EFFECT OF FINANCIAL LEVERAGE ON STABILITY AMONG DEPOSIT-TAKING MICROFINANCE INSTITUTIONS IN KENYA

BY

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DECLARATION

This management research project is my original work and to the best of my knowledge has not been presented for an award of a degree in any University.

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This management research project has been submitted for examination with my approval as the University Supervisor.

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DEDICATION

I dedicate this research proposal to my parents Mr. and Mrs. Ong'ayo, I really thank you for being a great source of encouragement and inspiration in my life and always believing in me.

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ABBREVIATIONS AND ACRONYMS

AMFI   Association of Microfinance Institutions of Kenya

CBK   Central Bank of Kenya

DOL   Degree of Operating Leverage

DR   Debt Ratio

DSE   Dar es Salaam Stock Exchange

DTMFI   Deposit Taking Microfinance Institution

MFI   Microfinance Institutions

ROA   Return on Assets

ROE   Return on Equity

SPSS   Statistical Program Scientific Package

ABSTRACT

The study was undertaken to ascertain the effect of leverage on the financial stability of deposit taking micro-finance institutions in Kenya. To achieve the objective of the study, secondary data, concerning the study variables, was utilized which was obtained from published and audited annual reports. The response rate was 80% as the study could not collect all the panel data as targeted since four DT-MFIs were not yet established for the years 2012 and 2013. The study carried out descriptive and inferential statistics to achieve the objective of the study. Correlation and regression analysis was undertaken on the panel data where all the independent variables displayed a significant correlation against the dependent variable of the study. Financial leverage indicated a positive and significant correlation of 0.447 against stability. NPL indicated a weak negative and significant correlation of -0.238 against stability. Tax payment revealed a positive and significant correlation of 0.326 against stability while the size of the firm indicated a strong positive and significant correlation of 0.628 against stability. The R square was 0.426 implying that the coefficient of determination was 42.6 % which suggests that the independent variables in the model could account for only 42.6% of the changes in the dependent variable of the study. Adjusted R square recorded a value of 0.402, which was below R square to indicate that the model had elements that did not add value to it. The model indicated significance of 0.001 which was below 0.05. Therefore, the study rejected the null hypothesis and concluded that there is significant effect of financial leverage on stability of DT-MFIs. Financial leverage and size had significance effect on stability as their p-value was less than 0.05 while NPL and Tax payment indicated p value that was above 0.05 hence, were not-statistically significant. The model implies that a unit increase in financial leverage when size is constant will lead to an increase of 0.023 in stability of DT-MFIs. On the other hand, a unit increase in size will lead to an increase of 0.621 in stability when financial leverage is kept constant. The study therefore recommended increasing financial leverage for DT-MFIs as well as ensure they enhance and improve their growth. The study also recommended that these institutions should not incur extra costs in trying to manage NPLs. Similarly, the study also recommended duly payment of taxes, as tax payments had non-significant impact on financial stability but lack of tax payment would increase non-compliance risks that would jeopardize the licensing of the institution.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Financial leverage is an important aspect that considers the use of debt to purchase an asset with the expectation that the returns from the use of the new asset will exceed the cost of borrowed funds. It is therefore a crucial concept for businesses and organisations that desire to hedge on profit maximization. The cost of debt must be considered in view of the returns expected from the use of the asset, and hence efficiency in organisations becomes one of the critical factors that should be considered. Financial leverage also affords financial institutions to plan out their expansion plan as it becomes a source of finance apart from the retained profit that is more preferred by management than the use of debt. Financial leverage through the process of balancing or combining equity and debt thus enables firms to establish a sound capital structure to finance operations and expansion. This balance of equity and debt is especially prominent in lending institutions which leverage their whole business model on debt through savings and deposits and debts through loans to customers and financial regulation by government bodies. This study thus seeks to elaborate on the effect of financial leverage on stability of financial institutions (Kim, Lewellen & McConnell, 1979).

This study will be underpinned on three theories found to bear relevance to the topic under research: The Modigliani and Miller theory, the Trade-off theory and the Pecking order theory. Modigliani's and Miller's theorem also known as irrelevant proposition theory postulates that under the assumption of absence of taxable income and costs of distress such as bankruptcy costs implying that a firm's capital structure does not affect its value due to valuation having a basis of future profits. The major assumption of this theory is a perfectly efficient market. The trade-off theory is a development of the Modigliani and Miller's theorem developed in part by the two individuals and improved upon by economists such as Myers (1984). The trade-off

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theory postulates an exchange that exists between internal and outsourced finance based on the taxation on income and costs that are not concerned with accruing profit such as distress costs. The capital structure of the firms is thus determined by which avenue of finance is more profitable. The third and final theory underpinning this research is the pecking order theory put forward by Myers (1984) which postulated a hierarchy of financial leverage based on the profitability where firms use the most beneficial financial source depending on what is available to them at the time or based on the scope of the firm itself. Larger and more profitable firms thus in this case prefer debts to equity since it affords them a greater opportunity, especially in the context of expansion showing a hierarchy of financing based on the opportunities each financing option affords to firms.

The Microfinance Act provides the legal basis for the operation of deposit taking MFI in Kenya. The challenges in the financial sector that makes it difficult for commercial banks to satisfactory meet the needs and the desires of all people and hence improve financial inclusion in the country, encouraged the establishment of MFI, as a way of addressing these challenges. This means that the products and services provided by MFIs are broadly targeted to the small and micro enterprises, in the country. They seek to provide banking services to low-income earners, who may not find it suitable or affordable to operate bank accounts in commercial banks. The deposit taking MFIs may therefore be categorized as smaller version of commercial banks, that are able to offer targeted products and services to their target market, to derive value while at the same time enhancing financial inclusion. The change in regulations in commercial banks such as the capping of interest rates, the central bank operations among others, have a direct effect on performance of deposit taking MFIs. They compete with commercial banks to lend credit to clients, while they are not able to access lending from the central bank like commercial banks. They are therefore left to raise finance from more expensive sources that means that they are required to charge higher interest rates on their loan products. These

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institutions are therefore required to understand the needs of their clients in a deeper manner, such that they are able to present products that are unique and able to address the unique requirements of their clients, which they may not obtain from commercial banks (Nzuve, 2016).

1.1.1 Financial Leverage

Financial leverage attributes to the practice of borrowing money to successfully invest in an asset or assets in the hope that the asset will generate more profit that exceeds the cost of borrowing, to pay back the leverage with interest amount. In other words, financial leverage defines the amount of capital a given company or organization relies on borrowing and the revenue generated from the asset purchased from the debt (La Rocca & Snehota, 2021). It involves the provision of loans to an individual or an organization with limited access to conventional financial services with the sole intention of undertaking business investments on assets that would generate future returns. Microfinance was initially considered as an alternative to both banks, which in most developing countries serve only 5-20% of the population, and informal and semi-formal sources of finance for the poor (Hubka and Zaidi, 2005). Similarly, according Bitok, Cheboi and Kemboi (2021) financial leverage is considered a key factor for financial sustainability. It is vital in the reduction of moral hazards and adverse selection that would come from increased monitoring exercised from increased stakeholders, that therefore helps in financial sustainability.

The concept of financial leverage has attracted research ever since the Modigliani and Miller (1958) capital structure theory was proposed. The tax shield that provides benefits to the levered company, acts as an inducement towards increased use of debt in its capital structure. However, increased financial risks would soon enough erode the tax shield benefits that financial managers should critically analyse their business environment, to understand the optimal capital structure that should be adopted. Further studies that have been conducted on

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financial leverage indicates that the cost of information, given that companies do not operate in efficient markets, is significant and key to result to significant difference between the cost of levered firm and the cost of unlevered firm. The decisions required on financial leverage, should be balanced and should be unique according to the needs of the organisation (Galak, Small & Stephen, 2011).

Bitok et al. (2021) measured financial leverage as the ratio of debt over equity. Other researchers similarly used debt ratio as a good measure of financial leverage, as it depicts the ratio of debt used in the capital structure of a firm, relative to the equity financing adopted by the firm (Okumu & Jagongo, 2017). The degree of financial leverage (DOL) coupled with earnings before interest and tax have also been used as a measure of financial leverage in a study conducted by Monyi (2017). This study therefore adopts use of degree of financial leverage as it considers both the aspect of the earnings before interest and tax, as well as interest paid by the microfinance.

1.1.2 Financial Stability

Financial stability is defined as the ability of a business to withstand financial emergency or a financial problem that the business faces. The problems may include loss of key customer or supplier, loss of key employee, a decrease in sales among others. Business stability is usually biased towards defining financial stability. It therefore results to the analysis of a business cashflow that indicates the extent to which a business can cope with various unfavourable scenarios in the business (Hatfield et al., 2017). Financial stability has in some cases been defined as the ability of business to maintain consistence in improving financial performance, competitive advantage, as well as sustainable growth. Financial stability is therefore crucial in strengthening and improving organizational growth, of which organisations implement strategies that include acquisition of other businesses, integration, hiring competent staff and hedging on technological advancement (Alaba & Patrick, 2021).

Ferguson (1960) was categorical that business stability was critically affected by staff mobility and the rate of employee turnover. The ability of a firm to retain its best work force was crucial to enhance its growth as well as capture more markets to increase its size. The study found that employees played a critical role in providing the organisation a competitive edge over its competitors. On the other hand, Hatfield et al. (2017) considered free cash flow as the measure of stability in a business. The ability of a firm to meet its short-term obligations as and when they fall due determine the stability of a firm. However, Alaba and Patrick (2021) had a more elaborate definition of stability that considered the stability of a firm as the performance of the organisation towards its objectives. The primary objective of a firm is to maximize shareholders' wealth. They therefore considered the measure of stability in a firm as the ability of the firm to achieve the best returns for the shareholders. The rate of return on assets employed was used as the measure of performance. This study will also employ ROA as the measure of stability in microfinance organisations as it depicts the ability of a firm to generate returns for the shareholders from the investments in assets that it has undertaken.

1.1.3 Financial Leverage and Firm Stability

Starting a business venture is a strategic process that requires proper management and the availability of capital for investment (La Rocca & Snehota, 2021). This capital is required to pay to produce goods and services for the purpose of generating sufficient profit. Thus, a company or an organization will leverage the available capital to invest in all operational practices in order to create value. Building and expanding labour forces is another key area for capital allocation (Chu & Fang, 2020). Where there is a sufficient labour force, there is high input, which directly reflects the output. Therefore, with the availability of microfinance, many companies have had equitable and fair access to financial services needed to boost their business operations for maximum profit. Most business assets out there, particularly those new in the field, rely heavily on the availability of sufficient capital for proper establishment. Thus,

the higher the capital available, the stronger the business foundation or growth. On the other hand, a lack of sufficient capital for investment in business development can significantly lead to the collapse of the business venture (Anwar, Tajeddini, & Ullah, 2020). The microfinance sector finances its operation using several methods, which include grants, debt, equity, and deposits (micro savings).

However, access to financial services may not be a clear path for some companies, particularly those not yet developed (Anwar, Tajeddini, & Ullah, 2020). For instance, most credit lenders may evaluate the credit score of such an organization and describe them as too low and thus disqualify them from accessing the financial services they need for development (Lee, Park, & Heo, 2019). Even though the minimum threshold for credit score from one lender to another may vary, there are still a good number of companies that have been denied access to loans even when they have the potential to develop their business. Therefore, the development of microfinance has been a cornerstone for many small or upcoming business entrepreneurs by offering them strategic opportunities to develop to the level they need.

On the other hand, there is also the burden of settling the debt. Lenders will give money to a company with a certain interest, which varies from one lender to another and also depends on the amount borrowed (Kgoroeadira, Burke, & van Stel, 2019). Therefore, by borrowing a loan, there needs to be a guarantee that whatever venture is being invested in will generate more income to necessitate the refund process as agreed. Thus, this refund process also plays a crucial role in the stability of the established business. For instance, if the review generated is not sufficient enough to support both the loan refund and the business investment, the business operation might experience some major challenges. Therefore, it can be stated that financial leverage can be both beneficial, where it supports the development of business, and detrimental to a company, were settling the debt affects the business progress.

1.1.4 Deposit-Taking Micro Finance Institutions in Kenya

Microfinance institutions are credit providers, however the loans they give out to borrowers are lesser than those of traditional banks. They provide credit to atypical borrowers who may not have a guarantee of payment as required by banks, clients that traditional banks consider too risky to offer credit. It is structured to offer low-income individuals the finance they may require starting businesses and have not due to lack of funds and guarantee ship. The loans are given according to the willingness of the individuals to repay the loan and previous transactions between the microfinance institution and the borrower thus it is much more viable once a rapport is established between borrower and lender (Younas & Kalimuthu, 2021).

Microfinance has been defined as a credit methodology that employs adequate collateral substitutes to deliver and recover short-term, working capital loans to micro-entrepreneurs. It is differentiated from commercial lending by the concepts of joint liability or group lending, dynamic incentives that allow for an increase in the size of loans over time, regular repayment schedules, and alternative collateral through forced savings. The deposit-taking microfinance institutions give small-scale investments a chance to generate income from otherwise untapped market activities (Mbugua, 2016). Deposit-taking microfinance institutions in Kenya came about as a result of the enactment of the Microfinance Act (2006) allowing such institutions to allow savings from the depositors which allowed the streamlining of operations by the MFIs. Currently, there are 13 deposit MFIs in Kenya, with most of their headquarters situated in Nairobi.

1.2 Research Problem

The evaluation of sources of finance is key to determining the performance of firms such as deposit-taking MFIs as the capital structure enables said firms to establish their profitability and scope for expansion. Capital structure is also important in determining essential macroeconomic factors that contribute to the growth of an economy as the flexibility of

operations afforded by improvement and profit across the board, in the context of financial institutions, within a country is indicative of economic progress (Booth et al., 2001). Deposit MFIs were established to enable low income earning individuals access to opportunities were not available to them due to lack of fund and lack of willing lenders to support opportunities such as small-scale entrepreneurship.

Few microfinance institutions located in Kenya are profitable as a notable number have collapsed or merged with their counterparts to better their financial performance (Okumu & Jagongo, 2020). A firm's financial sustainability is dependent upon its ability to develop and supply services or goods that meet customer needs and cover all costs of development and supply without the requirement of equity. According to Mwangi, Muturi, and Ombuki (2015), a sizable portion of deposit-taking microfinance institutions are unsustainable, with many having collapsed, others consolidating, and yet more simply underperforming underlining the need for evaluation of financial performance to ascertain the cause of the downturn in the microfinance industry in Kenya. Financial leverage plays a key role in determining the profitability of businesses as it is a gauge of a firm's ability to accrue adequate finance to achieve sustainable financial profitability.

Empirical studies have been undertaken as far as financial leverage as well as firm stability is concerned. Internationally, studies undertaken by Zhao and Wijewardana (2012) sought to determine financial leverage on company's growth and financial strength. This depicts a contextual gap since the study was not undertaken in Kenya and neither was it undertaken for deposit taking microfinance institutions. Other international studies include Edson (2015) that sought to determine profitability and financial leverage of commercial banks in Tanzania. Abubakar (2015) was conducted in Nigeria. Local studies include study by Mbugua (2016) that sought the relationship of capital structure and financial performance, depicting a conceptual gap. Other studies include Mwangi et al. (2015) deposit to asset ratio and financial

sustainability of MFIs. However, a closer study was undertaken by Okumu and Jagongo (2020) that sought to determine short-term and long-term debt and their impact on profitability of deposit taking MFIs in Kenya. This study depicts a methodological gap as the concepts were identified and measured differently from measures proposed in this study. This brings out the study gap that was addressed by the study.

This study thus sought to establish the effect of financial leverage and capital structure on the financial stability of deposit taking firms in Kenya. Despite several studies seeking to establish the cause of poor financial stability on deposit-taking, a closer look at the dynamic of debt and equity seems to suggest distinct relationship of the concepts, thus positing the research gap that was addressed in this study. This study thus sought to answer the question, what is the effect of financial leverage on the financial stability of deposit-taking microfinance institutions in Kenya?

1.3 Research Objectives

1.3.1 Main Objective

The main research objective of the study was to determine the effect of financial leverage on stability among deposit-taking microfinance institutions in Kenya.

1.3.2 Specific Objectives

The specific objectives of the study are:

> **Commented [WU1]:** were to determine:

(i) To determine factors that influence financial stability of deposit taking microfinance institutions in Kenya.

(ii) To determine the effect of financial leverage on financial stability of deposit taking microfinance institutions in Kenya.

1.4 Value of Study

This study would be of aid to various shareholders in the microfinance banking sector in Kenya. It would help the deposit microfinance institutions in Kenya to establish the effect of their financial leverage on their financial stability. The balance of debt and equity discussed in this study would enable such firms to gauge the most effective means of financing so as to maximize performance and profits.

This study could also be of use to Government regulatory bodies such as the Central bank of Kenya which would then use the contents of this study to better regulate capital requirements. Capital requirements imposed on deposit MFIs would thus be more informed and would be designed to ensure such institutions contribute to the economic progress of the Kenyan financial sector.

The study could also be of help from an academic perspective as scholars in the field of microfinance might utilize the findings of this study as a reference or for attainment of additional knowledge in the field of microfinance and how it is affected by issues of leverage and capital ratios. The study would also serve to confirm or refute the theories underpinned by it while concurrently filling the empirical gap that exists in the context of the impact of financial leverage on financial stability.

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CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter contains the theoretical review of theories bearing relevance to the contents of this study together with the various independent variables effecting deposit taking in micro finance institutions. The chapter culminates with the review of studies that relate to the topic of study, the conceptual framework and the summary of the chapter to conclude the chapter.

2.2 Theoretical Review

This section of the study encompasses theories that have been found to bear relevance to the study which are; the Modigliani and Miller Corporate Capital Structure Theorem, Trade-off theory and the Pecking order theory.

2.2.1 The Modigliani and Miller's Corporate Capital Structure Theorem

Modigliani and Miller's theory on corporate capital structure states that under circumstances where a company's taxable income and the cost of distress are absent in the business practices, the application of financial leverage has no impact on the value of the corporate (Al-Kahtani and Al-Eraij, 2018). Such an aspect is also known as the irrelevance proposition theorem. However, the irrelevance proposition theorem needs to be supported by a significant number of practical assumptions in most cases to ensure the workability of the theorem in the actual environment. Thus, by acknowledging this phenomenon, the core founders of the theorem, Modigliani and Miller, enlarged their irrelevance proposition theorto to constitute the effect of distress cost and corporate income taxes (Al-Kahtani and Al-Eraij, 2018). Distress cost is the situation where a given business firm experiencing massive financial challenges encounters beyond their operational cost, like when the capital cost is extremely higher than the generated revenue (Almeida and Philippon, 2007). Thus, by expanding the irrelevance proposition

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theorem, Modigliani and Miller ensured that the theorem serves its purpose of defining the company's optimal capital structure.

Therefore, Modigliani and Miller's work defined that a given corporate's optimal structure needs to establish a sensible balance between the tax benefits, which are contributed by the application of debt capital, and the cost that could be involved in potential bankruptcy for the organization or corporate (Al-Kahtani and Al-Eraij, 2018). This approach, as described by Modigliani and Miller, is known as the Trade-off Theory, which nowadays forms the basis that many corporate managements apply when strategically evaluating the optimal capital structure of their organizations.

The main criticism of this theory and those that were subsequently hypothesized after it is the assumption of an ideal market which simply does not exist. This theory bears relevance to the study in that it serves as a basis for determining the leveraging capabilities of a company-based capital structure.

2.2.2 Trade-off Theory

The trade-off theory serves as an extension of the Modigliani and Miller theorem as it takes into consideration the impact of taxes and bankruptcy costs (Cekrezy, 2013). The theory postulates that businesses appear to achieve the ideal, value-maximizing debt-to-equity ratio by balancing the benefits of debt against its drawbacks. Therefore, businesses will set a goal debt ratio and work slowly to achieve it (Myers, 1984). The theory exists in two forms static and dynamic predicting ideal capital structure that weighs costs against profits accrued from debt and, or equity finance (Dang et al. 2012).

A business chooses an ideal debt level and manipulates profits using taxation to establish its capital structure and financial leverage in terms of equity and debt. A firm's decision in terms

of equity and debt financing comes down to a trade-off between interest tax shields and the cost incurred beyond the scope of business that cases a strain on funds. The theory puts forward the notion that if a firm is large enough to leverage taxable income as a shield and has tangible resources it can then achieve a higher servicing of debt to maintain and improve business operations. At the same, time if a firm does not accrue much profit and has risky and intangible resources, adjustment of its capital structure will be difficult as it will solely rely upon finance from equity (Cekerezy, 2013).

The main criticism that arises with regards to the trade-off theory is the assumption of perfect knowledge in a perfect market (Myers, 1984). The theory has also been criticized for the prediction of an agreeable correlation between income and financial leverage which is contradictory to trustworthy empirical evidence (Sarkar & Zapatero, 2003). The theory's relevance to this study is underlined by its elaboration on the aspects of capital structure and leverage in the context of debt and equity ratios.

2.2.3 Pecking Order Theory

The pecking order theory was first postulated by Myers (1984) influenced by the works of Donaldson (1961) which hypothesized that if a firm chooses internal financing over external financing and debt to equity if external funds are under use it is said to be following a pecking order. The theory argues that retained profits are preferable to debt and debt is more profitable than equity.

The theory proposes that the financing behaviour of firms and investors is driven by adverse selection costs. Adverse selection refers to when business owners possess information that investors or other equity financier's lack (Frank & Goyal, 2008) which thus leads to market failure as one party utilizes the information to maximize profit to the detriment of the other party. Although debt is more profitable according to the theory there has to come a point where

equity is introduced as the firm takes on the limit of debts. In this case a firm with bad debts that is overvalued will seek to utilize adverse selection to sell equity and an undervalued firm seeks to retain equity since they are incapable of financing the business operations solely from the debts it can take on. There are various models of the adverse selection costs depicting the manner in which firms may use the pecking order theory to determine their capital structure and leverage (Frank & Goyal, 2008).

The theory has faced criticisms as it is majorly theoretical in nature that cannot be implemented practically (Kumar, n.d.). The theory also limits the types and the addition of funding methods, criticisms which can be attributed to its age and how little it has changed since it was first proposed. This theory bears relevance to the contents of the study as it can be utilized alongside other theories and methods of determining the capital structure and financial leverage.

2.3 The Determinants of Financial Stability in Deposit-Taking MFIs

Financial stability is a crucial factor that is considered in deposit taking MFIs. The effective management of the business operations depends on the financial stability of deposit taking MFIs. The study identified the determinants of financial stability of deposit taking MFIs as financial leverage, non-performing loans, customer deposits, interest rates and capital adequacy (Nguyen et al., 2019).

2.3.1 Financial Leverage

Okumu and Jagongo (2020) assert that few deposit taking microfinance institutions in Kenya operate on profitable accounts. The loss-making venture is in most cases attributed to inefficiency in financial leverage, where the microfinance institutions are not able to entirely meet the costs of borrowing funds from the revenue generated because of use of the asset acquired. The cost benefit of borrowing funds should be well analysed to ensure that the returns

from assets acquired, are higher than the costs of borrowing funds. However, the erratic financial systems in Kenya, where government has strong interests in the financial sector, and may from time-to-time control interest rates, is a key factor that may affect profitability and therefore affect financial stability of microfinance institutions (Alaba and Patrick, 2021).

Financial leverage in microfinance institutions, has to be considered carefully as it may have adverse effect on their financial stability. The reliance on borrowed funds to enhance investments may mean increased risk of bankruptcy, changes in the macro environment may mean that the prevailing interest rates may further deviate, increasing uncertainties and spurring the cost of borrowing. Microfinance institutions may, however, not be in position to transfer those costs to their customers, as higher competition from commercial banks and other lending institutions would drive them out of the market. The deposit taking MFIs would therefore absorb such risks, affecting their profitability, growth and sustainability, which may also mean the financial stability would equally be affected (Bitok et al., 2021).

2.3.2 Non-Performing Loans

The income generated by microfinance institutions largely depend on the interest earned from loans extended to SMEs and MSMEs. It therefore implies that each deposit taking MFI should have a well-established credit management system, that would ensure that they keep non-performing loans as low as possible (Ndung'u, 2014). Non-performing loans refer to the ratio of loans that have been outstanding for a period of more than 90 days, since they fell due to the total gross loans advanced. The higher the non-performing loans, would mean that the more the deposit taking microfinance institution find it difficult to be financially stable. Increased non-performing loans, means that the provision of bad and doubtful debts is increased, increasing costs of operations, while at the same time reducing profitability of the organisation (Ndung'u, 2014).

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The total ratio of non-performing loans to total gross loans is the credit risk that a bank or a microfinance institution is exposed to. The increase in the risk would mean that the financial institution fails to manage its credit appropriately, and increases its operational costs, while at the same time decreasing its ability to grow and provide more products to its clients. Macroeconomic variable is a key determinant on the level of NPL (Non-performing loans), other determinants include the unemployment rate, profitability of banks as well as real interest rates (Messai & Jouini, 2013).

2.3.3 Customer Deposits

A customer deposit means money from a customer to a company before the company has earned it. Financial institutions refer to customer deposits as money that the customer places with the financial institution for safe custody, or to ensure that the customer undertakes transactions effectively. Customers sometimes places deposits with the financial institution in fixed deposit accounts, where the financial institution pays a certain amount of interest to the customer (Winarto & Susan, 2022). The customer deposits are critical component in a financial institution as the institution is able to use such deposits as loans to undertake investments and generate returns before the customers require the deposit for their own use (Bald, 2008). The customer deposits are therefore crucial in enhancing operations of a financial institution, they provide the much-needed credit facility, at an affordable rate, while at the same time meeting the interests of the customers. Increasing the customer deposits improves operations and profitability of a deposit taking microfinance institution. However, the DTMFI should be very particular in attracting more customer deposits. It requires marketing, as well as provision of products that indicates that customers would get value if they would deposit their cash with the institution. The customers are also concerned of safety and stability of the institution before making deposits with the institution (Bald, 2008).

2.3.4 Size

The size of the microfinance institution is a key variable that would affect its stability. Economies of scale is a crucial component, where large organisations can derive benefits of producing in bulk. Large microfinance institutions would mean that customers are likely to trust it more, therefore it would increase its customer deposits, enhancing growth and stability. Large MFIs are also likely to enjoy huge discounts and may access cheaper credits. It therefore follows that increased size of deposit taking microfinance institution would lead to increased financial stability.

2.4 Empirical Studies

This study has cited empirical studies that have been found to bear relevance to the topic question. This study is therefore interested in prior research that has been carried out in the context of financial leverage and financial stability. Studies concerning deposit-taking MFIs have also be reviewed in the subsequent sections in this part of the study. Both international and local studies will be elaborated upon in this section.

Edson (2015) undertook a study with the purpose to establish the connection between the profitability of Tanzania's commercial banks and financial leverage. The study made use of secondary data from the Dar es Salaam Stock Exchange (DSE) over the period spanning 2007-2013 auditing the financial statements of listed commercial banks. The profitability and debt status of the banks were assessed using descriptive statistics, and regression analysis was used to establish the relationship between the dependent variables measured by Return on Average Asset (ROA) and Return on Average Equity (ROE) and the independent variable measured by Debt Ratio (DR). The study established the banks have large debt indicating a reliance on external finance since a change in debt amount in the capital structure has a negative effect on the return on average assets seen by 33% and almost no effect on the return on average equity.

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The study failed to establish the direct effect of financial leverage on the financial stability and performance of the firms in the study which will be assessed in this study.

According to Abubakar (2015) the overall goal of undertaking this study was to better understand how financial leverage affects deposit money banks' ability to generate profits in Nigeria, with a focus on how the debt-to-equity ratio and debt ratio impact these banks' return on equity. Using a convenience selection technique, the study chose 11 deposit money institutions from the Tier 1, Tier 2, and Tier 3 categorization of banks for the years 2005 through 2013. In order to describe the data set and look into how financial leverage and financial success are related, this study used both descriptive and correlation analysis. The results of the correlation analysis show a strong association between the debt-to-equity ratio and the financial performance measure of return on equity. The results also show that there is no meaningful connection between debt ratio and financial performance measured by ROE. Additionally, the descriptive analysis's findings indicate that around 84% of Nigeria's deposit money banks' total assets are financed by debts, showing that banks are highly leveraged financial organizations.

Zhao and Wijewardana (2012) sought to establish the effect of financial leverage, company growth, and financial strength in listed Sri Lankan corporations explored in great detail. This study's sample size is 30 per cent of the 13 sectors. The necessary data was gathered from published annual reports, the Colombo Security Exchange Handbook of listed firms, and the Central Bank of Sri Lanka annual reports from 2000 to 2009. Total assets, profit, and sales are the financial leverage indicators that were computed based on empirical results and the growth of the companies. For the purpose of determining the study's financial strength variable, multiple discriminant functions were built. A multiple regression model was also employed. According to the study's overall findings, growth and financial leverage are both positively

correlated in the Sri Lankan environment. Contrarily, given the warning signs regarding a firm's future growth, this situation tends to reinforce the idea that financial leverage and other growth factors have a positive rather than a negative relationship.

Monroy and Huerga (2012) set out to review the financing options for Microfinance institutions to define their size and international investors in MFI equity. It also researched the evolution of the MFIs within the stock exchange after the financial crisis. Data was obtained from the World Bank, annual accounts of the MFIs, stock exchanges and equity research documents. The study found most MFIs could be labelled as resilient business models and considered them new frontiers for the improvement of the global banking industry. The study primarily focused on the equity source of finance without taking into account the leverage on debt. It was also inconclusive in terms of the financial constraints the MFIs suffer like any other business enterprise.

Meero (2015) undertook a study that primarily had two objectives: the first was to determine the degree to which Islamic and conventional banks' capital structures are similar; the second was to determine the relationship between Islamic and conventional banks' performance in the Gulf States and various capital structure variables. For the years 2005 through 2014, this analysis was conducted on a sample of 16 Banks, including 8 Islamic and 8 Conventional Banks. Performance metrics have included ROE (return on equity) and ROA (return of asset). The ratios of total debt to total assets, equity to total assets, and debt to equity were employed as indicators of capital structure. To determine its association with bank performance, the size of the bank has been taken into account as a dependent variable. SPSS software was used to evaluate the data that was collected. The study's findings suggest that conventional and Islamic banks in the Gulf States have similar capital structures. The results showed that the capital

structure, or the overall long-term loan to equity ratio, had a positive impact on the financial stability of deposit-taking microfinance companies.

Locally, Mbugua (2016) delved into the connection between Kenyan deposit-taking microfinance institutions' capital structure and their financial performance. The study, which spanned the three years from 2013 to 2015, employed a descriptive design to describe the features of the six DTMFIS in Kenya as of December 31, 2015. The CBK, the Association of Microfinance Institutions of Kenya (AMFI), and the annual reports from the deposit-taking Microfinance institutions were used to gather secondary data. The total long-term debt to equity ratio was utilized to gauge capital structure and return on assets which is calculated as net earnings after taxes divided by average assets which was subsequently used to gauge financial performance. The ratios of long-term debt to total assets and shareholders' funds to total assets were also used as controlled variables. To further assess the data, a regression analysis model was applied using the statistical program Statistical Package (SPSS). The study used multiple regression analysis to evaluate the relationship between the variables being considered. The findings demonstrated that capital structure, or the total long-term loan to equity ratio, had a favourable effect on deposit-taking microfinance institutions' financial health.

Mwangi et al. (2015) sought out to establish the impact of deposit to asset ratio on the financial sustainability of MFIs in Kenya. For this study, an explanatory research design was employed. The nine registered Micro Finance Banks in Kenya that are governed by the Central Bank of Kenya were the study's target population, from whom a representative sample was taken. The study used the SPSS statistical program to deduce conclusions from cross-sectional data set up. Deposit to asset ratio was determined to be statistically significant in the study's assessment of the financial viability of MFIs. In the case of this study, deposit can be argued to represent equity since the Microfinance institutions use the deposits to conduct business operations and

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day to day operations. The study thus only took into consideration the implications of bank equity and not debt, which will be addressed by this study.

Okumu and Jagongo (2020) conducted a study with the precise objective to determine how short-term, long-term, and equity debt ratios impacted the profitability of deposit-taking microfinance institutions with an emphasis on those located within Nairobi City County. In order to investigate the effects of financial leverage on profitability in deposit-taking microfinance institutions in Nairobi City, the study took a positivistic approach and used a panel regression model. Twelve deposit-taking microfinance institutions in Nairobi City County were the target population. The information was gathered between 2014 and 2018. Additionally, the study analyzed secondary data and conducted a census of all 12 deposit-taking microfinance organizations in Kenya. Descriptive and inferential statistics were used to analyze the data. The descriptive statistics included mean, median, standard deviation, and frequency distributions, while the inferential statistics included diagnostic tests, Pearson correlation, and multiple linear regression models. Panel unit root test, test for fixed or random effects, normality tests, multicollinearity, autocorrelation, and heteroscedasticity were among the diagnostics tests. The study found that short-term debt and equity ratio were positively and significantly correlated with ROA while long-term debt and long-term debt was significantly and negatively associated with ROA thus the study concluded that the former was the better option in terms of leveraging for Microfinance institutions.

Ochieng (2018) set out to establish the variables affecting the profitability of deposit taking microfinance institutions in Kenya with Faulu Kenya Deposit Taking Microfinance LTD in particular in the study. To collect data for this study, a descriptive research design were used, seeking identify and explain variables that exist in a given scenario. The data was analyzed using descriptive and inferential statistics in the Statistical Package for Social Sciences (SPSS)

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version 24. Descriptive analysis used frequency distribution, variances, and standard deviation to determine the extent to which these variables influence the profitability of these institutions. Inferential statistics use correlation analysis to examine how lending rates, competition, and government regulations affect the performance of deposit-taking microfinance institutions. Primary data was obtained through questionnaires. The study found no relation between lending rates and profitability accrued to deposit-taking MFIs. The effect of lending rates on capital structure is essential in determining profitability which will be addressed this study.

Mungereza (2019) did a study whose goal was to determine the impact of capital structure on the economic effectiveness of Deposit-Taking Microfinance Institutions in Mombasa County. The study population consisted of four DTMIs operating in Mombasa County from 2009 to 2018, with a ten-year study period from 2009 to 2018. Secondary data was gathered in the form of yearly reports issued by the Central Bank of Kenya, as well as financial statements from respective DTMIs. The study found an insignificant positive correlation between financial performance and the variables under research.

2.5 Conceptual Framework

The conceptual framework presents in pictorial format the correlation between the variables in the study.

Figure 2. 1: Conceptual Framework

Independent Variables

| Financial Leverage |
| - DFL |

| Non-Performing Loans |
| - NPL/Gross Loans |

| Tax Payments |
| - Tax paid/Total Assets |

| Size |
| - Total Assets |

Dependent Variable

| Financial Stability |
| - ROA |
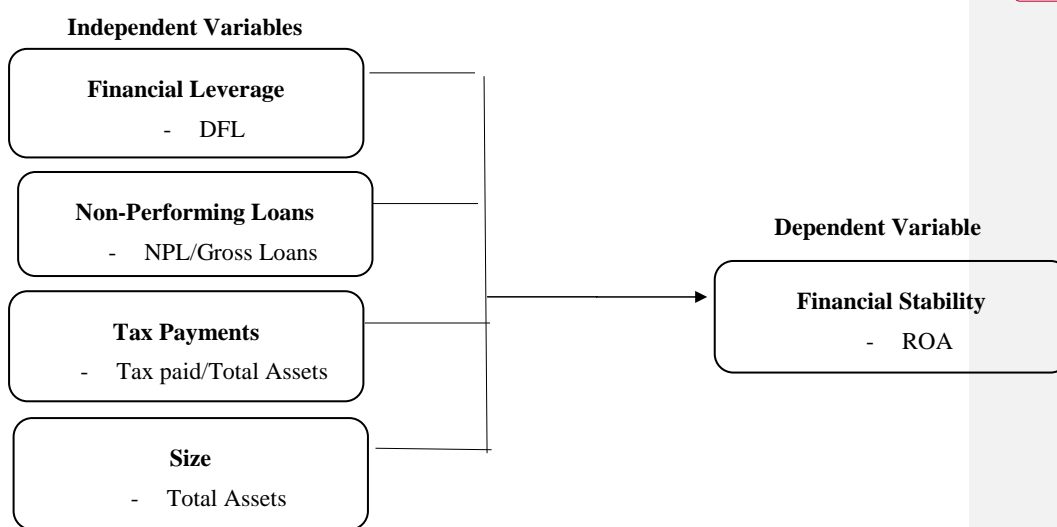
Figure 2.1 shows the correlation between the variables under study where the independent variables are expected to influence the dependent variable that is financial stability.

2.6 Summary of Literature Review

The review of prior literature on financial leverage thus concludes that while studies have been carried out on the topic of financial leverage and capital structure, they prove to be inconclusive and are do not have similar outcomes indicating the need for further research in the area. The lack of cohesiveness in findings can be attributed to the use of varied study variables and varied populations within the banking sector. While the prior studies elaborated

on financial leverage, they failed to elaborate upon the effect of it on business operations and financial stability. This constitutes the research gap that will be addressed by this study.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter entails the presentation of the design adopted by the study towards informing the kind of methodology that has been followed in meeting the research objective and obtaining chronological answer for the research question. The chapter also identified the population of the study as well as the data collection method adopted. Data analysis and diagnostic tests undertaken by the study, together with the analytical model that was adopted.

3.2 Research Design

Research design entails the chronological order that was followed by the study in answering the research question as well as meeting the research objectives. It therefore brings out the design adopted by the study in addressing data collection, and data analysis. There are different research designs that researchers may adopt in undertaking their studies. They are influenced by the objectives, type of data collected as well as the type of analysis preferred (Creswell & Creswell, 2003). The study adopted a descriptive research design as it involves describing the study variables while at the same time indicating the relationship formed by the study variables. Descriptive research design answers the what, the how, and when question, but do not answer the why question. It does not seek to explain the reason behind the type of relationship obtained between the study variables, but it explains what relationship exists between the study variables.

3.3 Population of the Study

The population refers to the specified number of items, goods, objects, people, or groups that are the subject of the study, which are being investigated and where data was sought from. The population should be homogenous while at the same time should be able to include all objects

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or items that are comprised in the population. The population of this study represents the items of events that are the subject of investigation in the study. This means that the population of the study was all the deposit talking micro finance institutions licensed to operate in Kenya.

There were only 13 licensed deposit taking microfinance institutions licensed to operate in Kenya. This is a small number and therefore the study carried out a census, where all these deposits taking microfinance institutions were investigated for the period of last ten years. The period of the study is therefore 2012-2021.

3.4 Data Collection

Secondary data was collected from published and audited annual reports for the last ten years (2012-2021) for all the deposit taking MFIs, as indicated in the appendix I. Secondary data was collected using data collection form (appendix II).

3.5 Data Analysis

The study used inferential statistics to establish the relationship between the independent variable and the dependent variable. SPSS software was used to undertake study analysis on data collected. Regression analysis was also used in determining the significance of the relationship between the study variables. Correlation analysis was conducted to determine the correlation between the independent variables and the dependent variable.

3.6 Diagnostic Tests

The study carried out the following five diagnostic tests on the data namely: linearity test, normality test, multicollinearity test, autocorrelation test and heteroskedasticity test.

3.6.1 Linearity Test

Variables are said to be linear if an increase in one unit of independent results to a fixed increase in the dependent variable. Therefore, linearity indicates a direct relationship between independent and dependent variables of a data. To test linearity, this study used linear plot tests, that plots the variables, where the distribution of data among the variables is observed. Linear data, shows linear pattern that would indicate that the data would be represented by a line of best fit.

3.6.2 Normality Test

OLS regression model that impacts the validity of all tests assumes that residuals behave normal. In this study, a non-graphical test by Shapiro Wilk was used to determine whether the residual's behaviour was normally distributed. The null hypothesis was that there is a normal distribution of the residue. The study accepted the null hypothesis at 95% significant level if the p-value was found to be greater than 0.05 ($p > 0.05$). The study therefore concluded that there existed normal distribution of the residual (Oscar, 2007).

3.6.3 Test of Autocorrelation

In time series data, disturbances can either display serial correlation or autocorrelation across the period. Serial correlation causes a problem of biasness of the standard errors and also inefficiency of consistent estimated regression coefficients when present in a linear panel data model. This study applied Durbin-Watson test to identify whether the problem of autocorrelation is present. This is a statistical test used for testing First Order autocorrelation between the error and its immediate previous value to find out whether there is correlation among the errors in different observations. There is no serial correlation is the null hypothesis. The study failed to reject the null hypothesis at 95% significant levels if d-statistic was more than 0.05 ($d > 0.05$). The conclusion is that there is no correlation among the errors in different observations.

3.6.4 Heteroscedasticity Test

Observations may have regression disturbances which do not have constant variances. This problem is referred to as heteroskedasticity. It may arise in cross-section data as well as time series data. Its presence causes a problem of inefficiency of the estimation results. Trevor Breusch and Adrian Pagan (1979) came up with modified Wald test for heteroskedasticity. This study used Breush-Pagan test in undertaking heteroscedasticity test.

3.6.5 Multicollinearity Test

The test is designed to ensure that the independent variables are not correlated with each other and therefore bring collinearity issues in the data. This is because independent variables should remain truly independent, and their dependence should be on the dependent variable. Variation inflation factors (VIF) is used to determine multi-collinearity, where variables with VIF or more than 10 are believed to have multi-collinearity that may affect the regressions. This is also determined by tolerance level, where a tolerance level of greater than 1 indicates presence of multicollinearity issues that would need to be solved.

3.6.6 Test of the Model

Model test is undertaken using AIC model test and use of BIC model test. The higher the score of either AIC or BIC, the less efficacy is the model. The test is undertaken on all the variables in the model then the test is repeated on the model with the exception of each of the independent variable to ensure which of the model has the lowest value of AIC or BIC.

3.7 Analytical Model

The regression model depicted below explains the expected.

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$

β_0 represent regression coefficient and β_1, β_2, β_3 and β_4 represents the gradient of the regression equation.

Where:

Y-is the financial stability represented by ROA

β_0 - Constant

X_1 – Financial Leverage represented by DFL = (EBIT/EBIT-Interest)

X_2 – Non-performing Loans indicated by ratio of NPL/Gross Loans

X_3 – Tax Payments indicated by total tax in relation to its total assets (Tax paid/Total Assets)

X_4 – Size represented by natural log of total assets

ε - The error term

3.8 Significance Tests

The study put to use the Analysis of Variance (ANOVA) model to test the significance of the study. This model assisted in establishing the significance level of the sample used for the study since it is simple to calculate and interpret. The sample was tested at 95% confidence level which is equivalent to 0.05 significant levels.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION OF FINDINGS

4.1 Introduction

This chapter presents the response rate, describes the variables from the data collected for each variable, the study also undertakes the diagnostic tests, correlation analysis, and regression analysis. The chapter concludes by summarizing the results and a discussion of the study findings.

4.2 Response Rate

The response rate represents the total data collected for each study variables in comparison to the target sample size of the data. The study targeted to collect annual panel data for a period of 10 years from 2012 to 2021. However, there are four DT-MFI that were not yet established for the years 2012 and 2013. Therefore, the study collected complete data for 8 years for all the DT-MFIs. This represents a total of 104 data points from the total expected 130 data points. The response rate for the study was therefore 80% that was found adequate for data analysis as per Mugenda and Mugenda (2003) where a response rate of above 60% was found adequate for study analysis.

4.3 Descriptive Statistics

Table 4. 1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
YROAStab	104	-54.22	3.90	-9.69	14.49
X1DFL	104	-118.50	167.90	4.30	22.09
X2NPL	103	.00	1500.00	55.13	166.66
X3TaxPayt	104	-17.35	23.81	-.16	4.95
X4Size	104	10.71	17.29	13.78	1.90
Valid N (listwise)	103				

Source: Researcher, (2022)

The stability is the dependent variable in the study given by return on asset. It has been used to indicate the financial stability of the DT-MFIs by indicating how much profit they accrue from the assets they have invested in, the higher the return on assets for a firm, the better the performance and hence the more stability it has. The mean for the return on assets is -9.69 with a standard deviation of 14.49 indicating that on average DT-MFIs are earning loss while the high standard deviation indicate that profitability of individual DT-MFIs is widely spread from the mean. The firm that recorded the highest return on assets was 3.9 while the firm that indicated the lowest return on assets was -54.22 times.

Financial leverage served as one of the independent variable of the study. It has been used to measure the extent to which financial institutions source their finances through loans. The mean for leverage was 4.3 with a standard deviation of 22.09 which implies that the financial leverage varies from across DT-MFIs. The DT-MFI that recorded the highest extent of leverage recorded 167.9 while the firm that recorded the lowest leverage was only -118.5.

Non-Performing Loans on the other hand measured the extent to which loan obligations have been defaulted by customers that the DT-MFIs gave the loans to. The higher the amount of NPLs within the DT-MFIs, the lower the financial stability and vice-versa since it is an indication of profitability especially for financial institutions that issue out loans. The mean for the NPLs was 55.13 with the standard deviation of 166.66 indicating that majority of DT-MFIs

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suffer from NPLs. The standard deviation indicates a big variation of NPLs across DT-MFIs. The DT-MFI that recorded the highest NPLs was 1500 while the firm that recorded the lowest NPL was only 0 implying that the firm had no NPL.

Tax payments also served as an independent variable for this study. The ability of a financial institution to paying its taxes is a sign of financial stability as it is able to meet its financial obligations to the government. The mean for taxes was -16 demonstrating that most DT-MFIs are incapable of paying taxes which is indicative of financial instability while the standard deviation of 4.95 shows that this is replicated in most of the institutions under review.

Size was used as another independent variable for the purposes of this study, Size can demonstrate a firm's financial stability by virtue of the economies of scale that may accrue to various operations or conversely the diseconomies of scale. The size of the DT-MFIs was arrived at by arriving at the natural log of the total assets. The mean for size was 13.78 with a standard deviation of 1.9 indicating that most DT-MFIs in terms of asset base, they are more or less of same size in terms of assets. The firm that recorded the highest size in terms of assets was 17.29 while the firm that recorded the least assets was 10.71 indicating there was not a substantial variation in the size of assets that DT-MFIs have at their disposal.

4.4 Diagnostic Tests

The diagnostic tests are carried out as a cautious measure to ensure that no spurious regressions are undertaken as the data is in a format acceptable for undertaking such analysis. Linearity test, normality test, autocorrelation test, multicollinearity, and heteroscedasticity test.

4.4.1 Linearity Test

The basis of linearity testing is understanding that the data could be represented by a straight line. This is an indication that the distribution of data could fittingly be described through the

use of a straight line where the elements of a straight line could aid in making projections and determining the line of best fit for the purposes of the study. Linear plots are carried out to determine the linearity of the study.

Figure 4. 1: Normal P-P Plot
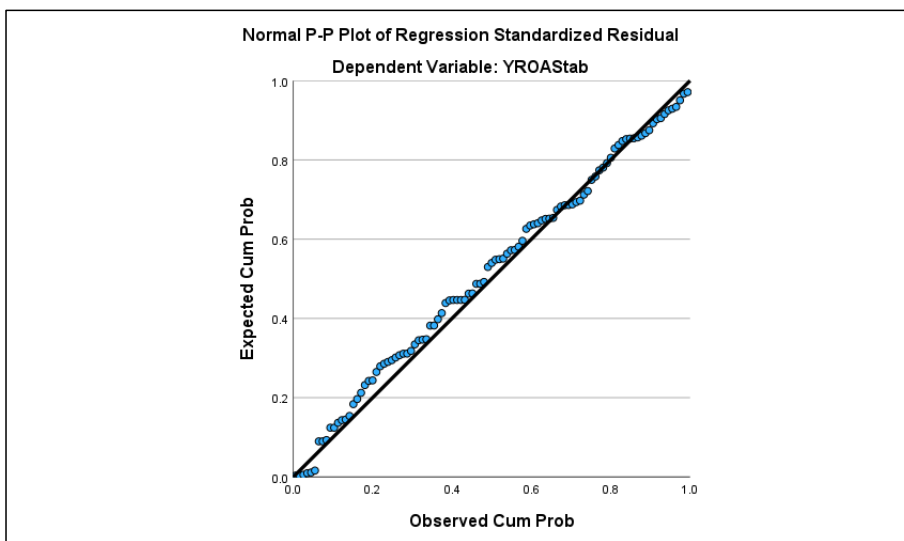
Source: Researcher, (2022)

The normal p-p plot indicates that majority of the plots followed the diagonal line. Therefore, the study assumes that the data variables are linear.

4.4.2 Normality Test

The normality test is undertaken so as to ascertain whether the data is distributed in a bell-shaped form that is referred to as a normal curve. The data can be explained and the null hypothesis tested when normality is observed in data distribution indicating the qualities of data that is normal in nature. The Shapiro-Wilk test is thus used for the purposes of this study to ascertain whether data is normally apportioned or not.

Table 4. 2: Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
YROAStab	.241	103	<.001	.782	103	<.001
X1DFL	.316	103	<.001	.424	103	<.001
X2NPL	.370	103	<.001	.262	103	<.001
X3TaxPayt	.295	103	<.001	.704	103	<.001
X4Size	.161	103	<.001	.916	103	<.001
a. Lilliefors Significance Correction						

Significance is below 0.05 for all variables, therefore the data is not normally distributed. This could be explained that the data was collected specifically from a portion of population for DT-MFIs. Therefore, recommend use of non-parametric tests for undertaking analysis, or else transform the data by standardizing the data if parametric tests are used in analysis.

4.4.3 Test for Autocorrelations
Table 4. 3: Autocorrelation Table

Model	Durbin-Watson
1	1.32

The test of auto correlations is utilized to determine that autocorrelations of the residuals is not significantly skewed to the right or he left. Autocorrelations is determined through the Durbin Watson Score that ranges from 0-4. The extremes of the score are not desired with the acceptable extents ranging from 1.5 to 2.5 with 2 connoting the perfect distribution of the residuals. The extremes are undesired due to the indication that the residual distribution is either

negatively or positively skewed. The autocorrelation table indicate presence of autocorrelation which will be corrected by using standardised data.

4.4.4 Multicollinearity Test

The multi-collinearity test is done so as to ascertain whether the independent variables are truly independent or whether they influence each other in such a way that would cause a collinearity problem to arise. This tested is undertake using VIF factors, where the values that are above ten indicate the presence of substantial correlations that could result in spurious regression.

Table 4. 4: Multicollinearity Table

Model		Sig.	Collinearity Statistics	
			Tolerance	VIF
1	(Constant)	<.001		
	X1DFL	.765	.977	1.024
	X2NPL	.265	.963	1.038
	X3TaxPayt	.298	.999	1.001
	X4Size	<.001	.943	1.061

Source: Researcher, (2022)

Multicollinearity table indicates that VIF is less than 10, so there is no problem of multicollinearity.

4.4.5 Heteroscedasticity Test

Heteroscedasticity is used to refer to the unequal scatter in the context of residuals or error terms in particular in OLS.

Table 4. 5: Heteroscedasticity Table

Breusch-Pagan Test for Heteroskedasticity[a,b,c]

Chi-Square	df	Sig.
24.634	1	<.001
a. Dependent variable: YROAStab		
b. H0: There is Homoscedasticity.		
c. Prediction: Intercept + X1DFL + X2NPL + X3TaxPayt + X4Size		

<div align="right">Source: Researcher, (2022)</div>

Data is heteroscedastic since significance is below 0.05 and therefore the study rejects the null hypothesis and concludes that there heteroskedasticity is present. The problem of heteroscedasticity is addressed by standardizing the variables.

4.5 Correlation Analysis

The purpose of the correlation analysis is to determine the correlation connecting the variables within the study. The correlation is used to determine the direction of movement of the dependent variable when every independent variable is increased by one unit. The measure of correlation is from a scale of 0 to 1 where 1 indicating perfect correlation and 0 indicating the lack of correlation. Correlation can also be positive or negative which is dependent upon the direction of the relationship. The study used spearman's correlation since the data was non-parametric.

Table 4. 6: Correlations Table

			YROAStab	X1DFL	X2NPL	X3TaxPayt	X4Size
Spearman's rho	YROAStab		--				
	X1DFL		.447**	--			
	X2NPL		-.238*	-.346**	--		
	X3TaxPayment		.326**	.465**	-.275**	--	
	X4Size		.628**	.080	-.109	.099	--
		N	104	104	103	104	104

**. Correlation is significant at the 0.01 level (2-tailed).	
*. Correlation is significant at the 0.05 level (2-tailed).	

Source: Researcher, (2022)

All the independent variables display a significant correlation against the dependent variable of the study. Financial leverage indicates a positive and significant correlation of 0.447 against stability. NPL indicates a weak negative and significant correlation of -0.238 against stability. Tax payment revealed a positive and significant correlation of 0.326 against stability while the size of the firm indicated a strong positive and significant correlation of 0.628 against stability.

4.6 Regression Analysis

Regression is thus undertaken to arrive at the significance of relationship connecting the independent variables and the dependent variable. The analysis is undertaken according to the regression model:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \varepsilon$$

4.6.1 Model Summary

Table 4. 7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin- Watson
1	.652[a]	.426	.402	.77663	1.32
a. Predictors: (Constant), Zscore(X4Size), Zscore(X3TaxPayt), Zscore(X1DFL), Zscore(X2NPL)					
b. Dependent Variable: Zscore(YROAStab)					

Source: Researcher, (2022)

The model summary indicated that R square was 0.426 implying that the coefficient of determination was 42.6 %, which suggests that the independent variables in the model could

account for only 42.6% of the changes in the dependent variable of the study. The other 57.4% of the changes in dependent variable can be explained by factors that are not included in the model of the study. Adjusted R square recorded a value of 0.402, which was below R square to indicate that the model had elements that did not add value to it.

4.6.2 Analysis of Variance

Table 4. 8: ANOVA Table

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	43.806	4	10.951	18.157	<.001[b]
	Residual	59.109	98	.603		
	Total	102.914	102			
a. Dependent Variable: Zscore(YROAStab)						
b. Predictors: (Constant), Zscore(X4Size), Zscore(X3TaxPayt), Zscore(X1DFL), Zscore(X2NPL)						

Source: Researcher, (2022)

The ANOVA table indicates that the significance was 0.001 which is below 0.05. Therefore, the study rejected the null hypothesis and concluded that there is significant effect of financial leverage on stability of DT-MFIs.

4.6.3 Regression Coefficient

Table 4. 9: Regression Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.001	.077		-.007	.995
	Zscore(X1DFL)	.023	.077	.023	2.300	.007
	Zscore(X2NPL)	-.088	.078	-.088	-1.122	.265
	Zscore(X3TaxPayt)	-.080	.077	-.080	-1.046	.298
	Zscore(X4Size)	.621	.079	.620	7.861	<.001
a. Dependent Variable: Zscore(YROAStab)						

The regression table indicate that only DFL and size had significance effect on stability as their p-value is less than 0.05. NPL and Tax payment indicated p value that was above 0.05 and hence were statistically insignificant. The model of the study was therefore, transformed by the regression coefficients in to:

$Y = 0.023X1 + 0.621X4$

The model implies that a unit increase in financial leverage when size is constant will lead to an increase of 0.023 in stability of DT-MFIs. On the other hand, a unit increase in size will lead to an increase of 0.621 in stability when financial leverage is kept constant.

4.7 Interpretation and Discussion of Findings

The stability is the dependent variable in the study given by return on assets. From the descriptive statistics, the mean for the return on assets was -9.69 with a standard deviation of 14.49 indicating that on average DT-MFIs are incurring losses while the high standard deviation indicate that profitability of individual DT-MFIs is widely spread from the mean. Financial leverage indicated a mean of 4.3 with a standard deviation of 22.09 which implies that the financial leverage varies significantly across DT-MFIs. Non-Performing Loans on the other hand, had a mean of 55.13 with the standard deviation of 166.66 indicating that majority of DT-MFIs suffer from NPLs. The standard deviation indicates a big variation of NPLs across DT-MFIs. The mean for tax payment was -0.16 and the standard deviation of 4.95 demonstrating that most DT-MFIs are incapable of paying taxes which is indicative of financial instability while the standard deviation shows that this is replicated in most of the institutions under the study. The mean for size was 13.78 with a standard deviation of 1.9 indicating that most DT-MFIs in terms of asset base, they are more or less of same size in terms of assets.

Correlation analysis was also applied by the study to indicate correlation between the study variables. All the independent variables displayed a significant correlation against the dependent variable of the study. Financial leverage indicated a positive and significant correlation of 0.447 against stability. NPL indicated a weak negative and significant correlation of -0.238 against stability. Tax payment revealed a positive and significant correlation of 0.326 against stability while the size of the firm indicated a strong positive and significant correlation of 0.628 against stability.

The study as well, applied the regression analysis to establish the relationship that existed between the independent and the dependent variables. R square was 0.426 implying that the coefficient of determination was 42.6 % which suggests that the independent variables in the model could account for only 42.6% of the changes in the dependent variable of the study. Adjusted R square recorded a value of 0.402, which was below R square to indicate that the model had elements that did not add value to it. The model indicated significance of 0.001 which was below 0.05. Therefore, the study rejected the null hypothesis and concluded that there is significant effect of financial leverage on stability of DT-MFIs. Financial leverage and size had significance effect on stability as their p-value was less than 0.05 while NPL and Tax payment indicated p value that was above 0.05 hence, were statistically insignificant. The model implies that a unit increase in financial leverage when size is constant will lead to an increase of 0.023 in stability of DT-MFIs. On the other hand, a unit increase in size will lead to an increase of 0.621 in stability when financial leverage is kept constant.

The findings of this study were found to be similar to the finding of Zhao and Wijewardana (2012) whose findings indicated that growth and financial leverage are both positively correlated in the Sri Lankan environment and that financial leverage and other growth factors had a positive relationship. Similar the result of Meero (2015) who found that the capital structure, or the overall long-term loan to equity ratio, had a positive impact on the financial

stability of deposit-taking microfinance companies were similar to the current study findings. The finding of the current study also concurred with the finding of Mbugua (2016) who demonstrated that capital structure, or the total long-term loan to equity ratio, had a favourable effect on deposit-taking microfinance institutions' financial health. The findings were also similar to those of Mwangi et al. (2015) where deposit to asset ratio was determined to be statistically significant in the study's assessment of the financial viability of MFIs. Similarly, Okumu and Jagongo (2020) as well found that short-term debt and equity ratio were positively and significantly correlated with ROA

However, the finding of the study differed with the findings of Edson (2015) who established that debt amount in the capital structure had a negative effect on the return on average assets and almost no effect on the return on average equity. Similarly, the finding of the current study contradicted the findings of Abubakar (2015) whose results indicated that there was no meaningful connection between debt ratio and financial performance measured by ROE. Mwangi et al. (2015) found that long-term debt and long-term debt was significantly and negatively associated with ROA which contradicts the current study's findings. Similarly, Ochieng (2018) found no relation between lending rates and profitability accrued to deposit-taking MFIs which is against the findings of the current study. Mungereza (2019) found an insignificant positive correlation between financial performance and the capital structure which differs from the current study findings where financial leverage had a significant correlation.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

In this chapter, the findings are summarized in accordance with the study's objective, conclusions are drawn and essential recommendations for the study are outlined. The study will conclude with the limitation encountered during the study as well as highlighting the potential area for more research to deepen the subject matter, are provided.

5.2 Summary of the Study

The study was undertaken to ascertain the effect of leverage on the financial stability of deposit taking micro-finance institutions in Kenya. The financial stability was the dependent variable of the study which was determined through the calculation of the return on assets (ROA). The independent variables of the study were; financial leverage, non-performing loans, tax payments, size and leverage. To achieve the objective of the study, secondary data, concerning the study variables, was utilized which was obtained from published and audited annual reports. The response rate was 80% as the study could not collect all the panel data as targeted since four DT-MFIs were not yet established for the years 2012 and 2013. The study carried out descriptive and inferential statistics to achieve the objective of the study.

The descriptive statistics indicated that on average DT-MFIs are earning loss indicated by a mean of was -9.69 while the high standard deviation indicate that there were few DT-MFIs earning profits while some were earning high losses. Financial leverage indicated a mean of 4.3 with a standard deviation of 22.09 which implied that the financial leverage varies across DT-MFIs. Non-Performing Loans on the other hand, had a mean of 55.13 with the standard

deviation of 166.66 indicating that majority of DT-MFIs suffer from NPLs. The standard deviation indicates a big variation of NPLs across DT-MFIs. The mean for tax payment was -0.16 and the standard deviation of 4.95 demonstrating that most DT-MFIs are incapable of paying taxes which is indicative of financial instability while the standard deviation indicated that all firms had close tax payment. The mean for size was 13.78 with a standard deviation of 1.9 indicating that most DT-MFIs in terms of asset base, they are more or less of same size in terms of assets.

Correlation analysis was also applied by the study to indicate correlation between the study variables. All the independent variables displayed a significant correlation against the dependent variable of the study. Financial leverage indicated a positive and significant correlation of 0.447 against stability. NPL indicated a weak negative and significant correlation of -0.238 against stability. Tax payment revealed a positive and significant correlation of 0.326 against stability while the size of the firm indicated a strong positive and significant correlation of 0.628 against stability.

The study as well, applied the regression analysis to establish the relationship that existed between the independent and the dependent variables. R square was 0.426 implying that the coefficient of determination was 42.6 % which suggests that the independent variables in the model could account for only 42.6% of the changes in the dependent variable of the study. Adjusted R square recorded a value of 0.402, which was below R square to indicate that the model had elements that did not add value to it. The model indicated significance of 0.001 which was below 0.05. Therefore, the study rejected the null hypothesis and concluded that there is significant effect of financial leverage on stability of DT-MFIs. Financial leverage and size had significance effect on stability as their p-value was less than 0.05 while NPL and Tax payment indicated p value that was above 0.05 hence, were statistically insignificant. The model implies that a unit increase in financial leverage when size is constant will lead to an

increase of 0.023 in stability of DT-MFIs. On the other hand, a unit increase in size will lead to an increase of 0.621 in stability when financial leverage is kept constant.

5.3 Conclusion

From the study findings, the study made several conclusions concerning the relationship between study variables. Financial leverage was found to have statistically significant impact on stability of DT-MFIs. Similarly, correlation analysis established a strong positive and significant correlation between financial leverage and stability of DT-MFIs. Therefore, the study concludes that DT-MFIs should enhance their financial leverages to enhance their stability. DT-MFIs need to efficiently manage their financial leverages to ensure that the returns from assets acquired, are higher than the costs of borrowing funds in order to realise profit and hence ensure stability.

From correlation analysis the study established that NPLs have negative significant weak correlation with stability while the regression analysis indicated a non-statistically significant impact on stability. This implies that a change in NPLs would not lead to any substantial effect on stability. Therefore, the study concludes that DT-MFIs should not incur unnecessary cost in reducing NPLs since it will only lead to increased operational cost but the effect on stability will be insignificant.

The study found out that tax payment as well had an insignificant effect on stability of the DT-MFIs and therefore concludes that the firms should not attempt to increase their tax payment in an attempt to increase stability rather, they should invest in other effective factors of stability.

The size of DT-MFIs was found to have a strong positive and significant correlation with stability. Similarly, the regression analysis established positive and statistically significant relationship between size and stability. Since size indicated total asset, DT-MFIs are required to increase their assets to enhance stability. Customers are more likely to trust large

microfinance organizations, which would lead to an increase in customer deposits, promoting growth and stability. Large MFIs may also be eligible for steep reductions and lower borrowing rates.

5.4 Recommendations of the Study

From the conclusion of the study, the study recommended that policy makers should formulate policies that would encourage DT-MFIs to improve their financial leverages such policies may include capping the interest rates on loans to ensure that interests on loans are not increased to levels that DT-MFIs in Kenya will not be able to access. Policy makers should also formulate and implement policies on the limited amount of financial leverage that DT-MFIs are required to have at any particular time to encourage them to increase their financial leverage which would ensure stability. The study recommends policy makers to loosen their policies concerning non-performing loans since its effect on stability is insignificant.

The study recommends the DT-MFIs to increase their financial sources which would increase their financial leverages. It also recommends MFIs to efficiently manage their financial leverages by analysing the cost benefit of borrowing funds to ensure that the returns from assets acquired, are higher than the costs of borrowing funds. The study also recommends DT-MFIs to diversify they portfolio in order to increase their assets which would lead to more returns and hence stability. The study recommends DT-MFIs to consider investing in other effective factors that would improve stability than incur cost in reducing and managing NPLs since it would lead to increased operational cost yet its impact on stability is insignificant.

5.5 Limitations of the Study

The study is limited by the analytical model and the factors adopted in the model. Despite the fact that the model had a co-efficient of determination of 42.6% indicating tat the model was responsible for 42.6% changes of financial stability in DT-MFIs, the adjusted R squared

(0.402) was slightly less, and therefore indicated that there were factors in the model that reduced the effectiveness of the model to predict stability. The study is therefore limited by the factors determined by the study, and which did not have significant effect on financial stability.

The study was also limited by the target population adopted, in which was highly skewed towards only DT-MFIs. The study however ensured that transformation of data collected through standardization was effected, to deal with skewed data that was not normally distributed. The study also ensured that it adopted non-parametric tests such as the Spearman's Correlation instead of parametric tests that require the use of data that is normally distributed.

The study collected secondary data and despite the data being collected from annual audited financial statements, there remains a chance that the data could have been incorrectly captured and therefore a chance of errors from the original entries would have an impact on the findings of the study. The use of secondary data is therefore a limitation, where the researcher adopts the data as collected from the audited financial statements without a way of verification of the true financial positions other than the fact that the financial statements were duly audited and received a clean bill of health from the auditor.

The number of DT-MFIs is also small, since there are only 13 licensed DT_MFI in Kenya. Some of these institutions had not received operational licenses in the 10-year period that had been identified by the study. It therefore followed that the study only adopted the 8-year period where data for each institution was available and as such the researcher avoided to use unbalanced panel data.

The study conducted covered the period of 2020-2021 which was marred with restrictions and great impact of Covid-19 pandemic. The pandemic was a great shock and disruption in all the markets across the world that affected normal business operations. This means that the results and performance of most institutions in this period was not normal as external factors had great

influence and impact on operations. This would perhaps make the data to be skewed or kurtotic affecting normality principles. However, the researcher also adopted data from previous period that had not been affected by Covid-19 interruptions.

5.6 Areas for Future Research

A similar study should be undertaken in future where more study variables would be included to increase the coefficient of determination. Perhaps the study would consider reviewing some factors that did not have significant effect on financial stability in the model. The findings of such a study should then be compared with the results and findings of this study.

Similar study should also be considered in future, where the study would adopt the use of primary data instead of secondary data. This will be able to address the issue of errors of original entry among other errors related with adoption of secondary data in research. The findings of such a study should also be compared with the findings of this study and conclusions undertaken accordingly.

The study would also recommend future research to be considered for a similar study, where the period considered by the study is not affected by disruptions of Covid-19 or other market shocks. The study should also consider other DT-MFIs other than the ones licensed to operate in Kenya to ensure that data collected by such a study is normally distributed. The findings of such a study would also be compared to the findings in this current study.

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APPENDICES

APPENDIX 1: List of Deposit Taking Microfinance Institutions in Kenya

1. Caritas Microfinance Bank LTD
2. Century Microfinance LTD
3. Choice Microfinance Bank LTD
4. Daraja Microfinance LTD
5. Faulu Microfinance Bank LTD
6. Kenya Women Microfinance LTD
7. Rafiki Microfinance Bank LTD
8. Remu Microfinance Bank LTD
9. SMEP Microfinance Bank LTD
10. Sumac Microfinance Bank LTD
11. U & I Microfinance Bank LTD
12. Uwezo Microfinance Bank LTD
13. Maisha Microfinance Bank LTD

APPENDIX 2: Data Collection Form

DTMFI	YEAR	EBIT	Interest	Net Income	Total Assets	Total Loans	NPL	Customer Deposits

APPENDIX III: DATA USED

DTMFI	YEAR	Y=ROA(Fin-Stability)	X1=DFL(EBIT/EBIT-Interest)	X2=NPL	X3=Taxpaymnt	X4=Size
FAULU MFI	2014	1.471194	1.704746	2.907059	0.652683	16.82711
CENTURY MFI	2014	-14.7186	1	18.69159	2.164502	12.35017
CHOICE MFI	2014	-37.6623	0.944444	0	14.28571	11.25156
DARAJA MFI	2014	-54.2169	0.942857	0	12.04819	11.3266
CARITAS MFI	2014	-32.2581	1	0	0	12.1335
KENYA WOMEN MFI	2014	1.66129	1.64441	5.473612	0.891069	17.1089
RRAFIKI MFI	2014	0.351464	5.043478	8.981861	0.033473	15.60309
REMU MFI	2014	0.759494	1.25	25	0.253165	12.88664
SMEP MFI	2014	-4.07906	0.454545	15.35168	0.841043	14.68177
SUMAC MFI	2014	1.025641	3	15.91696	0	12.8739
U&I MFI	2014	1.524999	1	8.375109	2.185856	11.82953
UWEZO MFI	2014	0.625	0	25.6	-0.625	11.98293
MAISHA MFI	2014	-16.8036	1	0.704146	-8.13079	12.12532
FAULU MFI	2015	0.455436	2.447	3.102803	0.26598	17.04725
CENTURY MFI	2015	-26.9036	0.551724	60.75949	-2.53807	12.19096
CHOICE MFI	2015	-37.6623	0.944444	0	14.28571	11.25156
DARAJA MFI	2015	-54.2169	0.942857	0	12.04819	11.3266
CARITAS MFI	2015	-32.2581	1	0	0	12.1335
KENYA WOMEN MFI	2015	1.237806	11.63914	10.7277	0.53843	17.2769
RRAFIKI MFI	2015	0.37521	20	12.03747	0.219951	15.86049
REMU MFI	2015	-3.77834	-1.42857	28.40467	-1.51134	12.89169
SMEP MFI	2015	-0.03858	-118.5	18.86574	-0.11574	14.76794
SUMAC MFI	2015	1.151316	10.23077	18.01386	0.986842	13.31793
U&I MFI	2015	3.782984	4.136699	6.661925	1.57412	12.12532

UWEZO MFI	2015	0.101523	34.33333	44.3299	0.507614	12.19096
MAISHA MFI	2015	-16.8036	1	0.704146	-8.13079	12.12532
FAULU MFI	2016	0.155867	4.914928	8.166643	0.200611	17.12492
CENTURY MFI	2016	-18.2222	0.121951	28.97196	0	12.32386
CHOICE MFI	2016	-28.6885	0.86	11.42857	-12.2951	11.71178
DARAJA MFI	2016	-15.5556	0.777778	13.72549	-9.44444	12.10071
CARITAS MFI	2016	-12.892	0.905405	0	0	13.26038
KENYA WOMEN MFI	2016	0.69666	20.16308	16.0504	0.314119	17.28603
RRAFIKI MFI	2016	-4.06715	-1	34.66266	-2.22465	15.80708
REMU MFI	2016	-3.31492	-2.58824	34.01639	-1.38122	12.7994
SMEP MFI	2016	-5.03949	-1.87671	20.03578	-0.4513	14.79346
SUMAC MFI	2016	1.743462	11.38889	6.133829	0.498132	13.59611
U&I MFI	2016	2.090896	5.293584	4.160431	1.42354	12.76922
UWEZO MFI	2016	1.136364	11	49.00662	0	12.77139
MAISHA MFI	2016	-16.8036	1	0.704146	-8.13079	12.12532
FAULU MFI	2017	0.564656	3.247653	16.80161	0.311943	17.04731
CENTURY MFI	2017	-21.875	0.619048	53.39806	0	12.57072
CHOICE MFI	2017	-27.9412	0.759259	19.35484	-11.7647	11.82041
DARAJA MFI	2017	-27.9762	0.783333	20.75472	-7.7381	12.03172
CARITAS MFI	2017	-8.07736	0.521127	5.698006	0	13.68654
KENYA WOMEN MFI	2017	0.064547	167.903	21.02343	0.062217	17.18042
RRAFIKI MFI	2017	-5.04716	-0.44027	91.85819	-1.88693	15.69016
REMU MFI	2017	-4.80226	-1.125	35.3211	-1.9774	12.77705
SMEP MFI	2017	-1.17045	-2.58333	18.84317	-3.21873	14.82128
SUMAC MFI	2017	0.439754	43.8	8.507223	0	13.9439

U&I MFI	2017	2.770404	7.761566	8.936523	0	12.91341
UWEZO MFI	2017	-4.24528	-1.08333	72.22222	-1.41509	12.26434
MAISHA MFI	2017	-13.9073	0.42	#DIV/0!	-2.64901	12.61818
FAULU MFI	2018	0.664832	3.751381	13.89923	0	17.11964
CENTURY MFI	2018	-5.80046	1	25.64103	0	12.97386
CHOICE MFI	2018	-42.8571	0.983051	40.90909	-17.3469	11.49272
DARAJA MFI	2018	-18.6047	1	33.33333	-6.97674	12.05525
CARITAS MFI	2018	-6.8328	0.964706	7.190413	0	14.03384
KENYA WOMEN MFI	2018	-2.7791	0.237548	18.86848	-0.72922	17.2086
RRAFIKI MFI	2018	3.242975	1.581818	43.03246	-1.38502	15.59393
REMU MFI	2018	-3.23326	0.767442	45.87156	-6.69746	12.97849
SMEP MFI	2018	-0.74788	-2.625	19.78925	0.203967	14.89448
SUMAC MFI	2018	0.326797	8	38.52013	0.718954	14.24078
U&I MFI	2018	1.498301	1.692308	9.52483	0.936438	13.18804
UWEZO MFI	2018	-12	1	69.62963	-1.77778	12.32386
MAISHA MFI	2018	-41.1765	1	47.10145	0	12.57418
FAULU MFI	2019	1.051018	2.11779	14.58795	0.486858	17.20605
CENTURY MFI	2019	-12.3563	-0.30233	24.06417	0	12.75996
CHOICE MFI	2019	-36.7089	0.793103	81.81818	0	11.2772
DARAJA MFI	2019	-24.0602	0.388889	170	10.52632	11.7981
CARITAS MFI	2019	-2.97897	-1.56863	18.33773	0	14.35317
KENYA WOMEN MFI	2019	-1.71425	-11.2415	18.35862	0.402419	17.23692
RRAFIKI MFI	2019	-4.50533	-1.25616	48.16858	0	15.51297
REMU MFI	2019	-3.20197	7.125	65.82278	5.172414	12.91411
SMEP MFI	2019	0.189321	4.255862	23.47955	0.398829	15.01365

SUMAC MFI	2019	0.447094	19.38889	16.76397	0.447094	14.51514
U&I MFI	2019	0.608241	13.54622	3.961331	0.494897	13.43922
UWEZO MFI	2019	-18.4524	4	80.88235	23.80952	12.03172
MAISHA MFI	2019	-3.00633	0.096211	45.74468	0	14.04979
FAULU MFI	2020	-1.36277	-7.29412	23.26725	-0.26299	17.19237
CENTURY MFI	2020	-20.2703	0.35	64.03509	0	12.59811
CHOICE MFI	2020	-48.1481	0.769231	133.3333	0	10.89674
DARAJA MFI	2020	-32.2581	0.925	800	0	11.72804
CARITAS MFI	2020	0.218914	35.4	9.07158	0	14.64144
KENYA WOMEN MFI	2020	-5.20001	-1.79767	28.57628	0	17.14909
RRAFIKI MFI	2020	-0.7327	-9.33333	69.29855	-0.31401	15.56162
REMU MFI	2020	-11.08	0.235294	87.60046	0	12.63415
SMEP MFI	2020	-2.00242	-3.84694	26.40205	-0.8416	15.05268
SUMAC MFI	2020	0.331754	33.54545	32.34399	0.189573	14.5622
U&I MFI	2020	1.490272	6.888889	5.428207	0.745136	13.59887
UWEZO MFI	2020	-13.4328	0.583333	158.9744	-4.47761	11.8056
MAISHA MFI	2020	3.903904	2.553846	52.11726	0	14.32534
FAULU MFI	2021	-1.46511	-3.92843	21.08692	-0.39597	17.13981
CENTURY MFI	2021	-1.99005	-3.125	82.30088	0	12.90421
CHOICE MFI	2021	-53.3333	0.958333	100	0	10.71442
DARAJA MFI	2021	-25	0.933333	1500	0	11.69525
CARITAS MFI	2021	0.576076	18.88235	6.147541	0	14.89765
KENYA WOMEN MFI	2021	0.582331	33.54962	28.12806	-0.09644	17.10989
RRAFIKI MFI	2021	-2.59796	0.666314	93.63622	0	15.58864
REMU MFI	2021	-17.6335	0.72549	138.4661	0	12.57495

SMEP MFI	2021	-1.36012	0.165276	36.12594	-0.35481	15.03399
SUMAC MFI	2021	0.197563	17.76471	34.7181	0.3622	14.92638
U&I MFI	2021	2.386348	5.171429	3.156966	1.093743	13.82122
UWEZO MFI	2021	-7.15935	0.975056	0	-2.09931	12.97849
MAISHA MFI	2021	-12.2759	0.5	188.1579	0	14.18707