THE EFFECT OF FUNDING STRUCTURE ON THE FINANCIAL PERFORMANCE OF DEPOSIT TAKING MICROFINANCE INSTITUTIONS IN KENYA

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D61/70122/2008

A RESEARCH PROJECT SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENT FOR THE AWARD OF MASTER OF BUSINESS ADMINISTRATION DEGREE, UNIVERSITY OF NAIROBI

NOVEMBER 2013
DECLARATION

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

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This research project has been submitted for examination with my approval as the University supervisor

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Signature…………………………
ACKNOWLEDGEMENT

It is my pleasure to thank the many people who made this project possible. It is difficult to overstate my gratitude to my supervisor Mr. Mirie Mwangi throughout my project 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 brilliant ideas.

I am indebted to my many student colleagues 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.

Lastly, and most importantly, I wish to thank my parents, son and fiancé. To them I dedicate this project.
DEDICATION

To my precious family members Louis and Carol 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.
ABSTRACT

Capital structure is a financial tool that helps to determine how firms choose their funding structure. Most DTMFIs in Kenya started off as NGOs and had built significant supply side competencies, as such, funding structure had no relevance. However, with growth and commercialization, MFIs are spun off to become fully independent, the puzzle of funding structure that will ensure sustainability and profitability becomes relevant. In this study, an attempt has been made to fill in the existing knowledge gap by determining effects of funding structure on the financial performance of Deposit Taking Micro Finance institutions in Kenya. This study analyzed the funding structure and financial performance of Deposit taking microfinance institutions in Kenya for the period 2011 to 2012. For the purpose of this study, the data was extracted from the published institution’s annual audit reports and CBK’s banks supervision annual reports for the 2 years under examination. This study used descriptive statistics to explain the main features of a collection of data in quantitative terms while correlation and linear regression analysis are used for analyzing the data. Financial performance was measured using return on assets while capital structure of DTMFIs was measured using customer’s deposits and borrowings divided by total assets. The results revealed there is positive relationship between funding structure and financial performance. The study concluded that increase in customer deposits and assets in DTMFIs would significantly improve financial performance of DTMFI while borrowing significantly decreases DTMFIs financial performance. Further this study concluded that DMFIs preferred source of fund was customer deposit and increase in asset, while borrowing generally has decreased in importance in the DMFI funding structure as it led to low profitability. From the findings the study concludes that that most of DTMFIs in Kenya were using borrowed funds but incrementally utilizing more of deposits as financial performance improve. Use of customer deposits has given the deposit-taking microfinance institutions (DTMFIs) headroom to cut their reliance on expensive borrowings as increased customer deposits provide an alternative source of cash. A proportionate increase in deposit base as a percentage of total assets typically lead to an overall lower cost of funds hence high profit margin. The study recommends management in DTMFIs should focus on enhancing Customer Deposits and assets as a source of funds as there existed a positively and strongly correlation between deposit and ROA. The results of the study were valuable to DTMFI organizations in Kenya in getting reliable insights on relationship between profitability and funding structure. DTM managers agrees that while mobilizing customer deposits is slower than they would like, they expect CBK and Treasury to change rules to allow DTMs attract big depositors. The findings indicated that a proportionally higher deposit as a percentage of total assets is associated with improved profitability, assuming that the deposits program is cost efficient. Although borrowings had negative significantly correlation to ROA, this study calls for the development of appropriate regulatory policies that enable DTMFIs to have access to long-term debt which may in turn improve their profitability. This may include relaxation of their listing requirements in the capital market.
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ABBREVIATION

CS - Capital Structure
DMFIs - Deposit Taking Microfinance Institutions
FSS - Financial Self-Sufficiency
GMM - Generalized method of moments
MFIs - Microfinance Institutions
OER - Operating Expense Ratio
OLS – Ordinary Linear System
OSS - Operating Self-Sufficiency
ROE - Return on Equity
SMEs - Small and medium Enterprises
ROA - Return on Assets
OELP - Operating expenses per dollar lent
NGOs - Non Governmental Organizations
CBK - Central Bank of Kenya
PAT - Profit After Tax
CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

A profitable microfinance industry is vital in maintaining a stable micro-banking system. Low profitability weakens the capacity of Deposit taking MFIs to absorb negative shocks, which subsequently affect Microfinance institutions solvency. Profitability of MFIs is determined by the way they are run given the environment in which they operate, risk management capabilities, their competitive strategies, quality of their management and levels of capitalization (Laffont and Guessan, 2000).

Prior to the microfinance revolution, poor people's opportunities to take up loans had been severely limited for several reasons. The financial market is interested to know the relative impact of financing decision on a firm’s performance. Deposit taking MFIs are more likely to have been licensed to mobilize deposits and therefore may have a higher deposit to assets, deposit to loans, and loans-assets ratio (Berger, and Udell, 2006). It also evident that Deposit taking MFIs have higher debt-equity composition perhaps because as firms mature they become known to the market, which enables them to expand their access to capital. Put differently, as DMFIs get older, the weight of external financial sources steadily decreases while the equity steadily becomes a more important source of finance. Additionally, Deposit taking MFIs may have lower debt ratios as they accumulate deposits and/or plough back into lending the retained profits.

1.1.1 Funding Structure

Financing choice involves a tradeoff between risk and return to maximize shareholder wealth (Berger, Bonime, Covitz and Hancock, 2000). The objective of an optimal
financing choice for any firm is therefore to have a mix of debt, preferred stock, and common equity that will maximize shareholders wealth, since changes in financial leverage affect firm value (Farrington and Abrams, 2002).

In practice different financial institutions may pursue different goals but the core objective of any financial institution is to minimize its cost. Although debt as a homogeneous source of Deposit taking MFIs funds is a powerful theoretical construct and a useful first step, this study goes beyond the leverage decision and investigates other dimensions of DMFIs funding choice. Even with respect to debt, the nature of debt and its incentive properties can differ according to, for instance, maturity (long and short) and to the providers. Capital requirement as set is a DMFI regulation, which sets a framework on how MFI and depository institutions must handle their capital. However, White and Morrison (2001) posited that the regulator ensures that Deposit Taking MFIs have enough of their own capital at stake. Bichsel and Blum (2005) supported this proposition arguing that these regulations help in reducing negative externalities such as disruptions to the payments system and a general loss of confidence in the banking system in addition to boosting the financial performance.

In recent years, with the maturing of the microfinance industry, large numbers of microfinance institutions (MFIs) have greatly increased their outreach and sustainability. Furthermore, the formal market of microfinance is influenced by the process in which informal MFIs convert into formalized or regulated financial institutions which was referred to as “upscaling” before. This usually requires fresh capital from outside investors, regulatory approval by local banking authorities and improved governance plus internal controls. The transformation process then typically allows MFIs to mobilize client deposits as an additional source of refinance and offer
additional non-credit products (Frank, 2008). Furthermore, with the transformation and growth of their assets, MFIs get improved access to new sources of funding in the international capital markets and also product diversification which allows them then to broaden their outreach and serve more clients. Overall, the microfinance market currently faces a trend towards “commercialization” which is a broad term used to refer to the application of market-based business principles to microfinance. (Frank, 2008)

Regulated DMFIs’ capital structure has also been maturing and is progressively approaching the structure that predominates in banks. While many DMFIs initially depended on domestic and international borrowing, their main source of funds is now by far deposits. At the same time, borrowing has generally decreased in importance in the DMFI capital structure. The issuance of bonds, while promising, continues to be little used. Although precise estimates are not available, issuing stock to add new shareholders is a mechanism rarely used by MFIs. Instead, the capital base of the MFIs has been increased mostly by reinvesting a large share of the sizable profits that the MFIs have generated (Jansson, 2003).

Many MFIs also look to deposit financing and commercial debt as essential elements of funding future growth in the microfinance sector (de Sousa-Shields & Frankiewicz, 2004). Commercial debt financing is an important tool in MFI funding and management; both short-term as well as longer-term debt financing. Access to these sources of funding requires transition to a regulated entity, a transition that can be challenging and expensive in the short run because of the management, capital, and technical requirements for a regulated entity.
In some cases, MFIs receive grants and subsidized loans from development agencies to finance the transition into deposit-taking institutions. Funds from development agencies may also be deployed as financial instruments designed to improve access for newly regulated entities. These instruments, such as guarantees for capital market issuances or bank loans, have newly regulated MFIs to prove creditworthiness and borrow at cheaper rates (Counts, 2005). The importance of borrowing from public–sector institutions and donors is that it allows MFIs to enjoy interest rates and maturities that would be difficult to obtain from domestic or international commercial lenders (Jansson, 2003). MFIs in several Latin American countries have made progress in the transition to regulation and market funding using stock and bond issuance as source of funds (Conger, 2003). Stock issues by Latin American MFIs have essentially been limited to programs of reinvesting profits and the incorporation of new shareholders through the private placement of shares.

1.1.2 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 is 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 an 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, grants and deposits) must be optimized by trying to give priority to deposits, which are often the cheapest resources. If this is not possible, DMFI 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 & Hishigasuren, 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 as 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 DMFI could begin by analyzing 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 DMFIs’ 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).

1.1.3 Relationship between Financial Performance and DMFI’S Funding Structure

Deposit to assets ratio is only relevant to MFIs that mobilize deposits. The lower the ratio, the greater is the MFI’s capability to fund its assets base from deposits. A proportionally larger deposit base as a percentage of total assets will typically lead to an overall lower cost of funds, assuming that the deposits program is cost
efficient in its operational and financial expense of deposits ratios. The higher the ratio, the more the MFI must rely on external funding, which is often a more costly source of funding than deposits. MFIs may also effectively use local depositors as in the case of Irish loan funds (Hollis, and Sweetman, 2007) not just for funding, but also because of the important discipline that depositors can impose on expenses management which has an impact on profitability. The study postulates a positive relationship between MFIs that accept deposits and profitability. Portfolio to asset ratio may also affect profitability. In the empirical MFI literature, portfolio to asset ratio is used both as a measure of credit risk and lending specialization.

Loans are less liquid and more risky than other assets in a DMFIs’s portfolio. The risk of default, and the additional costs incurred in managing credit risk, requires DMFIs to apply a risk premium to the interest rate charged for the loan. Larger share of loans to total assets may therefore translate to more interest revenue because of the higher risk. However, MFI loans are subject to significantly higher transaction costs than retail profit seeking banks, which include cost of funds for on-lending, the loan loss, and administrative costs (Cull et al, 2009). MFI clients may often live in inaccessible locations. Since MFIs operations are heavily dependent on personal contact for their execution which is very time-consuming, this translates to a higher absolute transaction cost per loan. That notwithstanding, profitability should increase with a larger share of loans to assets as long as interest rates on loans are liberalized and the MFI applies mark-up pricing (Farrington & Abrams, 2002).

1.1.4 Deposit taking Microfinance Institutions in Kenya

Microfinance industry in Kenya promotes small-scale investments that generates sufficient revenues from otherwise unrealized market activities while yielding a return
on the investment. Agency costs may be particularly large in this industry because DMFIs hold private information on their loan clients. In addition, Deposit taking MFIs access to grant funding and other safety-net protections may increase incentives for risk shifting or lax risk management, potentially increasing the agency costs of outside debt (Counts, 2005).

The enactment and endorsement of Deposit Taking Microfinance Institutions Act (The Microfinance Act 2006) by the parliament gave birth to Microfinance Deposit Taking Institutions which are allowed to mobilize and intermediate savings from the depositors (Mutua 2003). Microfinance institutions world over have been identified as critical institutions to nations quest for solutions to the development challenge (CGAP, 2002). An effort to modernize and uplift operations of microfinance institutions gave rise to Deposit Taking Microfinance which is regulated under MFI Act 2006 by Central Bank of Kenya (CBK, 2006). According to ADB (2000) and Otero and Maria (2002), the implementation of the policy was deemed important for savings mobilization and proper management of public deposits by implementing basic minimum level of prudential regulations. Mutua, (2003) argues that, the Act provides prudential requirements that enable DTMs to manage resources properly which ultimately improves the efficiency and loan costs.

The Microfinance Act 2006 of Kenya, seeks to streamline the operation of the MFIs in Kenya, addresses licensing provisions, and sets minimum capital requirements and minimum liquid assets, submission of accounts to the Central Bank, supervision by the Central Bank, and limits on loan and credit facilities. The licensed deposit taking MFIs accepts public funds and contributes to poverty alleviation while in compliance with the required financial sector safety and soundness.
The Deposit taking MFIs are regulated under the act to provide savings, credit, and other financial services to MSEs and to low-income households in both rural and urban areas. Currently, there are eight Deposit Taking Microfinance Institutions in Kenya which include Faulu Kenya DTM Limited, Kenya Women Finance Trust DTM Limited (now Kenya Women Holdings Limited), REMU DTM Limited, SMEP DTM Limited, UWEZO DTM Limited, Century Deposit Taking Microfinance, SUMAC DTM Limited and Rafiki DTM Limited. All these DTMFIs have their Headquarters in Nairobi.

1.2 Research Problem

The funding structure of a Microfinance industry is basically a mix of funds which a DTM 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 funding structure is deemed to have an impact on a firm financial 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.

Deposit Taking Microfinance institutions (DMFIs) have extended limits of formal finance and involved the Low income earners into formal commercial systems thus diversifying families’ income bases, physical, humanoid and social assets through decent money managing after economic tremors hence smoothening consumption (Cohen, 2003). Extraordinary operating costs and capital constrictions in the MFI
industry have vetoed DMFIs from fulfilling the mammoth demand. Dehejia, Montgomery and Morduch (2005) exhibited that the demand for credit by the deprived is elastic. Donor organizations and governments stress financial sustainability as means to exploit outreach breadth (Armend´ariz de Aghion & Morduch, 2004). Therefore, DTMFIs capital structure is critical for their sustainability and performance.

Studies on the effect of DTMFIs funding structure for developing countries on financial performance have been insufficient and scarce. A number of such studies have in most cases been done on developed economies. Plouffe (2001), identified young and promising MFIs and Mahjabeen (2010) compared provisions of micro loans between MFIs and traditional banks highlighting performances of Japan and United States.

The funding structure in deposit Taking Microfinance institution is crucial due to need of maximizing returns and also because of the impact such funding structure has on a DTMFIs’s ability to deal with the competitive financial market in Kenya. DMFIs with a relatively high portfolio to asset ratio may be at greater risk of failure. Regulted DMFIs made choice on funding decision to increase portfolio asset ratio due to specialization in lending and benefits from informational advantages, which may reduce intermediation costs and enhance profitability (Freixas, 2005).

DTMFIs in Kenya use equity and or donations as some of their main source finances in Kenya which accounted for by 72.42% and 27.58% in form of debt. Whether the funding structure in DTMFIs influence financial performance has not been empirically determine. Understanding the role of DMFIs’ funding structure and its composition, whose knowledge largely misses in the literature, constitutes a
knowledge gap in Kenya, hence studying the field will be critical. Mainly this study seeks to ascertain implications of funding structure on DTMFI financial performance.

Various studies have been carried out to ascertain various funding structure facets in Kenyan firms. Kiogora (2002) sought to find out whether capital structures of quoted companies were consistent over time and to ascertain whether companies quoted on the Nairobi stock Exchange in the same industry had similar capital structures. Mwendwa (2011) carried out a study on relationship between capital structure and profitability of Commercial Banks in Kenya. The studies have not determined the effects of Capital structure on financial performance of microfinance institutions in Kenya. This study seek to fill the existing knowledge gap by determining effects of funding structure on financial performance in Deposit Taking Finance institutions in Kenya. The study seeks to answer the question, what was the effect of funding structure on financial performance of DTMFIs in Kenya?

1.3 Objective of the Study

To determine the effect of funding structure on the financial performance of Deposit Taking Microfinance Institutions in Kenya

1.4 Value of the Study

Deposit Taking 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. The study may significant to the management of the Deposit Taking MFIs who gained knowledge on the impact of capital structure on financial performance so as to make sound financial choice on capital structure.
While most information on the funding structure of Deposit Taking MFI is highly fragmented, this study attempts to synthesize the information to better understand the link between the funding structure and financial performance. Even development and donor organizations realize that only by weaning off donor dependency and adopting a commercial orientation can these Deposit Taking MFIs truly attract the capital and savings base they need to scale up their microloan portfolios, increase sustainability, lower lending rates, and start meeting the demand. This study provided information to address the capital constraint issues of most Deposit MFIs. As DMFIs 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.

The study was significant to scholars and research who may find this study in carrying out further research and gain knowledge on impact of capital structure on financial performance of Deposit Taking Microfinance Institutions.
CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

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

2.2 Theoretical Review

2.2.1 The Modigliani–Miller Theorem

The Modigliani–Miller theorem (of Franco Modigliani, Merton Miller) forms the basis for modern thinking on capital structure. The basic theorem states that, under a certain market price process (the classical random walk), in the absence of taxes, bankruptcy costs, agency costs, and asymmetric information, and in an efficient market, the value of a firm is unaffected by how that firm is financed. It does not matter if the firm's capital is raised by issuing stock or selling debt. It does not matter what the firm's dividend policy is. Therefore, the Modigliani–Miller theorem is also often called the capital structure irrelevance principle. Modigliani was awarded the 1985 Nobel Prize in Economics for this and other contributions. Miller was a professor at the University of Chicago when he was awarded the 1990 Nobel Prize in Economics, along with Harry Markowitz and William Sharpe, for their "work in the theory of financial economics," with Miller specifically cited for "fundamental contributions to the theory of corporate finance."

One of the important financial decisions confronting a firm is the choice between debt and equity. In their seminal paper dealing with irrelevance of debt in capital structure
for determining firm value, Modigliani-Miller (1958) included a number of assumptions - one of which was absence of corporate tax. Subsequently, when Modigliani-Miller (1963) factored corporate tax in the model, it was found that theoretically the value of a firm should increase with debt because of higher interest tax shield. But monotonic increase of debt for higher tax shield increases bankruptcy cost especially when profitability of the firm is low and fluctuating. This leads to ‘trade off’ theory of capital structure that postulates an optimum debt level or target level, where the marginal increase of present value of tax saving is just offset by the same amount of bankruptcy cost.

Although we may not be able to determine the exact debt target level objectively in microfinance, because of MFIs industrial organization, trade off theory explains that that there is a limit to debt financing and the target debt may vary from MFI to MFI depending on profitability, among a host of other factors. Consistently, profitable MFIs with lot of tangible asset that can be offered as collateral for debt may have a higher target debt ratio. Simply put high proportion of fixed interest capital to equity would imply that the MFI is highly indebted and therefore risks becoming insolvent. On the other hand highly leveraged MFIs may perform better by enjoying scale economies, enhancing their ability to boost profitability.

2.2.2 Pecking Order Theory

The alternative theory of finance known as ‘pecking order’ theory was developed by Myers (1984). It is based on the premise that in reality successful firms (zero’ debt firms) with high and consistent profitability rarely goes for debt financing. The origin of pecking order theory is asymmetric information where managers know more
about a firm’s prospect than the outside investors. The theory suggests that if the firm issues equity shares to finance a project, it has to issue shares at less than the prevailing market price. This signals that the shares are overvalued and the management is not confident to serve the debt if the project is financed by debt. Thus issue of shares is ‘bad news.

The pecking order theory suggests that firms have a particular preference order for capital used to finance their businesses (Myers, 1984). Owing to the presence of information asymmetries between the firm and potential financiers, the relative costs of finance vary between the financing choices. Where the funds provider is the firm's retained earnings, meaning more information than new equity holders, the new equity holders will expect a higher rate of return on capital invested resulting in the new equity finance being more costly to the firm than using existing internal funds. A similar argument can be provided between the retained earning and new debt-holders. In addition, the greater the exposure to the risk associated with the information asymmetries for the various financing choices besides retained earnings, the higher the return of capital demanded by each source. Thus, the firm will prefer retained earnings financing to debt, short-term debt over long-term debt and debt over equity.

On the contrary if external borrowing is used to finance the project, it sends a signal that the management is confident of the future prospect of serving debt. Hence debt is preferred over shares in financing decision. If debt is issued, pricing of debt instrument remains a problem. To avoid controversy the management may wish to finance project by internal Fund generation, i.e. by retained earnings. Thus, financing follows an order, first-retained earnings, then-debt and finally equity when debt
capacity gets exhausted. This explains why the profitable firm uses less debt. These preferences exhibit transitivity.

MFIs in Africa may represent an interesting scenario since retained earnings are zero and perhaps following the pecking order may opt for debt since quite a number are not regulated and therefore have no access to capital market. Should I find evidence that is consistent with the pecking order theory then my results should highlight a negative relation between capital structure and MFI profitability.

### 2.2.3 Agency Cost Theory

The agency cost theory is premised on the idea that the interests of the firm’s managers and its shareholders are not perfectly aligned. In their seminal paper, Jensen and Meckling (1976) emphasized the importance of the agency costs of equity. They argue that agency costs of equity in corporate finance arise from the separation of ownership and control of firms whereby managers tend to maximize their own utility rather than the value of the firm. Agency costs can also arise from conflicts between debt and equity investors.

Stockholders, because of their rights, may take undue advantage over bond holders in an attempt to maximize their fortunes in a firm. Bond holders are therefore compelled to protect themselves from such contingencies. Such covenants adversely affect the corporate legitimate operations to some extent the costs of lost efficiency and other costs. Although Modigliani and Miller (1963) recommends that firms should maximize their debt financing opportunities, such a situation does not hold in the long run due to such agency problems between stake holders. Therefore costs related to protective covenants are substantial and rise with the increase in debt financing.
2.3 Empirical Review

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.

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.

Kiogora (2002) sought to find out whether capital structures of quoted companies were consistent over time and to ascertain whether companies quoted on the Nairobi
stock Exchange in the same industry had similar capital structures. He found out that there were differences in capital structure among industry groups: there was a negative relationship between returns of firms quoted on the Nairobi Stock Exchange and their level of leverage and that companies in the Agricultural sector had consistent levels of equity from year to year. Firms within a given sector tended to cluster towards some target Equity/Total Assets ratio implying that an optimal capital structure exists. He also found out that returns increased with increased leverage hence supporting the traditionalists’ view of an optimal capital structure.

Makau (2006) carried out a study on the effect of capital structure on firm value: evidence from Nairobi stock exchange. From the study, the researcher concluded that there existed a regression equation that was relating the firms leverage to its own growth, profitability, liquidity, size and non debt ratio tax shields, the study also concludes that there was a general increase in leverages from year 2003 to years 2007. The researcher also concluded that in order for firm to increase its leverage it should increase it factors that leads to increase in it size and growth. The study further concludes that the firm own capital structure affects is value. The study further concludes that profitability of the company affects leverage of the company

Silva (2008) on the effect of capital structure on MFIs performance. The objective was to determine the effects of capital structure on MFIs performance in Kristiansand. This study found that total debt and short term debt ratio impacts positively and significantly on ROE while negatively and significantly on ROA. Long term debt ratio had a positively and significantly impact ROE but not significantly impact on ROA of MFIs. This shows that if MFIs use long term debt to finance their operations, there may not be a pressure on management of MFI. This further suggests that
profitable MFIs depend more on long term debt financing. The study uses a data set which consists of 290 MFIs from 61 countries. This indicated that ROA and ROE was used as performance indicators, while debt to equity, long term debt to equity, short term debt to equity, debt to assets, long term debt to assets and short term debt to assets ratios are used as indicators of capital structure of MFIs.

Hüttenrauch & Schneider, (2009) examine best practice liability management to control liquidity, rate and concentration risk, as well as to maximize profitability, also becomes a priority. 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.

Kibet (2009) carried out a study to establish whether there was a relationship between capital structure and profitability of MFIs in Kenya. 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. The study found that 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.

Mahjabeen (2010) empirically examined influenced of funding on and financial stability in Europe. He compared provisions of micro loans between MFIs highlighting performances of Japan and United States. Thus, understanding the role of MFIs’ funding structure and its composition, whose knowledge largely misses in the literature, constituted a knowledge gap in Uganda, hence studying the field was important. Mainly this study seeks to ascertain implications of funding structure on MFI performance proxied by sustainability, specifically characterizing indicators of MFI performance, identifying funding sources and then determining the influence of funding structure on MFI performance. Generally the study hypothesized that MFIs with better funding structure would be sustainable, but the question was what nature of such funding structure would render an MFI sustainable operationally and financially. Therefore the study deployed a hierarchal sampling research design of gathering all MFI data from the central governing body of all MFIs where authenticity was more expected and where if gaps existed, the individual MFIs would be approached. Because grants as a composition of funding structure were generated from donors on interest free schemes and given to farmers at a certain interest, this implied that MFIs hugely supported with grants would be more sustainable theoretically. The study concluded that the choice of funding structure influence returns on assets in MFIs.

Kar (2012) seeks to answer the question “Does capital and financing structure have any relevance to the performance of microfinance institutions?” from an agency
theoretical standpoint. The results of the study confirm the agency theoretic claim that an increase in leverage raises profit-efficiency. It also finds that cost efficiency decreases with decreasing leverage. Leverage have a negative significant impact on debt of outreach, but the study finds that capital structure does not have any noticeable impact on breadth of outreach. The study uses a panel dataset of 782 MFIs in 92 countries for the period 2000 – 2007. ROA, ROE and operating expenses per dollar lent (OELP) are used as indicators for financial performance and some of the indicators for capital structure are capital-asset ratio, debt-equity ratio, loans asset ratio and PAR30.

2.4 Summary of literature Review

The chapter review past studies on funding of microfinance institutions. It is appropriate to investigate how funding structure of Deposit Taking microfinance institutions (DMFIs) affects financial performance. The relationship between funding structure and financial performance of DMFIs in Kenya has not been documented. The review of the study however identified few local studies such as Oriaro (2001) who assessed the suitability of a regulatory framework for operations of MFIs in Kenya and Magiri (2002) who sought to establish the 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 funding structure and financial performance of DMFIs in Kenya. The funding structure of a firm is basically a mix of debt and equity which a firm deems as appropriate to enhance its operations.
CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This chapter presented the research design and methodology that was used to carry out the research. It presented the research design, the population, sample size and sampling procedure, data collection and data analysis.

3.2 Research Design

Research design refers to the way the study is designed, that is the method used to carry out the research (Mugenda and Mugenda, 2003). Descriptive Research is the investigation in which quantity data was collected and analysed in order to describe the specific phenomenon in its current trends, current events and linkages between different factors at the current time. The major purpose of descriptive survey research design is 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 research design was selected as it helped in establishing the effects of DTMFIs funding structures on financial performance.

3.3 Target Population

According to Kothari, (2008), a population is a well-defined or set of people, services, elements, and events, group of things or households that are being investigated. This definition ensures that population of interest is homogeneous. Census population studies are more representative because everyone has equal chance to be included in the final sample that is drawn according to Mugenda and Mugenda (2003).
The sample of this study was all 6 of the 8 licensed Deposit Taking Microfinance institutions in Kenya. These Microfinance institutions in Kenya are licensed and regulated pursuant to the provisions of the Association of Microfinance Institutions. Currently there are 8 Licensed Deposit Taking Microfinance institutions (AMFIs, 2012). The study adopted a sample survey where all the 6 Deposit Taking Microfinance Institution that were fully operational in 2011-2012 formed part of the sample under study. Remu, Century and community-based Uwezo DTM are yet to report their full year results, having been set up less than one year ago.

3.5 Data Collection

The study used secondary data information obtained from articles, books, newspapers, internet and magazines. To a large extent, secondary data was collected from the financial statements of the DMFIs and other necessary articles. Of critical importance were articles with information on annual earnings of the DMFIs, returns on assets, return on equity and interests earned. The study was collected data of sources of funds for the DMFIs for a period of two years from 2011 to 2012. The study restricts dataset to include only Microfinance institutions whose data is reasonably reliable. Rather than taking DMFIs statement of financial performance at face value, these data had been adjusted to account for hidden subsidies which render these data valuable.

3.6 Data Analysis

The study analysis was undertaken using the panel data regression estimation, generalized methods moments, GMM estimation technique utilized in panel estimation that incorporates dynamics to take into consideration persistence in the behavior of dependent variables over time. Because of the endogeneity problem, the
OLS estimate of the effect of financing structure measures on MFI financial performance. The study undertaken methodology currently in use in the empirical literature of MFI profitability (mainly fixed or random effects). To solve the endogeneity problem, the study resort to the system GMM method. System GMM estimator is more suited to estimate MFI financial performance equations in study empirical framework. DMFIs Financial outcomes may be highly persistent so their lagged levels might be very weak instruments for the first differenced equations.

Microfinance literature devotes considerable attention to the life cycle model which is basically a process of MFIs transformation. It posits that sources of DMFIs financing are linked to the stages of MFI development therefore from this line of argument since the study primary focus is on the impact different sources of funding have on the outcome financial performance. The study therefore estimates the following basic regression:

\[ Y_1 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \]

Where;

- \( Y_1 \) = Return on Assets (ROA),
- \( X_1, X_2, X_3 \) = Customer Deposit, Borrowings, Shareholders fund(equity) respectively
- \( \alpha \) = Constant
- \( \beta_1, \beta_2, \beta_3 \) = Regression Coefficients
- \( \varepsilon \) = Error term

Studies on firm performance employ various measures to test the predictions of different Funding Structure hypothesis. Some of the measures of performance that have been used over the years include financial ratios (Madajewicz, 2008), stock market return and their volatility. For the purpose of this study utilized return on
assets as our profitability proxy. ROA remains a valuable measure of DMFI’s profitability. The study determined the effects of Deposit taking MFIs funding structure on financial performance measured at 95% confidence level of P-Value > 0.05.

The Microfinance Financial Reporting Standards recommends the use of ROA and ROE as measures of MFI profitability rather than OSS and FSS. It is a financial metric that is well established and understood across the finance spectrum. As such, it is useful regardless of the legal status or mission of an MFI.

<table>
<thead>
<tr>
<th>Regression Statistics</th>
<th>Notation</th>
<th>Measure</th>
</tr>
</thead>
<tbody>
<tr>
<td>Variable</td>
<td>ROA</td>
<td>Net profits after taxes/av. Assets</td>
</tr>
<tr>
<td>Return on assets</td>
<td>BAssets</td>
<td>Borrowing/ Average Assets</td>
</tr>
<tr>
<td>Deposits to assets</td>
<td>DepAsse</td>
<td>Voluntary Deposits/Average Assets</td>
</tr>
<tr>
<td>Shareholders fund to assets</td>
<td>EqAsset</td>
<td>Equity/Assets</td>
</tr>
</tbody>
</table>
CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introductions
This chapter presents the data analysis, presentation and interpretation of the study, the study analyzed the funding structure/financial mix for DTMFIs for duration of four year starting year 2011 all the way to 2012. The data was collected from 6 DTMFIs which had had their account audited.

4.2 Analysis Descriptive Statistics for 2011-2012
Table 4.1: Descriptive Statistics for 2011 -2012

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>2011 In millions</th>
<th>2012 in Millions</th>
<th>Min in Million</th>
<th>Max in Million</th>
<th>Mean</th>
<th>Std. Dev</th>
</tr>
</thead>
<tbody>
<tr>
<td>Customer Deposits</td>
<td>6</td>
<td>3,972</td>
<td>7,003</td>
<td>13.00</td>
<td>2457.00</td>
<td>706.833</td>
<td>920.435</td>
</tr>
<tr>
<td>Borrowings</td>
<td>6</td>
<td>10,622</td>
<td>11,082</td>
<td>.00</td>
<td>7528.00</td>
<td>1808.67</td>
<td>2931.12</td>
</tr>
<tr>
<td>Shareholders’ equity</td>
<td>6</td>
<td>3,014</td>
<td>3,834</td>
<td>51.00</td>
<td>2114.00</td>
<td>570.750</td>
<td>784.66</td>
</tr>
<tr>
<td>Total Asset</td>
<td>6</td>
<td>24,798</td>
<td>32,409</td>
<td>64.00</td>
<td>17873.0</td>
<td>4450.33</td>
<td>6910.62</td>
</tr>
<tr>
<td>ROA (%)</td>
<td>6</td>
<td>-2.91%</td>
<td>-0.45%</td>
<td>-8.23</td>
<td>1.90</td>
<td>-1.4383</td>
<td>3.68166</td>
</tr>
</tbody>
</table>

Source: CBK bank supervision annual Reports 2011/2012

From the table above; total customer deposits increased from Kes. 3.972 billion in year 2011 to Kes. 7.003 billion in year 2012. The lowest deposit was 13 million while the highest was 2.457 billion with a mean score of 706.83 million. In addition, total borrowing increment rose from 10.6B to Kes 11 Billion with minimal deviation and a mean score of 1.8 billion which means that most of the DTMFIs in Kenya were not using more external borrowing in funding it operations.
Further, the assets of the DTMFIs increased from Ksh24 Billion to 32 Billion with a mean score of 4.45 Billion and standard deviation of 6.91 billion indicating the Deposit Taking MFIs were mobilizing more assets in their funding structures. The findings revealed that there was an increase in financial performance of the Deposit taking MFIs as the ratio of ROA increased from -2.91% in year 2011 to -0.45% in year 2012 with a mean score of -1.43. Also a high deviation indicates that there is variation in financial performance in various Deposit taking MFIs.

4.3 Correlation Analysis
The study used Karl Pearson’s coefficient of correlation in order to quantify the strength of the relationship between the variables. The Pearson product-moment correlation coefficient determines the strength of a linear association between two variables and is denoted by \( r \) which can take a range of values from +1 to -1. A value of 0 indicates that there is no association between the two variables. A value greater than 0 indicates a positive association, that is, as the value of one variable increases so does the value of the other variable. A value less than 0 indicates a negative association, that is, as the value of one variable increases the value of the other variable decreases.

The Pearson’s coefficient was used to verify the existence or non-existence of linear correlation between and among the funding structure variables with financial performance for Deposit taking MFIs. The findings are presented as follows;
Table 4.2: Correlation matrix (dependent variable: ROA)

<table>
<thead>
<tr>
<th>Variable</th>
<th>ROA</th>
<th>Deposits</th>
<th>Borrowings</th>
</tr>
</thead>
<tbody>
<tr>
<td>ROA</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Deposits</td>
<td>0.884*</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>(0.013)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Borrowing</td>
<td>-0.617*</td>
<td>0.538</td>
<td>1</td>
</tr>
<tr>
<td>(0.004)</td>
<td></td>
<td>(0.65)</td>
<td></td>
</tr>
<tr>
<td>Equity</td>
<td>-0.719*</td>
<td>0.522*</td>
<td>0.437</td>
</tr>
<tr>
<td>(0.003)</td>
<td></td>
<td>(0.003)</td>
<td>(0.003)</td>
</tr>
</tbody>
</table>

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

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

Source: CBK bank supervision annual Reports 2011/2012

From table 4.2, it was observed that ROA ratio is positively and strongly associated to Customer Deposits (0.884*, P-value < 0.01). This implies that customer deposits influences financial performance Deposit Taking MFIs. On the other hand ROA is negative and strongly correlated to Deposit Taking MFIs borrowing (-0.617*, P-value < 0.01), indicating that borrowing negatively affects performance Deposit Taking MFIs. Similarly, equity is negative correlated to ROA (-0.719*, P-value < 0.01).

In particular, the findings shows that being able to accept deposits has positive impact on profitability of DTMFIs and has significantly influenced financial performance of the DTMFIs. The study found that large deposits would affect the profitability of the DTMFIs. This indicated that increase in assets boost DTMFI profit. Borrowing and Equity has a negative impact of DTMFIs ROA implying that depending on external findings of the DTMFIs would impact negatively on ROA. In additon the correlations among the predictive variables was not very strong (none is a multiple of the other), there was little evidence of multicollinearity among them and thus were included in the following regression analysis.
4.4 Regression Analysis
Regression analysis is the statistical technique that identifies the relationship between two or more quantitative variables: a dependent variable, whose value is to be predicted, and an independent or explanatory variable (or variables), about which knowledge is available. The technique is used to find the equation that represents the relationship between the variables. Multiple regressions provide an equation that predicts one variable from two or more independent variables. The study adopted multiple regression guided by the following model:

\[ Y_1 = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon \]

Where:

\( Y_1 \) = Return on Assets (ROA),
\( X_1, X_2, X_3 \) = Customer Deposit, Borrowings, Shareholders fund(equity) respectively
\( \alpha \) = Constant
\( \beta_1, \beta_2, \beta_3 \) = Regression Coefficients
\( \varepsilon \) = Error term

Table 4.3: Model Summary

<table>
<thead>
<tr>
<th>Model</th>
<th>R</th>
<th>R Square</th>
<th>Adjusted Square</th>
<th>R</th>
<th>Std. Error of the Estimate</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>0.861a</td>
<td>0.7413</td>
<td>0.681</td>
<td>0.412</td>
<td>0.0017</td>
<td></td>
</tr>
</tbody>
</table>

a. Predictors: Customer Deposit, Borrowings, Shareholders fund

*Source: CBK bank supervision annual Reports 2011/2012*

From the findings, the coefficient of determination (the percentage variation in the dependent variable being explained by the changes in the independent variables) \( R^2 = 0.7413 \). This indicates that the funding structures for DTMFIs vary with variation in financial performance (ROA). Thus they explain 74.13% in variation financial
performance which is statistically significant with P-Value of 0.0017 which was less than 0.05 at a confidence level of 95%.

Table 4.4: Analysis of Variance

<table>
<thead>
<tr>
<th>Source: CBK bank supervision annual Reports 2011/2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>ANOVA</strong></td>
</tr>
<tr>
<td>-------------------------------------------------------</td>
</tr>
<tr>
<td>Regression</td>
</tr>
<tr>
<td>Residual</td>
</tr>
<tr>
<td>Total</td>
</tr>
</tbody>
</table>

The total variance (60) was the difference into the variance which can be explained by the independent variables (Model) and the variance which was not explained by the independent variables (Error). From the findings, the significance value of the F statistic is 5.837 significant at 0.014, indicating that all the variables (Customer Deposit, Borrowings, Shareholders fund) are significant predictors of financial performance deposit taking MFIs.

Table 4.5: Regression Coefficient Results

<table>
<thead>
<tr>
<th>Source: CBK bank supervision annual Reports 2011/2012</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Beta Coefficients</strong></td>
</tr>
<tr>
<td>Constant</td>
</tr>
<tr>
<td>Deposits</td>
</tr>
<tr>
<td>Borrowings</td>
</tr>
<tr>
<td>Equity</td>
</tr>
</tbody>
</table>

Dependent Variable: Financial Performance

From the findings of the study the following regression equation was established;

\[ Y1 = \alpha + 5.897X_1 + 2.761X_2 - 0.859X_3 - 0.547X_4 \]
From the findings in the regression model the study found that holding customer Deposits, Borrowing and Equity constant at (Zero), financial performance of the DTMFIs would be at 5.897. From the regression results, a unit increase in customer deposits would lead to a significant positive increase in ROA by 2.761 (p=0.003, t=1.575). A unit increase in DTMFIs borrowing would lead to a decrease in ROA by factor 0.859 (P=0.0124, t=3.692) while a unit increase in DTMFIs equity would lead to decrease in ROA by a factor 0.547 (P= 0.011, t=2.179). The findings indicated that increase in customer deposits in DTMFIs would statistically significant improve financial performance of DTMFI while borrowing and Equity significantly decreases DTMFIs financial performance.

**4.5 Discussion of the Findings**

From the findings ROA ratio is positively and strongly associated to Customer Deposits (0.884*, P-value < 0.01). This implies that customer deposits influences financial performance Deposit Taking MFIs. Further, from the regression analysis, customers Deposit have a positive beta coefficient on financial performance of the DTMFIs. This implied that the lower Deposit to assets ratio, the greater is the MFI’s capability to fund its assets base from deposits. A proportionally larger deposit base as a percentage of total assets will typically lead to an overall lower cost of funds. The higher the ratio, the more the DTMFI must rely on borrowing (external funding), which is often a more costly source of funding and lead to low ROA. The findings concurred with Hollis, and Sweetman, (2007) who found that DTMFIs may also effectively use local depositors as in the case of Irish loan funds not just for funding, but also because of the important discipline that depositors can impose on expenses management which has an impact on profitability.
On the other hand ROA is negative and strongly correlated to Deposit Taking MFIs borrowing (-0.617*, P-value < 0.01), indicating that borrowing negatively affects performance Deposit Taking MFIs. Further, from regression analysis, a unit increase in DTMFIs borrowing would lead to a decrease in ROA by factor 0.859 (P=0.0124, t=3.692). The findings are consistent to Mohamad (1994) research on the relationship between capital structure and profitability of listed industrial firms on the main board of the Kuala Lumpur Stock Exchange (KLSE) which found that there were significant relationships between market imperfections changes in capital structure on firm’s profitability; while debt and equity size are negatively related to firm’s profitability.

From the findings equity is negative correlated to ROA (-0.719*, P-value < 0.01). In addition, a unit increase in DTMFIs equity would lead to decrease in ROA by a factor 0.547 (P= 0.011, t=2.179). Mohamad (1994) found that equity size is negatively related to firm’s profitability. 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.

A reasonable interpretation of regression results is that a proportionally larger deposit base will typically lead to an overall lower cost of funds for the MFIs with an implication of improved profitability—assuming that the deposits program is cost efficient. Consistent with Cull, et al (2011), MFIs should therefore broaden their services toward offering (more) deposits. This is important as it would also broaden the lending capacity of MFIs. These results are however contrary to García-Herrero, (2009) who do not find significant results in the MFIS industry in China.
CHAPTER FIVE

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 effects of funding structures on financial performance of DMFIs in Kenya. It also presented the conclusion, and recommendations of the study.

5.2 Summary of Findings
The study revealed that DTMFI ROA ratio was positively and strongly associated to Customer Deposits. ROA ratio was positively and strongly associated to Customer Deposits. Similarly ROA was found to be negative and strongly correlated to Deposit Taking MFIs borrowing. Equity was also found to be negative significantly correlates to ROA. In particular, the findings shows that being able to accept deposits has positive impact on profitability of DTMFIs and has significantly influence financial performance of the DTMFIs. The study found large deposits would affect the profitability of the DTMFIs as indicated by 0.841 with a P>r< 0.002. The study revealed that increase in assets boost DTMFI profit. Borrowing and Equity has a negative impact of DTMFIs ROA implying that depending on external findings of the DTMFIs would impact negatively on ROA.

The study revealed that there exist a positive relationship between customer deposit and assets with DTMFIs financial performance. From the findings in the above table the study found that holding customer Deposits, Borrowing and Equity constant at (Zero), financial performance of the DTMFIs would be at 5.897. From the regression
results, a unit increase in customer deposits would lead to a significant positive increase in ROA by 2.761 (p=0.003, t=2.173).

The study revealed that there existed a negative relationship between borrowing and financial performance of DTMFIs as a unit increase in DTMFIs borrowing would lead A unit increase in DTMFIs borrowing would lead to a decrease in ROA by factor 0.859 with P<r<0.0124, t=1.575). While a unit increase in DTMFIs equity would lead to decrease in ROA by a factor 0.547 (P= 0.011, t=2.179.

The study further revealed that increase in customer deposits and assets in DTMFIs would significantly improve financial performance of DTMFI while borrowing significantly decreases DTMFIs financial performance. The study established that DMFIs main source of fund is customer deposit and increase in asset while borrowing has generally decreased in importance in the DMFI funding structure as it led to low profitability.

The study findings indicated that customers Deposit and assets influence financial performance of the DTMFIs. This implied that the lower Deposit to assets ratio, the greater is the MFI’s capability to fund its assets base from deposits. A proportionally increase in deposit base as a percentage of total assets will typically lead to an overall lower cost of funds hence high profit margin . The higher the ratio, the more the DTMFI must rely on borrowing (external funding), which is often a more costly source of funding and lead to low ROA. The findings concurred with Hollis, and Sweetman, (2007) who found that DTMFIs may also effectively use local depositors as in the case of Irish loan funds not just for funding, but also because of the important discipline that depositors can impose on expenses management which has an impact on profitability.
From the regression results, a proportionally larger deposit base would typically lead to an overall lower cost of funds for the DTMFIs with an implication of improved profitability—assuming that the deposits program is cost efficient. Consistent with Cull, et al (2011), MFIs should therefore broaden their services toward offering (more) deposits. This is important as it would also broaden the lending capacity of MFIs. These results are however contrary to García-Herrero, (2009) who do not find significant results in the Chinese banking industry.

5.3 Conclusions

The study concluded that increase in customer deposits and assets in DTMFIs would significantly improve financial performance of DT MFI while borrowing significantly decreases DT MFIs financial performance. The study concluded that DMFIs main source of fund was customer deposit and increase in asset while borrowing has generally decreased in importance in the DMFI funding structure as it led to low profitability.

The study further revealed that increase in customer deposits and assets in DT MFIs would significantly improve financial performance of DT MFI while borrowing significantly decreases DT MFI s financial performance. This has given the deposit-taking microfinance institutions (DTMs) decision to reduce their reliance on expensive borrowings as increased customer deposits provide an alternative source of cash.

The study concluded that customers Deposit and assets influence financial performance of the DT MFIs implying that lower Deposit to assets ratio, the greater is the MFI’s capability to fund its assets base from deposits. A proportionally increase in deposit base as a percentage of total assets will typically lead to an overall
lower cost of funds hence high profit margin. The study concluded that a higher Deposit to assets ratio, the more the DTMFI must rely on borrowing (external funding), which is often a more costly source of funding and lead to low ROA.

5.4 Policy Recommendations
Most of DTMFIs in Kenya should use more of customer’s deposits in their funding structure as Deposit and assets mobilization has important impacts on DTMFIs in generating profits as this give management time to strategize how to repay this debt and also this is associated with less cost. Therefore this study calls for the development of appropriate regulatory policies that enable DTMFIs to have access to long-term debt to improve their profitability. This may include relaxation of their listing requirements in the capital market.

The findings indicated that a proportionally higher deposit as a percentage of total assets is associated with improved profitability, assuming that the deposits program is cost efficient. From this perspective, voluntary deposit mobilization may help DTMFIs achieve independence from donors and investors, which is particularly important in periods of liquidity constraints. Savings mobilization may therefore lead to greater profitability since it provides DTMFIs with inexpensive and sustainable source of funds for lending. This perhaps explains why it is an indispensable element for well-performing DTMFIs. Deposits may however require widespread branching and other expenses. But for DTMFIs to collect deposits, they require license for taking public deposits which calls for transition to regulation

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

The study recommend management in DTMFIs should focus on enhancing Customer Deposits and assets as a source of funds as there existed a positively and strongly correlation between Deposit Taking MFIs Total Assets and ROA. However, noted that there were challenges for DTMs seeking to establish their presence in the market given the stringent regulations and problems with capital and technology. The rules hit harder on microfinance institutions seeking to convert to DTMs than those setting up as DTMs from the onset. DTM managers agrees that while mobilizing customer deposits is slower than they would like, they expect CBK and Treasury to change rules to allow DTMs attract big depositors.

Borrowings had negative significantly correlation to ROA. This clearly indicated that accepting deposits has positive impact on profitability of DTMFIs and has significantly influence financial performance of the DTMFIs. The implied that deposits and assets increase would boost DTMFI profit. Deposit mobilization has important impacts on DTMFIs in generating and mitigating each of these risks.

**5.5 Suggestion for Further Research**

The study further recommends an in-depth study which use return on in equity rather than return on assets. This work is a first attempt to study the influence of capital structure on microfinance profitability in Africa economies. Future research could address the impact of, grants, retained earnings, share capital, debt relative to assets and commercial funding liabilities ratio on microfinance profitability. A study can
also be done on the relationship between maturity structure of the DMFIs debt and its
decision and performance.

5.6 Limitation of the Study

The study faces limitations. Obtaining of data from the DTMFIs was a great challenge
and the management in the institutions was uncooperative, however the researcher
explained that the data that was to be obtained was for academic purpose only. In
attaining its objective the study was limited to 6 DTMFIs which were registered with
Central Bank for more than three year from whose data was sourced.

The study is also limited to the degree of precision of the data obtained from the
DTMFIs financial reports. To mitigate the challenge, the study accepted a confidence
level of 95%.

The study also faces challenges of time resources limiting the study from collecting
information for the study particularly where the DTMFIs management delayed giving
the DTMFIs financial reports. To mitigate this, the researcher made often follow up
and enhance collection of sufficient data from the DTMFIs.
REFERENCES


CBK bank supervision annual Reports 2011/2012


Oriaro (2001) Assessing the suitability of a regulatory framework for operations of mfis in Kenya


APPENDICES

Appendix I : Deposit Taking Microfinance Institutions in Kenya.

1. Faulu Kenya DTM Limited
2. Kenya Women Finance Trust DTM Limited
3. Remu DTM Limited
4. SMEP Deposit Taking Microfinance Limited
5. UWEZO Deposit Taking Microfinance Limited
7. Century Deposit Taking Microfinance,
8. SUMAC DTM Limited
### Appendix ii: DTMFI data 2011

DMFIs Funding Sources in Ksh in ‘M’ for the years 2011

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>Deposits</th>
<th>Borrowings</th>
<th>Equity</th>
<th>Total assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faulu</td>
<td>-0.25%</td>
<td>1,965</td>
<td>2,426</td>
<td>556</td>
<td>5,141</td>
</tr>
<tr>
<td>Rafiki</td>
<td>-3.40%</td>
<td>98</td>
<td>100</td>
<td>135</td>
<td>441</td>
</tr>
<tr>
<td>UWEZO</td>
<td>-13.56%</td>
<td>8</td>
<td>0</td>
<td>47</td>
<td>59</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>KWFT</td>
<td>1.36%</td>
<td>1,095</td>
<td>7,187</td>
<td>1,925</td>
<td>17,036</td>
</tr>
<tr>
<td>REMU</td>
<td>-10.48%</td>
<td>14</td>
<td>0</td>
<td>100</td>
<td>124</td>
</tr>
<tr>
<td>SMEP</td>
<td>1.3%</td>
<td>792</td>
<td>909</td>
<td>252</td>
<td>1,998</td>
</tr>
</tbody>
</table>

*For the calculation of ROA, total assets are equal to total assets since 4 of the 6 DTMIs had no opening balance.*
## Appendix iii: DTMFI data 2012

<table>
<thead>
<tr>
<th></th>
<th>ROA</th>
<th>Deposits</th>
<th>Borrowings</th>
<th>Equity</th>
<th>Av. Total assets</th>
</tr>
</thead>
<tbody>
<tr>
<td>Faulu -</td>
<td>0.91%</td>
<td>2,949</td>
<td>2,162</td>
<td>614</td>
<td>6,389</td>
</tr>
<tr>
<td>Rafiki</td>
<td>0.44%</td>
<td>468</td>
<td>434</td>
<td>140</td>
<td>1,140</td>
</tr>
<tr>
<td>UWEZO</td>
<td>-2.90%</td>
<td>18</td>
<td>0</td>
<td>55</td>
<td>69</td>
</tr>
<tr>
<td>KWFT</td>
<td>0.92%</td>
<td>2,493</td>
<td>7,869</td>
<td>2,303</td>
<td>18,710</td>
</tr>
<tr>
<td>REMU</td>
<td>-4.58%</td>
<td>61</td>
<td>0</td>
<td>102</td>
<td>153</td>
</tr>
<tr>
<td>SMEP</td>
<td>2.5%</td>
<td>1,014</td>
<td>617</td>
<td>620</td>
<td>2,144</td>
</tr>
</tbody>
</table>

*ROA= PAT/Av. Total Assets