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**Capital Structure and Financial Performance of Micro-Finance
Institutions in Kenya**



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Capital Structure and Financial Performance of Micro-Finance Institutions in Kenya

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Abstract

Purpose: This research was envisioned to assess the influence of the capital structure on ROE of Micro-financial institutions in Kenya. The research was in search for resolving the following problem; is there a connection between the composition of capital (loan, shareholder's equity, retained earnings and deposits) and the viability of MFIs? If the firm size has an influence on ROE? The study was motivated by the following capital structure theories, which are the theory of pecking order, Trade-off theory and the theory of Marketing timing.

Methodology: To define the independent variable, the researcher used a correlation research design. The target demographic of the research was all 14 successful microfinance companies as recognized by the Kenya Microfinance Act as of 2020. The research therefore represented a census survey with a period of 5 years (from 2016-2020). The study's research model consisted of the independent variable loans, shareholder's equity, retained earnings and deposits and the size of the firm as a moderating variable, determined by the firm's total asset value, and the following ratios as dependent variables: return on equity. To analyze the results, EViews was used. There was descriptive and inferential statistics execution. Diagnostic results were computed before the data analysis.

Findings: The results were presented in the form of tables. The inferential statistics with the moderating variable revealed that loan financing has statistical negligible sway on the financial return of MFIs ($p=0.9832>0.05$). Shareholders equity financing was found to have a statistically significant influence on financial performance of MFIs ($p=0.0047<0.05$). Retained earnings financing was found to have a statistically significant influence on financial performance of MFIs ($p=0.0016<0.05$). Deposit financing was found to have a statistically insignificant influence on financial performance of MFIs ($p=0.2168>0.05$).in this study.

Unique contribution to theory, practice and policy: The study suggested that MFIs should strike a balance benefits and costs of debt arising thereof in line with the Trade-off theory, fast growing MFIs to utilize more retained earnings in capital structure, more profitable businesses use less shareholder's equity in capital structure mix and finally positive correlation on deposits indicating similar correlation is likely to exist with financing capital structure. Thus MFIs may consider reviewing these measures so as to enhance performance to serve the low-income earners better in improving the economy. Further studies can be done based on other performance measures like ROA, EPS, Net Interest Margin. The study used a correlation research design for five-year period from 2016 to 2020. Therefore, this study can be replicated using a different methodology and covering a longer period like ten year.

Key Words: *Loan Financing, Retained Earnings, Deposit Financing, Firm Size and Financial Performance*

Background of the Problem

In the contemporary era, the main aim of each business firm is to increase its optimum value by utilizing available financing sources. MFIs being one of the business Organisation, cannot be exempted from noble task for its positive financial performance. As a result, every financial manager faces a difficulty in evaluating investment projects in terms of risk-return and determining the optimal mix of capital structure to make financing decisions. Nassar (2016), states that the ability of an organization to identify its capital structure remains a difficult challenge towards achievement. It has been observed that the finest investment plan and funding leads to a positive increase in the firm's financial performance. (Woldemariam, 2016).

Capital Structure

The decisions of Organizations regarding capital structure are critical and important for the reason that every decisions are directed to maximization of the owner's value and growth of the performance of the organization's finance (Awais, Iqbal, Iqbal, & Khursheed, 2016). Other reasons include minimizing of the costs and bankruptcy. Managers typically try to work in a range of values because it might be a challenge to define the optimum capital structure. In addition, there must be a consideration of the market signals that their financial choices will impact due to the fact that announcements about an organization taking on debt are often viewed as positive news, a strategy known as debt signaling, MFIs with promising futures would attempt to acquire money by debt other than stock in the situation to avert dilution and sending any negative warning signs to the market. If MFI raises an excess amount of capital in a given time period, the debt cost, common equity and preferred stock begins rising, and as this happens, the capital's cost of marginal also rises. Thus, to measure how risky MFI is, potential shareholders examine the debt-equity ratio. It might similarly be compared to other Organization's leverage amount within the alike industry —on assumption that these firms are operational on a suitable capital structure; to assess if the Organization's capital structure includes an unusually high proportion of debt.

The significant financing sources for organizations are internal funding which includes retained earnings and the external funding which is either equity or debt. The amount of profit that remains after a portion of surpluses is referred to as retained earnings that are retained to the Organisation. Retained earnings are relatively important source of internal funding in an Organization since there is no floating costs in addition raises financial obligation and risk. Thus, retained earnings support an organization's potential to exploit the shareholders' value (Masood, 2018). Furthermore, Organizations accesses innumerable borrowing sources either through long-term or short-term obligations. Short term obligation could possibly be cheaper related to long term obligation yet could position an organization to greater risk in comparison to long term debt for it may entail interval renewal. In line with Qayyum and Noreen (2019) . Any organization must have a sound loan and internal sources of funding plan since it display a direct influence on how well organization performs. For instance, maintaining a sensible equilibrium between debt and equity would improve the Organization's financial stability. If not, the firm would go bankrupt due to the illogical debt and equity arrangement. (Oayyun & Noreen, 2019). If an Organisation depends entirely on equity and internal funding, this may pose challenges in escalating and attracting opportunities in the market. Therefore, Organizations would prefer debt capital for growing and increasing the earning prospective. Consequently, it can be claimed that a company with an ideal capital structure can cut costs and increase profitability. (Zeitun & Keen, 2007), as a result, the organization can obtain a competitive advantage. (Riaz, 2015).

Globally, several research have been carried out to determine how organizations make capital structure decisions. For instance, Baker and Martin (2017), in USA established that profitability, operational leverage, risk and organizations, growth rate determines capital structure. They further noted organizations that make massive returns moderately depends on debt for the massive returns to permit then in funding their investments from within through their incomes. Equally, this means that MFIs with lower operational costs experience low operational risk that leads to proper planning than organizations on high operational cost. In regards to this, it translates organization that develop fast depends on funding externally. Additionally, organizations are encouraged to use loan for flotation costs obligatory on issuance of debt are lesser than equity. Nevertheless, organizations whose its growth relies on debts regularly suffer uncertainty for the future thus they do not rely heavily on debts. To this extend, it is clear that MFIs needs to determine a suitable capital structure for a high- positive financial performance.

In Nigeria, Akintoye (2017) underlines some factors including securities issue timing and expert advices may impact the capital structure. Additionally, it is disclosed that good timing of securities issuing is crucial, and ought to always be considered. The implication is, MFIs have to make a decision either to fund the operations first on equity and later on debt or vice versa basing on status of the economy and capital market. Additionally, the author notes that professional advices also affects the decisions of capital structure since the decisions are made from advices of professionals such as credit rating agencies, investment bankers and financial analysts. Njagi (2017) Kenya notes that, once capital is raised externally, the Organizations

makes the decision on equity or debt much energies is exerted on the process of making financial decisions in determining the most appropriate capital structure to be used. This in turn affects the weighted capital cost which is so key to an Organization that MFIs should keep in mind. Therefore, from the worldwide, regional and local context on capital structure, it is wanting that MFIs needs to determine optimum capital structure for the high financial performance.

Financial performance of MFIs

Financial performance, according to Nandan (2010), is a particular pointer of how efficient firm would leverage resources from its core business approach to make profits. Ratios are frequently used as a benchmarking tool and as a typical indicator of financial performance. Most studies have chosen to evaluate financial performance using ROA, ROE, and EPS. The ROE ratio evaluates how profitable firm stands in relative to the shareholders equity. Khrawish (2018)), states ROE as a measure is a fraction of Disposable income minus Taxes distributed over the owners' Capital. Mohita (2019) reports that there is slow but good growth in MFIs based on assessments of the operational and financial outcomes of 762 MFIs worldwide. MFIs in Eastern Europe and Central Asia experienced a ROA loss of (1.1%) during the 2017 fiscal year. African MFIs had a ROA of 3.1% while having a poor portfolio quality, while South Asian MFIs had a ROA of 3.5% (Micro-Finance Barometer Report, 2018). Additionally, South Asia's growth decreased from 13.4% in 2016 to 6.6% in 2017. East Asia and the Pacific saw a rise in borrowing in 2017, going from 10.6% to 18.1%. Kenyan MFIs experienced significant growth between 2011 and 2017. There has been a growth in both the number—from 6 in 2011 to 13 in 2017—and the asset base—from 24.5 billion in 2011 to 31.5 billion in 2017. From 9 billion in 2011 to 40.1 billion in 2016 (CBK, 2017), their customer deposits grew.

MFIs reported dismal financial outcomes despite this growth (Central Bank of Kenya, 2019); they had a 169% decline in profits in 2015. In 2016, they recorded losses of Kshs. 331 million, Kshs. 622 million in losses combined in 2017, and Kshs. 1.4 million in losses combined in 2018. A 131% drop from 2017 (CBK, 2017) of \$1.35 billion. Furthermore, it should be mentioned that in 2016 ROE and ROA decreased by 3.5% and 0.5%, respectively. Furthermore in 2017 ROE decreased to -5.5% and deteriorated in 2018, when ROE was -13.8%, then somewhat improved to -0.4% and -3% in 2019, before falling precipitously to -3% and -28% in 2020 (CBK, 2021). MFIs encountered a number of difficulties, including low performance, according to the AMFI assessment from late May 2020, two months after COVID-19 was deemed a national disaster. Franklin (2021) claims that the year 2020 was the worst year for Kenya's microfinance banks (MFBs), as Covid-19 increased the sector's losses and made them worse due to competition from Saccos and digital lenders. The 14 MFBs' losses soared by 561%, as of Sh339 m 2019 compared with Sh2.2 b in end year 2020, according to the most recent CBK 2020 banking sector supervision report, while overall net assets fell by 1.55% to Sh75.1 billion. The leading company in the sector, Kenya Women Microfinance Bank (KWFB), saw its operating profit go from Sh381 m in 2019 to a staggering Sh816 m loss as of the end of December 2021. The Covid-19 epidemic was dangerous to MFBs. The slowdown

in economic activity decreased the absorption of emerging debts MFBs tighten up the loaning rules in aspect of rising perils. Kenya Women Microfinance Bank (KWFB), the industry leader, saw its operational profit plunge from Sh381 million in 2019 to a startling Sh816 million loss by the end of December 2021. For MFBs, the Covid-19 pandemic posed a threat. The economy's slowdown made it harder for new loans to be taken out as MFBs tightened their lending guidelines in response to escalating risks.

Statement of the Problem

According to Karthika and Karthikeyan (2015), MFIs are among the most operational tools for poverty relief, economic progress, and development in emergent economies, worldwide nearly half the population survives on less than \$2.50 per day. MFIs, according to Caramela and Sami (2018), are crucial in providing financing, particularly to marginalized groups and low-income earners, because most of these groups often lack access to other financing from larger banking institutions and capital markets. As a result, the role of MFIs to whichever economy, including Kenya's, cannot be understated (CBN, 2019). According to Duru, Ehidihamhen, and Chijioke (2018), the SMEs segment provides more than 90% of licensed businesses, accounts for > 80% of employment, and covers roughly 50% of the GDP. Remarkably, these SMEs solely depends on MFIs to fund their operations. In spite of this function, MFIs have alarmingly reported low financial performance (Central Bank of Kenya, 2019). Over 40% of MFIs, for example, have reported diminishing earnings and other losses, and closures, divestiture, and retrenchment have all been common during the past five years (Central Bank of Kenya, 2018). Since Modigliani and Miller's (1958) time, the link of an organization's capital structure with its financial performance has been topic of discussion (Uskumbayeva, 2017), with an emphasis on ideal capital structure geared toward great performance (Baliyan, Dzimiri, & Wally-Dima R. 2019). Numerous studies have been conducted throughout over periodic time in both urbanized and emerging economies on the capital structure because of its key and crucial nature.

Several scholars have painstakingly carried out several studies. For instance, Kirmi (2017) used descriptive and causal study design methodologies to examine the connection between the capital structure with success of registered petroleum and energy enterprises from 2012 to 2016. They measured the influence of obligations proceeding ROA. According to the findings, there exists strong positive link between short-term obligations and ROA, weak negative link between long-term obligations and ROA, and weak positive correlation between total loan and ROA. In Nigeria between 2011 and 2015, Akingunola, Olawale, and Olaniyan (2017) looked into connection of capital structure choices with organizational financial stability. Debt, equity, growth, size, ROE, and ROA were calculated using regression analysis. The results showed that debt over the study period significantly improved ROE and ROA. Shen (2017) examined ROE, ROA, gearing fraction, long-term loan capital fraction, and existing loan capital fraction in his regression analysis of the link of capital structure with firm success in China from 2011 to 2015. Performance of Chinese listed companies showed a weakly negative association with the asset liability ratio, according to the study. The association of capital structure with

company performance remains unclear due to the conflicting and varying findings of these studies. For this cause, the aim of the research stands to appraise the influence of loans, shareholder equity, deposits, and financing from retained earnings on the ROE, which serves as a gauge of the MFIs' financial performance that have been granted licenses by the CBK ..

Objectives of the Study

The main objective of this research was assess the influence of capital structure on financial success of Kenyan MFIs. The specific objectives were:

- i. To determine influence of loan financing on financial performance of Kenyan MFIs.
- ii. To examine the influence of shareholder's equity financing on the financial performance of Kenyan MFIs.
- iii. To assess the influence of retained earnings on Kenyan MFIs' financial performance.
- iv. To analyse influence of deposit financing on financial performance of Kenyan MFIs.
- v. To determine the influence of moderating variable of firm size in the interconnection of capital structure and financial performance of MFIs in Kenya.

Theoretical Review

Trade-off Theory

In 1973, Kraus and Litzenberger suggested the concept. Agreeing with Trade-Off Concept, organizations determine capital structure objective through harmonising the tax-shield advantage and the insolvency price tag. The cost-benefit analysis of debt financing is taken into consideration by the theory (Tsoy & Heshmati, 2017). Therefore, every firm has an ideal capital structure, according to TOT theory. Debt has the advantage of acting as a tax haven that lowers the capital cost. Bankruptcy fees and collection costs are included in the cost of debt. Bankruptcy costs are incurred as end result of the firm's inability to repay its debts. As a result, agreeing to trade-off concept, advantage of exhausting loan reduces as bankruptcy price and agency rises (Tsoy & Heshmati, 2017). Trade-off theory identifies negative leverage influences on company performance (Hassan & Holmstedt, 2016) .For that reason, firms ought to be aware of the charges and profit attached to obligation and equity as well as endeavor to move towards optimum capital structure (Oayyun & Noreen, 2019). Furthermore, TOT also presupposes that businesses use their capital by balancing levy advantages of obligation in contrast to risks of insolvency, targeting for perfect liability ratio. The theory relates to capital structure and shed light on how MFIs choose how much debt and equity financing to use by weighing the costs and advantages. This theory is crucial and pertinent to this study.

Pecking Order Theory (Hierarchy of financing choices)

Myers and Majluf proposed theory in 1984. The Pecking Order Concept, in contrast to the Trade-Off Concept, believes at hand exists definitely not optimum leverage. Capital remains decided by firms through hierarchical manner. In addition, Donaldson's 1961, POT contradicts the hypothesis of firms having specific debt-to-equity relation to allow operation on low most likely capital cost (Agyei, 2020) . For covering the long-standing debts, firms preset pyramid

of capital springs, agreeing to paper's core idea. The leading preference be there engagement of firm's assets, frequently retained earnings (Yıldırım, 2021). If inadequate exists, the subsequent preference en route for acquiring funds via alternative bases, preferably bank credits and trade bonds. Since financiers realise other stock proposing accurately, outlook the situation as undesirable news, then stand simply set to acquire replacement stocks at a cut rate, is the least desirable form of financing (Simatupang, 2019). In the view this would cause cost being reassigned from principal shareholders to new shareholders, subscribing new stocks at lessened charges is questionable (Oktaviani, 2019). The theory is relevant to the study because it informs the public about how the MFIs are performing. If MFIs finance themselves internally, it indicates that they are strong; if they finance themselves through debt, it indicates that management is confident that the institutions can meet their monthly periodic obligations.

Market Timing Theory

Market Timing Concept suggested via Baker & Wurgler in 2002, the firm's capital structure remains primarily determined via the market's current situation. This means firms are usually not concerned using debt or equity financing, rather by the kind of funding that seems to be valuable by financial markets at the time. Firms, for example, issue new stocks once stock prices rise then rebuy stocks or issue obligation whenever the rates of stock decline. (Baker & Wurgler, 2002). As a result, market fluctuations influence the selection of a capital structure. This demonstrates throughout promising as well as fit market or beforehand crunch once assets are overrated, firms stand driven to offer equity as well as lower debt rate. According to market timing theory, leverage and firm performance have a negative relationship beforehand a financial crisis, a positive link in crisis, and negative association that persist for up to a decade afterward the crisis as a consequence of the crisis's negative impact on financial markets (Tsoy & Heshmati, 2017). This theory is pertinent to the study because it provides insight into how well the management of MFIs understands and predicts the economy. In order to make money with the chosen sources of finance, this is done in order to seize the moment when the market is at its best or worse.

Empirical Review

Loan and Financial Performance of MFIs in Kenya

According to Kirimi (2018), between the years of 2012 and 2016, the researcher used descriptive and causal research design methodologies to examine the linkage amid the capital structure verses viability of Kenyan registered oil as well as energy companies by calculating the power of entire obligations on ROA. In accordance with the findings, there exists strong positive link between total debt and ROA, weak negative link between long-term obligation and ROA. Khan (2012) employed a joint ordinary least square regression of 36 engineering business organizations in Pakistan. Outcomes revealed slightly adverse association of firm's success on gross turnover and Tobin's Q asset yield, negative statistically insignificant correspondence of financial leverage and commercial performance gauged by the ROE. Kajirwa (2015) determined outcome of owner's share in company's leverage on its output. Scrutiny done of banks registered on Nairobi Stock Exchange via linear computational formula

was engaged and profitable yield was estimated on ROI. The findings disclosed the firm's effectiveness having adversely influenced thru debt, however insignificantly. It stood resolved efficiency having unfavorably influenced via usage of owners share in capital system of money-making banks. The research pointed out money-making banks ought to accept reserves with least hazard to exploit productivity.

Researchers from Nigeria, Uremadu and Onyekachi, (2019), looked into how capital structure affected company performance. With specific emphasis on the customer merchandises industrialized segment of economy, the study used manifold regression scrutiny to assess ROA, long-standing obligation to asset share, and overall liability to equity percentage. The results indicated capital structure expressed adverse and irrelevant impact on commercial viability in Nigeria's customer goods trade. Aziz and Abbas, (2019), employed the regression method to evaluate the link between various loan financing and company viability in 14 economic segments of Pakistan as of 2006 to 2014. Findings revealed negative insignificant association.

When analyzing the financial viability of Borsa Istanbul as from 2005 to 2012, Nassar (2016) utilized ROE, ROA and earnings per share as firm viability measures employed debt percentage as dependent variable for capital structure. Findings revealed existence of somewhat adverse link amid capital structure and firm viability. Ullah, Uddin, Abdullah and Islam (2017), Using a pooled data technique, examined factors impelling capital structure over influence on liability maturity in Bangladesh's textile industry from 2010 to 2015. The study included an examination of numerous issues influencing capital structure and the impact on debt maturity. According to the findings, there exists significant link between age and debt maturity ratios. On the debt maturity, growth prospects were discovered to be insignificant. Overall obligations suggested important influence on profitability.

In Nigeria between 2011 and 2015, Akingunola, Olawale, and Olaniyan (2017) investigated connection of the capital structure choice over the company's monetary success. Regression analysis was utilized to quantify temporary liability, liability equity, asset tangibility, long-standing debt, size, growth, ROA as well as ROE. Overall obligations revealed favorable, major impact on ROE and ROA during research period. Using Vietnamese food and beverage enterprises as a case study, Dang, Bui, Dao, and Nguyen (2019) examined capital structure and link over business monetary performance. Explanatory variables that are computed as measures of company performance include ROE, ROA, and EPS. The short-, medium-, and long-term obligation ratios were described as pointers of a firm's capital mix. Unevenly distributed panel statistics of 605 observations as of 61 registered companies in manufacturing subdivision were considered in certain significant studies. It was discovered that financial leverage significantly affected a company's financial performance; debt ratios revealed favorable and significant effect on earnings per share and ROE displayed negative effect on ROA.

Ganiyu, Adelopo, Rodionova and Samuel (2019), studied relationship of Nigerian firm performance over capital structure using a generalized approach of moment measurement. The study included growth potential, asset tangibility risk, age, ownership, size, and ROE as factors. It also used overall leverage percentage, long-standing leverage, temporary leverage, and asset

tangibility. The study discovered a strong connection of capital structure over company monetary success.

Shareholders' Equity and Financial Performance of MFs in Kenya

Zachary, James, and Maingi (2019), investigate how owner equity impacted the financial viability of some NSE-listed companies. An explanatory research strategy was employed because of the nature of the issue. Quantitative data were employed. Quantitative data were employed. A panel data model and multivariate tests were used to examine how the independent variable affected the company's financial viability. 30 chosen companies' data were gathered between 2007 and 2015. Because it places an emphasis on objectivity and is appropriate for a quantitative research to fulfill the aim of evaluating assumptions, positivist philosophy was employed. The normality test, auto-correlation test, unit root test, heteroscedasticity test and pooling test were useful in the diagnostic procedures carried out. Conclusions were reached after the regression coefficients underwent a t-statistic significance test at the 5% confidence level. Contribution of the explanatory variable in response to the variable was ranked using the coefficient of determination (R^2). The study found financial viability of particular enterprises registered on Nairobi Stock Exchange expressed significantly improved by equity. The results showed that equity significantly and favorably affected financial performance. The study came to the additional conclusion that employing equity improved a firm's ability to explain fluctuations in financial viability. Equity therefore significantly and favorably impacted financial performance.

Main and Jagongo (2022), revealed shareholder equity has a favorable influence on the financial viability (ROA) of small tiered deposit-taking Kenyan MFIs. Aman (2011) made an effort to look into the connection between Indian company financial performance and stock ownership. The study looked into how stock ownership impacted the listed Indian companies' financial performance. The study examined the connection between accounting and equity ownership inclusive of market indicators of corporate financial viability. The BSE 500 indexes of the Bombay Stock Exchange of India's 500 listed businesses were included in the study. The study's sample at the end of 2009–2010 consisted of the 397 most traded businesses, which comprise majority of tradeoff. The affiliation amid stock possession and financial viability of Indian registered corporations was examined via the Ordinary least squares (OLS) approach. The findings demonstrate extremely consolidated ownership structure of the Indian market. Indicating additional factors (Behavioral, macroeconomic, political, and contextual) influencing firm performance accounting ownership structure, outcome of the regression exploration revealed that disseminated equity possession impacts definite scopes of reporting financial viability indicators that is ROE however in absence market performance indicators (i.e. Tobin's Q, P/E, and P/BV percentages). Irene, Kimani, and Samuel (2017) used a descriptive survey research design with a target population of all 10,611 registered SMEs in Embu County to assess the link between equity financing and financial viability of SME's within Embu Town, Kenya. The study's conclusions indicate that equity funding and SMEs' financial performance are positively correlated.

Retained Earnings and Financial Performance of MFIs in Kenya

The goal of Abdikadir's study (2020) was to determine how equity financing affected financial success of SMEs in Kenya's Garissa County. Investigation was supported by the usage of the market timing chain and the Pecking Order Theory. 3097 small and medium-sized businesses were the target demographic for the quantitative investigation approach. First hand statistics was gathered by questionnaire. Findings showed that majority of SMEs prioritize raising money internally. The majority of Garissa's small and medium-sized businesses usually used retained revenues to fund their operations. It was evident that the majority of the small and medium-sized businesses in Garissa County benefit from retained earnings by lower borrowing costs. According to the study's findings, changes in retained earnings significantly and favorably affect the financial performance of SMEs in Kenya's Garissa County. Retained revenues and reserves, according to Maina and Jagongo (2022), have a favorable effect for Kenyan microfinance organizations. Cash reserve and liquidity were found by Watila and Ondabu (2022) to have a bad but minor influence on the performance on Kenyan MFBs.

Retained earnings were one of the factors that Mwongeli and Ariemba (2018) discovered to influence effectively monetary sustainability of MFIs in Kenya. Odero et al. (2021) looked at how the capital structure of MFIs in Nairobi City County, Kenya affected their financial performance. The Kenya Microfinance Act, which will recognize 14 successful microfinance firms as of 2020, was combined with a five-year census study (from 2014 to 2018). The equity ratio, debt to equity fraction, as well as size of the firm, which was grounded on the gross asset value of the company, made up the research model for the study. The following ratios, ROE, served as the dependent variables. Stata was utilized to examine the outcomes. According to the inferential statistics, equity funding revealed statistically irrelevant impact on financial viability of MFIs ($p=0.05 < 0.05$). Salim and Yaday (2012) conducted research on how to link the capital mix of MFIs in Kenya with financial viability, and their findings signposted a weak adverse correlation amid the dual variables that was not statistically significant. According to Tshabalal (2017), a study employing the panel statistics approach was voted for in South Africa in the direction of examining influence of equity funding on the performance of SMEs. Results suggested equity funding, as a portion of capital mix and the firm's productivity, revealed positive association.

Deposits and Financial Performance of MFIs in Kenya

Commercial banks simply are not only financial bodies competing for deposits in Kenya. Additional bodies that compete in the deposits market include co-operative societies, mortgage companies, and licensed MFIs Mutuku, (2009). Competition for essential deposits frequently moves banks to increase their funding request with additional costly, unstable entire sale funds, affecting commercial bank profitability directly. Kemdong (2022) determined that the deposits from customer were among the main financing sources used by MFIs, and that they contributed positively to the financial stability of Cameroonian MFIs. In Kenya, Onyinkwa (2017) discovered a favorable correlation between customer deposits and financial performance of MFIs. Islam and Nasreen's (2018) study found, among other things, that

deposits, as indicated by the total deposits to total assets ratio, had favorable influence on performance of MFIs in Bangladesh. Gul (2011) employing data as of top 15 Pakistani commercial banks from 2005 to 2009, researchers inspected the influence of loans, economic growth, inflation, deposits, assets, equity, and market capitalization on profitability indicators such as ROE, ROA, NIM and ROCE. The findings revealed that deposits, amid other things, presented a positive relationship on ROE. Deposits, on the other hand, had an inverse association on ROCE. Likewise, total deposits to total assets presented an inverse correlation on ROCE, indicating that banks that depend on deposits for financing are unprofitable.

Firm Size and Financial Performance of MFIs in Kenya

In assessing the influence of capital structure on financial performance of MFIs in Nairobi county, Kenya, using descriptive research design, the findings revealed that firm size was not a significant moderator ($p=0.581>0.05$) in the study (Odero, R. O., Mutswenje, V. S. 2021). Grace (2017) noted that diverse scholars used different control variables when carrying out studies on the structure of resources and corporation efficiency. They found a clear positive correlation between overall debt to capital, firm size and ROI, and shareholder' equity. Growth of assets had a negative insignificant impact on its reward and to the shareholders investment, while performance had a significant implication as measured by change in shareholder's equity. For assessing link between structure of capital and the business results of SMEs in Ghana, Victor and Badu (2012) employed 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. Salim (2013) focusing on appraising firm size power 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 presented existence of positive interconnection of firm size and return of commercial Banks, Doga (2013) validated the influence of assets volume.

Conceptual Framework

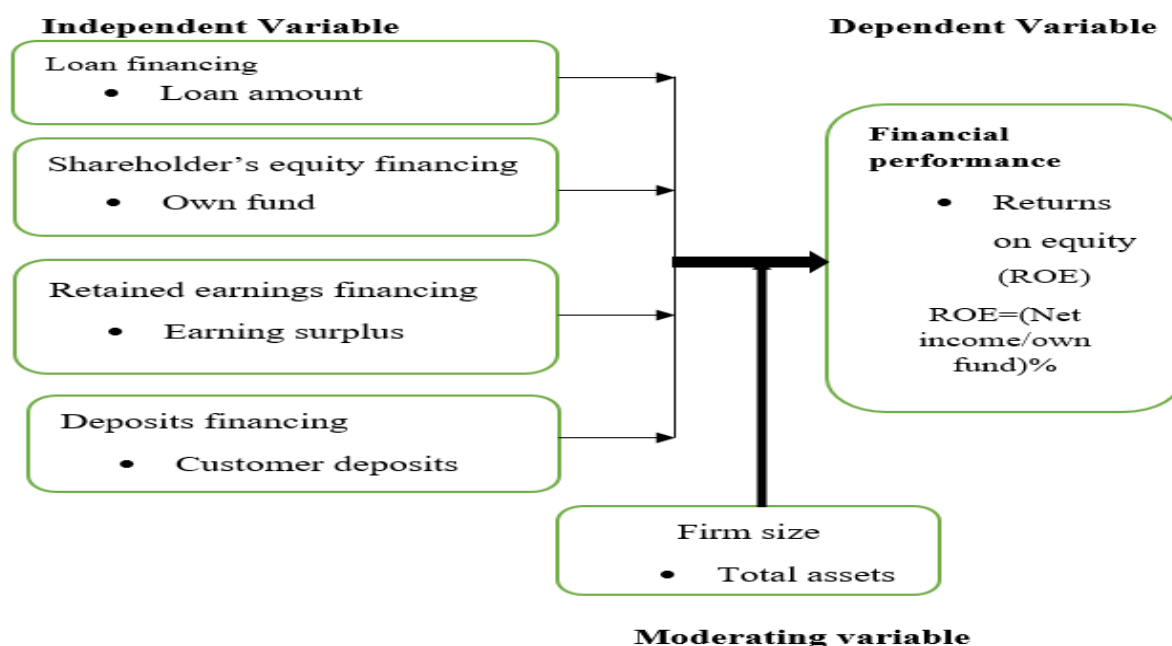


Figure 1: Conceptual Framework

Research Design and Methodology

The research used a correlation research strategy. 14 deposit taking - MFIs that CBK had licensed as of the reports for the years 2016 through 2020 made up the study's target population. Statistics was gathered by means of a statistics collection sheet. The annual audited reports of CBK served as the source for the secondary data. A census survey was employed in the study. Time series statistics was extracted as from 2016 to 2020, and the cross-sectional data was the MFIs. This was so because the information for the periods was readily accessible and up to date. Panel data was considered the most fit for assessing causal relationships because it gives the most all-inclusive info on variables. The quantitative data was exhibited in mean, medium, minimum, maximum, and standard deviation whereas the inferring statistics included correlation, diagnostics, and regression. The panel regression model suggested was defined as follows:

$$Y_{1it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \epsilon_i \text{-----i}$$

$$Y_{1it} = \beta_0 + *MV_{it} (\beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it}) + \epsilon_i \text{-----ii}$$

Where; MV= Moderating variable, Y_{it} = Financial performance of MFI i at time t, X_{1it} = Loan financing for MFI i at time t, X_{2it} = Retained earnings financing for MFI i at time t, X_{3it} = Shareholder's equity financing for MFI i at time t, X_{4it} = Deposit financing for MFI i at time t, β_0 =Constant, $\beta_1...4$ =Coefficient of the variables and ϵ =Error term

Descriptive Statistics

This subdivision deliberates the quantifiable figures of the data analysed for the 5-year period. The results of descriptive data for the ROE and four independent variables are as shown and summarized table below;

Table 1: Descriptive Statistics

	ROE	DEPOSITS	LOAN	RETAINED EARNINGS	SHAREHOLDERS EQUITY
Mean	-35.10	3,048.16	1,010.42	-109.20	396.49
Median	-7.80	277.50	32.50	-100.50	203.00
Maximum	365.00	2,2931.00	9,074.00	1,435.00	2,500.00
Minimum	-1,488.00	0.00	0.00	-1,961.00	0.00
Std. Dev.	196.61	6,111.81	2,180.51	473.39	507.15
Obs.	70	70	70	70	70

Source: Study data (2023)

As of the above outcomes, ROE stands with an average of -35.10, median of -7.80, least amount of -1488 with maximum amount of 365.00. This donates that ROE was moderately unstable over the research period. Equally, retained earnings displayed mean of -109.20, median of -100.50, least amount of -1,961 with maximum amount of 1,435 implies volatility of results during the study period. Loan funding had recorded an average value of 1,010.42, median of 32.50, least amount of 0.00 and maximum amount of 9,074 suggesting steadiness results over the study time. The deposit funding displayed mean of 3,048.16, median of 277.50, least amount of 0.00 and maximum amount of 6,111.81, as a consequence signifying that deposit financing remained very steady during the study time. The high standard deviation of each variable indicates that the data points are dispersed throughout a greater range of values.

Correlation Analysis

From the table 2, it displays the correlation between ROE as the dependent variable and deposits, loan, retained earnings and shareholder's equity as independent variables which is 0.06, 0.05, 0.04, and 0.02 respectively indicates that they're basically not correlated. There is very little connotation amid dependent variable, ROE and independent variables, deposits, loan, retained earnings and shareholder's equity of MFIs.

Table 2: Findings of the correlation matrix

	ROE	DEPOSITS	LOAN	RETAINED EARNINGS	SHAREHOLDERS EQUITY
ROE	1.00				
DEPOSITS	0.06	1.00			
LOAN	0.05	0.87	1.00		
RETAINED EARNINGS	0.04	0.36	0.52	1.00	
SHAREHOLDER EQUITY	0.02	0.06	-0.004	-0.63	1.00

Stationarity Tests for the Model Variables**Panel Unit Root Test for the Deposits Variable /Series (at level)****Table 3: The results of panel Unit Root Test for deposits series (at level)**

Method	Statistic	Prob.**	Cross-sections	Obs
Panel unit root test: Summary				
Series: DEPOSITS				
Sample: 2016 2020				
Balanced observations for each test				
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	6.75183	1.0000	13	52
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	2.99722	0.9986	13	52
ADF - Fisher Chi-square	15.0295	0.9568	13	52
PP - Fisher Chi-square	24.1923	0.5650	13	52

Given that probability values of all the three tests (Levi, Lin & Chu, ADF-Fisher Chi-square, and PP-Fisher Chi-square of 1.000, 0.9568, and 0.5650, respectively are greater than 0.05 from Table 3 above, the conclusion is that Deposit series is not stationary at level and the variable cannot be used in the estimation equation at level if the problem of a false regression or a statistical approach that displays deceptive statistical signal of a linear correlation is to be evaded. Therefore, differencing the series at 1st Difference was required to determine if stationarity in the series can be achieved.

Table 4: The Results of Panel Unit Root Test for the Deposits Series (at 1st Difference)

Panel unit root test: Summary

Series: D(DEPOSITS)

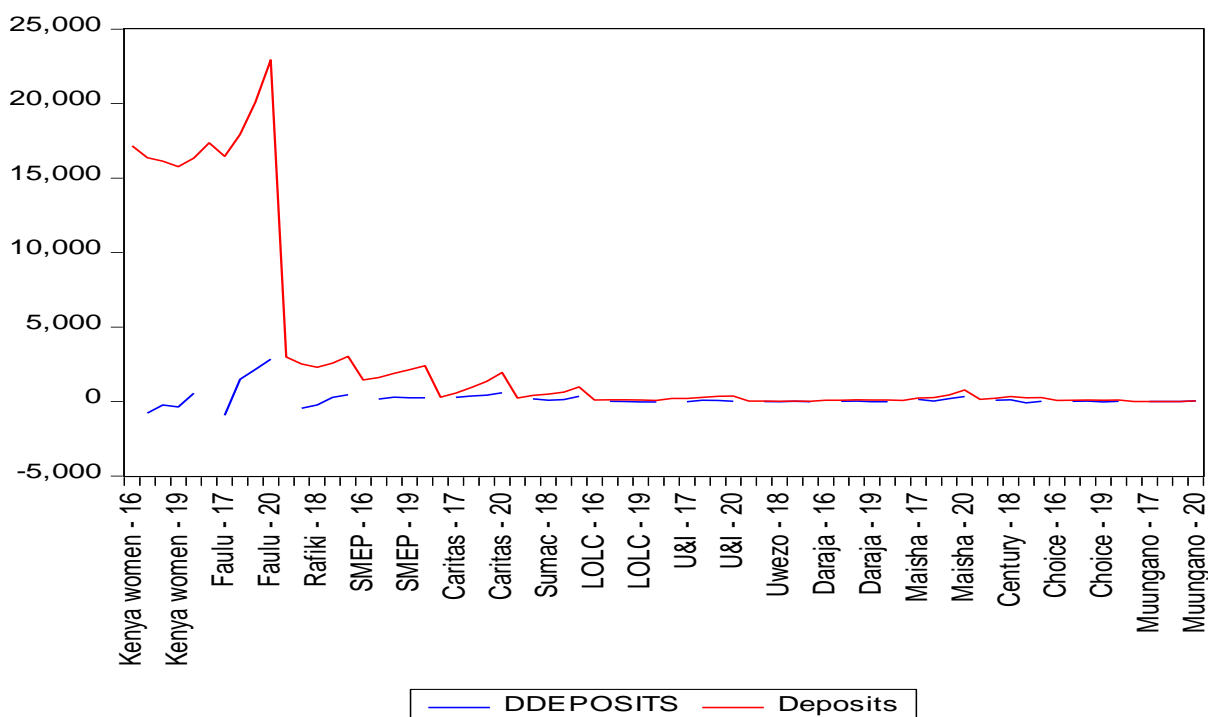
Sample: 2016 2020

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-25.8839	0.0000	13	39
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	43.3987	0.0175	13	39
PP - Fisher Chi-square	50.6190	0.0027	13	39

Given that probability values of all the three tests (Levi, Lin & Chu, ADF-Fisher Chi-square, and PP-Fisher Chi-square) of 0.000, 0.0175, and 0.0027, respectively are less than 0.05, from Table 4 above, the conclusion is that Deposit series is stationary at 1st difference and the variable can be used in the estimation equation at 1st difference.

Figure 2: Graph of Deposits Series at Level (Deposits) and at 1st Difference/Stationary (DDEPOSITS)



It can be observed from Figure 2 above that the line graph of the DDEPOSIT series (at 1st level difference) depicts less of a random walk and is more stationary as compared to that of Deposits (at level or containing the actual values of the series collected for the research).

Panel Unit Root Test for the Loan Series (at level)

Panel unit root test: Summary

Series: LOAN

Sample: 2016 2020

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t^*	-1.57847	0.0572	10	40
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W -stat	-0.48468	0.3140	10	40
ADF - Fisher Chi-square	21.5336	0.3663	10	40
PP - Fisher Chi-square	29.0208	0.0874	10	40

Table 5: The Results of Panel Unit Root Test for the Loan Series (at Level)

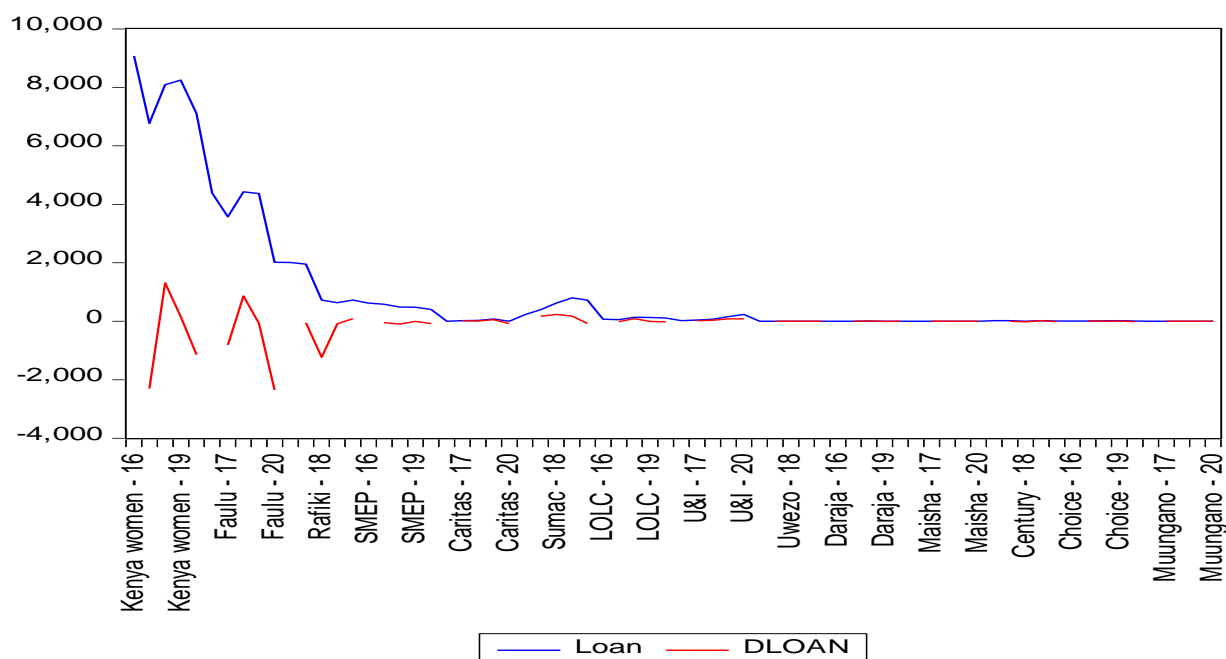
Given that probability values of all the three tests from Table 5 above (Levi, Lin & Chu, ADF-Fisher Chi-square, and PP-Fisher Chi-square of 0.0572, 0.3663, and 0.0874, respectively, are > 0.05 , the inference is that Loan series is not stationary at level and the variable cannot be used in the estimation equation at level if the problem of a spurious regression or is to be avoided. Therefore, differencing the series at 1st Difference was required to determine if stationarity in the series can be achieved.

Table 6: The Results of Panel Unit Root Test for the Loan Series (at 1st Difference)

Panel unit root test: Summary				
Series: D(LOAN)				
Sample: 2016 2020				
Balanced observations for each test				
Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-13.6665	0.0000	11	33
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	39.1078	0.0137	11	33
PP - Fisher Chi-square	43.8823	0.0037	11	33

Given that probability values of all the three tests (Levi, Lin & Chu, ADF-Fisher Chi-square, and PP-Fisher Chi-square) of 0.000, 0.0137, and 0.0037, respectively are less than 0.05, therefore the Loan series is stationary at 1st difference and the variable can be used in order to avoid the problem of a spurious regression.

Figure 1: Graph of Loan Series at Level (Loan) and at 1st Difference/Stationary (DLOAN)



It can be observed from Figure 3 above that the line graph of the DLOAN series (at 1st level difference) depicts less of a random walk and is more stationary as compared to that of Loan (at level or containing the actual values of the series collected for the research)

Panel Unit Root Test for the Retained Earnings Series (at level)**Table 7: The Results of Panel Unit Root Test for the Retained Earnings Series (at Level)**

Panel unit root test: Summary

Series: RETAINED_EARNINGS

Sample: 2016 2020

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t^*	-0.66317	0.2536	13	52
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	2.50726	0.9939	13	52
ADF - Fisher Chi-square	9.85093	0.9982	13	52
PP - Fisher Chi-square	13.1882	0.9822	13	52

Given that probability values of all the three tests from Table 7 above (Levi, Lin & Chu, ADF-Fisher Chi-square, and PP-Fisher Chi-square of 0.2536, 0.9982, and 0.09822, respectively, are greater than 0.05, the conclusion is that Retained Earnings series is not stationary at level and the variable cannot be used in the estimation equation at level if the problem of a spurious regression or is to be avoided. Therefore, differencing the series at 1st Difference is required to determine if stationarity in the series can be achieved.

Table 8: The Results of Panel Unit Root Test for the Retained Earnings Series (at 1st Difference)

Panel unit root test: Summary

Series: D(RETAINED_EARNINGS)

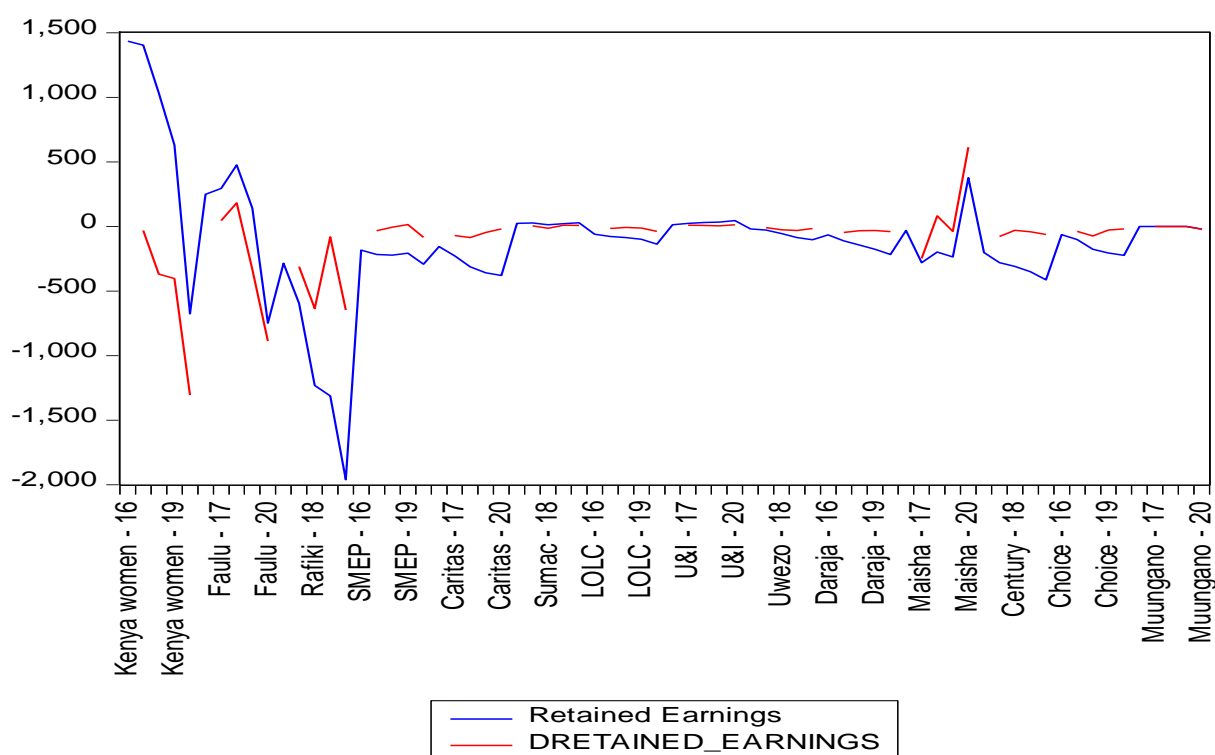
Sample: 2016 2020

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t^*	-6.13582	0.0000	13	39
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	24.7570	0.5328	13	39
PP - Fisher Chi-square	29.2305	0.3007	13	39

Given that it is only the probability value of the test of Levi, Lin & Chu (0.0000) that fall below 0.05 and for the other two tests, ADF-Fisher Chi-square (0.5326) and PP-Fisher Chi-square (0.3007), fall above 0.05, the majority rule (i.e., 2 out of 3 suggesting the presence of a unit root within the sequence would lead to overall conclusion that retained earning series is not stationary at 1st difference level. However, since the series is incompatible with 2nd level differencing, the 1st level differencing outcome which produces a series that can be said to have a more discernible trend (i.e., less random walk) than the series at level as evidenced in the below graph (DRETAINED EARNINGS) is adopted and the variable can be used in the estimation equation at 1st difference level in order to lessen the impact of the problem of a false regression or a statistical approach that displays deceptive statistical confirmation of a linear connection.

Figure 2: Graph of Retained Earnings Series at Level ((Retained Earnings) and at 1stDifference/Less Random Walk (DRETAINED_EARNINGS)



It can be observed from Figure 4 above that the line graph of the DRETAIED_EARNINGS series (at 1st level difference depicts less of a random walk and is more stationary as compared to that of Retained Earnings (at level or containing the actual values of the series collected for the research).

Panel Unit Root Test for the Shareholders' Equity Series (at level)

Table 9: The Results of Panel Unit Root Test for the Shareholders' Series (at Level)

Method	Statistic	Prob.**	Cross-sections	Obs
Panel unit root test: Summary				
Series: SHAREHOLDERS_EQUITY				
Sample: 2016 2020				
Balanced observations for each test				
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-48.1561	0.0000	11	44
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-10.2284	0.0000	11	44
ADF - Fisher Chi-square	40.7428	0.0088	11	44
PP - Fisher Chi-square	53.6424	0.0002	11	44

Given that probability values of all the three tests from Table 9 above (Levi, Lin & Chu, ADF-Fisher Chi-square, and PP-Fisher Chi-square of 0.000, 0.0088, and 0.0002, correspondingly, < 0.05, the conclusion is that Shareholders' equity series is stationary at level and the variable (SHAREHOLDERS_EQUITY) can be used in the estimation equation at level while avoiding the problem of a spurious regression. Therefore, differencing the series at 1st Difference is not required to determine if stationarity in the series can be achieved.

Panel Unit Root Test for the ROE Series (at level)

Table 10: The Results of Panel Unit Root Test for ROE Series (at Level)

Method	Statistic	Prob.**	Cross-sections	Obs
Panel unit root test: Summary				
Series: ROE				
Sample: 2016 2020				
Balanced observations for each test				
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t*	-7.28225	0.0000	13	52
Null: Unit root (assumes individual unit root process)				
Im, Pesaran and Shin W-stat	-1.01370	0.1554	13	52
ADF - Fisher Chi-square	28.5588	0.3315	13	52
PP - Fisher Chi-square	37.5490	0.0666	13	52

Given that probability values of all the three tests from Table 10 above (Levi, Lin & Chu, ADF-Fisher Chi-square, and PP-Fisher Chi-square of 0.0000, 0.3315, and 0.0666), correspondingly, have 2 values > 0.05 , the majority rule of 2 out of 3 suggests that the conclusion is that ROE series is not stationary at level and the variable cannot be used in the estimation equation at level if the problem of a spurious regression or is to be avoided. Therefore, differencing the series at 1st Difference is required to determine if stationarity in the series can be achieved.

Table 11: The Results of Panel Unit Root Test for the ROE Series (at 1st Difference)

Panel unit root test: Summary

Series: D(ROE)

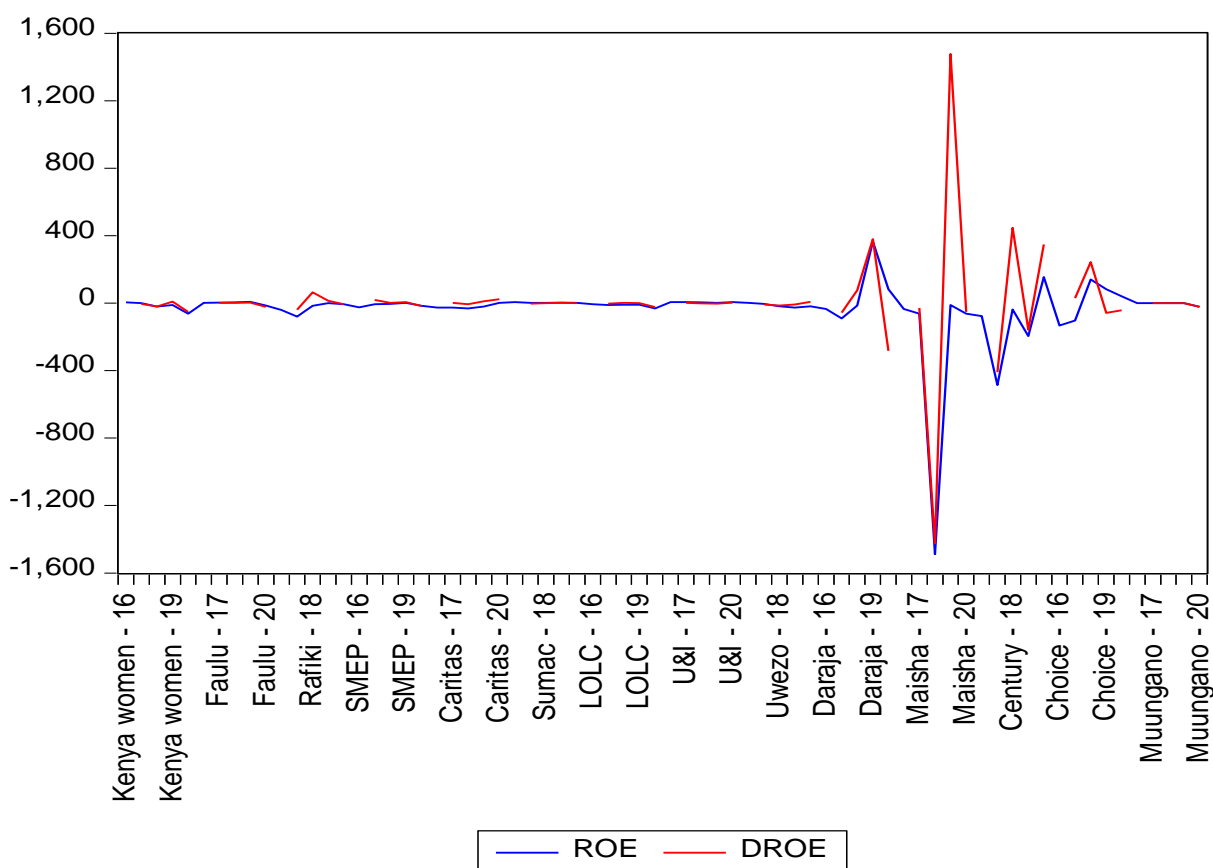
Sample: 2016 2020

Balanced observations for each test

Method	Statistic	Prob.**	Cross-sections	Obs
Null: Unit root (assumes common unit root process)				
Levin, Lin & Chu t^*	-14.0654	0.0000	13	39
Null: Unit root (assumes individual unit root process)				
ADF - Fisher Chi-square	55.9829	0.0006	13	39
PP - Fisher Chi-square	59.2247	0.0002	13	39

Given that probability values of all the three tests from Table 11 above (Levi, Lin & Chu, ADF-Fisher Chi-square, and PP-Fisher Chi-square of 0.000, 0.0006, and 0.0002, correspondingly, are < 0.05 , the conclusion is that the ROE series is stationary at 1st difference and the variable (DROE) can be used in the estimation equation at level while avoiding the problem of a spurious regression.

Figure 3: Graph of ROA Series at Level (ROE) and at 1st Difference/Stationary (ROE)



Research Findings and Discussion

Loan Financing and Financial Performance of MFIs in Kenya

This study's initial goal was to determine how loan funding affected the financial performance of Kenyan MFIs. A unit increase in loan financing would lead to 0.009825 increase in ROE, with a p-value $0.9832 > 0.05$ an indication that loan financing had a statistically insignificant influence on MFIs financial performance. Based on the findings, it is predicted that small MFIs will employ less loan in their capital structure, which remains contrary to the trade-off theory. This result is in line with empirical research by Kirmi (2018), Akingunola, Olawale, and Olaniyan (2017), Dang, Bui, Dao, and Nguyen (2019), and others who reputable a positive link amid loan financing in line with financial performance, prominent to expectation of such an association. The findings contrast with those of Uremadu and Onyekachi (2019), Kajirwa (2015), and Khan (2012), who discovered a weak but negative correlation between loan financing and financial performance.

Shareholder's Equity Financing and Financial Performance of MFIs in Kenya

The subsequent objective was to assess how shareholder equity financing affected return on equity (ROE). From the findings, a unit increase in shareholders equity financing would lead to -0.578911 decrease in ROE, with a p-value $0.0047 < 0.05$ an indication that shareholders

equity financing had a statistically significant influence on MFIs financial performance. The analysis came to the conclusion that there is little correlation between shareholder equity funding and MFI ROE in Kenya. According to the pecking-order principle, a more profitable business should have a capital structure that uses less shareholder equity. The results corresponds to majority of literature that have bee done on the connection between financial success and shareholders' equity; Irene, Kimani, and Samuel (2017), Zachary, James, and Maingi (2019), as well as MFIs are anticipated to deploy shareholder equity in capital structure.

Deposit Financing and Financial Performance of MFIs in Kenya

The second last goal of exploration was meant to scrutinize the linking amid deposit funding and ROE on MFIs in Kenya. The findings show that a unit increase in deposit financing would lead to 1.540409 increase in ROE. A pvalue of $0.2168 > 0.05$ meant that deposit financing was insignificant predictor of MFIs financial performance. The findings show that in the Kenyan MFIs industry, deposit finance is not an important determinant of the financial performance of MFIs. The findings lined by those of studies by Gul (2011), Ratnovski and Huang (2009), Mutuku (2009), Bassey et al. (2014), and Handoo and Sharma (2014). These studies found a positive correlation amid deposit financing and financial performance, indicating that a similar correlation is likely to exist with the financing of capital structure.

Retained Earnings and Financial Performance of MFIs in Kenya

Establishing the link between retained profits financing and ROE of MFIs in Kenya was the fourth goal of this study. A unit increase in retained earnings financing would lead to 0.646623 increase in ROE, with a p-value $0.0016 < 0.05$ an indication that retained earnings financing had a statistically significant influence on MFIs financial performance. The course of the association is in line with the pecking order concept, which shows affirmative association of retained earnings and financial success of ROE. This positive association agrees with the findings of the vast majority of studies linking retained profits to ROE, including Tshabalal (2017), Odero, et al. (2021), and Abdikadir (2020). These studies indicate that fast growth MFIs utilise more retained earnings, indicating that the majority of them will also be incorporated into the mix of the capital structure.

Firm size and financial performance of MFIs in Kenya

With the presence of the mediating variables, the ROE of the micro finance institutions increases by 11.08076 with a statistically significant p value of 0.0003 with is below the threshold of 0.05. The inference is that firm size was a significant moderator in this study, since it has significantly changed the decision rule in the model.

Conclusions

It can be reputable to acknowledge that a mixture of funding sources had an effect on financial strength. From the five independent variables considered, loans, deposits and retained earnings were positively related with a value of 0.009825, 1.540409 and 0.646623 respectively. As such MFIs should endeavor to increase these sources of financing to optimum level as a unit increase

influences ROE positively. Additionally, shareholder equity and assets revealed a negative association with values of -0.578911 and -2.697301 respectively which implies that an increase leads to a unit decrease in ROE.

Recommendations

Microfinance Institutions should strike a balance on loan financing. Although loan results in tax benefits, MFIs should strike a balance benefits and costs of debt arising thereof in line with the Trade-off theory, fast growing MFIs to utilize more retained earnings in capital structure, more profitable businesses use less shareholder's equity in capital structure mix and finally positive correlation on deposits indicating similar correlation is likely to exist with financing capital structure. Thus MFIs may consider reviewing these measures so as to enhance performance to serve the low-income earners better in improving the economy.

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