

**THE RELATIONSHIP BETWEEN PROFITABILITY GROWTH
AND THE YIELD ON GROSS PORTFOLIO OF MICRO-FINANCE
INSTITUTIONS IN KENYA**

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DECLARATION

Declaration by candidate:

I hereby declare that this project is my original work and has not been presented for a degree in any other University

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Declaration by supervisor:

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DEDICATION

I dedicate this research Project to my entire family and colleagues

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My sincere gratitude goes to Almighty God for the much needed strength, courage and health he has given me to carry out my research. She has stood by me and saw me through the entire research.

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ABSTRACT

The objective of this study was to find out the relationship between profitability growth and the yield on gross portfolio of micro-finance institutions in Kenya. The performance of microfinance institutions has been studied extensively both locally and internationally. In the global arena for instance, Dissanayake (2012) tried to investigate the determinants of profitability proxied by ROE for eleven MFIs in Sri-Lanka for the period covering 2005-2011. It is evident that there exists no study in Kenya that has ever studied the relationship between yield on gross loan portfolio and profitability. Therefore is it against this backdrop that this study sought to find out the relationship between profitability growth and the yield on gross portfolio of micro-finance institutions in Kenya by answering the question: What is the relationship between profitability growth and the yield on gross portfolio of micro-finance institutions in Kenya?

This research involved a cross sectional survey of the credit only micro finance institutions operating in Kenya. The population of the study in this research was the microfinance institutions headquartered in Nairobi. The sample size of this study was 5 credit only microfinance institutions. From the 5 credit only microfinance institutions, the study targeted the chief financial managers from each to make a sample size of 5 respondents. The study used primary data that was collected through a self-administered questionnaire that consisted both open and closed ended questions designed to elicit specific responses for qualitative and quantitative analysis respectively. The study findings revealed that increased competition has led to increased efficiency and that the increased efficiency in turn has allowed MFIs to generate increasing profits from lower yields. Furthermore the study found out that NGO MFIs generally achieve a higher Return on Assets than licensed and supervised MFIs and that in the absence of competition, even highly inefficient MFIs can remain profitable by simply raising their interest rates. The Pearson correlation analysis to determine the relationship among the independent and variables showed that the variables are perfectly and positively correlated and vice versa. This shows that the Profitability growth and growth in portfolio yield variables are dependent on each other for the Yield on Gross Portfolio.

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CHAPTER ONE

INTRODUCTION

1.1 Background of the study

Microfinance is a set of financial services including deposits, loans, payment services, and insurance products offered to the poor and low-income households and, micro-enterprises, which are run on commercial basis in contrast to other poverty alleviation programs. However, in comparison to conventional financial service providers, a microfinance institution should have the poverty reduction set as one of its highest priorities. Thus, profitability is not the only criterion when it comes to evaluation of individual financial products. For instance, despite the fact that deposit product offered to low-income households might be unprofitable due to the small average size; a microfinance institution is likely to choose to offer the product. That is because deposits could bring about benefits other than profit such as financial discipline that in return will affect the microfinance clientele in a positive way.

Moreover, microfinance intends to combine conventional financial techniques with methodologies that are suited to cutting costs without imposing higher default risk through making use of its clientele's specific needs. Microfinance involves the provision of financial services to the poor and low income people with micro business (Otero, 1999 cited in Marzys, 2006). They are helpful tools to fill the gap of mainstream banks limits

in reaching the rural and urban poor people and the uncovered (weak) non-poor with financial banking services. They are intended to reduce poverty and mitigate risk by letting the low income and poor people have access to credit, savings and insurance. MFIs have grown subsequent to Muhammad Yunus's establishment of the Grameen Bank Project in 1976 (Cabraal, et al. 2006). However, there are substantial differences in the stage of development and performance among different nations (MIX, 2010).

1.1.1 Profitability of MFI

Profitability is the primary goal of all business ventures. Without profitability the business will not survive in the long run. So measuring current and past profitability and projecting future profitability is very important. Profitability is measured with income and expenses. Profitability is measured with an "income statement". This is essentially a listing of income and expenses during a period of time (usually a year) for the entire business.

A profitable microfinance industry is vital in maintaining the stability of the micro-banking system. Low profitability weakens the capacity of microfinance institutions (henceforth MFIs) to absorb negative shocks, which subsequently affect solvency. Profitability reflects how MFIs are run given the environment in which they operate, which should epitomize efficiency, risk management capabilities, their competitive strategies, quality of their management and levels of capitalization.

Any ordinary business is most concerned with its profitability, since if there is no basis for profit, or break even, the business will cease to exist. MFIs differ a bit, since

subsidies and donations work as a kind of safety net for some institutions, so that other priorities come first. However, due to the rapid growth of the industry, profitability has become an important priority and a step in becoming sustainable, and it is therefore important to know different ways to measure profitability.

Profitability will be measured by collecting expense and income data from the microfinance institutions and matching both to get their resultant difference. If revenue is greater than cost then profit is being realized and vice versa for loss realization

1.1.2 Yield on gross loan portfolio

Yield stands for the earning performance of individual MFI, which is expressed by the yield of the gross loan portfolio. However while it is called portfolio yield, it is more of a nature of a lending related revenue expressing the earning performance of a MFI. Yield on gross loan portfolio, or portfolio yield ratio, measures income from the loan portfolio as well as the average interest rate charged to borrowers by the MFI (including loan-related fees). It is calculated by dividing cash financial revenue from loan portfolio by average gross loan portfolio. It indicates the gross loan portfolio's ability to generate cash financial revenue from interest, fees, and commissions. It does not include any revenues that have been accrued but not paid in cash or any non-cash revenues in the form of post-dated checks, seized but unsold collateral. Yield on gross loan portfolio measures how well an MFI matches the maturities of its assets and liabilities. In this formula, "expected annual yield" means the effective interest rate of the loan contracts (the declining-balance

equivalent rate) for a single payment period multiplied by the number of periods in a year (Stauffenber, Abrams, Kenyon and Barluenga-Badiola, 2003).

For yield in gross portfolio to be meaningful, it must be understood in the context of the prevailing interest rate environment the MFI operates in. Generally speaking, yield on gross portfolio is the initial indicator of an institution's ability to generate revenue with which to cover its financial and operating expenses. MFIs tend to disguise their interest rates, but yield on gross portfolio is an easy way to calculate the actual rate obtained by an institution. Clients may be less likely to borrow, or government interest rate ceilings may prohibit the high interest rates needed for MFIs to survive. Yield on gross Portfolio cuts through the many tricks used by MFIs to disguise their lending rates such as flat rates, training fees, up front fees, discounts from disbursed amounts, etc. Portfolio yield shows how much, on average, the MFI really receives in interest payments on its loans (Tor, 2003).

1.1.3 Relationship between yield on gross loan portfolio and profitability

According to Arunachalam (2006), yield on gross loan portfolio is the ratio between interest payments in an MFI's loan portfolio and the total value of the portfolio. Portfolio yield also indicates the type of clientele that an MFI serves. Higher yields indicate riskier and more under-banked clientele. Whereas ROA and ROE indicate whether an MFI can generate sustainable long-term profits, portfolio yield is an indicator of an MFI's revenue during a specific period of time.

Specifically, yield on gross loan portfolio, or portfolio yield ratio, measures income from the loan portfolio as well as the average interest rate charged to borrowers by the MFI (including loan-related Portfolio yield is a percentage (%)). It shows the average gross returns as a proportion of the portfolio outstanding. Generally speaking, Portfolio Yield is the initial indicator of an institution's ability to generate revenue with which to cover its financial and operating expenses. Yield on gross loan portfolio measures how much the Microfinance Institution (MFI) actually received in interest payments from its clients during the period. It also provides an insight into portfolio quality. If the MFIs use cash accounting here, the Portfolio Yield will not include the accrued (interest and fee) income that delinquent loans should have generated, but did not. For yield on gross loan portfolio to be meaningful, it must be understood in the context of the prevailing interest rate environment the MFI operates in. Therefore, Yield on Gross Loan Portfolio is an indicator of the real rate of interest charged by MFIs (Arunachalam, 2006). This study therefore seeks to unearth and determine if there exists a relationship between profitability and gross portfolio yield for the MFIs in Kenya.

1.1.4 MFI in Kenya

Although the 2006 Microfinance Act in Kenya allows deposit taking MFIs, such MFIs in Kenya appeared in 2009 when two of the pioneering MFIs- Faulu Kenya and Kenya Women Finance Trust transformed to deposit-takers. Transformation of microcredit programmes into a bank serving only low income clients is an old story that happened back in 1999 when K-Rep became the first commercial bank in Kenya to serve only low

income clients, and the first NGO in Africa to transform into a regulated financial institution (Central Bank of Kenya, 2013).

Financial inclusion remains to be a challenge for Kenya. A financial access survey by the central Bank of Kenya found that over 50 percent of the poorest quintile is financially excluded, while nearly 70 percent of the wealthiest quintile access financial services from formal prudential financial providers. Banks are dominant in the Kenya's MFI industry. For instance, the total asset held in the industry grew from USD 1.71 billion in 2009 (over two fold of Ethiopia's) to 2.59 billion at the end of 2011 (Over 4 fold of Ethiopia's), yet, 80 percent of the total asset belonged to the Equity Bank. If we exclude commercial banks from the figure, the asset growth drops significantly. The size of the MFI sector without banks is one-fifth its aggregate size with banks (Kenya AMFI and Microfinance Rating (MFR), 2013). Regulated MFIs in Kenya are by law restricted to limit loan per borrower not to exceed 2 percent of the MFI's equity. Again, MFIs coerced to direct their mobilized deposits to advancing microfinance loans i.e. from the total deposit mobilized, 70 percent should be allocated to microfinance loans (FSD Kenya, 2012). In the long term, deposit-taking MFIs, now called microfinance banks (MFB), and the regulators will potentially determine depth-of-outreach in Kenya, as more and more credit only MFIs transform into MFBs. By the end of 2013, MFBs in Kenya reached nine.

Overall, the microfinance average outstanding loan size in Kenya is high. The second row entry in table 2 for the year 2011 shows that for a one currency unit per capita income earned, there is a loan outstanding of 1.93 currency units i.e. a borrower can have

a loan size nearly twice his/her share from the total GDP. Excluding microfinance services provided by banks leads the whole MFI sector average outstanding loans a percentage of per capita GDP to fall from 193 percent to 54 percent in 2011. Such fall shows banks involvement in lending to richer clients.

In 2011, the microfinance sector altogether got 58.9 percent of total assets funded from deposits, and the figure takes a completely different picture when MFI service provider banks are excluded: the dominant fund source becomes borrowed money accounting 54.2 percent followed by compulsory deposits (22.5 percent) and voluntary saving (6.32 percent). The debt-to-equity-ratio is near 5 percent, which indicates low equity leverage in the sector. MFI sector's Operational Self-Sufficiency (OSS) excluding banks was 110 percent, 105 percent, and 105 percent for 2009, 2010 and 2011, respectively. Comparing these figure to the total sector (133 percent in 2009 and 150 percent in 2011), shows non-bank microfinance institutions are performing less than banks. Yet, they have managed to be operationally self-sufficient in aggregate. However, the sector still relies on donations and 73.3 percent of donations are raised from international partners while only 26.7 percent from local entities and bodies. In terms of external funding, the sector reports that 59 percent of its facilities are domestically raised while the remaining 41 percent is raised on international capital markets (AMFI and MFR, 2013)

1.2 Statement of the problem

The performance of microfinance institutions has been studied extensively both locally and internationally. In the global arena for instance, Dissanayake (2012) tried to

investigate the determinants of profitability proxied by ROE for eleven MFIs in Sri Lanka for the period covering 2005-2011. The study found out that debt to equity ratio and operating expense ratios have negative statistical significance relation with ROE. Write-off ratio and cost per borrower ratios have a positive and statistically significant relationship with Return on Equity (ROE) and that the personnel productivity ratio is not statistically significant determinant of ROE. In addition, Jorgensen (2012) studied profitability and connection with yield on gross profit by taking sample of 879 MFIs all over the world. The study found out that number of active borrowers, cost per borrower, deposit and legal status have negative significant relation with return on assets (ROA). The factors having positive and significant impact on ROA includes gross loan portfolio, capital to asset ratio, gross loan portfolio to asset, operating expense to gross loan portfolio and age of new MFI.

In conclusion Jorgensen put; yield on gross portfolio did not show a significant explanatory variable for profitability, hence, there is no general trend between increase in interest rate and increase in profitability. Closer home, the pioneer empirical study on determinants of profitability of African MFIs was done by Muriu (2011). Muriu, under the study 'what explains the low profitability of MFIs in Africa' tried to find the factors contributing to profitability of MFIs. The study found out that capital, size (scale of economy) and freedom from corruption had significant positive relationship with profitability. Factors such as credit risk and efficiency have significant negative relation with profitability. Further, the study revealed that Gearing ratio, inflation, GNI per capita and age were insignificant factors.

From the above empirical studies it is evident that there exists no study in Kenya that has ever studied the relationship between yield on gross loan portfolio and profitability. However, in Kenya the only available information is the microfinance portfolio performance which shows that In 2013, the sector's portfolio achieved a better annual growth than previous years (+27.9%), to attain a value of KES 63.1 billion. Without banks, the sector's loan book increased to KES 40.2 billion; realizing 35.2% annual growth. MFIs' market share follows an increasing trend while the Banks' share of the sector's portfolio has decreased and Credit-only MFIs' position remains stable. As of 2013, Banks, MFIs and Credit- only MFIs account for 36%, 45% and 19% respectively of the total sector's loan book. MFIs achieved higher portfolio growth in 2013 (+37.3%), up from past year's 25% growth. Though on a lower magnitude, Banks also achieved improved year-on-year portfolio growth (microfinance loan book) in 2013 (+16.9%). However, the portfolio of Credit-only MFIs grew at a reduced pace (+30.5% compared to +38.2% in 2012). Therefore is it against this backdrop that this study sought to find out the relationship between profitability growth and the yield on gross portfolio of micro-finance institutions in Kenya by answering the question: What is the relationship between profitability growth and the yield on gross portfolio of micro-finance institutions in Kenya?

1.3 Objectives

The objective of this study was to find out the relationship between profitability growth and the yield on gross portfolio of micro-finance institutions in Kenya.

1.4 Value of the study

Researcher

The Study is of greater help to the researcher in obtaining detailed information on profitability and portfolio yield growth of MFIs and the connection between profitability and portfolio yield.

Management of micro finance institutions

The recommendations that will be offered after conducting this study will be of value to the management of micro finance institutions in Kenya as comparison between profitability and gross portfolio yield will; first provide insight on how much money the MFI actually collects from its clients. Secondly it will provide an indication of the MFI's efficiency in collecting from its clients. Finally the study findings will also provide insights on commercial viability for the micro finance institutions as the portfolio yield measures how much the MFI actually received in cash interest payments from its clients during the period. Portfolio yield is the initial indicator of an institution's ability to generate revenue with which to cover its financial and operating expenses. A comparison between the portfolio yield and the average effective lending rate gives an indication of the institution's efficiency in collecting from its clients. It also provides insight into portfolio quality since most MFIs use cash accounting and portfolio yield does not include the accrued income that delinquent loans should have generated, but did not.

Government

The findings on the relationship between profitability and portfolio yield of credit only MFIs in Kenya will help government in its role in supporting the microfinance sector creating legislation, regulations and setting up development wholesale funds to support the growth and development of microfinance institutions. This is because portfolio yield stands for the earning performance of individual MFI, which is expressed by the yield of the gross loan portfolio. Although it is called portfolio yield, it is more of a nature of lending related revenue expressing the earning performance of a MFI and therefore since the government is tasked with setting up interest rates ceilings, the finding of this study will help it come up with optimal interest rates that will enhance growth of microfinance institutions.

Clients

It is common for microfinance institutions to hide their effective interest rate. Clients may be less likely to borrow, or government interest rate ceilings may prohibit the high interest rates needed for MFIs to survive. The findings of this study will benefit the clients as Portfolio yield cuts through the many tricks used by MFIs to disguise their lending rates such as flat rates, training fees, up front fees and discounts from disbursed amounts. This is because Portfolio yield shows how much, on average; the MFI really receives in interest payments on its loans.

Future researcher

The findings of this study will be made available to offer information for further studies extensively or specifically on any issue to be covered hence add to the knowledge on the growth of Micro Finance Institutions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The purpose of this chapter is to review the existing literature in relation to microfinance institutions, Change in Profitability and the Yield on Gross Portfolio that will be used as background knowledge for the study. The specific areas that will be covered here are the theoretical framework and empirical review.

2.2 Theoretical review

2.2.1 The Structure Conduct Performance (SCP) Model

The Structure Conduct Performance (SCP) model is one of the earliest frameworks used to examine the factors that determine the profitability of financial institutions (Grygorenko, 2009). It was developed by Joe S. Bain Jr., who described it in his book "Industrial Organization". The SCP paradigm is considered a pillar of industrial organization theory, and it has been since its conception a starting point when analyzing markets and industries, not only in Economics, but also in the fields of business management and controlling. According to Baye (2010), the structure of an industry refers to the factors such as technology, concentration, and market conditions. Conduct refers to how individual firms behave in the market; it involves pricing decisions (such as interest rate, commission and fees), advertising decisions, and decisions to invest in research and development, among other factors. Performance refers to the resulting

profits and social welfare that arise in the market. The Structure Conduct Performance (SCP) paradigm views these three aspects of the industry as being integrally related and asserts that the market structure causes firms to behave in a certain way. In turn, this behavior causes resources to be allocated in certain ways leading to either an efficient or inefficient market. The Structure Conduct Performance (SCP) model therefore asserts that factors external to the organizations such as market conditions are primarily and indirectly, the determinants of profitability. Mason (1939) and Bain (1951) were the earliest to suggest that profit of firms are determined by concentration level of the market. They demonstrated that profits of firms operating in highly concentrated industries are significantly higher than that of firms operating in industries with lower concentration.

2.2.2 Markowitz's portfolio theory

In the 1950's the investment community talked about risk but there was no measurable specification for the term. However, investors were eager to quantify their risk variable. Markowitz showed that the variance of the rate of return was an important measure of risk under a reasonable set of assumptions and came forward with the formulas for computing the variance of the portfolio. The use of this formula revealed the importance of diversifying to reduce risk and also provided guidance on how to diversify effectively (Reilly, 1989). When Markowitz first published his ideas of portfolio selection in 1952 he rejected the notion that investors should maximize discounted returns and choose their portfolio accordingly. Markowitz's view was that this rule failed to imply diversification, no matter how the anticipated returns were formed. The rule he rejected implied that the

investor should place all of his or hers funds in the security with the greatest discounted value. He also rejected the law of large numbers in portfolios made up of securities, objecting to the claim that it would result in both maximum expected returns and minimum variance, and pointing out that returns from securities are too inter-correlated for all variance to be eliminated with diversification. Markowitz also pointed out that a portfolio with maximum expected returns is not necessarily the one with the minimum variance. Hence, that there is a rate at which the investor can gain expected returns by accepting more variance, or reduce variance by giving up expected returns. Building on these observations he presented the expected returns-variance of returns rule (Markowitz, 1952). Markowitz's idea was that investors should hold mean-variance efficient portfolios. While not an entirely new concept, mean-variance optimization was not a widely used strategy at the time. Most investment managers were focusing their efforts on identifying securities with high expected returns (Chan, Karceski, & Lakonishok, 1999). In his paper, Markowitz formally presented his view that although investors want to maximize returns on securities they also want to minimize uncertainty, or risk. These are conflicting objectives which must be balanced against each other when the investor makes his or her decision. Markowitz asserts that investors should base their portfolio decisions only on expected returns, i.e. the measure of potential rewards in any portfolio, and standard deviation, the measure of risk. The investor should estimate the expected returns and standard deviation of each portfolio and then choose the best one on the grounds of the relative magnitudes of these two parameters (Sharpe, Alexander, & Bailey, 1999).

As previously mentioned, Markowitz rejected the expected returns rule on the grounds that it neither acknowledged nor accounted for the need for diversification, contrary to his expected return-variance of return rule. In addition, he concluded that the expected return-variance of return rule not only revealed the benefits of diversification but that it pointed towards the right type of diversification for the right reason. It is not enough to diversify by simply increasing the number of securities held. If, for example, most of the firms in the portfolio are within the same industry they are more likely to do poorly at the same time than firms in separate industries.

In the same way it is not enough to make variance small to invest in large number of securities. It should be avoided to invest in securities with high covariance among themselves and it is obvious that firms in different industries have lower covariance than firms within the same industry (Markowitz, 1952). Simply put, Markowitz concluded that by mixing stocks that flip tail and those that flip heads you can lower the risk of your overall portfolio. If you spread your investments across unrelated stocks you will maximize your potential profit whether the economy is slowing down or growing. If you then add more and more stock in different combinations you have what Markowitz called an efficient portfolio. An efficient portfolio is the portfolio which gives the highest profit with the least risk. The aim of Markowitz's methods is to construct that kind of portfolio (Mandelbrot, 2004).

Until Markowitz suggested this approach to portfolio analysis no full and specific basis existed to justify diversification in portfolio selection. Also the concept of risk had rarely

been defined in a thorough manner in portfolio analysis before Markowitz's writings, let alone treated analytically. With his approach these issues, diversification and risk, got a specified framework and a workable algorithm for employing that framework for practical problems was provided. Markowitz did not, however, suggest a preferred technique for security analysis or a suitable method for portfolio selection. He concentrated on providing a general structure for the whole process and providing an algorithm for performing the task of portfolio analysis (Sharpe W. F., *Portfolio Analysis*, 1967). Markowitz created a theory of portfolio choice in the uncertain future. He quantified the difference between the risk that was taken on individual assets and the aggregated risk of the portfolio. He showed that the portfolio risk came from covariances of the assets which made up the portfolio. The marginal contribution of a security to the portfolio return variance is therefore measured by the covariance between the return of the security and the return of the portfolio but not by the variance of the security itself. In his writings, Markowitz argues that the risk of a portfolio is less than the risk of each asset in the portfolio taken individually and provides quantitative evidence of the merits of diversification (Amenc & Le Sourd, 2003).

In his model of portfolio management Markowitz identified the efficient set of portfolios, or the efficient frontier of risky assets. The principal idea behind the frontier set of risky portfolios is that the investor should only be interested in the portfolio which gives the highest expected return for any given risk level. Also, the frontier is a set of portfolios that minimizes the variance for any target expected return (Bodie, Kane, & Marcus, 2009). With his work, Markowitz introduced a parametric optimization model that was

both sufficiently general to be applicable to a significant range of practical situations and simple enough to be usable for theoretical analysis.

2.2.3 Mission drift theory

Mission drift theory implies a change in the client portfolio away from the poorest customers and towards relatively more affluent ones in the pursuit of higher financial sustainability. Mission drift occurs when an organization's resources and activities are diverted from its formal goals. Minkoff and Powell (2006) note that mission drift encompasses both accommodation (becoming more conservative because of institutional pressures) and proactive change (becoming more militant because of internal pressures). But mission drift, whether conservative or militant, is extreme. Reorientation, a broadening of mission without sacrificing the original intent, is another possible path when nonprofits are faced with changing environments that threaten their survival (Minkoff and Powell 2006).

Mission drift occurs in two mechanisms – administrative and programmatic drift – which can lead to two different forms of mission drift and administrative dominance which results from administrative drift - when administration and fundraising displace an organization's programmatic efforts. Programmatic opportunism occurs when the organization suffers from programmatic drift and adopts programs that are not in line with its mission to ensure its financial survival (Hishigsuren, 2007).

As a result of the schism of microfinance and the mission alignment of these organizations between two basic ideologies, the services offered and target demographics of these organizations also vary. Many MFIs are adopting policies that would support an increase in average loan balance so as to decrease per unit costs associated with lending, which reinforces the debate surrounding the trade-off between outreach and sustainability (Cull, Demirgüç-Cunt, and Morduch, 2009; Hermes, Lensink and Meesters, 2011). If MFIs adopt such a policy, they would in theory be selecting to disseminate fewer loans to extremely impoverished households (the "core poor") and lend at a greater level to entrepreneurial poor households. Core households demand smaller loans at shorter terms than entrepreneurial poor households. As a result, there is a greater likelihood that core poor households will receive lending services from welfarist institutions, while entrepreneurial poor receive these same services from institutionalist organizations.

In this theory the loans to assets ratio indicates how big a portion of the institution's assets are tied up in its loan portfolio. It is defined as (end-of-year loan portfolio) / (end-of-year assets). Similarly as ROA and SOSS, this ratio is turned into percentage form. Cull, Demirgüç-Kunt & Morduch (2009) use the ratio to describe the institution's business practices (its orientation), and it can be interpreted as its ability to attract a large customer base, and also as an indicator of the variety of its operations. Though they use the variable only in their profitability regressions and not mission drift analysis, it is included in this analysis nevertheless, since it is likely to reveal institutional behavior regarding outreach as well that is a high loans to assets ratio indicates a focus on credit in the services portfolio, which could indicate a search for efficiency through focusing on a

core product. Low loans to assets ratio could indicate that credit is a mere side-product for the institution, which could lead to its credit operations being less efficient.

2.3 Determinants of yield on gross portfolio

The determinants of yield on gross portfolio are group lending, targeting women borrowers, lending to rural population, high profitability and good governance. These determinants increase the yield on gross portfolio. They are further discussed here below: Group lending increases the yield of the portfolio. Armendáriz and Morduch (2005) suggest that group lending decreases the risk of default thanks to the formation of groups with individuals of the same type. That is, risky borrowers form groups with risky borrowers and safe borrowers with same borrowers. The Grameen Bank is based mainly on this idea. However, Gine et al. (2009) show in their experimental projects that they would otherwise choose. Gine et al. (2009) argue that group lending facilitates profitable risk taking while maintain high rates of loan repayment. In other words, implicit insurance mechanism imposed by group loan helps to avoid greater default risk for the whole group.

Targeting women borrowers increases the yield of the portfolio. Targeting the woman borrowers is one of the building blocks of microfinance. Women are deemed to be more reliable and responsible borrowers than men (Armendáriz and Morduch, 2005). Therefore we should be able to see better repayment rate or lower portfolio risk with the increase of

portion of women borrowers. Also Barr and Kinsey (2002) found in their study that men are more likely to behave anti-socially, which may be the cause of lower repayment rate by men.

Lending to rural population increases the portfolio yield. Given the emphasize of microfinance lending on social factors and relationships among people, the rural populations with its higher stability of population and with their more focused earning activities seems more suitable for microfinance approaches than the urban population. This may transform into lower default risk and higher repayment rates leading to higher portfolio yield in rural areas.

High profitability also influences the portfolio yield. It's argued that MFIs exploit borrowers by charging a high yield and at the same time as having high profitability. This is based on arguments of MFIs that focus should be in profitability which is being claimed by critics that this would simply mean higher interest rates and fees for borrowers.

Good governance leads to higher portfolio yield. Papers such as Coleman and Osei (2008), and Mersland and Strom (2009) argue that good governance of MIFs contribute to good performance. In contrast to these authors, we will be using as an indicator of good governance the legal entity of individual microfinance institutions. Armendáriz and Morduch (2005) point out that the non-profit bodies are less successful in enforcing the loan conditions and managing the portfolio risk. Moreover, Dokulilová, Janda and Zetek

(2009) point out those MFIs face problems in areas such as ethics, management, legal entity and other uncontrollable surroundings. Therefore, we will test the hypothesis that the banks and non-bank financial institutions are most effective and NGOs are the least effective in terms of portfolio management and earning performance.

2.4 Empirical literature review

Dissanayake (2012) tried to investigate the determinants of profitability proxied by ROE for eleven MFIs in Sri-Lanka for the period covering 2005-2011. He tried to see the relationship between different internal or MFI specific factors and ROE; for the study he used data from MIX market database and performed regression analysis. The finding shows that, debt to equity ratio and operating expense ratios have negative statistical significance relation with ROE. Write-off ratio and cost per borrower ratios have a positive and statistically significant relationship with ROE. The personnel productivity ratio is not statistically significant determinant of ROE.

Jordan (2008) studied the impact of macroeconomic environment on sustainability of Latin American MFIs by selecting 85 MFI from MIX database for the period from 1999-2005. The study included four macro economic factors namely; unemployment rate, per capita GDP, interest rates and inflation. The sustainability of the MFIs is measured by ROE and repayment rates; for which regression analysis is done using random effect model. The result shows that none of the macro economic factors have significant impact on repayment rate. In contrast, ROE is highly influenced by per capita GDP.

To see the effect of per capita GDP, two divisions were set; one is low income developing nations and the other is high income developing nations. In this regard per capita GDP has no impact on low income developing nations but, there is a high significant impact of per capita GDP on high income nations. Apart from other macroeconomic indicators Inflation was not statistically significant. Jorgensen (2012) studied profitability and connection with yield on gross profit by taking sample of 879 MFIs all over the world. The objective was to find factors that determine profitability and to find whether high interest rates go hand in hand with high profits for MFIs. The study focused on factors such as outreach, financing structure, expense, revenue, efficiency, quality of portfolio and different peer group comparisons like age, deposit taking, legal status and profit status. The data source was MIX for the 879 MFIs for the study year i.e. 2009 and ROA and profit margin were used as the proxies for profitability and gross yield portfolio respectively. The outcome of the study revealed that number of active borrowers, cost per borrower, deposit and legal status have negative significant relation with ROA. The factors having positive and significant impact on ROA includes gross loan portfolio, capital to asset ratio, gross loan portfolio to asset, operating expense to gross loan portfolio and age of new MFI.

In conclusion Jorgensen put; yield on gross portfolio did not show a significant explanatory variable for profitability, hence, there is no general trend between increase in interest rate and increase in profitability. The pioneer empirical study on determinants of profitability of African MFIs is done by Muriu (2011). Muriu, under the study 'what

explains the low profitability of MFIs in Africa. He tried to find the factors contributing to profitability of MFIs. He used Generalized Method of Moments (GMM) system using an unbalanced panel data set comprising of 210 MFIs across 32 countries operating from 1997 to 2008. The proxies for profitability were both ROA and ROE. The factors studied are classified into three categories: Firstly, MFIs specific including capital, credit risk, size, age efficiency and gearing ratio; secondly, Macro economic factors including Gross national Income (GNI) per capita and inflation; thirdly, institutional developments proxied by freedom from corruption.

The data were gathered from MIX database, world development indicator and Heritage foundation for the three categories of determinants. In concluding his study Muriu stated that; capital, size (scale of economy) and freedom from corruption had significant positive relationship with profitability. Factors such as credit risk and efficiency have significant negative relation with profitability. Further, the study revealed that Gearing ratio, inflation, GNI per capita and age were insignificant factors.

2.5 Summary of the Literature Review

Profitability measures the goal of delivering services in a financially sustainable manner. The critics of the high profits of MFIs and their connection to the high interest rates charged are the reason for the analysis of this relationship (Mix Market, 2011).

To attain profitability and financial sustainability, MFIs must apply high but not excessive interest rates. This reasoning was confirmed by (Cull, 2009) who show that MFIs granting individual loans are no longer profitable when the interest rates applied surpass 60%, because the demand for credit decreases and will penalize the still existing clients making them unable to repay their loans. Raising the interest rates too high would in other words undermine the portfolio quality and profitability (Cull, 2005).

Since interest rates on micro-loans represent the major costs for the clients and at the same time the main income for MFIs it is now worth taking a closer and systematic look at it. Very often the seemingly high interest rates compared to normal commercial lending rates are the strongest point of criticism for opponents of profitable microfinance business.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The chapter describes the proposed research design, the target population, sampling design and size, data collection instruments and procedures, validity and reliability and the techniques for data analysis.

3.2 Research Design

This research involved a cross sectional survey of the credit only micro finance institutions operating in Kenya. The study adopted a descriptive approach in focusing these institutions. According to Emory (1995), a survey is feasible when the population is small and variable hence the researcher was able to cover all the elements of the population. Robson (2004) underlines that; descriptive research aims at availing accurate information on the variables with the intention of bettering understanding of the subject under study. Kothari (2004) affirms this in his argument that descriptive research provides a framework for exploring a social phenomenon while Mugenda and Mugenda (2003) reckons that it offers the study a chance to bring out new insight providing perspective to the variables. Therefore the survey is considered to be more efficient and economical method. Furthermore descriptive research provides clear defined information and its findings are conclusive. It also determines the frequency with which the variables are conveyed

3.3 Population of the Study

The population of the study in this research was the microfinance institutions headquartered in Nairobi. It is estimated that currently there are over 200 microfinance providers in Kenya. These microfinance providers can be clustered into three broad categories: formal, semi-formal and informal institutions, with the level of formality defined by the degree of formal regulation and supervision: The formal category includes commercial banks licensed under the Banking Act, building societies, the Kenya Post Office Savings Bank and the Deposit taking Microfinance Institutions; Now Microfinance Banks. The second category comprises of the credit-only category and includes NGO-MFIs and SACCOs. The third category consists of the informal category which includes ASCAs, ROSCAs, shopkeepers and money-lenders.

3.4 Sample design

Sampling involves the researcher securing a representative group that enabled him/her to gain information about the population (Mugenda and Mugenda, 2003). The target population for this study was the credit only microfinance institutions headquartered in Nairobi. According to AMFI report (2014), there are 46 credit only Micro finance institutions in Kenya. Simple random sampling method was applied to come up with the sample size. Simple random sampling is a probability sampling procedure that gives every element in the target population, and each possible sample of a given size, an equal chance of being selected. According to Mugenda and Mugenda (2003), at least 10% of the target population is representative enough in a study. Therefore the sample size of this study was 5 credit only microfinance institutions. From the 5 credit only microfinance

institutions, the study targeted the chief financial managers from each to make a sample size of 5 respondents. The reason for choosing the chief finance managers is because they are deemed to be well versed with correct information relating to the relationship between the Level of Change in Profitability and the Yield on Gross Portfolio of Micro-Finance Institutions.

3.5 Data Collection

The study used primary data that was collected through a self-administered questionnaire that consisted both open and closed ended questions designed to elicit specific responses for qualitative and quantitative analysis respectively. The closed ended questions enabled the researcher to collect quantitative data. The questionnaire was designed to investigate the factors effecting project sustainability. The researcher selectively sampled and identified data that is easily accessible and important for the problem under investigation. The questionnaires were administered by drop and pick method.

3.6 Data Analysis

The research deployed both qualitative and quantitative methods. According to Kothari (2008) this aids in understanding the main research theme more effectively as both methods complement each other's deficiencies. The process of data analysis involved data clean up and explanation. All the questionnaires that were completed each day were checked for completeness at two levels: One by the enumerators and then the other by the researcher. This ensured that many anomalies detected were corrected while still in

the field. Certain questions in the instruments were designed to give related information very closely. Technically, this was done deliberately in order to be able to assess the consistency of the responses. All the questionnaires from the field were collected for further processing. They were edited and coded. The coded data was further modified to search for illegal codes, omissions, logical inconsistencies and any error found was referenced back to the original data forms (questionnaires) and the necessary corrections made. Both qualitative and quantitative data analysis techniques were employed to bring out the relationship between the key variables of the study. Statistical Package for Social Scientists (SPSS Version 22) for quantitative data analysis was used to analyze the data and to give frequency distributions and cross-tabulations of key variables. The qualitative data was analyzed by categorizing the responses into related categories (themes). Qualitative data was useful in supplementing and illustrating quantitative data. Inferential statistics in form of correlation and regression analysis was used to draw conclusions concerning relationships between the independent (profitability growth,) and dependent variables (Yield on Gross Portfolio). The regression statistical model was in the form of:

$$Y=C+m_1X_1 +\epsilon;$$

Where;

Y= Yield on Gross Portfolio

X_i= Profitability growth

C = Constant in the Model

€ = Error Term in the Equation

3.7 Data validity and reliability

Validity refers to the extent to which a test measures what we actually wish to measure: it is based on the adequacy with which the items in an instrument measure the attributes of the study (Nunnally and Bernstein, 2000). The solution for assuring construct validity is by use of multiple source of information, establishing chain of evidence and having key informants to review the report. Multiple sources of information were used in the form of two kinds of sources: literature review on previous empirical research, primary data in the form of interviews and using questionnaires.

Reliability is the extent to which any measuring procedure yields the same results on repeated trials (Neuman, 2000). In many areas of research, the precise measurement of hypothesized processes or variables (theoretical constructs) poses a challenge by itself. In general, in all social sciences, an unreliable measurement of people's beliefs or intentions obviously hampers efforts to predict their behavior. Reliability and item analysis can be used to construct reliable measurement scales, to improve existing scales, and to evaluate the reliability of scales already in use. Specifically, Reliability and item analysis aided in the design and evaluation of sum scales, that is, scales that are made up of multiple individual measurements (e.g., different items, repeated measurements, different measurement devices, etc.). The program computed numerous statistics that allowed the user to build and evaluate scales following the so-called classical testing theory model. The assessment of scale reliability was based on the correlations between the individual items or measurements that make up the scale, relative to the variances of the items. In

this context the definition of reliability is straightforward: a measurement is reliable if it reflects mostly true score, relative to the error.

CHAPTER FOUR

DATA FINDINGS, ANALYSIS AND PRESENTATION

4.1 Introduction

This chapter reports the findings of the study based on the methods discussed in the previous chapter. Its purpose is to analyze the variables involved in the study. Data from the respondents was collected and analyzed to establish the relationship between profitability growth and the yield on gross portfolio of micro-finance institutions in Kenya. Data collected was both qualitative and quantitative which involved the use of frequencies, percentages and means. Data was presented by use of tables, pie charts and bar graphs.

4.2 Descriptive Analysis

4.2.1 Response Rate

On the response, the study had targeted 5 respondents; all the 5 respondents filled and returned their questionnaires thus constituting 100% response rate. According to Mugenda and Mugenda (1999) a 50% response rate is adequate, 60% good and above 70% rated very good. This implies that basing on this assertion; the response rate in this case of 100% is very good.

4.2.2 Whether the organization is for profit or non-profit MFIs

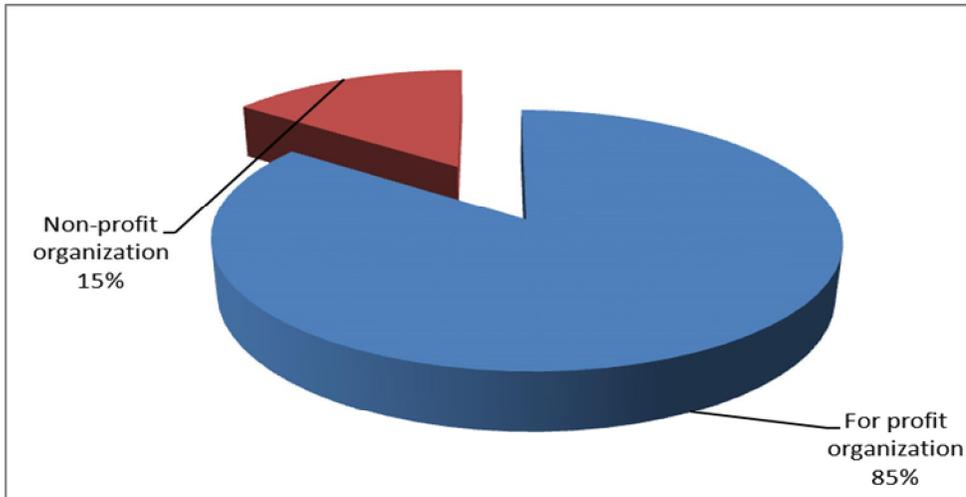


Figure 4. 1: Whether the organization is for profit or non-profit MFIs

From the study findings, majority (85%) indicated that their organizations were for profit making, while the remaining 15% indicated that their organizations were non-profit making.

4.2.3 Ownership structure of the organization

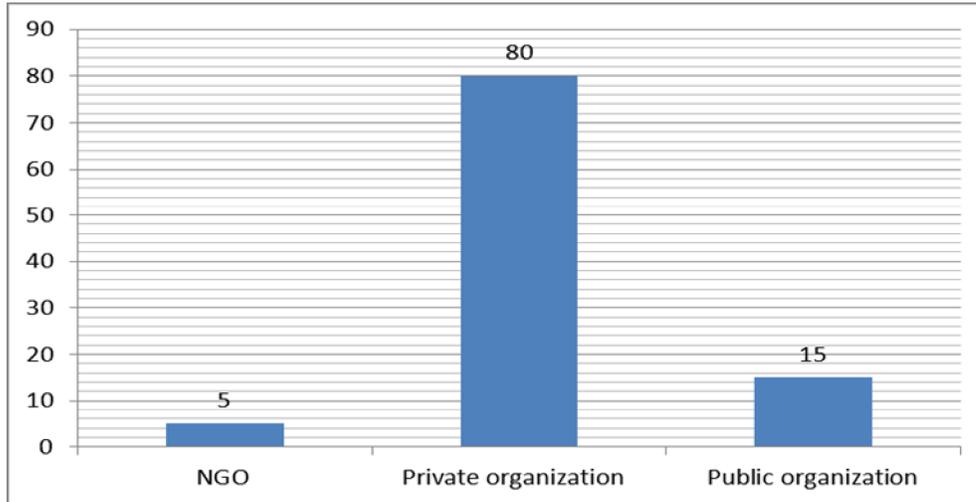


Figure 4. 2: Ownership structure of the organization

It was revealed that 80% of organizations sampled were private organizations, 15% were public organizations, while the remaining 5% were NGOs.

4.2.4 Strategies employed by the organization to remain profitable

The respondents unanimously agreed that there existed formal documented mission and vision statement in their organizations. This could be so because many organizations give formal vision and mission statements to guide their operations up to the unforeseeable future. The research found that the directors were involved in the formulation of vision and mission, In addition the mission and vision is reviewed after every five years. According to the research the following factors were viewed to be the cause of the alteration of the company's vision and mission. Economic changes, competitor's actions and management policies were mentioned as those with greater extent of causing alterations. According to research offering a wide range of services, engaging highly skilled staff and intensive staff training were considered of great

importance for the organizations to remain competitive. Kenya women finance trust also value credit and repayment terms greatly in regard to competition. In addition, they are keen on the geographical presence of the organization, product differentiation, ability to improve service provision, donor funding and profitability of rival firms they regard them as key determiners of competition in the industry.

4.2.5 Extent to which respondents agree or disagree with various statements in relation to the profitability of the MFI

According to Armendáriz and Morduch (2005), a profitable microfinance industry is vital in maintaining the stability of the micro-banking system. Low profitability weakens the capacity of microfinance institutions (henceforth MFIs) to absorb negative shocks, which subsequently affect solvency. Profitability reflects how MFIs are run given the environment in which they operate, which should epitomize efficiency, risk management capabilities, their competitive strategies, quality of their management and levels of capitalization. It is on this basis that the researcher sought to find out the Extent to which respondents agree or disagree with various statements in relation to the profitability of the MFI. The findings are presented in table 4.1 below

Table 4. 1: Extent to which respondents agree or disagree with various statements in relation to the profitability of the MFI

Statements	Strogly		Neutral	Disagree	Strongly	Mean	Std Dev
	Agree	Agree			diagree		
Increased competition has led to increased efficiency	52	29	10	10	0	4.2	0.20
Increased efficiency in turn has allowed MFIs to generate increasing profits from lower yields.	38	48	10	5	0	4.2	0.20
NGO MFIs generally achieve a higher Return on Assets than licensed and supervised MFIs.	19	48	24	10	0	3.8	0.18

In the absence of

competition, even

highly inefficient

MFI's can remain	10	38	29	19	5	3.3	0.14
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profitable by

simply raising their

interest rates

Study findings revealed that respondents were in agreement that increased competition has led to increased efficiency as indicated by a mean of 4.2 and a standard deviation of 0.20; that increased efficiency in turn has allowed MFIs to generate increasing profits from lower yields as indicated by a mean of 4.2 and a standard deviation of 0.20; that NGO MFIs generally achieve a higher Return on Assets than licensed and supervised MFIs as indicated by a mean of 3.8 and a standard deviation of 0.18; and that In the absence of competition, even highly inefficient MFIs can remain profitable by simply raising their interest rates as indicated by a mean of 3.3 and a standard deviation of 0.14.

4.2.6 Respondents rating on how various measures of profitability are employed by the organizations to financial performance

Profitability measures the goal of delivering services in a financially sustainable manner.

The critics of the high profits of MFI s and their connection to the high interest rates charged are the reason for the analysis of this relationship. It is on this basis that the study sought to establish the respondents rating on how various measures of profitability

are employed by the organizations to financial performance. The findings are presented below

Table 4. 2: Respondents rating on how various measures of profitability are employed by the organizations to financial performance

Statements	Very great extent	Great extent	Moderate extent	Little extent	No extent	Mean	STD DEV
Self-sufficiency ratio	52	29	10	10	0	4.2	0.20
Return on assets	38	48	10	5	0	4.2	0.20
Return on equity	19	48	24	10	0	3.8	0.17
Profit margin	10	38	29	19	5	3.3	0.14
Operational efficiency	10	67	10	10	5	3.7	0.24

Table 4.2 above shows the ranking according to the respondents of the given environmental factors in terms of their significance in measuring profitability of the organizations to financial performance. A five point Likert scale was used to interpret the ranks with the statements ranging from insignificant to most significant. According to scale those factors considered insignificant were awarded 1 while those factors considered most significant were awarded 5. Within the continuum are 2 for less significant, 3 for significant and 4 for more significant. Also mean and standard deviation was used to analyze the data. According to the researcher those statements with

a mean close to 5 were considered most significant while those with a mean close to 1 were considered insignificant. According to the research, Self-sufficiency ratio was considered to measure profitability of the organizations' financial performance to a great extent as shown by a mean of 4.2 and a standard deviation of 0.20; Return on assets to a great extent as shown by a mean of 4.2 and a standard deviation of 0.20; Return on equity to a great extent as shown by a mean of 3.8 and a standard deviation of 0.17; Profit margin to a moderate extent as shown by a mean of 3.3 and a standard deviation of 0.14; and Operational efficiency to a great extent as shown by a mean of 3.7 and a standard deviation of 0.24

4.2.7 Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected return on equity

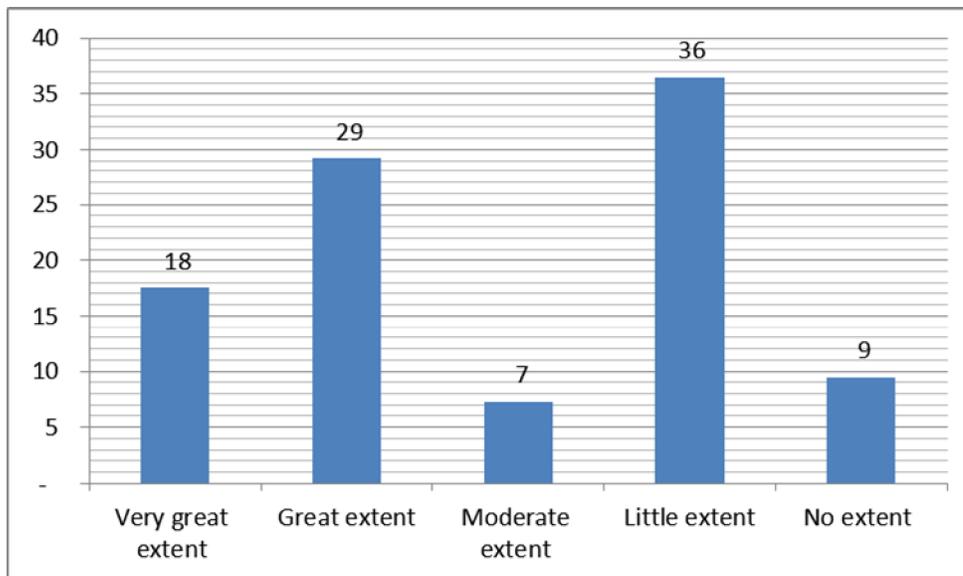


Figure 4. 3: Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected return on equity

Table 4. 3: Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected return on equity

	Amount (Kshs.)	Frequency
Very great extent	1200000	18
Great extent	2000000	29
Moderate extent	500000	7
Little extent	2500000	36
No extent	650000	9
Total	6850000	100

As revealed in figure 4.9 above and table 4.10 above, 42% of the respondents indicated that the organization uses RoE as a proxy for commercial viability to a very great extent, 26% to a great extent, 14% to a moderate extent, 15% to no extent and only 3% to a little extent

4.2.8 Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected return on assets

Vanguri (2008) suggests from his research on capital allocation in MFIs that allocating more capital towards loan portfolio will yield better returns. Berger and Humphrey (1997) review 130 studies on financial institutions and suggest that banks that have high loans to assets ratios tend to have higher profit efficiency. The value of assets has been included in financial efficiency models by Luo (2003), Seiford and Zhu (1999).

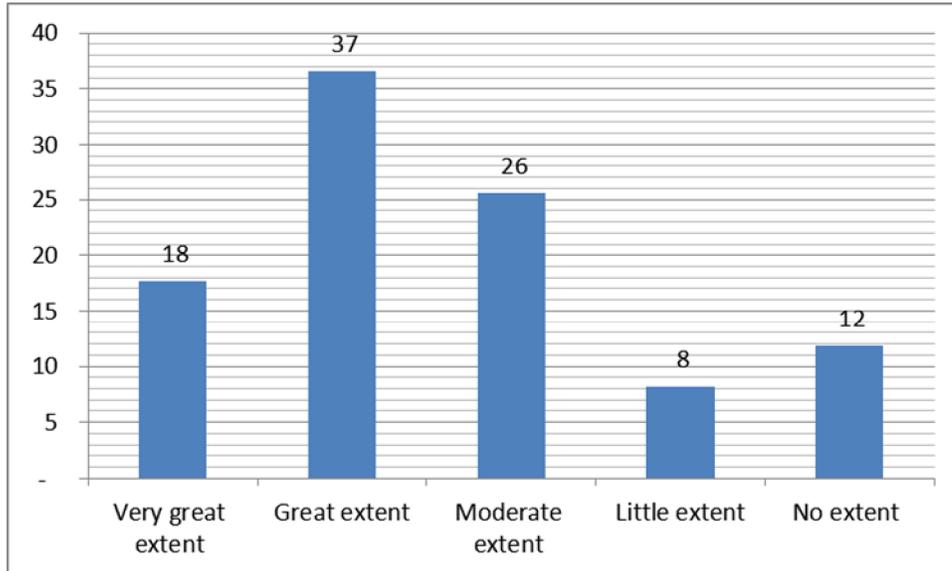


Figure 4. 4: Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected return on assets

Table 4. 4: Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected return on assets

	Amount (Kshs.)	Frequency
Very great extent	560000	18
Great extent	950000	37
Moderate extent	1400000	26
Little extent	450000	8
No extent	650000	12
Total	5470000	100

As revealed in figure 4.4 above and table 4.4 above, 37% of the respondents indicated that the organizations Yield on gross loan portfolio for the year ended 2014 affected return on assets to a great extent, 26% to a moderate extent, 18% to a very great extent, 12% to no extent and only 8% to a little extent.

The findings therefore collate with findings by Roy Mersland, (2009). In the banking industry, the ratio of operating expenses to the value of total assets is an accepted indicator of unit operating costs (D Humphrey, Willeson, Bergendahl, & Lindblom, 2006). The following variable is used as a measure of the OEA ratio (Roy Mersland, 2009a)

4.2.9 Extent that the organizations Yield on gross loan portfolio for the year ended 2014 affected the profit margin

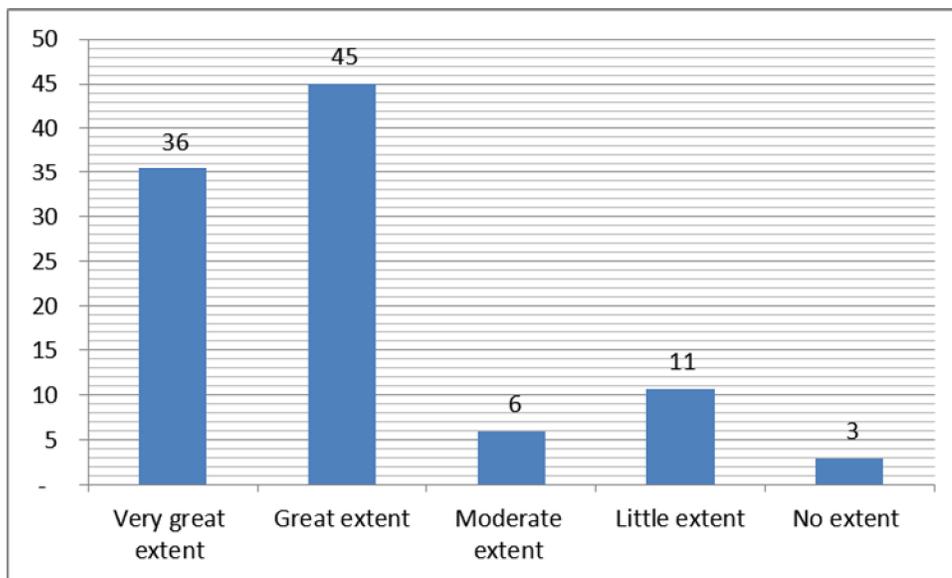


Figure 4. 5: Extent that the organizations Yield on gross loan portfolio for the year ended 2014 affected the profit margin

Table 4. 5: Extent that the organizations Yield on gross loan portfolio for the year ended 2014 affected the profit margin

	Amount (Kshs.)	Frequency
Very great extent	690000	36
Great extent	580000	45
Moderate extent	390000	6
Little extent	450000	11
No extent	650000	3
Total	5470000	100

As revealed in figure 4.9 above and table 4.10 above, 45% of the respondents indicated that that the organizations Yield on gross loan portfolio for the year ended 2014 affected the profit margin to a great extent, 36% to a very great extent, 11% to a little extent, 6% to a moderate extent and only 3% to a no extent

4.2.10 Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected operation efficiency

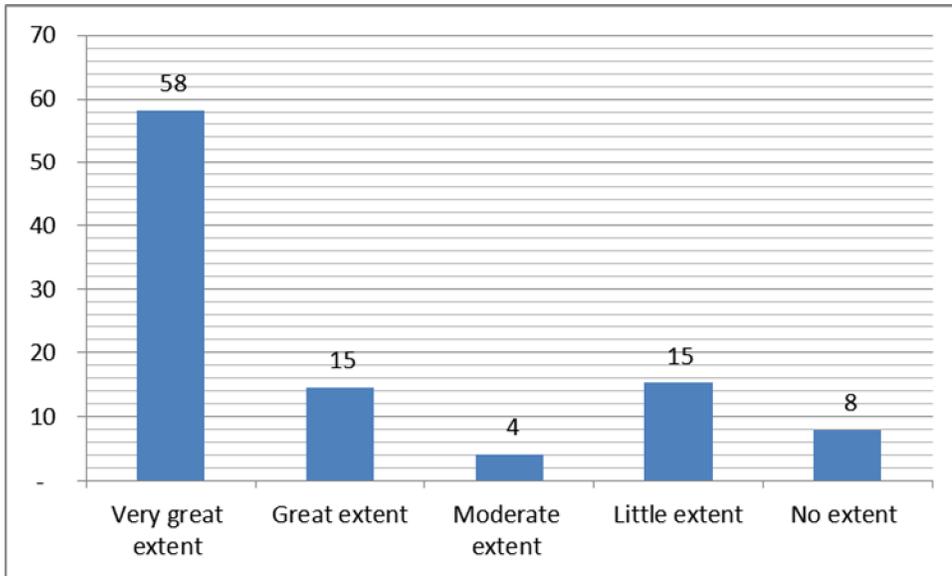


Figure 4. 6: Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected operation efficiency

Table 4. 6: Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected operation efficiency

	Amount (Kshs.)	Frequency
Very great extent	970000	18
Great extent	2000000	37
Moderate extent	1400000	26
Little extent	450000	8
No extent	650000	12
Total	5470000	100

Figure 4.7 and table 4.7 reveal that 37% of the respondents felt that the organizations Yield on gross loan portfolio for the year ended 2014 affected operation efficiency to a great extent, 26% to a moderate extent, 18% to a very great extent , 12% to no extent and only 8% to a little extent

Operating expenses to portfolio ratio (OEP ratio) can be used as a measure of cost-efficiency and it is frequently used in the microfinance literature (Ledgerwood, 1998). The OEP ratio indicates the cost needed for the MFI to operate one unit of its portfolio. The ratio ranges from 0 to 1 where a ratio close to zero indicates a highly efficient MFI. Considering the size of the portfolio, larger MFIs can compare its cost level with smaller MFIs. Ahmed and Munir (2006) and Gonzalez (2007) use the OEP ratio in their papers on financial efficiency, and the rating agencies highlight the ratio in their report.

4.2.11 Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected Self-sufficiency ratio

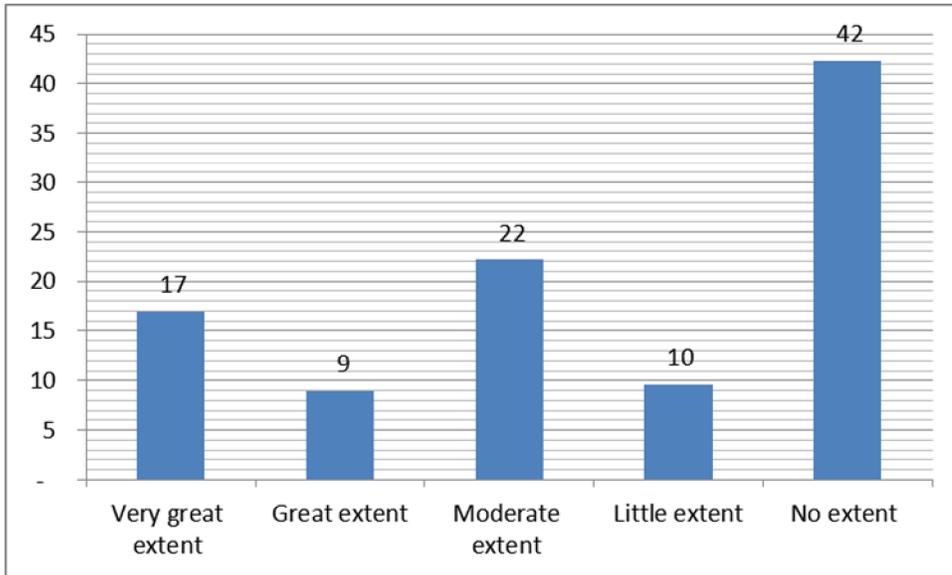


Figure 4. 7: Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected Self-sufficiency ratio

Table 4. 7: Extent to which the organizations Yield on gross loan portfolio for the year ended 2014 affected Self-sufficiency ratio

	Amount (Kshs.)	Frequency
Very great extent	680000	17
Great extent	360000	9
Moderate extent	890000	22
Little extent	386000	10
No extent	1700000	42
Total	4016000	100

As revealed in figure 4.7 above and table 4.7 above, 17% of the respondents indicated that the organizations Yield on gross loan portfolio for the year ended 2014 affected Self-sufficiency ratio to a very great extent, 9% to a great extent, 22% to a moderate extent, 42% to no extent and only 10% to a little extent

4.2.12 Extent that the organizations Yield on gross loan portfolio for the year ended 2014 affected portfolio yield

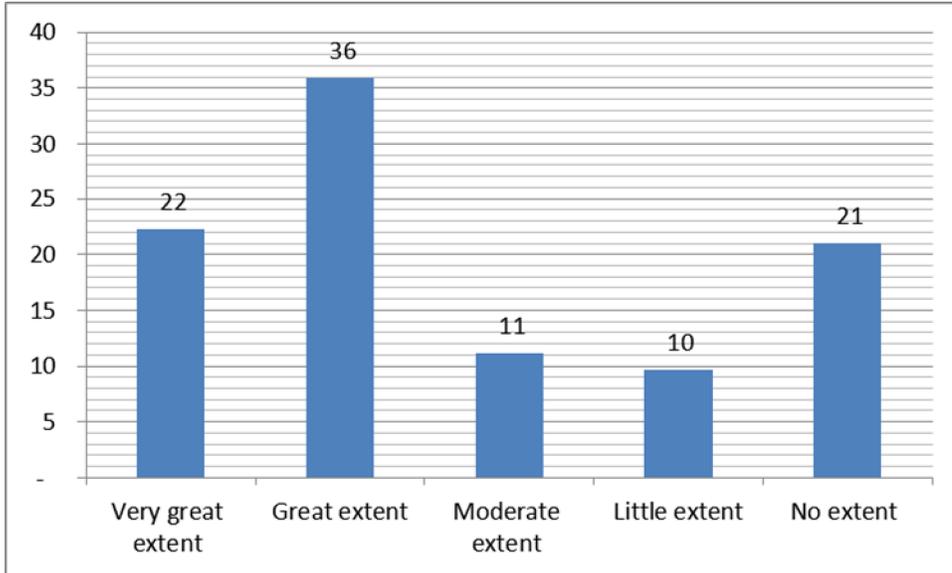


Figure 4. 8: Extent that the organizations Yield on gross loan portfolio for the year ended 2014 affected portfolio yield

Table 4. 8: Extent that the organizations Yield on gross loan portfolio for the year ended 2014 affected portfolio yield

	Amount (Kshs.)	Frequency
Very great extent	1800000	22
Great extent	2900000	36
Moderate extent	899000	11
Little extent	780000	10
No extent	1700000	21
Total	8079000	100

As revealed in figure 4.8 above and table 4.8 above, 22% of the respondents indicated that the organizations Yield on gross loan portfolio for the year ended 2014 affected portfolio yield to a very great extent, 36% to a great extent, 11% to a moderate extent, 21% to no extent and only 10% to a little extent

4.2.13 Extent that the organization uses ROE as a proxy for commercial viability

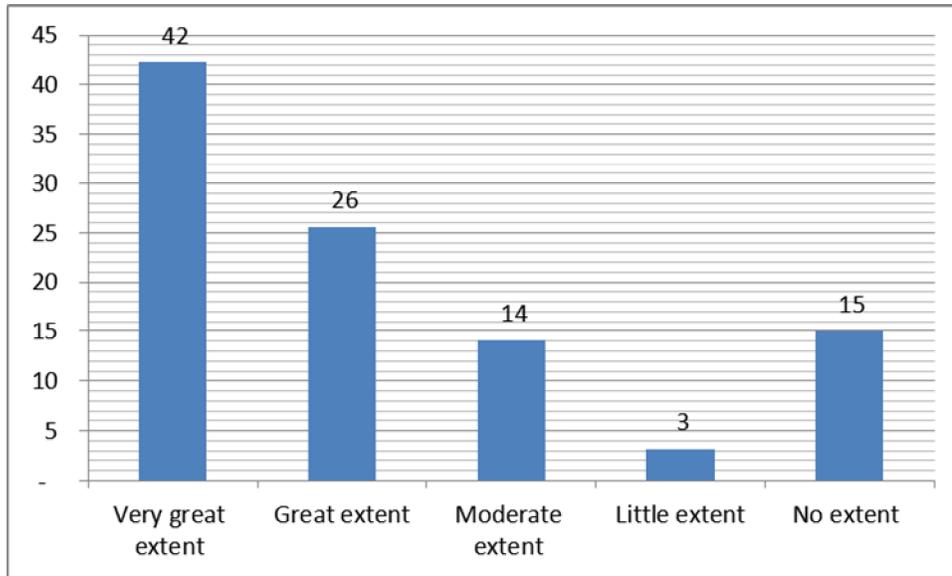


Figure 4. 9: Extent that the organization uses ROE as a proxy for commercial viability

Table 4. 9: Extent that the organization uses ROE as a proxy for commercial viability

	Amount (Kshs.)	Frequency
Very great extent	4800000	42
Great extent	2900000	26
Moderate extent	1600000	14
Little extent	356000	3
No extent	1700000	15
Total	11356000	100

As revealed in figure 4.9 above and table 4.9 above, 42% of the respondents indicated that the organization uses ROE as a proxy for commercial viability to a very great extent, 26% to a great extent, 14% to a moderate extent, 15% to no extent and only 3% to a little extent.

This supports findings by Arunachalam (2006) that ROA and ROE indicate whether an MFI can generate sustainable long-term profits, portfolio yield is an indicator of an MFI's revenue during a specific period of time. According to Arunachalam (2006), yield on gross loan portfolio is the ratio between interest payments in an MFI's loan portfolio and the total value of the portfolio. Portfolio yield also indicates the type of clientele that an MFI serves. Higher yields indicate riskier and more under-banked clientele. Whereas ROA and ROE indicate whether an MFI can generate sustainable long-term profits, portfolio yield is an indicator of an MFI's revenue during a specific period of time.

4.3 Regression model summary of the effect of independent variables on the dependent variable

From the results shown in table 4.13, the model shows a goodness of fit as indicated by the coefficient of determination r^2 with value of .605. This implies that independent variables Profitability growth and Growth in portfolio yield explain 60.5% of the variations of Yield on Gross Portfolio. 39.5% of variations are brought about by factors not captured in the objectives. Durbin Watson value of 2.220 was established illustrating lack of auto correlation in the model residuals.

Table 4. 10: Regression model summary of the effect of independent variables on the dependent variable

R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics			Sig. F Change	Durbin-Watson
			F Change	df1	df2		
.6053	.52	.65554	2.761	3	23	.022	2.220

Table 4. 111: Regression Coefficient of Determination of the effect of independent variables on the dependent variable

	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	1.448	.560		2.584	.001
Profitability growth	.191	.058	.313	3.329	.002
Growth in portfolio yield	.466	.123	.312	3.779	.000

The study conducted a multiple regression analysis so as to determine the relationship between the relationship between profitability growth and Yield on Gross Portfolio and the four attributes investigated in this survey. The regression statistical model was in the form of:

$$Y=C+m_1X_1 +p;$$

Where;

Y = Yield on Gross Portfolio

X_i = Profitability growth

C = Constant in the Model

ϵ = Error Term in the Equation

According to the regression equation established, taking all factors (Profitability growth and Growth in portfolio yield) constant at zero, the effects of competitive strategies on Yield on Gross Portfolio as a result of these independent factors will be 1.448. The data findings analyzed also shows that taking all other independent variables at zero, a unit increase in Profitability growth will lead to a 0.191 increase in Yield on Gross Portfolio. This therefore implies that all the two variables have a positive relationship with contributing more to Yield on Gross Portfolio

4.4 Correlation Analysis

The study used the Pearson correlation analysis to determine the relationship among the three variables and the dependent. A correlation figure of 1 show that the variables are perfectly and positively correlated and vice versa. From the table below the entire variable are positively correlated with a high value of Pearson correlation which is close to 1. This shows that the variables are dependent on each other for the Yield on Gross Portfolio.

Table 4. 12: Correlation Analysis

		Yield on Gross Portfolio	Profitability growth	Growth in portfolio yield
Yield on Gross Portfolio	Pearson Correlation	1	.926**	.958**
	Sig. (2-tailed)		.000	.000
	N	110	110	110
Profitability growth	Pearson Correlation	.926**	1	.892**
	Sig. (2-tailed)	.000		.000
	N	110	161	161
Growth in portfolio yield	Pearson Correlation	.958**	.892**	1
	Sig. (2-tailed)	.000	.000	
	N	110	161	161
	Sig. (2-tailed)	.000	.000	.000
	N	110	161	161

4.5 Interpretation of findings and Discussion

Respondents were in agreement that there existed formal documented mission and vision statement in their organizations. The research found that the directors were involved in the formulation of vision and mission, In addition the mission and vision is reviewed after every five years. According to the research the following factors were viewed to be the cause of the alteration of the company's vision and mission. Economic changes, competitor's actions and management policies were mentioned as those with greater extent of causing alterations. According to research offering a wide range of services, engaging highly skilled staff and intensive staff training were considered of great importance for the organizations to remain competitive. Kenya women finance trust also value credit and repayment terms greatly in regard to competition. In addition, they are keen on the geographical presence of the organization, product differentiation, ability to improve service provision, donor funding and profitability of rival firms they regard them as key determiners of competition in the industry.

Study findings revealed that respondents were in agreement that increased competition has led to increased efficiency; that increased efficiency in turn has allowed MFIs to generate increasing profits from lower yields; that NGO MFIs generally achieve a higher Return on Assets than licensed and supervised MFIs; and that In the absence of competition, even highly inefficient MFIs can remain profitable by simply raising their interest rates.

According to the research, Self-sufficiency ratio was considered to measure profitability of the organizations' financial performance to a great extent; Return on assets to a great extent; Return on equity to a great extent; Profit margin to a moderate extent; and Operational efficiency to a great extent.

According to Armendáriz and Morduch (2005), a profitable microfinance industry is vital in maintaining the stability of the micro-banking system. Low profitability weakens the capacity of microfinance institutions (henceforth MFIs) to absorb negative shocks, which subsequently affect solvency. Profitability reflects how MFIs are run given the environment in which they operate, which should epitomize efficiency, risk management capabilities, their competitive strategies, quality of their management and levels of capitalization.

Further Vanguri (2008) suggests from his research on capital allocation in MFIs that allocating more capital towards loan portfolio will yield better returns. Berger and Humphrey (1997) review 130 studies on financial institutions and suggest that banks that have high loans to assets ratios tend to have higher profit efficiency. The value of assets has been included in financial efficiency models by Luo (2003), Seiford and Zhu (1999). The findings therefore collate with findings by Roy Mersland, (2009). In the banking industry, the ratio of operating expenses to the value of total assets is an accepted indicator of unit operating costs (D Humphrey, Willeson, Bergendahl, & Lindblom, 2006).

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

From the analysis and data collected, the following discussions, conclusions and recommendations were made. The responses were based on the objectives of the study.

5.2 Summary of the major Findings

Majority (85%) of the respondents indicated that their organizations were for profit making, while the remaining 15% indicated that their organizations were nonprofit making. Eighty Per cent of organizations sampled were private organizations, 15% were public organizations, while the remaining 5% were NGOs.

Respondents unanimously agreed that there existed formal documented mission and vision statement in their organizations. This could be so because many organizations give formal vision and mission statements to guide their operations up to the unforeseeable future. The research found that the directors were involved in the formulation of vision and mission, In addition the mission and vision is reviewed after every five years. According to the research the following factors were viewed to be the cause of the alteration of the company's vision and mission. Economic changes, competitor's actions and management policies were mentioned as those with greater extent of causing alterations. According to research offering a wide range of services, engaging highly

skilled staff and intensive staff training were considered of great importance for the organizations to remain competitive. Kenya women finance trust also value credit and repayment terms greatly in regard to competition. In addition, they are keen on the geographical presence of the organization, product differentiation, ability to improve service provision, donor funding and profitability of rival firms they regard them as key determiners of competition in the industry.

Study findings revealed that respondents were in agreement that increased competition has led to increased efficiency as indicated by a mean of 4.2 and a standard deviation of 0.20; that increased efficiency in turn has allowed MFIs to generate increasing profits from lower yields as indicated by a mean of 4.2 and a standard deviation of 0.20; that NGO MFIs generally achieve a higher Return on Assets than licensed and supervised MFIs as indicated by a mean of 3.8 and a standard deviation of 0.18; and that In the absence of competition, even highly inefficient MFIs can remain profitable by simply raising their interest rates as indicated by a mean of 3.3 and a standard deviation of 0.14.

According to scale those factors considered insignificant were awarded 1 while those factors considered most significant were awarded 5. Within the continuum are 2 for less significant, 3 for significant and 4 for more significant. Also mean and standard deviation was used to analyze the data. According to the researcher those statements with a mean close to 5 were considered most significant while those with a mean close to 1 were considered insignificant. According to the research, Self-sufficiency ratio was considered to measure profitability of the organizations' financial performance to a great

extent as shown by a mean of 4.2 and a standard deviation of 0.20; Return on assets to a great extent as shown by a mean of 4.2 and a standard deviation of 0.20; Return on equity to a great extent as shown by a mean of 3.8 and a standard deviation of 0.17; Profit margin to a moderate extent as shown by a mean of 3.3 and a standard deviation of 0.14; and Operational efficiency to a great extent as shown by a mean of 3.7 and a standard deviation of 0.24.

5.3 Conclusions

The study's objective was to analyze the relationship between profitability growth and the yield on gross portfolio of micro-finance institutions in Kenya. The study concludes that increased competition has led to increased efficiency; that increased efficiency in turn has allowed MFIs to generate increasing profits from lower yields; that NGO MFIs generally achieve a higher Return on Assets than licensed and supervised MFIs; and that in the absence of competition, even highly inefficient MFIs can remain profitable by simply raising their interest rates.

According to Armendáriz and Morduch (2005), a profitable microfinance industry is vital in maintaining the stability of the micro-banking system. Low profitability weakens the capacity of microfinance institutions (MFIs) to absorb negative shocks, which subsequently affect solvency. Profitability reflects how MFIs are run given the environment in which they operate, which should epitomize efficiency, risk management capabilities, their competitive strategies, quality of their management and levels of capitalization.

The study concludes that there are some factors that cause the alteration of the company's vision and mission. Economic changes, competitor's actions and management policies were mentioned as those with greater extent of causing alterations. According to research offering a wide range of services, engaging highly skilled staff and intensive staff training were considered of great importance for the organizations to remain competitive. Kenya women finance trust also value credit and repayment terms greatly in regard to competition.

According to Minkoff and Powell (2006), note that mission drift encompasses both accommodation (becoming more conservative because of institutional pressures) and proactive change (becoming more militant because of internal pressures). But mission drift, whether conservative or militant, is extreme. Reorientation, a broadening of mission without sacrificing the original intent, is another possible path when nonprofits are faced with changing environments that threaten their survival (Minkoff and Powell 2006).

The return on equity in our estimates shows significant when the MFIs ensures decrease in portfolio at risk past due 30 days. Cost efficiency is significant when other variables are constant. The result depicts that the sample MFIs attain breadth of outreach at the same time reduces the cost per borrower and lastly, for the MFIs to increase the depth of outreach PAR30 will also increase.

5.4 Limitation

Cases of respondents not cooperating were experienced. The researcher mainly engaged the respondents in a brief interview before issuing the questionnaires as a strategy to avoid lack of cooperation. The researcher issued the data collection instruments which were collected later. This gave the respondents adequate time to fill the questionnaires.

Accessibility to data was also a constraint in view of the confidentiality of information in private owned financial institutions. This limitation was minimized by relying on published reports both in the print and electronic media. A letter of introduction was obtained from Nairobi University which enabled the researcher to collect data from the relevant institution for the study

The study was also limited by lack of information coming from the various MFI's for fear of information confidentiality not being honored by the researcher. This was mitigated by the researcher obtaining permission from the specific relevant authorities.

The study was faced with other anticipated obstacles which included and not limited to; access to accurate information due to respondents' divided attention to questionnaires and the desire to safeguard the reputation of the organisation thus hindering information dispatch. This was mitigated by the researcher having a small briefing with the respondents on the magnitude and importance of the data to be collected.

5.5 Recommendations

5.5.1 Policy Recommendations

MFIs should fix attractive interest rate for time deposit and savings deposit. Although operating expenses will rise but the outreach performance is going to be achieved.

Government needs to ensure adequate provision of infrastructures like electricity which is basically required by the MFIs to carry out its operation, based on the findings that outreach increases together with financing cost for MFIs in Kenya.

The government should implement the stakeholder role stated in the microfinance policy supervisory and regulatory framework by setting aside an amount not less than 1% of the annual budgets of state governments for on lending activities of microfinance banks in favor of their residents.

The study recommends for policy considerations of the successful and effective operation of microfinance programs by simplifying distribution of loan, improving yield on gross loan portfolio, personnel productivity and reducing of borrowing funds from the donors, reducing operating cost, utilizing resources to generate financial revenue and focus on increasing the value of their total assets in Kenya.

5.5.2 Recommendations for further studies

Since the study focused on the relationship between profitability growth and the yield on gross portfolio of micro-finance institutions in Kenya, the researcher recommends a study outside Kenya with similar variables to see if the findings hold in other countries.

The study recommends that researcher should mainly engage the respondents in a brief interview before issuing the questionnaires as a strategy to avoid lack of cooperation. The researcher issued the data collection instruments which were collected later. This gives the respondents adequate time to fill the questionnaires.

The study further recommends that accessibility of data should be minimized by relying on published reports both in the print and electronic media. A letter of introduction should also be obtained from the University which enables the researcher to collect data from the relevant institution for the study.

The study finally recommends that lack of information coming from the various MFIs for fear of information confidentiality not being honored by the researcher should be mitigated by the researcher obtaining permission from the specific relevant authorities.

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APPENDICES

APPENDIX I: Introductory letter

Dear Sir/Madam,

RE: REQUEST TO COLLECT DATA FOR AN MBA PROJECT

I, Eric Langat, am a post graduate student at University of Nairobi pursuing a Master of Business Administration degree.

Pursuant to the pre-requisite course work, I am currently conducting an academic research project on **THE RELATIONSHIP BETWEEN PROFITABILITY GROWTH AND THE YIELD ON GROSS PORTFOLIO OF MICRO-FINANCE INSTITUTIONS IN KENYA**. The focus of my research will be the micro finance institutions operating in Nairobi and this will involve use of questionnaires administered to chief finance officers of the selected micro finance institutions.

I kindly seek your assistance in filling this questionnaire and I guarantee you the data will be used solely for academic use and will not at any one time disclosed to anybody without your authority and consent. I have enclosed an introductory letter from the University of Nairobi for your verification. Your assistance will be highly valued. Thank you in advance.

Yours faithfully,

Eric Kipkemoi Langat

í í í í í í í í í í í .

MBA Student,

School of Business University of Nairobi.

	Stroglyly agree	Agree	Neutral	Disagree	Strongly diagree
Increased competition has led to increased efficiency					
Increased efficiency in turn has allowed MFIs to generate increasing profits from lower yields.					
NGO MFIs generally achieve a higher Return on Assets than licensed and supervised MFIs.					
In the absence of competition, even highly inefficient MFIs can remain profitable by simply raising their interest rates					

6. In a scale of 1- 5 where 1 is to a very great extent and 5 is to no extent rate how the following measures of profitability are employed by your organization to financial performance

Profitability ratios	To a very great extent	To a great extent	To a moderate extent	To a little extent	To no extent
Self-sufficiency ratio					
return on assets					
return on equity					
Profit margin					
operational efficiency					
Portfolio Yield					

7. To what extent does your organizations Yield on gross loan portfolio for the year ended 2014 affected return on equity? (Indicate in figures)

To a very great extent	Amount (Kshs.)
To a great extent	
To a moderate extent	
To a little extent	
To no extent	

8. To what extent does your organizations Yield on gross loan portfolio for the year ended 2014 affected return on assets? (Indicate in figures)

To a very great extent	Amount (Kshs.)
To a great extent	
To a moderate extent	
To a little extent	
To no extent	

9. To what extent does your organizations Yield on gross loan portfolio for the year ended 2014 affected the profit margin? (Indicate in figures)

To a very great extent	Amount (Kshs.)
To a great extent	
To a moderate extent	
To a little extent	
To no extent	

10. To what extent does your organizations Yield on gross loan portfolio for the year ended 2014 affected operation efficiency? (Indicate in figures)

To a very great extent	Amount (Kshs.)
To a great extent	
To a moderate extent	
To a little extent	
To no extent	

11. To what extent does your organizations Yield on gross loan portfolio for the year ended 2014 affected Self-sufficiency ratio? (Indicate in figures)

To a very great extent	Amount (Kshs.)
To a great extent	
To a moderate extent	
To a little extent	
To no extent	

12. To what extent does your organizations Yield on gross loan portfolio for the year ended 2014 affected portfolio yield? (Indicate in figures)

To a very great extent	Amount (Kshs.)
To a great extent	
To a moderate extent	
To a little extent	
To no extent	

13. To what extent does organization uses ROE as a proxy for commercial viability.

Tick appropriately.

To a very great extent	
To a great extent	
To a moderate extent	
To a little extent	
To no extent	