CAPITAL STRUCTURE AND FINANCIAL PERFORMANCE OF MICROFINANCIAL INSTITUTIONS IN NAIROBI CITY COUNTY KENYA

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ABSTRACT

This research was intended to appraise ramification of the capital system on commercial return of micro-financial institutions in Kenya's Nairobi City County. The research was seeking to resolve the following problem. What are the capital structure features used by the MFI? Is there a connection between the composition of capital and the viability of firms? If the business size has an impact on earnings before tax? The study was motivated by the following capital structure theories, which are the theory of Modigliani and Miller, standard theory, the theory of net income method and the theory of net operating income approach. To define the independent variable, the researcher used a descriptive analysis design. To explicate sequel of predictor variables on the responding variables, explanatory research may also be used. The target demographic of the research is to be all 14 successful microfinance companies as recognized by the Kenya Microfinance Act as of 2020. The research therefore represents a census survey with a period of 5 years (from 2014-2018). The study's research model consisted of the independent variable debt ratio, the equity ratio and the size of the company as a moderating variable, determined by the company's gross asset value, and the following ratios as dependent variables: return on equity. To analyze the results, Stata will be used. There will be descriptive and inferential statistics execution. The gradation of correlation allying to covariate parameter and responding parameter used in the sample will be defined by regression analysis. A certain diagnostic result can be calculated before the study is completed. Out-turn in the form of tables and graphs will then be displayed. The inferential statistics revealed that equity financing has statistical negligible sway on the financial return of MFIs ($p=0.155>0.05$). Debt financing was found to have a statistically significant influence on financial performance of MFIs ($p=0.024<0.05$), the findings further showed that firm size averaged at -0.0132. The findings show however, firm size was not a significant moderator ($p=0.581>0.05$) in this study. The study suggested that with the establishment of negative correlation between debt financing and the financial performance, in pursuit of higher profit and better performance the firm management can utilize debt financing by taking the advantage of tax shield benefit, another study was suggested to be done using the same variables but now using the Return on Asset as the contingent on parameter. The study suggested the occurrence of indistinguishable evaluation in supplemental financial sphere such as Saccos and Insurance companies' further study with involvement of other capital structure rations was also suggested.

Key words: Equity finance, Debt finance, Capital structure, financial performance.

INTRODUCTION

Microfinance is spelt out as form of money dealing zone that provides financial services to its stakeholders in every sphere globally by offering solutions to their financial challenges at individual or group level (Julia & Somer Anderson 2020) Micro-finance programs are designed to meet excluded consumers, typically poorer segments of the population, perhaps economically disadvantaged or more geographically remote, and to help them become self-sufficient (Caramela &Sami 2018). Initially, there is a limited concept of microfinance: providing micro-loans to disadvantaged businesses however currently it is accessible by everyone, "a world in which a wide range of affordable, hi-fi services are available (Feigenberg & Benjamin, 2011), it is seen that microfinance has a significant effect on the global economy, not to mentioned regional and national economies, this means that their well-being means the well-being of the economy. Today, microfinance institutions have an increasingly wide variety of sources of funding. This facilitates better reinvestment of finance, but it also makes capital structure considerations more difficult.

The capital structure, according to Welch (2009), is the cumulative total of all demands of the establishment. The capital structure defines the mix of the long-term capital of a company, which consists of a jumble of debt and equity and other assets that finance the growth of the company (Loth, 2019). The fund composition is the blend of equity and debt (San and Heng, 2011. The root of the fund fabric is the philosophy of Modigliani and Miller (1958), which focuses largely on the optimal business situation and advocates that the value of the company is free from the sequel of the judgment on the fund composition, rather than arguing that the value of the company is calculated purely by its simple earning power.

It is noted (Waweru,2016) that most microfinance institutions receive funds from numerous borrowers, like repository, reminding them of loans, equity, reserves and separate types of debt. The aim of the analysis is to assess the capital structure relationship and the company's financial results, which is also anchored by the following described studies. The leverage of 272 American industries listed on the New York Stock Exchange, in operation within the period of 2005 - 2007 was analyzed by Gill and Biger (2016). The analysis found that there was a beneficial association between the capital structure of an organization and profitability. (Nasimi, 2016) showed the same findings. Antwi *et al*. (2012) noted that companies with greater income appear to favor use of higher debt ratios. Tailab (2014) observed that the association between the firm value and competitiveness results was unfavorable for American energy companies between 2005 and 2013. Related results were observed in surveys of businesses from 14 European countries (Mathur, 2015). Usman and Azeem (2014) established a poor efficacious association of fund fabric and financial results in their investigation of sugar companies registered on the Karachi securities exchange between 2006 and 2011. Pouraghajan (2012) showed a negative connection between the debt of 12 manufacturing companies listed on the Tehran stock exchange and the financial results of the companies. Salim and Yaday (2012) have reported a bleak association of fund fabric and the financial results of the research carried out on 237 listed companies in Malaysia between 1995 and 2011. The analysis found a strong link between the two criteria (Waweru 2016)

suggested that a study carried out on the microfinance institution's capital structure in Ghana showed that they are primarily composed of long-term debt as opposed to shorter debts, as such a heavily leveraged microfinance institution is able to meet its clientele in an attempt to reduce hunger and poverty (Kyereboah-Coleman,2007).

Kenya is also not left out, as per (Waweru, 2016) Kenya's microfinance institution's mission is to mitigate and relieve insecurity by offering credit facilities to the wider underbanked community, thus demonstrating connection of identified fund composition and financial results. (Koroba, 2011) noted that Kenya's microfinance services provider comes under threesome. The degree of oversight and control determines the standard of decorum. Commercial banks, non-bank financial institutions, credit unions and postal service savings banks fell under the structured grouping. The moderately section involves thrift and credit cooperatives (SACCOs) and microfinance institutions, while the irregular category is governed by growing and revolving savings and credit associations (ROSCAs) and money lenders, all of which display a strong connection of the fund structure and the composition of the finance sectors.

Research Problem

In assessing the liquidity, cost and value of the company, the financial structure plays a larger role, concentrating on the control of the funds available and the method of sourcing them to ensure that the company stays liquid and efficient for the good of the shareholders. In order to prevent cases of businesses running into liquidity hitches whose lowest outcome will be bankruptcy, this includes careful consideration of both the application and investment of the available fund (Mwandia 2014).

Elijah (2014) loudly argued that in any country's economic development, microfinance institutions are very important. A positive divergence in the output of MFIs facilitates economic deepening, thereby contributing greatly to the growth of the economy through the provision of major and fundamental financial services. A significant number of literatures indicate that in order for MFIs to reach maximum capacity that alleviates poverty, which is proof that they must become financially viable by improved profits before tax, and an effective capital structure must be placed in place (Brau and Wller, 2004)
Even so, the issue of the downturn in financial results and the lack of microcredit in Kenya is real and lethargic, so an agent must decide whether or not this is related to their model of capital structure. The declining trend is summarized in table 1

Table1: Financial performance of MFIs

Period	2014	2015	2016	2017	2018
ROE	0.08	0.05	0.02	0.01	0.01
ROA	0.02	0.01	0.008	0.002	0.000

Source: Researcher (2021)

Several researchers have noted that the capital structure influences the valuation of MFIs, which essentially has a direct relationship with the financial success of the organization Baraza (2014). A significant number of literatures indicates that MFIs must become financially viable in order to reach maximum potential (Brau and Wller, 2004). Bogan (2008) identified a correlation between the capital structure as a key measure of the progress of MFIs, asset's volume of and capital structure of MFIs are correlated with results according to Bogan (2008). Elijah (2014) states that an evolving phase is indeed the investigation of optimum capital structure. According to Bogan (2008) using descriptive statistics and a basic regression model, concluded that the fruition of the institutions was shaped by the source of capital structure. By estimating the random and fixed effect linear model, Coleman (2007) analyzed effects of fund composition on MFIs' efficiency. Although numerous studies have been done to establish the correlation of the parameters in this context, there are still not sufficient data to allow us to generalize confidently whether the correspondence of fund fabric and the financial return of microfinance companies is positive or negative, this shows that inadequate studies have been carried out.

Objectives of the study

The overarching goal was to appraise outcome of capital structure on financial performance of MFIs in Nairobi City County Kenya.

Specific objectives

i. To evaluate the influence of equity financing on financial return of MFIs Nairobi City County Kenya.
ii. To establish effect of debt financing on financial performance of MFIs Nairobi City County Kenya.
iii. To determine the moderating consequence of firm size in the interconnection of capital structure and financial performance of MFIs in Nairobi City County Kenya.

Theoretical Review

Modigliani and Millers Approach

This approach was developed in 1958 by Modigliani and Miller, who promoted the proposition of irrelevance of the capital structure. They indicated that a company's appraisal is unrelated to the structure of resources used. They advocated that the net profit determines the company's stock valuation; this hypothesis claimed no connection linking the business's worth and its fund component. This essentially means that the growth in the amount of debt would not have a bearing on capital costs. They also speculated that all this activity takes place in the ideal economy, arguing that it does not matter what financial form a business uses to fund its activities in perfect markets. They also believed that a company's stock worth is calculated by its profitableness and the prevailing imminence, its appraisal is autonomous of the manner in which it decides to fund its acquisition or deliver its dividends. They

believed, however, that no fees, no acquisition costs and no bankruptcy costs will be paid for the retention of this plan. Another expectation is that the interest rates for all firms and management would be equal. Another main statement they made is that knowledge symmetry will occur and that there be no impact of debt on the profits of a corporation until interest and taxes.

However, there are some holes in this plan, in the sense that there is no ideal market and there are taxation, acquisition rates and disparities in borrowing costs, data asymmetries and debt impacts on earnings in the real world scenario. They later provided new data that suggested that the cost of capital had a bearing on the structure of capital and thus had an effect on the company's profitability, assuming that taxes were also imposed. They then assumed that the tax shield would minimize debt payments, thus improving the company's profitability. Centered on this hypothesis, the research indicates that there is a link between the capital structure selected by an organization and its financial performance, exploration thus assists in diagnosing the degree of correlation between the fund component and economic condition, whether it is a positive or negative association, and the associations between the two variables.

Traditional theory

In the 1950s, Ezta Solomon and Fred Weston promoted this idea, suggesting existence of an ideal structure proportion where the company’s stock value is maximum at minimum capital expenditure. Changes in the funding mix on either side of this stage will add a positive shift to the valuation of the business. Marginal debt costs are smaller than the cost of equity at this point, and marginal debt costs are higher than the cost of equity after this point. According to this strategy, debt can only occur in a financial system until a certain stage above which any rise in borrowing will result in a decrease in the company's valuation. This strategy is based on the following assumptions: the interest rate on debt stays the same for a time after which a rise in leverage contributes to an increase in the interest rate, the anticipated equity shareholder rate remains the same or rises steadily, after which the equity shareholders begin to consider financial risks, and then the expected rate increases exponentially from the maximum stage, as an equity shareholder. Donaldson first proposed this idea in 1961. It begins with asymmetric knowledge, when management know more about the opportunities, risks and value of their business than outside investors. It hypothesizes that with asymmetric knowledge, the cost of financing increases. It is understood that company funding comes from three sources, including internal capital, debt and new equity. Companies tend to first use internal capital before entering into debt and can only use equity as the final resort. Therefore, this hypothesis postulates that firms have a hierarchy of sources of funding.

(Myers & Majluf, 1984) advocated for this thought that common stock is undesirable mode of raising funds since investor suspect that administrators assume that the business is overvalued when managers raise new equity and they take advantage of this over valuation. As a consequence, shareholders would put a lower valuation on the issuing of new shares. (Fama & French, 2002) found that the pecking order best illustrates certain aspects of the

results than the tradeoff hypothesis. (Goyal & Frank, 2003) proved that the theory of pecking order fails. Where it should be kept, that for businesses, information imbalances are a matter of concern. This hypothesis establishes that there is a connection between the selected capital structure and that is why internal outlets are favored before debts and eventually equity, this analysis sought to assess the magnitude of this relationship.

Net Income Approach Theory

In 1952, Durand proposed the Net Income Approach. The principle suggests rising the firm's quotation by lowering the cumulative capital budget whose computation takes the form of Weighted Average Capital Cost. This is done through offering a higher percentage of leverage which is relatively a cheaper means of financing in comparative to equity

WACC is a combined cost of common stock and leverage, in which the value acquired by each form is averaged (David Kindness 2020). Changes in a company's financial leverage may advance to a related shift in the company's capital proportionate Weight and valuation, according to the Net Income Approach. The Net Profits Strategy implies that a negative deviation of opportunity cost advances for a positive deviation of entity's gear, with an upswing valuation of the business. In the other hand, as the debt decreases, the WACC increases and the company's valuation thereby decreases. However, the hypothesis has the following weaknesses; it suggests that the rise in debt does not impact investors' interest levels, there are only two forms of financing: leverage and common stock. Preference Share Capital and Deferred Profits are not sources of funding. The claims that firms have a uniform dividend payout proportion, no flotation costs, no acquisition costs and corporate dividend levy, a flawless stock market and infinite in all forms of funding, such claims do not carry water in the actual market. Therefore, from the hypothesis it's proved prevailing of correspondence of the selected fund component and financial strength that is the center of the analysis, hence made the theory important for the study as the researcher's aim was to assess the nature of the relationship and the degree of correlation between the variables.

Net Operating Income Approach Theory

This technique was put forward in 1952 by Durand and varies entirely from the Net Income Solution. Often known as the conventional approach, it holds that the shift in leverage have insignificant sequel on the firms. The model holds that the firm's quotation is independent to all form of finance; however, the quotation depends on the intervening peril and the intervening yield, as the percentage of leverage can only induced by the sale turn over. Hence, change of the leverage to common stock ratio is insufficient to change the value of the company.

Furthermore, it notes that the organization is faced with elevated risk with the rise in a company's debt portion. The equity owners want more dividends to balance that. Thus, the cost of equity increases with an increase in financial leverage. The argument and conclusions were based on this hypothesis. Regardless of the degree of borrowing, the average

capitalization rate stays steady. The valuation of the company was "EBIT/Overall Capitalization Rate" at a given EBIT level, equity value is the difference between the total company values less debt value, WACC remains stable, the valuation rises in productive correlation of growth in extended financial obligation. Growing the debt in the framework of the capital results in an increased risk to lenders. The shareholders demand higher returns as a payoff for investment in the highly leveraged firm, contributing to higher equity capital costs.

Empirical Review

Equity Financing and Financial Performance

Martin-Oliver (2012) analyzed the consequence of raising large amount of fund through the sale of company's share within Spanish banks. In study on the effect of equity capital on financial efficiency. The study showed that a one percent positive deviation leads to a consequential 4.2 percent positive move of the lending rate.

Ganka (2010) observed how the structure of the capital of a microfinance institution determined the success of the institution in his study of financial stability MFIs in Tanzania. Equity financing has also been found by studies to be modest technique of enhancing productivity of MFIs. As examining contribution of fund in the growth of MFIs in Uganda, Sakabira (2013) found out that, MFIs with healthier fund fabric are more successful. Mesquita and Lara (2003) on their study to validate upshot of equity financing on profitability, finding substantiated the quiddity of bleak correlation of equity financing and the business return. Return on Equity was implemented as a measure of profitability.

Survey by Kihinde (2012) in an attempt to signaling the reality of interconnection of equity financing (retained earnings) and the financial performance of SMEs in Nigeria, after adopting the descriptive research design in the study, it substantiated quiddity constructive interlink of equity financing and the financial performance. Edon & Agayi (2015) on the quest to validate impact of equity financing on financial results of corporate in Naigeria carried out the study with following variables in considerations, equity financing being one of the elements of predictor parameter and financial performance the regress parameter, correlation design and hypothesis testing was adopted, master and auxiliary data were used, survey established a positive correlation between the variables in considerations. Study by Tshabalal (2017) in the desire to evaluate the influence of equity financing and performance of SMEs did a study in South Africa, adopting the panel data method, the finding revealed the subsistence of a constructive interconnection of equity financing as an element of capital structure and the firm's profitability.

Debt Financing and Financial Performance

Ann and Heng (2011) studied the correlation allying of structure of capital and corporate success of companies before and after the 2007 crisis, in which 49 Malaysian construction companies listed on the Bursa Malaysia Main Board from 2005 to 2008 were considered, splitting firms into three units, small, medium and big or large. In his study (capital structure), extended liability to capital variables is used, outcome displayed affinity of composition of capital in business return; meanwhile, outcome held it that no correlations linking the various variables examined in this research.

Abdullah and Roslan (2012) analyzed effects of the fabric of capital on corporate return in evaluating the connectivity of this to business turnover of Malaysian firms, and the outcome signaled pragmatic connection of capital structure of an organization and financial performance. The contingent parameters adopted used analysis are ROA (Return on asset), ROE (return on equity) and exposure parameter: market volume (SIZE), and predictor parameter: total debt (TD). All businesses in Malaysia, particularly the Modigliani-Miller theorem, are publicly listed entities; trade-off theory and pecking order theory were looked into in order for undisputable outcome to be realized.

A study of 58 companies from 2005 to 2010 includes the Biru (2016) research, which covers two major consumer and industrial industries, with summation of 358 findings, retrogression paradigm used. Test findings revealed that liabilities remarkably sequel ROA and ROE, the validation was evidence even with the interconnection of other explanatory parameters.

Daniel Kebede's (2011) survey investigated the fundamental of fund component in Ethiopia's small-scale manufacturing co-operators. In fact, the research technique used in the thesis is the quantitative approach to the survey process. Time span of1998 to 2002, source of the facts wa financial statements of 13 small-scale development cooperatives of the E.C. The investigator used leverage as a dependent variable in the analysis, while size, tangibility, profitability, earning volatility, growth and age are used as independent variables. The study showed that size and tangibility have a beneficial leverage relationship, while there is an opposite leverage relationship between competitiveness, complexity, growth and age.

Khan applies a pooled ordinary least square regression to 36 engineering industry firms in Pakistan by (2012). Results suggest a marginally negative interaction between the company's success measured by asset yield, gross profit margin and Tobin's Q, albeit a negative although not statistically relevant correlation between financial leverage and business results measured by the return on equity.

Kajirwa (2015) tried to determine sequel of equity in the company's leverage form on company's output. There was scrutiny of banks listed on the Nairobi Stock Exchange. Linear computational form was employed. The commercial return was determined by returns on investments. The discoveries of the study showed that the organization's productivity was negatively impacted by debt, but not significantly. It has been concluded that efficiency is

adversely impacted by the use of equity in the capital system of commercial banks. The study indicated that commercial banks should go for finances with minimum risk in order to maximize profitability.

His results on the fund component, ramification on the financial success of Sri Lankan business organizations between 2005 and 2009 were published in a study conducted by Pratheepkanth (2011). As a consequence of the study, a negative correlation was validated, the determinant of fund fabric was debt equity proportion and the gross profit, net profit, ROA and ROE of the debt-to-equity ratio were adopted in valuation of financial performance. Khalaf Al-Taani (2013) empirical analysis on interlink of capital component and market performance in Jordan focused on relating structure of capital and financial performance found a connectivity of the two parameters. An appraisement of the impact of the funding mechanism on the financial efficacy of deposit-taking microfinance institutions in Kenya was also done.

Firm Size and Financial Performance

Grace (2017) noted that different researchers used different control variables when performing studies on the structure of resources and company efficiency. They found a clear positive correlation between overall debt to capital, business size and yield on investment, and shareholder' gain. Development of business properties had a negative negligible impact on its reward and to the shareholders investment, while performance had a substantial ramification as measured by change in shareholder's wealth. For assessing liaison of structure of capital and the business results of SMEs in Ghana, Victor and Badu (2012) used company scale, company age and board size, while Hasan *et.al* (2014) used company size as the control variable. As control variables, Iavorskyi (2013) used firm scale, business dummy and entry exit.

Scale and financial performance analyses such as Marsh (1982); Fama and Jesen (1983); Rajan and Zingales (1995) show that major corporations favor extended liabilities over fading liabilities. The statement was based on the diversification of the business. More details for lenders and comparatively lower interest rates, both of which are enjoyed by big companies, are stable cash flows and less likelihood of bankruptcy supply. Thus, a positive size association

Leverage and. Nevertheless, in that larger corporations had low debt ratios; Wald (1999) discovered distinct findings in German companies. However, this was due to the ownership arrangement of the major corporations in the report.

Wafula (200) in his desire to substantiate the sway of firm size on returns of the firms registered in Nairobi Security Exchange, in which the data collected were restricted to those firms in operation within the period of 2002 to 2008 with independent variable inconsideration being firm size, cash flow and dividend yield, the secondary data were

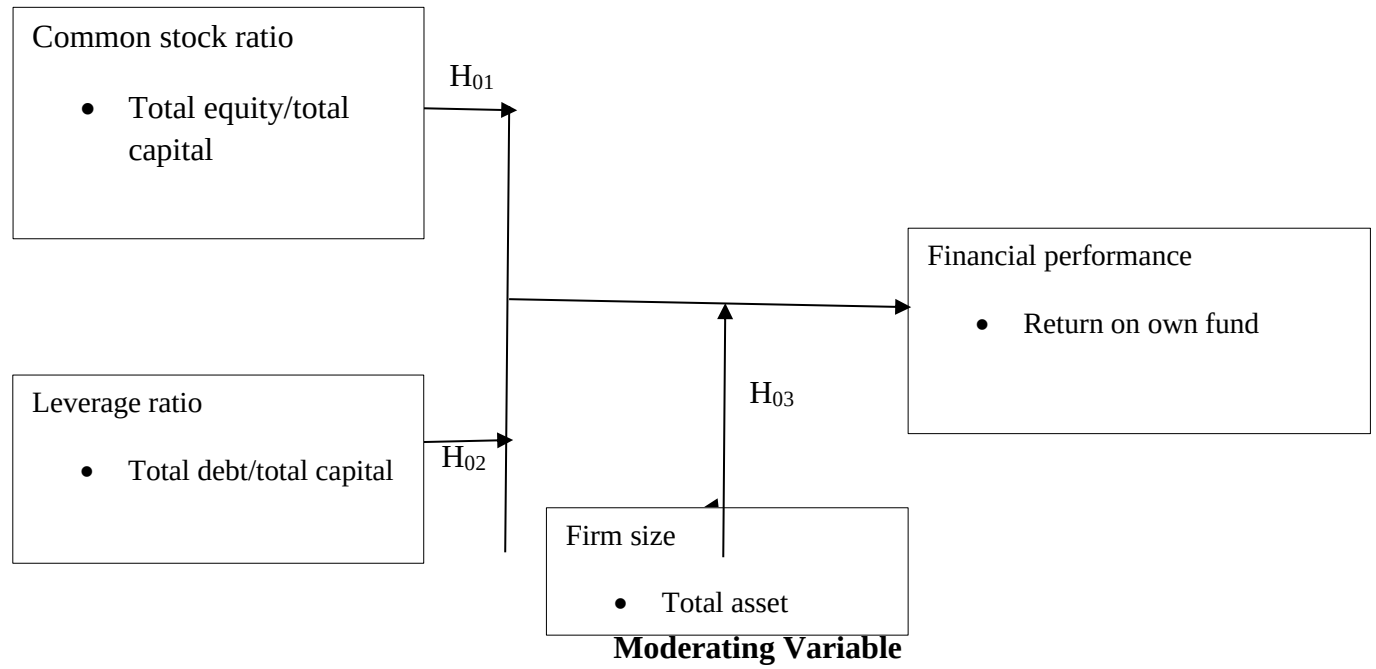
considered in the study with descriptive analysis being the center of the study, the study revealed a weak positive correlation connecting size and return of the firm.

Salim (2013) focusing on evaluating firm size impact on return of the commercial banks in Kenya, research considered firm size to be independent variable with its elements being total deposit, total loan and total assets with financial performance as the observed parameter, the survey displayed subsistence of constructive interconnection of firm size and return of commercial Banks, Doga (2013) validated the influence of assets volume.

Amato and Amato (2004) in the search of interlink of firm magnitude and return of the firms, with the adoption of descriptive research design, and the secondary data being used, the research demonstrated the interconnection of the variables in consideration. The study conducted by Lee (2009) with aim of establishing association magnitude of the firm and return, 7000 Us publicly-held firms were selected, the survey disclose that firm size is statistically significant in determining the profitability of the firm.

Amato & Burso (2007) in an attempt to establish the firm size-profit relationship from the firms in the service sector where both cubic and linear form of relationships were analyzed, findings indicated that firm size was statistically insignificant in determining the firm's profitability, however the cubic relationship of ROA and firm size was established.

Figure 1: Conceptual framework



Source: Researcher (2021)

Research Design

Descriptive research architecture was included in the study. As it attempts to explain the condition and phenomena correctly and systematically, it also helps address the questions of how and when. Descriptive study architecture allows one or more variables to be examined using a wide range of quantitative and qualitative approaches. Descriptive analysis was also be sufficient as the author wanted to figure out the association between variables in this report. Moreover, if the analysis is done repeatedly with the new sample subject, the finding is constant (Paul 1996)

Target Population

The goal population populace the total number of microfinance institutions registered in Kenya by a group of microfinance institutions in Kenya (AMFI). Such microfinance in Kenya stands at 24, of which 14 microfinance institutions within Nairobi City County are the subject of the report.

Sampling design

Since the study population was not high, the researcher included census instead of sampling, with only 14 of them in Nairobi City County, the registered microfinance institution in Kenya 24 in number, with the study that is expected to concentrate on Nairobi City County, which means that the study only focused on the 14 microfinances under the jurisdiction of the studies. The details were collected from the Mix Sector website, also known as the Microfinance Information Exchange (MIX), and the multi-institution websites.

Data Collection instruments

Using annual reports from the related MFIs, the study relied on secondary results. Auxiliary was attained from MFI reports and publications from the financial statements of the selected MFIs. This can be used to assist with determining the financial results of the institutions in particular. To ensure objectivity, data from the annual reports was obtained over a span of 5 years. The combination of one data set with another or the use of modern computational approaches for estimation can be part of this secondary research. (Szabo & Strang, 1997). The analysis would focus on data obtained from the MIX industry database in a systematic way. MIX industry data is accurate and has been used by several analysts who are involved in microfinance. The MIX business tests MFI details for accuracy and coherence.

Data Analysis and Presentations

Dissection of information involve evaluating, cleaning, transforming and presenting information in order to illustrate relevant information, suggest conclusions and facilitate decision-making (Etikan, 2016). In this report, quantitative data analysis techniques were used.

Quantitative data analysis, according to sukamolson (2007), refers to the method of attempting to understand by gathering numerical data and analyzing those mathematically using statistics

Using descriptive statistics, the quantitative information obtained was analyzed. Any variable under analysis was defined using the mean and standard deviation. Using Stata, the data was analyzed, to assess the reliability of the obtained diagnostic tests for the linearity, homoscedasticity, independence and normality of the data was performed before the analysis is performed.

Descriptive and inferential statistics was executed, mean and standard deviation was calculated by descriptive statistics, as inferential statistic inscribing the correspondence fund fabric and financial results. Retrogression scanning was applied to evaluate the causal propinquity explanatory along with explained elements, and knowledge about frequency tables, was used during the analysis.

Regression Model

This research has financial performance as response parameter and capital structure as the predictor parameter, the general model was as follows

$FP = f(CS) + MV$ ……(i)

The second model demonstrated the direct relationship between leverage and common stock without consideration of the moderating variable which is firm size and the financial performance, Paradigm held it that business return is concomitant of its fund fabric then the interaction of elements was expressed as follows

$P_f = \beta_{0+} \beta_1 T_{it} + \beta_2 Tit + \varepsilon_t$ .....(ii)

The third model however demonstrated the relationship of the same parameters but with the consideration of firm size as the moderating variable. This prototype elucidates the interconnection of the variables in which performance is validated to be a concomitant of a constant β_0, equity financing and debt financing with an exponential error

$P_f = \beta_{0+} \beta_1 Tit + \beta_2 Tit + \beta_3 MVit + \varepsilon_t$ .....(iii)

Finally, the last model showed how each predictor parameter interact with each other but with upshot of moderating on each one of them and its ramification on the overall financial performance with a common constant

This exemplar depicted consanguinity of the parameters, affinity of performance, equity financing, debt financing with asset volume moderating interlinks, constant β_0 and exponential error ε_t was regarded.

$P_f = \beta_{0+} \beta 1 Tit * MVit + \beta_2 Tit * MVit + \varepsilon_t$. .....(iv)

The interaction of firm size with both equity and debt financing was authenticated by this prototype exponential error and constant ε_t, β_0 were regarded.

Where,

FP=Financial performance.

CS= Capital structure.

MV=Moderating variable.
T_1=Equity financing.
T_2=Debt financing.
FS=Firm size.
$\beta_{0=}$ Exponential constant.
ε_t=exponential error.

RESEARCH FINDINGS AND DISCUSSIONS

Descriptive statistics

Table 2: Descriptive Statistics.

Variable	Obs	Mean	Std. Dev.	Min	Max
ROE	84	.0614286	.2709339	-.79	.93
Equity Financing	84	.2485714	.1398721	.02	.81
Debt Financing	84	.7446429	.1689332	.02	.98
Firm Size	84	14.85345	1.342239	11.83	17.29

Source: Study data (2021).

From the results, ROE had an average of 0.0614, range of error of 0.271 with a least rate of -0.79 with maximum value of 0.93. This implies that ROE is relatively volatile over the study period. Similarly, equity financing was relatively stable with a medial of 0.249, predictable error of 0.140 a lowest rate of 0.02 and a maximum value of 0.81 implying stability of outcome over the period. Debt financing had an intermediate of 0.745, normal deviation of 0.169 with a lowest rate of 0.02 and a maximum value of 0.98 implying stability of outcome over the period. Firm size had a mean of 14.853, probable error of 1.342 a rock-bottom rate of 11.83 and a maximum value of 17.29, thus indicating that firm size was very stable over the study period.

Panel Regression Analysis

Panel regression model without the moderating variable

Table 3: Panel regression model without the moderating variable.

```
Random-effects GLS regression                   Number of obs      =        84
Group variable: company1                        Number of groups   =        14

R-sq:  within  = 0.0735                         Obs per group: min =         6
       between = 0.0241                                        avg =       6.0
       overall = 0.0649                                        max =         6

                                                Wald chi2(2)       =      5.62
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0601
```

roe	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
equityfinancing	-.508893	.3575133	-1.42	0.155	-1.209606	.1918203
debtfinancing	-.6693827	.2960113	-2.26	0.024	-1.249554	-.0892112
_cons	.6863759	.2986224	2.30	0.022	.1010868	1.271665
sigma_u	0					
sigma_e	.26807131					
rho	0	(fraction of variance due to u_i)				

Source: Study Data (2021).

Without the inclusion of the predictor variables, the ROE of the micro finance institutions increases by 0.6864. This increase is significant as seen by the p value of 0.022. The findings show that a unit increase in equity financing would lead to -0.508893 decrease in ROE. A p-value of 0.155>0.05 meant that equity financing was insignificant predictor of MFIs financial performance. Therefore, based on the statistically significant effect of equity financing on the financial performance of MFIs, the first H_{01} 'Equity financing has no significant effect on financial performance of MFIs in Kenya' is therefore not rejected. The findings show that in the Kenyan micro finance institution industry, equity finance is not an important determinant of the financial performance of MFIs. These findings contradict the findings by Musila (2015) who did a study on equity financing and financial performance of energy and petroleum sector companies at NSE and found that equity ratio and growth opportunities affected financial performance positively. These findings were in agreement with the findings by Salim and Yaday (2012) who studied on Building the connection between the structure of capital and results and found that there was an existence of a negative correlation between the two variables in consideration.

A unit increase in debt financing would lead to -6.6938 increase in ROE, with a p-value 0.024<0.05, an indication that debt financing had a statistically significant influence on MFIs financial performance. Therefore, the second H_0 'Debt financing has no significant effect on financial performance of MFIs in Kenya' is hereby rejected. These findings show that among Kenyan MFIs, debt financing is of notable influence on their return. This finding contradicts

those by Abdullah and Roslan (2012) who analyzed the effects of the structure of capital on corporate return by analyzing the connectivity of this to business turnover of Malaysian firms, and the outcome of the survey which displayed pragmatic association capital structure of an organization and financial performance. The findings also contradict those by Waweru (2017) who study analyzed how the capital structure was connected to the extent of outreach and the cost of default and concluded that widely used debt MFIs worked best by targeting too many consumers, recording gain due to reduced cost of operation there creating competitive advantage over competitors. The findings also agree with the findings by Wamugo *et al.,* (2014) who did a study on non-financial firms listed at Nairobi stock exchange and concluded that return on asset and return on equity financial measures are negatively affected by increased debt. The study advocates for reduction of long-term debt to improve performance. The findings are also similar to Bafana *et al.,* (2015) and Gichangi (2014) findings who showed that ROA performance measure is negatively affected by debt as well as the study by Amenya (2013) who found that return on equity is negatively affected by rise in debt. The research advocates for debt reduction to improve return.

The findings validated the combined influence of independent variables was determined using the R Square (0.0649) which implies that the predictor variables in the model had 6.49% determination of micro finance institutions financial performance, which was statistically insignificant evidence by the p value 0.0601<0.05. There was 93.51% of the outcome of Return on Equity, which was not spelt-out by the element in the dummy, hence could only result from other variables beyond the scope of the study.

The equation thus become:

ROE_{it} =0.6864 - 0.5889Equityfinancing$_{it}$ - 0.6994Debtfinancing+ε

Panel regression in presence of moderating variable.

Table 4: Panel regression model with moderating variable.

```
Random-effects GLS regression                   Number of obs      =        84
Group variable: company1                        Number of groups   =        14

R-sq:  within  = 0.0736                         Obs per group: min =         6
       between = 0.0595                                        avg =       6.0
       overall = 0.0684                                        max =         6

                                                Wald chi2(3)       =      5.88
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.1177
```

roe	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
equityfinancing	-.5240277	.3601063	-1.46	0.146	-1.229823	.1817677
debtfinancing	-.6365604	.3031902	-2.10	0.036	-1.230802	-.0423185
firmsize	-.0132074	.0239493	-0.55	0.581	-.0601473	.0337324
_cons	.8618731	.4372874	1.97	0.049	.0048054	1.718941
sigma_u	0					
sigma_e	.27006348					
rho	0	(fraction of variance due to u_i)				

Source: Study Data (2021).

With the introduction of firm size which is a moderating variable, a unit increase in equity financing leads to a non-significant decrease in ROE by -0.5240. The p value is 0.146 which is more than 0.05. A one unit increase in the rate of debt financing leads to a significant decrease in the ROE by -0.6366. The p value of 0.036 indicates significance. The moderating variable (firm size) is statistically insignificant as shown by the p value of 0.581. As the firm size increase by a unit, there is a decrease in the ROE by -0.0132 times. In the absence of the explanatory variables, there is a significant increase in ROE by 0.862 with a p value of 0.049. From the model, an R2 of 0.0684 was obtained which implies that the predictor variables and the moderating variable explain 6.84% of the changes in the ROE. Further, there was an increase in R2 from 0.0649 in the absence of the moderating variable to 0.0684 in the presence of a moderating variable. This clearly indicates the significance of the firm size.

The panel regression model thus becomes;

$ROE_{it} = 0.862 - 0.5240Equityfinancing_{it} - 0.6366Debtfinancing_{it} - 0.014Firmsize_{it}$

These findings contradict the findings by Grace (2017) who noted that different researchers used different control variables when performing studies on the structure of resources and company efficiency and found a clear positive correlation between overall debt to capital, business size and yield on investment, and shareholder' gain.

Panel regression under the interactions between the independent and moderating variable

The outcome was put forward in table 4.10 below.

Table 5: Interaction effects of moderating variable.

```
Random-effects GLS regression                   Number of obs      =        84
Group variable: company1                        Number of groups   =        14

R-sq:  within  = 0.0613                         Obs per group: min =         6
       between = 0.0903                                        avg =       6.0
       overall = 0.0541                                        max =         6

                                                Wald chi2(2)       =      4.64
corr(u_i, X)   = 0 (assumed)                    Prob > chi2        =    0.0985
```

roe	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
equityfinancingfirmsize	-.0259567	.0220373	-1.18	0.239	-.069149	.0172357
debtfinancingfirmsize	-.0301459	.0143998	-2.09	0.036	-.058369	-.0019228
_cons	.4916626	.2273033	2.16	0.031	.0461563	.937169
sigma_u	0					
sigma_e	.26992409					
rho	0	(fraction of variance due to u_i)				

Source (Study Data, 2021)

The results present the panel regression output from the interactions between the firm size and the independent variables. With the interactions between the firm size and equity

financing, there is a decrease in the ROE by- 0.0260 and this decrease is not significant. The interaction between the firm size and debt financing results in a -0.0301 significant decrease in the ROE for every unit. The p value is 0.036 which is less than 0.05. In the absence of the interactions and the predictor variables, there is a 0.4917 increase in the ROE. The increase is significant at 0.05 level of significance. Further there is a decrease in R2 with the interactions from 0.0684 in the absence of the interactions to 0.0541 in the presence of the interactions. This means that the interactions alongside the predictor variables explains 5.41% of the changes on the ROE of the firms. The null hypothesis H03: 'there is no significant moderating effect of Firm size on the relationship between MFI's financial performance and capital structure' is not therefore, rejected. The implication is that firm size was not a significant moderator in this study, since it did not significantly change the decision rule in the model.

The panel regression becomes;

ROE_{it} =0.4917 - 0.0260Equityfinancing*$firmsize_{it}$ - 0.0301Debtfinancing*$firmsize_{it}$

CONCLUSION AND RECOMMENDATIONS

Conclusion

The deduction of the review is hinged on the empirical findings of the study. The first objective was to determine the effect of equity financing on financial performance of MFIs in the Kenya. In respect to this, the study concluded that the effect of equity financing on financial performance is statistically insignificant. The researcher concludes that equity capital has no much importance to the contribution of financial performance of MFIs.

In regards to debt financing, the study concludes that debt financing is not well distributed across the MFIs, with a few MFIs having high debt financing and the majority not being so. However, the research concludes that debt financing has a notable shape on the financial performance of MFIs in Kenya.

In regards to the firm size, the researcher validated that the firm size, as arbitrating factor had statistically inconsequential moderating mastery on the correspondence of capital structure and MFIs financial performance. Therefore, the research concludes that generally, firm size is not an important factor when establishing the relationship between capital structure and ROE.

Recommendations

The policy exhortation of the survey is commensurate with variables with notable guidance on financial performance of MFIs in Kenya. The study concluded that debt financing has a cynical and significant shape on financial performance of MFIs in Kenya. Therefore, in pursuit for high profitability and hence better performance of MFIs, management can utilize debt financing by taking advantage of tax shield enjoyment analogous to the use debt capital otherwise they do debt reduction to improve returns.

Suggestion for further studies

The investigator proposed similar survey be performed featuring the same variables, but now using Return on Assets as the dependent variable.
The study further suggests a similar study in other financial sectors such as Saccos and Insurance companies. Another study is also suggested to include other capital structure ratios.

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