

**THE RELATIONSHIP BETWEEN CAPITAL STRUCTURE AND PROFITABILITY
OF MICRO FINANCE INSTITUTIONS IN KENYA**

By

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**A RESEARCH PROJECT PRESENTED IN FULFILMENT OF THE
REQUIREMENT OF THE AWARD OF THE MASTER DEGREE IN BUSINESS
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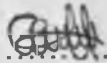
NOVEMBER, 2011

DECLARATION

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

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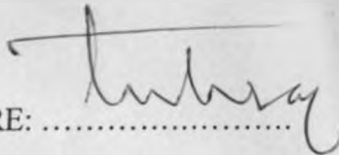
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This project has been presented with my approval as the University supervisor.

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DEDICATION

To my precious family members wife Selina, Children cherop and Rotich for giving me a new purpose for living and a renewed zeal to complete my study. The same also goes to my dad and mum for giving the opportunity to go to school.

ACKNOWLEDGEMENT

It is a pleasure to thank the many people who made this project possible. It is difficult to overstate my gratitude to my supervisor Mr. karanja, throughout my proposal writing period he shared with me a lot of his expertise and research insight. He quickly became for me the role model of a successful researcher in the field. He provided advice, good teaching and lots of good ideas.

I am indebted to my many student colleagues ondie, Karen, Phyllis, kapto, Kiptoo, Jane just but to mention a few for providing a stimulating and fun environment in which to learn and grow. I also wish to thank my family for providing a loving environment for me and all my friends, who have joined me in the discovery of what life is about, and how to make the best of it.

ABSTRACT

Over the last 20 years, microfinance institutions in Kenya have largely developed through concerted grant funding. This situation prevailed up to the late 1990s when key donors started pushing MFIs to start moving towards sustainability in their operations. Most MFIs in Kenya had started off as NGOs and had built significant supply side competencies. The push towards sustainability was therefore not going to be easy for institutions previously focused on free spending outreach drives, rather than sustainable operations.

This study used descriptive statistics. Descriptive statistics are used to describe the main features of a collection of data in quantitative terms. One important use of descriptive statistics is to summarize a collection of data in a clear and understandable way. This study used data for registered selected MFIs in Kenya for the period during 2006-2009. Profitability of MFIs were measured using return on assets since MFIs do not have shareholders equity, capital structure of MFIs was measured using short term debts divided by total (SDA) assets, long term debts divided by total assets (LDA) and total debts divided by total assets (DA), size of the MFIs was used as control variables and was measured using logarithms of total assets. In determining the relation between profitability and capital structure of MFIs, the researcher used multiple regression Analysis method. With multiple regression analysis method it is possible to express the model that will be used in studying the relation between capital structure and profitability and variables we want to examine (SDA, LDA, DA , SIZE and ROA).

The capital structure decision is crucial for any business organization. The decision is important because of the need to maximize returns to various organizational constituencies, and also because of the impact such a decision has on an organization's ability to deal with its competitive environment. From the findings the study found that that most of MFIs in Kenya were using equity and or donations as their main source finances in Kenya which accounted for by 72.42% and 27.58% in form of debt. The study further found that there exist a positive relationship between capital structure and profitability of MFIs in Kenya

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CHAPTER ONE: INTRODUCTION

1.1 Background of the study

In recent years microfinance institutions (MFIs) have become one of the most important instruments in development policy. The idea of microfinance arose in the mid-1970s when Mohammad Yunus started a pilot scheme lending small amounts of money to villagers in Bangladesh who, due to lack of collateral, had no access to conventional loans. Encouraged by high repayment rates, he founded the Grameen Bank to run such schemes on a larger scale. In 2009 the Grameen Bank lend to more than 2 million people. Since Grameen's early successes, the concept of micro credits has spread throughout the world, and a plethora of organizations providing small loans to the poor have come into being. MFIs are most widespread in less developed countries, although they are by no means confined to them. Micro lending programs have also been introduced in transition economies like Bosnia and Russia and even in Western economies like Canada and the United States (Aghion & Murdoch, 2005). There are more than 5 million households served by micro credit schemes in the world today.

Prior to the microfinance revolution, poor people's opportunities to take up loans had been severely limited for several reasons. First, poor households cannot offer collateral to back up their loans, because they own too few substantial possessions. Second, the potential addressees of small loans in less developed countries often live in remote rural villages beyond the reach of the traditional banking system. Third, although loans needed for individual projects are small, their myriad nature makes monitoring and enforcement costs prohibitively high. Poor villagers' only access to credit had been through non-commercial development programs that provided subsidized credit. However, because these schemes faced the same monitoring difficulties as traditional banks, they often suffered from poor repayment rates and high costs and were typically doomed to failure for that reason.

MFIs use innovative means to overcome these problems. Though the individual schemes differ vastly in their concrete implementations, most of them share some main characteristics, the most prominent of which is that of group lending (Armendariz de Aghion & Morduch, 2000). In a typical microfinance scheme, borrowers with individual risky projects form

groups that apply for loans together. The whole group is liable if one or more group members default. Thus, joint liability provides an insurance against individual risks. Even if an individual project fails and some of the borrowers are unable to repay, the group as a whole might still be able to do so. In this sense, joint liability serves as a substitute for collateral. Unless the individual risks are perfectly correlated, the overall risk of involuntary non-repayment can be substantially lower than with individual borrowing.

K-Rep was the oldest MFI in Kenya. It was founded in 1984 as an intermediary organization to address the financial, management and technical shortfall experienced by existing non-governmental organizations (NGOs) involved in small and micro-enterprise after a study conducted in 1983 to assess the institutional needs of NGOs by USAID. At that time, USAID's interest was to promote micro-enterprise development globally as means of poverty alleviation (K-Rep, 2010).

1.1.1 Micro Finance Institutions in Kenya

Over the last 20 years, microfinance institutions in Kenya have largely developed through concerted grant funding. This situation prevailed up to the late 1990s when key donors started pushing MFIs to start moving towards sustainability in their operations. Most MFIs in Kenya had started off as NGOs and had built significant supply side competencies. The push towards sustainability was therefore not going to be easy for institutions previously focused on free spending outreach drives, rather than sustainable operations. It was also difficult for those that had significantly grown and expanded operations on grant funding to suddenly have to look for alternative sources of capital as donor funds either dwindled or became inadequate to sustain the growth momentum (Macharia, 2005).

During this period, many MFIs seized the moment and incorporated as private capital companies. Others, like K-Rep, chose the route to formal commercial banking with a multiplicity of ownership. By early 2000, the landscape for microfinance was changing, and changing for good. What eventually became clear was that donors were willing to provide funding for capacity building but not capital for lending purposes. This new shift heralded the beginning of an almost desperate search for capital from various sources, a case applicable to all MFIs. The way in which MFIs search for private capital is significantly

different from the way the MFIs attract donor funding. Indeed, managing the liability side of the balance sheet, hitherto an under-appreciated part of MFI business strategy, is fast becoming a key ingredient to growth and success. This is as true for debt and deposit management as it is for equity capital, each of which demand distinct, but somewhat overlapping strategies.

Funding and capitalization strategies take place within the context of a sector transforming from one driven primarily by a social mission ethos to one that also responds to the needs and interests of private capital. The transition to private capital is well underway and some MFIs are mostly or entirely funded by private capital. But the transition has been slow and difficult as many MFIs lack the management capacity to attract and absorb private capital. Best practice knowledge, improved regulatory regimes, and stronger sector associations, among other interventions, are having positive effects on the sector's capacity. While improvements vary by country and institution, many MFIs now have or can develop the capacity to profitably employ commercial capital.

To make the transition to private capital, MFIs will have to play by a new set of rules those of the private sector. These rules are numerous, but all revolve around profit making, an objective that has not entirely entered the poverty focused lexicon of microfinance. Achieving funding goals also require structured, professional funding strategies. Some MFIs have such strategies, unfortunately most rely on rather informal and ad hoc approaches to funding. As MFIs grow, adopting professional strategies becomes all the more important, because growth is heavily contingent upon access to funding, which is increasingly only available from the private sector.

Of the 7,000 NGOs providing microfinance services to poor entrepreneurs throughout the world, only a minute percentage has initiated transformation into privately owned, regulated MFIs. However, there is some evidence that most transformed MFIs have achieved encouraging results. They have found new shareholders, increased their equity capital and improved governance, institutional sustainability and outreach to the poor (Hishigsuren, 2009).

1.1.2 Evolution of MFI Funding Sources

Although microfinance has existed for centuries in various forms, the development of distinct MFIs came into prominence in the 1980s after the emergence of the Grameen Bank, which developed strategies and lending techniques that influenced microfinance organizations all over the world. Initially, microfinance used “social capital” to overcome the lack of collateral and limited information on creditworthiness that had long hindered the extension of financial services to poor populations. Much of the applied economics literature in this area addresses the MFI lending Mechanisms Morduch (1999), the social worth of microfinance organizations (Navajas et al., 2003) MFIs encompass a wide range of providers that vary in legal structure, mission, target area and methodology. The issue of funding is crucial to the financial sustainability of MFIs regardless of whether they operate as commercial banks, finance companies, credit unions, or non-profit organizations.

Existing research places the evolution of MFI funding sources within the context of an institutional life cycle theory of MFI development (de Sousa-Shields, 2004). According to this framework of analysis, most MFIs start out as NGOs with a social vision, funding operations with grants and concessional loans from donors and international financial institutions that effectively serve as the primary sources of risk capital for the microfinance sector. Thus, the literature on microfinance devotes considerable attention to this process of “NGO transformation” as a life cycle model outlining the evolution of a microfinance institution (Helms, 2006).

Generally, the life cycle theory posits that the sources of financing are linked to the stages of MFI development. Donor grants and “soft” loans comprise the majority of the funding in the formative stages of the organization. As the MFI matures, private debt capital becomes available but the debt structures have restrictive covenants and/or guarantees. In the last stage of MFI evolution, traditional equity financing becomes available (Fehr & Hishigsuren, 2004).

1.1.3 Capital Structure and Financial Risks

Financial risk or uncertainty is defined as the added variability of net returns to owner equity that results from the financial obligation associated with debt (or capital lease) financing. This risk results primarily from the use of debt as reflected by leverage; leverage multiplies the potential return or loss that will be generated with different levels of operating performance. Financial risk is evidenced by variability in the return on equity (ROE) of the business. Furthermore, there are other risks inherent in using debt. Uncertainty associated with the cost and availability of debt is reflected partly in fluctuations in interest rates for loans, and partly through non-price sources. Nonprice sources include differing loan limits, security requirements, and maturities, depending on the availability of loan funds over time. Thus, financial risk also includes uncertain interest rates and uncertain loan availability (Halov *et al.*, 2008).

Financial risk increases rapidly with the use of borrowed funds. The tendency for total risk to become greater at an increasing rate as the relative amount of non-equity (debt or capital lease) capital used in a business expands is referred to as the principle of increasing risk. The use of non-equity capital – whether it is acquired by borrowing, leasing, or some other contractual agreement – creates a fixed financial commitment in the form of interest, rent, or other obligations. This commitment to the supplier of non-equity capital results in financial risk. As leverage (the amount of non-equity capital relative to equity capital) increases the financial commitment increases; hence, the risk increases also. With an equal percentage of gain or loss on assets (ROA), the magnitude and percentage of loss on equity capital (ROE) is greater than that of the gain, thus the principle of increasing risk. At the same time, as long as the rate of return on capital invested (ROA) exceeds the cost of using non-equity capital there is a gain from the use of leverage in the form of increased returns to the owner of the business (Halov *et al.*, 2008).

The use of borrowed capital increases the level of investment undertaken by the firm without causing any additional cost for firm's owners other than interest expenses. This increases the return of invested capital by owners. However, borrowed capital increases the risk for the

firms as well as for owners, because borrowed capital creates fixed expenses (i.e. interest), thus a minimum profit level is necessary for financing the level of interest. Financial structure is a very important element for firm's profitability. Firms may use their debt-to-equity ratio to affect profitability. Some firms choose a high debt-to-equity ratio, whereas others prefer to choose a lower one. The successful selection and use of the debt-to-equity ratio is one of the key elements of the firm's financial strategy.

1.2 Statement of the Problem

The determination of a company's capital structure constitutes a difficult decision, one that involves several and antagonistic factors, such as risk and profitability. That decision becomes even more difficult, in times when the economic environment in which the company operates presents a high degree of instability. Therefore, the choice among the ideal proportion of debt and equity can affect the value of the company, as much as the return rates can.

Financial structure is a very important element for firm's profitability. Nikolaos (1996) found that there is negative and statistically significant relationship between debt-to-equity ratio and profit margin. The negative relationship between the financial variable and the profit margin was in line with the results of Baker (1973), Hurdle (1974) and Oustapassidis (1998). Major studies carried out in recent years which proved that there exists significant relationship between capital structure and profitability were Long and Malitz (1985), Kester (1986), Friend and Lang (1988), Titman and Wessels (1988), El-Khoury (1989) and Canda (1991). Mohamad (1994) showed that there were significant relationships between market imperfections changes in capital structure on firm's profitability. Berger and Bonaccorsi (2006) showed that higher leverage or lower equity capital ratio is related to higher profit efficiency, and Abor (2005) on capital structure and profitability of SMEs in Ghana, showed that short-term debt ratio is positively correlated with return on equity.

It is appropriate to investigate how capital structure of microfinance institutions (MFIs) affects their profitability. The microfinance sub-sector has evolved as a development tool intended to provide credit and financial services to the productive poor who do not have access to formal financial intermediation and are engaged in small and micro enterprises. In

the beginning, such microfinance institutions were set up through state-run subsidized credit schemes and therefore were directly controlled by the state. Through their evolution, MFIs have benefited from the establishment of mutual funds as part of shareholder structure and/or the connection of such organizations with capital markets. These developments have several implications for their capital structure, operations and performance essentially because the presence of debt exerts pressure on management to ensure efficiency and profitability and to be able to honour such debt obligations.

The capital structure of a firm is basically a mix of debt and equity which a firm deems as appropriate to enhance its operations. Thus, theory point out that high leverage or low equity/asset ratio reduces agency cost of outside equity and thus increases firm value by compelling managers to act more in the interest of shareholders, (Berger and Bonaccorsi di Patti, 2006). Therefore capital structure is deemed to have an impact on a firm performance against the position held by Modigliani and Miller in their seminal work of 1958. Modigliani and Miller (1958) argue on the basis of the following assumptions; existence of perfect capital market; homogenous expectations; absence of taxes; and no transaction cost, that, capital structure is irrelevant to the value of a firm.

The relationship between capital structure and profitability of MFIs in Kenya has not been documented. The study however identified few local studies Oriaro (2001) assessing the suitability of a regulatory framework for operations of MFIs in Kenya and Magiri (2002) relationship between credit models used by MFIs in Kenya and the attainment of outreach. This study is therefore motivated by the need to close this gap in knowledge by studying the relationship between the capital structure and profitability of MFIs in Kenya. To the best knowledge of the researcher, there is no study that has been done on the relationship between capital structure and profitability of MFIs in Kenya.

1.3 Objectives of the Study

This study aim at establishing whether there is a relationship between capital structure and profitability of MFIs in Kenya.

This study sought to achieve the following specific objectives:

1. To examine the nature of capital structure of MFIs in Kenya
2. To establish whether there exist a relationship between capital structure and profitability of MFIs in Kenya

1.4 Research Questions

1. What is the nature of capital structure of Kenyan MFIs?
2. Does there exist a relationship between capital structure and profitability of MFIs in Kenya?

1.5 Justification of the Study

Microfinance Institutions (MFIs) have risen to the forefront as invaluable institutions in the development process. Nevertheless, capital constraints have hindered the expansion of microfinance programs such that the demand for financial services still far exceeds the currently available supply. Moreover, it is observed that microfinance organizations have had various degrees of sustainability. Thus, the question of how best to fund these programs is a key issue. Recognizing the potential of microfinance in the development process, this study seek examine the relationship between capital structure and profitability of MFIs in Kenya, and explore how changes in capital structure could facilitate future growth and improve the efficiency and financial sustainability of MFIs.

1.6 Significance of the Study

While most information on the capital structure of MFIs is highly fragmented, this study attempts to synthesize the information to better understand the link between capital structure and profitability. Even development and donor organizations realize that only by weaning off donor dependency and adopting a commercial orientation can these MFIs truly attract the capital and savings base they need to scale up their micro loan portfolios, increase sustainability, lower lending rates, and start meeting the demand. This study will provide information to address the capital constraint issues of most MFIs. As MFI transparency improves and innovative financing is used, transaction costs should begin to decline so that even more new financial tools can increase the liquidity in the MFI funding market.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter has looked at the theory of capital structure and the various sources of funding that are available for MFIs. Their opportunities and challenges are discussed.

2.2 Theory of Capital Structure

Determination of an optimal capital structure has frustrated theoreticians for decades. The early work made numerous assumptions in order to simplify the problem and assumed that both the cost of debt and the cost of equity were independent of capital structure and that the relevant figure for consideration was the net income of the firm. Under these assumptions, the average cost of capital decreased with the use of leverage and the value of the firm (the value of the debt and equity combined) increased while the value of the equity remained constant.

Modigliani and Miller (1958) showed that this could not be the case. Their contention was that two identical firms, differing only in their capital structure, must have identical total values. If they did not, individuals would engage in arbitrage and create the market forces that would drive the two values to be equal. Their proof of this proposition was based upon several assumptions (many of which have subsequently been relaxed without changing the results. Since no taxes have been assumed, the operating income (EBIT) is equivalent to the net income which is all paid out as dividends (Modigliani & Miller, 1958).

This implies that a firm should use as much debt as possible. Yet, we do not see companies using 100% debt. It might be pointed out that during the late 1980s there was a considerable amount of substitution of debt for equity among firms, particularly in the case of leveraged buyouts. However, many of those firms subsequently failed and the typical debt/equity ratio today is similar to earlier levels (Modigliani & Miller, 1958).

So why do we not see more debt employed by companies? The answer to this question has been sought by many and two primary proposals have been put forth. First, bankruptcy costs

were invoked as a factor. That is, the more debt a firm uses, the higher the probability that the firm would default and go into bankruptcy. Therefore, the present value of bankruptcy costs had to be deducted from the value of the firm (Tobin, 1956). A second factor was that of “agency” costs, such as the necessity of reporting regularly to lenders (audited financial statements, bank “monitoring” fees, trustees for debt payments, etc.) that accompany the use of debt. Both of these costs increase in present value of expected costs terms as the proportion of debt increases. Another way of viewing these costs is that the risk of receiving full interest and principal payments increases and thus the required rate of return of lenders increases. Consequently, the cost of debt increases and the average cost of capital will ultimately increase (Tobin, 1956).

So what are the insights that we can gain from this theoretical view of capital structure? First, we should note that, while debt financing is “cheap” in the sense that required rates of return on equity will always be higher than the interest rate on debt, there is a “hidden” cost in that the cost of equity rises as we utilize more debt financing. This is one reason that using the average cost of capital in valuing a project or company is more appropriate, even if we intend to borrow all of the money to finance it (Modigliani & Miller, 1958). While cheap debt may be used to finance a project, there is increased risk to shareholders from increasing financial leverage results in an increase in the cost of equity. The average cost of capital reflects both the cost of debt as well as the cost of equity and thus will reflect the increased cost of equity associated with the use of more debt financing (Modigliani & Miller, 1958).

The second important concept is that tax-deductible debt financing results in a tax subsidy by the government. This subsidy adds value to the firm. For example, what is the “advantage” of being a home owner with a mortgage rather than leasing a home? It is the taxes that will be saved.

2.2.1 Optimal capital structure

While there is a considerable amount of literature with respect to the optimal capital structure of corporate firms, the application of the Modigliani-Miller (MM) theorem and other corporate finance theorems to lending institutions is less straight-forward. The basic MM

principles are applicable to lending institutions, but only after accounting for the fundamental differences in how lenders and corporations operate (Cohen, 2003). With the application of MM to a corporate firm, one can point to an optimal capital structure in terms of the firm's value. However, the relationship between the levered and unlevered betas, the manner in which revenues are generated and the nature of regulation for a lending institution are different from that of a corporate firm. Consequently, there appears to be no well-defined theoretical notion of an optimal capital structure for a lending institution. As an added level of complexity, an MFI is a unique type of lending institution with risk and return characteristics different from standard lending operations (Oustapassidis, 1998).

2.3 Empirical Review

2.3.1 Private profit oriented, value maximizing enterprises

Financial structure is a very important element for firm's profitability. Firms may use their debt-to-equity ratio to affect profitability. Some firms choose a high debt-to-equity ratio, whereas others prefer to choose a lower one. The successful selection and use of the debt-to-equity ratio is one of the key elements of the firm's financial strategy.

Nikolaos (1996) in an attempt to investigate the relationship between debts-to equity ratio and firm's profitability, taking into consideration the level of firms' investment and the degree of market power found that there is negative and statistically significant relationship between debt-to-equity ratio and profit margin. The negative sign indicated that either the cost of borrowed capital is higher than its benefit from investment, or that firms financed by retained profits are more profitable than those financed by borrowed capital. The negative relationship between the financial variable and the profit margin was in line with the results of Baker (1973), Hurdle (1974) and Oustapassidis (1998). The relationship between investment and profit margin is positive and statistically significant. This meant that there is an effective use of capital.

The major studies carried out in recent years which proved that there exists significant relationship between capital structure and profitability were Long and Malitz (1985), Kester (1986), Friend and Lang (1988), Titman and Wessels (1988), El-Khoury (1989) and Canda (1991). The studies had mainly concluded that capital structure measured by debt/equity ratio

had an inverse relationship with profitability measured by Return on Investment (ROI). Even the distinguished Professor Myers of MIT had written in 1995 that “the strong negative correlation between profitability and financial leverage” is one of the ‘most striking facts about corporate financing’.

Mohamad (1994) made a research on the relationship between capital structure and profitability of listed industrial firms on the main board of the Kuala Lumpur Stock Exchange (KLSE). Mohamad used Ordinary Least Squares and Correlation Analysis to analyze the data which consisted of two sets. Profitability was measured by the Return on Investment, whereas capital structure had two indicators: debt to equity ratio, and debt to total assets ratio. Once again, the M&M propositions were disputed as Mohamad made the following conclusions (p. 108): “The results showed that there were significant relationships between market imperfections changes in capital structure on firm’s profitability. “The study was also in agreement with the U.S. findings where debt and equity size were negatively related to firm’s profitability.

Berger and Bonaccorsi (2006) using data on commercial banks in the USA showed that higher leverage or lower equity capital ratio is related to higher profit efficiency, and Abor (2005) on capital structure and profitability of SMEs in Ghana, showed that short-term debt ratio is positively correlated with return on equity. In a similar study, Chiang, *et al.* (2002), on capital structure and profitability of the property and construction sectors in Hong Kong conclude that while high gearing is positively related to asset, it is negatively related to profit margins.

2.3.2 Non Profit seeking organizations

The Non profit organizations (NPO) form is generally defined through the non-distribution constraint coined by Hansmann (1980), stating that NPOs are precluded from distributing financial surplus from operation. Thus, NPOs lack private ownership or stock trading on an equity market. This constraint allows NPOs to attract private donations which are tax-deductible, as well as being exempt from corporate profit tax and other taxes. Just as in POs there are two major sources of capital - debt and equity. Unlike in the realm of Profit

Organizations (Pos), lack of an equity market for the NPO residual implies inherently an incomplete markets framework.

Despite the aforementioned equity gap, there are distinct internal and external sources of equity for the NPO. The latter includes primarily donated capital that is solicited from a well functioning philanthropy market. Donated capital is often restricted and in general the arbitrage of returns on assets of similar characteristics is meaningless, and, therefore, so is the opportunity cost of capital.

Internal equity can take two forms. The first, which is also found in POs, is fund balance. The second is the NPO endowment which consists of perpetual investments, the returns on which are used for precautionary savings (Fisman and Hubbard, 2005) and investment. Recognizing the importance of the endowment Bowman (2002) proposes that NPOs be thought of as holding companies - made up of an operating company and a supporting mutual fund.

Both market and non-market debt constitutes NPO borrowing channels. Market debt is assessed on a commercial basis and hence investor's required rate of return is established in the market. Non-market debt on the other hand is mostly sourced from individuals with close links to the NPO. Covenants and rates on such loans depend on the utility functions of providers and will often be more generous than market rates. Market debt instruments are similar to those found in POs and include mortgages, bank loans and regular bond covenants. The difference is found in NPOs' access to cheaper tax-exempt private activity bonds, issued through state or local authority to fund "qualified" projects. Many authors, Wedig (1996), Fisman and Hubbard (2005) point out that the ability to borrow at tax-exempt rates benefits NPOs with an indirect tax shield. Hence, NPOs borrow funds in tax-exempt markets and invests these in higher yielding assets or gain indirect arbitrage profits through substitution of internal funds.

2.4 Microfinance Capital Structure

Microfinance is in the process of transforming from a sector dominated by a mission-driven ethos to one responding to the needs and interests of private capital. The sector must do this

if it has any hope of reaching a significant number of poor people with permanent financial services. The transition to private capital has, in fact, already begun, and a few microfinance institutions (MFIs) are entirely funded by private money. But the transition has been uneven, slower and more difficult than most imagined. Many claim this is so because MFIs lack the capacity to attract and absorb private capital (Ahlin & Townsend, 2007).

The search for any kind of capital will ultimately have to satisfy the interests of investors, as well as meet the needs of MFIs. This will involve more complex and calculated funding considerations as MFIs work to secure the lowest cost and most appropriate form of capital possible. Each of the main types of capital available requires strategic cost and management decisions. To take on savings, normally the least costly capital, is a major decision that demands exceptionally strong product costing capacity, as well as a keen sense of market. This is particularly true, as many MFIs are finding, if the cost of managing the many small deposits from low-income credit clientele must be offset by attracting a few larger deposits from wealthy clients. Not all MFIs will be able to take on savings, simply because they cannot comply with deposit regulations, or because such regulations do not exist in appropriate forms. For those that do, they will face significant business culture and management challenges in the transformation to become regulated entities. Best practice liability management to control liquidity, rate and concentration risk, as well as to maximize profitability, also becomes a priority (Hüttenrauch & Schneider, 2009). Even though the majority of microcredit loans are or will be intermediated savings, debt from banks, investors or non-commercial funders will remain vitally important to the sector. Debt will remain important for both deposit and non-deposit-taking MFIs for both funding and balance sheet management.

International social investment funds are a growing debt option and are viewed by MFIs as an attractive alternative to purely private sector capital. Such social funds are attractive because they almost always provide funding at well below market costs and have keen knowledge of MFIs. These advantages, however, may be offset by the fact that over 85 percent of lending and investments are in hard currency, exposing MFIs to foreign exchange risk they are seldom able to manage or absorb. With annual fund disbursements expected to

reach an estimated \$100 million in the coming year or two, only around 2 percent of total estimated demand for debt will be funded by the funds. This limits the role of the MFI funds to a demonstration role or, if given more support, an important tactical role explicitly leveraging private domestic capital (Lapenu & Zeller, 2001).

MFI are looking to commercial banks for capital as well. Reserve requirements and a lack of sector information hamper commercial bankers' interest in MFIs. To overcome these obstacles, guarantee programs that avoid negative past experiences will be required. Other domestic and international debt providers who are bound by fiduciary laws will similarly require guarantees if MFIs are to tap bond and other sources of non-bank commercial capital markets. In the absence of readily accessible local capital, however, international initiatives with the explicit goal of leveraging local capital represents an important bridge to commercial capital (Robinson, 2001).

MFI equity is a special problem. Equity investment is important to MFIs because it is a much more flexible form of financing than other available options. It is necessary for regulatory purposes that a bank (MFI or otherwise) meets and maintains certain capitalization requirements to collect client savings. It is also important – critically so – because the owners of equity control and guide an institution: hence, what drives owners drives the institution. In the case of MFIs, owners have been driven largely by mission to alleviate poverty, where sustainability, rather than profit, has been the motivating factor. This, combined with being a poorly understood sector, has worked to limit the amount of private sector participation in MFIs, despite return on equity yields that are demonstrably higher than many other competing investments (Cohen, 2003).

Attracting equity has many barriers, including valuation problems (MFIs over price and the market under prices MFIs), limited means for investors to extract income from investments (for example, poor share liquidity, few dividends and majority shareholders unwilling to maximize profits), and the frequent incompatibility of non-profit and for-profit ownership. The fear that for-profit owners will abandon the poverty mission is a key, though still unsubstantiated, source of distrust among non-commercial shareholders. Conversely, for-profit owners fear that unless they are in the majority, non-profit owners will forever plow

retained earnings into expanding services to the poor without rewarding the risks their capital is taking. Building sound relationships between incoming for-profit and existing mission-driven owners is critical (Basu, 2005). Poor reporting transparency and standards that are not entirely consistent with private sector needs exacerbate the challenges facing all types of capital access for MFIs. Many regulatory issues inhibit both the microfinance banking and investor environment in ways that prohibit or limit transition to private capital.

Of the four components of microcredit interest rates (cost of funds, loan loss expenses, operating expenses, and profits) profit is certainly the most controversial. Some observers are uncomfortable with the notion of private parties making any profit from micro lending, which they view as a service to poor people, and not as a business opportunity. However, in most countries, the microcredit market is still immature, with low penetration of the potential clientele by MFIs and little competition so far – and standard economic theory predicts that profits will be higher in such markets than in more developed markets where competition constrains prices (Counts, 2005).

The interest rates charged by a MFI are mainly calculated on the basis of its financial situation and profitability targets¹; to get a better understanding of the levers it can use to lower them, it is first and foremost necessary to analyse its financial model. The second stage involves examining the profitability levels of MFIs. Indeed, it is estimated that the 10% of the most profitable MFIs have a return on equity (ROE) of over 34%; this figure must be compared with the average bank ROE which is below 18%. The situation is made even more complex by the arrival of the private sector which, while channeling increasing amounts of capital towards MFIs, sets them profit constraints that are higher than those of donors. All these reasons clearly explain why the issue of profitability levels is so important (Dehejia, Montgomery & Morduch, 2005).

2.4.1 Commercial Capital Challenges

Attracting and managing private capital begins with sound liability (capital structure) management and decision-making. This is more than a just function of meeting funding needs. Each type of capital has its advantages and disadvantages. Cost implications are key, but so are other considerations, such as the mix of funding, the flexibility of liability

structures and of course, liquidity management. More complex yet is that every operational decision financial and non-financial has immediate and long-term financial management implications. MFI liability management is further complicated by the simple fact that institutions seldom have easy access to the variety of capital resources enjoyed by other financial institutions. The barriers to each type of capital – deposits, commercial debt and equity – offer specific challenges (CGAP, 2004).

2.4.2 Commercial Debt

There are many reasons why debt capital is and will remain important for MFIs. First, it is always less expensive to lend someone else's capital than your own equity. Debt can also be less expensive than savings, particularly for MFIs new to the deposit business. Additionally, as MFIs mature they will require some level of debt to manage healthy balance sheets. The most important reason debt remains important to MFIs, however, is that the majority cannot yet access deposits, or if they can, deposits cannot be collected in volumes sufficient to cover loan demand. Of course, and for a variety of reasons, some MFIs prefer to remain non-deposit taking institutions and, as such, they rely greatly on debt finance (Aghion & Morduch, 2004).

Portfolio funding aside, debt will always play a role in the maintenance of healthy balance sheets. This is particularly true of larger institutions that require large volumes of funds for liquidity and rate risk management. Debt in larger commercial financial institutions normally ranges from 20 percent to 30 percent of liabilities. In small commercial institutions it comprises a smaller portion of liabilities, usually between 5 percent and 20 percent (Robinson, 2001). Mature institutions mostly require rapidly available short-term funds and large quantities of long-term funds. Medium- and long-term debt is important when deposits cannot keep pace with loan demand, or in times of economic crisis.

The real debt transition question is not whether MFIs need commercial debt, but whether they are developing borrowing relationships that ensure appropriate risk, liquidity and profit management. Commercial debt continues to be shy and most lenders hesitate to lend to MFIs, despite their good performance. Those that do provide only short-term capital, where long-

term capital is in dire need. There are number of good reasons for this, including the fact that most MFIs do not have sufficient collateral to back loans. For commercial bankers, lack of collateral increases the risk of lending. It also can affect cost, as uncollateralized loans require lenders to set aside more reserve requirements than for fully covered loans (Robinson, 2001).

2.4.3 Equity

Although equity usually makes up a relatively small portion of the total financing of larger MFIs, it is their most important source of commercial funds for several reasons. Equity is a much more flexible form of financing than other available options. It is necessary for regulatory purposes that a bank has enough equity investment to meet minimum capitalization requirements. Most importantly, though, the shareholders of any firm are its owners and, as such, control the ultimate purpose and direction of the firm (Cohen, 2003).

It has been a source of some frustration that though many transitioned and transitioning MFIs demonstrate high return on equity, there still is very little commercial equity interest and/or investment in the sector. Most equity remains in the hands of non-profit organizations, either local or international, or is held by international financial institutions. Aside from cooperative member ownership, a few employee stock ownership plans and a few share purchases by private institutions or individuals, there is little significant private sector, local ownership of MFIs (CGAP, 2004).

So why don't commercial investors take advantage of what is surely favorable performance and buy shares of MFIs? The answer is that relative profitability is not the only relevant issue. Both low return-on-equity and high return-on-equity firms attract investment well enough in other sectors throughout the world. Generally speaking, if a firm is unable to attract investment, there is either a problem with the pricing of the investment opportunity or with the investment mechanisms themselves. Equity pricing issues arise whenever there is poor valuation and/or the firm deviates from the behavior of a normal, profit-seeking business.

5 Mobilizing Savings

Savings are the most prized form of funding for small financial institutions. They are an attractive pro-poor product as well as a stable, low-cost source of funds. The introduction of savings has also been credited with attracting more clients, improving customer satisfaction and loan repayment, and motivating better institutional governance. Savings MFIs are also more likely to be fully funded commercially than other MFIs, and rely less on commercial borrowing. This trend is consistent with mature developed country markets where savings typically constitute up to 85 percent to 95 percent of the funding base of small savings institutions (Brau & Woller, 2004). If savings are so valuable, why do many MFIs not take them? The main reason is that the microfinance industry developed primarily from non-profit organizations that were not legally allowed to mobilize savings. In Kenya, Faulu Kenya and Kenya Women Finance Trust are mobilizing savings. The other MFIs do not take deposits because they cannot meet the regulatory requirements to do so, or because appropriate regulatory regimes do not exist.

Savings are universally understood as an inexpensive, abundant source of funding. Unfortunately, it is a source the microfinance sector still understands relatively little about. This is because deposit collection is a distinctly different business than lending. Many MFIs are basically credit management companies with both human and physical resource assets tied closely to credit management and growth. Changing focus from credit to savings has proven challenging and, in many cases, collecting significant deposits has taken longer than many MFIs would have thought necessary (Basu, 2005).

5 Financial Performance

The share of the loan portfolio (as a percentage of total assets) devoted to financing income-generating activities for microenterprises and, possibly, VSEs and SMEs must be above 70% of the total balance sheet. This ratio indicates that the MFI is focusing on its core business which is its most profitable activity (Farrington & Abrams, 2002).

The main area of expertise of a MFI remains its sound knowledge of its clients; when it moves away from this, it takes a risk and causes provisions to put pressure on its profitability.

The cost of financial resources (equity, debts, and deposits) must be optimized by trying to give priority to deposits, which are often the cheapest resources. If this is not possible, a MFI should optimize the debt/equity leverage effect in order to avoid financing growth exclusively at the exorbitant cost of accrued income. Indeed, in this case it can only achieve a sufficient level of net income by charging high rates, which in turn will raise the level of equity so as to boost growth or at least not to curb it. The weight of the return on capital – dividends – must be a specific focus. It will be more difficult to bear if the debt/equity ratio is not optimized (Fehr & Hishigsuren, 2004). Operating expenses, which by nature are high, must be controlled. The aim is not to try to reach bank operating ratios at all costs – this could easily lead to a loss of control (too many clients per loan officer, increase in the unit amount of loans without checking how the funds are used, etc.) – but simply to rationalize certain costs when this makes sense (de Sousa-Shields & Frankiewicz, 2004).

Each MFI could begin by analysing the sensitivity of ROE to the overall effective rate (OER) which includes all the direct costs relating to the loan charged to its clients so that the shareholders can be aware of the leeway they have to adjust the rate charged to the client more accurately in line with their profitability strategy. Moreover, it would seem that benchmarks are required for MFIs' levels of ROE. The comparison with the banking sector is enlightening, but can only be made in the case of mature MFIs that have been profitable for several years and have an activity that has reached a certain critical size (Cohen, 2003).

All of these criteria must of course be analyzed in the light of the local economic context. But any inefficiency relating to one of them will put a strain on the profitability of a MFI. Once the performance of the institution has been analyzed and optimized, the next step is to look at the other factor which has a decisive effect on the rates charged: the MFI's profitability target. It is set by the shareholders and must meet both their own profitability targets and also the institution's need to strengthen the equity of the structure. Today it does not seem clear how the level of profitability expected by shareholders is defined. Yet when the issue is to choose between transferring a financial advantage to clients (by improving performance for example) and increasing profitability for shareholders, a natural trend prevails: the exclusive quest for profit. This sketchy area can only be dealt with by designing and implementing

specific tools and defining levels of profitability in a more rational manner (Farrington & Abrams, 2002).

7 Model Specification

7.1 Control variable

Capital structure can be defined as the mix (or proportion) of a firm's permanent long-term financing represented by debt, preferred stock, and common stock equity (Van Home & Wachowicz, 1995). The mix of long-term sources of funds used by the firm. This is also called the firm's "capitalization". The relative total (percentage) of each type of fund is emphasized." (Petty, Ibrwn, Scott & Martin, 1993) A more comprehensive explanation was given by Masulis (1988). Capital structure encompasses a corporation's (including its subsidiaries') publicly issued securities, private placements, bank debt, trade debt, leasing contracts, tax liabilities, pension liabilities, deferred compensation to management and employees, performance guarantees, product warranties, and other contingent liabilities. This represents the major claims to a corporation's assets. Increases or reductions in any of these items represent a form of capital structure change." Nevertheless, for the sake of simplicity, a number of prominent theorists have restricted the capital structure issue to the debt equity choice (Schlosser 1992). On the other hand, the term profitability is so much in use especially in the business world to the extent that the phrase refers to all kinds of measurement and indicators for a firm's success.

7.2 Variable definition

Capital Structure Variables

Debt Equity Ratio (DER)

The capital structure of a firm will be measured by:

DA is short-term debt divided by the total assets for MFIs (Martin, 1993);

$$SDA = \frac{\text{short term debt}}{\text{Total Assets}}$$

DA is long-term debt divided by the total assets for MFIs (Farid, 1980);

specific tools and defining levels of profitability in a more rational manner (Farrington & Abrams, 2002).

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Debt Equity Ratio (DER)

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SDA is short-term debt divided by the total assets for MFIs (Martin, 1993);

$$\text{SDA} = \frac{\text{short term debt}}{\text{Total Assets}}$$

LDA is long-term debt divided by the total assets for MFIs (Farid, 1980);

$$\text{LDA} = \frac{\text{long term debt}}{\text{Total Assets}}$$

DA is total debt divided by the total assets for MFIs (Farid, 1980); and

$$\text{DA} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

SIZE is the log of total assets for MFIs; size of the company was used as control variable.

$$\text{Size} = \log \text{ of total assets}$$

Profitability variables

Profitability had come to mean different things for different people, as agreed by Farid (1980): "Profitability can be defined and measured in several ways depending on the purpose. It is a generic name for variables such as net income, return on total assets, earnings per share, etc. The simplest definition and measure of profitability is the net income." Company's profitability was measured by one indicator i.e. return on assets. This variable was obtained mainly from the literature of Ahmad Farid (1980), Gallinger and Poe (1995), Mohamad Khan (1994), Van Home and Wachowicz (1995), and Siegel, Shim and Hartman (1992).

Return On assets (ROA)

The **return on assets (ROA)** shows how profitable a company's assets are in generating revenue.

ROA can be computed as:

$$\text{Formula: ROA} = \frac{\text{Net Income}}{\text{Total Assets}}$$

The above ROA is calculated based on the original Du Pont formula which is a widely used measure of a firm's success. ROA is usually used together with ROE. The Du Pont formula provides a lot of insights to financial managers on how to improve company profitability and investment strategy.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This section details the methods that will be employed by the study. The research design and sample and data are explained. The variables measurement and analysis procedure are also outlined.

3.2 Research Design

The research design that was employed in this study was a descriptive survey research design inform of a survey. The major purpose of descriptive survey research design was to describe the state of affairs as it is at present. According to Mugenda and Mugenda (1999) a descriptive research is a process of collecting data in order to answer questions concerning the current status of the subjects in the study. The primary use of descriptive statistics was to describe information or data through the use of numbers (create number of pictures of the information). The characteristics of groups of numbers representing information or data are called descriptive statistics (Kay, 1997). According to Mugenda and Mugenda (1999) this type of research attempts to describe such things as possible behavior, attitudes, values and characteristics.

This study used descriptive statistics. Descriptive statistics are used to describe the main features of a collection of data in quantitative terms. One important use of descriptive statistics is to summarize a collection of data in a clear and understandable way.

3.3 Target Population and Sample

The target population of this study was 43 MFI which are registered in Kenya This study used data for registered selected MFIs in Kenya for the period during 2006-2009. The choice of regulated MFIs is based on the accessibility of their financial records and the fact that Microfinance Act came into being in 2006, requires all microfinance to prepare, publishes and submits their financial statement to the Central Bank Of Kenya.

3.4 Variable measurements

Profitability of MFIs were measured using return on assets since MFIs do not have shareholders equity, capital structure of MFIs was measured using short term debts divided by total (SDA) assets, long term debts divided by total assets (LDA) and total debts divided by total assets (DA), size of the MFIs was used as control variables and was measured using logarithms of total assets

3.5 Data Analysis

In determining the relation between profitability and capital structure of MFIs, the researcher used multiple regression Analysis method. With multiple regression analysis method it is possible to express the model that will be used in studying the relation between capital structure and profitability and variables we want to examine (SDA, LDA, DA , SIZE and ROA).

Joshua (2002) in his study on the effect of capital structure on profitability of listed firms in Ghana used a general model for panel data that allowed the researcher to estimate panel data with great flexibility and formulate the differences in the behavior of the cross-section elements was adopted. The relationship between debt and profitability is thus estimated in the following regression models:

$$ROE = \beta_0 + \beta_1 SDA + \beta_2 SIZE + \beta_3 SG + \mu$$

$$ROE = \beta_0 + \beta_1 LDA + \beta_2 SIZE + \beta_3 SG + \mu$$

$$ROE = \beta_0 + \beta_1 DA + \beta_2 SIZE + \beta_3 SG + \mu$$

Where:

ROE is EBIT divided by equity for firm i in time t;

SDA is short-term debt divided by the total capital for firm i in time t;

LDA is long-term debt divided by the total capital for firm i in time t;

DA is total debt divided by the total capital for firm i in time t;

SIZE is the log of sales for firm i in time t;

SG is sales growth for firm i in time t; and

μ is the error term.

This study used ROA (return on assets) rather than ROE (return on equity) since the microfinance are not listed and therefore the best measure of their profitability is ROA. The total capital in the model will be substituted by total asset, as it was done by Ibrahim (2005) in his study on the impact capital structure choice on firm performance in Egypt. The model to be used by this study will be ;

$$ROA = \beta_0 + \beta_1 SDA + \beta_2 SIZE + \mu$$

$$ROA = \beta_0 + \beta_1 LDA + \beta_2 SIZE + \mu$$

$$ROA = \beta_0 + \beta_1 DA + \beta_2 SIZE + \mu$$

Where:

ROA is EBIT divided by total assets for MFIs;

SDA is short-term debt divided by the total assets for MFIs;

LDA is long-term debt divided by the total assets for MFIs;

DA is total debt divided by the total assets for MFIs; and

SIZE is the log of total assets for MFIs;

μ is the error term.

CHAPTER FOUR:

4.0 DATA ANALYSIS, PRESENTATION AND INTERPREATION

4.1 Introductions

This chapter presents the data analysis, presentation and interpretation of the study, the study analyzed the capital structure/financial mix for MFIs for duration of four year starting year 2006 all the way to 2009. Out of 43 targeted MFIs only 15 had been in operational for the study period and their data was readily available for the study.

4.2 Analysis for Year 2006

Table 4.1: MFIs data 2006

	ROA	SDA	LDA	TDA	SIZE
BIMAS	1.58%	0.024024	0.048776	0.0728	8.410869
Equity Bank	4.79%	0.008	0.016243	0.024243	10.30156
Faulu - KEN	5.96%	0.1489	0.302312	0.451212	7.463376
Jamii Bora	2.25%	0.033433	0.06788	0.101313	8.625434
K-Rep	2.24%	0.047688	0.09682	0.144508	9.717691
KADET	-6.36%	0.057681	0.11711	0.174792	8.675253
KPOSB	1.16%	0.292231	0.593317	0.885548	10.18531
KWFT	4.31%	0.116412	0.236351	0.352763	9.56013
MCL	-23.97%	0.001782	0.003618	0.005399	9.405228
Micro Africa	1.41%	0.222972	0.4527	0.675672	8.520315
Opportunity Kenya	-13.97%	13.56857	27.54832	41.11689	8.511541
PAWDEP	7.68%	0.024138	0.049008	0.073147	8.391077
RAFODE	-6.94%	0.086829	0.176289	0.675672	7.85248
Riverbank	-22.47	0.093668	0.190174	0.283842	8.805277
SMEP	0.44	0.28413	0.57687	0.861	10.17916

From the financial statement of year 2006, the researcher computed return on assets, SDA which was the ratio of short term debt over total assets, and then LDA which was the ration of long term debt over total assets, TDA which was the ratio of total debt divided by total assets then lastly the size which was logarithm of total assets. From the above data the researcher derived the various regression equations as stipulated by the research design.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.251(a)	.063	.124	9.58238

The adjusted R^2 is known as coefficient of determination ,which tell us the variation in dependent variable due to changes in independent variables, from the above table the adjusted R^2 was 0.124, which means that there was 12.4% variation in return on assets(profitability) of MFIs due to changes in SDA(short term debt) and size of the MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.251 thus there was a positive relationship between short term debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	61.709	2	30.854	.336	.722(a)
	Residual	918.221	10	91.822		
	Total	979.929	12			

From the above table the significance of the model was 0.772 which higher that 0.005 thus the model is not statistically significant.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.790	28.465		.098	.924
	SDA	25.812	31.491	.251	.820	.432
	SIZE	.108	3.190	.010	.034	.974

From the above table the study established the following regression equation;

$$ROA = 2.790 + 25.812 \text{ SDA} + 0.108 \text{ SIZE}$$

From the above equation the study found that holding short term debts constant and size of the company constant zero, ROA (profitability) of MFIs would be 2.79. A factor increase in SDA (short term debt) would lead to increase in profitability of MFIs by factor of 25.812 and also a unit increase in size would lead to increase in profitability of MFIs by factors of 0.108. This information shows that there is a positive relationship between profitability of MFIs with size and short term debt.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.024(a)	.001	.199		9.89628

From data in the above table the adjusted R^2 is 0.199 which means that there was 19.9% variation in ROA due to changes in LDA (long term debt) and size of MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.024 thus there was a positive relationship between long term debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.566	2	.283	.003	.997(a)
	Residual	979.363	10	97.936		
	Total	979.929	12			

From the ANOVA table, the P- value for the model was 0.997 which means that the model was not statistically significant since the P-value was greater than 0.005.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.621	29.609		.055	.957
	LDA	1.045	13.941	.024	.075	.942
	SIZE	.035	3.290	.003	.011	.992

The established regression equation was

$$ROA = 1.621 + 1.045 \text{ LDA} + 0.035 \text{ SIZE}$$

From the above equation the study found that holding long term debts constant and size of the company constant zero, ROA (profitability) of MFIs would be 1.621. A factor increase in LDA (long term debt) would lead to increase in profitability of MFIs by factor of 1.045 and also a unit increase in size would lead to increase in profitability of MFIs by factors of 0.035. This information shows that there is a positive relationship between profitability of MFIs with size and long term debt.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.181(a)	.033	.161		9.73608

From data in the above table the adjusted R^2 is 0.161 which means that there was 16.1% variation in ROA due to changes in TDA (total debt) and size of MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.181 thus there was a positive relationship between total debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	32.017	2	16.008	.169	.847(a)
	Residual	947.913	10	94.791		
	Total	979.929	12			

From the ANOVA table, the P- value for the model was 0.847 which means that the model was

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	4.884	29.354		-.166	.871
	TDA	5.598	9.635	.181	.581	.574
	SIZE	.196	3.246	.019	.060	.953

The established regression equation was

$$\text{ROA} = 4.884 + 5.598 \text{ TDA} + 0.196 \text{ SIZE}$$

From the above equation the study found that holding total debts and size of the company to a constant zero, ROA (profitability) of MFIs would be 4.88. A factors increase in TDA (total debt) would lead to increase in profitability of MFIs by factor of 5.598 and also a unit increase in size would lead to increase in profitability of MFIs by factors of 0.196. This information shows that there is a positive relationship between profitability of MFIS with size and total debt.

Descriptive Statistics 2006

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	15	-22.47	0.44	-11.015	16.19982
SDA	15	0.093668	0.28413	0.188899	0.134677
LDA	15	0.190174	0.57687	0.383522	0.273435
TDA	15	0.283842	0.861	0.572421	0.408112
SIZE	15	8.805277	10.17916	9.492219	0.971482
Valid N (listwise)	15				

From the above table mean of total debt was 0.572421 which was equivalent to 57.24% which means that in 2006 most of the MFIs in Kenya were using more of debt accounted for by 57% while equity was being accounted for by 43%. The maximum of return on assets was 0.44 while minimum was -22.47 which means that there was great deviation in their profitability. Size of MFIs had the standard deviation of 0.971482 which mean that size was almost the same to all MFIs; this means that size was almost constant to all MFIs. Most of the MFIs were using long term debts as shown by mean of 0.38 compared to the mean of short term debt 0.189.

4.3 Analysis of year 2007

Table 4.2: MFIs data 2007

	ROA%	SDA	LDA	TDA	SIZE
BIMAS	1.20	0.005406	0.072941	0.078346	8.503921
Equity Bank	5.17	0.000439	0.058774	0.08518	10.7249
Faulu - KEN	2.35	0.134174	0.298645	0.432819	9.475112
Jamii Bora	-2.65	0.034138	0.075985	0.110123	8.750373
K-Rep	2.13	0.051424	0.11446	0.165884	9.847499
KADET	-20.98	0.082885	0.184485	0.26737	8.83997
KPOSB	1.17	0.275433	0.613089	0.888493	10.24149
KWFT	5.13	0.138464	0.308194	0.446658	9.740303
MCL	1.41	0.277425	0.617494	0.894919	7.241308
Micro Africa	1.41	0.250668	0.557938	0.808606	8.652832
Opportunity Kenya	-13.97	0.214252	0.476883	0.691135	8.317515
PAWDEP	2.57	0.018136	0.040366	0.058502	8.533859
RAFODE	-3.24	0.277425	0.075985	0.446658	8.533859
Riverbank	-22.47	0.093668	0.190174	0.283842	8.805277
SMEP	0.44	0.28413	0.57687	0.861	10.17916

From the financial statement of year 2007, the researcher computed return on assets, SDA which was the ratio of short term debt over total assets, and then LDA which was the ration

of long term debt over total assets, TDA which was the ration of total debt divided by total assets then lastly the size which was logarithm of total assets, as shown in the table above. From the data in the above table the researcher derived the various regression equations as stipulated by the research design of the study.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.326(a)	.106	.072		7.92918

The adjusted R^2 is known as coefficient of determination ,which tell us the variation in dependent variable due to changes in independent variables, from the above table the adjusted R^2 was 0.072, which means that there was 7.2% variation in return on assets(profitability) of MFIs due to changes in SDA(short term debt) and size of the MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.326 thus there was a positive relationship between short term debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	74.857	2	37.429	.595	.570(a)
	Residual	628.719	10	62.872		
	Total	703.576	12			

From the above ANOVA table the significance of the model was 0.570 which higher than 0.005 thus the model is not statistically significant.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.743	24.469		1.052	.318
	SDA	25.341	21.647	.005	.016	.988
	SIZE	2.689	2.580	.328	1.042	.322

From the above table the study established the following regression equation;

$$ROA = 2.743 + 25.341 SDA + 2.689 SIZE$$

From the above equation the study found that holding short term debts constant and size of the company constant zero, ROA (profitability) of MFIs would be 2.743. A factor increase in SDA(short term debt) would lead to increase in profitability of MFIs by factor of 25.341 and also a unit increase in size would led to increase in profitability of MFIs by factors of 2.689. This information shows that there is a positive relationship between profitability of MFIS with size and short term debt.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.328(a)	.108	0.071		7.92342

a Predictors: (Constant), SIZE, LDA

From data in the above table the adjusted R^2 is 0.071 which means that there was 7.1% variation in ROA due to changes in LDA (long term debt) and size of MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.328 thus there was a positive relationship between long term debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.771	2	37.885	.603	.566(a)
	Residual	627.805	10	62.781		
	Total	703.576	12			

From the ANOVA table, the P- value for the model was 0.566 which means that the model was not statistically significant since the P-value was greater than 0.005.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.493	3.474		1.129	.285
	LDA	1.262	10.375	.037	.122	.906
	SIZE	2.740	2.506	.334	1.093	.300

The established regression equation was

$$ROA = 6.493 + 1.262 \text{ LDA} + 2.740 \text{ SIZE}$$

From the above equation the study found that holding long term debts constant and size of the company constant zero, ROA (profitability) of MFIs would be 6.493. A factor increase in LDA (long term debt) would lead to increase in profitability of MFIs by factor of 1.262 and also a unit increase in size would lead to increase in profitability of MFIs by factors of 2.740. This information shows that there is a positive relationship between profitability of MFIS with size and long term debt.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.327(a)	.107	0.071	7.92582

From data in the above table the adjusted R^2 is 0.071 which means that there was 7.1% variation in ROA due to changes in TDA (total debt) and size of MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.327 thus there was a positive relationship between total debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	75.389	2	37.694	.600	.567(a)
	Residual	628.187	10	62.819		
	Total	703.576	12			

From the ANOVA table, the P- value for the model was 0.567 which means that the model was not statistically significant since the P-value was greater than 0.005.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	6.417	3.984		1.101	.297
	TDA	9.695	7.441	.029	.093	.927
	SIZE	2.737	2.537	.334	1.079	.306

The established regression equation was

$$ROA = 6.417 + 9.695 \text{ TDA} + 2.737 \text{ SIZE}$$

From the above equation the study found that holding total debts and size of the company to a constant zero, ROA (profitability) of MFIs would be 6.417. A factor increase in TDA (total debt) would lead to increase in profitability of MFIs by factor of 0.695 and also a unit increase in size would lead to increase in profitability of MFIs by factors of 2.737. This information shows that there is a positive relationship between profitability of MFIS with size and total debt.

Descriptive Statistics 2007

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	15	-22.47	5.17	-2.68867	-4.26667
SDA	15	0.000439	0.28413	0.142538	0.110677
LDA	15	0.040366	0.617494	0.284152	0.224715
TDA	15	0.058502	0.894919	0.434636	0.318967
SIZE	15	7.241308	10.7249	9.092492	0.91638
Valid N (listwise)	15				

From the above table mean of total debt was 0.3189 which was equivalent to 31.89% which means that in 2007 most of the MFIs in Kenya were using more of equity accounted for by 68.11% while equity debt was accounted for by 3.189%. The maximum of return on assets

was 5.17 while minimum was -22.47 which means that there was great deviation in their profitability. Size of MFIs had the standard deviation of 0.91638 which mean that size was almost the same to all MFIs; this means that size was almost constant to all MFIs. Most of the MFIs were using long term debts as shown by mean of 0.28 compared to the mean of short term debt 0.14.

4.4 Analysis of year 2008

Table 4.3: MFIs data 2008

	ROA%	SDA	LDA	TDA	SIZE
BIMAS	1.85	0.034396	0.069835	0.104231	8.584062
Equity Bank	5.71	0.026384	0.053567	0.079951	10.88725
Faulu - KEN	-1.08	0.145153	0.294705	0.439859	9.570915
Jamii Bora	-8.07	0.059102	0.119996	0.179098	8.945511
K-Rep	-4.58	0.093664	0.190165	0.283829	9.912969
KADET	-22.47	0.093668	0.190174	0.283842	8.805277
KPOSB	0.44	0.28413	0.57687	0.861	10.17916
KWFT	6.55	0.155935	0.316595	0.47253	9.977588
MCL	5.75	0.237013	0.481208	0.718221	7.914814
Micro Africa	58.70	0.095839	0.194583	0.290422	8.704861
Opportunity Kenya	-31.85	0.246738	0.500952	0.74769	8.528393
PAWDEP	1.39	0.084888	0.172349	0.257237	8.686762
RAFODE	3.49	0.095839	0.316595	0.718221	7.479264
Riverbank	5.26	0.022172	0.041177	0.06335	10.98458
SMEP	-1.77	0.496822	0.241309	0.371245	9.634193

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.207(a)	.043	.149		22.22372

The adjusted R^2 is known as coefficient of determination, which tell us the variation in dependent variable due to changes in independent variables, from the above table the adjusted R^2 was 0.149, which means that there was 14.9% variation in return on assets (profitability) of MFIs due to changes in SDA (short term debt) and size of the MFIs The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.207 thus there was a positive relationship between short term debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	220.363	2	110.182	.223	.804(a)
	Residual	4938.939	10	493.894		
	Total	5159.302	12			

From the above table the significance of the model was 0.804 which is higher than 0.005 thus the model is not statistically significant.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	9.133	62.471		.146	.887
	SDA	2.052	7.951	.207	.668	.519
	SIZE	3.143	6.690	.007	.021	.983

From the above table the study established the following regression equation;

$$ROA = 9.133 + 2.052 \text{ SDA} + 3.143 \text{ SIZE}$$

From the above equation the study found that holding short term debts constant and size of the company constant zero, ROA (profitability) of MFIs would be 9.133. A factor increase in SDA(short term debt) would lead to increase in profitability of MFIs by factor of 2.052 and also a unit increase in size would led to increase in profitability of MFIs by factors of 3.143. This information shows that there is a positive relationship between profitability of MFIS with size and short term debt.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.202(a)	.041	.151	22.24467

From data in the above table the adjusted R^2 is 0.151 which means that there was 15.1% variation in ROA due to changes in LDA (long term debt) and size of MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.202 thus there was a positive relationship between long term debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	211.049	2	105.524	.213	.812(a)
	Residual	4948.254	10	494.825		
	Total	5159.302	12			

From the ANOVA table, the P- value for the model was 0.812 which means that the model was not statistically significant since the P-value was greater than 0.005.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	13.408	64.341		.208	.839
	LDA	5.439	38.965	.205	.653	.529
	SIZE	3.592	6.771	.027	.087	.932

The established regression equation was

$$ROA = 13.408 + 5.439 \text{ LDA} + 3.592 \text{ SIZE}$$

From the above equation the study found that holding long term debts and size of the company constant zero, ROA (profitability) of MFIs would be 13.408. A factor increase in LDA (long term debt) would lead to increase in profitability of MFIs by factor of 5.439 and also a unit increase in size would lead to increase in profitability of MFIs by factors of 3.592.

This information shows that there is a positive relationship between profitability of MFIS with size and long term debt.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.187(a)	.035	.158		22.31456

From data in the above table the adjusted R^2 is 0.158 which means that there was 15.8% variation in ROA due to changes in TDA (total debt) and size of MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.187 thus there was a positive relationship between total debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	179.905	2	89.952	.181	.837(a)
	Residual	4979.398	10	497.940		
	Total	5159.302	12			

From the ANOVA table, the P- value for the model was 0.837 which means that the model was not statistically significant since the P-value was greater than 0.005.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.287	67.544		.256	.803
	TDA	15.270	25.415	-.194	-.601	.561
	SIZE	3.115	6.986	-.049	-.152	.882

The established regression equation was

$$ROA = 1.287 + 15.270 \text{ TDA} + 3.115 \text{ SIZE}$$

From the above equation the study found that holding total debts and size of the company to a constant zero, ROA (profitability) of MFIs would be 1.287. A factors increase in TDA

(total debt) would lead to increase in profitability of MFIs by factor of 15.27 and also a unit increase in size would lead to increase in profitability of MFIs by factors of 3.115. This information shows that there is a positive relationship between profitability of MFIS with size and total debt.

Descriptive Statistics 2008

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	15	-1.77	5.26	1.745	4.970961
SDA	15	0.022172	0.496822	0.141243	0.335628
LDA	15	0.041177	0.241309	0.259497	0.141515
TDA	15	0.06335	0.371245	0.217298	0.217715
SIZE	15	9.634193	10.98458	10.30939	0.954868
Valid N (listwise)	15				

From the above table mean of total debt was 0.2173 which was equivalent to 21.73% which means that in 2008 most of the MFIs in Kenya were using more of equity accounted for by 72.27% while debt was accounted for by 27.73%. The maximum of return on assets was 5.26 while minimum was -1.77 which means that there was great deviation in their profitability. Size of MFIs had the standard deviation of 0.954868 which mean that size was almost the same to all MFIs; this means that size was almost constant to all MFIs. Most of the MFIs were using long term debts as shown by mean of 0.26 compared to the mean of short term debt 0.14.

4.5 Analysis of years 2009

Table 4.4: MFIs data 2009

	ROA%	SDA	LDA	TDA	SIZE
BIMAS	-2.65	0.050846	0.094428	0.145274	8.615964
Equity Bank	5.26	0.022172	0.041177	0.06335	10.98458
Faulu - KEN	-1.77	0.496822	0.241309	0.371245	9.634193
Jamii Bora	-2.65	0.57679	0.118531	0.182355	8.986903
K-Rep	-2.72	0.008678	0.12585	0.193616	9.853475
KADET	-9.91	0.608883	0.209351	0.322079	8.89995
KPOSB	5.27	0.00607	0.317157	0.487934	10.16878
KWFT	-1.77	0.241117	0.312729	0.481121	10.01898
MCL	-18.20	19.45794	0.475332	0.73128	7.956207
Micro Africa	5.27	0.041505	0.192207	0.295702	8.746253
Opportunity Kenya	-18.20	0.246348	0.457503	0.703851	8.553889
PAWDEP	0.24	0.082874	0.153908	0.236782	8.81924
RAFODE	0.24%	0.121198	0.246068	0.367265	8.89995
Riverbank	5.71	0.026384	0.053567	0.079951	10.88725
SMEP	-1.08	0.145153	0.294705	0.439859	9.570915

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.722(a)	.521	.426		5.89460

The adjusted R^2 is known as coefficient of determination, which tells us the variation in dependent variable due to changes in independent variables, from the above table the adjusted R^2 was 0.426, which means that there was 42.6% variation in return on assets (profitability) of MFIs due to changes in SDA (short term debt) and size of the MFIs.

The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.722 thus there was a positive relationship between short term debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	378.393	2	189.197	5.445	.025(a)
	Residual	347.463	10	34.746		
	Total	725.856	12			

From the above ANOVA table the significance of the model was 0.025 which higher than 0.005 thus the model is not statistically significant.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	44.389	21.871		2.030	.070
	SDA	.517	.362	.355	1.429	.183
	SIZE	4.521	2.328	.483	1.942	.081

From the above table the study established the following regression equation;

$$ROA = 44.389 + 0.517 \text{ SDA} + 4.521 \text{ SIZE}$$

From the above equation the study found that holding short term debts constant and size of the company constant zero, ROA (profitability) of MFIs would be 44.389. A factor increase in SDA(short term debt) would lead to increase in profitability of MFIs by factor of 0.517 and also a unit increase in size would lead to increase in profitability of MFIs by factors of 4.521. This information shows that there is a positive relationship between profitability of MFIs with size and short term debt.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.793(a)	.628	.554	5.19471

From data in the above table the adjusted R^2 is 0.554 which means that there was 55.4% variation in ROA due to changes in LDA (long term debt) and size of MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.793 thus there was a positive relationship between long debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	456.006	2	228.003	8.449	.003(a)
	Residual	269.850	10	26.985		
	Total	725.856	12			

From the ANOVA table, the P- value for the model was 0.003 which means that the model was statistically significant since the P-value was less than 0.005.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	35.266	19.759		1.785	.105
	LDA	9.120	2.410	.497	2.346	.041
	SIZE	4.163	1.986	.444	2.096	.062

The established regression equation was

$$ROA = 35.266 + 9.120 \text{ LDA} + 4.163 \text{ SIZE}$$

From the above equation the study found that holding long term debts constant and size of the company constant zero, ROA (profitability) of MFIs would be 35.266. A factors increase in LDA (long term debt) would lead to increase in profitability of MFIs by factor of 9.120 and also a unit increase in size would lead to increase in profitability of MFIs by factors of

4.163. This information shows that there is a positive relationship between profitability of MFIS with size and long term debt.

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.793(a)	.629	.555	5.18728

From data in the above table the adjusted R^2 is 0.555 which means that there was 55.5% variation in ROA due to changes in TDA (total debt) and size of MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.793 thus there was a positive relationship between total debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	456.777	2	228.388	8.488	.001(a)
	Residual	269.079	10	26.908		
	Total	725.856	12			

From the ANOVA table, the P- value for the model was 0.001 which means that the model was statistically significant since the P-value was less than 0.005.

Coefficient

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	35.311	19.706		1.792	.103
	TDA	18.969	8.052	.498	2.356	.040
	SIZE	4.167	1.981	.445	2.103	.062

The established regression equation was

$$ROA = 35.311 + 18.969 \text{ TDA} + 4.167 \text{ SIZE}$$

From the above equation the study found that holding total debts and size of the company to a constant zero, ROA (profitability) of MFIs would be 35.311. A factor increase in TDA (total debt) would lead to increase in profitability of MFIs by factor of 18.969 and also a unit increase in size would lead to increase in profitability of MFIs by factors of 4.167. This information shows that there is a positive relationship between profitability of MFIS with size and total debt.

Descriptive Statistics 2009

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	15	-1.08	5.71	2.315	4.801255
SDA	15	0.026384	0.145153	0.085769	0.083982
LDA	15	0.053567	0.294705	0.174136	0.17051
TDA	15	0.079951	0.439859	0.259905	0.254493
SIZE	15	9.570915	10.88725	10.22908	0.930789
Valid N (listwise)	15				

From the above table mean of total debt was 0.26 which was equivalent to 26% which means that in 2009 most of the MFIs in Kenya were using more of equity accounted for by 74% while debt was accounted for by 26%. The maximum of return on assets was 5.71 while minimum was -1.07 which means that there was great deviation in their profitability. Size of MFIs had the standard deviation of 0.930789 which mean that size was almost the same to all MFIs; this means that size was almost constant to all MFIs. Most of the MFIs were using long term debts as shown by mean of 0.17 compared to the mean of short term debt 0.085.

4.6 Regression Summary

In a bid to get general trend of MFIs the study found mean of all the ratio ,ROA,SDA,LDA,TDA and SIZE from the mean of the above ratio the researcher coded these mean in the SPSS and then derived various regression equation that are discussed below.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.174(a)	.030	.140		8.53503

The adjusted R^2 is known as coefficient of determination, which tells us the variation in dependent variable due to changes in independent variables. From the above table the adjusted R^2 was 0.140, which means that there was 14% variation in return on assets (profitability) of MFIs due to changes in SDA (short term debt) and size of the MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.174 thus there was a positive relationship between short term debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Significance
1	Regression	129.585	2	64.792	.889	.417(a)
	Residual	4152.264	57	72.847		
	Total	4281.849	59			

From the above ANOVA table, the P-for the model was 0.417 which is higher than 0.005 thus the model is not statistically significant.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Significance
		B	Std. Error	Beta		
1	(Constant)	17.780	14.258		1.247	.218
	SDA	7.196	15.695	.065	.458	.648
	SIZE	1.625	1.666	.138	.976	.333

From the above table the study established the following regression equation;

$$ROA = 17.78 + 7.196 \text{ SDA} + 1.625 \text{ SIZE}$$

From the above equation the study found that holding short term debts constant and size of the company constant zero, ROA (profitability) of MFIs would be 17.78. A factor increase in SDA(short term debt) would lead to increase in profitability of MFIs by factor of 7.196 and also a unit increase in size would led to increase in profitability of MFIs by factor of 1.625. This information shows that there is a positive relationship between profitability of MFIS with size and short term debt.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.459(a)	.211	.183		7.70104

From data in the above table the adjusted R^2 is 0.183 which means that there was 18.3% variation in ROA due to changes in LDA (long term debt) and size of MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.459 thus there was a positive relationship between long term debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Significance
1	Regression	901.410	2	450.705	7.600	.001(a)
	Residual	3380.439	57	59.306		
	Total	4281.849	59			

From the ANOVA table, the P- value for the model was 0.001 which means that the model was statistically significant since the P-value was less than 0.005.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Significance
		B	Std. Error	Beta		
1	(Constant)	21.803	12.230		1.783	.080
	LDA	17.230	4.730	.433	3.643	.001
	SIZE	2.614	1.398	.222	1.871	.067

The established regression equation was

$$ROA = 21.803 + 17.230 \text{ LDA} + 2.614 \text{ SIZE}$$

From the above equation the study found that holding long term debts constant and size of the company constant zero, ROA (profitability) of MFIs would be 21.803. A factor increase in LDA (long term debt) would lead to increase in profitability of MFIs by factor of 17.230 and also a unit increase in size would lead to increase in profitability of MFIs by factor of 2.614. This information shows that there is a positive relationship between profitability of MFIs with size and long term debt.

Model Summary

Model	R	R Square	Adjusted Square	R	Std. Error of the Estimate
1	.170(a)	.029	.155		8.54119

From data in the above table the adjusted R^2 is 0.155 which means that there was 15.5% variation in ROA due to changes in TDA (total debt) and size of MFIs. The R is correlation coefficient which tells us the strength of relationship between the variable. The study found that the correlation coefficient is 0.170 thus there was a positive relationship between total debts and profitability of MFIs.

ANOVA

Model		Sum of Squares	df	Mean Square	F	Significance
1	Regression	123.593	2	61.797	.847	.434(a)
	Residual	4158.256	57	72.952		
	Total	4281.849	59			

From the ANOVA table, the P- value for the model was 0.434 which means that the model was not statistically significant since the P-value was greater than 0.005.

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Significance
		B	Std. Error	Beta		
1	(Constant)	19.684	13.557		1.452	.152
	TDA	1.438	4.023	.047	.357	.722
	SIZE	1.861	1.545	.158	1.204	.234

The established regression equation was

$$\text{ROA} = 19.684 + 1.438 \text{ TDA} + 1.861 \text{ SIZE}$$

From the above equation the study found that holding total debts and size of the company to a constant zero, ROA (profitability) of MFIs would be 19.684. A factor increase in TDA (total debt) would lead to increase in profitability of MFIs by factor of 1.438 and also a unit increase in size would lead to increase in profitability of MFIs by factors of 1.861. This information shows that there is a positive relationship between profitability of MFIS with size and total debt.

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	60	-31.85	58.70	-.3635	15.36812
SDA	60	.01	.29	.0785	.07685
LDA	60	.02	.59	.2387	.21397
TDA	60	.01	.89	.2758	.27812
SIZE	60	7.46	10.30	8.7949	.72411
Valid N (listwise)	60				

From the above table mean of total debt was 0.2758 which was equivalent to 27.58% which means that most of the MFIs in Kenya were using more of equity which is accounted for by 72.42%. The maximum of return on assets was 58.70 while minimum was -31.85 which means that there was great deviation in their profitability. Size of MFIs had the standard deviation of 0.72411 which mean that size was almost the same to all MFIs and thus the reason it was used constant to all regression model. Most of the MFIs were using long term debts as shown by mean of 0.2387 compared to the mean of short term debt 0.0785.

CHAPTER FIVE

5.0 SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the summary of key findings, which are set out in line with the study themes or objectives. The objectives of the study were to determine the nature of capital structure of MFIs in Kenya and to establish whether there exist a relationship between capital structure and profitability of MFIs in Kenya. It also presented the conclusion, and recommendations of the study.

5.2 Summary of Findings

The established regression equation for SDA was:

In years 2006: $ROA = 2.790 + 25.812 SDA + 0.108 SIZE$

In years 2007: $ROA = 2.743 + 25.341 SDA + 2.689 SIZE$

In years 2008: $ROA = 9.133 + 2.052 SDA + 3.143 SIZE$

In years 2009: $ROA = 44.389 + 0.517 SDA + 4.521 SIZE$

The established regression equation for LDA and size was

In years 2006: $ROA = 1.621 + 1.045 LDA + 0.035 SIZE$

In years 2007: $ROA = 6.493 + 1.262 LDA + 2.740 SIZE$

In years 2008: $ROA = 13.408 + 5.439 LDA + 3.592 SIZE$

In years 2009: $ROA = 35.266 + 9.120 LDA + 4.163 SIZE$

The established regression equation for TDA was

In years 2006: $ROA = 4.884 + 5.598 \text{ TDA} + 0.196 \text{ SIZE}$

In years 2007: $ROA = 6.417 + 9.695 \text{ TDA} + 2.737 \text{ SIZE}$

In years 2008: $ROA = 1.287 + 15.270 \text{ TDA} + 3.115 \text{ SIZE}$

In years 2009: $ROA = 35.311 + 18.969 \text{ TDA} + 4.167 \text{ SIZE}$

From the above regression equation it was established that most of MFIs in Kenya were using more of equity than debt, mostly in all the years equity was found to account for more than 60% of the entire MFIs capital, while debt was accounting for more than 30% of the capital for MFIs. There was a general increase in the influence of debt on profitability of MFIs from year 2006 to 2009.

The established general regression equations were;

$ROA = 17.78 + 7.196 \text{ SDA} + 1.625 \text{ SIZE}$

$ROA = 21.803 + 17.230 \text{ LDA} + 2.614 \text{ SIZE}$

$ROA = 19.684 + 1.438 \text{ TDA} + 1.861 \text{ SIZE}$

From the above equations it can be deduced that most of the MFIs in Kenya were using more of Equity. Long term debts were found to have great effects on profitability of them. Further total debt had small effect on profitability of MFIs this could be due to the fact most of MFIs were using equity rather than debt as noted that most MFIs were using 27.58 % as debt and 72.42% as equity. There was greater deviation in profitability of MFIs as noted by greater deviation of ROA. Jensen and Meckling (1976) argument regarding the possibility of capital structure influence on firm performance, found that capital structure mix affects the financial performance of MFIs. Several researchers have followed this extension and conducted numerous studies that aim to examine the relationship between financial leverage and firm performance over the last decades. The study found that there was a positive association between debt and profitability of MFIs this was in line with Hadlock and James (2002) who concluded that companies prefer loan (debt) financing because they anticipate a higher

return. Taub (1975) also found significant positive coefficients for four measures of profitability in a regression of these measures against debt ratio. Petersen and Rajan (1994) identified the same association, but for industries. Baker (1973), who worked with a simultaneous equations model and Nerlove (1968) also found the same type of association for industries. Roden and Lewellen (1995) found a significant positive association between profitability and total debt as a percentage of the total buyout-financing package in their study on leveraged buyouts. Champion (1999) suggested that the use of leverage was one way to improve the performance of an organization.

The study further found that LDA has a positive association with profitability this contradicts the finding of Joshua (2005) who found that an increase in the long-term debt position is associated with a decrease in profitability. This is explained by the fact that long-term debts are relatively more expensive, and therefore employing high proportions of them could lead to low profitability. The results support earlier findings by Miller (1977), Fama and French (1998), Graham (2000) and Booth et al. (2001). Firm size again is positively related to profitability. The significantly positive regression coefficient for total debt implies that an increase in the debt position is associated with an increase in profitability: thus, the higher the debt, the higher the profitability. Again, this suggests that profitable firms depend more on debt as their main financing option. This supports the findings of Hadlock and James (2002), Petersen and Rajan (1994) and Roden and Lewellen (1995) that profitable firms use more debt. In the Ghanaian case, a high proportion (85 percent) of debt is represented by short-term debt. The results also show positive relationships between the control variables (firm size and sale growth) and profitability.

5.3 Conclusions

The capital structure decision is crucial for any business organization. The decision is important because of the need to maximize returns to various organizational constituencies, and also because of the impact such a decision has on an organization's ability to deal with its competitive environment. From the findings the study concludes that that most of MFIs in Kenya were using equity and or donations as their main source finances in Kenya which accounted for by 72.42% and 27.58% in form of debt. The study further concludes that there exist a positive relationship between capital structure and profitability of MFIs in Kenya the

study further concludes that most MFIs in Kenya were using more of equity than debt in their capital structure mix.

5.4 Recommendations

Following the findings and the conclusion made above, the study makes the following recommendations: Most of MFIs in Kenya should use more of long term debt in their financing as this give management time to strategize how to repay this debt and also this is associated with less cost. The study further recommends an in-depth study which use return on in equity rather than return on assets. This study further recommends that MFIs should consider being listed in NSE as this would give them an opportunity to gain capital through the stock market. A study can also be done on the relationship between maturity structure of the MFIs debt and its decision and performance.

5.5 Limitation of the Study

Mainly because of time and financial limitations the method used was descriptive research design. The researcher was the one financing this study. The variables in this case cannot be controlled by the researcher. The goal was to identify the variables and describe how they relate but not to establish causality between the study variables. The study was able to collect data from 15 MFIs out of 34 registered MFIs in Kenya.

5.6 Implication of the Study

The results of the study will be valuable to MFI organization in Kenya in getting reliable insights on relationship between profitability and capital structure. The study is useful to the management in that it provides an insight into improving organizational performance through capital structure mix. The study will broaden the knowledge on relationship between profitability and capital structure and provide a basis to academicians for future research on corporate culture. This will expand effects of corporate culture on organizational performance.

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APPENDICES

Appendix I: MFI data

MFI data 2006

	ROA	Short term debt	Long term debt	Total debt	Total assets	Size
BIMAS	1.58%	6187500	12562500	18750000	257,554,667	8.410869
Equity Bank	4.79%	160198500	325251500	485,450,000	20,024,484,000	10.30156
Faulu - KEN	5.96%	4327835.82	8786818.18	13,114,654	29,065,400	7.463376
Jamii Bora	2.25%	14112846	28653354	42766200	422117982.8	8.625434
K-Rep	2.24%	248941440	505426560	754,368,000	5,220,245,000	9.717691
KADET	-6.36%	27307883.5	55443278.5	82,751,162	473,427,115	8.675253
KPOSB	1.16%	4477456970	9090594455	13,568,051,425	15,321,643,250	10.18531
KWFT	4.31%	14112846	28653354	42766200	422117982.8	9.56013
MCL	-23.97%	19,213,800	42766200	61,980,000	562,823,977	9.405228
Micro Africa	1.41%	73886340	150011660	223,898,000	331,371,000	8.520315
Opportunity Kenya	-13.97%	4406307512	8946139495	13352447007	324743580	8.511541
PAWDEP	7.68%	5940000	12060000	18000000	246,080,384	8.391077
RAFODE	-6.94%	48,574,020	98619980	147,194,000	506,828,000	7.85248
Riverbank	-22.47	83,296,950	169118050	252,415,000	337,593,000	8.805277
SMEP	0.44	13,200,000	26800000	40,000,000	383,761,950	10.17916

MFI data 2007

	ROA	Short term debt	Long term debt	Total debt	Total assets	Size
BIMAS	1.20%	23,275,000	1725000	25,000,000	319,095,607	8.50392
Equity Bank	5.17%	1,401,510,000	3119490000	4,521,000,000	53,076,000,000	10.7249
Faulu - KEN	2.35%	400,663,820	891800115.8	1,292,463,936	2,986,154,957	9.475111
Jamii Bora	-2.65%	19,213,800	42766200	61,980,000	562,823,977	8.750373
K-Rep	2.13%	361,963,130	805659870	1,167,623,000	7,038,808,000	9.847499
KADET	-20.98%	57338160.48	127623647.5	184,961,808	691,783,081	8.83997
KPOSB	1.17%	4802978308	10690500106	15,493,478,414	17,437,932,433	10.24149
KWFT	5.13%	761446294.1	1694832074	2,456,278,368	5,499,243,336	9.740303
MCL	1.41%	4835639.47	10763197.53	15,598,837	17,430,444	7.241308
Micro Africa	1.41%	112701740	250852260	363,554,000	449,606,000	8.652832
Opportunity Kenya	-13.97%	44,508,157	99066542.31	143,574,699	207,737,516	8.317515
PAWDEP	2.57%	6,200,000	13800000	20,000,000	341,868,234	8.533859
RAFODE	-3.24%	89,532,444	4677928450	7,196,813,000	14,749,566,000	8.533859
Riverbank	-22.47%	21,000,000	39000000	60,000,000	413,012,853	8.805277
SMEP	0.44%	61,928,160	898109550	1,381,707,000	7,136,327,000	10.17916

MFI data 2008

	ROA	Short term debt	Long term debt	Total debt	Total assets	Size
BIMAS	1.85%	13,200,000	26800000	40,000,000	383,761,950	8.584062
Equity Bank	5.71%	2,035,110,000	4131890000	6,167,000,000	77,135,000,000	10.88725
Faulu - KEN	-1.08%	540,433,722	1097244223	1,637,677,945	3,723,192,456	9.570915
Jamii Bora	-8.07%	52,133,400	105846600	157,980,000	882,085,377	8.945511
K-Rep	-4.58%	766,548,090	1556324910	2,322,873,000	8,184,063,000	9.912969
KADET	-22.47%	59,822,871	121458556	181,281,427	638,670,553	8.805277
KPOSB	0.44%	4,292,135,971	8714336669	13,006,472,640	15,106,240,826	10.17916
KWFT	6.55%	1,480,919,257	3006714854	4,487,634,111	9,497,034,800	9.977588
MCL	5.75%	19,479,876	39550050.4	59,029,926	82,189,053	7.914814
Micro Africa	58.70%	48,574,020	98619980	147,194,000	506,828,000	8.704861
Opportunity Kenya	-31.85%	83,296,950	169118050	252,415,000	337,593,000	8.528393
PAWDEP	1.39%	41,267,635	83785804.8	125,053,440	486,140,581	8.686762
RAFODE	3.49	6187500	12562500	18750000	257,554,667	7.479264
Riverbank	5.26	14112846	28653354	42766200	422117982.8	10.98458
SMEP	-1.77	73886340	150011660	223,898,000	331,371,000	9.634193

MFIs data 2009

	ROA	Short term debt	Long term debt	Total debt	Total assets	Size
BIMAS	-2.65%	21,000,000	39000000	60,000,000	413,012,853	8.615964
Equity Bank	5.26%	2,139,900,000	3974100000	6,114,000,000	96,512,000,000	10.98458
Faulu - KEN	-1.77%	2,139,900,000	1039361050	1,599,017,000	4,307,180,000	9.634193
Jamii Bora	-2.65%	559,655,950	115009440	176937600	970293914.7	8.986903
K-Rep	-2.72%	61,928,160	898109550	1,381,707,000	7,136,327,000	9.853475
KADET	-9.91%	483,597,450	166274540	255,806,984	794,237,414	8.89995
KPOSB	5.27%	89,532,444	4677928450	7,196,813,000	14,749,566,000	10.16878
KWFT	-1.77%	2,518,884,550	3266997633	5026150204	10446738280	10.01898
MCL	-18.20%	1,759,152,572	42973786.1	66113517.12	90407958.3	7.956207
Micro Africa	5.27%	23,139,731	107157232	164857280	557510800	8.746253
Opportunity Kenya	-18.20%	88,193,794	163788475	251,982,269	358,005,322	8.553889
PAWDEP	0.24%	54,658,365	101508392	156,166,757	659,537,847	8.81924
RAFODE	5.71	73886340	150011660	223,898,000	331,371,000	8.89995
Riverbank	-1.08	5940000	12060000	18000000	246,080,384	10.88725