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EFFECT OF CAPITAL STRUCTURE ON PROFITABILITY OF MICROFINANCE INSTITUTIONS IN NAKURU TOWN, KENYA

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Abstract

The challenges facing microfinance institutions in regard to their capital structure persuaded conducting of this study which evaluated the effect of capital structure on profitability of MFIs in Nakuru town, Kenya. It precisely examined the effect of equity capital and debt capital on profitability of MFIs. The study adopted a cross-sectional survey research design. The target population comprised of 171 employees working with MFIs in Nakuru town. A sample of 64 respondents was obtained using stratified random sampling method. The study used research questionnaires to collect data. The instrument was pilot tested before it was used to collect data. The Statistical Package for Social Sciences software was used to facilitate analysis of the data. Both descriptive and inferential statistics constituted data analysis. The null hypotheses were tested at 95% confidence level. The results of the analysis were presented in tables. The study found that equity capital did not significantly influence profitability of MFIs. However, debt capital had a significant effect on the said profitability. Moreover, it was revealed that capital structure generally had a significant effect on profitability of MFIs. The study concluded that equity capital ratio in MFIs was on the rise. The study concluded that debt capital was the last financing option for MFIs. The study recommended that the owners of MFIs should inject more capital in cases of distress or where the accessible source of funds is only through equity capital injection. The study also recommended that more debt should be used to finance the activities of MFIs.

Keywords: Capital structure, debt, equity, microfinance institutions, profitability

INTRODUCTION

Capital structure describes how firms finance their overall operations and growth by employing various sources of funds. Firms can use either debt or equity or both to finance their assets. Generally, firms can choose the aforesaid alternative capital structure (Abor, 2005). However, the best choice of capital structure is a mix of debt and equity (Shubita & Alsawalhah, 2012). It is averred that in the event that interest is not tax deductible, owners of firms would be indifferent regarding the options of equity and debt. On the other hand, in the event that interest is tax deductible, owners would maximize the value of their firms by employing absolute (100%) debt financing (Shubita & Alsawalhah, 2012). According to Cull et al (2007), microfinance institutions (MFIs) premise their activities on profitability and poverty alleviation. Since early 90s, these firms have indeed facilitated financial inclusion of people who have hitherto been excluded from the banking sector.

It is noted that most microfinance institutions obtain funds inform of grants, equity, deposits and various forms of debt from different investors such as commercial banks and other lending institutions (Bogan, 2012). It is therefore the duty of microfinance institution to ensure the best mix of the funds in its capital structure that brings forth maximum returns. According to Ngo (2012) different funding sources of microfinance institutions in Vietnam have their associated costs which impact of the performance of the institutions. It is noted that large microfinance institutions rely more on debts and are therefore highly leveraged which enables them to achieve higher efficiency, profitability, sustainability and outreach than smaller institutions which presumably have no access to large debts.

Microfinance institutions have increasingly played a crucial role in the financial systems of most developing countries (Reed, 2011). Resultantly, MFIs have accentuated poverty alleviation among thousands of people in the aforementioned countries through the services they offer (Bubna & Chowdhry, 2010). A report by Microcredit Summit of 2011 showed that MFIs enabled approximately 175 million people to access savings and credit services. Against this backdrop, however, MFIs are unable to sustainably render the stated services on their own. This implies that they have to resort to external funding. Tchuigoua (2014) lamented that evidence on financing alternatives of MFIs and their determinants has remained elusive.

It is noted that capital structure of microfinance institutions in Ghana is mainly composed of long-term debt as opposed to short-term debt. As such it is noted that the highly leveraged microfinance institutions are able to reach out to their clientele in a bid to alleviate poverty and achieve other goals (Kyereboah-Coleman, 2007).Salawu and Awolowo (2009) established that capital structure composed of 60% short-term debt, equity and long-term debt has an influence on firm profitability in Nigeria.

The object of microfinance institutions in Kenya is to reduce and alleviate poverty through provision of credit facilities to the larger unbanked populace. In the 1980s through 2000 many microfinance institutions were supported by non-governmental organizations and multinational agencies which were much concerned with creating employment and alleviating poverty through the use of microfinance. It is noted that the dominant microfinance institutions in the 90s were Kenya Women Finance Trust (KWFT), Kenya Rural Enterprise Programme (K-Rep), Faulu Kenya and Family Finance. In the recent past, microfinance institutions have become more vibrant following government interventions in helping out micro-enterprises through microfinance. These institutions may be formal or informal and advance credit either to individuals groups where the later takes the form of Grameen model. However, the interest rates of these microfinance institutions remain higher than commercial banks (Kaburi, Ombasa, Omato, Mobegi & Memba, 2013).

At the close of 2013, microfinance services were provided through a network of 698 branches across Kenya. This was a rise of 23.32% compared to the previous year. These services are rendered by commercial banks, microfinance banks and credit-only MFIs. Out of the mentioned number, MFIs totaled 199 branches countrywide with the largest concentration being the greater Rift Valley region. At the same time, MFIs had a total of 1,926 employees. Borrowings amongst credit-only MFIs have been on the rise as reflected by figures increasing from Shs4.7b to Shs6.8b and to Shs7.9b in years 2011, 2012 and 2013 respectively. These financial institutions borrow from both domestic and international lenders. They perceive loan amount and the repayment frequency as being more favourable for international loans as compared to domestic loans. However, the guarantee requirements and the loan application process are perceived as more favourable locally as opposed to international borrowing process.

Statement of the Problem

Microfinance sector is very important to the country's socio-economic development given the fundamental role it plays in financial inclusion. The sector focuses mainly on the hitherto unbanked population mostly the low-income earners in the society. However, the sector has been facing numerous challenges which have threatened the survival and growth of the very industry. The fact that many MFIs are not deposit-taking, a departure from other financial institutions, yet they give out loans to their customers implies that they rely heavily on debt and possibly retained earnings. This is a huge challenge due to inadequacies of retained earnings and exorbitant interest rates charged by commercial banks when lending to MFIs.

When there are challenges on capital structure of MFIs, these firms will have inadequate funds to loan out to their customers. Interest charged on credit advanced to borrowers is the spine of MFIs. Therefore, when MFIs lack sufficient funds to give their customers in form of loans is likely to lead to foregone profits, losses, and ultimately collapse of these institutions. Indeed, it 2014 Sector Report on the Microfinance Sector in Kenya by the Association of Microfinance Institutions (AMFI, 2014) indicated that MFIs portfolio yield reflects higher operational costs incurred. Operating expenses ratio as at 2014 was 23.5% amongst credit-only MFIs. Moreover, these MFIs have limited availability of affordable financial resources and also have limited bargaining power to source funds at competitive rates as compared to microfinance banks (MFBs) and banks. Therefore, such MFIs have lower portfolio quality compared to banks and MFBs. In the same light, the report indicated that, MFIs capitalization is not deemed sufficient because, unlike MFBs and banks, they are not regulated, a situation that presents a higher risk profile. The present study aimed to address the problem of capitalization affecting MFIs as one way of enhancing their profitability.

General Objective

The general objective was to evaluate the effect of capital structure on profitability of microfinance institutions in Nakuru town, Kenya.

Specific Objectives

i. To examine the effect of equity capital on profitability of microfinance institutions in Nakuru town
ii. To analyze the effect of debt on profitability of microfinance institutions in Nakuru town

Research Hypotheses

H_{01}: Equity capital does not have significant effect on profitability of microfinance institutions in Nakuru town

H_{02}: Debt does not have significant effect on profitability of microfinance institutions in Nakuru town

THEORETICAL FRAMEWORK

In this section, theories of capital structure and profitability are reviewed and discussed relative to microfinance sector and institutions. The study reviews Miller and Modigliani capital structure theory and market power theory.

Modigliani and Miller Capital Structure Theory

Miller and Modigliani (1958) were the proponents of the theory. The theory assumes a perfect market and states that the value of the company is independent of its capital structure. That is, it doesn't matter how a firm finances its operations and therefore the value of the firm is not dependent on its capital structure, hence capital structure is irrelevant. The theory is based on the assumption that there are no taxes, no transaction costs, no bankruptcy costs, there is equivalence in borrowing costs for both the investors and companies such that investors can borrow at the same rate as corporates, companies and investors have the same information such that there is no informational asymmetry and that there are no effect on a company's earnings before interest and taxes.

The theory further states that the market value of a firm is determined the risk of it underlying assets and more so by the firm's earning power. The firm value therefore is totally independent of the way the firm finances its investment activities and pays out dividends (Oghenekohwo, Nkeiruka & Nnenna, 2015). The second proposition by Modigliani and Miller (1963) brought about the trade-off theory that incorporates bankruptcy costs. The authors argued that there is a tax benefit associated with debt financing and there was also the cost of debt that they termed the bankruptcy cost of debt. Under the new proposition otherwise called trade-off theory, it was argued that the marginal benefit of increases in debt reduces while the marginal cost increase. As such, the firm that maximized its overall value would consider to trade-off between equity and debt while financing. The assumptions of the first proposition of the Miller-Modigliani theorem doesn't hold in the real world and has spurred the development of other theories such pecking order and agency theories that address the shortcomings of Miller-Modigliani theorem.

Market Power Theories

The market power hypothesis has been used to explain bank performance. The theory posits that the performance of a bank is largely influenced by the market structure of the industry. According to the theory, there are two separate approaches that are Structure-Conduct Performance (SCP) and Relative Market Power (RMP). The SCP hypothesis contends that the high level of market concentration is the source of market power (Smirlok 1985). As such, the high concentration of banking institutions in the banking market gives rise to market power by banks. Thus, the banking institutions in more concentrated markets are more likely to make abnormal profits. This is ascribed to their ability to give loan on higher interest rates and accept deposit at lower interest rates due to monopoly than firms in less concentrated markets despite their efficiency (Tregenna, 2009).

However, critics contend that the direct source of market power emanates from the domination of participants in the individual market irrespective of the source of domination and hence the emergence of RMP (Shepherd, 1986).According to RMP hypothesis, banks with large market share and diversified products exert their market power and therefore influence prices and thus make huge profits. In line with the hypothesis, individual market shares determine market power and market imperfections (Mensi & Zouari, 2010). Indeed, according to Tregenna (2009) banking institutions are able to exert market power and thus earn non-competitive profits. The theory serves best to explain profitability of microfinance institutions. MFIs commanding large market share and more so with diversified products are able to make huge profits since they can influence the prices of their products such as loans based on elasticity of demand due to alterations in prices.

EMPIRICAL REVIEW

This section covers a review of empirical studies that have been carried out in the past in respect of capital structure and profitability of firms with a bias to financial sector particularly microfinance sector. The studies reviewed are in tandem with equity capital and debt as components of capital structure, and also profitability.

Equity Capital

An empirical investigation of the effect of equity capital on interest rate and demand for credit was carried out (Martin-Oliver, Ruano & Salas-Fumas, 2012). The study particularly examined the effect of imposing higher capital requirements on demand for credit and interest rate among Spanish banks. The study found that an increase by one percent of equity capital ratio increased bank lending rates by a 4.2 basis points. Further, the study noted that increase in the cost of funds for banks as result of the increase in a percent of equity capital ratio led to a fall of about 0.8% in the demand for credit. It was suggested that higher equity capital requirements for banks resulted in increase in social costs as the banks adjust to the new standards.

Equity financing constraints and corporate capital structure was put into perspective (Zhu & Wang, 2013). The study purposed to establish how uncertainty of equity financing as a result of equity financing regulations in emerging capital market affect company's capital structure decisions. It is noted that the value of the firm decreases with the uncertainty of equity financing. This is ascribed to the relationship between the firm's future cash and the financing policies. It was suggested that uncertainty of equity financing affects the decision on optimal capital structure. Lower optimal capital structure would be attained in case of greater uncertainty of equity financing.

In another study, Lislevand (2012) analyzed the effect of capital structure on performance of microfinance institutions. Cross-sectional data from 403 MFIs in 73 countries was used. The measures of capital structure were debt to equity ratio and debt to assets ratio while cost of funds and return on assets peroxide performance. It was established that most of the surveyed MFIs were less financed through equity. Indeed, it was noted that the institutions used approximately a quarter of debt capital as equity in their capital structure. The study however noted that the proportion of equity to debt in the MFIs was not significant in MFIs performance

Financial sustainability in rural microfinance institutions in Tanzania was empirically examined (Ganka, 2010). The study noted that how capital of micro financial institution is structured determines the performance of the institution. However, the author noted that having different sources of capital do not improve performance. The findings also revealed that equity financing is relatively cheaper option and as such improves the performance of micro finance institutions. Similarly, Sekabira (2013) while looking into the role of capital structure on performance of MFIs in Uganda established that MFIs that have better share capital composition in their capital structure are more sustainable

Oke and Afolabi (2011) examined capital structure and industrial performance. The authors particularly studied five firms quoted in Nigeria Stock Exchange for a period of 9 years. The study used panel data regression model. The findings revealed that there was a positive relationship between firm performance and debt to equity ratio. More so, the study ascertained that equity financing adversely influenced performance of the firm.

A study on the effect of capital structure on financial performance of firms was carried out (Siro, 2013). Longitudinal research design was employed. On focus were the 61 listed firms at NSE. The study relied on secondary data which was obtained from NSE hand books and company financial statements. It was noted that there was an inverse relationship between capital structure and financial performance of the surveyed firms. Particularly, the study ascertained that higher debt ratio, that is lower equity ratio resulted to less return on equity. The study underlined the need of more equity capital employment in the firm rather than borrowing since the cost of debt financing may be higher.

Debt Capital

An empirical examination of the impact of capital structure on performance of microfinance institutions was conducted (Kyreboah-Coleman, 2007). The study consisted a data set of 290 MFIs from 61 countries across the world. The study noted that most microfinance institutions employed more debt financing in their capital structure in order to enable the institutions to

reach their customers and potential customers and enjoy greater economies of scale. Further, it was noted that the ratio of total debt to short term debt adversely and significantly influenced performance measured by return on assets while affecting positively return on equity. It was therefore suggested that profitable MFIs incline to long-term debt financing.

There have been arguments on the effect of capital structure on performance of corporate entities where empirical evidence from various researchers give mixed and contestable results (Muriu, 2011). The author empirically examined whether the financing choice of MFI has an impact on profitability. A total of 210 MFIs across 31 countries in Asia, Middle East, Latin America and Africa that were in operation from 1997 to 2008 were considered. Data was obtained from these institutions. The study findings indicated that microfinance institutions that incorporated higher proportions of debt in their capital structure were more profitable. It was also noted that MFIs with higher portfolio to assets ratio were more profitable depending on the age of the institution. The study concluded that MFIs should have policies that are geared towards access to long-term debt in order to enhance microfinance profitability.

In Nigeria, Appah, Okoroafor and Bariweni (2013) empirically examined the effect of capital structure on performance of firms listed in Nigerian Stock Exchange for the period 2005 to 2011. A total of 32 quoted firms were considered for the study. The study employed panel study. The results indicated that short term debt, long term debt and total debt negatively influenced performance when it was measured by using return on asset and return on equity. Further, non tax debt and liquidity negatively influenced performance of the firms.

The capital structure-financial performance nexus was examined (Orua, 2009). The study purposed to establish how capital structure related to outreach level and default rate. A total of 36 MFIs in Nairobi registered with Association of Microfinance Institutions were considered. Data was obtained from annual financial statements of the selected MFIs for the period 2004 to 2008. The independent variables were short term debs, long term debts and total debts as a ratio of total assets. Dependent variables were outreach and default rate. It was discovered that most of the surveyed MFIs were highly leveraged. Indeed, mean total debt ratio was 76%. It was further noted that MFIs financed their operations with long term debt and enjoy satisfactory performance as depicted by return on assets and return on equity ratios. Short-term debt and long-term debt positively influenced outreach but long-term debt was not significant with default rate. It was concluded that MFIs that high used debt performed better by reaching to more clients, enjoyed economies of scale and were able to deal with moral hazard and adverse selection issues.

An assessment of the effect of funding structure on the financial performance of deposit taking microfinance institutions in Kenya was carried out (Kiiru, 2013). The study relied on data

from Central Banks' annual supervision reports for the period 2011 to 2012. Measures of financial performance was return on assets while proxies for funding structure were customer deposit and borrowings divided by total assets. The study noted that the surveyed institutions used borrowings to fund themselves. Further it was established that borrowing or debt adversely affected the institutions' financial performance. In addition, it was noted that MFIs were less inclined to debt or borrowing as it reduced financial performance, rather the institutions preferred customer deposits to debts. The study however recommended that appropriate regulatory policies should be developed in order to allow MFIs to access long-term debt which may consequently improve profitability of the institutions.

In the same vein, Kajirwa (2015) sought to find out whether the use of debt in firms debt structure affects firm performance. The study was a survey of commercial banks listed on Nairobi Securities Exchange. Longitudinal research design was used. Financial performance was measured by return on assets. The study findings indicated that debt negatively affected firm performance though not significantly. It was concluded that use of debt in commercial banks' capital structure adversely affects performance. The study recommended that commercial banks should source for low risk financing in order to enhance performance.

Profitability

Jørgensen (2011) examined profitability of microfinance institutions and yield on gross portfolio. The aim of the study was to determine the factors that determine profitability and to establish whether the high interest rates influence profitability of the institutions. 879 MFIs in Denmark participated in the study. The study noted that factors that positively influenced profitability were the capital asset ratio, age of the MFI and gross loan portfolio. However, the cost per borrower and number of active borrowers negatively influenced profitability. In addition, operating expense positively influenced profitability of the institutions. The findings on yield on gross portfolio showed that there were no general trends that MFIs charged higher yield in a bid to obtain higher profitability.

A study conducted by Abrar and Javaid, (2016) sought to determine the impact of capital structure on profitability of microfinance institutions. The study particularly considered the sources of funding and relative profitability of microfinance institutions. Return on assets, operational self-sufficiency and return on equity proxied profitability while deposit to asset ratio, net deposits and debt to equity ratio were used to measure the financial sources. Data from approximately 70 countries around the globe was used. The study found that deposits enhanced the levels of debt and therefore complemented the firms' overall profitability. The increase in operating costs and risks was noted to reduce profitability.

An investigation into debt policy and financial performance was conducted (Abor, 2007). The study targeted medium sized enterprises in Ghana and South Africa. The results revealed that the effect of short-term debt was negatively and significantly influenced gross profit margin of the surveyed enterprises. It was suggested that increasing short-term debt would decrease the profitability of the firms. An earlier study on the effect of capital structure on financial performance in Ghana revealed that profitable firms relied more on debt financing due to the perceived low financial risk (Abor 2005).

An empirical study on the determinants of microfinance institution profitability was conducted (Gudeta, 2013). The study investigated the internal and external factors that affected profitability in microfinance institutions in Ethiopia. The study adopted quantitative research method. A total thirteen microfinance institutions were selected and data for the period 2003 to 2010 obtained from the institutions. The determinants of profitability were age, size, financing structure, risk and liquidity and real gross domestic product growth. The proxy for profitability was return on assets. The study established that internal variables that were portfolio quality and efficiency measured by operating expense to gross loan portfolio significantly and negatively influenced profitability. The age or learning effect of MFI positively influenced profitability. As such it was noted that as MFIs become more mature, their profitability increased. Capital adequacy ratio, firm size and real gross domestic product were insignificant on profitability. Since quality of portfolio and operational efficiency were important factors in profitability, the study recommended that management of MFIs need to develop good credit management policy and reduce operating costs through the use of mobile micro banking and reducing the frequency of installment payments.

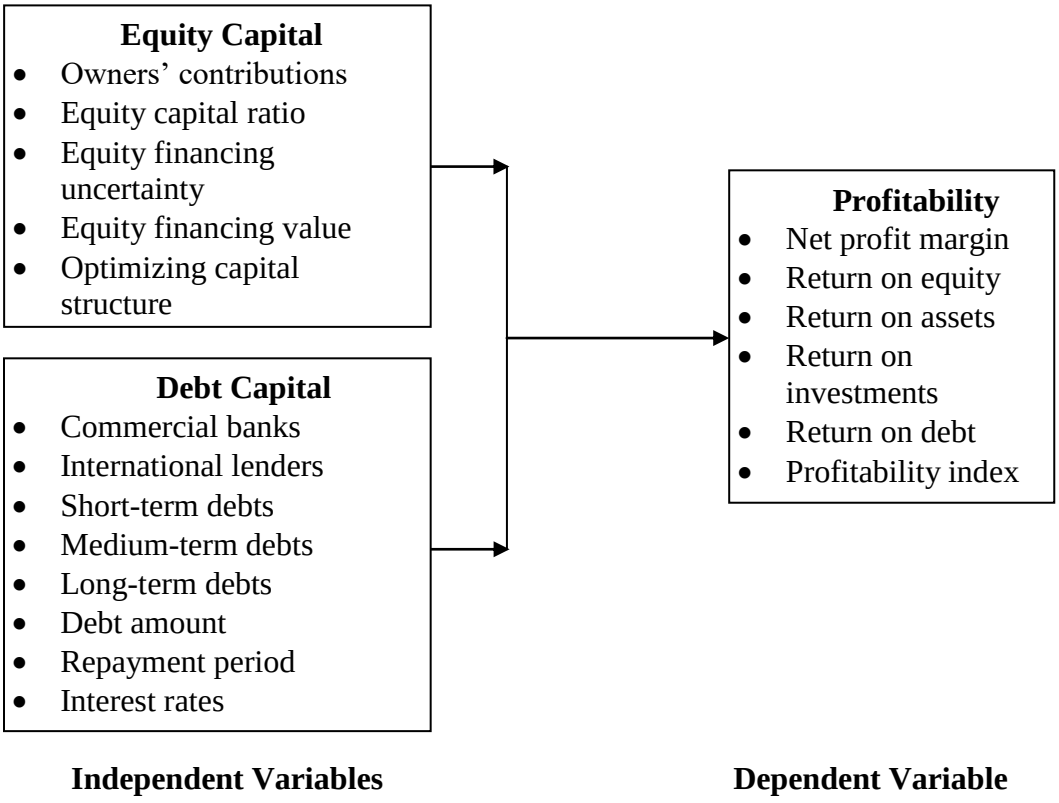
In another study, Marura and Okatch (2015) investigated the factors that affect profitability of microfinance institutions in Kenya. The study employed descriptive research design. MFIs in Nairobi central business district were considered for the study. The study findings revealed that the debt collection process in the microfinance affected credit risk management which in turn determined profitability of the institution. In addition legal policies and credit rating had an effect on profitability of the MFIs. It was recommended that MFIs ought to review their lending policies to be in line with the legal policies in order to enhance their profitability and compliance with the set laws.

Conceptual Framework

A conceptual framework is a diagrammatic representation of study variables and their perceived relationships. Figure 1 illustrates the conceptual framework for this study. As indicated, the independent variables include equity capital and debt capital while profitability of MFIs is the

dependent variable. Therefore, it was assumed that each of the stated independent variables, which are indicators of capital structure, affected profitability of MFIs. In the same breadth, capital structure was generally believed to impact on profitability of MFIs. It is on these premises that the study was conducted.

Figure 1: Conceptual Framework



METHODOLOGY

Research Design

A research design is variously described as the blueprint or roadmap of conducting a research study (Kothari, 2008). A good research design should be able to effectively address the research problem and also the study objectives. The study adopted a cross-sectional survey research design. Cross-sectional studies are conducted over a given period of time and include participants drawn from various sources (organizations). This study included employees working with MFIs in Nakuru town. The study employed quantitative approach.

Target Population

An aggregate of all subjects or individuals who share common or related character traits constitute the target population. In respect of the present study, the target population comprised

of 171 employees working with MFIs in Nakuru town. Lack of distinct structures in MFIs as in the case of commercial banks partly justified the choice of all employees working the MFIs. It was believed that the targeted individuals were conversant with issues touching on capital structure and profitability of their firms. Another reason of targeting all employees was to minimize selection bias.

Sample Size and Sampling Technique

This section focuses on the sampling frame, sample size determination, and also the sampling technique that were employed to obtain respondents from the target population.

Sampling Frame

A sampling frame is described as an exhaustive list from which the sample is derived. In other words, a sampling frame encapsulates all the members of the target or accessible population. Therefore, the 171 employees working with MFIs in Nakuru town constituted the sampling frame as shown in Table 1.

Table 1: Sampling Frame

	Microfinance Institutions	No. of Employees
i.	Eclof Kenya	13
ii.	Vision Fund Kenya Limited	12
iii.	BIMAS	17
iv.	SISDO	14
v.	Micro Africa Ltd	17
vi.	Fusion Capital Ltd	13
vii.	Jitegemee Credit Scheme	21
viii.	Pamoja Women Development Programme	22
ix.	Musoni Kenya Ltd	16
x.	Platinum Credit Limited	17
xi.	Real People	9
Total		**171**

Sample Size Determination

A sample is a subset of the study population. As such, a good sample should be a representative of the study population. According to Kothari (2008) when the size of the target population is relatively large (N > 100), then sampling is necessitated. Scientific methods are

emphasized when determining the sample size. In respect to the foregoing, Nassiuma's (2008) formula was employed to calculate the size of the sample as hereby outlined.

$$n = \frac{NC^2}{C^2 + (N-1)e^2}$$

Where n, N, C, and e represent sample size, size of target population, coefficient of variation (21% ≤ C ≤ 30%), and error margin (2% ≤ e ≤ 5%).

The above equation is substituted as follows.

$$n = \frac{171\ (0.3)^2}{0.3^2 + (171-1)0.03^2}$$

$$n = 63.33$$

$$n = 64 \text{ respondents}$$

This implies that the size of the sample (n) was equivalent to 64 respondents.

Sampling Technique

Sampling technique refers to the method that is used to obtain the sampled respondents from the target population. This study employed probability sampling methods, particularly, stratified random sampling method to draw respondents from the study population (sampling frame). There were a total of 11 MFIs registered with AMFI – Kenya which had different number of employees. Each MFI was equivalent of a stratum which meant the study had a total of 11 strata. Stratified random sampling ensured that there was no bias in obtaining sampled respondents from the study population.

Research Instrument

A research instrument is a tool that is essentially used to collect data from respondents. There are various types of instruments including interview schedules, questionnaires and focus-group discussion checklists amongst others. The choice of instrument is determined by the kind of research design and the type of data intended to be collected. Given that this was a survey study, research questionnaires were the most appropriate (Mugenda & Mugenda, 2009). In addition, in order to collect quantitative data, the questionnaire was structured. As such, the questionnaire contained close-ended questions that addressed all study objectives.

Pilot Testing

A pilot study was carried out before the main study. The purpose of conducting this study was to identify any probable weaknesses in the research instrument by way of assessing both its

validity and reliability. The piloting of the instrument also enabled the researcher to know how well the respondents were able to comprehend the questions therein. Any errors or deficiencies detected at this stage were addressed accordingly prior to the administration of the instrument in collection of data for the main study. The pilot study was carried out in Molo town, which like Nakuru town, is in Nakuru County. On focus were employees working with these firms who were randomly selected. The scope of the pilot study was necessitated by the fact that the participants were not supposed to take part in the main study.

Validity Testing

Validity testing is aimed at verifying whether or not the research instrument indeed measures what it purports or is intended to measure. As such, a valid instrument is bound to enable collection of data that can effectively address the study objectives and research problem. There are various types of validity. In this study, the interest was in determining the content validity. As argued by Kimberlin and Winterstein (2008), content validity cannot statistically be measured. Essentially, therefore, this validity was determined through consultation with university supervisor who determined the extent to which the instrument addressed the study objectives.

Reliability Testing

Reliability is a test of internal consistency of the research instrument. External consistency is ordinarily beyond the control of the researcher hence the interest in assessing internal consistency. Study used most widely used and recommended reliability test Cronbach alpha (α). The reliability threshold was alpha values equal to or greater than 0.7 ($\alpha \geq 0.7$). As shown in Table 2, the study variables returned values greater than 0.7. As indicated reliability of equity capital was $\alpha = 0.842$; debt capital was $\alpha = 0.820$; while profitability was $\alpha = 0.783$. Therefore the entire research questionnaire was proved to be reliable for use in data collection.

Table 2. Results of Reliability Test

Variables	Test Items	Alpha Values
Equity Capital	5	0.842
Debt Capital	8	0.820
Profitability	6	0.783

Data Collection Procedure

Upon determination of both validity and reliability of the research instrument, the next stage was to collect data from the sampled respondents. The researcher sought requisite permits and

consents from the University and the senior managers of MFIs in Nakuru town. The questionnaire which was self-designed was administered by the researcher in person where it was issued to the sampled respondents through the respective managers. The respondents were allowed a maximum of five working days to fill in the questionnaire. The filled questionnaires were then collected from the respondents.

Data Processing and Analysis

The collected filled questionnaires were ascertained to ensure that only the appropriately filled ones according to instructions were considered. The foregoing addressed the issue of data cleaning and outliers; a factor that was anticipated to enhance reliability of the research findings. The Statistical Package for Social Sciences (SPSS) Version 24 software was used to facilitate electronic analysis of the data collected. Essentially, both descriptive and inferential statistics constituted the analysis. Descriptive analysis comprised measures of distribution, measures of central tendencies, and measures of variation. This was limited to background information of the respondents. The measures of central tendencies took the form of means and the aim was to demonstrate the views of the respondents on the various study constructs. More so, the measures of variation adopted constituted the standard deviation which was used to show the extent to which the respondents agreed with various propositions under each construct of the study. Inferential statistics used include Pearson's correlation coefficients and regression analysis. Correlation analysis was employed to show the direction, strength and significance of the effect of each of the independent variables (equity capital and debt) on the dependent variable (profitability). On the other hand, regression analysis was used to demonstrate the extent to which each of the mentioned independent variables affected the profitability; the combined effect of the independent variables (capital structure) on the dependent variable (profitability), and also to address the research hypotheses. The null hypotheses were tested at 95% confidence level. The results of the analysis were presented in tables. The following regression model was adopted.

$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$

Where:

Y	=	Profitability
β_0	=	Constant
X_1	=	Equity Capital
X_2	=	Debt Capital
ε	=	Error Term
β_1, β_2	=	Regression Coefficients of Independent Variables

FINDINGS AND DISCUSSIONS

Response Rate

The response rate is calculated from the number of questionnaires that were successfully filled and returned against the number of questionnaires issued to respondents. Sixty-four questionnaires were administered in respondents. From these questionnaires, a total of 58 were successfully filled and returned. This translated to a response rate of 90.63% which was highly adequate.

Descriptive Findings and Discussions

This section shows the tabulated views or opinions of MFIs' employees regarding issues touching on capital structure (equity capital, debt capital) and profitability in their firms. The results are on a five point Likert scale where points 1 to 5 range from strongly disagree to strongly agree respectively. In this part the descriptive findings of the study constructs are illustrated.

Equity Capital

Respondents were asked to indicate their opinions in respect to equity capital in the MFIs they worked with. The descriptive findings are displayed in Table 3. It was noted that respondents agreed (mean = 3.90; std dev = 0.931) that equity capital ratio was on the rise in the organization and that equity financing was cheaper than other forms of financing (mean = 3.97; std dev = 0.794). Respondents were non-committal that MFIs' core capital came from owners' contributions (mean = 3.10; std dev = 1.119) and that optimal capital structure of MFIs was dependent on equity financing (mean = 2.97; std dev = 1.008). It was disputed (mean = 2.26; std dev = 1.052) MFIs faced uncertainty regarding equity financing.

Table 3: Descriptive Statistics for Equity Capital

	n	Min	Max	Mean	Std. Dev
Our MFI core capital comes from owners' contributions	58	1	5	3.10	1.119
Equity capital ratio is on the rise	58	2	5	3.90	.931
Our firm faces uncertainty regarding equity financing	58	1	4	2.26	1.052
Optimal capital structure in our firm is dependent on equity financing	58	1	4	2.97	1.008
Equity financing is cheaper than other forms of financing	58	2	5	3.97	.794

Debt Capital

The opinions of the respondents in relation to debt capital were analyzed and presented in Table 4. Respondents agreed that the period of debt was in line with the debts amount (mean = 3.88; std dev = 1.077) and that funds borrowed attracted interest rates (mean = 4.19; std dev = 0.712). It was further admitted that debt capital was the last financing option in the firm (mean = 3.97; std dev = 1.042). It was interesting to note that respondents were unsure whether MFIs borrowed funds from local commercial banks (mean = 3.31; std dev = 1.404). Respondents were also not sure whether the firm borrowed medium-term funds (mean = 2.81; std dev = 1.017) or long term funds (mean = 3.38; std dev = 0.768). However, it was disagreed that MFIs borrowed funds from international lenders (mean = 2.28; std dev = 1.022) and that these firms borrowed short-term funds (mean = 2.43; std dev = 1.171).

Table 4: Descriptive Statistics for Debt Capital

	n	Min	Max	Mean	Std. Dev
Our MFI borrows funds from local commercial banks	58	1	5	3.31	1.404
Our MFI borrows funds from international lenders	58	1	4	2.28	1.022
Our firm borrows short-term funds	58	1	4	2.43	1.171
Our firm borrows medium-term funds	58	1	4	2.81	1.017
Our firm borrows long-term funds	58	2	5	3.38	.768
Period of debt is in line with the debt amount	58	2	5	3.88	1.077
Funds borrowed attract interest rates	58	3	5	4.19	.712
Debt capital is the last financing option in our firm	58	1	5	3.97	1.042

Profitability

The respondents' opinions on profitability of the MFIs were also sought and analyzed. The findings are shown in Table 5. The study found that respondents concurred (mean =3.66; std dev<0.785) that MFIs enjoyed high net profit margin and high return on investment (mean =3.66; std dev<0.608). Respondents were neutral regarding the view that MFIs enjoyed high return on equity (mean =3.48; std dev<0.978) and assets (mean =3.41; std dev<0.859); high return on equity (mean =3.48; std dev<0.978), high return on debt (mean =3.31; std dev<0.977) and high profitability index. The foregoing illustrated that MFI under study registered high profitability (mean =3.36; std dev<0.831). The results indicated by the small standard deviations implied that the opinions of the employees of the MFIs were not much varying.

Table 5: Descriptive Statistics for Profitability

	n	Min	Max	Mean	Std. Dev
Our firm enjoys high net profit margin	58	2	5	3.66	.785
Our MFI has high return on equity	58	1	5	3.48	.978
Our firm enjoys high return on assets	58	2	5	3.41	.859
Our MFI enjoys high return in investment	58	2	4	3.66	.608
Our firm enjoys high return on debt	58	1	5	3.31	.977
Our firm's profitability index is high	58	1	5	3.36	.831

Inferential Findings and Discussions

To determine the relationship between the independent variables (equity capital and debt capital) and dependent variable (profitability) Pearson's correlation analysis was employed. More so multiple regression analysis was used to determine the implication of capital structure on profitability of MFIs. Therefore, this section presents the correlation and regression findings and interpretations.

Relationship between Equity Capital and Profitability

The study determined the relationship that existed between equity capital and profitability in MFIs. The correlation results are shown in Table 6. According to the results, there existed a weak, positive and statistically significant ($r = 0\ .261$; $p < 0.05$) relationship between equity capital and profitability in MFIs. This meant that though owner's capital had a positive effect on profitability of MFIs, the effect was marginal. As noted that equity capital in the MFI was on the rise, it could be deduced that equity capital injection results to profitability in the long run. The findings concurred with Siro's (2013) study on listed firms that emphasized on the importance of equity capital. In addition, the findings tallied with observations of study done in Tanzania (Ganka, 2013). The study had found that equity financing is relatively cheaper option and as such improves the performance of micro finance institutions.

Table 6: Relationship between Equity Capital and Profitability

		Profitability
Equity Capital	Pearson Correlation	.261*
	Sig. (2-tailed)	.048
	n	58

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

Relationship between Debt Capital and Profitability

The study examined the relationship between use of debt capital and profitability in MFIs. The correlation results indicated in Table 7 reveal that a moderately strong, positive and statistically significant ($r = 0.466$; $p < 0.01$) relationship existed between debt capital and profitability. It implied that debt capital largely influenced profitability in the MFI. Debt capital therefore was used in profit generating activities such as loaning out to borrowers at higher interest rates or even channeled to other investments that generated profits. Debt capital was argued to create more incentive than equity capital and retained profits in enhancing profitability due to the obligation of servicing interest of borrowed funds. The findings of a study on performance of microfinance institutions from 61 countries across the world were reinforced the findings of the present study (Kyreboah-Coleman, 2007). The findings had indicated that profitable MFIs incline to long-term debt financing.

Table 7: Relationship between Debt Capital and Profitability

		Profitability
Debt Capital	Pearson Correlation	.466**
	Sig. (2-tailed)	.000
	n	58

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

The effect of Capital Structure on Profitability of MFIs

Multiple regression analysis was used to determine the combined effect of the independent variables (equity capital and debt capital) on dependent variable (profitability). The foregoing represented capital structure. The individual effect of the independent variables on dependent variable was also determined. Table 8 indicates the contribution of the three variables to profitability. The ANOVA Table 9 illustrates the significance of the association between the study variables and Table 10 indicates the varied effect of equity capital, retained earnings and debt capital on profitability of MFI. The aforementioned is further explained.

As shown in Table 8, it was revealed that 23.2% of profitability of MFI was attributed to its capital structure as characterized by equity capital and debt equity. Therefore, there were other factors besides the ones investigated by the study that could explain 76.8% of the profitability of MFIs. Such factors could be the quality of assets, competition, and overall economic performance among others. Moreover, a moderately strong and positive ($R = 0.522$)

relationship existed between equity capital, retained earnings, debt capital and, profitability. Thus it is noted that capital structure of MFI is critical in enhancing its profitability.

Table 8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.522[a]	.272	.232	.37122

a. Predictors: (Constant), Equity Capital, Debt Capital

The results of analysis of variance (Table 9) showed that the association between equity capital and debt capital on one hand and profitability on the other hand, was positive and statistically significant ($F = 6.737$; $P < 0.05$). Therefore profitability of MFI was dependent on its capital structure. The findings underscored the importance of the mentioned elements of capital structure in enhancing profitability of MFIs.

Table 9: ANOVA[b]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	2.785	3	.928	6.737	.001[a]
	Residual	7.441	54	.138		
	Total	10.227	57			

a. Predictors: (Constant), Equity Capital, Debt Capital

b. Dependent Variable: Profitability

The results of multiple regression coefficients shown in Table 10 indicated that the capital structure (equity capital and debt capital) had a significant effect on profitability of MFIs. It was noted that the effect of debt capital on profitability of MFI was significant ($t = 3.213$; $p < 0.05$). However, the effect of equity capital ($t = -0.325$; $p > 0.05$) on profitability was not significant. This implied that the first null hypothesis failed to be rejected. The second null hypothesis was, however, rejected.

In addition, it was noted that in order to increase profitability of MFIs by one unit, then equity capital had to be reduced by 0.040 unit and debt capital increased by 0.399 unit while holding other factors (1.639) constant. It was, therefore, noted that financing MFI activities by debt increased profitability. Debt capital was the most crucial component of capital structure of microfinance institutions in Nakuru town.

Table 10: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.639	.427		3.838	.000
	Equity Capital	-.040	.123	-.057	-.325	.746
	Debt Capital	.399	.124	.393	3.213	.002

a. Dependent Variable: Profitability

$Y= \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \varepsilon$

The above was interpreted as follows:

$Y= 1.639 – 0.040X_1 + 0.399X_2$

Summary

It was agreed that equity capital ratio was on the rise in MFIs and that equity financing was cheaper than other forms of financing. It was unclear whether MFIs' core capital came from owners' contributions and whether these firms faced uncertainty regarding equity financing. It was also not clear whether optimal capital structure in MFIs was dependent on equity financing. The correlation results showed that there existed a weak, positive and statistically significant ($r = 0 .261$; $p < 0.05$) relationship between equity capital and profitability in MFIs.

It was believed that funds borrowed attracted interest rates and that period of debt was in line with the debts amount. It was also admitted that debt capital was the last financing option in the firm. The view that MFI borrowed from local commercial banks and /or international lenders raised mixed responses and was inconclusive. In addition, contrary to the expectations respondents were unsure whether the firm borrowed short-term funds, medium term funds and/or long term funds. The study discovered a moderately strong, positive and statistically significant ($r = 0.466$; $p < 0.01$) relationship between debt capital and profitability.

It was admitted that the firm enjoyed high net profit margin and high return on investment. Nevertheless, respondents were indifferent of the view that the firm enjoyed high return on assets, high return on equity, high return on debt and high profitability index. The findings further noted that 23.2% of profitability of MFI was attributed to its capital structure factors of equity capital, retained earnings, and debt equity. Moreover, it was established that a strong, positive and statistically significant relationship existed between equity capital, retained earnings, debt capital and, profitability

CONCLUSIONS

The study concluded that the equity capital ratio in the MFI was on the rise and that equity financing was cheaper than other forms of financing in the firm. It was further inferred that equity capital was important in enhancing profitability of MFIs though marginally. It is therefore imperative for MFIs to consider the amount of equity necessary to realize a given level of profitability and ensure the firm is not wholly financed through equity hence ensure the optimum mix of debt and equity.

The study also inferred that borrowed funds attracted interest rates and the period of debt was in tandem with the debt amount borrowed. In addition, the study concluded that debt capital was the last financing option for the firm. It was further noted that use of debt capital largely enhanced profitability in the MFIs.

RECOMMENDATIONS

The study recommended that the owners of MFI should inject more capital to the firm in cases of distress or where the accessible source of funds is only through equity capital injection. However, the appropriate level of equity to debt should be maintained in order to ensure that the funds are not conservatively used and also to ensure higher profitability and hence higher shareholder wealth. In relation to the use of debt capital, the study recommends that more debt should be used to finance the activities of the firm. However, high leverage coupled with declining profits may render a firm to make losses and consequently collapse. Hence optimum amount of debt should be used in the capital structure of the firm.

LIMITATIONS

The study faced a couple of limitations. First, it was rather difficult to convince management of MFIs to allow their staff to participate in the study. More so, some of the employees were not willing to take part in the study for fear of negative reprisals from their bosses. Thirdly, the MFIs registered with Association of Microfinance Institutions were quite few. To address these challenges, the managements of the MFIs were assured that the study was purely academic and the researcher was not interested in sensitive financial data. In addition, the employees were assured that the data collected were to remain confidential and that their identities were not to be disclosed whatsoever. The study held the assumption that the registered MFIs were the most organized and structured while compared to unregistered ones and as such were the most appropriate to focus on.

SUGGESTIONS FOR FURTHER STUDIES

The study determined the effects of capital structure on the profitability of microfinance institutions in Nakuru town, Kenya. There are other sectors apart from banking sector in Kenya where capital structure may be investigated and its effects on profitability determined, for instance in the mining sector. It is also suggested that a study on capital structure and its influence on firm financial performance in learning institutions may be carried out. The role of capital structure on the financial performance of non-governmental organizations should also be determined.

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