

**THE EFFECT OF GROWTH ON PROFITABILITY OF
MICROFINANCE BANKS IN KENYA**

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DECLARATION

This research project is my original work and has not been submitted for examination to any other University.

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This research project has been submitted with my authority as the university supervisor.

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I wish to express my appreciation to God for seeing me through my studies.

I also wish to express my gratitude to wife Lydia Makena, my two children Maryanne and Joy for their Moral support during the time of my studies. Special thanks to my supervisor, Mr. Barasa for his guidance, critic and advice when I was undertaking this research. I will forever grateful to Parents, brothers and sisters for their encouragements as I pursued my studies.

DEDICATION

This project is dedicated to my wife Lydia Makena and my two children Maryanne Muthoni and Joy Kendi.

ABSTRACT

Kenya banking sector has gone through fundamental reforms such as deregulation and globalization that have contributed to an increase in competition among Microfinance banks. This form of growth has impacted positively on increased access to banking services and products targeting all classes of customers especially low income earners. The objective of the study was to determine the effect of growth on profitability of Microfinance banks in Kenya. The study adopted a descriptive research design which was used to test the hypothesis of the relationship that existed between bank growth and profitability of Microfinance banks in Kenya. The population for this study involved 9 Microfinance banks that had been operational for the last five years. The study covered a period five years (2011-2015) and the data will be obtained from annual reports of Central Bank of Kenya. Data was analyzed using descriptive statistics and inferential statistics (correlation and regression analysis). It was found that Microfinance banks were profitable since return on assets increased in the study period. The bank's assets grew and generated income making it possible for them to meet their financial compulsions. Change in assets and profitability of Microfinance banks were found to be positively correlated. Bank size and financial performance were moderately correlated while there lacked a correlation of capital adequacy, liquidity, asset quality and financial performance. Change in net assets and asset quality were found to be negatively related to profitability of Microfinance banks in Kenya. The regression model was found to be significant. Capital adequacy, liquidity, asset quality and logarithm of assets were statistically insignificant while only change in assets was statistically significant. The study recommends that Microfinance banks should increase their branch networks and enhance accessibility of banking products and services. This will allow prospective customers to learn more about new products or services, open new accounts and increase bank deposits. The major limitation for this study was that Microfinance banks in Kenya which implied that the results obtained in this study cannot be used to make generalization for the entire banking sector in Kenya or any other financial institution. The study further recommends that future researchers should conduct a longitudinal research design and panel data to find out the cause and effect of relationships between growth and profitability of Microfinance banks. This research design will also enable researchers to establish long-term effect and sustainability of growth on profitability.

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LIST OF ABBREVIATIONS AND ACRONYMS

AMFI	Association of Microfinance Institutions
ANOVA	Analysis of Variance
EAC	East Africa Country
KNBS	National Bureau of Statistics
ROA	Return on Assets
ROE	Return on Equity
SPSS	Statistical Package for Social Sciences
US	United States

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Growth of a business is an important component towards the success of the firm, to achieve success and remains in business; both growth and profitability are essential ingredients for the firm's survival and to remain attractive to investors and analysts (Hirtle & Stiroh, 2007). Profitability is critical for the long-term survival of the firm. For a business to flourish it needs to have stable earnings to facilitate its growth and expansion as it continues operating. Apart from business earnings, it is essential to have knowledge of the external environment in which the firm operates (Charlene, 2005). Banks provide the needs of various stakeholders such as the government, private institutions, public organizations and foreign investment. They aspire to meet the financial needs of all their stakeholders and to achieve their corporate goal.

Growth of a bank contributes to the economic development; it brings about an integrated financial institution, broadens the capital market, increased technological transformation, increased efficiency and competitiveness among commercial banks. Banks contribute towards the development of a country through mobilizing savings, engaging in individual investments and financing industrial projects. A bank that is profitable can easily explore growth opportunities for greater overall profitability. This attracts current and potential investors to such a bank since they have trust and confidence towards that bank. The financial health of bank is a key determinant on the growth strategies that the bank should consider taking.

On the other hand, Berger (1997) argues that if a firm has multiple weaknesses such as performance, sales or marketability, untimely attempt to growth can lead to the collapse of such a firm.

The first step is to consolidate the current markets before trying to alter its growth. Hirtle & Stiroh (2007) opine that growth of a firm serves a major role in the expansion of a business especially in enhancing sustainability as a result of high customer numbers and corporate reputation.

1.1.1 Firm Growth

Naceur & Goaid (2001) defined growth as an approach used by a bank to increase its revenues with greater product sales or service income. Lee (2009) defines growth as increasing profitability through cost minimization. Therefore bank growth can be described as increased firm sales, business expansion through merger and acquisition, growth in profit, product and service development, diversification and an increment in number of firm staffs. Loderer (2009) posits that growth can be determined using various indicators; the mostly used include assets, sales, employment, market share, profit and physical output. Sales are universally acceptable indicator of a firm's growth. Assets value depends on the capital strength of an industry. The firm's market share might be ambiguous this is because market share differences might not be relevant especially for small sized firms hence making a comparison of firms market shares for firms that operate in dissimilar markets might not lead to valid conclusion. It is difficult almost impossible to compare physical output across industries due to complexity and the nature of the firms operations in different sectors. Profits are universally

acceptable measure of growth since they consider various aspects of the firm apart from its size.

Bank growth provides a platform for diversification and minimization of business risks. Growth of a bank has several advantages for example according to by Shehzad, De Haan & Scholtens (2013) growth a bank leads to financial stability and diversification of its investment portfolio. Growth contributes to an increase in firm size which brings about a high bargaining power over suppliers and distributors. This is consistent to Akbas and Karaduman (2012) who argue that firms large in size are more stable since they are capable of achieving huge sales because of capital savings from economies of scale. There are no specific measures of a bank growth however going by the changes that occurs in the financial statements these are the financial position statement and comprehensive income statement, one can determine whether the banking system is at a high level of growth or not. The key indicators to establish the growth of a bank is increase in customer deposits, total assets and the liabilities held by a bank; long term and short term liabilities. Long-term liabilities are highly utilized when the banks opt to expand externally. This study will measure bank growth using net assets (Loderer, 2009).

1.1.2 Concept of Profitability

Penman (2007) explains that profitability is the primary goal of a business. Without making profits the it is not possible for the firm to survive for a long period. It is therefore worthy to measure current and past profitability and projecting future profitability of the firm. According to Pandey (2005) profitability is used to measure the level of management efficiency through firms resources utilization with an aim of increasing the business value. Profitability is

viewed as a virtual measure of profits. Vijayakumar (2011) defines profitability as ability of the firm to use its resources to produce more revenues than expenses. It is the capability of the firm to generate profits from its operations. Profitability is one of the four pillars utilized for analyzing financial statements and the firm's performance as a whole. The other pillars include efficiency, solvency and market prospects. Investors, creditors and managers use these fundamental concepts to make an analysis of how the firm is performing and its future potential if the operations were effectively managed. According to Petersen & Kumar (2010) profitability is one of the major concerns to most firms. The common tool for financial ratio analysis is profitability ratios that are adopted in determining the profitability of the firm and investor returns. Profitability measures are important to managers and owners of the firm since they indicate the level of efficiency and performance of the firm. Profitability ratios can be looked at from different ways that include returns and margin.

Pandey (2005) indicates that profitability determines economic success of the firm in connection to the amount of capital invested. Net profit accounting determines the economic success of the firm. Profitability can be measured using income and expense. Income is money that is obtained from the activities of the firm such as selling products and services. There are various measures of profitability, the popular one include Return on Equity (ROE) and Return on Assets (ROA). ROA determines how profitable the firm is relative to its total assets. ROA gives a reflection of the management's efficiency in the utilization of its assets to achieve profits. It is computed by annual earnings divided by the total assets. ROE is the net income that is returned as a proportion of the stakeholder's equity (Penman, 2007).

1.1.3 The Effect of Firm Growth on Profitability of Microfinance Banks in Kenya

A lot of research has been done to establish the link between growth and profitability; however no agreement has been reached so far. Different studies depict different results as follows Jang and Park (2011) investigate the link between firm profitability and growth. The results found that an increase in profit led to an increment in growth. Other studies have argued that firm's profitability is positively related to growth (Coad, 2009). Bottazzi & Riccaboni (2001) revealed that there is no relationship between profitability and growth. Chandler & Jansen (1992), Mendelson (2000) made use of sales increment to predict growth; the findings revealed that profit and sales growth had a positive correlation.

Markman & Gatner (2002) posit that growth is independent to profitability. Reid (1995) findings indicated that there was a negative relationship between profitability and growth. Hoy (2002) reported that the firm's profitability has a negative connection to an increase in growth. Fitzsimmons, Stephen & Douglas (2005) explained that when there is a constant growth rate of a firm, which is also referred to as sustainable growth rate, growth is likely to be correlated to the firm's profitability. Macmillan & Day (1987) argue that large scale firms which rapidly enter into the market; they achieve high profitability as a result of high growth of the business.

According to Greiner (1997) the relationship between profitability and growth can either be positive or negative but this depends on the management behavior. He further argued that managers who motivate their employees perform well. This contributes to the growth of the firm leading to profitability. This is consistent to Serrasqueiro (2009) who studied Portuguese firms and found a positive link

between profitability and growth. Wilson & Morris (2000) posit that small firms rely on internal source of finance to expand their businesses and evade finances from external sources. This brings about a positive correlation between growth and profitability.

1.1.4 Microfinance Banks in Kenya

Microfinance Act of 2006 outlines the supervisory and regulatory structure of Microfinance banks in Kenya. The Microfinance Act was put forward on 22 May 2008. Its core functions were licensing and supervision to regulate its establishment. This act enables Microfinance banks to mobilize customer deposits from the public.

This enables Microfinance banks to easily lend money and get an interest which is one of the key sources of income (McIntosh, De Janvry & Sadoulet, 2005). Microfinance Act (2006) was revised by deleting the term institution which was then substituted to Microfinance bank licensed under this Act. Microfinance bank is a company that is licensed to do business within the confines of micro financing. Microfinance banks are regulated and supervised by the Kenya Central Bank.

The Association of Microfinance Institutions (AMFI) is a member-based institution that is registered under the Societies Act by the leading MFIs in Kenya. This institution is aimed at increasing the capacity of Microfinance industry to increase access to deposits to the low income earners. The reason for the establishment of AMFI was the need to have a binding voice to lobby the government for better policies and increase access to information and experiences as well as to link up and network with both local and global actors. Currently

AMFI has 62 membersø Institutions offering services to more than 6.5 million middle and poor class families with financial services in Kenya (AMFI, 2014).

In the last decade, the banking sector in Kenya has experienced a rapid growth in particular Microfinance banks. Quite a number of new Microfinance banks have been registered, new products have been introduced and the use of banking technologies which has enabled differentiation of banking products and services, improved flexibility, accessibility and convenience. Financial liberalization has provided a favorable environment to conduct microfinance business, this has led to free and fair competition. This had led to improved quality of banking products and services and hence improved customer satisfaction. This has attracted more customers especially the lower end customers who previously could not afford banking services (Kavoo, 2013).

1.2 Research Problem

Growth serves a vital role in assisting the firm to attain its goals; it has numerous advantages such as gaining stability, access to credit from the financial institutions, capital savings from suppliers and corporate image. This provides an opportunity for the firm to invest and expand. Investors are more attracted to invest in firms whose rate of growth is impressive and promising. Willison, Dimitris & Hong (2013) posits that growth of the firm leads to improved profitability; this is because firms that have a high rate of growth are financial stable and hence, they can afford modern technology which leads to improved efficiency in their operations (Delmar & McKelvie, 2013).

The banking sector in Kenya has undergone through various reforms such as deregulation and globalization which has increased competition among

Microfinance banks (Wangui, 2014). The banking sector in particular microfinance banks have experienced a rapid growth that has contributed positively to increased access to banking services and products to the lower end and the middle class. Some microfinance banks in the large category are currently adopting modern technologies to enhance efficiency, flexibility and convenience of their banking services and products. This has impacted positively to their profitability (Kavoo, 2013).

The link between bank growth and profitability is not clear; there are mixed results with regard to the arguments by Wilson et al (2013), it was concluded that bank growth is independent to its profitability, other scholars such as Berger (1997) indicated that there exist a linear correlation between growth of the bank and its profitability. Shehzad, De Haan & Scholtens (2013) studied commercial banks to establish the relationship between size, growth and profitability. . The study found that bank growth and profitability were independent of each other.

Kimani (2014) examined manufacturing firms to establish the relationship between firm size and profitability. The findings indicated a negative relationship between firm size and profitability. Kithuka (2013) studied firms listed in Nairobi Security exchange to establish the relationship between firm size and asset growth. The results found that firm size was statistically insignificant to asset growth. Kariuki (2012) found there exist a negative relationship between growth and profitability of listed firms in Kenya. Most studies: Shehzad et al., (2013), Kimani (2014) and Kithuka (2013) have concentrated on bank size and profitability. Limited focus was given on the link between growth and profitability in particular Microfinance banks in Kenya. This study therefore seeks

to find an answer to the question: what is the relationship between growth and profitability of Microfinance banks operating in Kenya?

1.3 Research Objective

The general objective of the study was to determine the effect of growth on profitability of Microfinance banks in Kenya.

1.4 Value of the Study

Central bank of Kenya might use the empirical results of this study to formulate policies that will provide a platform for commercial banks to grow and expand and hence impact positively on their profitability.

Microfinance banks will understand the most appropriate ways of measuring growth. Commercial banks will realize some of the growth and expansion strategies to adopt to bolster their profitability. They might consider borrowing some of the growth practices adopted by Microfinance banks. The finance practitioners will increase their understanding concerning bank growth; they will be enlightened about the most appropriate measures to measure growth and profitability of Microfinance banks.

Students will learn about the growth theories and their contribution towards improved profitability. Further, the study will educate them on the relationship between bank growth and profitability. Researchers, who deem this area of study relevant, might use the findings that will be obtained from this study as a base for future researches.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The chapter comprises of the theoretical framework for this study. The chapter also consists of the determinants of profitability, empirical review which covers both the international and local evidence and the summary of the literature review.

2.2 Theoretical Framework

The study is informed by three theories including Evolutionary Theory, Growth of the Fitter Theory and Models of learning and Selection. These theories have been discussed in line with the study variables which are growth and bank profitability.

2.2.1 Evolutionary Theory

Evolutionary theory discusses how growth and profitability of the firm relate. According to Alchian (1950) proposed the "natural selecting" argument that firms that are profitable are more stable, such firms diversify their investments hence minimize their risks. These firms have likelihood to grow and survive in the long-run unlike less workable firms that might be unable to sustain their market share and leave the market through evolutionary selection approach. Mendes & Rebels (1999) posits that the rate of profits explains the financial health of the firm and thus it is easy to foresee that profit making firms might experience growth and gain maximum profits. Alchian (1950) put more emphasis that this tendency is brought about by the decisions of the firm but rather because of an evolutionary process as a result of acting at an industry level.

According to Papadogonas (2005) firms strive to achieve a competitive advantage by investing in modern technologies to maximize their core competencies and minimize the costs of operations to outdo their rivals in the same industry. This is consistent to evolutionary view which indicates that profitable firms tend to grow and survive while less profitable firms might not survive in the long-run and hence lose their market share. In his theoretical paper Jovanovic (1982) also supports that firms that make profit have a more likelihood to survive and grow by reevaluating their earnings, if not so firms which are not efficient are removed from the market.

The evolutionary theory is based in the premise that new firms are faced by uncertainty as they try to fit and adapt to the environment. Competitive pressures force the firms to devise ways to fit in the environment in order to survive and sustain competitiveness. This involve a nonstop process of creative destruction which is motivated by two forces which include idiosyncratic learning which results to competitive advantage differences. According to Jovanovic (1982) the main source of learning is recent performances feedback. The second force is competitive selection amongst diverse firms that allows some to survive and others to exit. This model posits that growth is an indicator which defines performance of the firm and its viability to succeed in the long-run. A firm that records a high performance is likely to survive in the long-run while a firm that records poor performance might be tempted to exit the market.

2.2.2 Growth of the Fitter Theory

Growth of the firm and profitability has received growing attention from various scholars. The growth of the fitter theory was put forward by Alchian (1950). This

theory holds that attractive firms survive and grow in a given market whilst other firms exit as a result of low performance (Kouser & Hassan, 2012). Further, Alchian (1950) proposed that suitable firms survive and grow, while less strong companies are unable to maintain their market share and exit by evolutionary selection means. Therefore if the rate of profit making reveals the level of fitness, it is likely to expect that firms that make profit will grow (Jang and Park, 2011).

Delmar & McKelvie (2013) explains that firms that make profits have a growth prospective because they can easily fit in the environment and invest in future competitive strategies with their earnings. Profitability prevents the risk of acquisition and reliance on external financing however; it portrays a adequate level of the market demand. According to Mukhopadhyay and AmirKhalkhali (2010) profits provide money for growth. The firm might experience internal grow by investing in development projects in different forms for example; it may capitalize on technological advancements to increase its capacity in research and development and hence contribute to products and process innovations.

Firm growth and profitability are considered as key drivers of the firm, however; there lacks a generalized relationship between the two variables. Researchers: Goddard, Tavakoli & Wilson (2009) depict a positive effect between profitability and firm growth. A study by Reid (1995) indicates that there is a negative relationship between profitability and growth. According to Garcia-Manjon & Romero-Merino (2012), Delmar et al. (2013), small firms experience rapid growth as compared to large firms. Based on the findings, small firms put great efforts to attain economies of scale; they experienced rapid growth as compared to large firms, this is because larger firms were unable to attain further growth due to the reduction of cost to lowest level.

2.2.3 Models of Learning and Selection

According to Geroski (2004) growth of the firm and survival high depends on its ability to learn. Extant literature shows that survival and post-entry performance of a new company will depend on how best it adapts to the environment and the strategies used. Learning and selection approach stresses on the importance of the ability of the firm to learn and its capacity to innovate to compete in the environment. This is consistent to Geroski & Gugler (2004) who argue that firms that invest in modern technologies to innovate can easily maximize on their core competence to produce products and services that are superior compared to their competitors. However, this is not easy to achieve for a new firm because it requires a huge capital investment and a higher understanding of the market.

Larger firms that have more experience in the market stand a better chance as compared to new firms that are still struggling to find a niche in the market. In line with learning and growth models, a firm requires a considerable period of learn and grow, in the process of learning the firm creates strong bonds with its stakeholders such as suppliers which brings about economies of scale as a result of corporate reputation. This contributes to the profitability of such firms and hence the need to invest in modern technologies to achieve competitiveness in the market. The proponents of this model include Jovanovic (1982), Ericson & Pakes (1995) & Pakes & McGuire (1994). The fundamental traits for this model are that they consider the firms dynamism and the level of efficiency which high determines their chances of survival. Jovanovic (1982) devised a model whereby firms cannot establish their level of effectiveness until they are in the market. The process of learning is also referred to as Bayesian or passive learning process.

Firms that are efficient in their operations are likely to grow much faster until they reach a minimum efficient size. Inefficient companies disappear with the course of time. These findings are coincide with Bourke (2004) who indicated that larger firms that have more experience in the market are financially stable as compared to smaller firms that are quite new in the market. This is because the large firms use modern technologies in their operations hence they are more integrated and their services are quite distinct, this leads contributes to higher profitability. Information a essential asset to the firm because it can be used a resource to bolster profitability. In this study, the researcher will investigate the microfinance banks that record the least costs of operations and determine their sizes with the help of asset growth. This will confirm or dispute whether the learning and growth model on basis of whether larger and older firms easily afford modern technologies hence exhibit lower operational costs as compared to new and smaller firms.

Smaller firms grow and increase their size to gain the advantages that are realized by a large firm. It is argued that smaller businesses grow faster because of sunk costs since their initial investment is a small proportion of the optimum production in the long run. A study by Hart & Oulton (1996), and based on Lucasø (1978) model, found that there exists an inverse relationship between the elasticity of substitution and the firm average size. Further, the model, therefore, explains that smaller companies experience slow growth rates as a result of high costs incurred in their operations, this leads to losses.

2.3 Determinants of Profitability

There are several determinants of profitability; however this study will discuss the following determinants Capital Adequacy, Liquidity, Loan Quality, Bank Size and Inflation. These determinants have been discussed in relation to how they affect the profitability of the bank.

2.3.1 Capital Adequacy

Capital adequacy is a determinant of bank's profitability that is computed as a ratio of total equity to total assets. Capital structure consists of retained profit, shareholders' funds and reserves.. These elements influence commercial bank's profitability owing to its influence on leverage and risk. Assets of commercial banks can be funded using either debt or capital.

However, financing through debt is very risky as opposed to financing through capital putting into consideration commercial banks exposure to credit and liquidity risks. The explanation for this is that, in an event that a commercial bank experience loss as a result of creditor defaulting or liquidity challenges, the bank must still service its debts (Berlin & Mester, 2007). Relatively, a bank with an adequate capital can take a high risk that emanate from credit and liquidity risks. Claey's & 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 goes bankruptcy and distress. Charlene (2005) notes that commercial banks that have a higher equity levels can minimize their cost of capital which might have a positive impact on the profitability. According to Basel II and III accord, frequently majority banks insolvencies are as a result of credit losses and

thus it is advisable for commercial banks to have a high quality capital to absorb loss to cope with stress period.

2.3.2 Liquidity

Liquidity is determined using a liquidity ratio which is computed by dividing current assets with current liabilities. 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. A bank becomes liquid if it is able to accumulate enough cash and its ability to raise fund from different sources to meet its financial obligation on time. When a bank is faced by financial difficulties, it might be forced to raise extra funds through borrowing or selling off a part of its liquid assets. This might create an impression among shareholders that the bank is making some arrangement to dispose bad assets off. Thus, attract lower prices for liquid assets which might expose the bank income loss from liquid assets sales (Barros, Ferreira & Willians, 2007).

2.3.3 Loan Quality

Loan quality has a high influence on profitability of banks. It is computed dividing the total number of non-performing loans by total gross loans and advances. The function of the bank is to provide loans to borrowers. Loan serves as a key source of earnings for commercial banks. Banks provide loans to generate revenues and to contribute to profitability. Angbazo (2012) put more emphasis that banks should be careful when offering loans to the borrowers since they might expose themselves to financial losses.

An example is the latest financial crisis that occurred between 2007 and 2008 in the United States of America. Most banks that offered more loans including non-prime loans in this period suffered financial losses as a result of high default rates on non-prime loans which were as a result of decline in house prices. This led to the collapse of some banks (Willison, Dimitris & Hong, 2013).

2.3.4 Bank Size

Bank size is a determinant of bank's profitability that is measured using the logarithm of assets. Alexandru & Genu (2008) contend that the size of a bank is usually used to indicate the probability of diseconomies or economies of scale in the banking framework. Bank size is a control variable of differences in cost and product and risk variation. It is argued that the cost differences (diseconomies or economies of scale) contribute positively on the relationship between bank size and its profitability provided that economy of scale is considered significant (Amato & Wilder, 2001). This is consistent to an investigation conducted in Switzerland by Ammar & Russell (2003) that examined the bank profitability determinants before and during the financial crisis. The findings established that there exist a positive correlation between smaller and larger banks and profitability. The results showed that smaller and larger banks were more profitable as compared to medium-sized banks prior to financial crises. The reason was because banks which are large in size benefitted from economies of scale, providing a wide variety of products, diversification of loan product.

2.4 Empirical Review

This section covers local and international studies that have been done in relation to growth and profitability of firms as follows. The studies depicts the author(s),

the year when the study was published, the title of the study, the place where the study was conducted, the methodology that was used and the results that were obtained. The studies are also in line with the arguments of the theories that support this study.

2.4.1 International Evidence

Berger (1997) studied the profit-structure relationship in banks United States. The study adopted longitudinal research design for a period of ten years. Data was gathered from financial statements and records. Analysis of data was done using ordinary least square method and the results found that increase in the bank's size attributed to total assets increment impacted positively on the profitability, this is so because the increase in size of a bank, results to an increment in economies of scale and this increases the bank's profitability.

Barros, Ferreira & Willians (2007) their analysis of Europeans banks to establish determinants of worst and best performing banks. The study adopted an explanatory research design. The study covered a period of ten years (2000-2009) where panel data was extracted from audited reports and records. A multiple linear regression model was adopted to establish how variables relate. Granger causality tests and Dickey-fuller tests were carried out. The findings observed that there exists a negative relationship between profitability and bank growth; as the banks grow, its diversified portfolio increases information asymmetry and bureaucracy which lowers profitability because of its inability to effectively supervise its operations.

Scholtens et al. (2013) examined the relationship between bank size, its growth, and its profitability. The study used a longitudinal research to establish how the

variables relate. The study gathered specific bank data of two banks in Jordan in the Amman financial market for 11 years (1999-2009) from their financial statements. The study adopted the descriptive analytical method to analyze the data using Statistical Package for Social Sciences. The findings showed that the variations in bank profitability are determined by increment in the size of the bank and profitability, as a result volatility of profit made by banks depends on their size and growth.

Garcia et al. (2012) conducted a study in Spain to establish determinants of the bank's profitability. The study adopted a longitudinal research design for a period of fifteen years (2001-2015). Panel data was collected from financial statements and records. The findings observed that higher growth in profitability of banks has a higher proportion of total assets, loans, deposits by customers, efficiency and minimal credit risks.

It was concluded that higher profitability is associated with the bank that is able to maintain higher asset even in cases of increased issuance of loans. Despite the fact that there is additional cost of sustaining a higher loan, the banks need to balance the two.

Pastory & Janeth (2013) conducted a study in East Africa Country (EAC) region, to establish the relationship between bank growth rate and profitability. The study utilized secondary panel data from bank scope in the four regions. The study used an explanatory research design. Both secondary and primary data were utilized. The results found that bank growth indicators impacted positively on the profitability of banks in EAC. Further, the results revealed that Kenya banks were efficient compared to other banks in the EAC, Tanzania was ranked second

followed Uganda while Rwandan banks were ranked third in term of efficiency. The results showed that the quality of asset, efficiency in management and adequacy in capital were positively related to profitability. The study also established a negative relationship between Liquidity and bank's profitability.

2.4.2 Local Evidence

Mehrjardi (2012) conducted a study on Kenya banking sector, to establish the relationship between size and profitability. The study adopted a descriptive research design to establish the link between size and profitability of banks. The study covered a period of five years and secondary sources of data were obtained from reports at Central bank. Descriptive statistics and a multiple linear regression model were employed for analysis. The findings observed that there was a positive correlation between profitability of banks and number of customers, deposit liabilities, market share and number of branches the bank operates.

Wambu (2013) conducted a study on Commercial Banks in Kenya to investigate the relationship between profitability and liquidity. The study adopted a descriptive statistics. Regression analysis was done to reveal how study variables related. Secondary sources of data were used that were gotten from annual reports of Central bank. The study population involved all the 43 commercial banks that are licensed to work and operate in Kenya. The study covered a period between (2008 to 2012) and data analysis was conducted with the help of a regression model and descriptive statistics. The findings indicated that commercial banks in Kenya exhibited a positive relationship between profitability and liquidity.

Muia (2013) conducted a study on Islamic banking in Kenya to establish relationship between innovation in financial practices and profitability growth.

The study adopted descriptive research design to establish the relationship between and profitability growth of Kenya Islamic banking sector. The study targeted 8 commercial banks that are licensed to work as Islamic banks. The study covered a period between 2009 and 2012. Primary data was collected with the help of questionnaires and secondary data was obtained from Central bank annual reports. Data was analyzed using regression analysis and descriptive statistics. The findings observed that there existed a moderate relationship between bank innovations and profitability of Islamic banks in Kenya.

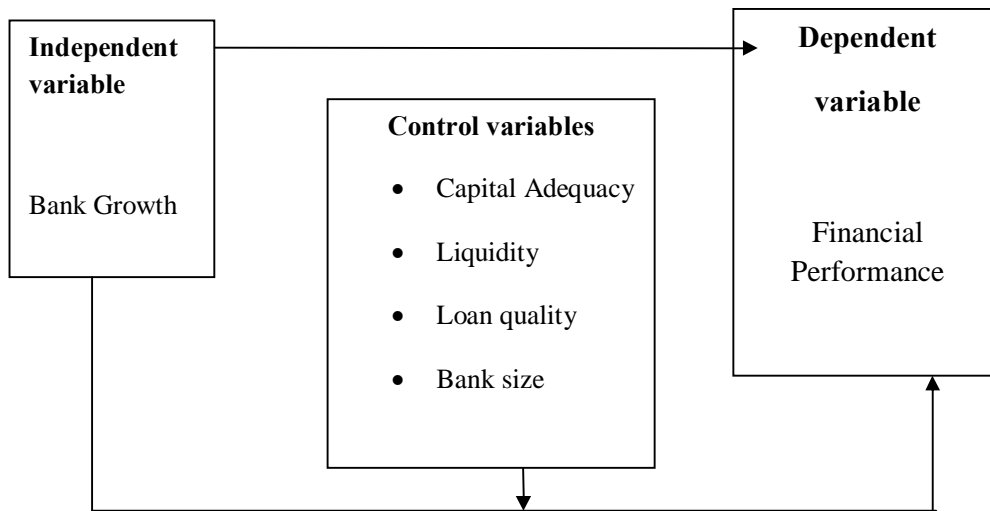
Mimano (2014) conducted a study on commercial banks in Kenya to examine the influence of agency banking on the growth of banks profits. The study used an exploratory research designs to establish the influence of agency banking on growth of profits. The study used secondary sources of data that covered a period of 4 years between 2010 to 2013. The target study units for this research were the 13 commercial banks that used of agency banking to roll out financial services to their customers. The results found that there exist a strong relationship between agency banking profit growth of commercial banks in Kenya.

Litunya (2014) conducted a study on Kenya banking sector examine the influence of internal variables on the bank profitability. The study adopted a descriptive research design to establish the effect of internal variables on the profits made by commercial banks operating in Kenya. The study covered a period of ten years and secondary data was gathered from annual bank survey reports of CBK and economic survey reports from Kenya National Bureau of Statistics (KNBS) in the period (2009 to 2013). A multiple linear regression model was adopted to find out the link between variables. The results showed that Loan portfolio quality,

liquidity, asset value and administrative costs were statistically significant to profitability.

2.5 Conceptual Framework

The dependent variable in this study is profitability measured using ROA. The independent variable is growth and the intervening variables are (capital adequacy, liquidity, loan quality, bank size and inflation). The dependent variable is financial performance and the moderating variable is economic policies.



Source: Researcher, 2016

2.5 Summary of the Literature Review

From the literature review, it is clear that more focus on the link between growth and profitability has extensively researched in the US and most parts of Europe and Asia. However, more concentration has been laid in both banking and manufacturing sectors. In the Africa context, little focus has been given on the link between bank growth and profitability, more concentration has been laid on the determinants of bank profitability and the relationship between bank size and financial performance of commercial banks. The available research findings in

Kenya have either investigated a single factor or two factors in an attempt to establish whether there exists any relationship between bank growth and profitability. This study seeks to carry out an exhaustive approach that will bring forth a clear understanding of the relationship that exists between bank growth and profitability of Microfinance banks in Kenya.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter consists of the research methodology that was used to achieve the objective of the study. It covered data collection and data analysis. The subheadings discussed in this chapter involved the research design, study population, data collection and data analysis.

3.2 Research Design

A research design is a blueprint on the way data will be collected and analyzed to test the hypothesis for the study (Frankfort-Nachmias & Nachmias, 2008). Kothari (2006) posit that a research design allows the research to examine the behavior of the variables without altering them. The study utilized a descriptive research design to test the hypothesis of the link which existed between bank growth and profitability of Microfinance banks in Kenya. Litunya (2014) applied a descriptive research design to investigate the relationship between internal variables and profit made by commercial banks in Kenya. The researcher chose this research design because it was flexible in establish the relationship that existed between variables.

3.3 Study Population

Kothari (2006) defines a population as a discrete set of objects that possess comparable characteristics that can either be measured or observed. The population for this study involved 9 Microfinance banks that had been operational for the last five years (2011-2015), as at 31st of December, 2015 (See Appendix I).

3.4 Data Collection

Data collection entails gathering and selecting and information systematically to enhance accuracy and validity. Secondary sources of data were used since the study was quantitative in nature. The study covered a period five years which was obtained from annual reports of Central Bank of Kenya. According to Cooper and Schindler (2006), secondary sources of data were got from published sources and records. This form of data was available and accessible online from the Central Bank of Kenya website.

3.5 Data Analysis

Sekaran (2006) defines data analysis as the process of extracting, compiling and modeling raw data with an objective of obtaining constructive information that can be used to formulate conclusion by predicting the outcome of the study. Data collated was cleaned, sorted and coded using Statistical Package for Social Sciences (SPSS). The choice of SPSS was because it provided a wide array of statistical data analysis. Inferential statistics was used for data analysis. Kothari (2006) notes that inferential statistics is a kind of statistics that enables the researcher to test reliability of the findings in a study in order to make inferences from the data. Percentages, tabulation, the standard deviation and mean were utilized to present the data. Mean and Standard Deviation was used to establish the link between the study variables. A multiple linear regression equation was used to establish the relationship between bank growth, other selected control variables and profitability of Microfinance banks in Kenya.

3.5.1 Conceptual Model

A conceptual model consisted of concepts that were used to enable any logical reader to have an understanding of a subject that the model represents. Below is the conceptual model for this study.

$Y_1 = \text{Profitability}$

$Y_2 = \text{Growth}$

$Y_3 = \text{Control variables}$

$Y_1 = f(Y_2 + Y_3)$

$Y_2 = f(G)$

$Y_3 = f(C)$

$C = f(Ca, L, Lq, Bs)$

Where,

f=function

G=Growth was measured using change in net assets

C= Control variables

Ca= Capital adequacy was measured using the ratio of capital to total weighted assets.

L=Liquidity was measured as the ratio of current assets divided by current liabilities.

Lq= Loan quality which was measured by dividing the total number of non-performing loans divided by total gross loans and advances.

Bs=Bank size which was measured using logarithm of assets

3.5.2 Analytical Model

The regression equation to be utilized was a multivariate function that consists of five independent variables namely capital adequacy, liquidity, loan quality, bank size and bank growth that affects profitability. The dependent variable was profitability that was determined using Return on Assets (ROA). Below is the regression model which as follows:

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

Where:

Y = Profitability which was measured using Return on Assets (ROA) calculated as net income divided by total Assets.

X₁ = Bank growth was measured using change in net assets.

Control variables

X₂ = Capital adequacy which was determined using the ratio of capital to total weighted assets

X₃ = Liquidity which was measured as the ratio of current assets divided by current liabilities.

X₄ = Loan quality was measured by dividing the total number of non-performing loans divided by total gross loans and advances

X₅ = Bank size which was measured using the log of total assets

= Regression constant

= Error term normally distributed about the mean of zero (standard error term).

$\beta_1, \beta_2, \dots, \beta_n$ = The coefficients of the variation to determine the volatility of each variable to profitability the in regression model.

3.5.3 Tests of Significance

The study tested the level of statistical significance of the results at 95 percent to establish whether the model was a good predictor using Analysis of Variance (ANOVA) approach. This approach was appropriate in z-test or t-test when assessing the significance of the difference between more than two samples at the same time. If the result of the test was within 5 percent, this implied that the variable was statistically significance in explaining the link between bank growth and profitability.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter covers a discussion of data analysis which was done in line with the objective of the study, to determine the effect of growth on profitability of Microfinance banks in Kenya. Data was analyzed using descriptive statistics and inferential statistics that included Pearson Correlation and Regression Analysis.

4.2 Return Rate

The researcher collated secondary sources of data from Central Bank Reports of Microfinance banks in Kenya. The study covered a duration of five years, nine banks and six variables that constituted 270 data points (observations). However, a few data was missing hence the researcher managed used 234 data points which was obtained from the computed measurements of the study variables.

4.3 Descriptive Statistics

The study used descriptive statistics to summarize the results of the study in form of standard deviation and mean and showing the trend and patterns of the variables in the study period. The results are shown in Table 4.1

Table 4.1 Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	39	-.27	.04	-.0206	.06218
Change in net assets	39	.71	3.71	1.1445	.61055
Capital Adequacy	39	.10	3.10	.5553	.54013
Liquidity	39	.15	2.98	.5288	.56614
Asset Quality	39	-.11	7.86	.7231	1.20268
Logarithm of assets	39	1.77	4.50	3.0657	.87443
Valid N (listwise)	39				

Source: Research data, (2016)

From the results in Table 4.4, ROA increased from -.27 to .04, it had a mean value of -.021 which was an indication of improved profitability. Change in net assets increased rapidly from .71 to 3.71 and mean value of 1.14. This implied

that Microfinance banks were growing fast. Capital adequacy increase from .10 to 3.10 which implied that Microfinance banks faced financial risk. This was attributed to failure to effectively implement credit policies and standards. Liquidity increased from .15 to 2.98 with a mean of .529, which was an indication that Microfinance banks met their short-term financial obligations. Asset quality increased rapidly from -.11 to 7.86 with an average of .723, which was as a result of increase in non-performing loans. Bank size increased from 1.77 to 4.50 which implied that the income generated from assets increased in the study period. This findings support the relationship between bank growth and profitability of Microfinance banks.

4.4 Pearson Correlation Coefficient

Pearson's correlation coefficient is the test statistics that measures the statistical relationship, or association, between two continuous variables. It is known as the best method of measuring the association between variables of interest because it is based on the method of covariance. It gives information about the magnitude of the association, or correlation, as well as the direction of the relationship. Since it is a statistical measure of the strength of a linear relationship between paired data it will enable us determine the relationship between growth and profitability of microfinance as per the study objective.

The used the coefficient will help in establishing the strength of link between growth and profitability of Microfinance banks in Kenya if it exists. Ranging from -1 to +1. A value of +1 will show a perfect positive relationship between two whereas -1 will show a perfect negative relationship between the two variable. The results of the relationship between growth and profitability of Microfinance banks in Kenya are depicted in Table 4.2 below

Table 4.2 Pearson Correlation Coefficient

		ROA	Change in net assets	Capital Adequacy	Liquidity	Asset Quality	Logarithm of assets
ROA	Pearson Correlation	1	-.865**	-.041	-.133	.116	.455**
	Sig. (2-tailed)		.000	.804	.421	.482	.004
	N	39	39	39	39	39	39
Change in net assets	Pearson Correlation	-.865**	1	.084	.208	-.164	-.470**
	Sig. (2-tailed)	.000		.610	.203	.317	.003
	N	39	39	39	39	39	39
Capital Adequacy	Pearson Correlation	-.041	.084	1	.380*	-.109	-.630**
	Sig. (2-tailed)	.804	.610		.017	.510	.000
	N	39	39	39	39	39	39
Liquidity	Pearson Correlation	-.133	.208	.380*	1	-.037	-.318*
	Sig. (2-tailed)	.421	.203	.017		.824	.049
	N	39	39	39	39	39	39
Asset Quality	Pearson Correlation	.116	-.164	-.109	-.037	1	.124
	Sig. (2-tailed)	.482	.317	.510	.824		.454
	N	39	39	39	39	39	39
Logarithm of assets	Pearson Correlation	.455**	-.470**	-.630**	-.318*	.124	1
	Sig. (2-tailed)	.004	.003	.000	.049	.454	
	N	39	39	39	39	39	39

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

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

Source: Author data, (2016)

The results in Table 4.3 indicate that there was a strong positive correlation between change in assets and profitability. The correlation score was -.865. This implied that growth contributed to profitability of Microfinance banks. Bank size had a moderate correlation with financial performance. The correlation score was .455. On the other-hand, capital adequacy had a correlation score of -.041, liquidity had a score of -.133 while .166 and asset quality did not have any correlation with financial performance.

4.5 Regression Analysis

Regression analysis will help us understand how the profitability of microfinance banks in Kenya (dependent variable) changes when growth varies. In other words, what happens to profitability when growth is varied, while the other independent variables are held fixed. The study used a regression model to test the hypothesis between growth and profitability of Microfinance banks. The results are shown below.

4.5.1 Model Summary

The model summary was set out to establish the model's goodness of fit. The results are shown in Table 4.3

Table 4.3 Model Summary

Model Summary				
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.873 ^a	.763	.727	.03249

a. Predictors: (Constant), Logarithm of assets, Asset Quality, Liquidity, Change in net assets, Capital Adequacy

Source: Research data (2016)

The outcome of table 4.3 above found that the R-square (coefficient determination) was 76.3%. This implies that the growth explained about 76.3% of the change in profitability. 76.3% percent of the profitability of microfinance banks in Kenya is due to growth. The relationship therefore between growth and profitability can be said to be high as per the results above

4.5.2 Analysis of Variance

Analysis was done to establish whether the model was significant in giving an explanation on the effect of growth on profitability of Microfinance banks. The results are shown in Table 4.4 below which found that the model had predictive

value and thus it was significant. This was because its p-value was less than 5%,
 p=.000

Table 4.4 Analysis of Variance (ANOVA^a)

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.112	5	.022	21.235	.000 ^b
	Residual	.035	33	.001		
	Total	.147	38			

a. Dependent Variable: ROA

b. Predictors: (Constant), Logarithm of assets, Asset Quality, Liquidity, Change in net assets, Capital Adequacy

Source: Research data, (2016)

4.5.3 Model Coefficients

Model coefficients provide unstandardized and standardized coefficients to explain the direction of the regression model and to establish the level of significance of the study variables. The results are captured in Table 4.5.

Table 4.5 Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		Sig.
		B	Std. Error	Beta	t	
1	(Constant)	.031	.042		.751	.458
	Change in net assets	-.083	.011	-.814	-7.872	.000
	Capital Adequacy	.012	.014	.107	.890	.380
	Liquidity	.005	.010	.045	.487	.630
	Asset Quality	-.001	.004	-.024	-.276	.784
	Logarithm of assets	.011	.009	.157	1.213	.234

a. Dependent Variable: ROA

Source: Research data, (2016)

The regression equation obtained was as below:

$$ROA = .031 - .083X_1 + .012X_2 + .005X_3 - .001X_4 + .011X_5 +$$

The results found that change in net assets and asset quality were negatively related to profitability of Microfinance banks. This implied a unit decline in variables (change in net assets and asset quality) led to a corresponding decrease in profitability. Capital adequacy, liquidity and logarithm of assets were

positively related to profitability, this implied that a unit increment in any of the variables was positively related to profitability.

Capital adequacy, liquidity, asset quality and logarithm of assets were insignificant because their probability values were more than 5 %, $p=.380$, $p=.630$, $p=.784$ and $p=.234$ respectively. However, change in net assets was significant in giving an explanation on the effect of growth on profitability of Microfinance banks. This was because its probability value was less than 5%, .000.

4.6 Discussion of Findings

Descriptive findings indicated that ROA increased progressively in the study period to .04 towards the end of 2015 from -.27. These findings are consistent to Muia (2013) who found that ROA of commercial banks increased in the study period. Capital adequacy also increased to 3.10 from .10 which was attributed to a tremendous increase in non-performing loans. This was risky because it implied that Microfinance banks borrowed as compared to their equity finance. These findings have been supported by Litunya (2014) who found that non-performing loans of commercial banks increased in the study period. However, the levels of liquidity were indicative the banks were able to meet their short-term financial compulsions.

The size of the bank grew from 1.77 to 4.50; this was a sign of good performance of Microfinance banks since they assets were able to generate income in the study period. These results are in line with Mimano (2014) who found that commercial banks met their financial obligations. Liquidity increased from .15 to 2.98 which

implied that Microfinance banks met their short-term compulsions. Asset quality rose from -.11 to 7.86 with an average of .723, this was as a result of an increase in non-performing loans. Assets grew from 1.77 to 4.50 which was an indication that Microfinance banks were profitable. The descriptive results are consistent to Muia (2013) whose descriptive results found that commercial banks attained a tremendous growth as a result of profitability.

Correlation results found that growth and profitability were strongly correlated. The correlation score was (-.865). This finding is supported by Muia (2013) who found that growth and profitability were positively correlated. Bank size was moderately correlated to profitability of Microfinance banks. The correlation score was found to be .455. This is also supported by Mimamo (2014) who found that profitability was positively correlated to bank size. There existed no correlation between capital adequacy and profitability of Microfinance banks. The correlation score was .041. The finding is coherent to Garcia et al. (2012) who found no correlation between capital adequacy and financial performance.

The model was significant in explaining the effect of growth on profitability of Microfinance banks in Kenya. These results conformed to the findings by Scholtens et al. (2013) who found that the regression equation adopted was significant. Asset quality and growth were found to be negatively related to profitability of Microfinance banks (-.083 and -.001). These findings are supported by Mimamo (2014) who indicated that growth was negatively related to profitability.

Further, growth was significant because since its probability value was less than 5%, $p=.000$. This is in agreement with Barros et al. (2007) who found that growth was significant.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

Included in this chapter is summarized findings and conclusion in relation to this study objective. It also covered the recommendations made by the researcher, the limitations and areas that would be appropriate for further studies.

5.2 Summary of Findings

The descriptive results found that ROA increased from -.27 to .04, change in net assets grew from .71 to 3.71. This meant that Microfinance banks were performing which contributed to increase in income generated from assets. Microfinance banks increased their levels of leverage; this was depicted through capital adequacy that grew rapidly from .10 to 3.10, which was an indication of an increase in financial risk. Liquidity increased from .15 to 2.98 which implied that Microfinance banks met their short-term compulsions. Asset quality rose from -.11 to 7.86 with an average of .723, this was as a result of an increase in non-performing loans. Assets grew from 1.77 to 4.50 which was an indication that Microfinance banks were profitable. The descriptive results are consistent to Muia (2013) whose descriptive results found that commercial banks attained a tremendous growth as a result of profitability.

Correlation results found a strong correlation between change in assets and profitability of Microfinance banks (-.865). Bank size was moderately correlated to financial performance of Microfinance banks (R=.455).

Capital adequacy, liquidity and asset quality lacked a correlation with financial performance (0.41, -.133 and .116 respectively). These results are consistent to Pastory and Janeth (2013).

Coefficient of determination indicated that growth explained about 76.3% of profitability. The regression model was found to be significant since its p-value was less than 5 percent, $p=0.000$. Asset quality and change in assets were negatively related to profitability while capital adequacy, liquidity and logarithm of assets were positively related. Apart from change in net assets, all the other independent variables under investigation were insignificant because their p-values were greater than 5%. These findings are consistent to Mimamo (2014) who found that growth was statistically significant.

5.3 Conclusion

The descriptive results concluded that Microfinance banks were profitable since return on assets increased in the study period. The banks' assets grew and generated income making it possible for them to meet their financial compulsions. The findings further concluded that change in assets and profitability of Microfinance banks were positively correlated. Bank size and financial performance were moderately correlated while there lacked a correlation of capital adequacy, liquidity, asset quality and financial performance.

The study also concluded that change in net assets and asset quality were negatively related profitability of Microfinance banks in Kenya. The regression model was found to be significant. Capital adequacy, liquidity, asset quality and

logarithm of assets were statistically insignificant while only change in assets was statistically significant.

5.4 Recommendations

The study recommends Microfinance banks should expand their branch networks and enhance accessibility of banking products and services. This will allow prospective customers to learn more about new products or services, open new accounts and increase bank deposits.

Microfinance banks should invest more resources in innovation of products and services to broaden the scope of their products and service offerings. This will give customers an opportunity to choose from a variety of banking products or services based on their specific needs.

Microfinance banks should maintain a lean and competent staff that can perform and execute their roles efficiently. Such employees can effectively contribute their efforts and capabilities in minimizing operational costs to boost efficiency in banking operations.

The top management should recognise and reward competent staff who record outstanding performances. This will encourage and inspire other employees to work harder and cultivate a working culture which will impact positively towards improved bank performance.

CBK should set policies that enable Microfinance banks to compete fairly and engage in ethical business practices by providing quality products and services to customers. In so doing, this will give enable Microfinance banks to provide services that add value to the customers.

5.5 Limitations for the Study

The study limited itself to Microfinance banks in Kenya which implied that the results obtained in this study cannot be used to make generalization for the entire banking sector in Kenya or any other financial institution.

The study was limited to secondary sources of data which are historical and hence based on fundamental assumptions and concepts. This kind of data might not be accurate and reliable to effectively reflect the actual needs of the researcher.

The study was limited to five independent variables namely: capital adequacy, liquidity, loan quality, bank size and bank growth. There are several factors that affect profitability of Microfinance banks apart from the ones discussed in this study such as banking technologies such as ATMs, Internet banking, use of debit and credit cards.

5.6 Suggestions for Further Research

Due to the changing dynamic nature of the business environment which is characterized by technological changes, regulations and social factors, future researchers should consider conducting a similar study after a period of 10-15 years to find out whether this relationship will hold.

A similar study should be carried out using a longitudinal research design and panel data to find out the cause and effect of relationships between growth and profitability of Microfinance banks. This research design will also enable researchers to establish long-term effect and sustainability of growth on profitability.

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APPENDICES

APPENDIX I: COMPUTED MEASUREMENT FOR THE STUDY VARIABLES

	Year	Liquidity	ROA	Asset Quality	Change in net assets	Ln of Assets	Capital Adequacy
FAULU	2015	0.28	0.012398	0.926505	0.829282	4.503259	0.23
KWFT		0.31	0.004541	0.821895	0.897359	4.403532	0.21
SMEP		0.53	0.003752	0.978599	0.884173	3.888123	0.21
REMU		0.24	-0.00039	0.911042	0.94822	3.413635	0.30
RAFIKI		0.4	-0.03778	0.8082191	1.276316	2.598791	0.59
UWEZO		0.4	0.011513	0.7674419	0.748148	2.783904	0.36
CENTURY		0.334	-0.26904	0.7291667	2.348837	2.294466	0.276
SUMAC		2.17	0.000885	1	0.96	2.354108	1.25
U&I		0.28	0.038043	0.8181818	0.714286	2.264818	0.79
FAULU	2014	0.24	0.0175653	0.63	0.823	4.431122	0.25
KWFT		0.24	0.0147145	0.567657	0.807	4.307924	0.23
SMEP		0.35	0.00351464 4	0.752443	0.885	3.776338	0.24
REMU		0.29	- 0.04079058	-0.10757	1.1147	3.376212	0.31
RAFIKI		0.81	0.00759493 7	0.608696	0.942	2.596597	0.79
UWEZO		0.27	0.01025641	0.630435	0.888	2.591065	0.51
CENTURY		0.261	- 0.14718614 7	0.15	2.219	2.363612	0.384
SUMAC		0.15	0.00625	0.65625	0.9459	2.20412	0.53
U&I		0.57	0.01459854	0.285714	0.852	2.136721	1.45
FAULU	2013	0.23	0.01327006 6	0.41	0.8074	4.094611	0.10
KWFT		0.27	0.01797535 9	0.5427	0.774	4.3374992	0.198
SMEP		0.26	0.00240963 9	0.219178	0.851	3.3961993	0.41

REMU		0.67	- 0.01780415 4	0.727273	1.174	2.5276299	0.60
RAFIKI		0.42	0.00244631 7	7.860963	0.8252	3.5657298	0.27
UWEZO		0.25	- 0.01869158 9	0.636364	1.125	2.0293838	0.66
CENTURY		0.244	- 0.16463414 6	0.1666667	3.714	2.2148438	0.60
SUMAC		0.21	- 0.03583061 9	0.285714	1.0125	2.4871384	0.62
U&I		0.634	0.0125	0.333333	0.875	1.9030899	3.10
FAULU	2012	0.24	0.00759361 1	0.33	0.7855	3.8829800	0.17
KWFT		0.40	0.00848704 9	0.33	0.747	4.3092890	0.17
SMEP		0.28	0.02358078 6	0.56	0.7195	3.3598350	0.56
REMU		0.80	- 0.03867403 3	0.53	1.4615	2.2576790	0.81
RAFIKI		1.17	0.00272034 8	0.58	0.9646	3.2643460	0.15
UWEZO		0.52	- 0.02564102 6	0.71	1.08333	1.8920950	0.88
CENTURY		N/A	N/A	0.13	N/A	N/A	N/A
SUMAC		N/A	N/A	N/A	N/A	N/A	N/A
U&I		N/A	N/A	N/A	N/A	N/A	N/A
FAULU	2011	0.21	0.00038902 9	0.46	0.8295	3.711048	0.27
KWFT		0.39	0.01772716 6	0.574194	0.9376	4.231368	0.17
SMEP		0.24	0.01301301 3	0.34507	0.7769	3.300595	0.3
REMU		2.98	- 0.10483871	0.333333	1.9286	2.093422	1.41
RAFIKI		1.60	- 0.03401360 5	0	2.05	2.644439	0.36
UWEZO		0.48	- 0.13559322	0.333333	2.111	1.770852	0.94
CENTURY		N/A	N/A	N/A	N/A	N/A	N/A
SUMAC		N/A	N/A	N/A	N/A	N/A	N/A
U&I		N/A	N/A	N/A	N/A	N/A	N/A

Source: CBK, 2016

APPENDIX II: LIST OF MICROFINANCE BANKS IN KENYA

- i. Choice Microfinance Bank Limited
- ii. Faulu Microfinance Bank Ltd
- iii. Kenya Women Microfinance Bank Ltd
- iv. SMEP Microfinance Bank Ltd
- v. Remu Microfinance Bank Ltd
- vi. Rafiki Microfinance Bank Ltd
- vii. Uwezo Microfinance Bank Ltd
- viii. Century Microfinance Bank Ltd
- ix. Sumac Microfinance Bank Ltd

Source: CBK, 2015