

**THE EFFECT OF MICRO AND MACRO ECONOMIC
VARIABLES ON THE FINANCIAL PERFORMANCE OF
DEPOSIT TAKING MICROFINANCE BANKS IN
KENYA**

**BY
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DECLARATION

I declare that this Research Project is my original work and has not been submitted for examination in any other university or institution of higher learning .

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This Research Project has been submitted for examination with my approval as the University Supervisor

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DEDICATION

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TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENTS	iii
DEDICATION.....	iv
LIST OF TABLES	vii
LIST OF FIGURES	viii
LIST OF ABBREVIATIONS	ix
ABSTRACT.....	x
CHAPTER ONE: INTRODUCTION.....	1
1.1 Background of the Study	1
1.1.1 Micro and Macroeconomic Variables.....	2
1.1.2 Financial Performance	3
1.1.3 The Effect Micro and Macroeconomic Factors on Financial Performance	5
1.1.4 Deposit Taking Microfinance Banks in Kenya.....	6
1.2 Research Problem	7
1.3 Objective of Study	9
1.4 Value of Study	9
CHAPTER TWO: LITERATURE REVIEW.....	11
2.1 Introduction.....	11
2.2 Theoretical Review	11
2.2.1 The Arbitrage Pricing Theory.....	11
2.2.2 The Deflation Theory.....	12
2.2.3 The J-curve Theory	13
2.3 Micro and Macro Variables Affecting Financial Performance.....	15
2.3.1 Liquidity.....	15
2.3.2 Bank Size	15
2.3.3 Capital Adequacy.....	15
2.3.4 Market Power.....	16
2.3.5 Inflation.....	16
2.3.6 Gross Domestic Product	17
2.4 Empirical Review.....	17
2.4.1 International Evidence	17

2.4.2 Local Evidence.....	21
2.5 Summary of Literature Review.....	23
CHAPTER THREE: RESEARCH METHODOLOGY	25
3.1 Introduction.....	25
3.2 Research Design.....	25
3.3 Population	26
3.4 Data Collection	26
3.5 Data Analysis	26
3.5.1 Analytical Model	27
3.5.2 Test of Significance	28
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND INTERPRETATION	29
4.1 Introduction.....	29
4.2 Response Rate.....	29
4.3 Descriptive Statistics.....	30
4.4 Inferential Statistics	31
4.4.1 Correlation Analysis	31
4.4.2 Regression Analysis.....	33
4.4.3 Model Summary.....	33
4.4.4 Analysis of Variance.....	33
4.4.5 Model Coefficients.....	34
4.5 Interpretation of the Findings.....	35
CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATION	37
5.1 Introduction.....	37
5.2 Summary	37
5.3 Conclusions.....	38
5.4 Policy Recommendations.....	38
5.5 Limitations of the Study.....	39
5.6 Suggestions for Further Research	41
REFERENCES.....	42
APPENDICES	46
APPENDIX I: List of Licenced MFBs in Kenya as at December 2014.....	46
APPENDIX II: Microfinance Bank Data.....	47

LIST OF TABLES

Table 4.1: Response Rate.....	29
Table 4.2: Descriptive Statistics	30
Table 4.3: Correlation Analysis	31
Table 4.4: Model of Goodness Fit	33
Table 4.5: Analysis of Variance.....	34
Table 4.6: Regression Coefficients	34

LIST OF FIGURES

Figure 2.1: The J-curve effect on a time-series graph	14
Figure 4.1: The Relationship between ROA and Micro and Macro Environment	32

LIST OF ABBREVIATIONS

AMFI	Association of Microfinance institutions of Kenya
BSD	Banking sector development
CPI	Consumer Price Index
GDP	Gross Domestic Product
KNBS	Kenya Bureau of statistics
MFBS	Deposit Taking Microfinance Banks
MFI s	Microfinance Institutions
NPL	Non-Performing Loans
PTE	Pure Technical efficiency
ROA	Return on Assets
ROE	Return on Equity
ROS	Return on Sales
SE	Scale Efficiency
SMB s	Small and Medium Businesses
SPSS	Statistical Package for Social Sciences
SRF	Sample Regression Function
TE	Technical efficiency

ABSTRACT

Effective financial management is a key to success for any business and being aware of external and internal factors of financial risk is vital to mastering the art and science of good financial performance. The Kenyan micro-banking industry has enjoyed a steady growth and stability during the last decade. Empirical studies conducted recently demonstrate that Kenyan finance sector is sound and well-equipped to withstand some of the internal and external shocks. However, the profitability and efficiency are some of the challenges faced by the banks to strengthen their financial positions in order to meet the risks associated with openness and globalization. This study sought to examine the effect of Micro and macroeconomic factors on the financial performance of microfinance banks in Kenya. Specifically to study whether Liquidity, Bank size, Capital adequacy, Market power, Inflation and GDP affect ROA. This study used a descriptive research design and covered a five year period from 2010-2014. A population of nine MFBs in Kenya as at 31st December, 2014 was used. Secondary data was collected from the reliable websites and, annual reports of MFBs. A multiple regression analysis model and statistical softwares of SPSS and Excel used in data analysis. The findings point out that micro and macro variables i.e. Liquidity, Bank size, Capital adequacy, Market power, Inflation except GDP positively affect financial performance of Micro of microfinance banks. The study concludes that Liquidity, Bank size, Market power, Inflation and GDP have no significant effects on the financial performance of microfinance banks. This study also concludes that out of the variables that turn out to positively affect financial performance, it is only capital adequacy significantly affects the return on asset of the microfinance banks in Kenya. The study recommended that strategies to facilitate increased a favorable microeconomic environment of MFBs should be adopted by management for a good financial performance. It further recommended that the supervisory body of macroeconomic environment like Inflation and GDP should ensure viable environment for micro banking.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

A strong banking sector is able to confront negative shocks and contribute to the stability of the financial system. Effective financial management is a key to success for any business and being aware of external and internal factors of financial risk is vital to mastering the art and science of good financial performance. Business owners must be adept at balancing income, expenses and debt in a way that ensures the financial sustainability and growth of the organization. According to Ross (1976), the expected return of a financial asset can be modeled as a linear function of various macro-economic factors or theoretical market indices. Kwon and Shin (1999), stated that a country's economy affects the performance of organizations and by extension the most influential macro-economic variables are GDP, currency exchange rate, interest rates, inflation and market risk.

Microfinance banks that are operating in the competitive environment are likely to be more efficient in near future in Kenya and the surrounding region. The Kenyan micro-banking industry has enjoyed a steady growth and stability during the last decade. Most microfinance institutions are started with the target group being the middle and low income level persons, their success therefore depends on the support received from those who operate and benefit from it. Stress tests conducted recently also demonstrate that Kenyan finance sector is sound and well-equipped to withstand some of the internal and external shocks. However, the efficient functioning of the banking sector has become one of the most important objectives of financial reforms in Kenya. The profitability and efficiency also become one of the challenges faced by the banks

to strengthen their financial positions in order to meet the risks associated with openness and globalization (Almazari, 2014).

Deepened financial inclusion has been a major agenda of the Central Bank of Kenya which has seen it introduce the concept of Deposit taking by the microfinance Institutions, agency banking and mobile banking. However, there are only few Deposit Taking Microfinance banks as the regulator has put in place stringent conditions for Microfinance Institutions (MFIs) to transform to deposit taking Microfinance Banks (MFBs). In addition to the Pre-conditions, the cost of new recruitment, staff training, physical and information technology infrastructure upgrade has proved to be higher than the benefit of collecting cheaper profit. The CBK has said that it is willing engage in talks with the MFIs on the terms while also allowing them to use their previous sales office as branches (Ngigi, 2012).

1.1.1 Micro and Macroeconomic Variables

The micro determinants originate from bank specific and industry specific variables affecting financial performance. The group of the bank-specific determinants of performance involves operating efficiency and financial risk. Studies dealing with internal determinants employ variables such as size, leverage, liquidity, risk management and expenses management among others. Size is introduced to account for existing economies or diseconomies of scale in the market. Poor asset quality and low levels of liquidity are the two major causes of bank failures. During periods of increased uncertainty, financial institutions may decide to diversify their portfolios and/or raise their liquid holdings in order to reduce their risk. In this respect, risk can be divided into credit and liquidity risk. Molyneux and Thornton (1992), find a negative and significant relationship between the level of liquidity and profitability. In

contrast, Bourke (1989), reports an opposite result, while the effect of credit risk on profitability appears clearly negative (Miller and Noulas, 1997).

The group of micro determinants referred as industry specific variables describes the industry-structure factors that affect bank profits, which are not the direct result of managerial decisions. These are industry concentration and the ownership status of banks. The Structure-Conduct Performance hypothesis figures prominently among theories that relate market power to bank profitability.

The second group of determinants relates profitability to the macroeconomic environment within which the banking system operates. The external determinants are variables that are not related to bank management but reflect the economic and legal environment that affects the operation and performance of financial institutions. A number of explanatory variables have been proposed for both categories, according to the nature and purpose of each study. Brinson et.al (1991), defined macro-economic variables as those that are pertinent to a broad economy at the regional or national level and affect a large population rather than a few selected individuals. The variables identified as having major influence include; inflation, gross domestic product (GDP), currency exchange rate, interest rates, legal and regulatory environment and risk.

1.1.2 Financial Performance

Financial performance refers to the degree to which an achievement is being or has been accomplished. Previous studies suggest that both macro and micro factors affect performance. Micro factors like capital size, size of deposit liabilities, size and composition of bank's credit portfolio, interest rate policy, exposure to risk, management quality, labor productivity, bank size, bank age, ownership, ownership concentration, and structural affiliation among others influences bank financial

performance. Macro factors like inflation and economic growth also affect financial performance of firms. However, there are other factors to consider in determining financial performance for instance, the attribution of certain income and operating expenses, the assignment of capital, and a robust, multi-dimensional reporting and analysis framework must all be in place to utilize profitability information in an actionable manner. (Vong & Chan, 2007) and (Tan & Floros, 2012),

Almajali et al. (2012), argues that there are various measures of financial performance. For instance return on sales (ROS) reveals how much a company earns in relation to its sales, return on assets (ROA) explains a firm's ability to make use of its assets and return on equity (ROE) reveals what return investors take for their investments. The return that a company gets on its equity is one of the most important factors in making successful stock investments (Livy, 2013). Return on equity (ROE), tells how well a company is turning the owners' investment into profit. In other words, it tells what percentage of profit the company makes for every monetary unit of equity invested in the company. When the company is a corporation, this metric goes by the name "return on stockholders' equity," but the same principles apply regardless of how the business is structured. With return on equity, higher is generally better (Price, 2012). ROE doesn't specify how much cash will be returned to the shareholders, since that depends on the company's decision about dividend payments and on how much the stock price appreciates. However, it's a good indication of whether the company is even capable of generating a return that is worth whatever risk the investment may entail (Berman, Knight and Case, 2013). This study will use ROA to measure financial performance

1.1.3 The Effect Micro and Macroeconomic Factors on Financial Performance

Factors affecting performance of financial institutions according to profitability are broadly categorized into two; internal or micro and external or macro factors (Sehrish et.al 2011). Internal factors are mainly influenced by a bank's management decisions and policy objectives. The internal factors such as the management decisions, size of the bank, capital, risk management and expenses management affect the profitability of the bank directly, because most of these factors remain confidential. Other internal factors, such as credit or liquidity are considered as bank specific factors, which are closely related to bank management, especially the risk management. The need for risk management in the banking sector is inherent in the nature of the banking business. Low asset quality and poor liquidity are the two major causes of bank failures and represented as the key risk sources in terms of credit and liquidity risk and attracted great attention from researchers to examine their impact on bank profitability (Staikouras and Wood, 2004).

External factors focus on macroeconomic variables reflected in the economic and legal environment where banks operate. The external factors affecting the profitability of banks are represented in economic situations and institutional background. The macroeconomic environment, such as inflation, interest rates and cyclical output. Industry specific factors are the variables that represent market characteristics such as market concentration, industry size and ownership status (Athanasoglou et al., 2006). Several studies have shown that external factors affect performance for instant, Gompers and Lerner (1998), established that higher GDP growth implies higher attractive opportunities for entrepreneurs, which in turn lead to a higher need for venture funds. Firms are adversely affected by inflation since they tend to hold

investment over duration of time between acquisition and exit. Also, Interest rates determine the cost of borrowing and can therefore have a significant impact on equity returns (Nielsen, 2011).

1.1.4 Deposit Taking Microfinance Banks in Kenya

Deposit taking microfinance business is a new development by the Central Bank of Kenya under the agency called Bank Supervision Department following the Microfinance Regulations Act of 2008. The Act enables Deposit Taking Microfinance Banks licensed by the Central Bank of Kenya to mobilize savings from the general public, thus promoting competition, efficiency and access. (CBK, 2010) This was done with the hope that the microfinance industry will play a pivotal role in deepening financial markets and enhancing access to financial services and products by majority of the Kenyans. It is meant to make provision for the licensing, regulation and supervision of microfinance business and for connected purposes enable Microfinance institutions expand the range of services they're offering in the Kenyan financial sector. This means that in addition to giving loans to its clients, they are now be able to mobilize and intermediate savings The application procedure at December 2014 involved: An application fee of Kshs. 5,000 (None refundable), license fee of Ksh.150,000 annually, branch license fees as follows; (Branch within in a city or municipal council Kshs. 50,000, Branch within a town council Kshs. 20,000, Branch within a county council Kshs. 10,000.The license takes a maximum processing time of one month and this demonstrates commitment to eradication of poverty and reinforcement of strategies to empower Kenyan families.

The failure of most MFIs to change into MFBs has been attributed to tough conditions put in place by the CBK. The strict conditions have seen those that had transformed suffer a huge drop in earnings discouraging other players from

converting. The essence of transforming to deposit taking Banks was to allow the institutions access cheaper funds, which they could then lend to the public at a lower rate rather than depending on expensive credit from financial institutions, which forces them to charge high rates on their borrowers. As at the end of June, 2012, the deposit taking micro-finance institutions had mobilized deposits worth Sh12.3 billion with a total loan portfolio value of Sh17.9 billion (Ngigi, 2012).

1.2 Research Problem

The financial performance of nation-wide financial system and individuals in Kenya has had a positive bearing due to the adoption of deposit taking by microfinance establishments because the deposits are a source of loanable funds to the customers. Financial performance, specifically return on equity refers to the profits a company earns compared with the amount of shareholder's equity is invested in the company and it tells well your company is turning the owners' investment into profit thus it is an indicator of financial performance. The internal determinants originate from bank accounts like statement of financial position and therefore could be termed micro or bank-specific determinants. Industry specific factors are those that affect bank profits, which are not the direct result of managerial decisions for instance industry concentration and the ownership status of banks. The final category is the macro or external determinants, which are variables that are not related to bank management but reflect the economic and legal environment that affects the operation and performance of financial institutions. These are those that are pertinent to a broad economy at the regional or national level and affect a large population rather than a few selected individuals. (Brinson et al., 1991).

In his study, Gwahula (2013), concluded that bank specific factors, specifically bank size, liquidity, as well as capital adequacy were found to be the main factors

influencing the bank's efficiency, while with industry specific characteristic market share and concentration were found to influence significantly bank's efficiency and in the case of macroeconomic factors only GDP was found to influence the bank's efficiency. Owoputi (2014), found out that there's existence of positive and significant effect of capital adequacy, bank size, productivity growth and deposits on profitability. Credit risk and liquidity ratio have a negative and significant effect on bank profits. Locally, Mbogo and Ashika (2011), confirmed that legal environment, competitive pressure and liquidity and risk management challenges had the greatest importance in influencing Microfinance Institutions innovation. Another study by Githinji (2008), found out that the average size of savings had a positive influence on return on equity and that this relationship was positive.

From the studies reviewed, it is evident that several research works on internal and external factors affecting bank performance in various parts of the world have been carried out. However, the short coming of these reviews is that most studies seem to be ignoring the industry specific factors affecting financial institutions and only concentrate on internal and macroeconomic variables which give a generalized overview. Further from the studies these factors are inconclusive with some researchers finding insignificant effect while others establishing significant influence. This study bridges this gap by use of annual data involving the Microfinance industry, specifically answer the question: What is the effect of the micro and macro variables on the financial performance of Deposit Taking Microfinance Banks in Kenya?

1.3 Objective of Study

To investigate the effect of micro and macro-economic variables on the financial performance of Deposit Taking Microfinance Banks in Kenya.

1.4 Value of Study

On prospective investors, the study will be helpful in making investment decisions as it will shed light on the various factors, micro and macro, that could affect the Return of assets. It will help in understanding the consequence of these factors on financial performance of the Microfinance Banks in Kenya thus investors take advantage on the investment opportunities available when these variables fluctuate.

The study will help financial institution managers to carefully plan and forecast using fluctuations in the internal and external factors that affect Return on assets. With a better understanding of factors affecting the performance, financial institutions managers can mitigate losses to with a view to ensure banks remain stable to serve their purpose and as long as this happens, they will be able to maximize shareholders value and growth of the economy will be a sure deal.

The findings will also be useful to policy makers in the area of regulation and supervision. This study would be an eye opener to the government on how certain monetary and fiscal policies influence banking industry performance and hence contribute in improvement of macroeconomic policy making. The government plays a significant role in creating an enabling environment for operation of businesses. The study will provide useful lessons on how various legal, regulatory and procedural requirements could impact on the finance sector in general as they endeavor to conform. In this way, the study findings will offer useful inputs to advise the review of the policy and legal framework and influence effective formulation of economic

policies by government statutory bodies and Central Bank of Kenya thus guiding the operations the direction of macroeconomic variables in the future

To academic and researchers the study has provided a platform for quality discussion and debates amongst academicians, policy makers, and professionals and provides a basis for further research regarding micro and macroeconomic variables affecting the return on assets and financial performance of financial institutions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter presents the theoretical framework, review of empirical studies and selected micro and macro determinants of financial performance, specifically Return on Equity.

2.2 Theoretical Review

This section provides theoretical evidence of various arguments by different scholars and researchers in relation to influences of micro and macro variables and Return on Equity. This study will be guided by Arbitrage Pricing Theory, the Deflation Theory and the J-curve theory effect on equity fund returns.

2.2.1 The Arbitrage Pricing Theory

Ross (1976), proposed the Arbitrage Pricing Theory (APT) which predicts a relationship between the returns of a portfolio and the returns of a single asset through a linear combination of many independent macro-economic variables or theoretical market indices. It is an asset pricing model based on the idea that an asset's returns can be predicted using the relationship between that same asset and many common risk factors. APT uses the risky asset's expected return and the risk premium of a number of macro-economic factors. Arbitrageurs use the APT model to profit by taking advantage of mispriced securities. A mispriced security will have a price that differs from the theoretical price predicted by the model

At the core of APT is the recognition that only a few systematic factors affect the long-term average returns of financial assets. APT does not deny the myriad factors that influence the daily price variability of individual stocks and bonds, but it focuses on the major forces that move aggregates of assets in large portfolios. Asset returns

are also affected by influences that are not systematic to the economy as a whole, influences that impinge upon individual firms or particular industries but are not directly related to overall economic conditions. Such forces are called "idiosyncratic" to distinguish them from the systematic factors that describe the major movements in market returns. Because, through the process of diversification, idiosyncratic returns on individual assets cancel out, returns on large portfolios are influenced mainly by the systematic factors alone. Ross' formal proof shows that the linear pricing relation is a necessary condition for equilibrium in a market where agents maximize certain types of utility and so there are many factors that affect performance, both internal and external and this study will focus on identifying them.

2.2.2 The Deflation Theory

The theory was proposed by Fisher (1933), which suggested that: following a deflationary disturbance, the subsequent effect of a lower price level may not tend to bring immediately the level of output back toward its full employment value. In other words, a fall on inflation rates leads to fall in the level of prices, which leads to greater fall in the net worth of business, reduced profitability hence precipitating bankruptcies which leads the concerns running at a loss to make a reduction in output, in trade and in employment of labor. The cycles cause complicated disturbances in the rates of interest and a fall in the money value.

The complicated disturbances described above can be summed as both external and internal forces (macro and micro factors) influencing state of over indebtedness existing between, debtors or creditors or both which can compound to loan defaults. The key point is that deflation gives a crucial role to borrower's balance sheet and net worth. Attempts to liquidate debt in the context of over-indebtedness and low price level are likely to turn into depression via an unstable interaction between excessive

real debt burdens and deflation. Besides, deflation will come with price change effects which may, by impacting negatively the expected profitability, reduce further the level of aggregate demand. It results as long as low price level do not affect positively and significantly aggregate demand and do not counteract the destabilizing price change effects, full employment equilibrium will not be restored.

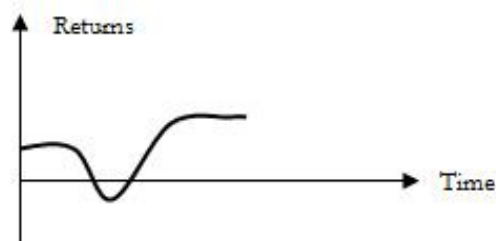
In relevance to the study, the theory posits that reduced inflation rates will lead to reduced firm profitability and can lead to firms running to bankruptcy. This is contrary to the expectation that increased inflation reduces purchasing power of money, reduced real sales and increased operation costs and also interest rates in the economy. According to this theory, if inflationary pressures from the fiscal stance are being transmitted exclusively through the financing channel, then inflationary pressures could be reduced without fiscal adjustment if alternative (sustainable) sources of financing, such as external financing, are available. In practice, however, some fiscal adjustment is typically also necessary because either the amount of alternative finance is insufficient and/or the fiscal stance is also putting upward pressure on prices through the aggregate demand channel.

2.2.3 The J-curve Theory

In Davies (1962), presented the J-curve theory, a phenomenon that gives a key insight into how private equity works and what investors should expect when allocating their capital. Specifically, we will address what is commonly known as “The J-Curve Effect” This is a phenomenon in which a period of negative or unfavorable returns is followed by a gradual recovery that stabilizes at a higher level than before the decline. The J-curve phenomenon can be summarized as the first year’s investment expenses of investing in a fund that has yet to harvest its capital gains in the future.

In the early years of a private equity fund, investment returns are virtually always negative. The J-curve effect occurs when funds experience negative returns for the first several years. This is a common experience, as the early years of the fund include capital draw-downs and an investment portfolio that has yet to mature. If the fund is well managed, it will eventually recover from its initial losses and the returns will form a J-curve: losses in the beginning dip down below the initial value, and later returns show profits above the initial level. The progression of this phenomenon appears as a "J" shape as shown below;

Figure 2.1: The J-curve effect on a time-series Graph



Source: Davies (1962)

Economic analysts and policymakers factor the J-curve effect into their analyses and decisions as a way to gauge both short- and long-term effects of a variable change or new policy. Investors should expect a greater return from private equity than from public equity investments due to illiquidity and a long-term commitment. However, it is important to bear in mind that, in contrast to public equity, private equity investments initially have negative returns and accumulated negative net cash flows in the early years of a fund's life. Once one understands the J-Curve effect, this unique characteristic of private equity fund investing becomes less of a concern, and the true benefits of private equity as a return enhancer and asset diversification strategy can begin to be appreciated.

2.3 Micro and Macro Variables Affecting Financial Performance

Return on assets as an indicator of financial performance in most financial institutions and firms in general are influenced by both micro and macro factors (internal and external variables). With empirical proof, selected variables will be discussed and how they affect financial performance

2.3.1 Liquidity

Anyanwu (1993), sees liquidity as assets readily convertible to cash without loss and ability to pay depositors on demand. It is the company's ability to meet its maturing short-term obligations and if liquidity is insufficient, serious financial difficulty may occur. Poor liquidity is analogous to a person having a fever; it is a symptom of a fundamental problem. The relationship between liquidity and shareholder equity plays a critical role in determining ROA. Therefore, without required liquidity and funding to meet obligations, a financial institution may fail.

2.3.2 Bank Size

Bank size is usually used to examine the economies or diseconomies of scale in the banking sector. A large bank reduces cost because of economies of scale and scope. Kosmidou, Tanna and Pasiouras (2002), Alper and Anbar (2011) and Khrawish (2011), found positive relationship between performance and bank size. On the other hand, Syafri (2012), found that bank size has negative effect on profitability.

2.3.3 Capital Adequacy

There is a positive relationship between a bank's profits and its level of capital. When the market becomes more competitive, banks need to adapt different strategies in order to retain profitability. Demirgüç-Kunt and Huizinga (1997), present evidence that financial expansion and structure are important variables. According to Obamuyi (2013), is calculated as the ratio of total equity to total assets. The Signaling Theory

argues that a higher capital signals positively to the market on the value of the bank. A positive signal provides private information to the bank to enhance capital as the future prospects are good.

2.3.4 Market Power

Market power known as market share is how a bank is leading an industry. Market power is defined as how much profit a bank earns in relation to other banks operating in an industry. It is also profit of individual bank over profits of banks operating in an industry. Flamini, McDonald and Schumacher (2009), views market power as individual bank's loan over banking industry loan to domestic private sector.

2.3.5 Inflation

Inflation is an important determinant of banking performance. High inflation rates are related with high loan interest rates and incomes. The effect of inflation on banking performance depends on whether inflation is predicted or unexpected. If inflation is fully anticipated and interest rates are adjusted accordingly, a positive impact on profitability will result. On the other hand, unanticipated raises in inflation cause cash flow difficulties for borrowers which can lead to premature termination of loan planning and loan losses. The findings of the relationship between inflation and profitability are varied. Studies by Vong and Chan (2007), and Tan and Floros (2012), show that high inflation rates lead to higher bank profitability. The studies of Khrawish (2011) and Syafri (2012), report a negative relation between inflation and profitability. In addition, Demirguc-Kunt and Huizinga (1997), observe that banks in developing countries are likely to be less profitable in inflationary environments when they have a high capital ratio.

2.3.6 Gross Domestic Product

Gross Domestic Product is performing indicator of an economy and it is defined as Gross National Income less net income factor from abroad (that is the value of imported commodities from foreign countries). Chandra (2008), observes GDP as final goods and services in the economy during a specified period usually a year. Being aware of the economic factors like gross domestic product that play a role in performance of firms in an economy can help one make more tactical decisions when it comes to equity purchases. While it is impossible to predict every gyration of equity holding, by looking at economic factors you can form general conclusions on whether economic factors will inflate or deflate equity returns.

2.4 Empirical Review

The empirical review is about the previously done research both internationally and locally on the internal and external factors variables affecting ROE and performance in general.

2.4.1 International Evidence

Cîrciumaru, Marcu, and Siminică (2010), performed a study on the Return on assets for the Romanian Industrial Companies. A sample of 73 Romanian companies operating in industries was used. The survey covered the year 2008 and was based on data extracted from annual financial statements of the companies from the sample. They identified the influence factors of the return on assets and the quantifiable ones were the operating profit margin, the asset turnover and the financial leverage. These financial rates, together with the return on equity, have been determined for the entire population of enterprises from the sample. Subsequently tested was the statistical correlation between the level of influence factors and the return on equity. The results obtained partially confirmed the hypotheses set, but also denied for some of them.

Mirzaei and Mirzaei (2011), examined the Bank-specific and Macroeconomic Determinants of Profitability in Middle Eastern Banking. In particular, the impact of bank-specific and macroeconomic factors on bank profitability is examined. Using both the Ordinary least square technique, the results showed the persistence of profit, confirming the dynamic character of the model specification. Findings from the dynamic model confirmed a non-linear relationship between size and profitability. Although no evidence is found in support of the traditional Structure-Conduct-Performance hypothesis in the static model, the dynamic model confirms such hypothesis strongly. They also found out that capital strength, liquidity, and efficiency are the main determinants of profitability. Off-balance-sheet activities reduce bank profits and the Middle Eastern banks don't seem to anticipate inflation, meaning that the influence of inflation is negative for the Middle East at least for the period under consideration.

Gwahula (2013), investigated the effect of bank specific, industry specific and macroeconomic variables of commercial banks' efficiency. Data envelopment analysis was applied to obtain efficiency estimates such as, Technical efficiency (TE), Pure Technical efficiency (PTE) and scale efficiency (SE) for the period of 2005-2008. Regression model findings revealed that bank efficiency is influenced by both bank specific, industry specific and macroeconomic factors. More specifically with bank specific factors bank size, liquidity, as well as capital adequacy were found to be the main factors influencing the bank's efficiency, while with industry specific characteristic market share and concentration were found to influence significantly bank's efficiency. Lastly in case of macroeconomic factors only GDP was found to influence the bank's efficiency. In similar view Non performing loans (NPL),

ownership and CPI were found to be insignificant in explaining commercial bank`s efficiency.

Dragnić (2013), studied the Impact of Internal and External Factors on the Performance of Fast-Growing Small and Medium Businesses (SMBs). The study was conducted on Croatian fast-growing SMBs. The research is of a dynamic and multisectoral structure and the defined independent and dependent variables were examined and analysed in the period from 1990s to the year 2010, largely based on primary data and secondary data. The paper provided a more realistic picture of the variability of environmental factors, as well as of the variability of SMBs performance/effectiveness, as well as includes the period of economic crisis, jeopardizing not only the performance, but also the very survival of businesses in general. This study confirmed that eight internal factors (business entity size, life cycle stages, technology and product innovation, organizational autonomy, centralization and formalization, market roles, and type/importance of goals) and three out of the five analyzed external factors (general state of the economy, sector, and type of customers), depending on the period (life cycle stage and general state of the economy), exercise a more or less significant impact on the performance of SMBs.

Uluyol, Lebe and Akbaş (2014), investigated The Relation between Financial Leverage (debt to total assets ratio) and Return on Equity (ROE) of the Companies: A Research on the Companies Traded on İstanbul Stock Exchange in the Base of Industries This research was carried out on the base of five industries using the financial leverage- and ROE ratios during the 22 years` quarter periods from 1991-2012. Empirical results revealed that there is a strong triple-threshold effect between

financial leverage (debt to total assets ratio) and firm value and that after a fixed point in debt level the debts contributes to the firm value negatively. The negative relationship between debt financing and equity financing has two reasons: Either the cost of debt financing is higher than firm profitability or the profitability of the predominantly equity financing firms is higher than debt financing firms. According to the results of analysis the relationship between debt to total assets and ROE is positive in the construction industry and negative in the IT, food, mining and textile industry.

Berzkalne and Zelgalve (2014), examined the relationship between return on equity and other company characteristics of industries in Latvia. These characteristics were classified in two broad groups: ratios (return on assets, return on sales and current ratio), and capital structure ratios (total debt, long-term debt and short-term debt ratios). Companies represented three industries: agriculture (150 companies), food production (150 companies) and retail (150 companies). In addition, the ratio of tangible assets and company size were analysed. The methods of research applied were the monographic method, graphical method and correlation analysis. Based on the analysis of a sample of 450 companies over the period from 2004 to 2012, it was concluded that agriculture companies did not have volatile ROE in the period of the study, and during recession, this ratio still remained above 10%. Therefore, ROE of agriculture companies is not generally associated and correlated with other company characteristics. In the case of food production companies, they found out that during the recession more profitable companies had less debt (regardless of maturity). For retail companies, they concluded that bigger companies have a higher ROE, yet asset structure and long-term debt ratio are negatively correlated with ROE.

2.4.2 Local Evidence

Ondego and Ochanda (2003), determined the major factors that influence the establishment and sustainability of micro finance schemes in Kenya. Primary data were collected from 30 micro-finance institutions in Nairobi, Kenya. The institutions included Kenya Women Finance Trust (KWFT), Faulu Kenya, Pride-Africa and Kenya Rural Enterprise Program (K-REP) among others. Structured questionnaires were administered to the managers and the program administrators in these institutions. The findings of this study revealed that there were no clear policies regulating micro finance institutions (MFIs) in Kenya. On implementation issues, the results indicated that the most commonly implemented MFI design was the solidarity group. However, few MFIs were extending loans to individuals. Most MFIs were taking deposits to cushion the risks associated with non-repayment of loans. With regard to sustainability, the study revealed that there were a few MFIs which had attained financial sustainability as a result of their sound financial cost control and provision of quality portfolios. However, a number of MFIs had not attained financial sustainability and were relying on subsidies from donors.

Githinji (2008), sought to establish the factors that influence sustainability of microfinance institutions (MFIs) in Kenya .A descriptive survey design was used. The population of interest in this study consisted of all the 30 microfinance that operate within Nairobi. Since the study was a survey and the number in the population was not so large, all the 30 MFIs operating in Nairobi were selected for the study. This study was facilitated by the use of both primary and secondary data. Operational sustainability, as component of financial sustainability measurement, was measured using return on assets (ROA) and return on equity (ROE). Regression analysis was also run to establish the direction of influence of each of the factors on financial

sustainability. The results revealed that majority of microfinance institutions in Kenya are below the market mean sustainability as measured by both the return on assets as well as the return on equity. The study found that the average size of savings had a positive influence on return on assets and that this relationship was positive. The rest of the variables did not have a significant influence on either ROA or ROE. The study therefore concludes that majority of microfinance institutions in Kenya are not financially sustainable if measured by the return on assets or return on equity.

Mbogo and Ashika (2011), investigated the factors that influence product innovation in microfinance institutions in Kenya, including leverage, the legal environment, competitive pressure and organizational factors such as, liquidity and risk management challenges, distribution and human resource challenges. The population of this study was all the 40 microfinance institutions registered with the Association of Microfinance Institutions (AMFI) and operating in Nairobi. Two of the registered MFIs operated outside Nairobi. Data was collected from the financial statements of microfinance institutions registered with the Association and operating in Nairobi. A census research design was used, with a self-administered questionnaire given to all 38 participants. Analysis of the data confirmed that legal environment, competitive pressure and liquidity and risk management challenges had the greatest importance in influencing MFI innovation. Results from findings of this paper established that there is a positive correlation between legal environment, liquidity management and human resources for MFIs and product innovation.

Kimando, Kihoro and Njogu (2012), sought to establish the factors affecting sustainability of microfinance institutions operating within the Murang'a Municipality. This study was a descriptive survey. The population of study comprised

of all the managers of the microfinance institutions and all the field officers in Murang'a municipality. The sample consisted of 45 respondents who were managers of the 15 microfinance institutions in Murang'a municipality and 2 field officers from every institution. Primary data was collected from the managers and the field staff of the institutions using structured questionnaires. The study found that financial regulations, number of clients served, financial coverage and volume of credit transacted were the factors that highly affected the sustainability of microfinance institutions. The study concludes that sustainability of MFIs is a function of related and interconnected factors. The study recommended MFIs to open many branches to reach as many people as possible and ensure they conform to rules and regulations.

2.5 Summary of Literature Review

From the literature review above, it is evident from both classical scholars and modern researchers locally and internationally, that diverse factors are responsible for changes in the return on equity, thus affecting the financial performance of institutions. Both Micro and Macro factors have effects on financial performance of firms. Different conclusions have been arrived at, some factors portraying significant effects while others showing no significant effect on return on assets or performance in general.

Mirzaei and Mirzaei (2011), found out that capital strength, liquidity, and efficiency are the main determinants of profitability measured by ROE. Results of analysis by Uluçol, Lebe and Akbaş, (2014) show the relationship between debt to total assets and ROE is positive. Gwahula (2013), concluded that with bank specific factors: bank size, liquidity, as well as capital adequacy were found to be the main factors influencing the bank's efficiency, while with industry specific characteristics market share and concentration were found to influence significantly bank's

efficiency. Lastly in case of macroeconomic factors only GDP was found to influence the bank`s efficiency. In similar view Non performing loans (NPL), ownership and CPI were found to be insignificant in explaining commercial bank`s efficiency.

The review of literature clearly portrays a mixture of internal and external variables affecting financial performance. In Kenya, most of the studies concentrate on financial institutions like commercial banks and microfinance institutions with less emphasis to the effect of these factors on Deposit taking Microfinance Banks. Other studies done focused on few, say three to four variables and so this current study therefore narrows the gap by establishing how Return on assets (ROA) relates specifically with selected micro as well as macro issues.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter looked at the methods that were used by the researcher to gather and analyze data from the field of study. These methods were: research design, population, data collection, data analysis, analytical model, test of significance.

3.2 Research Design

Research design is the arrangement of conditions for collection and analysis of data in a manner that aims to combine relevance to the research purpose with economy in procedure according to Claire et al., (1962). The study employed descriptive as well as correlation research designs. A descriptive research design describes the characteristics in a given population or a phenomenon being studied. According to Cooper and Schindler (2004), descriptive studies are more formalized and typically structured with clearly stated hypotheses.

This research design is advantageous as it gives researchers the ability to look at what they are studying in various aspects and provides a bigger picture as opposed to other types of research design (Kothari, 2004). Time series empirical data on the selected macroeconomic variables were used to examine the causal relationship between independent industrial related and macroeconomic variables and financial performance, specifically return on assets (ROA) which is the dependent variable. This method was successfully used by Wanjiru (2000), in a study of factors that influence productivity of credit officers in microfinance institutions with a lot of success and so the method is perceived to be the best in obtaining in-depth data.

3.3 Population

Population is the total collection of elements which the researcher wishes to make inferences. (Cooper and Schindler, 2006) The intended population of this study were all the nine Microfinance Banks in Kenya (MFBs) licensed by the Central Bank of Kenya. By the end of year 2014 there were nine (9) Microfinance Banks in Kenya (CBK, 2014) provided in Appendix I.

3.4 Data Collection

The study employed secondary data to gather information relevant in conducting the study. Secondary data is information that has previously been collected that is utilized by a person other than the one who collected the data and it can be obtained from books, journals and electronic materials (Mugenda and Mugenda, 2003). Secondary data was collected from the Central Bank of Kenya (CBK) published reports on microfinance banks, reports by the Association of Microfinance institutions of Kenya (AMFI), Kenya Bureau of statistics (KNBS) and banking supervision reports to help evaluate the micro and macro-economic factors affecting the return on equity of Deposit Taking Microfinance Banks in Kenya. The study covered a five year period from 2010-2014 based on the availability and accessibility of data.

3.5 Data Analysis

Data analysis as classifying, coding and tabulating information needed to perform quantitative or qualitative analyses according to the research design and appropriate to the data. It is the process of evaluating data using systematic and logical reasoning to examine describe, illustrate, condense recap and evaluate each component of the data provided Mosby (2009).

The study used multiple regression technique in analyzing the relationship between changes in the response variable and change in the predictor variables. Data obtained

from secondary data was analyzed using various analyzing software such as, Statistical Package for Social Sciences (SPSS), STATA and Microsoft Excel version 2010. The results obtained from the model were presented in form of tables and graphs to aid in analysis and ease with which the inferential statistics was drawn.

3.5.1 Analytical Model

The regression model that was used contained six independent variables i.e. Two micro economic variables and two macroeconomic variables affecting the dependent variable return on assets (ROA) of Deposit Taking Microfinance Banks in Kenya. It was as follows:

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

Where:

Y= Return on Asset (ROA) as a measure of financial performance which was measured as net income divided by total assets.

X₁= Liquidity (LIQ) which was measured as current assets/current liabilities

X₂= Bank size (LTA) was measured as the Log of Total Assets

X₃= Capital adequacy which is determined by ratio of total equity to total assets.

X₄= Market power was measured as per annual individual microfinance bank's net income divided by sum of all microfinance banks net income

X₅= Inflation (CPI) index was obtained from the CBK Website

X₆= GDP annual growth

α = Regression constant

ε = Error term normally distributed about the mean of zero.

β₁β₂...β_n was the coefficients of the variation to determine the volatility of each variable to financial performance the in regression model.

3.5.2 Test of Significance

The model's validity was measured on how well the regression model fits the data. Goodness of fit statistics are available to test how well the sample regression function (SRF) fits the data how or how close' the fitted regression line is to all of the data points taken together. The most common goodness of fit statistic is known as R^2 (Brooks, 2008).

A correlation coefficient must lie between -1 and $+1$ by definition. Since R^2 defined in this way is the square of a correlation coefficient, it must lie between 0 and 1. If this correlation is high, the model fits the data well, while if the correlation is low (close to zero), the model is not providing a good fit to the data. R^2 is the square of the correlation coefficient between the values of the dependent variable and the corresponding fitted values from the model. The test was performed at 95% level of confidence to determine whether the model is a good predictor.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND INTERPRETATION

4.1 Introduction

This chapter presents the data findings and analysis in form of tables, figures, and inferential statistics. Descriptive statistics was used to analyze the findings obtained from the data of the financial statements of the nine Micro financial banks in Kenya.

4.2 Response Rate

This research study targeted the nine (9) Microfinance Banks in Kenya as at 31st December, 2014 but data was obtained from only 5 of those banks. Annual reports from some microfinance banks was unavailable and inaccessible mainly because some banks have barely two years since they were licensed to take in deposits. This therefore created a response rate of 55.6 %. This response rate was satisfactory to make conclusions for the study. Weisberg, Krosnick & Bowen (1996) recommended a response rate of 70%. Mugenda & Mugenda (2003) indicated that a response rate of 50 percent is adequate for analysis and reporting; a rate of 60 percent is good and a response rate of 70 percent and over is excellent. Based on the assertion, the response rate was considered good for the analysis.

Table 4.1: Response Rate

Response Rate	Frequency	Percentage
Response	5	55.6%
Unresponse	4	44.4%
Total	9	100.00%

Source: Resource Findings

4.3 Descriptive Statistics

A descriptive analysis of the data was conducted to determine whether the data exhibited ordinariness. The result of the descriptive statistics was presented in table 4.2.

Table 4.2: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	23	-3.0000	5.3000	1.577391	1.9193588
GDP	25	1.6	3.0	2.020	.5099
Market Power	25	.1737	.2093	.190066	.0133493
Total assets	22	505840	10698491200	2983879024.45	3516540548.47
Size (Log of Total Asset)	22	7.5000	9.9900	9.458636	.6709077
Capital Adequacy	22	.0000	266.0000	23.447902	74.2121710
LIQUIDITY	18	.0442	.8780	.251042	.1915998
Inflation	25	3.9610	31.5000	16.390200	12.2582994
Valid N (listwise)	17				

Source : (Research Findings)

Table 4.2 presents the descriptive statistics of the variables deliberated in this research, these are: Return on Assets, market power, size of the MFB, Capital adequacy, size of MFB, liquidity, inflation and GDP. The descriptive statistic and the distribution considered was minimum, maximum, mean and standard deviation. The standard deviation gave the dispersion in the data while the mean was used to establish the average value of the data.

Return on asset (ROA) recorded a mean of 1.577391 with standard deviation of 1.9193588. On average the micro financial banks realized a net income of 1.577391 units for a unit asset used in investments. GDP had a mean of 2.020 with a standard deviation of 0.5099. Market power recorded a mean of 0.190066 with a standard deviation of 0.0133493. Therefore on the average, each MFB had a mean annual average income of 0.0133493 for every total income of all microfinance banks in Kenya during the study period. During the study period spanning between 2010 and 2014, microfinance banks recorded an average total asset of 2983879024.45 with a standard deviation of 3516540548.47. Capital adequacy had a mean of 23.447902

with a standard deviation of 74.2121710. Liquidity and inflation had a mean of 0.2510 and 16.390 respectively.

4.4 Inferential Statistics

Correlation analysis shows the associations between different variables considered in the study. The study sought to establish the relationship between the independent and control variables, and financial performance. Pearson Correlation analysis was used to achieve this end at 95% confidence level.

4.4.1 Correlation Analysis

Table 4.3: Correlation Analysis

		ROA	GDP	Market Power	Total assets	Size (Log of Total Asset)	Capital Adequacy	Liquidity	Inflation
ROA	Pearson Correlation	1	-.381	.099	-.142	.447 [*]	.618 ^{**}	.008	.364
	Sig. (1-tailed)		.066	.353	.294	.036	.004	.488	.075
GDP	Pearson Correlation	-.381	1	.018	.118	-.071	-.081	-.130	-.233
	Sig. (1-tailed)	.066		.472	.325	.393	.379	.309	.184
Market Power	Pearson Correlation	.099	.018	1	.672 ^{**}	.379	-.335	-.218	-.091
	Sig. (1-tailed)	.353	.472		.002	.067	.094	.200	.365
Total assets	Pearson Correlation	-.142	.118	.672 ^{**}	1	.341	-.333	-.614 ^{**}	-.024
	Sig. (1-tailed)	.294	.325	.002		.090	.096	.004	.464
Size (Log of Total Asset)	Pearson Correlation	.447 [*]	-.071	.379	.341	1	.300	-.102	-.118
	Sig. (1-tailed)	.036	.393	.067	.090		.121	.348	.325
Capital Adequacy	Pearson Correlation	.618 ^{**}	-.081	-.335	-.333	.300	1	.053	.057
	Sig. (1-tailed)	.004	.379	.094	.096	.121		.421	.413
LIQUIDITY	Pearson Correlation	.008	-.130	-.218	-.614 ^{**}	-.102	.053	1	.022
	Sig. (1-tailed)	.488	.309	.200	.004	.348	.421		.466
Inflation	Pearson Correlation	.364	-.233	-.091	-.024	-.118	.057	.022	1
	Sig. (1-tailed)	.075	.184	.365	.464	.325	.413	.466	

*. Correlation is significant at the 0.05 level (1-tailed).

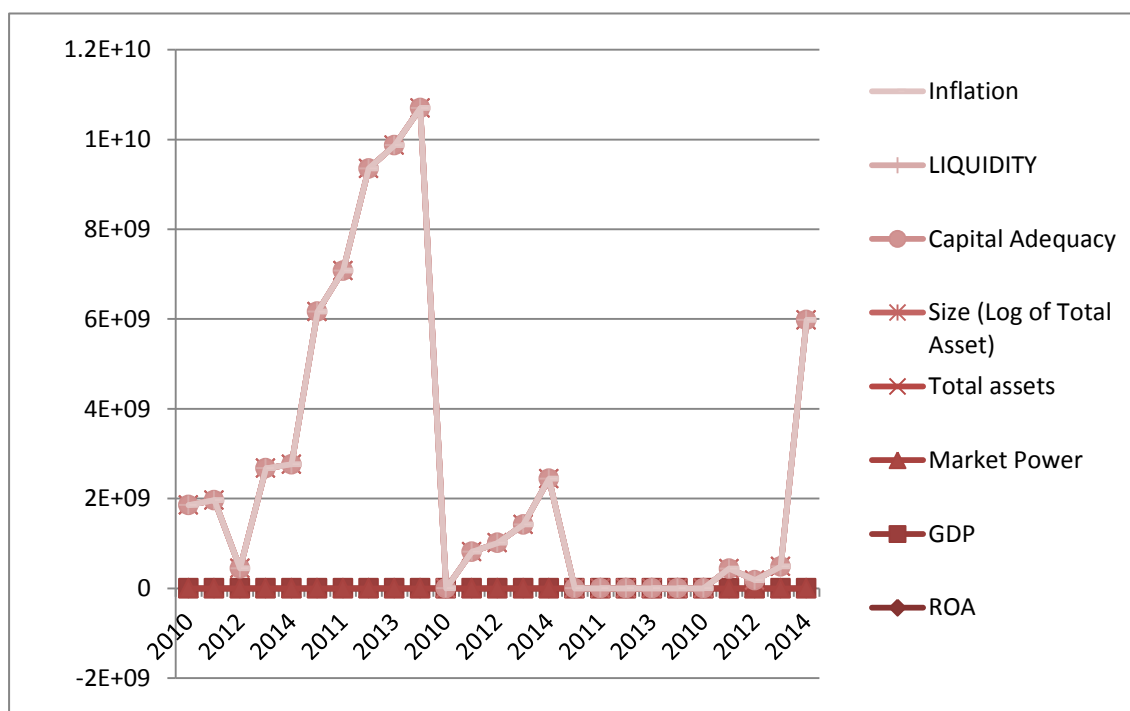
**.. Correlation is significant at the 0.01 level (1-tailed).

c. Listwise N=17

Table 4.3 above shows negative and weak linear relationships ($R=-0.381$) between GDP and the financial performance of micro financial banks. Market Power shows weak but positive relationship with the financial performance of the microfinance banks ($R=-0.099$). Total asset of the microfinance banks showed weak and negative relationship with the bank's financial performance. Capital adequacy showed moderate and positive ($R=0.618$) linear correlation with the profitability of the microfinance banks.

The relationship between the financial performance of MFB and the independent variables were graphed and presented in the graph below. The graph indicates that inflation showed variability between 2010 and 2014 while the rest of the control variables remained fairly constant across the period.

Figure 4.1: The Relationship between ROA and Micro and Macro Environment



Source: Resource Findings

4.4.2 Regression Analysis

The relationship between micro and macroeconomic variables and the financial performance of MFBs was evaluated through a regression analysis. The results presents the regression. The regression analysis was of the form:

$$Y=\alpha+\beta_1X_1+\beta_2X_2+\beta_3X_3+\beta_4X_4 +\beta_5X_5 + \beta_6X_6 + \varepsilon$$

4.4.3 Model Summary

A model summary gives the coefficient of determination showing the extent to which the predictor variables influence the dependent variable.

Table 4.4 Model of Goodness Fit

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.836 ^a	.698	.517	1.1547030

Predictors: (Constant), Inflation , Liquidity, Capital Adequacy, GDP, Size (Log of Total Asset), Market Power

Source: Research Findings

Table 4.4 above illustrates the result of the regression in a model summary. The result indicates an R square of 0.698. A high R square in the model is an indication that the micro and macro variables considered are highly associated with the microfinance bank’s financial performance. This implies that 69.8% of the total variation in microfinance bank financial performance is attributed to the changes in Liquidity, Bank size, Capital adequacy, Market power, Inflation and GDP.

4.4.4 Analysis of Variance

Analysis of variance determines the reliability of the model developed in explaining the relationship between variables. The F statistic is used to test the significance of the

relationship between the depended and the independent variables. The results of ANOVA are presented in table 4.5 below.

Table 4.5 Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	30.871	6	5.145	3.859	.029 ^b
	Residual	13.333	10	1.333		
	Total	44.204	16			

a. Dependent Variable: ROA

b. Predictors: (Constant), Inflation , Liquidity, Capital Adequacy, GDP, Size (Log of Total Asset), Market Power

Source: Research Findings

The F value in the table is 3.859 with a distribution F (6, 10). The probability of observing a value greater than or equal to 3.859 is less than say 0.05 as indicated by the significance value of 0.029 which is less than 0.05 testing at 5% level. Since the significance value of the F statistic is small then there is a strong evidence that the regression model developed is statistically significant. The predictors explain the variation in the results is insignificant. It is clear from the results that the relationship between the variables is statistically significant.

4.4.5 Model Coefficients

Table 4.2: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-9.474	6.343		-1.494	.166
	GDP	-.995	.729	-.248	-1.365	.202
	Market Power	31.710	25.542	.275	1.241	.243
	Size (Log of Total Asset)	.569	.696	.178	.818	.432
	Capital Adequacy	.012	.004	.618	2.910	.016
	LIQUIDITY	.124	1.560	.014	.080	.938
	Inflation	.043	.025	.316	1.747	.111

a. Dependent Variable: ROA

Source: Research Findings

Table 4.6 above gives the regression coefficients which are used to answer the regression model proposed, which was:

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

Where: Y = Financial Performance

X_1 = Liquidity

X_2 = Bank size

X_3 = Capital adequacy

X_4 = Market power

X_5 = Inflation

X_6 = GDP.

β_0 = Constant, β_{1-6} = coefficients of X_{1-6} ε = standard error

Based on the findings, the following regression model was established:

$$\text{ROA} = -9.474 - 0.248\text{GDP} + 0.275\text{MP} + 0.178\text{SIZE} + 0.618\text{CA} + 0.014\text{LQD} + 0.316\text{INF}$$

From the model, it is clear that, all the variables except GDP are positively related to the dependent variable as all the coefficients are positive. The model also shows that holding the predictor variables constant at zero (0), the financial performance (ROA) would be negative at -9.474.

4.5 Interpretation of the Findings

From the equation, the study found that on the average microfinance banks registered a loss of 9.474 units for every shillings invested during the study period. GDP negatively impacts on the microfinance bank finance performance though the effect is not significant at 5% level of significance ($t = -1.365$, $p = 0.202$, $p > 0.05$). Market power positively affects financial performance of the microfinance banks. However, market

power does not significantly affect financial performance of the microfinance at 5% level of significance ($t=1.241$, $p=0.243$, $p>0.05$).

Capital adequacy has a positive and effect on the return on asset of microfinance banks. Capital adequacy significantly affects financial performance of the microfinance banks at 5% level of significance ($t=2.910$, $p=0.016$, $p<0.05$). Size of the microfinance banks has no significant effect on the financial performance of microfinance banks ($t=0.818$, $p=0.432$, $p>0.05$). Liquidity and inflation positively affects return on asset of the microfinance banks though the effect is not significant at 5% level of significance.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATION

5.1 Introduction

This chapter is a synthesis of the entire study, and contains summary of research findings, exposition of the findings, commensurate with the objectives, conclusions and recommendations based thereon.

5.2 Summary

The study aimed at evaluating the effect of micro and macro variables on the financial performance of the Microfinance Banks in Kenya. Secondary data was used in the analysis to study whether Liquidity, Bank size, Capital adequacy, Market power, Inflation and GDP affect ROA. A study period of 5 years data was investigated i.e. year 2010 to 2014. Inferential statistics were conducted where correlation analysis and regression analysis were used to study the association between the variables undertaken. A multiple regression analysis was conducted to develop the regression model relating the study variables. The significance of the results was tested at 5% level.

Based on the study findings from chapter four, return on asset had a mean of 1.577391 with standard deviation of 1.9193588. On average the micro financial banks realized a net income of 1.577391 units for a unit asset used in investments. GDP had a mean of 2.020 with a standard deviation of 0.5099. Market power recorded a mean of 0.190066 with a standard deviation of 0.0133493. During the study period spanning between 2010 and 2014, microfinance banks recorded an average total asset of 2983879024.45 with a standard deviation of 3516540548.47. Capital adequacy had a mean of 23.447902 with a standard deviation of 74.2121710. Liquidity and inflation had a mean of 0.2510 and 16.390 respectively. GDP negatively impacts on the microfinance bank finance performance though the effect is not significant at 5%

level of significance. Market power positively affects financial performance of the microfinance banks. However, market power does not significantly affect financial performance of the microfinance at 5% level of significance. Capital adequacy has a positive and effect on the return on asset of microfinance banks. Capital adequacy significantly affects financial performance of the microfinance banks. Size of the microfinance banks has no significant effect on the financial performance of microfinance banks. Liquidity and inflation positively affects return on asset of the microfinance banks though the effect is not significant at 5% level of significance.

5.3 Conclusions

Conclusions are made from the study findings resulting from the analyzed data. These are based on the variables studied and their influence on financial performance of MFBs in Kenya. The objective of the study was to establish the effect of micro and macro variables on the financial performance of microfinance bans in Kenya. The findings indicated that micro and macro variables i.e. Liquidity, Bank size, Capital adequacy, Market power, Inflation except GDP positively affect financial performance of Micro of microfinance banks. The study concludes that Liquidity, Bank size, Market power, Inflation and GDP have no significant effects on the financial performance of microfinance banks. This study also concludes that out of the variables that turn out to positively affect financial performance, it is only capital adequacy significantly affects the return on asset of the microfinance banks in Kenya.

5.4 Policy Recommendations

Microfinance activities should be encouraged countrywide as currently the country has only twelve microfinance banks that have been licensed by the CBK. Their products are fairer to access than those of commercial banks. For instant, microfinance banks charge a lower interest on loan and pay a higher interest on

savings than some other lending institutions like commercial banks. The study recommends the government to encourage a savings culture to expand the microfinance assets which is important for improved financial performance.

Strategies to facilitate increased a favorable microeconomic environment of MFBs should be adopted by management for a good financial performance. As the findings illustrated, financial performance MFBs in Kenya is highly dependent on the level of the institutions' micro environment. Increased Liquidity, total asset (size), and Capital adequacy are seen to facilitate favorable financial performance of these microfinance banks.

The supervisory body of macroeconomic environment like Inflation and GDP should ensure viable environment for micro banking. They should regulate the variables in such a way that they lead the economy towards the growth and favor of MFBs. This will favor the financial sector by facilitating better the financial health thus increased economic growth

The government as bank regulator through the CBK should adopt policies that ensure increased bank performance. Strict conditions of minimum liquidity and capital should continue being emphasized on to ensure none of the banks have lower of the two. Increased bank performance leads to general economic growth.

5.5 Limitations of the Study

It is an unarguable fact that any worthy research is capital intensive and in this study, finance problem was one of the problems the researcher encountered. For the researcher to accomplish this work alot of money was invested on sourcing of various texts which could not be found in the library. Money was also needed for transport fees, browsing, printing and binding of valuable materials.

Insufficient time also impacted unfavorably on the work. This was as a result of the rush in the academic calendar, deadlines, lack of enough time to personally go to the MFBs and collect the information that is not available in secondary materials, analysis and interpretation as well took a lot of time. As such, the researcher had to limit this study to only five MFBs whose information was complete and available.

The study was limited to only six micro and macro-economic variables whereas there are very many variables that affect the financial performance of MFBs. Six elements cannot fully represent all the variables this study left out. Future researchers are advised to explore at least more variables affecting financial performance.

The researcher in this study collected data from secondary source and information of such kind has its own defects. Secondary data especially from annual reports is prone to maneuvering by management in efforts to protect the company's image. Unlike primary data, secondary data may not be from untrustworthy sources, inaccurate or generalized rendering the information unreliable.

This researcher reduced the period of this study to only five years. Although microfinance deposit taking has not been around for long as it started in 2008, the period used in this study is not adequate to make conclusions. In future, scholars should consider researching the effects on microfinance banks using a longer study period with more deposit taking microfinance institutions than just nine. This can at least yield different and more reliable results.

5.6 Suggestions for Further Research

This study researched on the micro and macro factors affecting financial performance of microfinance banks. Scholars intending to conduct empirical studies on microfinance banks should consider effect of industrial factors like banking sector development on financial performance.

This study used only two macroeconomic variables namely: Inflation and GDP to examine the effect of macro environment on financial performance. Future scholars should consider other macroeconomic elements like foreign exchange rate, population growth, interest rate, GDP per capita among others in their study.

This study investigated the effect of Liquidity, size, Capital adequacy, Market power, Inflation and GDP on ROA of just few institutions of a larger sector. Microfinance banks in Kenya occupy a small percentage of the finance sector. Researchers should examine the effect of these variables on financial performance of other firms in the sector like commercial banks, SACCOs, insurance companies among others.

The study period was five years from 2010 to 2014, which is a short period to do an empirical study and make conclusions on effect of dynamic variables. In future these variables could fluctuate favorably or the reverse and possibly end up modifying the findings of this study. A forthcoming investigation on microfinance banks should put a longer study period into consideration

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APPENDICES

APPENDIX I: LIST OF LICENCED MFBs IN KENYA AS AT DECEMBER 2014

1. Faulu Kenya Microfinance Bank Limited
2. Kenya Women Microfinance Bank Limited
3. SMEP Microfinance Bank Limited
4. Remu Microfinance Bank Limited
5. Rafiki Microfinance Bank Limited
6. Century Microfinance Bank Limited
7. Uwezo Microfinance Bank Limited
8. SUMAC Microfinance Bank Limited
9. UandI Microfinance Bank Limited

Source: Central Bank of Kenya Website (www.centralbank.go.ke)

APPENDIX II: MICROFINANCE BANK DATA

YEAR	MFB	ROA	GDP	Market Power	Total assets	Size (Log of Total Asset)	Capital Adequacy	LIQUIDITY	Inflation
2010	FAULU	-3	3	0.173662	1854600000	9.2	0	0.256062	3.961
2011		0.2	1.6	0.173662	1965000000	9.3	0.263308	0.195458	8.36
2012		0.7	1.8	0.173662	446500000	8.6	1.186338	0.219337	7.67
2013		0.8	1.9	0.173662	2675536000	9.4	0.207921	0.200738	31.5
2014		0.7	1.8	0.173662	2764800000	9.44	0.209274	0.201181	30.46
2010	KWFT	1.4	3	0.209342	6162800000	9.79	0.263241	0.04418	3.961
2011		1.3	1.6	0.209342	7076900000	9.84	0.271983	0.044174	8.36
2012		0.9	1.8	0.209342	9354000000	9.97	0.246216	0.048712	7.67
2013		0.8	1.9	0.209342	9870000000	9.99	0.354478	0.050323	31.5
2014		0.9	1.8	0.209342	10698491200	7.5	0.430503		30.46
2010	SMEP	0.3	3	0.19553		9.79			3.961
2011		0.9	1.6	0.19553	813900000	9.84	0.315395	0.210738	8.36
2012		2.1	1.8	0.19553	1014000000	9.97	0.611243	0.272378	7.67
2013		2.4	1.9	0.19553	1420000000	9.99	0.494609	0.297223	31.5
2014		2.5	1.8	0.19553	2440190653	9.38	0.265764	0.332016	30.46
2010	SUMAC	5.3	3	0.177234	1405845	9.79	1		3.961
2011		4.6	1.6	0.177234	505840	9.84	3.651773		8.36
2012		2.7	1.8	0.177234	600000	9.97	266	0.212664	7.67
2013		5.3	1.9	0.177234	702000	9.99	238.7008	0.325661	31.5
2014		4.4	1.8	0.177234					30.46
2010	RAFIKI		3	0.194561					3.961
2011			1.6	0.194561	440661000	8.6	0.305536	0.43996	8.36
2012		0.34	1.8	0.194561	183820000	9.7	0.759439	0.878033	7.67
2013		0.32	1.9	0.194561	485800000	8.2	0.31599	0.289915	31.5
2014		0.42	1.8	0.194561	5975126000		0		30.46