical, descriptive and meaningful categories to provide a framework for analysis. Quantitative data was analyzed through descriptive statistics and presented through percentiles, means, standard deviations and frequencies. The information was then displayed by the use of tables, figures and content analysis for qualitative data. This was carried out by tallying up responses, computing percentages of variations in response as well as describing and interpreting the data in line with the study variables and assumptions.

The study also utilized correlation and multiple regression analysis to determine the relationship between liquidity management and financial performance of MFIs. A univariate analysis which is the distributional properties of a variable was carried out first for each variable to describe that variable and as a preparation for multivariate analysis. The study used F-statistics at a 5% confidence level to test the dependence of the financial performance of MFIs on liquidity management. Thus, the study employed multiple linear regressions in its multivariate analysis as summarized in equation 3.1:

$$Y_{it} = \beta_0 + \beta_1 AQ_{it} + \beta_2 MG_{it} + \beta_3 CA_{it} + \epsilon_{it} \text{-----Equation 3.1}$$

Where;

$Y_{it}$  is Financial Performance of MFI I at time t as expressed by ROE

$\beta_0$  is Intercept constant,

$AQ_{it}$  is Asset Quality of MFI i at time t

$MG_{it}$  is Maturity Gap of MFI i at time t

$CA_{it}$  is Capital Adequacy of MFI i at time t

$\beta_1 - \beta_3$  is Corresponding coefficients parameters

$\epsilon_{it}$  was the error term where i is cross-sectional and t time identifier.

**Table 3. 1: Table of Study Variables and Objectives**

<b>Variable /Objective</b>	<b>Variable Measurement</b>	<b>Statistical tools</b>	<b>Means of data collection</b>
Financial performance(Y)	ROE= $\frac{\text{Net profit}}{\text{Equity}}$	Mean, standard deviation, correlation coefficient and regression analysis	. Questionnaire .Secondary data survey sheet
Asset quality (X <sub>1</sub> )	Asset quality= $\frac{\text{Provision for bad debts}}{\text{Advances to customers}}$	Mean, standard deviation, correlation coefficient and regression analysis	. Questionnaire . Secondary data survey sheet
Maturity gap (X <sub>2</sub> )	Liquidity= $\frac{\text{Cash reserves}}{\text{Customer deposits}}$	Mean, standard deviation, correlation coefficient and regression analysis	. Questionnaire . Secondary data survey sheet
Capital adequacy (X <sub>3</sub> )	Capital adequacy= $\frac{\text{Equity}}{\text{Total assets}}$	Mean, standard deviation, correlation coefficient and regression analysis	. Questionnaire . Secondary data survey sheet

### **3.8 Diagnostic tests**

It was important to ensure the non-violation of the assumptions of the classical linear regression model before attempting to estimate the equation. Estimating the equation when the assumptions of the linear regression are violated runs the risk of obtaining biased, inefficient and inconsistent parameter estimates (Brooks, 2008). Hence normality, multi-collinearity autocorrelation and heteroscedasticity tests were carried out to ensure clear specifications of the analytical model given in equation 3

## CHAPTER FOUR

### RESEARCH FINDINGS AND DISCUSSIONS

#### 4.1 Introduction

This Chapter presents the results, analysis and findings of the study based on the research objectives. The results are presented in form of summary tables. Regression and correlations analysis will be used to analyze the data to answer the research questions' objectives.

#### 4.2 Response Rate

The study administered 100 questionnaires to the respondents who were in the finance departments of MFIs. A total of 68 questionnaires were filled, picked and collected from the respondents which translate to a 68% response rate. Babbie (2010) recommends that a 60% return rate is good. This indicate that the response rate was sufficient and falls within the recommended threshold.

#### 4.3 Results of Pre-test

The study desired to establish the reliability of the research instruments used. Results of the Cronbach's alpha coefficients for the tested items ranged from 0.725 to 0.801. Therefore, the research instruments met the threshold value of 0.7 as recommended by Cooper and Schindler (2011) as shown in Table 4.1.

**Table 4. 1: Cronbach Alpha Reliability Tests**

<u>Research Variables</u>	<u>Reliability</u>	<u>Remark</u>
Asset Quality	0.755	Adequate
Maturity Gap	0.801	Adequate
Capital Adequacy	0.725	Adequate
<u>Financial Performance</u>	<u>0.800</u>	<u>Adequate</u>

#### 4.4 Background information of the respondents

The study sought to establish the background information of the respondents in terms of gender, length of service and education level. This information was relevant in determining the understanding of the respondents to the issues sought by the study.

#### 4.4.1 Gender distribution of the respondents

The respondents sampled in the study comprised both male and female. The study required that the respondents indicate whether they are male or female. Table 4.2 shows the distribution of the respondents by gender. The table shows that of the respondents 58.8% were male while females were 41.2%. The data indicates that most of the staff working in the finance department of MFIs are male. The findings also indicate MFIs had both male and female employees and the ratio is within the  $\frac{1}{3}$ <sup>rd</sup> gender rule as stipulated in the Kenyan Constitution of 2010. The findings also imply that the views and opinions expressed in the study are gender-sensitive about liquidity management and financial performance of MFIs in Kenya.

**Table 4. 2: Whether the Respondent is Male or Female**

				Valid	
		Frequency	Percent	Percent	Cumulative Percent
Valid	Male	40	58.8	58.8	58.8
	Female	28	41.2	41.2	100.0
	<b>Total</b>	<b>68</b>	<b>100.0</b>	<b>100.0</b>	

#### 4.4.2 Length of Service in the MFI

The study sought to establish the length of time that the respondents had been in service in the MFI to establish their familiarity with the issues the study sought. The results presented in Table 4.3 show that twenty-eight employees (41.2%) had offered their services for less than six years whereas twenty-nine employees (42.6%) had offered their services for a period between 6-10 years and eleven employees (16.2%) had offered their services for more than 10 years. The length of service in an organization can determine the degree to which they are conversant with issues relating to their daily work performance. The findings showed that the bulk of the respondents had served for more than five years and thus were conversant with the issues sought by the study. Therefore, the bulk of the respondents representing (58.8%) had sufficient knowledge of the operations and functions of MFIs since they had worked for more than six years in the MFIs sector.

The study showed that there was job security within the MFIs and the management was offering fair rewards hence the distribution of the length of service to the MFIs. This also showed an indication that MFIs are good employers in Kenya and the Kenyan government needs to strengthen them since it will highly contribute towards the achievement of vision 2030 and also bridge the unemployment gap since most of the Kenyan youth are educated but not employed, hence the stronger the MFIs the better in contribution on the employment of Kenyan youth, (IEA, 2013).

**Table 4. 3: Respondents Length of Service**

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	<5 years	28	41.2	41.2	41.2
	6-10	29	42.6	42.6	83.8
	>10	11	16.2	16.2	100.0
	<b>Total</b>	<b>68</b>	<b>100.0</b>	<b>100.0</b>	

#### 4.4.3 Level of Education

The study was carried out in different MFIs who recruited staff depending on the various needs. It was therefore expected that employees have different qualifications depending on their staff needs. Educational levels influence liquidity management practices since the different skills or knowledge attained by the staff will enable them to tackle liquidity needs according to their educational levels. The researcher found that 48.5% of the respondents had a College education while 39.7% had a Degree whereas 11.8 % had a master’s degree and or a doctorate. The study sought to establish the educational level of respondents. The results are represented in Table 4.4.

The study showed that staff in the management level of MFIs are highly educated and are in a position to undertake critical managerial decisions about liquidity management and financial performance of MFIs therefore their response was relevant to the study since they understood the various aspects of liquidity management and financial performance of MFIs.

**Table 4. 4: Respondents Level of Education**

		Valid			
		Frequency	Percent	Percent	Cumulative Percent
Valid	College	33	48.5	48.5	48.5
	Undergraduate	27	39.7	39.7	88.2
	Postgraduate	8	11.8	11.8	100.0
	<b>Total</b>	<b>68</b>	<b>100.0</b>	<b>100.0</b>	

#### 4.5 Descriptive statistics

The objective of this study was to examine the effect of liquidity management on the financial performance of MFIs in Kenya. As such the study sought to examine the degree to which asset quality, maturity gap and capital adequacy affect the financial performance of MFIs. The section presents the results of the different aspects of liquidity which were asset quality, maturity gap and capital adequacy. A scale of 5 to 1 was used where 5 was strongly agreed, 4 is agreed, 3 is neutral 2 is disagree and 1 strongly disagreed. This section represents the results of the respondent agreed with the different aspects of liquidity management practices in the MFI. The section also presents the descriptive results of the secondary data obtained through the secondary data record survey sheet.

##### 4.5.1 Multicollinearity test

Multi collinearity test was conducted in this study by the variance inflation factor for the secondary data part. The results of the multicollinearity are presented in table 4.5. Collinearity statistics indicated variance inflation factor (VIF) < 2 an indication that the variable was not highly correlated therefore no existence of multicollinearity.

**Table 4. 5: Multi Collinearity Test Results**

Variable	VIF	1/VIF
Asset quality	1.9843	0.504
Maturity Gap	1.1449	0.8734
Capital adequacy	1.8261	0.5476
Mean VIF	<b>1.6518</b>	

### 4.5.2 Normality test

Parametric tests such as correlation and multiple regression require normal data. When data is not normally distributed it can distort the output for any further testing. The results presented in Table 4.6 show the variables had a p-value which was greater than 0.05 and thus it was concluded that the variable was normally distributed. To test for normality, the Kolmogorov-Smirnov test was used for the secondary data part.

**Table 4. 6: Results of the Kolmogorov-Smirnov test for Normality**

<b>Variable</b>	<b>K-S Statistic</b>	<b>Significance</b>
Asset quality	2.191	0.076
Maturity gap	2.225	0.075
Capital adequacy	2.167	0.057
Financial Performance	2.139	0.095

### 4.5.3 Heteroscedasticity test

The data used for the research was cross-sectional thus the existence of heteroscedasticity. The classical linear regression model assumes that the error term is homoscedastic meaning that it has a constant variance consequently if the error variance is not constant, then heteroscedasticity is present. Therefore, generating a linear regression model without checking for heteroscedasticity will lead to biased output the Breusch-Pagan test was used to test for heteroscedasticity for the secondary data part. Table 4.7 shows the results obtained from the Breusch-Pagan test. The results in Table 4.7 indicate that the P-value is greater than 0.05 (0.7585). It was found that the variables under this study did not suffer from heteroscedasticity

**Table 4. 7: Results of the Breusch-Pagan Test for Heteroscedasticity**

<b>Breusch-Pagan test for Heteroscedasticity</b>
Prob>Chic2=0.7585



#### 4.5.4 Autocorrelation test

The test for autocorrelation for the secondary data part was conducted using the Durbin-Watson test (1951). For this study the Durbin –Watson test was used to check that the residuals of the models were not auto correlated since the independence of the residuals is one of the basic hypotheses for regression analysis. The Durbin Watson test ranges in value from 0 to 4, A Durbin Watson value of 2 indicates non-auto correlation whereas a value tending to 0 is an indicator of positive correlation. A value tending towards 4 indicates negative autocorrelation. Results indicate that the overall value was 2.1106 was as shown in Table 4.8 therefore the data was not auto correlated

**Table 4. 8: Results of the Durbin-Watson for Autocorrelation**

Variable	Durbin-Watson	P-Value
Overall	2.1106	0.000

#### 4.5.6 Descriptive Analysis of Asset Quality and Financial Performance

Asset quality is critical in an MFI. Asset quality is the engine that provides cash for an MFI. Asset quality ratio is used as a signal of the changes in the status of the loan portfolio and credit quality therefore it is used as an indicator of credit risk in MFIs. Since the key aspects of MFIs are the issuance of money in form of loans hence they are mandated to ensure that monthly the members then repay as required in their contractual obligations. The researcher had several questions namely MFI had adequate loan portfolio, Rate of loan default in MFI is minimal, aspects of collateral are considered when issuing loans and flexible loan repayments periods improve loan repayment.

**Table 4. 9: Asset Quality and Financial performance Parameters**

	N	Mean	Std. Std.	Std. Deviation	Variance
<b>Asset Quality Parameters</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Error</b>	<b>Statistic</b>	<b>Statistic</b>
Gross loan portfolio is adequate	68	4.471	.07096	.585	.342
Rate of loan Default in the MFI is Minimal	68	3.985	.13167	1.086	1.179
Aspects of collateral are considered when issuing loans	68	4.309	.08184	.675	.455
Flexible repayment periods improve loan repayment	68	4.147	.11901	.981	.963
Valid N (list wise)	68				

From table 4.9 the study established that most MFI had adequate loan portfolios as indicated by a mean of 4.471, and a standard deviation of 0.585 this shows that the various loan products available in the MFIs are adequate to cater for the majority of the members' loan requirements. The study also established that the rate of loan default is also high with a mean of 3.985 and a standard deviation of 1.086 however this is being improved by the credit reference bureau that is blacklisting defaulters however the standard deviation is greater than that of loan portfolio meaning that all loan products suffer defaulters.

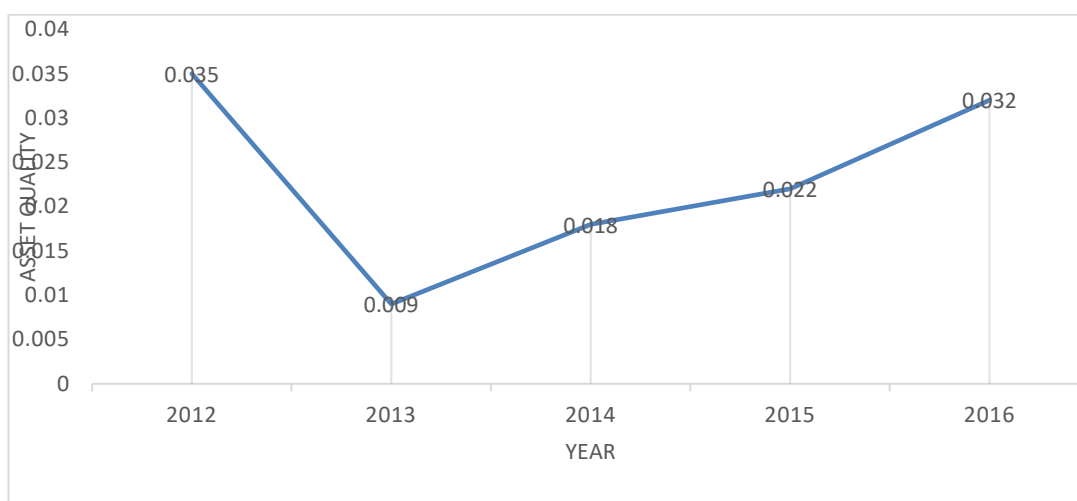
The study also established that aspects of collateral are always considered as indicated with a mean of 4.309 and standard deviation of .675 collaterals was important since it is what will be used to cover the loan in the instance of complete default this posed a challenge as in most cases the collateral was of higher value than the loan first given. The study also established that flexible loan repayment periods do not necessarily mean improvement in loan repayment as indicated by the mean of 4.147 and a standard deviation of 0.981. Therefore, MFIs should ensure that their loan portfolio generates enough income while they still try to reduce the risk they face from delinquent loans by maybe liaising with the credit reference bureau to ensure that the default risk is minimized as much as possible.

The findings imply that MFIs need to look at their loan products which will be availed to the market. This loan portfolio will determine the amount of cash available for daily operations since there are many people in the informal sector without a monthly salary but with daily proceeds that need to be tapped to improve the cash base. Therefore, the loan repayment periods for these groups will also differ as customers can have loan repayment periods of either daily, weekly, fortnightly and monthly to ensure all groups are captured in the loan products available. In instances where customers are required to give collateral then the MFIs should try and ensure that the value of the collateral and the loan given match as during the loan repayment period the loan amount reduces and the value of the collateral either increases or remains constant. The majority of the employees in the MFIs agreed that the gross loan portfolio was adequate, the rate of loan default in MFIs is minimal, aspects of collateral are considered when issuing loans and flexible loan repayment periods improve loan repayment.

Secondary data was collected from financial statements as available from CBK annual reports on MFIs from 2012-2016. From Table 4.10 the researcher observed that the highest asset quality was recorded in 2012 with a mean of 0.035 and a standard deviation of 0.048 whereas the lowest performance was recorded in the year 2013 with a mean of 0.009 and a standard deviation of 0.070 however there was an improvement thereafter this can be attributed with the introduction of the credit reference bureau that blacklists defaulters hence the improvement in loan defaulters. The study established that the MFIs on average have low exposure to credit risk as indicated by the means of less than 35%. This view is consistent with a study by Majakusi (2016) which concluded that Asset quality ensures sufficient cash is available to meet sufficient daily expenses as well enable lending to members. The study established the following from the audited financial reports. The descriptive statistics as represented in figure 4.1 show that the Asset quality was on a steady rise from the year 2013 to 2016. This can be attributed to the introduction of the credit reference bureau that blacklist loan defaulters hence members try to honor their loan pledges to avoid being blacklisted as this will weaken their credit ratings. The interest cap bill and the CBK benchmark lending rate led to a general decline in loan advanced as most of the banks instead preferred to invest in government treasury bills and bonds instead of lending to the market which is perceived to be riskier leading to a general decline in loans advanced to the public.

**Table 4. 10: Descriptive Statistics for Asset Quality from Secondary Data**

Year	2012	2013	2014	2015	2016
Mean	0.035	0.009	0.018	0.022	0.032
Std. Dev	0.048	0.070	0.022	0.022	0.023



**Figure 4. 1: The Variability of Asset Quality of MFIs in Kenya, 2012-2016 Secondary Data**

Also, MFIs need to review their loan products regularly to meet unexpected customer demands which might have been unforeseen during the initial stages of developing the loan products for example cases where customers delay repaying their loans or new members requiring loans earlier than anticipated. MFIs need to predict the loan proceeds that the various loan products will generate so that any extra proceeds can be invested for future returns. The risk created by the large loan product can have a crippling effect on the MFI which may lead to insolvency or even closure. These findings are in agreement with Mary (2014) which established that asset quality as a component of bad debts against the total cost of Deposit taking MFIs in Kenya, Kosmidou (2008) established that poor asset quality can have adverse effect impact on any financial institution by reducing the interest income revenue and (Jeane & Svensson, 2007) which suggested that loan is the major generator of income for most financial institutions.

With the current technological advancement, MFIs must be innovative since in the market they are many financial services providers who are giving out loans without the need of security or guarantors therefore this calls for a thorough review of the operations of MFIs to be in tandem with the technological advancement.

#### 4.5.7 Maturity gap and Financial Performance

The maturity gap is an indicator of the MFIs' ability to meet depositors' demands for cash. MFIs with enough liquid assets are said to be well managed. The researcher had set several parameters on the maturity gap to gauge its contribution to financial performance. The research questions included MFIs rely on external borrowing to finance their activities, MFIs suffer liquidity shortages and effective loan portfolio management maximizes the lending opportunities.

**Table 4. 11: Aspects of Maturity Gap Affecting Financial Performance of MFIs**

<b>Maturity Gap Parameters</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Std. Error</b>	<b>Variance</b>
MFIs rely on external borrowing to finance their activities	68	4.2353	.73541	.08918	.541
MFIs suffer liquidity shortages	68	4.1471	.67503	.08186	.456
Effective loan portfolio management maximizes lending opportunities	68	4.1029	.79438	.09633	.631
Valid N (list wise)	68				

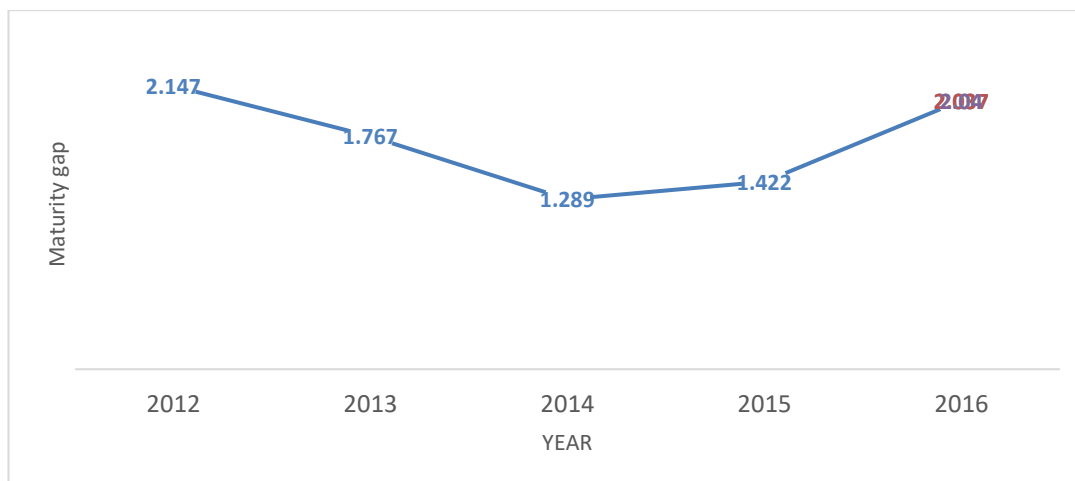
Results in table 4.11 established that MFIs rely partly on borrowing as indicated by a mean of 4.2353 and standard deviation of .7345 this means that most members deposit are not adequate to cover the activities of most MFIs and therefore rely also on donor funding. Hence the management was keen to get this funding to boost their books. The study also established that MFIs suffer minimal liquidity shortages as indicated by a mean of 4.1471 and standard deviation of .675 this meant that when most members lack adequate collateral they are denied loans and therefore issues of liquidity shortages are dealt with during the initial stages of the loan application. The collateral is the security that will cover the loan in case the member is unable to pay the loan amount.

The study also established that effective loan portfolio management maximizes lending opportunities as indicated by a mean value of 4.1029 and standard deviation of .794 this, therefore, means that MFIs with small loan portfolio can effectively manage and maximize the lending to members as they have a smaller loan portfolio to manage as opposed to a wide range of loan products that also significantly increase the spread of risk of default. In this study, the Maturity gap was measured in terms of cash and cash equivalents for secondary data. Table 4.12 presents the descriptive statistics on aspects of maturity gap affecting financial performance of MFIs.

**Table 4. 12: Descriptive Statistics for Maturity Gap from Secondary Data**

<b>Year</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Mean	2.147	1.767	1.289	1.422	2.037
Std. Dev	1.516	0.866	0.329	0.493	1.611

Secondary data was collected from financial statements as available from CBK annual reports on MFIs from 2012-2016. The study established the following from the reports as presented in Table 4.12: The results shown in table 4.12 indicate that the maturity gap of MFI was fluctuating over the sample period. The highest value recorded of Mean = 2.147, (SD = 1.516 was in 2012. This was followed by the year 2016 with a maturity gap of Mean = 2.037, (SD = 1.611). The least maturity gap was in the year 2014 as indicated by Mean = 1.289, (SD = 0.329). The data indicates that banks' advances to customer deposits over the five years declined from 2013 to 2015 and improved as from 2016 this can be attributed to the electioneering period of 2013 that saw a general decline in economic growth. The recorded standard deviation indicates that there were fluctuations in the maturity gap among MFIs in Kenya over the study period. The trend in the maturity gap is as depicted in Figure 4.2. This view is consistent with a study by Majakusi (2013) which concluded that liquidity is a bigger component of the maturity gap ensures that financial institutions lag their asset and liabilities to ensure a balance between the assets and liabilities. MFIs could team up with mobile service providers to reduce competition and also tap into the young generation that requires small amounts of loans regularly and pay within a short time.



**Figure 4. 2: The Variability of Maturity Gap of MFIs in Kenya Secondary Data, 2012-2016**

The study findings reveal that MFIs need to balance the maturity gap between their assets and liabilities this is evident from the fact that most MFIs do rely on external borrowings to fund loan portfolios and as such end up suffering cash shortages as most of the customers lack monthly pay at end month. Therefore, MFIs need to shore up more liquid assets to cover for the increase in the Maturity Gap this can be done by encouraging members to save a certain minimum amount before they get loans. They need also to keep an inventory on the better-performing loans against those with higher default rates and look at ways of reducing the loan under the form to maximize lending opportunities to better-performing loans. The findings of the study are in agreement with Maaka (2013) which found out that the performance of banks is negatively affected due to an increase in the liquidity gap and leverage, (CBK 2013) which established that higher liquidity and maturity gap might create liquidity risk to most MFIs in Kenya. And Goodhart (2008) established that the maturity of a bank's liabilities and assets affect its overall performance therefore are forced to rely on short-term bank loans to finance their short-term liquidity funding.

#### **4.5.8 Descriptive Statistical Analysis on Capital adequacy**

In business operations capital is one of the main facets of any business, as it indicates the financial health status as highly capitalized firms are assumed to be more stable Capital adequacy ratio, is used as an indicator of MFIs financial strengths in terms of withstanding operational and functional losses without jeopardizing customer's deposits and overall MFIs stability.

The study had identified a variety of study parameters to check on capital adequacy which included MFIs are funded wholly by member’s deposits, MFIs have adequate assets to cater for financial needs, Loss of income-generating opportunity will lead to a reduction in capital based and diversification of capital portfolio enhances the performance of MFIs. The study established that most MFIs are funded by members’ deposits as indicated by a mean of 4.338 and a standard deviation of .589. This means that most of the MFIs are stable financially. The study also established that MFIs have an adequate asset that can cater to financial needs that may arise at any time as indicated by the mean value of 4.265 and Standard deviation of .614. This means the management in most MFIs is aware of the need for setting aside reserves to create reserves in case of financial needs.

The study also established that loss of income-generating activities will not lead to a reduction in the capital base as indicated by the mean value of 4.059 and a standard deviation of .808 this means that capital is perpetual other than in case of complete closure. The study also established that diversification of capital portfolio enhances the performance of MFIs from the mean value of 4.088 and standard deviation of .993 therefore the capital base created will lead to increased cash in the MFIs which the members can purchase and then the MFI will issue them back again as loans and earn interest. The results from the study are as shown in table 4.13.

**Table 4. 13: Aspects of Capital Adequacy Affecting Financial Performance of MFIs**

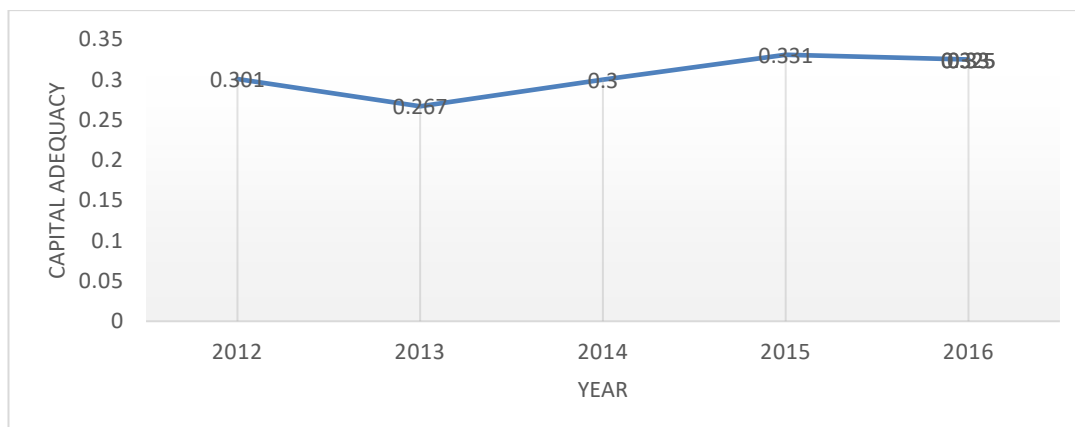
<b>Capital Adequacy Parameters</b>	<b>N</b>	<b>Mean</b>	<b>Std. Deviation</b>	<b>Variance</b>
<b>Statistic</b>	<b>Statistic</b>	<b>Statistic</b>	<b>Std. Deviation</b>	<b>Statistic</b>
MFIs are funded wholly by members deposits	68	4.3382	.58871	.347
MFIs have adequate assets to cater to financial needs	68	4.2647	.61372	.377
Loss of Income will lead to a reduction in capital	68	4.0588	.80821	.653
Diversification of Capital Portfolio Enhances Performance	68	4.0882	.97330	.947
Valid N (list wise)	68			



**Table 4. 14: Descriptive Statistics for Capital Adequacy for Secondary Data**

<b>Year</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Mean	0.301	0.267	0.300	0.331	0.325
Std. Dev	0.271	0.211	0.172	0.264	0.290

Capital adequacy ratio is used as an indicator of banks' financial strengths in terms of withstanding operational and functional losses without jeopardizing customer deposits and overall bank stability. Secondary data was collected from financial statements as available from CBK annual reports on MFIs from 2012-2016. The researcher established the following from the reports the results show that there was an increase in capital adequacy of the MFIs from 2012 to 2016. The year 2013 recorded the lowest capital adequacy ratio of Mean = 0.267, (SD = 0.211) while the year 2015 recorded the highest capital adequacy ratio of Mean = 0.331, (SD = 0.263). This implies that the ability of the MFIs in Kenya to absorb reasonable operational and functional losses without risking the institutions' stability had been improving over the study period, also it implies that the management of the MFIs in Kenya can meet the need for additional capital. Similarly, it implied that MFIs prefer less risky investments to avoid liquidity shortages. These findings are in agreement with (Kosmidou, 2008) that established that well-capitalized financial institutions face a lower cost of going bankrupt which reduces their cost of funding, Charlene (2005) noted that commercial banks with higher levels of equity can minimize their cost of capital which might have a positive impact on profitability Mary (2014) which established that capital adequacy as a component of long term debt against total Shareholder equity of Deposit taking MFIs in Kenya. Majakusi (2013) equated capital adequacy as the ratio between Equity over Net asset ratio and observed that the capital adequacy ratio of MFIs was steadily improving. The trend of this improvement in capital adequacy is presented in Figure 4.3.



**Figure 4. 3: The Variability of Capital Adequacy of MFIs in Kenya, 2012-2016**

The findings from the study reveal that majority of the MFIs are funded by members' deposits and the assets available to them are adequate to cater to most of their financial needs however if these assets are put into the wrong loan products then this can lead to a loss in income which may mean that the assets of this MFIs are impaired therefore to improve overall MFI stability so that it can operate profitably the MFI must try to diversify capital base by maybe investing in Governments treasury bills and bonds as this can be easily converted to cash without having to necessary interfere with the core capital of MFI.

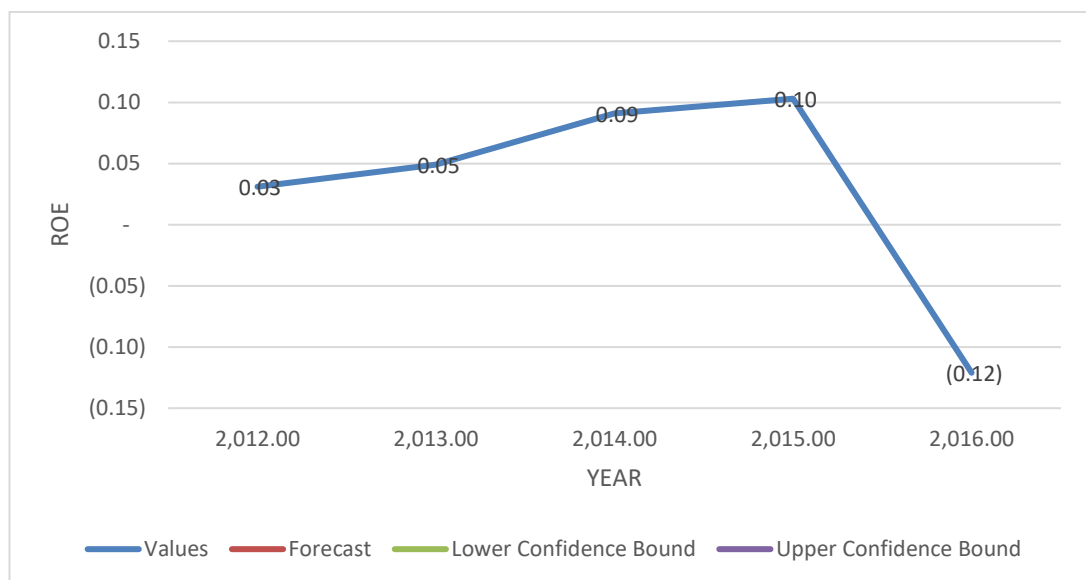
#### **4.5.9 Financial performance**

The study sought to establish how MFIs' financial performance impacts their liquidity management. Financial performance was measured using Return on Equity (ROE). The study period was from January 2012 to December 2016. Financial performance is the result of a firm's policies and operations in monetary terms for this study ROE was used. Table 4.15 displays the results of the study.

**Table 4. 14: Descriptive Statistics for Return on Equity from Secondary Data**

<b>Year</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Mean	0.031	0.049	0.091	0.103	-0.121
Std. Dev	0.069	0.100	0.01	0.527	0.23

The data was collected from financial statements as available from CBK annual reports on MFIs from 2012-2016. The researcher established the following from the reports the results indicate that the financial performance of MFI was fluctuating over the sample period since Return on equity is a measure of how effectively the management is utilizing the shareholders' capital Ongore and Kusa, 2013. The highest financial performance of Mean = 0.103, (SD = 0.527) was in 2015. This was followed by the year 2013 with a return on asset of Mean = 0.049, (SD = 0.10). The poorest financial performance was in the year 2016 as indicated by a ROA of Mean = -0.121, (SD = 0.23). The recorded standard deviation indicates that there were fluctuations in financial performance among MFIs in Kenya over the study period. The trend in financial performance is depicted in Figure 4.4.



**Figure 4. 4: The Variability of ROE of MFIs in Kenya, 2012-2016**

The findings reveal that from the year 2012 to the year 2016 the financial performance of MFIs slightly improved from 2012 to the year 2015 however in 2016 there was a slight drop. In Kenya there has been a huge increase in non-performing loans in deposit-taking MFIs over the last few years, this has greatly increased liquidity problems, this negatively impacts on investment decisions of the firm leading to the poor financial performance of the MFI (AMFI, 2013). Technological advancement in the financial sector demands that MFIs come up with new methods of advancing loans easily, fast and convenient to where the customer is and at times may be to his doorstep. Mobile service providers currently are offering loans to their customers easily, fast and conveniently with other banks developing applications that a customer

just downloads and accesses loans easily therefore MFIs should also embrace technology and maybe partner with mobile service providers or develop their applications that customers can download and access loan easily.

#### 4.6 Correlation Analysis

To evaluate the association between the study variables, the data collected was evaluated to generate a Power correlation coefficient which tests the association between the study variables. Results are therefore presented in table 4.16.

**Table 4. 15: Panel Power Correlation Table between the Independent Variables and Dependent Variables**

	ROE	Asset Quality	Maturity Gap	Capital Adequacy
ROE	1			
Asset Quality	-0.6707***	1		
Maturity Gap	-0.3963**	0.3660**	1	
Capital Adequacy	0.7859***	-0.6169***	-0.2206	1

\*\*\*Correlation is significant at 0.01 level & \*\* correlation is significant at 0.05

From table 4.16 Asset quality and Maturity, the gap had a negative correlation with the dependent variables whereas capital adequacy had a positive correlation with the dependent variable. Therefore, liquidity management had both positive and negative correlation with financial performance.

According to the Pearson correlation coefficient scale, a coefficient value in the interval 0.0-0.5 is a weak correlation, a range of 0.5-1.0 is a strong correlation accordingly a correlation value of 1 will indicate the presence of a perfect relationship between the dependent and independent variable the strength of the association varies from (- or +) indicating a positive or negative association from the intervals above.

Table 4.16 indicated that the asset quality of MFIs has a strong and negative correlation with the financial performance from the correlation coefficient value of -0.6707. The maturity gap has a weak negative correlation with a financial performance from the correlation coefficient value of positive -0.3963 this demonstrated that the association between the two variables is strong. Capital adequacy also a strong positive correlation with the financial performance from the coefficient value of 07859.

#### 4.7 Panel Regression Analysis

The relationship between liquidity management and financial performance of MFIs is evaluated through regression analysis. The regression model is summarized in table 4.17.

**Table 4. 16: Regression Coefficients**

Model	Coefficients	Std. Error	[95% Conf.	t	P> t
Constant	3.4645	1.563	.2140	2.22	.038
Asset Quality	-.0486	.0396	-.1311	-1.23	.232
Maturity Gap	-.0130	.0062	-.0258	-2.10	.048
Capital adequacy	.0559	.0180	.0185	3.11	.005

a. Dependent Variable: Financial Performance

The results in Table 4.17 provide the coefficients of the variables used in the study which were asset quality, Maturity gap and Capital adequacy.

Table 4.17 gives the regression coefficients which answer the regression model proposed

$$Y_{it} = \beta_0 + \beta_1 AQ_{it} + \beta_2 MG_{it} + \beta_3 CA_{it} + \epsilon_{it} \dots \dots \dots \text{Equation 4.1}$$

where:

$Y_{it}$  is Financial Performance of MFI i at time t as expressed by ROE

$\beta_0$  is Intercept constant,

$AQ_{it}$  is Asset Quality of MFI i at time t

$MG_{it}$  is Maturity Gap of MFI i at time t

$CA_{it}$  is Capital Adequacy of MFI i at time t

$\beta_1, \beta_2, \beta_3$  are Coefficients of the independent variables which measure the responsiveness of the Dependent variable (Y).

$\epsilon_{it}$  was the error term where i is cross-sectional and t time identifier.

From the data in table 4.17, the linear regression equation for this study is as shown in equation 4.2.

$$Y_{it} = 3.4645 - .0486X_1 - .0130 X_2 + .0559X_3 \dots \dots \dots \text{Equation 4.2}$$

The findings indicate that the constant (3.4645) is statistically significant ( $t=2.22$ ,  $p<0.005$ ), implying that holding all the independent variables (asset quality, maturity gap and capital adequacy) at zero financial performance (ROE) will be 3.4645 units. Asset quality was statistically insignificant therefore it does not influence financial performance. The findings contradict a study by Mary (2014), Olongo (2013) and Korir (2016) which found a significant positive relationship between asset quality and financial performance. This can be attributed to the introduction of interest cap rate in the year two thousand and sixteen (2016) where the banks were not supposed to charge a certain rate above the set benchmark lending rate therefore the MFIs loan products were affected and reduced as they preferred to lend to the Government that was less risky than lending to the members who have challenges meeting their monthly contributions. This law significantly reduced the MFIs revenues from the various loan portfolios.

The coefficient for maturity gap (-.0130) is statistically significant ( $t=-2.10$ ,  $p<0.05$ ) indicating that holding all the other independent variables (Asset quality and capital adequacy) constant at zero and increase in maturity gap by 1 unit will result in a decrease in financial performance by -.0130, therefore, decreasing the maturity gap between assets and liabilities would improve financial performance. The findings contradict with studies by Song'e (2015), Wanjohi (2013) and Korir (2016) which found a significant positive relationship between liquidity and financial performance. A decrease in maturity gap leads to an increase in financial performance this can be attributed to the fact that most MFIs rarely experience cases where members have applied for a loan and there is a delay in loan disbursement, Cases of delay in loan disbursement included inadequate collateral, lack of guarantors or missing details in loan application forms.

The coefficient for capital adequacy (.0559) is statistically significant at ( $t=3.11$ ,  $p<0.05$ ) indicating that holding all the other independent variables constant (Asset quality and maturity gap) 1 unit increase in capital adequacy will result in an increase in financial performance by .0559 hence financial performance is dependent on capital

adequacy. The findings are consistent with a study by Mary (2014) and Majakusi (2016) which found a significant positive relationship between Capital and financial performance this can be attributed to the fact that share capital in most Financial institutions which are a going concern does not decrease but either remain constant or increase due to issuance of the rights issue.

The study found out that asset quality has a negative but insignificant relationship with Financial performance while maturity gap also had a negative but significant relationship with financial performance whereas capital adequacy had a positive but significant relationship with financial performance therefore MFIs should ensure that liquidity management practices are put in place and adhered to improve on their performance

## CHAPTER FIVE

### SUMMARY, CONCLUSION AND RECOMMENDATIONS

#### 5.1 Introduction

This chapter presents a summary of the key study findings as well as the conclusions and recommendations made based on the study findings. This chapter will also point and present the areas pointed out for further research.

#### 5.2 Summary of the Findings

The study evaluated the effect of liquidity management practices on the financial performance of MFIs in Kenya. Data collected from both Primary and secondary sources were analyzed and interpreted. This section presents the summary of findings in regards to the effect of asset quality, maturity gap and capital adequacy on the financial performance of MFIs in Kenya.

##### 5.2.1 Asset quality and financial performance

The first objective was to find the effect of asset quality on the financial performance of MFIs in Kenya. Analytical methods used to arrive at research findings include descriptive statistics, correlation and regression analysis. The findings indicated that asset quality had a negative but insignificant effect on the financial performance of MFIs in Kenya. MFIs have no access to the central bank as a lender of the last resort therefore MFIs should ensure that their loan products portfolio is secured to avoid cases of defaulters and in extreme cases, complete default and also liaise with the credit reference bureau to avoid customers with a history of defaulting on loan repayments. The study also established that a negative significant linear relationship exists between asset quality and financial performance of MFIs in Kenya.

##### 5.2.2 Maturity Gap and financial performance

The second research objective was to examine the effect of the Maturity gap on the financial performance of MFIs in Kenya. Various analytical were used to arrive at the findings. The methods include descriptive statistics, correlation and regression analysis. The findings indicated that the maturity gap contributed to the financial performance of MFIs in Kenya. The results revealed that most MFIs rely on external borrowing to fund most of their members' demands for Cash. The data showed that MFIs suffer from liquidity shortages as the time the members demand cash and the



time the cash is availed was longer therefore increasing the liquidity gap. The study also found that a negative but significant relationship exists between the maturity gap and financial performance of MFIs in Kenya.

### **5.2.3 Capital adequacy and Financial Performance**

The third research objective was to evaluate the effect of Capital adequacy on the financial performance of MFIs in Kenya. Analytical methods used include descriptive statistics, correlation and regression analysis were adopted. The study found that most MFIs are funded by members' deposits, thus had adequate assets to cover for losses that result in liquidation the main reason for this is because most MFIs do not share the surplus profits to the customers in form of either interest on deposits or dividends to members and the amounts of Interests they earn they plow back as retained earnings, therefore, increasing their capital base. The study also established that a positive but significant relationship exists between capital adequacy and financial performance of MFIs in Kenya.

### **5.2.4 Liquidity management and financial performance**

The study found out that the bulk of the respondents concurred that proper liquidity management practices ensure a high rate of return on assets of the MFIs. The respondents also affirmed that employing sound liquidity management practices led to an improvement in the overall financial performance of the MFIs. The respondents also affirmed that a thin loan product line, increased default rate the mismatch between asset and liabilities negatively contributed to the MFIs financial performance

## **5.3 Conclusion**

The study investigated the effect of liquidity management on the financial performance of MFIs in Kenya. Against the analysis of the data collected and the study findings, the study makes the following conclusions in line with the study objectives.

### **5.3.1 Asset Quality and Financial Performance**

Asset quality has a negative relationship with the financial performance of MFIs. In this regard therefore Asset quality is very critical as a liquidity management measure in MFIs. The study had the following parameters to measure the aspect of asset quality on MFIs gross loan portfolio, rate of loan default, Collateral matters and flexible loan repayment periods. The study found that MFIs need to address the measures critically

to establish there are adequate loan products to cater to all member's needs and that all the loans are secured to ensure optimal financial performance since MFIs have a great role towards the achievement of vision 2030. The management needs to ensure there are diverse loan products to meet customer needs, strategies are put in place to ensure defaulters are reported to the credit reference bureau to avoid customers with poor credit records since they pose a threat to all MFIs. The association between the asset quality of the MFIs and financial performance is negative and significant. Provision for bad debts as a component of asset quality is eating into the profits of the MFIs as the loan defaulters need to be covered and the cover will come from the profits that the MFIs this makes financial performance go down since the provisions reduce profits recorded by MFIs.

### **5.3.2 Maturity Gap and Financial Performance**

The maturity gap had a negative relationship with the financial performance of MFIs. In this regard, the Maturity gap is the mismatch between assets and liabilities so that customers may demand cash and it may not be available the study observed that management needs to ensure that they reduce their over-reliance on donor and external borrowing to fund most of their member demands for cash leading to liquidity shortages. The management may also employ more knowledgeable employees to increase the knowledge base on the best ratio between the assets and liabilities so that customers are protected from lack of funds and the MFIs are also protected from members over withdrawals. The maturity gap determines the financial performance of MFIs' ability to make money transactions within a short period. Customers therefore are motivated to get more advances to inform of loans against their deposits. This leads to an increase in the financial performance of the MFIs thus there is a statistically relevant relationship between the maturity gap and financial performance of MFIs in Kenya.

### **5.3.3 Capital adequacy and Financial Performance**

Capital adequacy had a positive but significant association with the financial performance of MFIs. The study found out that most MFIs were funded by members' deposits and had adequate assets to cover their financial needs. Capitalization is directly related to financial performance as equity as a major component of Capital

directly impacts on financial performance as highly capitalized firms are deemed more financially stable than MFIs with low total equity.

### **5.3.4 Liquidity management and Financial Performance**

Proper liquidity management practices ensure a high rate of return on assets of an MFI. Similarly, MFIs that employ sound liquidity management practices increase their profits and revenues. Unpredictable borrowers plus the changes in political climate contributed negatively to the MFIs optimizing their financial performance. Therefore, liquidity management practices significantly influence the financial performance of MFIs

## **5.4 Recommendations**

The study makes the following recommendations regarding asset quality, maturity gap and capital adequacy based on the research findings.

### **5.4.1 Asset Quality**

The study sought to examine the consequence of asset quality on the financial performance of MFIs in Kenya. MFIs should adopt strategies for monitoring, constantly reviewing and reporting liquidity management levels to ensure both long and short term survival is not put at risk the strategies will aid in minimizing cases of excess or deficit in liquidity. An increase in advances to customers will increase financial performance however due to the risk of customers not paying provisions will have to be provided to mitigate against that this will however affect financial performance as the provisions will be reserved from the profits.

### **5.4.2 Maturity Gap**

The study sought to examine the effect of the maturity gap on the financial performance of MFIs in Kenya. MFIs should strive to schedule maturity periods of their reserve assets for them to correspond to the periods' funds will be required this will reduce the gap between the periods of acquiring the liquid assets compared to the time the liquid assets are due for demand. This can be done by creating awareness to their customers through customer forums and members' education on the various available options. Through this data they will know the kind of deposits and accounts to operate for their customers hence the MFIs will be able to estimate the level of liquidity to maintain at any given time. Due to the risk created by members

withdrawing their deposits on demand the MFIs should adopt other measures of mitigating against this which may include but are not limited to maintaining a buffer for liquid assets like buying treasury bills and bonds that are easily convertible to cash. MFIs should ensure that bank advances to their customers do not exceed the total customers' deposits at any time to ensure the liquidity gap is not put at risk.

### **5.4.3 Capital Adequacy**

The study sought to evaluate the consequence of capital adequacy on the financial performance of MFIs in Kenya. MFIs should ensure that members' deposits are adequate to fund most of their operations. MFIs should also ensure that they have adequate assets to cater to all their financial needs these assets will include both long term assets and short term assets that can be easily replaced with cash in case the need arises where quick cash is demanded.

### **5.4.4 Liquidity management and Financial Performance**

MFIs should come up with liquidity management practices that will cover unpredictable demand, Changes in the interest rate of their products to optimize their returns through the management of liquidity. Also, capital should be sought from alternative sources to boost liquidity management. MFIs should also seek to improve on their investments by looking for extra opportunities in the market to invest any excess funds and invest prudently to improve their financial performance.

### **5.5 Suggestions for Further Research**

From the data collected above, various limitations were encountered in the process of conducting the research, therefore calls for future researchers to understand the impact of liquidity management on financial performance on MFIs in Kenya the following therefore are the suggested areas of further and future research. Researchers can consider other economic environments like during recessions or political unrest this will give a direction on how MFIs will survive in such different and difficult Economics environments. Further studies can also be carried out on the effect of liquidity management practices adopted by MFIs to improve their financial performance. It will give an interesting study comparing the various liquidity management practices and models used by various MFIs to maintain optimal financial performance. Further research should also be undertaken to include Firms in other economic sectors other than the financial sector and compare the models adopted to

mitigate against liquidity constraints this would help in making generalizations that may be universally adopted in all the sectors of the economy and not the microfinance sector only.

## REFERENCES

- Adagi, J. (2013). Determinants of Financial Performance of Microfinance Institutions in Nairobi Kenya, *Unpublished MBA Project*, Moi University.
- (Afua K. (2010). An Assessment of the Effects of ‘Susu’ Scheme on the Economic Empowerment of Market Women in Kumasi, Ghana, 2010), Kwame Nkrumah University of Science and Technology.
- Akhtar, S. (2007). Pakistan: changing risk management paradigm perspective of the regulator, ACCA Conference CFOs: *The Opportunities and Challenges Ahead*, Karachi, 8; 23-29.
- Athanasoglou, A.D., & Gioka, D. (2000). The use of data envelope analysis in banking institutions performance, *Evidence from the Commercial Bank of Greece*, *Interfaces*, 30 (2), 81.
- Babbie, E. (2010). *The Practise of Social Research* Wadsworth Cengage Learning. *International Edition*
- Bank Supervision Annual Report, (2013). Central Bank of Kenya.
- Barros, C., Ferreira, C., & Willians, J., (2007). Analyzing the determinants of performance of best and worst European banks: A mixed logit approach, *Journal of Banking and Finance*, 31, 2189–2203
- Basel Committee on Banking Supervision, (2006). The management of liquidity risk in financial groups Bank of International Settlements.
- Basel Committee on Banking Supervision (2008), “Principles for sound liquidity risk Management and supervision”, available at: [www.bis.org/publ/bcbs138.htm](http://www.bis.org/publ/bcbs138.htm)
- Basel Committee on Banking Supervision, (2010). Basel III: International framework for liquidity risk measurement, standards and monitoring. Bank of International Settlements.
- Basel Committee on Banking Supervision, (2013). Basel III: The Liquidity Coverage Ratio and Liquidity risk monitoring tools. Bank of International Settlements.
- Berríos, M. (2013). The Relationship between Bank Credit Risk and Profitability and Liquidity. *The International Journal of Business and Finance Research*.
- Bessis, J. (2003). Risk Management in Banking, *John Wiley & Sons, Chichester, New York* 2nd edition, 272-278.
- Biwott R.K (2011). The Relationship between Working Capital Management Practices and Profitability of Companies Quoted at the Nairobi Stock Exchange, *Unpublished MBA Project*, University of Nairobi.
- Brunnermeier, M. and Pedersen, L.H. (2009), “Market liquidity and funding liquidity”, *Review of Financial Studies*, Vol. 22.
- Brunnermeier, M.K. & Yogo, M. (2009). A note on liquidity risk management, AEA Session on Liquidity, *Macroeconomics, and Asset Prices*, 12; 37-56 VGTU press.

- Central Bank of Kenya (2011). *Bank Supervisory Annual report*, Nairobi Kenya.
- Chaplin, G., Emblow, A. & Michael, I. (2000). *Banking system liquidity: developments and issues*, *Financial Stability Review*, 6; 93-112.
- Comptroller of the Currency (2001), *Liquidity: Comptroller's Handbook*, Comptroller of the Currency: Administrator of the National Banks, Washington, DC.
- Cooper, D.R. & Schindler, P.S. (2011). *Business Research Methods*. Boston: McGraw-Hill Irwin
- Crowe, K. (2009). *Liquidity risk management more important than ever*, *Harland Financial Solutions*, 3(1):1-5
- Dang, Uyen. (2011). *The CAMEL Rating System in Banking Supervision: a Case Study*. Published thesis of Arcada University of Applied Sciences, International Business.
- Diamond, W. & Rajan, G. (2001). *Liquidity risk, liquidity creation, and financial fragility: a theory of banking*, *The Journal of Political Economy*, 109(2):287-327, The University of Chicago Press.
- Diamond, W. & Rajan, R.G. (2005). *Liquidity shortages and banking crises*, *The Journal of Finance*, 60(2):615-47 The University of Chicago Press.
- Duncan, M. (2016). *Effects of liquidity management on financial performance of deposit taking savings & credit co-operative society in Kenya*, Jomo Kenyatta University of Agriculture And Technology.
- Global Journal of Business Research volume 6 number 2-2012, The Institute for Business and Finance Research, LLC
- Goodhart, C. (2008), "Liquidity risk management", *Financial Stability Review*, Vol. 11 No. 6.
- Goddard, J. Molyneux, P. & Wilson, O. (2009). *The financial crisis in Europe: evolution, policy responses and lessons for the future*, *Journal of Financial Regulation and Compliance*, 17(4): 362-80: Emerald Group Publishing Limited.
- Gonzalez, A., & Rosenberg. R., (2006). *The State of Microcredit: Outreach, Profitability and Poverty*. Microfinance Information Exchange, Inc. (MIX) and The Consultative Group to Assist the Poor (CGAP). Washington DC.
- Guglielmo, M.R. (2008). *Managing liquidity risk*, *Bank Accounting & Finance*, 8(1):1-5
- Jeanne, O. & Svensson, L.O. (2007). *Credible commitment to optimal escape from a liquidity trap: the role of the balance sheet*, *The American Economic Review*, 97(1):474-490.

- Jenkinson, N. (2008). Strengthening regimes for controlling liquidity risk, *Euro Money Conference on Liquidity and Funding Risk Management*, Bank of England, London, 9; 16-28.
- Halling, M. & Hayden, E. (2006). Bank failure prediction: a two-step survival time approach, *C.R.E.D.I.T. Conference, Austrian National Bank, Vienna*, 31; 101-109
- Heffernan, S. (1996). *Modern Banking in Theory and Practice*, John Wiley and Sons, New York.
- Holmstrom, B. & Tirole, J. (2000). *Liquidity and risk management*, *Journal of Money Credit and Banking*, 32(3):295-319.
- Kashyap, K. Rajan, R. & Stein, C. (2002). *Banks as liquidity providers: an explanation for the coexistence of lending and deposit-taking*, *The Journal of Finance*, 57(1):33-73.
- Kimari, N. (2013). Effect of Credit Risk Management on Financial Performance of Deposit Taking Savings and Credit Cooperative Societies in Kenya, *Unpublished MBA Project*, University of Nairobi
- Kosmidou, K. (2008). "The determinants of banks' profits in Greece during the period of EU financial integration", *Managerial Finance*, 34(3), 146-159.
- Maaka, A. (2013). The relationship between liquidity risk and financial Performance of commercial banks in Kenya, *Unpublished MBA Project*, University of Nairobi.
- Macaulay, R. (1988). Some theoretical problems suggested by the movements of interest rates, bond yields, and stock prices in the Unites States since 1856. New York: NBE
- Majakusi, J. (2016). Effect of liquidity management on the financial performance of Commercial Banks in Kenya, *Unpublished MBA Project*, University of Nairobi
- Microfinance Information exchange (MIX) (2011). *The Micro Banking Bulletin No. 10*. Washington DC: Microfinance Information Exchange, Inc
- Mishkin, S., Stern, G. & Feldman, R. (2006). A review of Gary Stern and Ron Feldman's too big to fail the hazards of bank bailouts, *Journal of Economic Literature*, 44(4):988-1004.
- Mwangi, G. (2012). The Effect of Credit Risk Management on the Financial Performance of Commercial Banks in Kenya, *Unpublished MBA Project*, University of Nairobi.
- Mugenda, O.M & Mugenda A.G. (2003). *Research Methods*. Act Press. Nairobi
- Muhammad, F.M., & Rafique, A. (2013). Commercial Banks Liquidity in Pakistan: Firm Specific and Macroeconomic Factors. *The Romanian Economic Journal*, XVI (48).



- Neupane, B. & Subedi, S. (2013). Determinants of Banks Liquidity and their Impact on Financial performance in Nepalese Commercial Banks. Unpublished MBA thesis submitted to Ace Institute of Management, Pokhara University *Master Thesis*, Pokhara University
- Njeri, M. (2013). The effect of liquidity on financial performance of deposit taking Microfinance institutions in Kenya
- Nyabwanga, R., Ojera. P., Alphonse. J., & Otieno. S., (2011). Effect of working capital management practices on financial performance: A study of small scale enterprises in Kisii South District, Kenya. *African Journal of Business Management* 6(18), 5807-5817.
- Nyaga, T. (2008). The nature of competition within micro finance industry in Kenya. *Unpublished MBA research project*, University of Nairobi
- Nyanga, O. (2012). Determinants of financial performance of commercial Banks in Kenya, *Unpublished MBA Project*, University of Nairobi
- Obawale, S. & Oladunjoye, O. (2013). Risk Management and Financial Performance of Banks in Nigeria, *Journal of Business and Management*, 14(6):52-56
- Olongo, O. (2013). The Effects of Financial Fraud and Liquidity on Financial Performance of Commercial Banks in Kenya, *Unpublished MBA Project*, University of Nairobi
- Oludhe, J. (2011). The impact of credit risk management on financial performance of commercial banks in Kenya, *Unpublished MBA Project*, University of Nairobi
- Omino, G. (2005). *Essays on Regulation and Supervision* [On-line]. Available <http://www.microfinancegateway.org>
- Ongaki, K. Belydah (2012). *Determinants of profitability of deposit-taking microfinance institutions and co-operative societies that have front office service activities registered with Sasra*. Unpublished MBA thesis, University of Nairobi.
- Ongore, V. O. and Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International Journal of Economics and Financial Issues* Vol. 3, No. 1, 2013 pp.237-252.
- Orodho, A.J. & Kombo, D.K. (2002). *Research methods*. Nairobi: Kenyatta University, Institute of Open Learning.
- Oye, A. (2006). *Financial management* (4<sup>th</sup>ed.), Lagos: El-Toda Ventures Ltd
- Pandey, I. N. (1985). *Financial Management*, India, New Print India Ltd.
- Perera, S., Skully, M. & Wickramanayake, J. (2006). Competition and structure of South Asian banking: A Revenue Behavior Approach, *Applied Financial Economics*, 16:789-801.

- Rahaman, A.S. (2010). Public Sector Accounting and Financial Management in a Developing Country Organizational Context: *A Three-Dimensional View: Armidale, University of New England, 1*; 121-153.
- Ravi, P. & Sharma, P. (2012). The impact of credit risk management on financial performance of commercial banks in Nepal, *International Journal of Arts and Commerce, University of New England Australia*
- Sangmi, M., Tabassum, N. (2010). Analyzing Financial Performance of Commercial Banks in India: Application of CAMEL Model. *Pakistan Journal Commercial Social Sciences 4:11, 40-55*.
- SBP (2008). Pakistan's Banking Sector Remarkably Resilient Despite Challenging Economic Environment: *SBP's Financial Stability Review*, State Bank of Pakistan, Islamabad.
- Tharmila, K. & Arulvel, K.K (2013). The impact of the capital structure and financial performance: A study of the listed companies traded in Colombo stock exchange
- Tianwei, Z. & Paul, E. (2006). Credit Risk and Financial Performance Assessment of Agricultural firms, *Published Ph.D. Thesis*, University of Illinois, US.
- Wanjohi, G. (2013). The Effect of Financial Risk Management on the Financial Performance of Commercial Banks in Kenya, *Unpublished MBA Project*, University of Nairobi.

## **APPENDICES**

### **APPENDIX I: Microfinance Institutions in Kenya List of Microfinance Institutions in Kenya**

- 1 Kenya Women Finance Trust
- 2 U & I Microfinance Limited
- 3 Aga khan First Microfinance Agency
- 4 Remu DTM Limited
- 5 Biashara Factors Limited
- 6 BIMAS
- 7 Sumac Microfinance Bank
- 8 SMEP
- 9 Choice Microfinance bank
- 10 Faulu microfinance bank
- 11 Co-operative Bank
- 12 Rafiki Deposit Taking Microfinance Ltd
- 13 Elite Microfinance
- 14 Equity Bank
- 15 Faulu Kenya DTM Limited
- 16 Uwezo DTM Limited
- 17 Musomi Microfinance bank
- 18 Jamii Bora Bank
- 19 Youth initiatives-Kenya
- 20 Jitegemee Trust Limited
- 21 Juhudi Kilimo Company Limited
- 22 Caritas microfinance bank
- 23 K-Rep Development Agency
- 24 Century microfinance bank
- 25 Kenya Entrepreneur Empowerment Foundation
- 26 Taifa Option Microfinance

**Source: (CBK, 2017)**

## APPENDIX II: Questionnaire

### Introduction

This questionnaire has been designed for the sole purpose of collecting data on the effects of liquidity management on the financial performance of MFIs in Kenya. Respondents will be expected to answer questions by writing a brief statement or ticking in the boxes provided. The information provided will be treated with confidentiality and at no instance will respondent names be mentioned in this research. This questionnaire is intended for academic purposes only

### SECTION A: GENERAL INFORMATION

1. Gender of respondent:

Male [ ]      Female [ ]

2. Length of service:

<5 years                      [ ]

6-10 years                    [ ]

Above 10 Years            [ ]

3. Education level:

Primary                      [ ]

Secondary                    [ ]

College                      [ ]

Undergraduate            [ ]

Post graduate              [ ]

**SECTION B: ASSET QUALITY**

4. This subsection has a statement related to asset quality within MFIs in Kenya use the scale of Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) and Strongly Disagree (1).

	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		(5)	(4)	(3)	(2)	(1)
i	The MFI's gross loan portfolio is adequate					
ii	The rate of loan default in the MFI's is minimal					
iii	Aspects of collateral are considered when issuing loans					
iv	Flexible repayment periods improve loan repayment					

5. Please indicate the type of loan products offered by your microfinance

- i) .....
- ii) .....
- iii) .....

6. What are the key challenges experienced in the members' loan repayment?

.....  
 .....

**SECTION C: MATURITY GAP**

7. This subsection has a statement related to the maturity gap in MFIs in Kenya. Use the scale of Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) and Strongly Disagree (1)

	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		(5)	(4)	(3)	(2)	(1)
i.	MFI's rely on external borrowing to finance their activities					
ii	MFI's suffers liquidity shortages					
iii	Effective loan portfolio management maximizes the lending opportunities					

8. Do you experience cases where members have applied for a loan and there is a delay on the issuance of the loan?

Yes [ ]

No [ ]

9. If yes, please explain various reasons behind the delay in loan disbursement

.....  
 .....

**SECTION D: CAPITAL ADEQUACY**

10. This subsection has a statement related to capital adequacy within MFIs in Kenya. Use the scale of Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) and Strongly Disagree (1).

	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		(5)	(4)	(3)	(2)	(1)
i.	MFI's are funded wholly by members deposit					
ii.	MFI's have adequate assets to cater to financial needs					
iii	Loss of income-generating opportunity will lead to a reduction in capital base					
iv	Diversification of capital portfolio enhances the performance of MFIs					

11. Please indicate the average monthly member's contribution in Kenya shillings of your microfinance as per the following ranges.

- Below 1000 [ ]
- 1001-2000 [ ]
- 2001-3000 [ ]
- 3001-4000 [ ]
- 4001-5000 [ ]
- Above 5000 [ ]

12. What are the challenges experienced by the microfinance on adherence to liquidity management policies?

.....

.....

## SECTION E: FINANCIAL PERFORMANCE INDICATORS

13. This subsection has a statement related to financial performance within MFIs in Kenya. Use the scale of Strongly Agree (5) Agree (4) Neutral (3) Disagree (2) and Strongly Disagree (1).

	Statement	Strongly Agree	Agree	Neutral	Disagree	Strongly Disagree
		(5)	(4)	(3)	(2)	(1)
i.	MFI's earnings before interest & taxes are adequate					
ii.	MFI's have adequate profit after taxes					
iii	MFI's total revenues exceed total expenses always					
iv	Adequate total assets enhance the performance of MFIs					

14. Please indicate the average monthly revenue in Ksh (Millions) of your microfinance as per the following ranges.

- Below 1M    [ ]
- 1001-2M    [ ]
- 2001-3M    [ ]
- 3001-4M    [ ]
- 4001-5M    [ ]
- Above 5M    [ ]

**THE END**

**THANK YOU**



### APPENDIX III: Secondary Data Review Guide

The Secondary data survey sheet will be filled by using the data from audited financial statements of MFIs for five years from 2012-2016 as is available from CBK

<b>Year/Variable</b>	<b>2012</b>	<b>2013</b>	<b>2014</b>	<b>2015</b>	<b>2016</b>
Total Assets					
Share Capital(Equity)					
Cash and Cash equivalents					
Current liabilities					
Net Loan portfolio					
Non-performing loans					
Member/Customers deposits					
Net Profit					