INFLUENCE OF FINANCIAL LEVERAGE ALTERNATIVES ON PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA. A MODERATING ROLE OF FIRM SIZE

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DECLARATION AND RECOMMENDATION

Declaration by the Candidate

I make declaration that this thesis is originally mine and hasn't been submitted to any university in the world or any other institute of higher learning for examination. All other sources of information for this work have been acknowledged by means of references.

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DEDICATION

This thesis honors my late parents; Peter and Elizabeth. Many thanks for instilling the roots of education in me. May their souls rest in peace. Special dedication to my academic mentor, Prof. John Akama for his continued support and motivation during the course of my doctorate studies.

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God bless you all, abundantly.

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ABSTRACT

Financial leverage and how it affects a firm's performance have been the subject of decades of discussion. The main objective of this study was to ascertain the underlying influence of financial leverage decisions on the financial results of MFIs in Kenya, with a particular emphasis on the company's size as a moderating component. The specific goals were to ascertain the reducing impact of firm size on the connection between financial leverage alternatives and the performance of Kenyan MFIs, as well as the effects of the financial leverage components (debt to equity, debt to capital, debt to asset, and debt to EBITDA ratio) as well as their influence on MFIs' performance. The research philosophy used in the study was positivism, and it was guided by the Modigliani along with Miler Theory. Thirteen microfinance banks made up the sample size of this longitudinal study, which was carried out in Kenya between 2011 and 2020 and had 53 MFIs as its target population. Secondary data was gathered using data collection sheets. To analyse the data, descriptive statistical techniques were applied. Using SPSS version 22, the data was analysed and displayed using tables, frequencies, and graphs. Inferential statistical methods such as the number of cases, maximum, minimum, means, and standard deviation were utilised. The hypothesis was tested and the study's degree of significance was determined using ANOVA procedures. To evaluate the strength of the association between the variables, Pearson's product moment correlation coefficient was employed. In order to ascertain the relationship between the study variables, a trend analysis on the MFIs was carried out. A hierarchical regression panel data model was then used to ascertain the moderating impact of firm size on the connection between the independent and dependent variables. The study's findings demonstrated that, although the debt to capital and debt to EBITDA ratios had a weak, positive, and statistically significant relationship with MFI performance in Kenya, the debt to equity as well as debt to asset ratios had a positive, moderate, as well as statistically significant relationship with MFI performance in Kenya. The relationship between financial leverage alternatives and MFI performance in Kenya was shown to be moderated by company size in a statistically meaningful way. The study indicated that financial leverage choices had a statistically significant effect on performance, refuting all of the null hypotheses in the process, with firm size acting as the moderating variable. Lastly, various recommendations were drawn; Future studies to consider other moderator variables such as age of the firm, Influence of other forms of leverage such as operating leverage and combined leverage and their effect on performance of MFIs in Kenya, that other studies be done on cross-sectional basis using primary data or mixed research methodology and also consider use of different clusters of MFIs as sample size to compare results.

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LIST OF ABBREVIATIONS AND ACRONYMS

AMFI **:** Association of Microfinance Institutions

AMFI-K **:** Association of Microfinance Institutions-Kenya

ANOVA **:** Analysis of Variance

BNP **:** National Bank of Paris

CBK **:** The Central Bank of Kenya

CFI **:** Corporate Finance Institute

CGAP **:** Consultative Group to Assist the Poor

COMFIs **:** Credit Only Microfinance Institutions

EBITDA **:** Earnings before Interest, Tax, Depreciation and Amortization

EPS **:** Earnings per Share

FDIC **:** Federal Deposit Insurance Corporation

GSM **:** Good Shepherd Microfinance

IADB **:** Inter-American Development Bank

IFC **:** International Finance Corporation

IFRS **:** International Financial Reporting Standard

KN **:** Knowledge at Wharton

KNBS **:** Kenya National Bureau of Statistics

K-REP **:** Kenya Rural Enterprise Program

KWFT **:** Kenya Women Finance Trust

MAC **:** My Accounting Course

ROA **:** Return on Asset

ROE **:** Return on Equity

ROI **:** Return on Investment

ROSCAs **:** Rotating Savings and Credit Associations

GCC **:** Gulf Cooperation Council Countries

GMTI **:** Ghanaian Ministry of Trade and Industry

LAB **:** Latin America Bureau

MFIs : Microfinance Institutions

MFBs **:** Microfinance Banks

NGOs **:** Non-Governmental Organizations

NPV **:** Net Present Value

NSE **:** Nairobi Securities Exchange

PS **:** Paradigm Shift

SACCO **:** Savings and Credit Cooperative Societies

SDG Sustainable Development Goal

SMEs **:** Small and Medium Enterprises

SPSS : Statistical Package for Social Sciences

SWOT **:** Strengths, Weaknesses, Opportunities and Threats

UNDP **:** United Nations Development Programme

USD **:** United States Dollar

VIF **:** Variation Inflation Factor

WBG World Bank Group

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

According to the World Bank (CBS, 2013), microfinance institutions, or MFIs, are organisations that conduct small-scale financial transactions using a variety of approaches to assist low-income households, microbusinesses, small-scale farmers, and other individuals who do not have access to regular banking services. Microfinance initiatives include advancement of financial services such as accepting deposits and advancing credit/loans to the poor and low income earning households and micro enterprises as a form of boosting their economic well-being. Therefore, because conventional banks are unable to offer the most appropriate securities for this class of citizens, microfinance institutions objectively pool savings, extend credit, as well as other financial services to millions of individuals who are primarily multidimensional poor. The microfinance activities can either be formally or informally conducted depending on the nature of the organization or group (AMFIs-K, 2021).

Microfinance activities are those that revolve around the provision of financial services through microfinance institutions either by the self-employed poor who depend on their micro enterprises for returns and are considered bankable because they miss the required collateral to be pledged as security for they are perceived to be high risk by main stream banking sector or traditional commercial banking sector, (Daley, 2002). Generally, banks have very stringent measures in place which makes it more difficult for low income earners to meet the requirements provided for them to benefit from the financing schemes that they have in place. Currently, microfinance institutions operate in various forms; Non-governmental Organizations (NGOs), Mutual funds, Cooperatives, Commercial businesses and banks to issue micro-loans to those excluded from traditional banking, (BNP, 2018).

Microfinance institutions therefore play a key role in the economy. This is because of its focus on the low income earning households and individuals who are also statistically identified to be a significant number worldwide. In their quest to diversify and improve the income levels in these households, they also require an enabling framework across all sectors (both government and private sector) for them to thrive. The comparison made between the incomes of beneficiary households and non-beneficiary households show that there is a significant difference between

them (Ayalew, 2014). It can henceforth be noted that considering this implied contrast, microfinance firms have a profound role in boosting livelihoods of individuals and the global economy in general.

Microfinance services have gained a worldwide acknowledgement as a model for poverty alleviation and a means to bridging the gap between the poor population and financial services. This means that most nations have adopted the model as a way of mitigating the financial challenges facing the people. The model is flexible and able to be adopted by any group of individuals seeking to pool together their finances as a way of creating a saving culture and a micro loaning scheme for themselves. As globalization closes in, different goals are being set out as nations collaborate to improve economically and shun away poverty. Microfinance is perceived as a dynamic vital mechanism towards attaining the first Sustainable Development Goal (SDG) targeting to reduce poverty by 2030 (Klapper, et. al., 2016).

Various changes are being experienced in the microfinance industry. These changes have greatly influenced the sector's expansion, change, and innovation, which has resulted in an increase in clients and diversity in the services and goods offered (CBK, 2018). However, profit levels within the industry, more specifically in Kenya keeps dropping as largely attributed to reduction of financial income (CBK, 2018). This means that, in as much as efforts are being made to empower the microfinance sector, there are challenges at equal measure that are affecting the industry. These challenges include, but not limited to; (i) need for resilient and viable business models through ensuring adequacy of capital and liquidity considering market dynamics in the banking sector, (ii) elevated credit risk which has contributed to increasing non-performing loans, (iii) reduced reliance on deposits and increased reliance on more expensive borrowed funds among others, (CBK, 2018).

Indicatively, there appears to be an increment in the number of microfinance institutions and activities across the globe as per the World Bank report of 2015 and the CBK report of 2018. It is however not so clear as to why there is the rise of these institutions whereas their performance appears to be deteriorating. So many studies have been conducted in various countries globally trying to establish the factors surrounding the growth of microfinance institutions and challenges leading to different levels of performance and each study has generated varied number of findings and given relevant suggestion to that effect. These studies include a research by (Kwado, et. al 2021) on Microfinance Institutions and financial inclusion in Ghana. This study has also

endeavored to examine the various issues that relate to the financial leveraging among microfinance firms in Kenya in relation to their performance, firm size notwithstanding. Leverage management can be effective with well-maintained capital asset ratio and debt equity ratio within the limit fixed by the apex bodies (Rupa, 2017).

1.1.1 History of Microfinance Institutions

The microfinance movement dates back to the 1970s when the founders of this model were proven to pass two tests; to show that poor people can be relied on to pay their loans and show that it is possible to provide financial services to poor people through market-based enterprises (Otero, 2006). From time immemorial, the fundamental objective of microfinance institutions had been poverty alleviation from the social perspective hence and use of traditional MFIs that comprised of mainly non-governmental organizations (NGOs), public sector banks and specialized microfinance banks. During this time, the government together with international donors assumed that poor people needed cheap credit and thought of using this MFI model to promote agricultural production for small scale land owners. As a way of leveraging on agricultural credit, these financiers came up with credit unions that were as a result of the inspiration of the Raiffeisen model (1964) that was developed in Germany.

By around 1980s, the credit model was already experiencing a lot of financial distress and related challenges. This led to a lot of criticism since most programs accumulated huge losses from the loans issued and therefore called for recapitalization in order to remain going concerns. Evidently, it came out profoundly that more market-based approaches were required so as to rescue the credit unions from winding up. These challenges provoked a new design that saw the consideration of microfinance as a fundamental aspect of the entire financial system. Microfinance institutions operate in a unique market. The institutions focus on the needs of people who are mostly regarded as' high risk' by commercial banks and small households which have very limited or ultimately no access towards financial services due to limited income levels that they are subjected to. While the share of households accessing credit has not changed significantly, expansion of the microfinance sector has made it possible for borrowers to shift from informal to formal sources of credit, especially among the poor (WBG, 2019).

Having faced financial distresses in the 1980s, a revamp in the system was in the offing and in the 1990s improvements in the microfinance sector were experienced across the world and it was

openly depicted that it was achievable to successfully finance the poor and recover the loans back. This was enhanced further through an open declaration by the United Nations' Secretary General in the year 2005 who marked the year as the international year of Microcredit. This was a step closer to the realization and unlocking of the full potential of microfinance institutions and microfinance activities in the globe. Even after this efforts have been pulled up, a lot more needs to be done to have this sector run smoothly, however; poverty alleviation seems not to be an easy mission as per (Wilson, 2007), poverty eradication is a complex expedition where social factors play a substantial role, including discrimination and lack of knowledge that continues from generation to generation.

As Microfinance institutions evolved through the years of 2000s, it called for more rapid and innovative systems and features bridging social intermediation and capital development and investment aimed at increasing the capacity of beneficiaries to involve formal financial services. Since then, microfinance system has come up with various models aimed at making them serve their clients better and secure optimal returns for their shareholders. The model has been adopted and now ranges from the informal sector whereby the so commonly termed as 'Chamas' (small informal groups doing merry-go rounds and table banking) work with small group of individuals in the rural areas to advance credit facilities to their members for socio-economic empowerment to formal frameworks where officially registered microfinance institutions such as Saccos, Credit unions, Microfinance banks among others use formal lending platforms to support various individuals, households and Micro, Small and Medium Enterprises with credit facilities for growth and development. Programs have been developed by most Microfinance Institutions to raise consciousness through imposing behavioral changes, moral teaching and social customs as prerequisites to receive the financial services (Ahmed, 2004).

Unlike typical financial institutions like banks, microfinance institutions are faced with two types of challenges; first, they provide small amount of financial services to the poor and second they need to cover their expenditures to sustain their business (Sonia et. al., 2020). As much as most microfinance institutions prioritize poverty alleviation as their main objective, it is important to note that developing nations have in recent days evolved in their market systems, leading to transformation of microfinance institutions into profit seeking entities. Considering the economic standing of most people which indicates an increasing level of poverty, there has been a rise in the number of MFIs in developing nations and these institutions have attracted a multi-faceted support.

Microfinance has gotten high recognitions from international actors, donors and governments (Oslen, 2010).

1.1.2 Overview of Microfinance Institutions

By the year 2003, commercial banks and other financial organizations were engaged in the microfinance industry (CGAP, 2003). Twenty commercial banks were providing microfinance in Africa by 2008. (AMAF, 2008). By the year 2016, there were 123 million customers in microfinance institutions worldwide attracting a loan portfolio of USD 102 billion with Asia leading at roughly 60% of all borrowers followed by Latin America and Sub-Saharan Africa coming third (BNP Paribas,2017). Strong growth, fierce competition, capital inflows, and the emergence of new players are the main drivers of the numerous changes taking place in the microfinance sector. Banks take up a significant amount of space among the new players. In Kenya currently, there are 53 microfinance Institutions (AMFI-K, 2019) with 13 microfinance banks which are regulated by the CBK (CBK's Annual Supervision Report, 2019). These institutions strive each day to manage their debt levels and improve their performance as well, meet their customer needs (CBK, 2019).

Microfinance institutions in Europe operate in a relatively same way as the rest of the countries in the globe. The suppliers and well-wishers' objective in microfinance was/is to create and advance a broad base of financial opportunities ranging from pooling together of savings and checking the client account details as well as advancing credit towards a large number of poor individuals and their enterprises who in most cases are out of target from the standard commercial banks. The firms device strategies to manage their financial leverage practices and improve their overall performance. The European microfinance suppliers' mission is therefore to focus on micro-enterprise loaning to individuals or to their firms which are not considered by other traditional banking services that are not only regarded as a phenomenon in the financial market but also a social exclusion aspect. A model by (Gabriela, 2018) on microfinance institutions in Europe suggests for usage of social capital for internalization of the performance drivers and the likelihood of achieving long-term and sustainable services which can be achieved through social capital that is effective to all.

Turkey is predominantly a Muslim State but it has made significant steps in advocating for microfinance activities in effort to alleviate poverty among its people. Recent researches argue that

many elements of microfinance are considered to coincide with the Islamic banking broader goals, and thus Islamic banks can be a more effective and efficient provider of financial services to the poor (Muhammad, 2016). Statistics from the Turkish Government (2014) showed that 15 % of its population was below the poverty line. This left its Banks with a role of complying with the Islamic Finance objective of social obligation to its citizens and a positive, dynamic and efficient contributor and provider of microfinance services aimed at alleviation of poverty. Therefore, a joint collaboration between participating Turkish Banks and reputable charity organizations was proposed based on a strategic partnership to establish a not for profit making institution to provide microfinance services.

In the North America (Canada and the United States), microfinance firms target populations that are marginalized and unable to access bank financing from mainstream financial service providers. According to the federal Deposit Insurance Corporation (FDIC, 2013), close to eight percent (8%) of Americans were unbanked which implied that over 9 million people were completely without bank accounts. The connotation here is that even developed countries are not exempted from poverty related effects and ought to be in a position to consider how to mitigate these fallouts. Moreover, the International Finance Corporation (IFC) and the World Bank signify that more than three billion people in developing countries lack access to loaning and deposit services. This means that more than half of the world's population is still in financial limbo and microfinance should come out in handy to meet these financial needs. It bridges the gap and makes finance available to a segment of the society that does not have access to regular banking systems (Bakhtiari, 2011).

In Latin America and the Caribbean, there exists more than 600 Microfinance institutions which have lent around $12 billion to more than ten million low income individuals (IADB, 2020). Brazil pioneered on matters Microfinance services in the 1970s. At the time, there existed tough social conditions in most Countries in Latin America due to dictatorial leaderships. However, micro finance did expand throughout the Continent from the 1980s which resulted to creation on new institutions and new work strategies to address the challenges in these countries (Latin America Bureau, 2012). The microfinance model was mainly enhanced by Non-Governmental Organizations (NGOs) and was growing outside the formal financial system. To date, NGOs still offer bulk lending in most nations whereas in some, such as Argentina, private banks and state organizations are more prominent in Micro lending (LAB, 2012).

In Australia, the approach to Microfinance is similar to those in most parts of the world as the trend of exclusion of the marginalized population from the financial system is at play. Since the 1990s, the social security reforms in Australia led to a drive in labour-market participation via narrowed eligibility requirements, activity tests, strengthened sanctioning regimes, stagnating payments and reduced public oversight (Melissa, J. and Kelly, G., 2021). The Australian Government has been putting efforts to streamline the social reforms so as to improve the household incomes to its poor section of the population. To achieve this goal of poverty alleviation, the Australian Government has paid the Good Shepherd Microfinance (GSM) to prepare its Financial Inclusion Plan so as to influence and enhance the economic growth to its citizen and the Country in general.

Microfinance activities in Asia were formally introduced in the 1770s. The concept was developed to respond to the underlying poverty situation in the continent. Since then, the concept has played a key role in the development of the Continent's financial and economic framework. The services mostly offered in the continent are exclusively to women as a form of causing empowerment of women and advocating for gender equality. The benefits of this empowerment model has since come along with benefits that include; provision of education for children, improvement of health conditions of the people, securing better living standards for the people and increasing levels of employment in regions where a majority of the population lives below the poverty line (Thi et al., 2020).

Microfinance in Bangladesh was introduced in 1976 experimentally as a program aimed at disbursement of micro loans to groups of poor women operating indigenous home-based enterprises. The microfinance operational framework is way different as compared to other formal financial intermediaries since they do not rely primarily on their deposits as their source of funds. In addition to advancing small loans, they further provide extra financial services that include but not limited to building, marketing of products and provision of vocational training meaning that they focus on both financial and social scope as the bilateral objectives of microfinance. The institutions however, are faced with liquidity and financial challenges which causes a struggle in their overall performance. Due to their low levels of capitation, most MFIs are mostly affiliated to donor and funding agencies to boost their stability. Bangladesh being at the forefront of microcredit movement, it is important to delineate the relationship between performance of microfinance institutions and their outreach efforts (Shakil et. al, 2014).

In China, Microcredit begun way back in the mid-1990s after the UNDP and World Bank started the promotion of the concept of Cooperation with organizations in the Chinese Government. Over 30 million people are relatively poor in China and survive below one dollar per day while 30 million people also live in abject poverty with less than twenty five cents a day (KW, 2010). With the Majority of the people living in the Countryside, a huge gap is noted in the living conditions and the nature of public services rendered such as medical and educational services as compared to urban areas. This means that Microfinance services are mostly demanded for in the rural areas as compared to urban centers. The Secretary General for the China Association of Microfinance indicated after ten years of development, microfinance in China had entered a phase of transition and were now in motion from experimental to commercial development.

In India, the banking system witnessed unprecedented growth and achieved a milestone outreach. The provision of credit to the poor is a positive approach of extending economic opportunities and ultimately curbing poverty. Providing sustainable credit services is seen as a way of increasing returns and productivity to the poor. Furthermore, studies in India still indicate that the poorest population in the country continue to lag behind and stay outside the formal banking system. An approach by Grameen bank was devised by Mohammed Yunus in 1970s with a microfinance model that was designed to specifically attend to the needs of the poorest population. Notably, the Indian banking system has not formulated good policies and procedures that can well suit the credit needs of the poor which has led to the intervention of microfinance as a bridge to this challenge (Rupa, 2017). This raises a red flag with regard to financial leverage decisions and to what extent these decisions have influenced the performance of MFIs in India.

The introduction of microfinance services in Malaysia dates back to 1987. The major objective was to provide access to financial services by the poorest in society and minimize the existing income inequalities. The poverty level in the country is underscored by disparities among those in urban centers, rural areas, gender and also ethnic formations and states. Just like in other nations, a number of Microfinance Institutions in the country also receive support from the Malaysian government but specific considerations are observed such as year of formation, type of the MFI, the scheme of lending, coverage of service area and borrowers targeted by the scheme. The Malaysian government has since then introduced various incentives to encourage the micro finance services in the country. The incentives include the packages for new strategies through additional allocation to various micro credit scheme under different loan program (Nita, 2018).

In Africa, most microfinance activities are undertaken around the Sub-Saharan region. It was noted by the World Bank that by the year 2014, just thirty four percent (34%) of adults had bank accounts by then. This meant that the degree of access to conventional banking services was low and this was mainly attributes to the high levels of poverty in Africa. In as much as there is a gradual increase in the number of individuals accessing the conventional banking services, the number of those who are unable to access these services is too significant considering the poverty index in the continent. This therefore shows the need for microfinance activities in the continent because these activities will be of utmost advantage to the poor population. The portion of people living with on less-than one dollar, twenty five cents ($1.25) a day in the Sub-Saharan Africa (41%) is more than twice as high as any other region (Simmons, 2015).

In South Africa, the idea of microfinance traces back to the 1980s and has been pushed forth since then, with many forces, commercial companies, non-governmental Organizations (NGOs) and Government agencies collaborating to achieve its core objective of poverty alleviation. The growth of the industry is separated into four distinct stages; Pioneer, Breakout, Consolidation and Maturity, (PS, 2010). Just like in other nations, the micro credit services are provided to meet the needs of the poor who are spread across the Country. The South African regulatory environment is attributable to these efforts. However, it has also resulted to socio-economic assumptions regarding clients around the Country's Banking system design. The informal financial service sector includes everything from rotating savings clubs (ROSCAs) and stokvels to burial societies and loans from Mashonisas. It is characterized by lack of conformity to any laws except those of natural selection which means, if it works for members the scheme thrives and if it fails, the scheme dies (PS, 2010).

Similarly, the pressure for decrease in the dependence levels in Nigeria has been so high with both internal and external factors greatly contributing. These has been subsidized through grant funding by international organizations designed to support microfinance institutions (Aza, 2017). The focus of microfinance institutions in Nigeria, just like in most parts of the world has been on mobilizing savings and advancing loans and related financial services to the less fortunate and low income earners who are extremely poor so that they can turn these funds into use by small businesses as a source of alleviating poverty. However, there has been a shrinking resource base from external funders and donors to support their initiatives to meet the increasing demand for grants and soft loans which signifies microfinance institutions in Nigeria will eventually need to

stand on their own hence the need for them to explore other mechanisms of fund mobilization for financial sustainability.

In Ghana, the poor and small & medium Enterprises are mostly disadvantaged by way of lack of access to mainstream financial services. This is the majority of the population yet their access to credit facilities is so limited thus, making it very difficult for formal financial institutions and commercial banks to serve and meet their needs for fear of advancing loans that can lead to delinquencies. The population is denied these services due to lack of sufficient securities and collaterals demanded hence a probable ground for microfinance institutions to thrive in the country. It was noted that 88% of the registered businesses in Ghana were Small Scale and medium Enterprises (GMTI, 2011).Hence, microfinance Schemes are Instrumental in transforming lives of the poor (Quansah, 2012).

Studies carried out in Ethiopia indicate that Microfinance institutions (MFIs) have significant role they are playing in the economy of the country. Their focus is also centered around the provision of loans, pooling together member deposits, providing insurance and making remittances to the poor and low income earners of whom standard commercial banks neglect. This makes them to plan well and try to manage their financial levels and keep an optimal balance between debt to assets, debt to equity and capital so as to earn their shareholders good returns. These low income earners are considered as high risk hence neglected from the financial inclusion which is now being bridged by microfinance institutions in Ethiopia. The Ethiopian government has then developed a legal back up through a proclamation that has paved way for the establishment of Microfinance institutions. These has led to legally registered Microfinance institutions that have since started to offer microfinance services. MFIs spread across rural and urban areas, extend legitimate deposit services to the public aiming to draw and accept drafts and to manage funds for microfinance business (Getaneh, 2005).

The idea of microfinance in East Africa started in the 1990s and since then, the sector has undergone rapid transformations in terms of the number of microfinance firms established and the customer base realized. This rapid growth is attributed to the fact that the governments in the region are cognizant of the existence of these microfinance institutions and acknowledged them as one of the key drivers of their economy. The fact that more than half of the population in these countries also live in rural areas makes these microfinance enterprises to be of significant value to the people in meeting their financial needs and the economic needs of their countries in terms of revenue

collection. The lending methodologies and approaches used by these microfinance institutions in the region have made them a more favored source of finance among the low income households in both rural and urban areas (Marr et. al, 2011).

Microfinance in Tanzania began in 1995 with Savings and Credit Cooperative Societies (SACCOs) and Non-Governmental Organizations (NGOs) at the epicenter of this model. The model has since contributed to rapid success of microfinance internationally. However, microfinance still remains a relatively new thing in Tanzania since it has not penetrated yet (Wikipedia, 2016). The microfinance system in the Country is also linked with poverty alleviation and women empowerment. In 2002, the Tanzanian Government implemented a microfinance policy to foster its success in the Country. Furthermore, the Tanzanian Government has since encouraged commercial banks to provide financial solutions to micro business enterprises and recognized Microfinance as a tool for poverty alleviation.

In Kenya, the Microfinance model dates back to mid1990s. The design has been in force since then and in the year 2006, a legislation was passed through Micro Finance Act that came to force in 2008. By the year 2010, more than twenty big MFIs existed in Kenya and had advanced approximately, USD 1.5 billion to over 1.5 million borrowers. The microfinance activities are not considered as a model of advancing grants but a model for stimulating entrepreneurial activities for economic prosperity. It is argued that free financial incentives may not stimulate the financial economic infrastructure and grow the local economy. The advancement of microcredit services to small business holders has been supported in the country so as to grow and become small and medium sized entrepreneurs (SMEs) resulting to empowerment of communities where these enterprises are operating.

To synergize and boost the productivity of MFIs in Kenya, a body; Association of Microfinance Institutions-Kenya (AMFIs-K) was registered in the years of early 2000s. The Association specifically started with 5 founding members and has close to 54 members by now (AMF-K, 2020). To serve better the needs of its members, further clustering has been done to this membership to include; Ordinary members (Credit only microfinance Institutions, Microfinance Banks, and Wholesale lenders microfinance Institutions), Associate Members (Commercial Banks, Savings and Credit Cooperative Societies and Development Institutions), Honorary members (key persons who have contributed to industry) and Consultants (MFI experts). The Association developed a strategic plan aimed at ensuring financial and operational self-

sustainability through member driven activities and outreach strategies to reach more members by offering microfinance services in order to ensure inclusivity (AMFI-K, 2020).

With the poor remaining jobless in Kenya, minimal efforts have been made to create job opportunities both in private sector and public sector. This gap has been narrowed through provision of microcredit by microfinance organizations and groups to enhance self-employment resulting to the transformation of micro-enterprises to small and medium sized enterprises (Nyandemo, 2013).The microfinance firms in Kenya however, struggle to meet their financial obligation. This is a gesture brought about by issues around financial leveraging and overall performance of the microfinance institutions. Specifically speaking, a net loss of Kshs. 1.0 billion was reported in the year ended June 2020 by the microfinance banks in Kenya compared to Kshs 0.7 billion in the previous year ended June 2019 (CBK, 2020).

1.1.3 Financial Leverage

The amount of debt financing a company uses as opposed to its own money is known as financial leverage (Rayan, 2010). Financial indicators include Earnings after Interest, Tax, Depreciation, and Amortisation (EBITDA), Return on Equity (ROE), Return on Assets (ROA), along with Earnings per Share (EPS). These parameters determine the performance of a firm which means that when prudent investment is done, return on investment is high thus better performance. Therefore, firm managers have a task of remaining strategic and focused in their capital budgeting decisions since such decisions may cause them to wrongly invest their institutional capital leading to bankruptcy, insolvency or ultimate winding-up. Different companies apply different financial leverage alternatives depending on their needs. Financing of such institutions is a matter of financial leverage in which the decision makers have to decide on whether to go for external debt or seek fresh equity from the shareholders. Most firms opt for a mix of debt and equity as their financing decisions (Nassar, 2016).

Finance managers are hired by shareholders to run their firms and earn them attractive proceeds in form of dividends. This agency relationship is pegged on the fact that the managers who are otherwise referred to as agents create more wealth for their shareholders who are otherwise referred to as principals. In order for these managers to maximize the value of their firms, they need to be cognizant of various factors that can adversely impact their firm's capital structure. These firms are going concerns by nature and for them to remain foreseeable, they must come up with optimal

investment decisions particularly on the mode of financing. This will always bring up the question on whether to go for internal funding, commonly referred to as equity financing or seek external funding which is otherwise referred to as debt. The optimization of capital structure of firms, recognizing various financial sources and financing sources are of particular significance (Zahra et al., 2013).

Financial leverage comes with a high degree of risk that is normally faced by institutional shareholders since it leads to increased likelihood of a firm's liability to service the debt (Abdallah, 2014). Each firm strives to establish its target financial structure parameters with regard to each element and the proportion of each element in the structure. It is through such strategies that a firm will work to achieve its strategic objective represented by a firm's increased value. This therefore means firm managers should work to ensure there is a balance between anticipated returns which is mostly as a results of the structure of a firm and the risk level that return is prone to. The assumptions observed by Modigliani and Miller (1958) on a financial markets perspective, they insinuate that the cost of capital is never affected by the financing structure hence a firm will always remain steady and cannot be triggered by the financing structure. However, the debt privilege that exists on tax advantage because its interests are tax exempted and the existence of debt in its capital structure declines the cost of capital that results to profitability growth hence increased ROE and ultimately increase in firm value. This forms part of the findings highlighted by (Tonye et.al, 2018) in their studies aimed to understand how corporate performance of Nigerian firms was being affected by financial leverage.

Understanding the degree of financial leverage is key for firms that intend to make financial decisions. The extent of financial leverage is relative to the degree at which a firm relies on debt financing (Meysam, 2014). As a firm acquires more debt, the more the chances are, that it becomes unable to fulfill its contractual obligations once they fall due. It is implied that a levered company has an obligation of making fixed interest payment whether it generates revenue or not. These fixed interest payments contribute to a significant change in net income to be more than the percentage change in gross earnings of the firm hence boosting the changes in a firm's revenues. This indicates that returns on a highly levered assets should be more responsive to the movement in the market than the returns on assets with little or no debt in their capital structure. A local study by (Yegon, et.al, 2014) on their study to understand the management of financial risk of firms' profitability on selected MFIs in Kenya argues that a firm's risk that is assessed on the basis of

leverage coefficient is of value in that it helps to predict the behavior analysis so as to determine the future financial prospects which must be taken into consideration during decision making.

The financial leverage alternatives, otherwise termed as components of financial leverage are elements of finance against which borrowing is considered. As various firms consider seeking debt instruments from either internal or external sources, there are considerations that are put to the fore before these financial instruments are advanced through the debt covenant which is normally signed between the lender and the borrower. It is through this contractual understanding that both parties agree to transact over a period of time. The nature of debt can either be short term, medium term or long term. Short term debt period ranges from zero months to one year, medium term debt takes a period ranging from three to five years while long term debt takes a period that goes above five years. The level of risk in this loaning process depends on the nature of the loan and the duration taken to repay this loan. Leverage is the use of assets and sources of funds by firms that have fixed cost such as interest expense to increase the potential profit to shareholders (Sjahrial, 2010).

In the concept of financial leverage, investors/borrowers needs are considered by lenders based on specific institutional guidelines that are clearly spelt out in the finance and credit policies and procedures of the lending institutions. Once an expression of interest is made by the borrower, the lender takes keen interest to access and appraise the potential of the borrower to pay the requested loan amount. In most cases, investors are risk averse and wants to invest less but earn more but notably, the higher the risk, the higher the return. The process of high returns is always desirable, but investors generally refuse to take the risk and use leverage therefore and must balance higher returns to increased risk (Weston et al., 2015).

Before these loan/debt is advanced to the borrower, the lender carries out a thorough risk assessment of the loan requested. As part of this loaning process, various steps are involved in order to ensure that the debt obligation is fully met by the borrower. The steps involved in this process include; credit policy provisions, Loan appraisal, Collateral substitute considerations and credit monitoring. At each stage, extensive assessment is done so as to ensure that ‘no stone is left unturned’. The credit departments in relevant institutions are tasked with this role of having the best results out of this process. First, compliance with credit policies is key as it outlines the exact factors to consider while issuing debt. This includes the 5 Cs; ‘Character’ of the borrower (trustworthiness), the ‘Capacity’ to repay the loan/debt, the ‘Capital’ levels of the borrower,

financial ‘Conditions’ of the borrower and ‘Collateral’ or other valuable assets owned by the borrower (Kiah et.al, 2021).

The concept of loaning is therefore pegged on various considerations based on the following elements of financial leverage; borrowing against the assets owned by the organization (this includes both current and non-current assets), borrowing against the capital position of the organization (debt and equity combined), borrowing against equity (Shareholders equity) and Borrowing against the earnings before interest, tax, depreciation and amortization of the institution. For this process to be a success, both the principal (shareholders) and the agents (management/finance managers) must collaborate to ensure that their firms achieve maximum returns out of their investment decision. In order to mitigate the risk of losses within the stoke portfolio and determine whether credit is going to be granted based on the firm's performance, the shareholders require information about the financial performance of the company. Meanwhile, management makes decisions by examining the company's financial performance over time (Vidyanata et.al., 2016).

Financial leverage activities are also done at corporate level with Microfinance Institutions managing their liquidity needs in a business to business model. The Interbank money market is a market in which banks extend loans to one another for a specific term (CBK, 2017). Microfinance banks utilize the same framework in mitigating their liquidity needs and ensure that they remain optimal in their business operations. The loans are either requested among the banks or requested from the central bank which mostly acts as a lender of last resort and a regulator of these Microfinance banks. Due to the compliance guidelines set out in this banking sector, a lot of guidelines are put in place to ensure that the MFBs are optimally in business. The same approach is adopted by MFIs within the Industry.

1.1.4 Performance

Performance is a yardstick against which the success of an institution is measured. The value of these firms is measured by Return on Assets, Return on Equity, Earnings per Share and Earnings before Interest, Tax, Depreciation and Amortization. The financial indicators used include; dividend yield, price earnings ratio, growth in sales, market capitalization among others (Barbosa et. al, 2005). Firms include these indicators in their annual financial reports with which they present to their shareholders through audit reports. Financial decisions are therefore geared towards

improving the firm's overall performance and ultimately increasing their value. Microfinance institutions face financial challenges which include but not limited to liquidity setbacks and credit risk which must be taken into account when strategic decisions are made so as to gain a competitive edge in business and earn sustainability.

For a firm to perform well, it should be cognizant of both its internal and external factors. This is well addressed through a self- assessment model that is mostly done using a SWOT (Strengths, weakness, opportunities and threats) analysis to ascertain the institutional needs and necessary steps that are required to ensure its sustainability. Sustainability is assured when good performance is achieved and measured through various indicators. Those measurements include Return on investment, Residual income, Earnings per share, dividend yield, price earnings ratio, growth in sales, market capitalization etc. (Barbosa et. at, 2005).

Microfinance Institutions are going concerns and therefore, operate with a view of yielding high returns in form of profits. These returns are distributed among shareholders in form of dividends. This affirms that profit maximization is a core objective of business enterprises and firm managers have an obligation of ensuring that these firms are productive at all times. This is one of the main reasons as to why an agency relationship is created between firms' shareholders and management. Through this relationship, a binding agreement is reached out between these two parties whereby the role of the shareholders remains to be oversight through an elected board of directors whereas the role of the management (finance managers) is to ensure that the institution performs well and yields attractive profits that can be distributed to its owners (shareholders). Survival of a firm and its continuity often depends on its performance (Nawaiseh, 2015).

Microfinance Institutions, just like any other commercial entity are keen on their survival and continuity. The shareholders of these firms therefore get into an agreement with independent auditors during the year who are contracted to carry out an independent audit on the management of their institutions so as to establish, whether or not, their firms have a prospective future. This audit process encompasses the examining of all financial transactions and checking on their authenticity. This process leads to preparation of very important financial statements that are used in measuring the performance of these institutions. Report of total revenue, statement of financial health, statement of cash flows, and report of changes in equity are some examples of these statements. All these statements bring about a reflection of a true and fair view of the firms' financial performance and future stakes. Establishing firm's performance is a good way of

evaluating the performance of the respective managers and making decisions on their retention (Juliet, 2017).

As microfinance institutions work to see their survival become assured, they have in one way or another created high competition among themselves within the economy. This brings about some dilemma and calls for the need for these institutions to create a balance between the social aspect and the financial aspect. The social aspect is one of the objectives of microfinance of ensuring that firms meet the social welfare of their clients and improve livelihoods while the financial aspect looks into ensuring maximum returns to the shareholders through generation of more profits. This has led to high competition for clients and market share among microfinance organizations in bid to ensure their sustainability. In line with this, a study was conducted by (Haily, 2020) to understand the concept of competition and microfinance institutions' performance in India which considered 183 MFIs in the Country.

Performance of microfinance institutions is pegged on the nature of capital investment decisions that their managers make. Capital investment decisions are long term decisions that are made through careful evaluation of various factors because, if they are not prudently made, a very big risk will befall the organization. One of the disadvantages of capital decisions is that they are irreversible. This means that once they have been made, they can hardly be undone therefore, if the finance managers make a good decision, their firms will thrive and vice versa. Capital investment decisions come with huge risks because they attract a huge junk of funds that must be invested by firms. To have these investments done, firms normally review their financing options by considering the sources of their funds. This is where finance managers' competencies are at play to ensure that they pick on the best source of financing. The decision of financing in a firm is crucial (Nyamita, 2014).

The main source of returns for microfinance firms is loaning and for them to meet the needs of their clients, they have to ensure that their liquidity levels are optimal. The MFIs also face liquidity challenges at one given point. This makes them to review various options on how they can seek more funds to finance their needs. Therefore, financial leveraging is a very important step in a firm that should be undertaken in order to boost institutional performance. However, it should be done diligently. Financial leverage offers investors a higher potential return, but it also carries a bigger risk of loss if the investment loses all of its value. Loan principal including accrued interest must be paid back (Abubakar, 2015).

1.1.5 Performance of Microfinance in Kenya

Kenyan microfinance institutions have a big role that they play in the economy. Their main objectives just like many other microfinance institutions in the world is to address poverty by pooling financial resources among the low income earning Kenyans and advancing them in form of micro credit to sustain their livelihoods. Between the years of 1980s and 2000, many non-governmental organizations (NGOs) and multi-national agencies were behind the microfinance institutions in Kenya with the aim of co-financing the MFIs as a way of alleviating poverty and employment creation so as to boost the income sources of the poor in Kenya. During the years of 1980s and 1990s, the microfinance industry was on an upwards trajectory with Kenya Women Finance Trust, Faulu Kenya, Kenya Rural Enterprise program (K-REP), and Family finance bank taking lead. The firms are now operating as fully fledged Microfinance banks under the regulation and supervision of the CBK which is Kenya's reserve bank (CBK, 2019).

With Kenya's population growth at 47 million (KNBS, 2019) and the country facing economic strain, it still implies that microfinance banks have more to do with regards to poverty alleviation. This further means that the microfinance firms need to continually serve their purpose of meeting the financial needs of the poor in society. However, their state and capacity to objectively meet their mandate of advancing micro loans to their clients, remains coupled with challenges of liquidity and poor performance as denoted by the CBK 2019. This makes the management of the institutions to go back to the drawing table to make further decisions on how they can strategically place the firms at a competitive edge for them to run to a foreseeable future. For this reason, the microfinance leadership is obligated to review options of going for debt as one of the options of managing their financial needs. While the management makes various decisions by examining the company's financial results in the previous period, the shareholders require information about the firms' financial performance in order to avoid the high risk of damage in the stock portfolio and to determine whether credit is going to be provided based on the firm's performance (Vidyanata et.al. 2016).

Microfinance banks performance in Kenya has been quite challenging with the sector incurring losses in its performance. According to the CBK banking sector Annual supervision report of 2020, the Microfinance Banks recorded a loss of Kshs 1billion in the year ended 2020 as compared to a loss of Kshs 0.7 billion in the previous year ended June 2019. This indicates that the performance of MFBs is moving from bad to worse. The report further indicates that customer deposits rose by

8.6 percent to Kshs 46.8 billion in June 2020 while its core capital to risk weighed assets ratio decreased from 15 percent in June 2019 to 14 percent in June 2020 as total capital to total risk weighed assets rose from 15.9 percent as at June 2019 to 16.3 percent in June 2020 which was pretty much above the minimum requirements of 10 percent and 12 percent respectively. The general performance of MFIs worsened with the arrival of Covid-19 pandemic which led to shunning of many economic activities of MFI clients and loss of jobs (AMFIs-K., 2020). The underlying message here is that in as much as the poor Kenyans keep on depositing their funds into the microfinance institutions with hope to get credit support, the microfinance sector appears to be struggling with liquidity and related challenges that may in the long run lead to their winding up if correctional strategies are not put in place.

1.2 Statement of the problem

Firm managers make financing decisions on a day-to-day basis with a projection that the available funds can be invested prudently to earn their shareholder's prospective returns in form of dividends. With the time value of money concept in mind, it is expected that the borrowed funds otherwise known as debt/loan will attract prospective returns that can make possible the loan repayment and have additional earnings that can be shared among the shareholders. Ideally, it should be implied that utmost utilization of debt/financial leverage will cause utmost performance of a firm. Therefore, it is expected that when financial leverage is optimally controlled, there should be optimal performance of firms.

However, the current situation in the microfinance industry in Kenya shows poor and negative profitability as indicated by various bank supervision reports released over the years by the central bank of Kenya. The Microfinance banks' profit levels within the industry keeps dropping as largely attributed to reduction of financial income (CBK, 2018).These report also depicts that the Microfinance institutions reported a negative 3.0 percent on their Return on Equity (ROE) in 2019 financial year. Further, the general ROE for ten years (2011-2020) as shown by the CBK reports depicts that all the MFIs regulated by CBK during this period did not meet the most optimal ROE ratio (15%-20%) for them to be considered as better performing. Moreover, statistics from CBK reveal that 50% of the MFIs (under CBK regulations) had negative ROE in 2015, 62% of the MFIs in 2016, 69% in 2017, 77% in 2018, 69% in 2019 and 71% in 2020. This is a worrying trend that provokes the need to establish why such a poor performance whereas these MFIs have a pivotal

role that they play in the economy considering the huge number of clients that they serve (53%), (KNBS, 2019), who are multi-dimensionally poor and depend on these institutions for financial support.

It is therefore clear that a gap exists between financial leverage and performance of Kenyan microfinance firms because the expected state on how institutional financial leveraging corresponds with performance (ideal situation), deviates a significantly from the actual situation. Furthermore, studies that have been undertaken on financial leverage and firm performance have brought out mixed findings and this has been as a result of different research methodologies deployed, theoretical models used and conceptual models applied. This include studies by (Ochieng et.al, 2014) on Financial leverage and performance of SACCOs in Kenya which applied a cross-sectional methodology with no moderating variable and a study on financial leverage on firms in the Netherlands by (Konstantin, 2012) that deployed a longitudinal approach but did not test its control variables.

1.3 Objectives of the study

1.3.1 Overall Objective

The overall goal of the study was to investigate how financial leverage options affected the performance by microfinance institutions, or MFIs, in Kenya, with a particular emphasis on the moderating effect of firm size. As stated in 1.3.2, five distinct objectives were derived in order to achieve this goal.

1.3.2 Specific Objectives

i. To evaluate the impact of the debt-to-asset ratio on Kenya's microfinance institutions' performance.
ii. To evaluate the Influence of Debt to Equity ratio on performance of Microfinance Institutions in Kenya.
iii. To establish the Influence of Debt to Capital ratio on performance of Microfinance Institutions in Kenya.
iv. To Analyse the impact of the debt to EBITDA ratio on Kenyan microfinance institutions' performance.

v. To determine how firm size modifies the relationship among financial leverage options and Kenyan microfinance institutions' performance.

1.4 Research Hypotheses

In the quest to achieve the objectives in 1.3, study will attempt to reconcile the following null hypotheses;

H_{01}: Debt to Asset ratio has no discernible statistical impact on Kenya's microfinance institutions' performance.

H_{02}: Debt to The equity ratio has no discernible statistical impact on Kenyan microfinance institutions' performance.

H_{03}: Debt to The capital ratio has no discernible statistical impact on Kenyan microfinance institutions' performance.

H_{04}: Debt to EBITDA ratio has no statistically significant Influence on performance of Microfinance Institutions in Kenya.

H_{05}: Firm size has no statistically significant moderating Influence on the relationship between financial leverage alternatives and performance of Microfinance Institutions in Kenya.

1.5 Significance of the study

The results of this study work will be significant to finance managers of the microfinance banks in Kenya as they will form a point of information that will guide them in determining their strategic direction for better performance and ultimate sustainably. In addition, the findings of this study will indicate the degree to which microfinance firms in Kenya are exposed to the financial risk and provide the probable recommendations on the measures they can put in place to mitigate the said risk. This study will also be significant to the members and shareholders of the microfinance banks because the findings will aid them understand the need for better performance of their institutions. Shareholders will always expect returns in form of dividends which means that they will always have interest in understanding how their institutions are performance.

The study will also create a point of action for the Kenyan government, particularly the ministry of national treasury and the CBK which is the sole regulator of all the banks in Kenya. The regulator can utilize the findings of this study to formulate new policies and ensure actual implementation that can help improve the microfinance sector achieve a competitive edge and boost the economy of the country. Finally, this study will add value in the scholarly world, more

specifically in the field of finance and bring closer the debate around capital structure and firms' performance which has been alive for many years now. This study will henceforth add a body of knowledge in the finance discipline by trying provide answers to previous related studies and reveal the gap that exists between financial leverage and performance of microfinance institutions in Kenya.

1.6 Scope and Justification of the Study

This study relates to the field of finance with a special focus on microfinance institutions and in particular, microfinance banks in Kenya and the micro and macro factors that influence their performance and ultimately their implications on investment, economic growth and social development. The study picked on 13 microfinance banks out of the 53 MFIs in Kenya where the survey was conducted. The 13 MFBs are centrally regulated by the CBK and have special characteristics and this attributes enabled the study to collect more significant data that ultimately informed the study objectives. This was as longitudinal study featuring a ten years period starting in the year 2011 to the year 2020 and investigated the financial leverage alternatives and their Influence on performance of MFIs in Kenya. The study focused on all microfinance banks in Kenya which were under the regulation of the CBK by the year 2020. According to the CBK's annual report and financial statements (2019), there were 13 regulated microfinance banks. This study therefore narrowed its focus to these very specific institutions for research because of their clearly defined guidelines which made this study findings more significant.

1.7 Limitations of the study

The purpose of this study was to determine how financial leverage options affected Kenyan microfinance organisations' performance while controlling for company size.The study was however limited to a number of factors: First and foremost, the study was limited to Microfinance institutions only. This meant that other sector players in the market and in the economy were being ignored and therefore, the findings of this study may not be used to generalize the results on behalf of other sectors in the market. Secondly, the study was limited to microfinance banks that meet a specific threshold in order for them to be regulated and supervised the CBK which is the highest ranking Bank in the Country. This was purposed in order to gain credibility of the research work

and to avoid dilution of the research findings. Thirdly, this research was limited to one form of leverage (financial leverage) and ignored other forms such us operating leverage and combined leverage and how they trigger performance of MFIs in Kenya. This was deliberately designed so as to avoid dilution of the research findings and therefore suggestions that other studies may consider different factors/approaches that have not been applied by this study. The study was longitudinal by nature and relied on secondary data and this limited other forms of methodologies such as cross-sectional studies using primary data that may yield different research results. Further, the study was limited to firm size as a moderating variable thus leaving out other prospective moderators in concept. Finally, the study area was limited to Kenya. This left out other areas of economic setting which also have different economic features and needs that may require further exploration alongside the performance of Microfinance Institutions.

1.8 Assumptions of the Study

This study was conducted under the assumption that the target population that was identified for the data collection was sufficient and able to provide the required information that would enable this study make statistically significant findings and draw relevant conclusions and suggestions for further studies. The assumptions were therefore accepted to hold methodologically and theoretically for this study.

1.9 Operational definition of terms

Debt-to-Asset ratio: This is a ratio in finance that expresses the degree of total Debt of a firm in relation to its total Assets. Total debt is a combination of short term, medium term and long term debt instruments sought by a firm while total assets include both current assets and non-current assets of a firm.

Debt to Equity Ratio: This is a ratio in finance that expresses the degree at which a firm's total debt relates to its total shareholders' equity. Total debt is a combination of all short-term debt and long-term debt while total equity includes total of shareholders' equity.

Debt to Capital Ratio: This is a financial ratio which expresses the degree of a firm's total debt in relation to its total capital. Total debt is a combination of all short-term, medium term,

and long-term debt of the firm while total equity is combination of all ordinary shares and preference shares of the firm.

Debt-to-EBITDA ratio: This is a financial ratio that expresses the degree of a firm's total debt in relation to total EBITDA. Total Debt is the sum total of a firm's short term, medium term and long-term institutional debt obligations. EBITDA is a combination of a firm's earnings before interest, its total tax obligation, depreciation (from its assets) and Amortization (from its intangible assets i.e goodwill & software).

Firm Size: Refers to a scale at which a firm operates and is measured by its total assets, total number of branches and total number of employees.

Microfinance institutions: These are enterprises that deal in micro or small financial transactions using various methodologies to serve low income households, micro enterprises, small scale farmers and others who lack access to traditional banking services.

Performance: This is a yardstick against which the success of a firm is measured.

Return on Assets (ROA): This is a ratio that is used to indicate how much profits a firm has been able to generate from the management of its own assets. It provides insights on how efficient a firm's management is maximizing its assets to create more income. When the ROA number is high, it means that the firm has a high asset efficiency or profitability thus optimal financial performance which means that it is able to generate more cash inflows.

Return on Equity (ROE): This is a ratio that is essentially used to measure the level of earnings that are generated by the firm for trading on their shareholding. The higher the return to equity the better because it indicates that the firm is utilizing funds effectively. A return on Equity of between 15%-20% is generally considered good.

Earnings per Share (EPS): This is a ratio that compares a firm's profits with the number of outstanding shares to evaluate profitability. It is determined by dividing a firm's net earnings by its outstanding shares.

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical Literature Review

2.1.1 Modigliani and Miller (MM) theory

The Modigliani and Miller model came to the fore in 1958 as established by Modigliani and Miller. The duo claimed that given a perfect market environment, the value of a firm is independent of its capital structure and has no connection to its financing choices, leading to the labeling of its capital structure as an ineffective representation for establishing the worth of a firm. Modigliani and Miller further argue that asset related risk and the capacity of revenue generation of a firm's assets are critical in measuring its value. However, a firm's market value is never affected by capital investment decisions which includes decisions on dividend allotment. Institutional shareholders may decide to use multiple sources to finance their investment and this would include issuance of new shares, use of borrowed capital (debt) or use of retained earnings. This study was therefore primarily guided by the MM Theory in enabling it to understand the Influence of financial leverage alternatives on the performance of microfinance institutions from the capital structure perspective. Performance leads to an optimal capital structure. The Modigliani and Miller irrelevance theorem says that cost of capital and a firm's value should not be affected by firm's financing policy, (Jahanzeb et al., 2013).

The Modigliani and Miller theory makes a number of assumptions; first, the choice between uses of debt or equity finance in a firm makes no difference to a firm's investment. Secondly, the

existence of arguments that capital structure proportions do not affect the value of a firm under any tax regime. Thirdly, the theory makes arguments that both the debt and equity holders of a firm share similar priorities and interests in the company and should partake in sharing the returns / earnings. Other assumptions put forth by the theory include, but not limited to, the unavailability of transaction costs, the representation of subjective random variables of the average future operating earnings of a firm and the fact that all firms within a similar class of industry share the same degree of business risk. Modigliani and Miller concluded that in perfect capital markets, no impact of leverage can be seen on firm value, (Jahanzeb et al., 2013).

There are a number of limitations that the Modigliani and Miller theory is subjected to; first, they argue that whether companies retain or declare their dividends makes no difference. According to Modigliani and Miller, retained earnings and external financing balance each other. These assumptions may theoretically be appealing but appear unpractical and unrealistic. Part of the limitations of the Modigliani and Miller approach are caused by imperfect markets, failure to recognize transaction costs, floating costs and the expression of uncertainty of future capital gains and preference of dividends. The assumptions made do not hold in the real world hence other researchers have come up with various theories to fill the gap in real life situation (Abor, 2007).

The Modigliani and Miller theory has been criticized for most of its assumptions; first, the fact that there is perfect market has been challenged by many scholars since in a practical world, there are no perfect markets. Secondly, the fact that transaction costs do not exist and no grey areas are required in generating fresh equity is unrealistic, since in the ideal world, the transaction and flotation costs must be incurred and other legal requirements must be adhered to in any business transactions. Thirdly, there exists a lending to brokerage and commission to sell shares expense whereas the theory assumes that no transaction costs are incurred, which is also not realistic. However, since they considered the assumptions of perfect markets with no taxes and no bankruptcy costs, the theory about debt irrelevance is hardly realistic (Osman et.al, 2013).

The Modigliani and Miller theory aims to explain how, given the assumptions of the efficient market hypothesis, financial leverage might influence the performance of financial organizations. The supporters contend that a firm's debt holders have the advantage when asserting claims against the company's earnings, which could increase the cost of debt and as a result, increase expenditure and decrease gross earnings, which is directly related to variable (iv) of this study work. A company's risk increases if it uses less expensive debt. Therefore, in order to make up for their

investments, the shareholders will need to request bigger payouts. The idea contends that a firm's worth will be determined by the underlying assets' risk and its capacity to generate profits from these assets. This is also consistent with the study's first variable. This theory will be useful in the study as it will provide a basis for comparison between financial leverage and performance based on a market (perfect market concept) point of view.

2.1.2 Trade-Off Theory

This theory was formalized in 1973 when Kraus and Litzenberger came up with an optimal financial leverage model. The theory was pegged on the findings of Modigliani and Miller theory of 1958, which states that debt and equity are determined by taxes and cost of financial distress. The development of this theorem was in retaliation to original theory by Modigliani and Miller which has then been explained by various scholars such as Scott in (1976) and Copeland & Weston (1988). Interest has benefits since it is tax deductible. It is further pointed out by Wolfgang and Roger (2003) argues that a firm's target leverage is stimulated by competing forces of taxes, the cost of financial distress and agency conflicts. This implies that an addition of debt to a company's capital composition will lower its corporate tax liability and the cash flows after tax which are available for the provider of the funds, which would result in a positive association between corporate tax shield and the company's value. The theory comes to the conclusion that taxes should be balanced in order to offset the expenses associated with debt, such as agency fees, financial hardship, and bankruptcy. The cost-benefit analysis of borrowing to fund projects is thus predicted by trade-off theory in order to create an optimistic capital structure. (Agha and others, 2014).

The Trade-off theory, like other theories, is also subjected to a number of assumptions. The theory was established under assumptions that there are no taxes, no transaction cost, distress cost and agency cost. The merit of this assumptions has undergone a number of reviews. The theory recognizes a tax effect gap on the trade-off theory and states that effects of tax are so complicated even beyond this theory's assumption. Cost of bankruptcy and its nature has not been expounded by the theory. (Murray et.al 2005) raised bankruptcy cost related questions that could cause effect upon leverage. These include; whether bankruptcy costs are fixed, whether these costs are a one-time cost. The theory acknowledges the fact that interest on debt is tax deductible, which means that the tax liability is reduced resulting in an increase in the tax shield. High portions of debt in a firm creates a huge risk for investors, which in turn makes them to demand high premiums on their

stock holdings or high dividend payouts. Several reviews conclude that implications of the trade-off theory for leverage ratios show clearly that the theory can be settled with existing literature on empirical evidence (Hennessy et.al, 2005).

This theoretical framework enables firms to identify their optimal capital structure and map out extra monetary unit of debt limitations which include deductible costs from the firm's tax as a result of paying interests, and lessening the free cash-flow problem.

Trade-off theory has, however, been criticized for predicting a positive correlation between earnings of a company and leverage. The fact that this theory has been able to predict a positive relationship between a firm's earnings and leverage is the greatest criticism since it turn out to be contradictory to empirical evidences that have been well established. The trade-off theory has since been unfavorable because it predicts a positive earnings to leverage association which turns out to be contrary to existing empirical studies. One possible explanation for this discrepancy might lie in the mean-reverting tendency of corporate earnings. The trade-off argument is unable to explain why corporations tend to be conservative when employing debt financing or why most nations have consistent levels of leverage but different taxing regimes. Generally, equity issuance leads investors to react negatively and management is not eager to issue equity, (Agha et al., 2014).

This study was therefore be influenced by trade-off theory when trying to correlate the micro and macro factors that affect firm debt and equity ratios which in the long run determine the sustainability of firms. The theory was also relevant to this research given that Microfinance Institutions that carefully choose their debt and equity levels perform well financially and are likely to overcome financial distress as compared to that that do not observe these norms in financial management. A tax advantage is created by firms that work smart to gain an optimal composition of capital in their operations. The bottom line is that the tradeoff theory guides in determination of the level of debt and equity that a firm needs to deploy through a strike in balance between costs and benefit analysis. This argument is relevant to the debt-to equity variable that the study seeks to find and its relationship with performance.

2.1.3 Pecking Order Theory

The Pecking Order theory was developed by Myers in 1984. This is a capital structure theory which argues that firm finance managers adopt a specific hierarchy in consideration of financing sources. The theory argues that companies prefer funding themselves from within as compared to

external funding. It further asserts that different costs of finances are associated with different sources. The theory provides that there is a specific preference of funding sources followed by managers when seeking funding opportunities; they first consider retained earnings then debt options and, lastly, opt to seek fresh equity. (Edim et. al, 2014) outlines the different types of financing sources which are valued differently; internal financing which comprises of equity and retained earnings, debt from lenders and new equity from issue of new stocks.

The pecking order is subjected to a number of assumptions; it first assumes that a target capital structure does not exist that firms can follow and opts for a capital structure of a particular order of preference that starts with internal financing, then debt financing and lastly seeking fresh equity. The theory also assumes that there exists information asymmetry in the market which involves insiders (managers) and outsiders (investors). Myers argues that firm managers are at an advantage point since they can have first-hand access to inside information of the firm and should act in favor of the firm owner as the act in the capacity of agents. Firms and their shareholders will therefore prefer deployment of retained earnings over debt, go for short term debt as opposed to long term debt or opt for long term debt as opposed to equity. The implication of this is that issuance of equity is considered very costly as insiders and outsiders' asymmetry of information increases. Companies will therefore give priority to their sources of funding in accordance to the law of least effort or that with the least resistance whereby the internal sources are first utilized and once depleted, debt is issued and when debt is not sensible any more, equity is issued. Equity capital, the most information sensitive security has adverse selection cost so firms prefer to raise equity as a financing means of last resort, (Machielsen, 2013).

As a theory, the pecking order theory is subject to a number of limitations; to begin with, the theory does not incorporate the effect of tax and the cost of issuing new securities, agency cost and financial distress of the cost of investing in opportunities. Secondly, the theory overlooks challenges relating to decision making by managers to accumulate much financial slack on the company and the effect of the availability of positive net present value's (NPV) of projects. A study by (Jibran et.al 2012) to establish the application of theory of pecking order on non-financial sector firms in Pakistan confirms that the assumptions of the theory were more realistic and could be tested easily. These limitations have contributed to the Pecking Order Theory to be regarded as a complement of the tradeoff theory rather than a subsisted.

The theory has however been criticized for suggesting that there lacks an optimal capital structure to boost the market value of firms, which contributes to firms choosing capital in accordance to the preferred order that starts with retained earnings, then debt and lastly equity. If the capital originates from internal funding sources like retained earnings from the past periods, this means there would be no cost of acquiring new capital. Firms therefore do not have a predetermined capital composition due to information asymmetry. This results to firms adopting a conservative investment behavior in times when deciding on whether to consider return equity over debt financing as a way of trying to maximize institutional performance. Most investors are risk averse, and this makes most firms to opt for internal financing as compared to seeking external debt as a source of financing.

The Pecking Order Theory becomes relevant to this study considering that the nature of information available to investors is asymmetric and they will therefore find it a bit hard to make financing decisions and, in particular, choose between internal and external sources of financing. This theory therefore explains the fact that most shareholders are risk averse and would opt to go for internal funding as a form of financing for fear of running into insolvency or ultimate bankruptcy. This therefore means that the fact that debt is easier and cheaper to obtain requires prudent decisions that can balance between risk and return. The pecking order theory will therefore be useful in this study as it will inform an understanding of the capital structure composition in the microfinance banks in Kenya and the order of financing preference in their financing decisions.

2.2 Empirical Literature Review

2.2.1 Debt to Asset ratio on Firm performance

The Debt to Asset ratio is a financial leverage ratio that which measures the degree of debt, whether long term or short term that a firm has on its statement of financial position relative to its assets (Ycharts, 2019). It shows the percentage of assets that are funded by borrowing compared with those funded by the investors. Debt ratio is very crucial in estimating the risk of financial behavior of a company and whether the company is liquid enough to meet its current financial obligations and successful enough to pay a return on their assets. One of the most important leverage ratio is the debt to equity ratio, which is an indicator of the amount of debt a company uses to run its operations (Gallo, 2015). As a firm becomes more burdened with debt, it also becomes more

levered which leads to an increase in the risk of finance and vice versa. The higher the debt ratio, the greater the probability of the company not being able to pay off its obligations, therefore the loan must be spent properly to obtain greater profit opportunities (PricewaterhouseCoopers, 2017). Firms across the globe work hard each day to create a balance between their debt and asset ratio so as to generate optimal returns for their shareholders and remain sustainable.

The financial leverage as well as performance difference across first-tier banks listed on Kenya's Nairobi Securities Exchange were investigated by Wabwile et al. in 2014. A purposeful investigation was conducted because the target firms have an asset portfolio worth at least $100 billion. In order to achieve the study's goals, secondary data across the listed banks was analyzed with a particular focus on the debt to asset component. From the analysis done, the study found out that debt to asset ratio had a negative but not significant effect on the performance of these listed banks. This meant that the firms were utilizing external debt as part of their capital structure and the management levels were optimal to yield better performance. This may be attributed to the size of their asset portfolio and therefore a comparative study may be considered with firms with small or medium asset portfolio to see if the outcome of these findings are in concurrence.

(Zahoor et. al, 2015) did a study to determine the correlation that between debt to asset ratio and Pakistani firms' performance. The study utilized the M & M theory as the lead theory and was supported by the Pecking order theory. The descriptive data was collected through a quantitative approach and an analysis of the data was done to determine the correlation between debt to assets and performance of firms. The findings of this study showed that there was a negative correlation between debt ratio and performance as measured by ROA meaning that too much debt by firms could lead to financial distress. It was noted that firms that practice a moderate usage of debt operate sustainably compared to those that use more debt. The study recommended that firms in Pakistan consider reducing their cost of capital so as to achieve better performance. This study results were based on secondary data that was collected and analyzed through panel data regression model. Separate studies can be conducted in different settings so as to compare the results for consistence.

Using panel data from Kenyan companies, (Kisavi et al., 2015) carried out a study to determine the relationship between debt-to-assets as well as the performance of listed firms in the Frontier market. In their investigation, they made use of both the pecking order theories and the Modigliani and Miller theory. Utilizing SPSS software, the quantitative data was gathered and examined to

determine the relationship between debt to assets and business success. The results demonstrated a strong and statistically significant negative correlation between performance and return on asset, a feature of financial leverage. The study's findings indicate that financial leverage is still a poor indicator of institutional success as determined by Tobin's Q and return on assets (ROA). This five-year study included a variety of methodological techniques, including panel data regression analysis, which may need to be tested in other settings to ensure consistency and dependability.

(Kamran, 2018) carried out a study to investigate the relationship between financial leverage component of debt to asset and performance of Pakistani firms. He utilized the Modigliani and Miller theory as a guide in his study, while using quantitative and qualitative data to analyze the correlation between variables. The study came up with findings that debt to asset ratio had a significant impact on performance of firms in the region. The research further recommended that firms take up debt as it helps to improve their performance, but at the same time, the investments made in the firms should be done carefully. This means that firm managers are under an obligation to be accurate and keen on the kind of decisions that they make regarding the future of their firms. It is through such decisions that these organizations prosper or fall into financial limbo. This study had a conceptual gap as it also failed to include a control variable in its conceptualization and this may have limited the study outcome.

(Umer et. al,2018) carried out a study on the Influence of debt to assets on performance of firms in Pakistan. This was longitudinal study conducted between the years 2011-2015 through a collection of qualitative and quantitative data. The findings from this research revealed that financial leverage (measured using debt to asset ratio) had a positive and noteworthy impact on firm performance. This means that the more the firms invest in assets, the more they are likely to earn in terms of returns. A conclusion from this study indicated that firms have their different uniqueness and leaderships that entirely dictate their growth curve and those with a better strategic investment teams tend to do better in business that those which do not advise that institutions should focus more on the expertise of the kind of human resource they bring on board and their value. This study used a panel data regression study model on the secondary data collected and this methodology is also limited to the fact that it can only give a status of past events.

(Tonye, 2018) made a study on the Influence of debt-to-asset ratio on corporate performance of Nigerian firms between the years1999-2016. Led by the Modigliani and Miller theory, the study collected qualitative and quantitative statistics with a descriptive approach and came up with

findings that debt to assets ratio had a positive and significant impact on the long-term debt levels of Nigerian firms' performance. The study concluded that Nigerian firms' performance was significantly affected by financial leverage. The study proposed that long term debt and other components of working capital should be effectively managed to boost institutional performance. This is a role that is entirely bestowed on the top management of these firms. The study also failed to incorporate a control variable which may alter the outcome of the results if tries at a different point in time.

(Jiang et. al, 2019) on their study to investigate the Influence of debt to assets on firms' financial performance with evidence from listed firms at the Ghana Stock Exchange revealed that financial leverage ratio had a strong and positive implication on the firms' performance as measured through Return on Assets. The study applied pecking order theory as the lead theory and used both qualitative and quantitative data to analyze descriptive data so as to understand the depth of the relationship between return on Asset and performance of the firms. It was concluded that firm managers should consider prudent financial practices to resolve financial challenges and ensure that current assets in the firm stay in a liquid state so as to take care of unprecedented demands that may emanate from suppliers and other recurrent costs. The study applied a longitudinal study with multiple regression data analysis technique. It will be advisable to use other research methodologies so as to compare the results of the study.

(Abdesslam et. al, 2020) made a study to find out the relationship between debts to assets among the Golf cooperation council's Islamic Banks in Asia. They considered both agency theory and signaling theory as guiding theories for their study. The study used quantitative data to analyze and measure the correlations between predictor variables and dependent variable and revealed that financial leverage component of debt–to-asset had a strong impact on firm performance as measured by Tobin's Q and return on Asset which implied that as the financial leverage increases, similarly financial performance increases. The conclusion from this study stated that a higher debt to asset ratio is attributed to high institutional performance. This indicates that when firms invest more on assets, they are likely to have improvements. The study that as investment levels increased, the return on investment also increased. This indicates that when firms invest more on assets, they are likely to have improvements on their performance. The study recommended for further studies on other forms of leverage like operating leverage and its influence on firm value.

The study failed to incorporate the control variable which may trigger the findings of the study thus similar studies may be conducted to incorporate the grey areas left out by this study.

2.2.2 Debt to Equity ratio on Firm performance

The debt-to-equity ratio, which measures leverage, compares the total amount of financial liabilities and debt to the total amount of equity held by shareholders (CFI, 2020). It therefore measures the degree to which a firm finances its activities using debt as compared to using its shareholders' equity. The ratio reflects the ability of a firm to cover its outstanding debts using shareholders' equity in the event of a business meltdown. Investors and potential equity holders normally use this ratio to come up with a company's financing strategy because their primary objective is to maximize profits that could be outstanding once all debts and preferred stakeholders have been paid. This therefore allows investors to examine the financial health of the company. In many cases, creditors usually like a low debt ratio because a low ratio (less than 1) is an indication of greater protection of their funds and shareholders like to get benefits from funds provided by creditors, hence would like a high Debt to Equity Ratio.

In most cases, debt to equity ratio is used to gauge the strength of the relationship between a firm's total value through a comparison between total debt and total equity by trying to determine the extent through which the borrowed funds / loan have been utilized to fund investments of the firm. At the end of the financial term, the firm's owners (shareholders) will be expecting prospected returns on their investments that will be measured through return on equity ratio. It is therefore prudent that firm managers invest wisely in the borrowed funds so as to meet the shareholders' objective of wealth maximization. (Hoi, 2014) in a study to determine debt-to-equity and its relationship with performance of listed petroleum firms in Kuwait established that debt to equity was strongly and positively correlated with firm performance.

A study by (Abdallah, 2014) aimed to examine the Influence of debt-to-equity and company profitability, using descriptive data to determine the degree at which financial leverage correlates with ROE. This study was undertaken on companies in Saudi Arabia so as to determine how Return on equity impacts company profitability. This study statistically revealed that debt to equity had a strong correlation with firm value as would be determined by return on equity. The study further advised that institutional managers and shareholders should be keen on the financing model used by their firms considering the various sources of finances and specifically, debt financing that may

cause a higher cost of capital. This means that as shareholders pool their funds together, they should be keen on the kind of investments that they pump their funds in order to be assured of an optimal return. The methodology used by this study may be applied in other studies so as to compare the results.

(Barakat, 2014) conducted a study to evaluate the impact of debt-to-equity on companies' share value on companies in Saudi Arabia. The study analyzed its data which was both quantitative and qualitative in nature in order to establish the degree of correlation between the independent variables (financial leverage and profitability) and dependent variable (companies' share value). The results yielded from this study indicated that debt to equity and financial leverage were strongly and positively associated as indicated in its measurement of return to equity ratio. It was noted that firms which have high debt levels had minimal return on their shareholders' equity. The study recommended optimal debt levels by these companies so as to meet the shareholders' expectations of better returns from their investments. Furthermore, the study suggested that the firms' management should be aware of the external environment in their strategic planning. This was a cross-sectional study that utilized both independent variables and dependent variable leaving out the control variable. This methodology can be tried in other similar studies to compare the results.

(Nyameyo, 2014) carried out a study to determine the impact of monetary leverage on the financial health of microfinance organizations in Kenya's Nakuru County. The study focused on the debt to equity ratio as a component of financial leverage and deployed a Census study using secondary data. The study further utilized longitudinal model covering a period between 2014 and 2018. Descriptive statistics study design was also deployed and the data was interpreted using means, standard deviations, maximums and minimums. The findings of this study revealed that debt to equity ratio had a strong, positive and statistically significant relationship with performance of Microfinance Institutions in Nakuru County and further recommended that the Microfinance Institutions to consider seeking short term debt to finance their operations as compared to long term debt.

(Kamran, 2018) carried out a study to find out the role of debt to equity on performance of companies in Pakistan. This study was supported by the Modigliani and Miller theory with both quantitative and qualitative data for analytical purposes. From a correlational analysis, the study indicated that return on equity (ROE) had a strong and significant relationship with financial

leverage. Firms were found to be investing using a mix of both long-term debt and equity from shareholders. It was, however, encouraged that firms consider taking up external debt for investment purposes as compared to equity as a strategy to improve their performance, but at the same time, firm managers were advised to be careful while making those investment decisions. This means that investment decisions are critical decisions for any institution and the institutional heads should be cautious when undertaking those decisions to avoid facing liquidity challenges. This study applied a time series study design with panel data regression analysis with both independent and dependent variables only, thus an indication of a gap that could be filled if similar studies were conducted using different study methodologies so as to reconcile the results.

A study conducted by (Tonye, 2018) on debt-to-equity and its Influence on corporate performance in Nigerian firms found out that return in equity (ROE) had and strong positive relationship on the long-term debt of Nigerian firms. These findings were arrived at through a correlational analysis of descriptive data that was both qualitative and quantitative. The Modigliani and Miller theory was also used as the primary theory in this study and the study concluded that the financial leverage component of debt to equity had a strong and positive influence on the growth of firms in Nigeria as reflected by ROE of these firms. This study further proposed that the government of Nigeria should loosen part of its policies to enable a stable business environment for business to thrive, thus increasing firm performance of Nigerian firms and ultimately boosting the economy of the country. This study was longitudinal in nature and provided results that could be retested using other research methodologies so as to establish the consistency of the findings.

(Oyakhilome et.al, 2018) carried out a study on debt-to-equity ratio and its effect on growth of firms while considering firm size as a moderating variable. The study was led by the Modigliani and Miller theory and supported by agency cost theory. With descriptive study design in play, the study further utilized quantitative study used to measure the extent of relationship between predictor variables and independent variable of performance. The study findings revealed that debt to equity and performance had a negative and significant Influence on firms and recommended that levered firms should closely monitor their finance costs and ensure that the additional capital brought in the business is effectively utilized so as to ensure return on the shareholders investments. This study applied a time series model to analyze the 5 years data through panel data regression. Hence, it will be advisable that similar studies are conducted using different study approaches to compare the findings.

(Butsili et.al, 2018) conducted a study on the Kenyan Microfinance Institutions. The study was specifically conducted in Kakamega County and deployed a Census study using descriptive data to analyze the position of these firms. A special focus was on the debt to equity ratio as a component of financial leverage. The findings of this study revealed that debt to equity ratio had a positive and significant influence on profitability of the Microfinance Institutions in Kakamega County as was measured by at 88.6% change in accountability of profitability. The study further recommended that the Microfinance Institutions managers to consider enhancing their loan processing strategies to improve the performance of the institutions hence ensure that they remain sustainable.

A study was done by (Gameli et.al, 2018) to determine how debt to equity relates to empirical performance of Ghanaian unlisted banks. The results from this study indicated that the unlisted banks in Ghana were highly levered with high debts as compared to equity. This was a longitudinal study that ranged between the year 2006 and 2016. A longitudinal study model is usually done over an extended period of time and allows for the study to find more consistent results due to the elongated period for observing the subjects and the study. The study was led by trade-off theory and utilized quantitative data from both primary and secondary data to arrive at its findings. The recommendations from this study were that the banks in Ghana focus more on prudent utilization of their debt instruments in order to enhance an optimal financial leverage ratio and curb the high gearing risk. Similar studies can be conducted using cross-section approaches and other moderating variables such as liquidity or firm size so as to compare the results.

(Jiang et. al, 2019) did a study in Ghana to evaluate the debt to equity levels and their implication on performance of listed firms at the Ghana stock exchange. The revelations from this study showed that the debt to equity component of financial leverage was strongly and positively associated with performance of firms as was measured by ROE. This study was led by the pecking order theory with qualitative and quantitative data being used to establish the degree of correlation between financial leverage and growth of firms. The study concluded that finance managers should be cautious in their expenditure levels and learn how to manage the suppliers' demands and other recurrent costs as a strategy to ensure institutional sustainability. The study further recommended that institutional managers should consider minimizing the usage of external debt and encourage utilizing other internal sources of financing such as equity from shareholders and retained earnings.

This study can be reapplied in different contexts using different methodologies and control variable such as firm structure so as to compare the findings.

2.2.3 Debt to Capital Ratio on Firm performance

Debt to Capital Ratio is a liquidity ratio which calculates a firm's use of financial leverage by comparing its total obligations to total capital (MAC, 2021). The Debt to Capital Ratio therefore measures the degree of debt that a company uses in financing its activities as compared to its total capital. The ratio gives an opportunity to firm shareholders and investors to determine the risk involved in investing in a particular business that may easily trigger the return of a company. Debt financing firm operations includes considerable risk because the loan amount (principal and interest) must be carried by the firm. Firms with higher ratios are deemed more risky than those with lower ratios since they must maintain the same level of business activity in order to pay their debt servicing commitments. This would mostly result to investors having interest in using the debt to capital ratio indicator to establish the level of risk for their firms based on their capital structure. (Magoro et.al, 2017) in their study to evaluate the relationship between debt capital and performance of South African companies revealed that there existed a positive association between capital and performance of these firms. The study further encouraged that investment firms should take a keen review of their capital structure before making the most probable investment decision. The study was limited to the concept of two variables (independent variable and dependent variable) and would be retested through inclusion of a control variable.

(Konstantin, 2012) carried out a study to determine the relationship between debt to capital on the value of firms in the Netherlands. The study was guided by the Modigliani and Miller, trade-off and agency theories. The study further utilized descriptive survey methodology considering quantitative and qualitative data analytical approaches. The empirical findings of the study, as supplied by several estimating methodologies, revealed a negative effect between leverage and firm value implying that rising total Debt to Capital Ratio harms company performance as evaluated by Tobin's Q. The study showed that debt has a detrimental Influence on company underinvestment and advised firm managers to be cautious when making investment decisions, particularly those with low liquidity and strong growth potential. This study used time series and panel data techniques and focused on enterprises in the Netherlands, therefore the results may differ depending on the context and methodology used.

(Zahra et. al 2013) in their study to determine the correlation between debt to capital and its Influence on the value of listed firms at the Tehran Stock Exchange found out that this relationship was a strong and negative between the two variables and further affected the performance of the said firms. The study was conducted in Iran through guidance of the pecking order theory. The findings were arrived at through a collection of quantitative data in which the descriptive study concluded that interest bearing debts in the capital structure of these firms lead to an increase in financial expenses and decreases net income, which in turn reduces the market value of shares and consequently the firm value. The recommendations from this study advised that institutional managers should work on minimizing the debt proportion which will lead to high firm value. This study used a time series model. Different methodological approaches like cross-sectional studies can be tested to compare the results.

(Ochieng et.al, 2014) carried out a research on the Influence of debt-to-capital ratio on the performance of Kenya's deposit taking cooperative societies. This study was guided by the trade-off theory and the pecking order theory. Both qualitative and quantitative data was generated and analyzed using SPSS software. The findings from descriptive data revealed that there existed a weak association between the debt to capital component of financial leverage and the Kenyan cooperative societies' performance. The study culminated that debt to capital had a strongly notable relationship with the performance of Savings and Credit Cooperatives in Kenya. Further, they suggested that longitudinal studies be conducted in the area so as to compare the results. The study used a cross-sectional model of study and recommended that longitudinal studies could be applied on the similar so as to compare the results.

A study was done by (Utkarsh et. al, 2015) to establish the role of debt-to-capital ratio and firm performance on Indian firms. The study deployed a panel data model and utilized descriptive data to determine the extent of association between financial leverage and firms' productivity. The results of the study revealed that debt to capital had a noteworthy Influence on firm capital which was used as an indicator of firm performance. The study remarked that more indebted firms hold more liquid assets as their long-term finance sources towards their current operations. The study further advised that whenever such capital decisions are made, proper strategies be put in place to ensure that there are optimal returns that can be earned from such investments. The use of panel data model with time series approach. Similar studies can be utilized with different study methodologies so as to reconcile the results.

(Magoro et.al, 2017) did a study on South African retail and wholesale firms to investigate the relationship that exists between debt to capital ratio and firm performance. The study adopted both the Modigliani and Miller theory and the Pecking order theory and applied a panel data regression model to 25 firms in South Africa and established that there existed a negative relationship between debt (short-term and long-term) and productivity of these firms. The study further suggested that more research be done to explore the Influence of Debt to Capital Ratio on the productivity of other sectors individually for in-depth understanding of how debt influences those specific sectors. Similar studies can be applied to incorporate all the study variables, including the control variable in which this study failed to incorporate.

Earnings per Share tries to describe a firm's profitability per the outstanding share of stock. (Kimran, 2018) carried out a study in Pakistan to investigate the influence of debt-to-capital ratio and performance of firms in the country. The study was based on the foundational theory of Modigliani and the Miller theory of 1958. Descriptive data, both qualitative and qualitative, was collected through questionnaires and analyzed to bring out findings that revealed that the financial leverage element of debt to capital ratio had a notable significance on the performance of these firms. The firms in Pakistan were, however, found to be managing their liquidity levels well. The study advised that firms can consider going for additional debts as a way of supplementing their investments and boosting returns to their shareholders. This study utilized time series data and failed to incorporate a control variable in its application, which can therefore be applied in other studies so as to compare the study findings.

A study conducted by (Onuora, 2018) on Nigerian listed firms sought to find out the Influence of debt to capital and its impact on performance of these institutions. From this study, it was found out that dependent variable strongly and negatively influenced performance of the companies. The basis of this study was Intermediate theory, which was supported by static trade-off theory and agency cost theory. The study utilized a descriptive data approach to arrive at the findings which indicated that too much debt was negatively influencing firms' deployed capital since much of the funds could be used to settle scores with the firms' creditors. The study recommended that managers should cover their interest and debt ratio for improvement in their firms' performance. The study was limited to cross-sectional methodology and implied that similar studies can be conducted with the application of longitudinal survey in order to compare the results.

(Alexander et. al, 2018) did a research to establish the correlation between debt-to-capital ratio and firm profitability on Swedish companies. The study was guided by Modigliani and Miller's theory. Qualitative and quantitative data collected was analyzed and interpreted to determine the relationship between the independent and dependent variables. The results of the study revealed that debt in relation to capital had a negative correlation on performance of firms. It was indicated that earnings per share caused a strong negative Influence on performance of firms. This study provided a basis of determination with regard to the debt levels of firms in Sweden and recommended that further, a longitudinal study should be conducted so as to provide a comparison of these findings and get more significant results. This study recommended the use of other study methodologies that could incorporate cross-sectional studies and the use of qualitative data so as to compare the results.

2.2.4 Debt to EBITDA ratio on Firm performance

Debt to Earnings before Interest, Tax, Depreciation and Amortization is a comparison of financial borrowings and earnings before interest, taxes, depreciation and amortization (IFRS, 2009). This metric is commonly used in estimating business valuations and is appropriate in establishing the financial health position of a business entity because it plays a role in measuring the capability of a firm to pay off its debt through comparing its financial obligations related to debt and other obligations. The major aim of this component is to focus on the available cash that the firm can use in paying its debt and how much of the returns will be earned by the firm. The ratio is therefore useful in making managerial decisions even for firms with take-over interests because it can make estimates of profitability without aggressive spending. When a firm’s interest coverage ratio is low, its debt burden is low hence high chances of default in interest payments which may lead to ultimate bankruptcy. A study by (Zulaika, 2016) aimed at examining the relationship existing financial leverage and productivity of fuel and petroleum sector firms in Angola. This study revealed that the level of correlation between EBITDA and firm performance was least of significance. However, these firms failed to apply EBITDA in their financing decisions.

(Elody, 2014) did a study in the United States of America (USA) to investigate the influence of debt-to-EBITDA on companies’ performance from a corporate perspective. The study was led by the Modigliani and Miller theory of 1958. Both qualitative and quantitative data was utilized to measure the degree of correlation between the predictor variable and dependent variable. The study

revealed that the leverage element of debt to EBITDA had an insignificant and negative correlation with performance as would be measured by earnings per share of these American firms. The study recommended that firm finance managers should be strategic in making long-term financial decisions since they affect the long-term operations of their firms and may lead to financial distress of they are not well planned. This study work utilized panel data regression model since this was time series data. For consistence of results, it would be advisable to apply other research methodologies so as to compare the findings.

(Olang, 2017) conducted a study to understand the impact of debt-to-EBITDA on the value of listed firms at the NSE based in Kenya. This study was led by Modigliani and Miller theory and supported by the Pecking order theory, trade off theory and agency theory. The study deployed the statistical package for social sciences to analyze the descriptive data and explain the degree of correlation between EBITDA and value of these firms. The revelations from this study showed that the financial leverage component of debt to EBITDA had a noteworthy and positive relationship with firm productivity and recommended that firms should consider maintaining optimal liquidity levels as they work to increase their assets that can stand in as security to boost profitability. This study failed to apply control variable in its model and this approach can be included in other similar studies so as to compare the study findings. Longitudinal studies can also be applied so as to view the consistency of the results over time.

(Ambundo et.al, 2017) did their study to find out the constraints to growth of microfinance firms in the Nairobi City, the capital of Kenya. Through a descriptive survey, they collected quantitative data and analyzed the data so as to evaluate the role of debt-to-EBITDA on the productivity of these firms. The study findings revealed that 36% of MFIs in Kenya offer savings as a service, the reason being that the rest (64%) are not registered as deposit taking MFIs by the CBK. The study results found out that these MFIs have constraints in managing their debt levels, which in turn affects their performance as measured through EBITDA. The study concluded that MFIs should avoid granting risky loans to risky customers or for speculative ventures, monitor loan repayments and negotiate loans whenever borrowers get into difficulties. It was recommended that MFIs should monitor their debt levels and be ready to take quick action whenever financial distress looms. This study used a cross-sectional approach but failed to include a control variable. Similar studies can be conducted using time series and 3 study variables (independent variable, dependent variable and control variable) so as to compare the consistence of the results.

(Shimenga et.al, 2019) conducted a study on the influence of debt-to-EBITDA & liquidity on the value of the manufacturing companies quoted at the NSE in Kenya. This was a census study carried on the Kenyan firms through quantitative data that was collected through questionnaires. Pecking order theory was used as the lead theory and was supported by agency cost theory and trade off theory. The study results revealed that the financial leverage element of debt to EBITDA had a positive and notable influenced the performance of firms. The study further recommended that finance managers should adopt feasible strategies to deal with financial leveraging in an effort to grow in their performance and overcome competition in the industry, resulting in their sustainability. Future studies could incorporate a control variable and consider longitudinal study so as to establish if this results still hold.

2.2.5 Moderating role of firm size in firm performance

Firm size comprise of the total assets owned by a firm. In this study, various indicators for measuring the size of microfinance firms were considered. This included; measuring the total asset portfolio, total number of employees of these firms and determining the total number of branches owned by the respective Microfinance institutions. However, the study narrowed its focus to a singular indicator of firm size (total assets) for easy measurement of the variables. Firm size is important in determining the profitability of firms (Olang', 2015). Large firms operate in a more sophisticated manner as compared to small firms. Variations in their governance is caused by the large number of shareholder, the many employees that they have and the nature of managing the many assets owned and the expectations of both their internal and external stakeholders. As a matter of fact, even government becomes an interested party to a large corporation mainly because of the degree of influence that these firms trigger in the economy.

A study was conducted in Thailand by (Vithessonthi et. al, 2015) to determine how firm size played a moderating role in the relationship between leverage and firms' performance during the 2007-2009 global financial meltdown. A panel data regression model was deployed on a targeted population of 496,430 with a sample of 170,013 private firms over a period of five years. The results from this secondary data analysis indicated that firm size had a significant and notable moderating Influence on the relationship between financial leverage and performance of firms with a show that the Influence was positive on small firms while it was negative on big firms. The study

recommended that finance managers be strategic when making considerations on investments and also take into cognizance the size of their firms to avoid financial distress.

(Zahoor et.al, 2015) conducted a study to ascertain the Influence of financial leverage on performance of firms in Pakistan with a focus on firm size. The study applied a descriptive data approach panel data methodology. To understand the moderating Influence of firm size on the relationship between these variables, the study observed that large firms were more advantaged as they could easily achieve economies of scale, earn new technologies and secure low cost funds. This meant that large companies could benefit more on matters financial leveraging as compared to smaller companies. It was also determined that there was a moderate positive link between company performance and financial leverage. As a result, as mentioned by Babalola (2013), a firm's size has been identified as a significant factor influencing its profitability.

In order to determine the moderating effect of company size on the link between firm growth and performance, (Atif et al., 2015) conducted research in Pakistan. Data were collected for this cross-sectional study from fifty local companies that were traded on the Karachi Stock Exchange. The study employed a descriptive statistical study design methodology in addition to using secondary data. Regression analysis was used to assess the research hypothesis and ascertain the importance of the relationship between the study variables. This theory was approved. This demonstrated that a firm's size has a favourable and noteworthy impact on its overall performance.The study suggested that all the firms' management should take caution and balance between growth of firms and performance through enhancing their policies and adherence to the same.

(Muhammad, 2016) conducted research to determine how business size affected the relationship between leverage and performance in an analysis of emerging markets. The longitudinal study (from 2005 to 2013) gathered secondary data for 304 non-financial enterprises in Pakistan. Analyzing the descriptive data showed that there existed a general negative influence between leverage and performance for all kinds of businesses. The study came to the conclusion that financial managers of small- and medium-sized businesses should refrain from borrowing money, while managers of large and medium-sized businesses should assess their debt ratios and adjust it to the ideal range to prevent overleveraging. The study also recommended that finance managers abstain from debt borrowing.

(Mohamud et al. 2016) carried out a study in Nairobi, Kenya to determine the moderating Influence of firm size on performance of firms. The study collected descriptive data through structured and

semi-structured questionnaires on 176 firms in Nairobi city. Along with multiple regression, which sought to understand the nature of the link between the variables. The Pearson's product moment correlation coefficient was applied to indicate the degree of the association between the independent variable, moderating variable and dependent variable. The study's findings showed that, while not serving as a moderator in this relationship, company size remained a predictor of a firm's success and management participation. Future research should look into additional potential moderating factors, including ownership type, firm age, industry regulations/government policies, and the legal environment, according to the study's recommendations.

In order to determine the impact of financial strain on the financial health of manufacturing companies and those affiliated with them at the NSE, (Ahmed, 2017) conducted research in Kenya. Firm size was used in the study as a moderating variable to examine how both dependent and independent variables related to one another. Ten picked enterprises were the subject of a descriptive research approach utilising longitudinal secondary data obtained between 2012 and 2016. The results of this study's correlation analysis showed a weak but favourable association between business size as well as return on asset.

Further, the findings reveled that financial performance of manufacturing firms quoted at the NSE were positively and significantly influenced by their size and concluded that there existed a directly significant Influence of firm size on financial performance of these firms.

(Dorothy et.al 2017) conducted a study to find out firms size's moderating Influence in the relationship between micro factors in manufacturing firms in Kenya and their financial performance. The study utilized descriptive data collected from 180 manufacturing firms in Kenya and applied a correlation and regression analytical study models to determine the degree of the relationship between the study variables. The results from the study signified that there existed a strong and positive association between firm micro factors and performance and firm size was a sufficient moderator variable. Further, it was noted that firm size was positively and strongly related with performance of manufacturing firms in Kenya. This study concluded that micro factors and firms' financial performance were positively related as caused by the moderator factor of firm size. Furthermore, the study proposed that large firms should leverage more on the economies of scale as compared to small firms which are included towards the shareholders' equity.

(Gilbert, 2018) studied the Influence brought about by financial leverage on firms' financial performance in relation to firm size. The study was conducted on 186 firms through descriptive statistics where purposive sampling and use of multiple linear regression was deployed to determine the relationship between variables. The study was guided by the Agency theory and Pecking Order Theory to determine the relevance and usefulness in interpreting the findings. The results from the study revealed that small-sized firms that have debt are greatly affected in terms of the profits they generate whereas, large-sized firms are insignificantly affected by huge debts taken. The study further revealed that the level of information flow in small-sized firms is irregular while they generate returns that are low and volatile thus making debt to be costly for them. On the contrary, large firms appeared to have easy access to debt markets and had less irregular information thus low cost of debt. The study concluded that firm size's impact is beneficial to institutional performance with large firms becoming more advantaged than small firms. Firm size affects performance (Isbanah, 2015).

(Charles, 2018) conducted a study in Kenya to determine the Influence in the relationship between capital structure and medium-sized and large enterprises' financial performance as moderated by firm characteristics. Secondary data was collected by the study, from audited books of 60 large enterprises quoted at the Nairobi Securities Exchange and 30 medium level firms in a period of six years. To help the study grasp the link between the dependent variable, predictor variable, and moderator variable, a variety of statistical models were utilised. The study's findings demonstrated that enterprise factors had a beneficial and important moderating influence on the link among debt structure and financial performance.The recommendations from this study proposed that these firms' management should consider to venture in assets of quality which are re-locatable easily.

(Ochieng, 2019) did a study in Kenya to evaluate the moderating role played by firm size on the relationship that exist among financial leverage and firms' financial performance of non-financial companies quoted at the Nairobi Securities Exchange. This was a seven-year longitudinal study (2012-2018) that sought for secondary data from certified financial materials provided by NSE. Panel data methodology was applied on a target population of forty seven non-financial institutions that were sampled purposefully. The study findings revealed that firm size was appositive and significant predictor of performance as indicated through Return on Equity (ROE). However, a model coefficient interaction term was negative but significant on ROE was negative which implied that the association between the independent variable and predictor variable was

negatively moderated by firm size. A conclusion from this study was that size of a firm was a significant moderator between the set variables and further proposed that the management of these firms should take note of the size of their firms before making leverage choices to avoid financially related challenges in their institutions.

A study was conducted by (Perdana, 2020) on Indonesian share market to establish the role played by firm size in the relationship between financial traits and value of Islamic firms. The study observed the firms' trend for six years and collected secondary data form certified financial documents which was analyzed through a using a panel data model. Purposive sampling technique was applied with the results of the study revealing that firm size moderator provide a reinforcing Influence for all independent variables and had a positive Influence on firm value. The study drew a conclusion that firm investors in equity market should consider firm size in the organizational governance. The study further proposed that a change in the moderating variable and perhaps consider corporate governance; board of directors, independent commissioners and audit quality so as to gauge the degree of the moderating Influence among independent variable and dependent variable.

2.3 Summary of Research Gaps

This study noted various results emanating from different literatures reviewed. The diverse findings were as a result of different research methodologies applied by respective authors, various study theoretical perspectives used and concepts. Regardless of the reviewed literature in this chapter, not so many studies have been done to understand the link between financial leverage and of microfinance firms and in particular, limited studies were found to have been done to explain how financial leverage correlates with the performance of microfinance banks right from the global perspective to the local level. Umer et. al, 2018) carried out a study on textile composite companies in Pakistan to find out the influence of financial leverage on performance. The results of this work indicated that these firms were positively impacted by financial leverage once the debt amount did not exceed the equity amount. There are also contradicting findings like those of (Kostatin, 2012) whose revelations depicted a negative association between financial leverage and the value of firms in the Netherlands. The contradictory results are as a result of the different research designs applied by respective studies; i.e use of quantitative data by Umer et al. and use of mixed research design by Konstantin. Both studies also failed to apply a moderating variable in the concepts.

Studies conducted at continental level such as (Okoro, 2014) applied both quantitative and qualitative research techniques (mixed research) to establish the correlation between financial leverage and performance of firms in Nigeria. The study used only two variables; independent variable and dependent variable leaving out the moderating variable. The study was not guided by any theories too and therefore the results of such a study will obviously call for further studies in the same area where unutilized research methodologies can be applied to reconcile the findings. This study makes an attempt to fill such gaps by addressing a number of gaps such as the inclusion on a moderating variable and use of various theories to guide the study and also try to get more concrete findings on the area of financial leverage and firm performance.

Moreover, local studies carried out in Kenya also depicted a number of gaps which were either conceptual, theoretical or methodological in Nature. This include; (Nyandemo et al, 2013) which utilized observational research technique with secondary data but was also lacking theories to guide the study and conceptual models to define the relationship between its study variables. Further, the (Ochieng et.al, 2014) also lacked a moderating variable in their study and utilized a cross-sectional research technique in an attempt to evaluate the effect of financial leverage on performance of deposit taking cooperatives in Kenya. This therefore means that there is need to have a multiple research techniques and studies around the same theme so as to further understand the influence of financial leverage alternatives on performance of Microfinance Institutions in Kenya. A summary of this literature and research gaps has been presented as shown in table 2.1.

Table 2.1

Summary of Literature review and Research Gaps

Author	Thematic Area	Methodology	Research Gaps	Focus of the Study
(Umer& Muhammad (2018)	-Impact of Financial Leverage in Firm Performance- Featuring Textile Composite Companies of Pakistan	-Descriptive research design -Use of panel data regression model	-Longitudinal study - No moderating variable	-Focuses on manufacturing Sector.
Konstantin (2012)	The Netherlands provides evidence regarding the impact of monetary leverage on firm value.	-Descriptive research design -Use of Panel data regression model.	-Moderating effect not tested. -Longitudinal study (2007-2011).	- Focus on listed firms in the Netherlands.
Shehla *et al.* (2012)	Relationship between financial leverage and performance: Evidence from Fuel and Energy Sector of Pakistan	-Descriptive research design. -Quantitative research analysis techniques	-No control variable -Cross-sectional study.	Focuses on Fuel and Energy sector in Pakistan.
Konstantin K. (2012)	The effect of financial leverage on firm value. Evidence from firms in the Netherlands.	-Descriptive research design. -Quantitative research analysis. -Panel data regression analysis model and time series.	-Longitudinal study conducted focusing on a 5 years period from 2007-2011.	- Focuses on firms in the Netherlands.

Nyandemo *et. al* (2013)	Overview of the role of microfinance in eradicating poverty in Kenya.	-Observational research technique using secondary data. -Cross-sectional study	-Theories guiding the study are missing. -No clear methodology, conceptual framework missing. -No clear variables	- Focuses on microfinance firms in Kenya
Raza (2013)	The effect of financial leverage on firm performance. Empirical evidence from Karachi Stock Exchange.	-Used descriptive research design. -Panel data regression model.	-No moderating variable -Longitudinal study (2004-2009)	- Focuses on listed firms in Pakistani.
Zahra *et al.* (2013)	The correlation between financial leverage and firm value in companies listed at Tehran stock exchange	-Applied descriptive research design. -Used correlation data analysis techniques. -Use of panel data regression model.	-Use of longitudinal study (2005-2010).	-Focuses on firms listed at Tehran stock exchange
Abdallah *et al.*(2014)	The impact of financial structure, financial leverage and company profitability on industrial companies in Saudi Arabia.	-Applied descriptive research design and panel data regression model. -Used Simple & multiple regression model of analysis and Pearson's correlation coefficient.	-Use of longitudinal study (2009-2012).	-Focuses on industrial firms in Saudi Arabia

Okoro (2014)	Financial leverage behavior and firm performance. Evidence from publicly quoted firms in Nigeria.	-Applied descriptive research design with both quantitative and qualitative data analysis. -Used Multiple regression model.	-No moderating variable -Longitudinal study approach used featuring the year 1990-2013.	-Focuses on publicly quoted firms in Nigeria
Ochieng and Karanja (2014)	The effect of financial leverage on the performance of deposit taking cooperatives in Kenya.	-Used descriptive and analytical research design. -Multiple regression model applied.	- No moderating variable. Used cross sectional study.	-Focuses on deposit taking cooperatives in Kenya.
Shehla*et al.* (2014).	The relationship between financial leverage and performance of firms in Pakistani.	- Applied descriptive study design using quantitative data analysis models. - Applied a panel data regression model.	-Used longitudinal study featuring the years 2000-2005. -No moderating variable	-Focuses on firms in Pakistan
Nurideen (2017).	Short term financial leverage and shareholders' wealth maximization of Ghanaian Banks.	-Applied descriptive statistics through quantitative approach and analytical procedures. -Used secondary data -Utilized panel data regression model.	-Applied longitudinal study model featuring the years 2004-2014. -Moderating variable missing.	- .Focuses on Ghanaian banks

Ilyukhin (2017)	The impact of financial leverage on firm performance. Evidence from Russian firms.	-Applied descriptive research design and analytical model. -Secondary data used - Applied a panel data regression model.	-Utilized a longitudinal study approach.	-Focus on Firms in Russia
Akinyi*et al.* (2019)	Mediating the effect of financial leverage on the relationship between firm size and performance.	-Descriptive study design using quantitative data and correlation analytical models. - Utilized a panel data regression model.	-Used longitudinal study model featuring the years 2008-2018.	- Focuses on Kenyan firms
Zahoor (2015)	The relationship between debt to asset and performance of firms in Pakistan.	-Used Descriptive statistical model with quantitative data. -Applied panel data regression model using secondary data.	-Applied longitudinal study featuring the year 2006-2011.	- Focuses on Firms in Pakistan.
Kisavi& Mohamed (2015)	Financial Leverage and Performance of Listed Firms in A frontier Market: Panel Evidence from Kenya	- Utilized descriptive study approach with econometric data. -Employs Panel Data regression model.	-Applies longitudinal study. -No recommendations for further study	-Focuses on frontier market firms only -Focuses in developing country (Kenya).

Tonye O. (2018)	The effect of debt to asset ratio on corporate performance of Nigerian firms.	-Used descriptive research design with quantitative and qualitative data. -Applied panel data regression model.	-Longitudinal study featuring the years 1999-2016 applied. -No moderating variable	-Focuses on Nigerian firms
Jiang *et al.* (2020)	The effect of debt to asset on Islamic Banks' performance in the Gulf Cooperation Council (GCC) countries.	- Used descriptive study design using quantitative and qualitative data analysis models. - Applied panel data regression model.	-Longitudinal study featuring the years 2005-2017. -No moderating variable.	-Focuses on Islamic banks in the Gulf countries with are financial in nature.
Abdallah *et al.*(2014)	The impact of debt to equity on leverage and company profitability on industrial companies in Saudi Arabia.	-Utilized descriptive research design. - Use of panel data regression model	-Use of longitudinal study (2009-2012).	Focuses on Industrial firms in Saudi Arabia.
Barakat (2014)	The impact of debt to equity on companies' share value.	-Used descriptive data. Applied simple regression, multiple regression and Pearson's correlation coefficient.	- Is a cross-sectional study. No moderating variable	- Focuses on the investment firms in Saudi Arabia.
Kamran (2018)	An investigation of debt-to-equity and performance of firms in Pakistan.	-Used descriptive research design.	-Longitudinal study used featuring the years 2012-2017. -No control variable.	- Focuses on firms in Pakistan

		- Applied panel data regression model.		
Oyakhilome and Felicia (2018)	Relationship between debt to equity and firm performance. New evidence on the role of firm size.	-Used descriptive research design with panel data regression model. -Used secondary data	-Longitudinal study featuring the years 2003-2007.	- Focuses on investment firms in Nigeria
Gameli and Kofi (2018)	An assessment of the relationship between debt to equity and empirical performance with evidence from unlisted banks in Ghana.	-Quantitative research approach with cross-sectional time series research design. -Used panel data regression model.	- Used a longitudinal study featuring the years 2006-2016.	-Focus on unlisted banks in Ghana
Utkarsh*et al.* (2015)	The role of operating liquidity and debt-to-capital ratio and firm performance of Indian firms.	-Uses ratio analysis techniques. -Used panel data regression model. -Used secondary data.	- Used a longitudinal study.	- Focus on firms in India.
Magoro and Abeywrdhara (2017)	Debt to capital ratio and performance of South African Companies.	-Applied descriptive research design with panel data regression model	-Used longitudinal study. -No control variable.	-Focused on wholesale and retail firms.

Onuora (2018)	The effect of debt to capital ratio on performance of firms listed in Nigeria.	-Applied descriptive research design with multiple regression model of analysis.	-Cross-sectional study. -No control variables	-Focused on listed firms
Alexander and Joel (2018)	Relationship between debt to capital ratio and firm performance.	-Utilized descriptive research design through quantitative data. Applied linear regression and multiple regression models. -Used panel data regression model.	-Used longitudinal study featuring the years 2012-2016.	- Focus on Swedish companies.
Elody (2014)	The influence of debt to EBITDA on firm performance from the corporate perspective.	-Used descriptive study design. - Used panel data regression model.	-Used longitudinal study featuring the years 2010-2013.	-Focuses on firms in the United States of America.
Olang (2017)	The effect of debt to EBITDA on profitability of firms listed at the NSE.	-Applied casual research design with multiple regression model and Pearson's correlation coefficient.	-Used a cross-sectional study -No control variable.	-Focused on firms listed at the Nairobi Securities Exchange (NSE).
Ambundo and Korir (2017)	Constraints to growth of microfinance institutions in Nairobi City.	-Applied descriptive research design and Probit regression analysis.	-Cross-sectional study used. -No control variable.	-Focus on Microfinance institutions in Nairobi City.

Shimenga & Miroga (2019)	-Influence of financial leverage and liquidity on performance of manufacturing firms listed at the Nairobi Securities Exchange.	-Utilized descriptive research model	-No control variable -It is a cross-sectional study.	-Focuses on manufacturing firms.
Vithessonthi and Tongurai (2015)	The moderating effect of firm size on the relationship between leverage and performance of firms during the 2007-2009 global financial crisis.	Descriptive study design	Used panel data regression model. -Used longitudinal study	Focused on private firms with both small sized firms and large sized firms.
Atif and Qaisar (2025)	The moderating role of firm size on financial performance of firms in Pakistan.	Applied descriptive statistical methodology	-Used secondary data for analysis. -This was a cross-sectional study	-Focused on firms listed at the Karachi Stock Exchange, Pakistan.
Muhammad A. (2016)	The effect of firm size as a moderator to leverage-performance relation from an emerging market review.	Used a descriptive study design methodology.	Was a longitudinal study review of 8 years. -Used secondary data.	- Focused on non-financial firms.
Mohamud et al.(2016)	The moderating role of firm size on performance of firms in Nairobi, Kenya.	-Applied descriptive survey approach.	-Used primary data.	Focused on manufacturing firms.

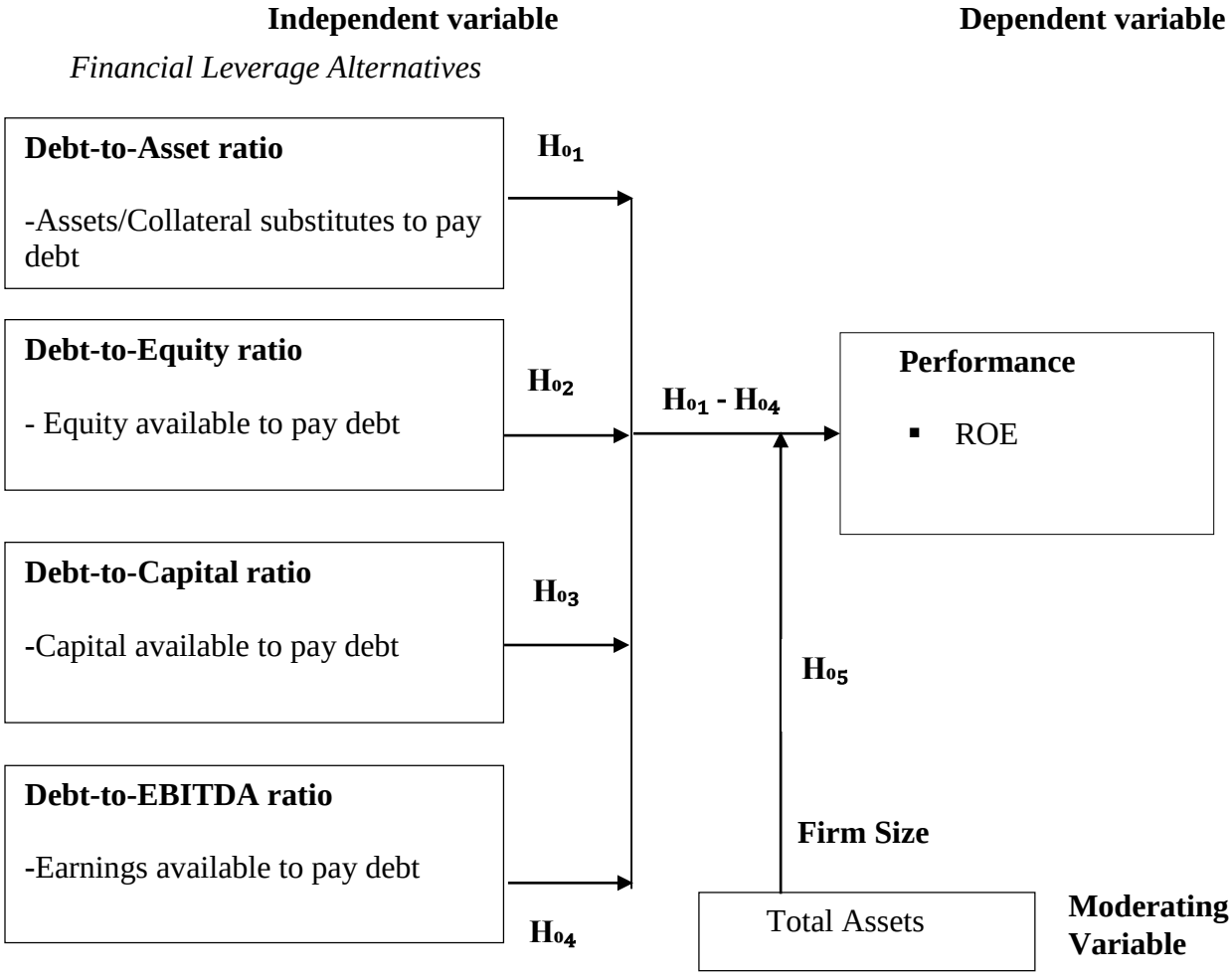
Dorothy and Edwin (2017)	The moderating effect of firm size on the relationship between micro factors and financial performance of manufacturing firms in Kenya.	-Applied descriptive study methodology. -Used correlational coefficient to determine the relationship among variables.	Used primary data	Focused on manufacturing firms in Kenya.
Charles S.(2018)	The moderating effect of firm characteristics between capital structure and firm performance of medium-sized and Large-Sized enterprises in Kenya.	Applied longitudinal study design featuring five years of study (2011-2016).	Used secondary data.	Focused on listed firms at the NSE
Ochieng D. (2019)	The moderating effect of firm size on the relationship between financial leverage and financial performance of non-financial firms listed at the Nairobi Securities Exchange.	-Longitudinal study of seven years. - Applied panel data regression model.	Used secondary data	-Focus was on non-financial firms
Perdana W.(2020)	Moderating role of firm size on financial characteristics and Islamic firm value at Indonesian Equity market.	-Used Panel data model with longitudinal study design.	Purposive sampling with secondary data	-Focused on Islamic firms.

2.4. Conceptual Framework

A conceptual framework is a written or visual product that illustrates the principal topics to be investigated, the important concepts, components, or variables, and the assumed relationships between them in either graphical or narrative form (Miles et.al, 1994). A conceptual framework facilitates the reader's understanding of the hypothesized relationship between study variables (Mugenda et.al, 2003). Employing the size of the company as a moderating variable, the conceptual structure in Figure 2.1 explains the relationship among the financial leverage choices and performance.

Figure 2.1

Conceptual Framework



Note, Conceptual framework *illustrating the relationship between financial leverage alternatives and performance using firm size as a moderating variable.*

Source: Author (2022)

Financial leverage alternatives represent the predictor variables for this study and are deployed by the firms to establish the changes in the performance of microfinance institutions which is regarded as the independent variable. The application or use of these elements will determine the level of performance among Microfinance Institutions (MFIs). The predictor variables attempt to implore the likely outcome upon the application and use of the predictor variables whereby it is expected that the standard of Microfinance Institutions' performance will be affected by the use and application of the above mentioned independent variables (financial leverage alternatives). The variables in the framework 2.1attempt to portray that, in as much as financial leverage elements are likely to have impact on Microfinance institutions' performance, other moderating variable (firm size) will also affect the performance. Indicatively, the size of a firm is dependent on various factors of measure that include total assets, total number of employees and total number of branched. The focus of firm size by this study is basically on total assets depicted in figure 2.1.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Philosophy

The term research philosophy refers to a system of beliefs and assumptions about the development of knowledge (Saunders, 2016). A well-thought-out and consistent set of assumptions will constitute a credible research philosophy, which will underpin your methodological choice, research strategy and data collection techniques and analysis procedures (Saunders, 2016). There are three commonly known philosophical paradigms in research; Positivism, Interpretivism and critical theory (Ryan, 2018). These philosophies differ on the goals of the research and the way to achieve these goals. Positivism is commonly associated with experiments and quantitative research (Ryan, 2018). Interpretivism argues that truth and knowledge is subjective, culturally and historically situated based on lived experiences and understanding of them (Ryan, 2018). Critical theory seeks to challenge worldviews and the underlying power structures that create them (Ryan, 2018).

This study therefore utilized the positivism research philosophy to guide its overall methodology. The positivist philosophy was a development of Auguste Comte, a French Philosopher between the years 1798-1857, where he recognized research as scientific methods of investigation. The philosophy was suitable for this study because it focused on quantifiable observations which are suitable for statistical analysis of data. Secondary and quantitative data was collected by the study. Positivism relies on the hypothetical deduction method to verify priority hypotheses that often stated quantitatively, where functional relationships can be derived between casual and explanatory factors (independent variables) and outcomes (dependent variables) (Ryan, 2018). Positivism research is based of five principles; there are no differences in logic of inquiry across sciences, the research should aim to explain and predict, research should be empirically observable via human sense hence inductive reasoning should be used to develop hypotheses to be tested during the research process, Research should be scientific and not based on common sense and Science must be value-free and it should be judged only by logic (BRM, 2019).

There are three research assumptions that are used to distinguish research assumptions; ontology, epistemology and axiology (Saunders, 2016).Table 3.1 is an illustration of the ontology,

epistemology, axiology and typical research methods associated with positivism research philosophy.

Table 3.1

Positivism Research Philosophy assumptions, characteristics and methods associated

Assumption	Characteristics	Methods associated
Ontology	-Real, external and independent -One true reality (universalism) -Granular (things) -Ordered	-Typically deductive, highly structured, large samples, measurements and quantitative techniques of analysis applied on a range of data being analyzed.
Epistemology	-Scientific in nature -Observable and measurable facts -Law-like generalization -Statistical -Casual explanation and prediction as contributions	-Typically deductive, highly structured, large samples, measurements and quantitative techniques of analysis applied on a range of data being analyzed.
Axiology	-Value free research -Research is detached, neutral and independent of what is researched. -Researcher maintains objective stance.	-Typically deductive, highly structured, large samples, measurements and quantitative techniques of analysis applied on a range of data being analyzed.

Note, Ontology, Epistemology, axiology and typical research methods associated with positivism research philosophy.

Positivism relates to research techniques that involves statistical quantitative methods like surveys and use of structured questionnaires that have a reliable data representation. Positivism also argues that isolation of a phenomena should be done and observations made be repeatable hence a research of this approach should rely on a deductive model when formulating and testing of its

hypotheses analysis and derivation of conclusions. Many studies in social sciences have in most occasions utilized a positivist approach in their research to arrive at logical findings and conclusions; (Shehla et.al, 2014) and (Ilyukhin, 2017) on their studies to find out the relationship between financial leverage and company performance in Pakistan and Russia respectively. A positivism study approach was therefore applied by this study to gather quantitative data with an attempt to yield the intended results.

3.2. Research design

(Creswell et.al 2007) describes research design as procedures for collecting, analyzing, interpreting and reporting research studies. It is a plan that connects the conceptual research problems with pertinent empirical research. This study utilized a descriptive research design as it would help to provided answers to questions of who, what, when, where and how a phenomenon is associated with the particular research problem. This research design lays the foundation for carrying out research (Yin, 2009). This study therefore adopted descriptive survey design because it was appropriate and accurate in depicting the relationship between independent variable, dependent variable and moderating variable. The method has widely been used by many researchers to advance their knowledge such as that of (Robinson, 1994) in a case study of televised news program (Raza, 2013) in a case of financial management of firms in Karachi Stock Exchange among others.

3.3 Study Area

This study was conducted in Kenya which is one of the nations in Africa that is found in the Eastern part and bordered by Sudan, Ethiopia, Uganda, Tanzania and Somalia. The study focused on Microfinance Institutions in the country which are spread across major cities and towns with most of their head offices located in the capital city (Nairobi). The Republic of Kenya is a Country in East Africa with 580,367 square kilometers (224, 081 Sq Km). It is ranked number 48^{th} in the world with a population of 47.7 million as per the 2019 census report. There are over 53 Microfinance institutions in Kenya as noted by the Association of Microfinance institutions (AMFIs, 2020) out of which 13 of them are classified as microfinance banks that are centrally regulated by the Central Bank of Kenya (CBK, 2019).

3.4 Target population

A population is defined as all the people, things, or events that share a particular observable trait (Mugenda et al., 2003). 53 microfinance organizations that by 2021 were participants of the Union of Microfinance Organizations in Kenya made up the study's target population. From this unit of analysis (microfinance Institutions), the study collected secondary data that was most relevant in meeting the objectives of this study. These Microfinance Institutions are classified under various categories based on the nature of their operations, asset portfolio and the regulating body. A summary of the target population is provided in table 3.2 and a full list in appendix II.

Table 3.2

Target Population Summary

Category/Cluster of MFI	Number
Microfinance Banks	14
Credit Only Financial Institutions	34
Wholesale Microfinance Institutions	3
Development Institution	1
Sacco	1
Total	53

Note, Source *(Association of Microfinance Institutions, 2021)*

3.5 Sample and Sampling Design

Sampling is a process in statistical analysis in which a predetermined number of observations are taken from a larger population (Alicia, 2020). Sampling technique considers many issues that are dependent on the kind of institution, the objective of the study, the complexity of the sampling exercise, timeframe for the activity and previous studies in the similar field. Sampling is important because it saves on cost and time for research while allowing researchers to gather the same answers from a sample that they would receive from the population. This study sampled data from the given study population of microfinance institutions so as to give a general conclusion with

regard to financial leverage alternatives and their Influence on the performance of Microfinance institutions in Kenya.

3.5.1 Sampling Frame

A frame for sampling is a collection of primary data from which a sample is drawn. It offers a means of selecting particular population segments from which information will be gathered. Turner (2003). It includes a list of individuals and institutions within a population that have the likelihood for being sampled. The sample frame for this study comprised of all the 13 Microfinance banks that are regulated by the central bank of Kenya by the year 2019. The microfinance banks were selected because of their uniformity in the way they operate and the fact that they are controlled and regulated centrally by a government body which is the central bank of Kenya (CBK). The 13 microfinance banks outlined in table 3.3

3.5.2 Sampling Procedure

Sampling is a systematic and cost-effective way of reducing data size while maintaining the most important components of the data set (Meng, 2003). This study deployed purposive sampling technique to collect data relating to the 13 microfinance banks in Kenya that were under the regulation of the CBK by the year 2019. This enabled the researcher to collect data from respondents that had similar characteristics so as to ensure credibility of the study findings and ultimately achieve the relevant goals for this study.

3.5.3 Sample size

A sample is a set of individuals or participants selected from a large population for the purpose of a survey (Salant et.al, 2004). This study adopted a purposive sampling technique. This approach was useful to this study because as it could ensure that the selected institutions have similar characteristics that would enable the study to produce significant and desired findings. This study aimed to get the most significant results from the survey and for this reason, purposive sampling was preferred whereby only the 13 listed microfinance banks in Kenya (by the year 2019) were contacted for the data collection exercise. The year 2019 was suitable to allow this study to conduct a trend analysis for all MFIs under the ten year period of focus (2011-2020). The selected

microfinance banks have similar features in that; they share uniform accounting and reporting systems and are centrally controlled and regulated by the Central Bank of Kenya. This was intentionally done to ensure credibility of the study work and ultimately realize study findings that are accurate. The Microfinance banks are unique in their operations and would therefore be the most preferred sample size that this study could use to establish the relationship between financial leverage alternatives and performance of Microfinance institutions in Kenya. The Table 3.3 is a representation of the sample size.

Table 3.3

Sample size

Name of MF Bank	Type
Caritas MFB Limited	MFB
Century MFB Limited	MFB
Choice MFB Limited	MFB
Daraja MFB Limited	MFB
Faulu MFB Limited	MFB
Kenya Women MFB PLC	MFB
Rafiki MFB Limited	MFB
Key MFB Limited	MFB
SMEP MFB Limited	MFB
Sumac MFB Limited	MFB
U & I MFB Limited	MFB
Uwezo MFB Limited	MFB
Maisha MFB Limited	MFB
Total	13

Note, Source *(CBK).*

3.6 Data Collection

The data collection exercise enables the researcher to respond to relevant question and evaluate results and give predictions about future trends and possibilities. This was a longitudinal study of a ten-year period where all the microfinance banks' (MFBs) secondary data was collected and examined from the period starting the year 2010 and ending the year 2019. Secondary data was therefore be used because it is suitable for a time series study since it also can be examined over a long period of time. This was quantitative data which is numerical in nurture and can be mathematically computed using different scales to yield the desired results/findings. The data collected was for ten years from the period starting the year 2011 to the year 2020 because it is during this period that microfinance banks came into existence and were being registered with the central bank of Kenya hence this would fit squarely within the timelines for which the study examined the data. Secondary data was sought from the CBK's bank supervision reports that captured information from audit reports that included income statements, cash-flow statements and statements for financial position. This data was therefore collected using structured data collection sheets that captured all details relating to all variables of focus by this study to allow for easy analysis.

3.6.1 Research Instruments

Research instruments are tools that the researcher uses to collect data (Sathiyaseelan, 2015). The study collected secondary data using structured data collection sheets. Secondary data relating to financial leverage alternatives was obtained from these published materials that are primarily meant for shareholders' consumption. The data collection tool/sheet in appendix I was used in the collection and recording of data. The data collection sheets for this study was administered to capture data from the thirteen Microfinance banks that are regulated by the CBK. The sheets were structured to capture data relating to total current assets, total non-current assets, total assets, total current liabilities, total non-current liabilities, total liabilities, total capital, total debt, total equity and total EBITDA. Therefore, observation method and surveys were utilized in the collection of secondary data. This data would enable the study to realize the results that enable the results to reflect performance as signaled by return on Equity (ROE).

3.7 Data Analysis and Presentation

Data analysis is the process of bringing order, structure and meaning to mass of information collected (Mugenda et.al, 2003

To create the data set N*T observations, data on Kenya's 13 microfinance banks (N) and the ten-year period from 2011 to 2020 (T) were examined using descriptive statistics. The association and numerical representation of variables are provided by descriptive statistics (Mugenda et al., 2003). Descriptive statistics' principal goal is to characterize a situation by emphasizing the crucial numerical data points in a summary. A summary of the data was provided, together with its frequencies, mean, and standard deviation. This aimed at providing statistically significant findings that yielded the results outlined by this study.

In order for the study to measure the strength of the relationships between predictor variables and response variable, Pearson's product moment correlation was applied. The correlation (denoted by *r)* tries to draw a line of best fit among these variables while indicating the degree of deviation of these variables from the best line of fit. The Pearson's product moment correlation coefficient takes a range of between -1 (negative one) and +1 (positive one) whereby, a range of 0 (zero) denotes a no relationship or association between the variables. A range of below zero (0<) denotes an existence of a negative relationship between variables while a range of above zero (>0) denotes a positive relationship between variables. Therefore, it means that a strong relationship between variables was to be determined as either strongly negative or strongly positive if the values were close to -1(negative one) or close to +1 (positive one) respectively.

Trend analysis was also used in the investigation of performance trail for MFBs. Trend analysis is a technical analysis technique that tries to forecast future stock price movements using recently observed trend data. Trend analysis is founded on the premise that what has happened in the past can provide traders with insight into what will happen in the future. There are three main types of trends: short-, intermediate- and long-term, (Kilgarriff, 2015). This approach was necessary considering the fact that different MFBs were on-boarded and regulated by the CBK at different times of the years under study hence thus, convenient for analysis.

To establish the direct Influence of financial leverage alternatives on financial performance, the study adopted panel data simple linear regression analysis using the model indicated below.

$Y_{it} = \beta_0 + \beta_1 X_{it} + \varepsilon_{it}$……...i

$Y_{it} = \beta_0 + \beta_2 X_{it} + \varepsilon_{it}$…….....ii

$Y_{it} = \beta_0 + \beta_3 X_{it} + \varepsilon_{it}$……..iii

$Y_{it} = \beta_0 + \beta_4 X_{it} + \varepsilon_{it}$…….....iv

Where:

Y_{it} = Performance

X_1, X_2, X_3, X_4 = Independent variables

X_1 = Debt to Asset ratio measured at time period t.

X_2 =Debt to Equity ratio measured at time period t.

X_3 = Debt to Capital ratio measured at time period t.

X_4 = Debt to EBITDA ratio measured at time period t.

β_0 = Constant

$\beta_1, \beta_2, \beta_3 \& \beta_4$ = Regression coefficient or change in Y by each X value

ε_t = Error term

The moderating influence of business size on the link between financial leverage options and financial performance was tested using hierarchical panel data analysis. The technique makes sure that the model has the fewest number of predictor variables feasible (Sekaran, 1992). This is also supported by Baron and Kenny's (1986) argument that the moderating influence was determined by designing a formula that regresses the variables that are independent against the variable that is dependent while adjusting for moderating variable company features. In light of this, the Panel Data Regression Model 3.4 was created in this study to examine the moderating effect of company size on the link between financial leverage options and MFI performance in Kenya. Regression models 3.2 and 3.3 helped this study combine cross-sectional data with time series data, much like regression model 3.1 did. The model's equation and explanation are displayed below.

$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_5 Z_{it} + \varepsilon_{it}$…….……v

Where:

Y_{it} = Performance

X_1, X_2, X_3, X_4 = Independent variables

X_{1it} = Debt to Asset measured at time period t.

X_{2it} =Debt to Equity measured at time period t.

X_{3it} = Debt to Capital measured at time period t.

X_{4it} = Debt to EBITDA measured at time period t.

Z_1 = Firm size

βi = Constant

β_1,β_2,β_3&β_4 = Regression coefficient or change in Y by each X value

ε_t = Error term

Table 3.4

Summary of objective Hypothesis Analytical Model and Interpretation

Objective	Hypothesis	Panel Data Analytical Model	Interpretation
To assess the Influence of Debt to Asset Ratio on performance of Microfinance Banks (MFBs) in Kenya.	**$H0_1$**:Debt to Asset Ratio has no statistically significant Influence on performance of Microfinance Banks (MFBs) in Kenya.	Simple regression Model $Y_{it} = \beta_0 + \beta_1 X_{it} + \varepsilon_{it}$ i	If F calculated > F critical, at P≤ 0.05 means the null hypothesis is rejected and vice versa
To evaluate the Influence of Debt to Equity Ratio on performance of Microfinance Banks (MFBs) in Kenya.	**$H0_2$**:Debt to Equity Ratio has no statistically significant Influence on performance of Microfinance Banks (MFBs) in Kenya.	Simple regression Model $Y_{it} = \beta_0 + \beta_2 X_{it} + \varepsilon_{it}$ ii	If F calculated > F critical, at P≤ 0.05 means the null hypothesis is rejected and vice versa.
To establish the Influence of Debt to Capital Ratio on performance of Microfinance Banks (MFBs) in Kenya.	**$H0_3$** : Debt to Capital has no statistically significant Influence on performance of Microfinance Banks (MFBs) in Kenya.	Simple regression Model $Y_{it} = \beta_0 + \beta_3 X_{it} + \varepsilon_{it}$ iii	If F calculated > F critical, at P≤ 0.05 means the null hypothesis is rejected and vice versa
To evaluate the Influence of Debt to Earnings before Interest, Tax, Depreciation and Amortization (EBITDA) on performance of Microfinance Banks (MFBs) in Kenya.	**$H0_4$**: Debt to Earnings before Interest, Tax, Depreciation and Amortization (EBITDA) ratio has no statistically significant Influence on performance of Microfinance Banks (MFBs) in Kenya.	Simple regression Model $Y_{it} = \beta_0 + \beta_4 X_{it} + \varepsilon_{it}$ iv	If F calculated > F critical, at P≤ 0.05 means the null hypothesis is rejected and vice versa

To assess the moderating Influence of firm size on the relationship between financial leverage and performance of Microfinance Banks (MFBs) in Kenya.	**$H0_5$**: There is no statistically significant moderating Influence of firm size on the relationship between financial leverage and performance of Microfinance Banks (MFBs) in Kenya.	Hierarchical regression analysis $Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_5 Z_{it} + \varepsilon_{it}$ ……v	If F calculated > F critical, at P≤ 0.05 means the null hypothesis is rejected and vice versa

Note, Source *(Author)*

3.8 Test of Assumptions

Assumptions are principles those accepted as being true based on logic or reasons but without proof or verification, (Jayesh, 2013). Assumptions are cardinal in any theory or paradigm and it is important to make the assumptions explicit and make them sufficient enough to describe a phenomenon at hand. Appropriate diagnostic tests were conducted before resolving on the estimation model. This tests were structured to do an assumption check that relates to Ordinary Least Square Panel Regression Models. The concerns of this diagnostic test were to detect any violations of panel error assumptions that includes but not limited to Normality test, Heteroskedasticity test, Autocorrelation test and Multicollinearity test.

3.8.1 Normality Test

This test played a key role in data modelling by ensuring normal data distribution and computing the likelihood of random variables to be distributed randomly. The residuals' normal behavior is an assumption of the Normal least Square (OLS) regression model that affects the validity of every test (Oscar, 2007). To ascertain whether the residuals performed normally or not, this study used the non-graphical Shapiro Wilk test for normality. The Shapiro Wilk test was used to perform a hypothesis check and determine whether the residuals had a normal distribution. The Normality test was therefore be used to make valid inferences by checking if the residuals/error terms of the regression followed a normal distribution. In normality test, if a study fails to reject the null hypothesis at 95% and the p-value is found to be greater than 0.05 ($p>0.05$), it would therefore signify conclusively that there is a normal distribution of residuals.

3.8.2 Heteroskedasticity

Regression disruptions whose variances vary among observations are referred to as heteroskedasticity (Green, 2008). Baltagi (2005) states that heteroskedasticity occurs in many applications using time series information and cross-sections, leading to inefficient estimate outcomes. Levene's test for equality was used in this work to check for heteroskedasticity. A statistically significant result at.05 < (less than 0.05) on a Levene's test for identical variations indicates that the group variances constitute heteroskedasticity rather than homoscedasticity. Stock and Watson (2003) states that there are two ways to deal with heteroskedasticity; one is the use of

the heteroskedasticity-robust standard errors and the other is the usage of weighted least squares. However, the heteroskedasticity-robust standard errors method is the most preferred (Stock & Watson, 2003). This study used the heteroskedasticity-robust standard errors so as to be able to deal with the problem of heteroskedasticity if found present.

3.8.3 Autocorrelation Test

Autocorrelation describes a sample or population observations or elements that relate to each other across time, space or other dimensions (Neil, 2010). Correlated observations are commonly but problematic, largely because they violate basic statistical assumptions about many samples: Independence across elements (Neil, 2010). Time series data often displays Autocorrelation or sequential correlation of the disturbances across periods (Green, 2008). Problems may arise between serial correlation and linear panel data since their presence would render biased standard errors that will make consistent the estimated regression coefficients inefficient but consistent. The Durbin Watson Test was used in the study to determine whether autocorrelation existed. The error and its most recent value are being tested for first-order autocorrelation (Brookers, 2008). This test was designed to find out whether there is a correlation between the errors in different observations. If the d-statistic is greater than 0.05, the study is unable to reject the null assumption at both the 95% and 90% levels, indicating that there is no relationship among errors in different data. The Durbin-Watson test annuls the existence of serial correlation.

3.8.4 Multicollinearity Test

Multicollinearity is the existence of a linear relationship among the independent variables (Kumari, 2008). Huge errors can be caused by Multicollinearity and this may make it very hard to assess the correlational importance of single variables in a model. Multicollinearity test was therefore applied to test the degree of correlation between predictor variables and dependent variable. Multicollinearity is generally agreed to be present if there is an approximate linear relationship among predictor variables in the data (Belsely et.al, 1980). This study opted for both the Variable Inflation Factor (VIF) and tolerance to test for Multicollinearity. To indicate the problem in Multicollinearity, the tolerance statistics values would have to lie below 0.10 ($1/VIF<0.10$) and when the inter-correlation among predictor variables is above 0.9 signals high Multicollinearity.

The study also opted for reciprocal for tolerance known as Variance Inflation Factor (VIF) to check for Multicollinearity. The Variance Inflation Factor displays the degree to which Multicollinearity has inflated the variance of the coefficient estimate (Belsley et.al, 1980). The study checked for Multicollinearity through correlation coefficients and variable inflation factor (VIF) values whereby a value of VIF >10 meant that the Multicollinearity was present and the assumption was violated and vice versa. Therefore, a variation inflation Factor of more than 10 (VIF>10) would indicate trouble with Multicollinearity (Oscar, 2007).

3.9 Ethical Considerations

Ethics is a branch of philosophy that deals with the conduct of people and guides the norms or standards of behavior of people and relationships with each other (Kovacs, 1985). The subject of ethics is people's conduct and the principles that should govern their interactions with one another (Blumberg et al., 2005). The study of ethics realization of social norms that point towards the behavior that an individual is hopped to have in a given situation. The moderation of human behavior toward carrying out the most righteous or universally acceptable deeds is greatly influenced by ethical norms. The study was conducted with utmost professionalism and strict adherence to respondent's confidentiality. First, it was prudent that a formal expression of interest is made to the Central Bank of Kenya's directorate of research where all material data relating to the objectives of this study was stored. To achieve this, a letter from the researcher was drafted and attached alongside with a corresponding introductory letter from Kisii University and a research license from the National Commission for Science, Technology and Innovation (NACOSTI). This approach granted the researcher authority to access the requisite financial documents that enabled the study to secure relevant data that was significant in obtaining the anticipated research findings.

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSIONS OF FINDINGS

4.1 Data Recording

This study was longitudinal in nature and sought data from Microfinance banks (MFBs) for a period of ten years (2011-2020). The data was provided by the research department at the Central Bank of Kenya (CBK) – Nairobi upon formal request through a letter that was accompanied by supporting documentation (NACOSTI license & Kisii University letter of application for research permit). The department submitted all the Bank supervision reports for the ten years (2011-2023). The major focus for this study was data that was envisaged in the statements of comprehensive income (Profit and Loss Accounts) and Statement of financial position (Balance Sheets) and in particular; data relating to total Assets, total assets, total Equity, total Capital and total earnings/net income. This data was further computed and recorded in the data collection sheets to reflect all the relevant ratios relating to financial leverage alternatives; debt to assets, debt to equity, debt to capital Total assets and the performance indicator of return on Equity (ROE).

4.1.1 Data Screening, Examination and Preparation

Screening of Data refers to the method of reviewing information to identify errors and correction before analyzing the information. Hair et al., (2010), observed that it is wise for data to be screened in order to ascertain the possible breach of underlying principles of multivariate strategies. This study collected secondary data relating to financial leverage activities in microfinance banks in Kenya from the year 2011-2020. The 10 year financial reports were made available through the central bank of Kenya. These data was envisaged in the annual bank supervision reports that were provided by the research department of the central bank of Kenya. Each year had its stand-alone report that had all the material data that could be informative to enable the analysis.

4.1.2 Analysis of Data Entry Errors

The collected data was recorded in a data collection sheet which was ideal in collecting the data that included total debt, total equity, total capital, total EBITDA and firm size indicators. The data was accurately entered into the sheet so as to be certain that the entries were sound enough to allow for analysis. The raw data was cross-examined against work sheet to check for errors that might

have occurred during data entry process from the original financial statements. With the assistance of my supervisors, the process was rigorously done to enhance accuracy in the process.

4.1.3 Analysis of Missing Data

The Microfinance Institutions financial reports for all the firms were cross checked to ensure that all requisite data was captured. Hair *et al.* (2013) notes that missing values should be replaced using mean when there are less than 5% missing values per item. In this study missing value analysis showed that none of them had missing values above 5%; they ranged from 0.25% to 2.2%. Hence, missing values were replaced using the mean values generated through SPSS version 22.

4.2 Descriptive Statistics

This study deployed purposive sampling which only set aside microfinance banks for analysis. This was due to their unique nature and model of operation that the study believed would be sufficient enough to bear fruitful results. Minima, Maxima, Mean Scores and Standard Deviations were used to describe the data collected which was also summarized so as to define a clear behavioral patterns. The maxima and minima scales were sufficient in determining the range within which the financial leverage alternative (debt to asset, debt to equity, debt to capital and debt to EBITDA) were calculated and therefore, they could significantly express the degree of correlation between variables.

4.2.1 Descriptive Statistics on Debt to Asset ratio

Debt to asset is crucial indicator variable that is used to measure institutional performance. This study therefore endowed to establish the Influence of this variable in order to affirm the degree of its Influence on MFIs' productivity in Kenya. The findings would further guide the shareholders to make rational decisions when determining the amount of debt to relay vis a vis the available institutional assets. Secondary data was sought from statements of finance that included audit reports and other relevant financial materials captured in the annual bank supervision report for the microfinance banks for a ten-year period ranging from 2011-2020. Descriptive statistical methods of minimum, maximum, mean and standard deviation were used to understand the attributes of the constructs of debt to asset. The outcomes are as shown in table 4.1.

Table 4.1

Descriptive Statistics on Debt to Asset ratio

	N	Minimum	Maximum	Mean	Std. Deviation
Kenya Women MFB PLC	130	.2	.4	.276	.0763
Faulu MFB Limited	130	.1	.5	.178	.1186
Rafiki MFB Limited	130	.1	.3	.189	.0580
SMEP MFB Limited	130	.1	.5	.218	.0931
Caritas MFB Limited	130	.0	.1	.010	.0173
Sumac MFB Limited	130	.0	.4	.220	.1615
Key MFB Limited	130	.0	.4	.151	.1430
U & I MFB Limited	130	.0	.3	.080	.1067
Uwezo MFB Limited	130	.0	.1	.012	.0257
Daraja MFB Limited	130	.0	.0	.003	.0095
Maisha MFB Limited	130	.0	.0	.000	.0000
Century MFB Limited	130	.0	.1	.033	.0403
Choice MFB Limited	130	.0	.2	.056	.0783
Average Mean				**0.11**	**0.0712**

Note, Source (*Field data*)

The results of the analysis on table 4.1 show that microfinance institutions surveyed had lower means of debt to total assets ratio; Kenya Women MFB PLC (M=0.276; SD=0.763), Faulu MFB Limited (M=0.178; SD=0.119), Rafiki MFB Limited (M=0.189; SD=0.058), SMEP MFB Limited (M=0.218; SD=0.0931), Caritas MFB Limited (M=0.010; SD=0.0173), Sumac MFB Limited (M=0.220; SD=0.162), Key MFB Limited(M=0.151; SD=0.143), U & I MFB Limited (M=0.080; SD=0.107), Uwezo MFB Limited (M=0.012; SD=0.026), Daraja MFB Limited (M=0.003; SD=0.01), Century MFB Limited (M=0.033; SD=0.0403) and Choice MFB Limited (M=0.056; SD=0.0783). This implied that a larger portion of the assets is financed through reserves or other sources of internal funds suggesting a lower risk of financial distress. This was further indicated by an average mean of 0.11 and a standard deviation of 0.0712. Therefore, it was revealed that the MFI managers were carefully observing their capital structure composition and in particular, the debt to asset component. This was due to the fact the optimal debt to asset ratio is provided at a

range of one or less that one (<1) that would mean that these firms were liquid enough to meet their financial obligations with a hope to perform better and yield prospective returns to their shareholders.

4.2.2 Descriptive Statistics on Debt to Equity ratio

Debt to equity was the second objective that this study endeavored to evaluate and know how it triggers the performance of Kenyan Microfinance Institutions. This component was critical as it would determine the degree of borrowing that these firms were involved in, and the extent to which their borrowings would be covered by their shareholders' equity. The more borrowings the firm makes the riskier the firm becomes in terms of the ability to repay their loans from their equity. This ought to put these firms at a risk of financial distress. Descriptive statistical methods of minimum, maximum, mean and standard deviation were used to understand the attributes of the constructs of debt to equity. The outcome of this findings was presented in Table 4.2.

Table 4.2

Descriptive Statistics on Debt to Equity

	N	Minimum	Maximum	Mean	Std. Deviation
Kenya Women MFB PLC	130	.9	4.6	1.689	1.614
Faulu MFB Limited	130	.4	4.4	1.582	1.408
Rafiki MFB Limited	130	.3	4.7	1.726	1.3790
SMEP MFB Limited	130	.5	3.6	1.166	.8829
Caritas MFB Limited	130	.0	.2	.033	.0574
Sumac MFB Limited	130	.0	2.1	.883	.7984
Key MFB Limited	130	.0	1.0	.340	.3651
U & I MFB Limited	130	.0	1.2	.264	.3680
Uwezo MFB Limited	130	.0	.1	.020	.0445
Daraja MFB Limited	130	.0	.1	.013	.0411
Maisha MFB Limited	130	.0	.2	.014	.328
Century MFB Limited	130	-.2	1.4	.263	.4713
Choice MFB Limited	130	-.4	.3	-.057	.2011
Average Mean				**0.647**	**0.741**

Note, Source (*Field data*)

The results of the analysis on table 4.2 show that Kenya Women MFB PLC had the highest mean (M=1.689; SD=1.614). This suggests that the institution lies heavily on debt compared to equity. Faulu MFB Limited (M=1.582; SD=1.41), Rafiki MFB Limited (M=1.73; SD=1.38), SMEP MFB Limited (M=1.17; SD=0.88), Caritas MFB Limited (M=0.033; SD=0.057), Sumac MFB Limited (M=0.883; SD=0.80), Key MFB Limited(M=0.151; SD=0.143), U & I MFB Limited (M=0.080; SD=0.107), Uwezo MFB Limited (M=0.340; SD=0.37), Daraja MFB Limited (M=0.013; SD=0.0411), Century MFB Limited (M=0.263; SD=0.47) and Choice MFB Limited (M= -0.057; SD=0.201). The results show that most institutions had higher proportion of equity financing. This was further indicated by an average mean of 0.647 and a standard deviation of 0.741. This therefore meant that MFIs were mostly depending on the contributions of equities from their shareholders as the key components in their capital structure and their main source of financial pillars. Once the ratio of debt to equity is kept below the acceptable minimum of less than one (<1), it implies that the MFIs are at a position to manage their financial needs and thus, stable enough to settle their financial obligations as and when they fall due. This was the observed scenario for many Microfinance firms for the ten years.

4.2.3 Descriptive Statistics on Debt to Capital

Objective three of the study aimed at establishing the Influence of Debt to Capital on performance of Microfinance Institutions in Kenya. Determination of this ratio was aimed at guiding this study in order to understand the degree of borrowed funds that shareholders invest in a project and the extent to which these funds are compared with the invested capital that MFIs lay down in their businesses. Descriptive statistical methods of Minimum, Maximum, Mean and Standard Deviation were used to understand the behavior of the constructs of Earnings before Interest, Tax, Depreciation and Amortization. The results are as shown in Table 4.3.

Table 4.3

Descriptive Statistics on Debt to Capital

	N	Minimum	Maximum	Mean	Std. Deviation
Kenya Women MFB PLC	130	.5	.8	.650	.1024
Faulu MFB Limited	130	.3	72.0	7.652	22.6103
Rafiki MFB Limited	130	.2	.8	.555	.1944
SMEP MFB Limited	130	.3	.8	.498	.1180
Caritas MFB Limited	130	.0	.1	.033	.0532
Sumac MFB Limited	130	.0	.7	.406	.2479
Key MFB Limited	130	.0	.5	.212	.1859
U & I MFB Limited	130	.0	.6	.187	.1946
Uwezo MFB Limited	130	.0	.1	.019	.0418
Daraja MFB Limited	130	.0	.1	.013	.0411
Maisha MFB Limited	130				
Century MFB Limited	130	-.3	.6	.126	.2552
Choice MFB Limited	130	-.7	.2	-.081	.2540
Average Mean				**0.79**	**1.90**

Note, Source (*Field data*)

The results of the analysis on table 4.3 show that Faulu women MFB PLC had the highest mean (M=7.652; SD=22.61). This suggests that the institution had a greater reliance on debt financing. Kenya women MFB limited (M=.650; SD=.102), Rafiki MFB Limited (M=.555; SD=.194), SMEP MFB Limited (M=.498; SD=0.12), Caritas MFB Limited (M=0.033; SD=0.053), Sumac MFB Limited (M=0.41; SD=0.25), Key MFB Limited (M=0.212; SD=0.19), U & I MFB Limited (M=0.19; SD=0.20), Uwezo MFB Limited (M=0.02; SD=0.042), Daraja MFB Limited (M=0.013; SD=0.0411), Century MFB Limited (M=0.126; SD=0.26) and Choice MFB Limited (M= -0.081; SD=0.25). The results show that most institutions had kept their debt to capital ratio at controllable levels since their ratio was basically bellow one (1<) which depicted that the MFIs had less exposure to the risk of insolvency. This was further indicated by an average mean of 0.79 and a standard deviation of 1.90.

4.2.4 Descriptive Statistics on Debt to EBITDA

The fourth objective in this study aimed to find out the Influence of Debt to Earnings before Interest, Tax, Depreciation and Amortization on performance of Microfinance Institutions in Kenya. This was aimed at determining the correlation between the amount of funds borrowed and the interest earned that could show the ability of MFIs to settle their loan demands from interest earned. Descriptive statistical methods of Minimum, Maximum, Mean and Standard Deviation were used to understand the features of the constructs of EBITDA. The findings are as shown in Table 4.4.

Table 4.4

Summary of descriptive Statistics on Debt to EBITDA

	N	Minimum	Maximum	Mean	Std. Deviation
Kenya Women MFB PLC	130	-32.6	28.1	4.183	16.3884
Faulu MFB Limited	130	-34.2	11.2	1.761	12.9315
Rafiki MFB Limited	130	-51.9	54.3	2.406	26.1227
SMEP MFB Limited	130	-10.7	17.5	2.170	9.3280
Caritas MFB Limited	130	-1.8	.0	-.238	.5590
Sumac MFB Limited	130	-8.0	6.1	2.826	4.4262
Key MFB Limited	130	-7.4	1.7	-3.019	3.1427
U & I MFB Limited	130	.0	605.0	62.055	190.7863
Uwezo MFB Limited	130	-1.7	5.5	.383	1.8730
Daraja MFB Limited	130	.0	.1	.013	.0411
Maisha MFB Limited	130	.1	.1	.110	.
Century MFB Limited	130	-.5	.0	-.176	.1966
Choice MFB Limited	130	-.7	.1	-.148	.2308
Average Mean				**5.564**	**20.46**

Note, Source (*Field data*)

The results of the analysis on table 4.4 show that U & I MFB Limited had the highest mean (M=62.055; SD=190.779). This implied that the institution had higher level of debt relative to its earnings suggesting increased financial risk. Faulu MFB Limited (M=1.761; SD=12.93), Rafiki

MFB Limited (M=2.41; SD=26.12), SMEP MFB Limited (M=2.17; SD=9.33), Caritas MFB Limited (M= -0.24; SD=0.559), Sumac MFB Limited (M=2.83; SD=4.43), Key MFB Limited(M=0.151; SD=0.143), U & I MFB Limited (M=0.080; SD=0.107), Uwezo MFB Limited (M= -3.02; SD=3.14), Daraja MFB Limited (M=0.013; SD=0.041), Century MFB Limited (M= -0.176; SD=0.197) and Choice MFB Limited (M= -0.148; SD=0.231). The results from table 4.4 reveals that the ratio of debt to EBITDA was higher that the at-most good that is provided (<3) which meant that the quality of profits or earnings that were being generated were not sufficient enough to address the debt needs of these firms. This was further indicated by an average mean of 5.564 and a standard deviation of 20.46. Once the mean goes beyond three (3>) it is considered that the firm is facing difficulties in generating attractive returns for their shareholders.

4.2.5 Descriptive Statistics on Firm Size

Firm size was applied in this study to act as a moderating variable in the relationship between financial leverage alternatives and performance of microfinance institutions in Kenya. Indicators of firm size include total assets, total number of employees and total number of branches. In order to measure the moderating Influence of firm size on the relationship between dependent variables and independent variable, the study settled on total asset as its sole indicator and moderator. This is because total assets is more holistic and compared to the other two components that measure firm size (total number of employees and total number of branches). Descriptive statistical methods of Minimum, Maximum, Mean and Standard Deviation were used to understand the traits of the constructs of firm size as generated in table 4.5.

Table

4.5: Descriptive Statistics on Firm Size

	N	Minimum	Maximum	Mean	Std. Deviation
Kenya Women MFB PLC	130	17036.0	32153.0	26733.500	5213.1637
Faulu MFB Limited	130	5141.0	29682.0	20973.700	9216.6463
Rafiki MFB Limited	130	441.0	7729.0	5170.600	2404.1399
SMEP MFB Limited	130	2.7	3446.0	2418.666	960.1935
Caritas MFB Limited	130	.0	2284.0	687.900	823.2581

Sumac MFB Limited	130	.0	2310.0	909.800	816.8639
Key MFB Limited	130	124.0	433.0	329.600	101.0569
U & I MFB Limited	130	.0	805.0	318.340	286.3534
Uwezo MFB Limited	130	59.0	226.0	157.300	62.5585
Daraja MFB Limited	130	.0	1665.0	240.100	506.6810
Maisha MFB Limited	130	171.0	1264.0	464.400	450.2614
Century MFB Limited	130	.0	431.0	193.800	144.0801
Choice MFB Limited	130	.0	136.0	64.400	58.7881
Average Mean				**4512.5**	**1618.79**

Note, Source (*Field data*)

The results of the analysis on table 4.5 show that Kenya women finance MFB PLC had the highest number of assets (M=26733.5; SD=5213.16). Faulu women MFB PLC had the second highest number of assets (M=29682.0; SD= 9216.7). Further, Rafiki MFB Limited (M=.5170.6; SD=.2404.14), SMEP MFB Limited (M=.2418.7; SD=960.19), Sumac MFB Limited (M=909.8; SD=816.86), Caritas MFB Limited (M=687.9; SD=823.26), Maisha MFB Limited (M=464.4; SD=450.3), Key MFB Limited (M=329.6; SD=101.06), U & I MFB Limited (M=318.34; SD=286.4), Daraja MFB Limited (M=240.1; SD=506.7), Uwezo MFB Limited (M=157.3; SD=62.6), Century MFB Limited (M=193.8; SD=144.08) and Choice MFB Limited (M= 64.4; SD=58.79) respectively. The results show that most institutions had a fair proportion of assets as indicated by an average mean of 4512.5 and a standard deviation of 1618.8.

4.2.5 Descriptive Statistics on performance of Microfinance Institutions in Kenya

One of the objectives of this study was to determine how financial leverage alternatives trigger productivity of MFIs in Kenya. The study settled on ROE as the key indicator of measuring performance. ROE was considered as the most suitable and optimal measure of MFBs' performance because it measures the profitability of these firms based on the amount of investments (shares/Equity) that the shareholders/owners of the firm have invested in the company. The analysis of descriptive data realized from these microfinance institutions' performance was done by use of Minima, Maxima, mean and Standard Deviation.

Table 4.6

Descriptive Statistics on performance of Microfinance Institutions in Kenya

	N	Minimum	Maximum	Mean	Std. Deviation
Kenya Women MFB PLC	130	-63.8	19.7	-2.48	25.72
Faulu MFB Limited	130	-16.4	29.7	7.22	11.86
Rafiki MFB Limited	130	-108.4	5.7	-20.28	37.04
SMEP MFB Limited	130	-27.9	13.4	-11.33	14.84
Caritas MFB Limited	130	-68.2	5.5	-16.27	24.41
Sumac MFB Limited	130	-23.1	7.3	-.682	9.69
Key MFB Limited	130	-31.5	4.6	-11.80	11.29
U & I MFB Limited	130	-60.7	10.2	-.999	21.36
Uwezo MFB Limited	130	-511.1	3.6	-58.60	159.32
Daraja MFB Limited	130	-191.3	2.4	-49.94	64.70
Maisha MFB Limited	130	-1487.5	7.5	-360.57	634.27
Century MFB Limited	130	-484.6	.0	-113.04	149.78
Choice MFB Limited	130	-146.0	196.7	-19.66	94.49
Average Mean				**-50.65**	**96.83**

Note, Source (*Field data*)

The results of the analysis on table 4.6 show that Faulu women MFB PLC was the only MFI that had a positive Influence on ROE (M=7.22; SD=25.72). Kenya women finance MFB PLC had negative mean on ROE (M=-2.48; SD= 25.72). Further, Rafiki MFB Limited (M=-20.28; SD=.37.04), SMEP MFB Limited (M=. -11.33; SD=14.84), Sumac MFB Limited (M=-.682; SD= 9.69), Caritas MFB Limited (M=-16.27; SD=24.41), Maisha MFB Limited (M=-360.57; SD= 634.27), Key MFB Limited (M=-11.80; SD=11.29), U & I MFB Limited (M=-.999; SD=21.36), Daraja MFB Limited (M=-49.94; SD= 64.70), Uwezo MFB Limited (M=-58.60; SD=159.32), Century MFB Limited (M=-113.04; SD=149.78) and Choice MFB Limited (M= -19.66; SD= 94.49) respectively. The results show that most firms incurred losses and were not generating sufficient returns for their shareholders. This was indicated by an average mean of -50.65 and a standard deviation of 96.83.

4.3 Trend Analysis

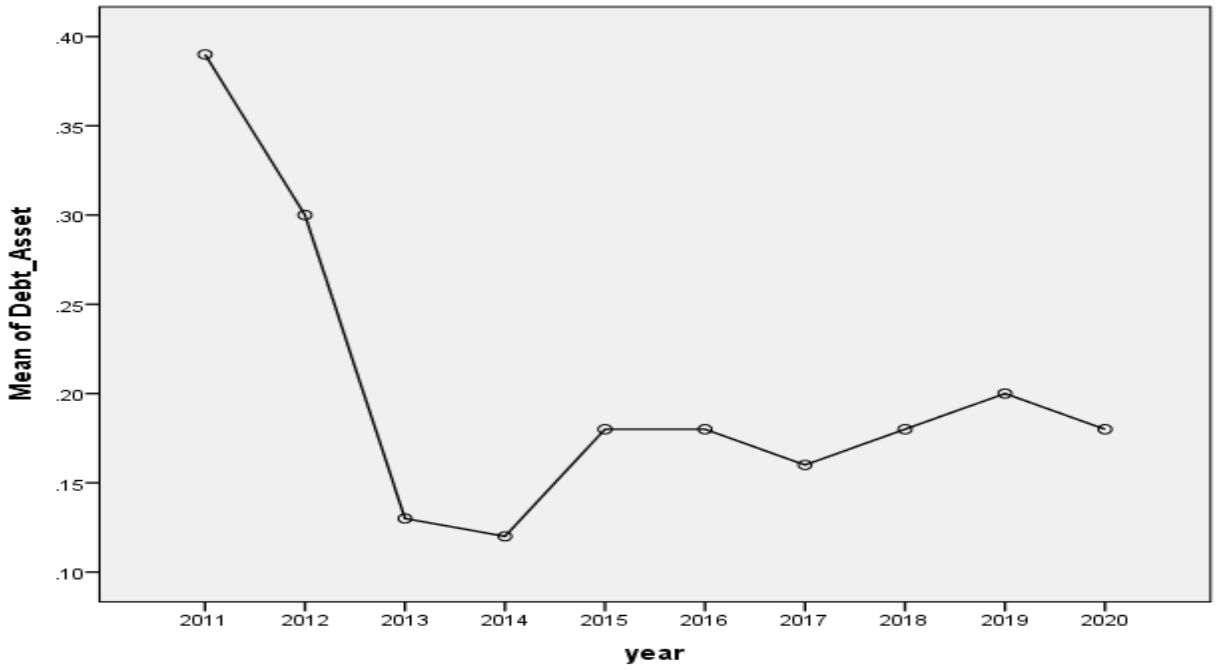
The study was a longitudinal in nature and focused on MFIs that were in existence by listing with the CBK between the years of 2011 to 2020. It was noted that different MFIs came to existence or listing by CBK at different times within the years of study. For this same reason a trend analysis approach was applied to establish the pattern of Debt to Asset, Debt to Equity, Debt to Capital, Debt to EBITDA, firm size and performance of Microfinance Institutions in Kenya for the said period of study.

4.3.1 Trend Analysis for Debt to Asset

Debt to asset was used as the first independent variable for this study. It was purposed to establish the ratio or degree at which debt/borrowing by these MFIs was correlating to assets from the year 2011 to 2020. Figure 4.1 outlines the illustration of how the situation was depicted and observed.

Figure 4.1

Trend Analysis for Debt to Asset



Note, Source *(Field data)*

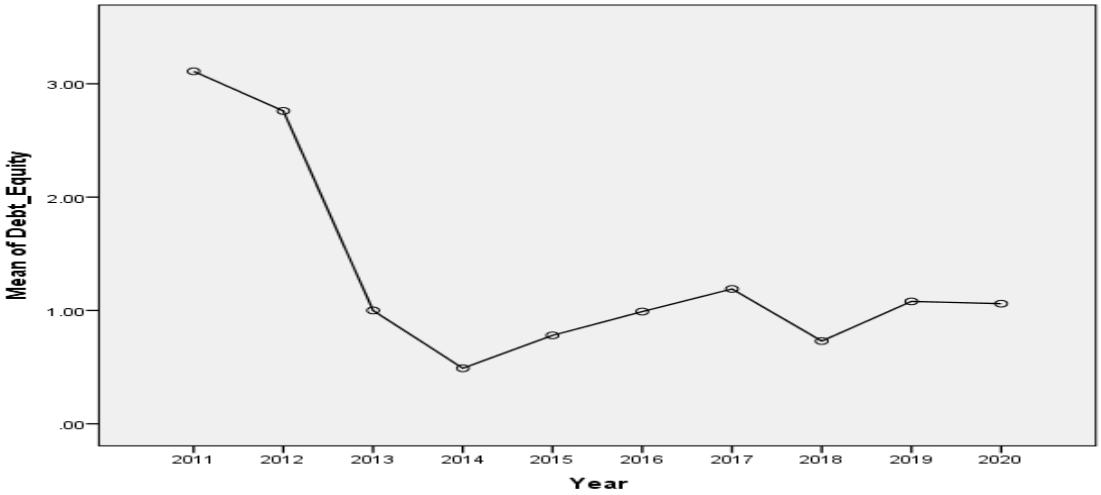
Figure 4.1 depicts that the ratio of debt-to-total-assets by MFIs in Kenya was steeply on a downward trajectory from the 2011 to 2013 and further in 2014. There was, however, a slight rise in the ratio in the year 2015 which reveals that during that year, the MFIs tried to perform better by keeping a balance between debts to asset at an optimal level, hence positive results. When the ratio or balance between debt and assets is less than on (<1), it means that the MFIs' assets are more than their debt. This was the case experienced throughout the 10 years of this study. It was implied that MFIs were able to keep their debt levels below their total assets and therefore, they were in a position to handle their financial needs as and when they fell due. This may be attributed to the prevailing economic climate that in most cases is brought about by industrial risk such as the outbreak of Covid-19 in the year 2020.This implied that microfinance institutions were better off financially and able to generate more income from their assets. This could be signaled through the available assets that could be used as collateral substitutes for debt, hence an indication of the ability to manage their cost of debt.

4.3.2 Trend Analysis for Debt to Equity

Due to the fact that different microfinance institutions were listed at different times, the study intended to analyze the behavior of debt-to-equity variable for the years under review. Figure 4.2 illustrates a trend analysis on debt to equity and a 2011-2020-year period.

Figure 4.2

Trend Analysis for Debt to Equity



Note, Source *(Field data)*

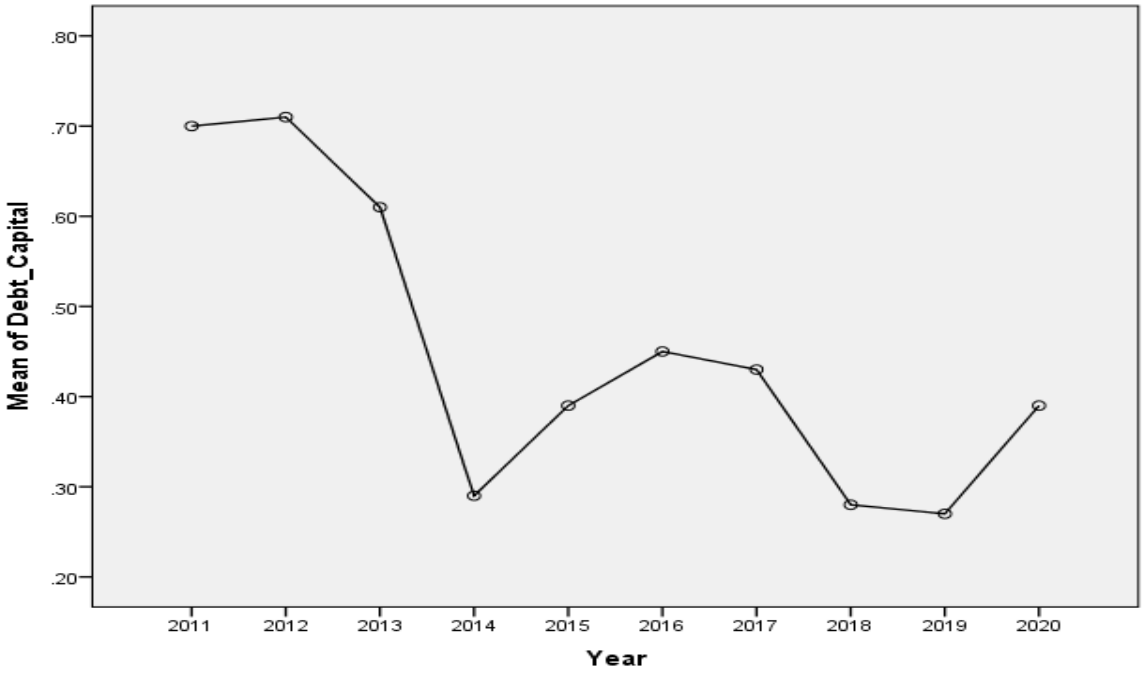
From the analysis in figure 4.2 it was clearly revealed means for debt to equity were relatively high for the years of 2011 and 2012 but thereafter, there appeared to be an optimal controlled levels of the same as from the years of 2013 through to 2020. When the balance between debt and equity falls below on (<1), it means that the firms has got more equity compared to debt and vice versa. From the data availed, it was noted that most firms had more debt than equity in the years of 2011 and 2012 while in the rest of the years, a balance was maintained. This was in effort to maintain a sound liquidity ratio for the firms and keep them financially sound. Therefore, it is implied that firm managers were keen in holding optimal levels of their shareholders equity vis a vis the level of external borrowings that they had opted thus remain liquid during these years while in operation.

4.3.3 Trend Analysis for Debt to Capital

Debt to capital trend analysis was also conducted to establish the various dynamics that were experienced during the years under study. Figure 4.3 shows the trend of debt to capital on Microfinance Institutions

Figure 4.3

Trend Analysis for Debt to Capital



Note, Source *(Field data)*

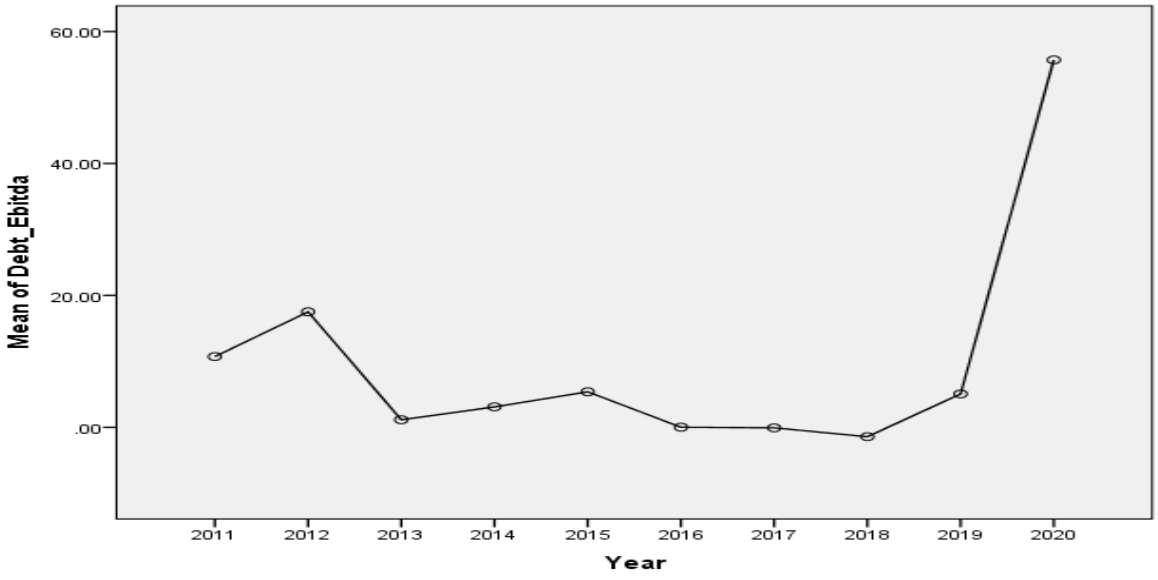
From the analysis in figure 4.3 it was indicated that the means for debt to capital fell significantly from .07 in the year 2011 to .30 in 2014 after which there was a rise through the year 2015 to 2016 then a downward trend to 2019 and then a rise in 2020. Throughout the period of the study, it was indicated that most firms made significant effort to hold their debt to capital ratio below one (1<). This implied that they were operating optimally and had sound liquidity balance hence in a position to meet their financial obligations anytime they could fall due. This may also be attributed to the state of the economy such as inflation that may lead to change in the investment plans by the affected institutions. A general observation from this outcome could mean that the management to these MFBs were alert to observe and amend any financial distress signal immediately they were identified.

4.3.4 Trend Analysis for Debt to EBITDA

The earnings of a firm are useful in determining profitability. Considering that the MFIs under this study were observed for a period of ten years, it was crucial that a trend analysis is also conducted to establish the behavior of these institutions in terms of debt to EBITDA. The illustration in figure 4.4 is a depiction of the findings based on the data collected for the period of study.

Figure 4.4

Trend Analysis for Debt to EBITDA



Note, Source *(Field data)*

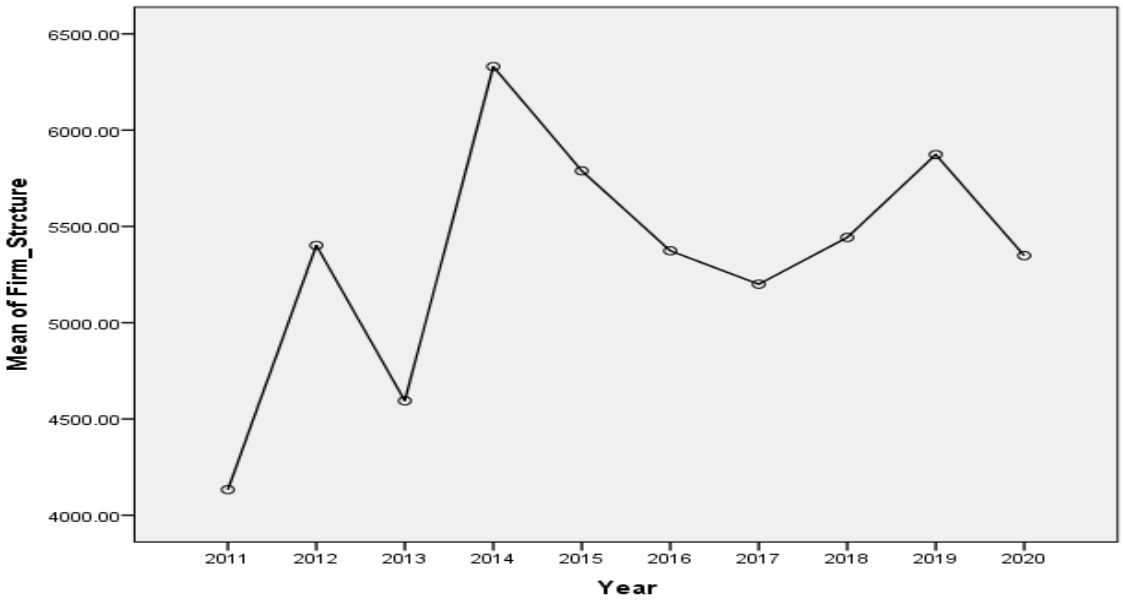
The illustration from figure 4.4 shows that Debt to EBITDA ratio was mostly high in the year 2011, 2012 and shot significantly in 2020. It can be concluded that most firms failed to hold a balance between the debt levels and earnings. This was depicted by the ratio levels that were mostly above three (3>) which implied a significant struggle in the profit margins. The acute rise in 2020 could be attributed to the economic strain that was caused by the global outbreak of Covid-19 pandemic between 2019 and 2020. The range in the year 2013-2019 was quite moderate which indicates that the economic market was optimally controllable.

4.3.5 Trend Analysis for Firm Size

The moderating variable in this study was firm size. An analysis of the trend was done to understand how this variable affects the relationship between financial leverage alternatives and performance of MFIs. Figure 4.5 illustrates a trend analysis on micro finance institutions firm size between the years 2011 to 2020.

Figure 4.5

Trend Analysis for Firm Size



Note, Source *(Field data)*

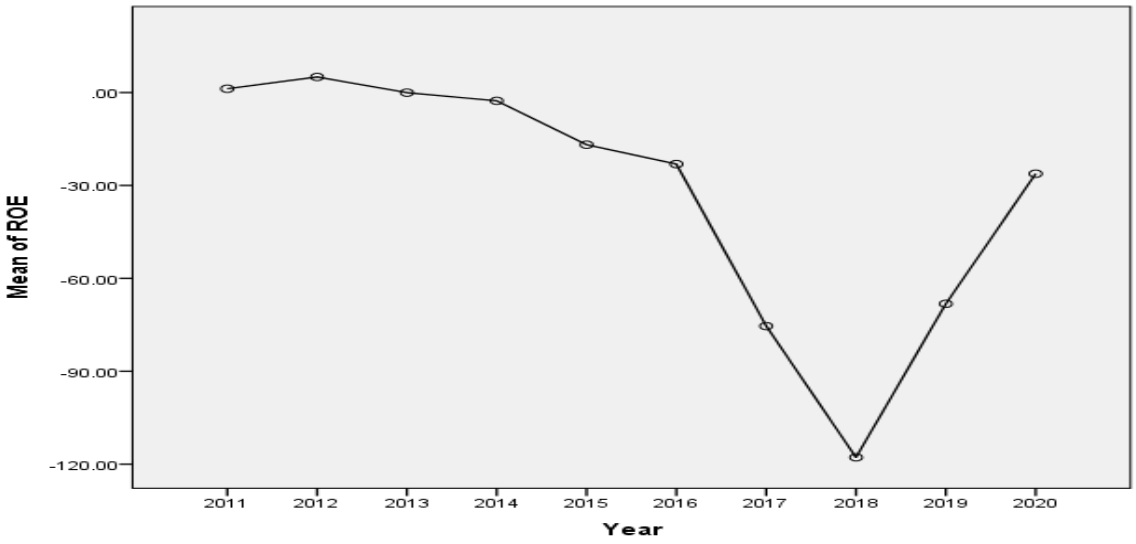
From the illustration in figure 4.5, firm size showed an increasing trajectory between 2011 and 2012 which implies that most micro finance institutions grew in size before a slight drop in 2013. The year 2014 showed an upward trend, while 2015 to 2017 indicated that most firms had dropped in size. There was an upward trend in growth between 2018 and 2019 while there was a flop in 2020. The downward trend observed in the years under review was in many instances tied towards sale of part of assets or retrenchment in the number of employees that was aimed at repayment of the microfinance institutions' debt that also led to merging or closure of some branches in order to manage their portfolio. It is always advisable to firm managers to monitor their debt levels in order to mitigate any possible financial challenges that they are facing.

4.3.6 Trend for ROE Microfinance Institutions

Return on equity was used by this study to express the degree of financial returns that could be earned by microfinance institutions out of the investments that shareholders have put in place from the loans that were acquired for the years under study. Figure 4.6 illustrate the trend for micro finance institutions return on equity during the study period of 2011-2020 and the results show a downward trend.

Figure 4.6

Trend Analysis for ROE



Note, Source *(Field data)*

The findings in figure 4.6 reveals that it was mostly experienced that microfinance institutions' Return on equity (ROE) was on a relatively, a downward trend from the year 2011 all through to the years. It was further noted that the decrease was very acute in the years 2017 and 2018 before beginning to regain in the year 2019 and 2020. The general trend depicted a significant lapse in the performance of micro financial institutions over the years 2012 to 2018 prompting this study to determine the cause of the trend. Generally speaking, the return on equity indicator shows that the microfinance institutions' performance was declining throughout the years and this was observed as a worrying trend that could call for further examination.

4.4 Correlation Analysis

Correlation is a crucial statistical step that is undertaken to measure the extent at which a prediction of a given variable can be done using other variables in a linear function. This study took similar steps to try and understand the degree of correlation between the alternatives of financial leverage and performance of microfinance institutions in Kenya. Tests were conducted by use of the Pearson product-moment correlation coefficient. Table 4.7 shows the Pearson's correlation significance between financial leverage alternatives and performance of microfinance institutions (MFIs). As denoted by r, the strength of a linear association between two variables is measured by the Pearson product-moment correlation coefficient. The Pearson correlation coefficient, r, ranges from +1 to -1. An. r-value of ±0.1 - ± 0.29 depict a weak relationship, an r-value of ±0.3 - ±0.59 shows a moderate relationship whereas an r-value of ±0.6 - ±1 depicts a strong relationship.

Table 4.7

Correlations Matrix

		Debt Equity	Debt Capital	Debt Asset	Debt_EBITDA	Performance
Debt Equity	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	130				
Debt Capital	Pearson Correlation	.194*	1			
	Sig. (2-tailed)	.027				
	N	130	130			
Debt Asset	Pearson Correlation	.005	.048	1		
	Sig. (2-tailed)	.951	.585			
	N	130	130	130		
Debt_EBITDA	Pearson Correlation	.209*	.088	.005	1	
	Sig. (2-tailed)	.017	.321	.952		
	N	130	130	130	130	
Performance	Pearson Correlation	.460**	.291**	.508**	.280**	1
	Sig. (2-tailed)	.000	.001	.000	.001	
	N	130	130	130	130	130

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

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

Note, Source *(Field data)*

The results from table 4.7 show that there exists a positive, moderate and statistically significant correlation between debt to asset ratio and performance of microfinance institutions (MFIs) in Kenya as measured by r=.508 and P< 0.05. The finding affirms the work of Umer and Muhammad (2018) who addressed the question of the Influence of debt to asset on productivity of firms in Pakistan. The findings confirmed the existence of a significant and positive impact of debt to asset on performance of firms in Pakistan.

Upon measurement of the correlation between debt to equity and firm performance, it was confirmed that the association between these variables was positive, moderate and statistically significant towards performance of MFIs in Kenya as shown by r=.460 and P< 0.05. The study findings correspond with the work of Hoi Seon Yoon (2014) who carried a study to determine debt-to-equity and its relationship with performance on listed petroleum firms in Kuwait and established that debt to equity had a significant and strong relationship with performance of the firms. Further, the finding supports the work of Abdallah et al. (2014) who carried the impact of debt-to-equity and company profitability in Saudi Arabia using descriptive study to determine the extent to which financial leverage correlates with Return on Equity, the study statistically revealed that debt to equity had a strong relationship with firm value as would be quantified by return on equity (ROE).

The strength of the correlation between debt to capital ratio and performance of microfinance institutions in Kenya was also measured by the study. This step was crucial because it would give results of this co-existence among variables to depict the degree of the relationship and therefore guide those who are assigned with the duty of making investment decisions on behalf of their organizations. The results in table 4.7 further revealed that debt to capital ratio had a weak, positive and significant correlation with performance of microfinance institutions in Kenya as was measured by r=.291 and P< 0.05. These findings were in concurrence with those of Ochieng and Karanja (2014), whose descriptive data revealed that there existed a weak correlation among financial leverage component of debt to capital and performance of Kenyan based cooperative societies.

Through a similar approach of measure, the association between debt to EBITDA and performance of microfinance institutions determined. The findings showed that debt to EBITDA and institutional performance had a weak, positive and significant relationship in microfinance institutions in Kenya as measured by r=.280 and P< 0.05. The finding concurred with the work of

Olang (2017) who investigated the Influence of debt-to-EBITDA on firm value among listed companies at the NSE in Kenya. The scholar argued that firms should consider maintaining optimal liquidity levels as they work to increase their assets that can stand in as security to boost profitability.

4.5 Diagnostic Tests

Among other authors, Garson (2012), Osborne and Waters (2002) emphasize the necessity of ensuring that the data supports the presumptions of the scientific procedures that the review would carry out. This is so that the analyst may confirm the validity of the data and emphasize the pertinent research model that upholds objective, reliable, and competent results. As a result, different statistical hypotheses were examined as described in this section to determine if the data met the normality assumptions, linearity assumptions, Multicollinearity assumptions, autocorrelation assumptions and heteroskedasticity assumptions.

4.5.1 Normality Test

To affirm if the research data was regularly distributed, a normality test was conducted. The residuals in the model could potentially produce false positive results for parametric tests if the assumption is broken. The Kolmogorov-Smirnov and Shapiro-Wilk tests, two widely used modes, were used in this work to test for normalcy (Garson 2012; Ghasemi & Zahediasi, 2012).

Table 4.8

Normality Test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Debt Asset	.438	130	.140	.111	130	.124
Debt Equity	.444	130	.152	.249	130	.135
Debt Capital	.099	130	.123	.781	130	.129
Debt_EBITDA	.241	130	.138	.561	130	.183
Performance	.237	130	.181	.633	130	.180

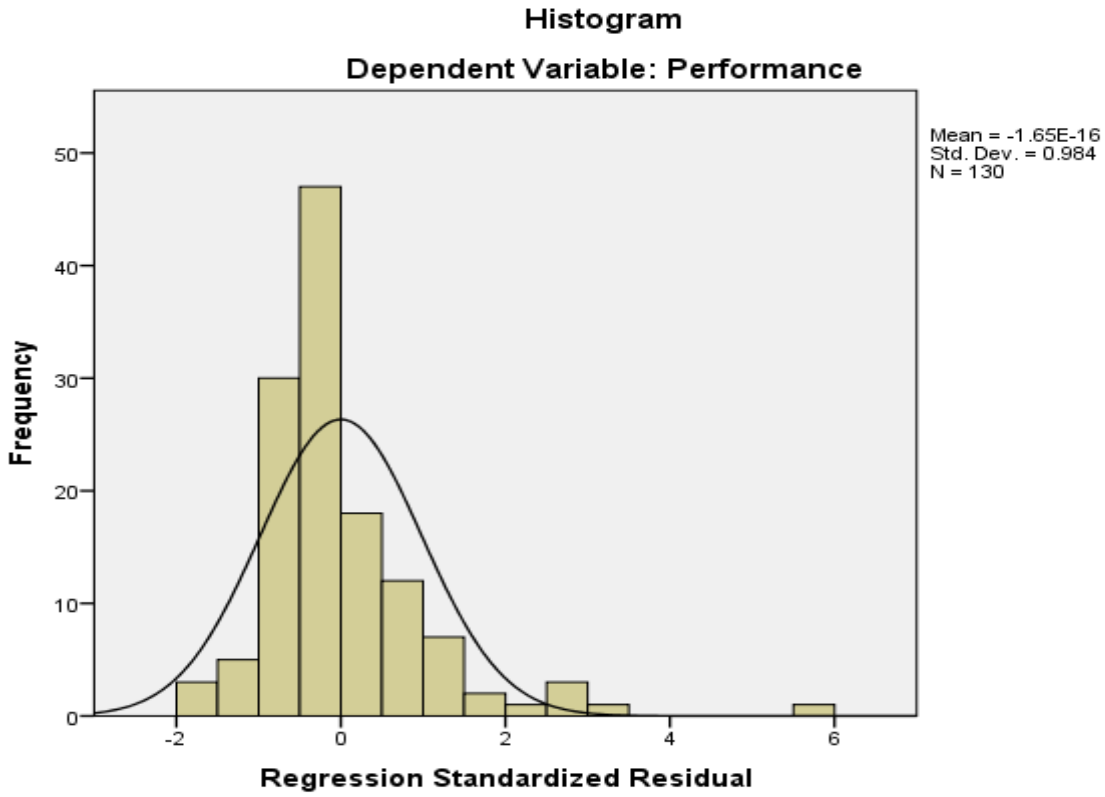
a. Lilliefors Significance Correction

Note, Source *(Field data)*

Consequently, the K-S and S-W tests shouldn't be noteworthy for the results to be regarded as normal (Tabachnick & Fidel, 2013). It is clear from the results shown in Table 4.8 that there was no issue with the data's normality because all of the variables' tests for K-S and S-W were not significant. As a result, the study's data distribution was deemed suitable for multivariate analysis. In addition to the normality tests, a graphical illustration of normality was conducted through a curve of normal distribution as shown in figure 4.5.

Figure 4.7

Normality Test



Note, Source *(Field data)*

Data from the field was entered into SPSS version 22 and examined using a histogram, as shown in figure 4.5, to see whether the data was normal. As depicted in figure (4.5) the parametric tests conducted for regression and correlation analysis revealed that the distribution of data was regular in nature. The output in figure 4.5 indicated that the data collected for this study was normally distributed hence sufficient to draw relevant findings and conclusions.

4.5.2 Linearity Test

As explained by Williams, et al. (2013), the response variable may be considered linear but the predictor variable may not be necessarily being in a linear function. Therefore, performance of microfinance institutions and the related predictor variables were considered in the same sense. Multiple regression analysis is meant to assess the association between response variable and predictor variables because the assumption of the nature of linearity typically portrays the response variable to be provoked by predictor variables (Osborne & Waters, 2002).

According to Williams, et al. (2013), the response variable (performance of Microfinance Institutions for this study) is considered to be a linear function of the regression coefficients (1, 2, 3... p), although it is not always a linear function of the predictor variables (X1, X2, X3, and X4). In order to test for linearity, SPSS's analysis of variance (ANOVA) and other tests were used (Field, 2009; Garson 2012). If the -value is less than 0.05, then the connection between independent and dependent variables is said to be linear, while those that depart from linearity have a -value greater than 0.05 when using ANOVA to test the assumption of linearity (Hair et al., 2010). For the current study's objectives, according to Table 4.14, the debt-to-asset, debt-to-equity, debt-to-capital, EBITDA, and company structure all affect the success of microfinance institutions. All of the correlations in Table 4.14 clearly show that they are linear, making the regression analysis in the study credible. The next section provides an explanation of each relationship's results.

Table 4.9

Linearity Test

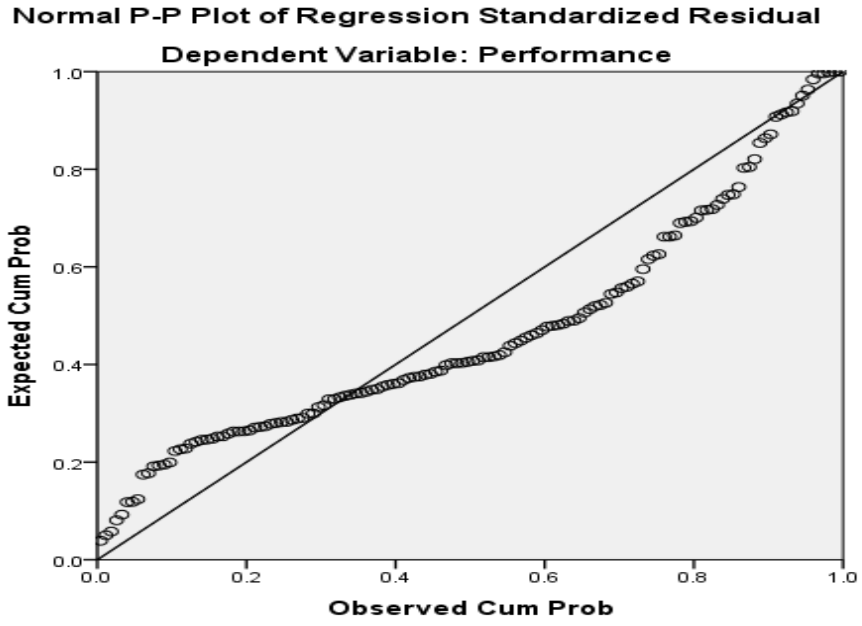
	ANOVA for linearity		Measures of Association	
	F	Sig.	R	Beta
Performance * Debt to Asset	46.924	0.000	0.504	0.504
Performance * Debt to Equity	36.086	0.000	0.455	0.455
Performance * Debt to Capital	11.594	0.000	0.278	0.278
Performance * EBITDA	11.331	0.000	0.275	0.275
Performance * Firm Size	38.426	0.000	0.423	0.423

Note, Source *(Field data)*

The table's findings of tests for linearity show a linear link between debt-to-asset ratio and microfinance institution performance (F = 46.924, p .000). Performance of Microfinance Institutions and Debt to Equity likewise have a linear connection (F = 36.086, p 0.000). Results also show a linear association (F = 11.594, .000) between debt to capital performance and that of microfinance institutions. Additionally, a linear link between microfinance institution performance and EBITDA was found (F = 11.331, p .001). Similar to this, there is a linear relationship between the company structure and performance of microfinance institutions (F=38.426, .000). The association between the response variable and each of the listed predictor variables' beta values was also noted in Table 4.9 were equal to the correlation coefficient (Pearson's r), therefore a sign of a linear relationship (Garson, 2012). Overall, the findings showed that all of the predictor factors (financial leverage alternatives) and the predicted variable have a substantial linear connection (performance of Microfinance Institutions). This suggested that the linearity assumption wasn't broken. The graphical evaluation of normality using the p-p plot was included as a supplement to the normality tests. An example of the normality test using a p-p plot is shown in Figure 4.6.

Figure 4.8

Linearity Test



Note, Source *(Field data)*

The illustration on figure 4.6 indicated that there was a normal distribution of data for parametric test i.e. regression analysis and correlation analysis, since the dotted lines lied closer to the diagonal line.

4.5.3 Multicollinearity Test

Multiple linear regressions make the presumption that the data are not Multicollinearity. When the predictor variables have an excessive amount of correlation with one another, Multicollinearity occurs. In order for Multicollinearity to not be a concern, the extent of the correlation coefficients should not get below .80 when constructing a Pearson's bivariate correlation matrix among all predictor variables, as one method of checking for Multicollinearity.

More crucially, the presence of Multicollinearity is assessed by looking at tolerance values and the variance inflation factor (VIF). According to Garson (2012), Multicollinearity is present when the tolerance, which is determined by 1-R squared, is less than 0.1. Similarly, VIF values for each of the variables, which are the reciprocal of tolerance values, show the extent that the variances in the regression estimations are enhanced due to Multicollinearity. VIF values greater than 4 suggest the possibility of Multicollinearity (Garson, 2012; Hair et al, 2014).

Table 4.10

Multicollinearity Test

		Collinearity Statistics	
Model		Tolerance	VIF
1	(Constant)		
	Debt_Asset	.997	1.003
	Debt_Equity	.925	1.081
	Debt_Capital	.958	1.044
	Debt_EBITDA	.954	1.048

Note, Source *(Field data)*

The results in Table 4.10 showed that all of the predictor variables' VIF values were less than 10 and their respective tolerance values were all more than 0.1. This indicates that Multicollinearity was not found for any of the predictor variables.

4.5.4 Autocorrelation Test

Field (2009) noted that the existence of autocorrelation is caused by a correlation between two residual observations in a model of regression. The residuals from a statistical regression study are tested for autocorrelation using the Durbin Watson (DW) statistic in Garson (2012) An expected value for the Durbin-Watson statistic is between 0 and 4, and it is generally assumed that a value of 2.0 indicates the absence of autocorrelation in the sample. Positive autocorrelation is indicated by values between zero and less than two, and negative autocorrelation is shown by values between two and four, Field (2009). For it to be confirmed that the observations are independent, the Durbin-Watson statistic should have a value between 1.5 and 2.5, according to Garson (2012).

Table 4.11

Autocorrelation Test

	Statistics
Std. Error of the Estimate	8.048
Durbin-Watson	1.960

Note, Source *(Field data)*

As the results indicate in table 4.11, the dependent and independent variables for Durbin - Watson ranged between 1.5 and 2.5 signaling that the observation were independent. This therefore indicated the study data did not cause any violation of independence test assumptions.

4.5.5 Heteroskedasticity Test

According to Osborne and Waters (2002), heteroskedasticity can be found by graphing standardized (or studentized) residuals against the expected values of the expected variable. The definition of homoscedasticity is the equality of error variance at all levels of the predictor

variables (Williams et al, 2013). Levene's test was used in this study to assess heteroskedasticity. The test determines the equality of the variance between independent and dependent variables. A crucial premise of linear regression models is that group variances are homoscedastic, however if the Levene's test for equality of variances is statistically significant at .05 < (that is, less than 0.05), then it signifies that the group variances are heteroskedasticity, not homoscedastic.

Table 4.12

Heteroskedasticity Test

	Levene Statistic	df1	df2	Sig.
Debt to Asset	0.534	2	138	0.476
Debt to Equity	.436	2	138	0.263
Debt to Capital	1.010	2	138	0.246
EBITDA	1.311	2	138	0.137
Firm Size	2.171	2	138	0.142

Note, Source *(Field data)*

According to the results in Table 4.12, homoscedasticity was not a problem because all of the variables had p-values greater than.05.

4.6 Regression Analysis

This study aimed at determining the relationship between financial leverage alternatives and performance of microfinance Institutions (MFIs) in Kenya with a view to understand the moderating role of firm size. Panel simple linear regression and the multiple linear regression techniques were applied to test the hypothesis. First, performance of microfinance institutions was regressed against each objective of financial leverage alternatives. Further, firm size was regressed against the four financial leverage alternatives as a necessary step in testing the moderating role. The results of the tests, performed at the 95% confidence level, were then presented.

4.6.1 Debt to Asset

The Influence of Debt to Asset on performance of Microfinance Institutions in Kenya was the first study objective that this research work intended to find out. Therefore, simple linear regression was performed and the following hypothesis was tested;

H_{o1}: Debt to Asset has no statistically significant Influence on performance of Microfinance Institutions in Kenya.

The study adopted panel data simple linear regression to test the Influence of debt to asset on performance.

$Y_{it} = \beta_i + \beta_1 X_{it} + \varepsilon it$……..……...i

Table 4.13a

Model Summary for Debt to Asset

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.508[a]	.258	.252	10.04766

a. Predictors: (Constant), Debt Asset

Note, Source *(Field data)*

The R squared value presented in table 4.13a showed that Debt to Asset explained 25.8 % of the variance on Kenyan MFIs' performance. An Analysis of variance (ANOVA) was tested and table 4.13b is a presentation of the results yielded.

Table 4.13b

ANOVA for Debt to Asset

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	4494.466	1	4494.466	44.519	.000[b]
	Residual	12922.300	128	100.955		
	Total	17416.767	129			

a. Dependent Variable: Performance

b. Predictors: (Constant), Debt Asset

Note, Source *(Field data)*

The ANOVA results in Table 4.13b indicated that the model fitness for the Influence of Debt to Asset ratio on performance of MFIs in Kenya was statistically significant as measured by F = 44.519 and ρ=.000. This was above the critical value of 5.18 thus, the model was statistically fit to predict performance of Microfinance Institutions using Debt to Asset. This Therefore was a proof that Debt to Asset was a significant predicator to performance of MFIs in Kenya outcome. The study therefore rejected the null hypothesis $\mathbf{H_{0_1}}$. These findings concur with (Gallo, 2015), who concluded that Debt to asset ratio is very crucial in estimating a company's risk of finance and whether the companies are liquid enough to meet their current financial obligations and successful enough to earn a return on their investment. Debt to asset ratio is one of the most important leverage ratio, which is also an indicator of the debt amount a company uses to run its operations. This means that firm managers have huge burden in determining the strategic growth of their firms at all times, be it during financial distress times or in times when the business is booming. Kamran (2018) alluded that firms take up debt as it helps to improve the performance but at the same time the investments made in the firms be done carefully. This means that firm managers are under an obligation of being accurate and keen on the kind of decisions that they make regarding the future of their firms. It is through such decisions that these organizations prosper or fall into financial limbo.

Table 4.13c illustrates the regression coefficients showing the mean change in terms of MFIs performance for a single change in debt to Asset.

Table 4.13c

Coefficients for Debt to Asset

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	5.058	.907		5.579	.000
	Debt Asset	4.244	.636	.508	6.672	.000

a. Dependent Variable: Performance

Note, Source *(Field data)*

The findings in table 4.13c further indicated that Debt to Asset predicted performance (β1=.504), which means that an increase in a unit of Debt to Asset yielded a .508 change in Microfinance Institutions. With the t value of 6.672; P Value= 0.000 against a level of significance at < 0.05, Debt to Asset proved to be statistically significant in changing the outcome of Microfinance Institutions in Kenya. Therefore, the new regression model will be;

$$Y = 5.058 + 4.244\ X_1$$

4.6.2 Debt to Equity

Objective two of the study intended to evaluate the Influence of Debt to Equity on performance of Microfinance Institutions in Kenya. In the quest to meet this objective, the following test hypothesis was explored;

H_{o2}: Debt to Equity has no statistically significant Influence on performance of Microfinance Institutions in Kenya.

The panel data simple linear regression was used to test the Influence of debt to equity on performance.

$Y_{it} = \beta_i + \beta_2 X_{it} + \varepsilon_{it}$……..……...ii

Table 4.14a

Model Summary for Debt to Equity

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.460[a]	.211	.205	10.35985

a. Predictors: (Constant), Debt Equity

Note, Source *(Field data)*

Table 4.14a illustrates that debt to equity explained 21.1 % level of variance with regards to Kenyan Microfinance Institutions' performance. This therefore signifies that the Influence of debt to equity on performance of MFIs in Kenya is profound.

The ANOVA test was conducted and the results are as depicted in table 4.14b.

Table 4.14b:

ANOVA for Debt to Equity

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	3678.986	1	3678.986	34.278	.000[b]
	Residual	13737.780	128	107.326		
	Total	17416.767	129			

a. Dependent Variable: Performance

b. Predictors: (Constant), Debt Equity

Source ;(Field data, 2022)

The ANOVA results in Table 4.14b indicated model fitness for Influence of Debt to equity on performance of MFIs in Kenya was statistically significant (F = 34.278, ρ=.000) which is above the critical value of 5.18. The model was therefore fit to predict performance of Microfinance Institutions using Debt to equity. This indicated that microfinance Institutions' performance in Kenya was statistically predicted by debt to equity. Therefore, the study rejected the null hypothesis $\mathbf{H_{02.}}$ In line with the study, Abdallah (2014) advised that institutional managers and shareholders should be keen on the financing model used by their firms considering the various sources of finances and specifically, debt financing that may attract a higher cost of capital. This means that in as much as shareholders pool their funds together, they should be keen on the kind of investments that they pump their funds into in order to be assured of an optimal return.

In the same way, Barakat (2014) recommended for optimal debt levels by these companies so as to meet the shareholders' expectations for better returns from their investments. Further recommendations were, that the firms' management should be aware of external environment in their strategic planning. This was a cross-sectional study that utilized both independent variables and dependent variable leaving out the control variable. This methodology can be tried in other similar studies to compare the results. Similarly, Kamran (2018) alluded that firms should consider taking up external debt for investment purposes as compared to equity as a strategy to improve their performance but at the same time, firm managers were advised to be careful while making those investment decisions. This means that investment decisions are critical decisions for any institution and the institutional heads should be cautious when undertaking those decisions to avoid facing liquidity challenges.

The mean change per a single unit in performance in relation to debt to equity has been shown in the regression coefficients table, 4.14c.

Table 4.14c

Coefficients for Debt to Equity

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.964	.945		5.255	.000
	Debt Equity	.764	.130	.460	5.855	.000

a. Dependent Variable: Performance

Note, Source *(Field data)*

The coefficients outcomes indicated that debt to equity predicted performance (β1=.455), which means that an increase in a unit of debt to equity yielded a .455 change in Microfinance Institutions. With the t value of 6.007; P Value= 0.000 against a level of significance of< 0.05, debt to equity proved to be statistically significant in changing the outcome of MFIs. The new regression model is.

$$Y = 4.964 + 0.764\, X_2$$

4.6.3 Debt to Capital

Debt to capital and its Influence on performance of MFIs in Kenya was the third objective that this study endeavored to establish. The following hypothesis was therefore tested;

H_{03}: Debt to Capital has no statistically significant Influence on performance of Microfinance Institutions in Kenya. Table 4.20a is an illustration of the summary of the model relating to debt to capital as measured by this study.

The study adopted panel data simple linear regression to test the Influence of debt to capital on performance.

$Y_{it} = \beta_i + \beta_3 X_{it} + \varepsilon it$……..……...iii

Table 4.15a

Model Summary for Debt to Capital

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.291[a]	.084	.077	11.16165

a. Predictors: (Constant), Debt Capital

Note, Source *(Field data)*

The R squared value presented in table 4.15a showed that debt to capital explained 8.4 % of the variance on performance of MFIs in Kenya. This signifies that debt to capital had a measurable influence on the performance of microfinance institutions in Kenya. In order to determine the level of significance, the Analysis of Variance was done and the results are shown in table 4.15b.

Table 4.15b

ANOVA for Debt to Capital

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1470.227	1	1470.227	11.801	.001[b]
	Residual	15946.539	128	124.582		
	Total	17416.767	129			

a. Dependent Variable: Performance
b. Predictors: (Constant), Debt Capital
Note, Source *(Field data)*

The ANOVA results in Table 4.15b indicated model fitness for Influence of debt to capital on performance of MFIs in Kenya was statistically significant as measured by $F = 11.801$, ρ=.000, which was above the critical value of 5.18. This meant that the model was fit to predict performance of Microfinance Institutions using debt to capital. This further showed that debt to capital is a significant predicator performance of Microfinance Institutions in Kenya outcome, therefore $\mathbf{H_{03}}$ is rejected.

These findings were in tandem with those of Zahra et al (2013), who recommended that institutional managers should work on minimizing the debt proportion which will lead to high firm value. In a similar note, Utkarsh et al (2015) that more indebted firms hold more liquid assets as their long-term finance sources towards their current operations. The study further advised that whenever such capital decisions are made, proper strategies be put in place to ensure that there are optimal returns that can be earned from such investments.

The indications from the regression coefficient table 4.15c signifies a mean change in performance for a single unit of change in debt to capital.

Table 4.15c

Coefficients[a] for Debt to Capital

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	1.364	1.782		.765	.445
	Debt Capital	10.288	2.995	.291	3.435	.001

a. Dependent Variable: Performance
Note, Source *(Field data)*

The coefficients results indicated that debt to capital predicted microfinance institutions' performance (β_3=.291), which means that a unit increase in debt to capital yielded a .291 change in Microfinance Institutions. With the t value of 3.435; P Value = 0.000 against a significance level of < 0.05, debt to capital proves to be statistically significant in changing the outcome of Microfinance Institutions. The new model is as follows;

$$Y = 1.364 + 10.288\, X_3$$

4.6.4 Debt to EBITDA

The relationship between debt to EBITDA and performance of MFIs in Kenya was established in the fourth objective of this study and the following hypothesis was put to test.

H_{04}: Debt to Earnings before Interest, Tax, Depreciation and Amortization (EBITDA) has no statistically significant Influence on performance of Microfinance Institutions in Kenya. A summary of the model has been demonstrated in table 4.21a.The study adopted panel data simple linear regression to test the Influence of debt to capital on performance.

$Y_{it} = \beta_i + \beta_4 X_{it} + \varepsilon_{it}$……..……...iv

Table 4.16a

Model Summary for EBITDA

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.280[a]	.078	.071	11.19862

a. Predictors: (Constant), Debt_EBITDA
Note, Source *(Field data)*

The R squared value presented in table 4.16a showed that Earnings before Interest, Tax, Depreciation and Amortization explained 7.8 % of the variance on performance of MFIs in Kenya which indicates that debt to EBITDA had a weak, positive and significant Influence towards the performance of MFIs in Kenya. To test the significance of the association between debt to EBITDA and performance of microfinance institutions, the ANOVA test was conducted and the outcome of the test is presented in table 4.16b.

Table 4.16b

ANOVA for EBITDA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	1364.410	1	1364.410	10.880	.001[b]
	Residual	16052.357	128	125.409		
	Total	17416.767	129			

a. Dependent Variable: Performance

b. Predictors: (Constant), Debt_EBITDA

Note, Source *(Field data)*

The ANOVA results in Table 4.16b indicated that the model fitness for Influence of Earnings before Interest, Tax, Depreciation on performance of MFIs in Kenya was statistically significant as measured by F = 10.880, ρ=.000, which was above the critical value of 5.18. Therefore, the model was sufficient to predict performance of MFIs using Earnings before Interest, Tax, and Depreciation. This indicated that Earnings before Interest, Tax, Depreciation is a significant predicator performance of MFIs in Kenya outcome. Therefore, the null hypothesis $\mathbf{H_{04}}$ was rejected.

Cognate to the findings, Elody (2014) alluded that firm finance managers should be strategic in making long term financial decisions since they affect the long-term operations of their firms and may lead to financial distress if they are not well planned. Further, the findings are in agreement with that of Olang (2017) who recommended that firms should consider maintaining optimal liquidity levels as they work to increase their assets that can stand in as security to boost profitability. A similar study in support of this findings is by Shimenga and Miroga (2019) who recommended that finance managers should consider to adopt practical solutions relative to

financial leverage strategies which can make their firms improve in their performance and overcome competition in the industry resulting to their sustainability

Table 4.21c is an illustration of correlation coefficients for debt to EBITDA as a dependent variable.

Table 4.16c

Coefficients[a] for EBITDA

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	4.165	1.207		3.452	.001
	Debt_EBITDA	.598	.181	.280	3.298	.001

a. Dependent Variable: Performance

Note, Source *(Field data)*

As revealed by table 4.16c, the regression coefficients determined a change in mean in terms of MFIs' performance for a single unit in debt to equity. The coefficients results indicated that Earnings before Interest, Tax, Depreciation was a significant predicator to MFIs performance as indicated through a performance (β_4=.280), which means that a unit increase in Earnings before Interest, Tax, Depreciation (EBITDA) is a significant predictor of performance which yielded a .280 change in Microfinance Institutions. With a t value of 3.366; P Value= 0.000 against a significance level of < 0.05, Earnings before Interest, Tax, Depreciation is a significant predictor of performance and proves to be statistically significant in changing the outcome of Microfinance Institutions. The new model is;

$$Y = 4.165 + .598\, X_4$$

4.6.5 Influence of Financial Leverage Alternatives on Performance of Microfinance Institutions in Kenya

Multiple regression model was used to determine the Influence of financial leverage alternatives on performance of microfinance institutions in Kenya. The regression model was as follows;

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

Where:

Y_{it} = Performance

X_1, X_2, X_3, X_4 = Independent variables

X_1= Debt to Asset measured at time period t.

X_2 = Debt to Equity measured at time period t.

X_3= Debt to Capital measured at time period t.

X_4= Debt to EBITDA measured at time period t.

β_0= Constant

$\beta_1, \beta_2, \beta_3 \& \beta_4$ = Regression coefficient or change in Y by each X value

ε_t = Error term

The model summary of the regression model is presented in table 4.22a.

Table 4.17a

Model Summary of Financial Leverage Alternatives on Performance of Microfinance Institutions in Kenya

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.732[a]	.535	.520	8.04782

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

Note, Source *(Field data)*

As shown in table 4.17a, variation in the outcome variable can be attributed to the predictor variables included in the model is shown by the R2 value. The degrees of freedom are taken care of via adjusted R-squared. According to the model, financial leverage alternatives explained 53.5% of the variation on performance of microfinance institutions in Kenya (R2 =.535, Adjusted R2 =.520).

Table 4.17b:

ANOVA[a] of Financial Leverage Alternatives on Performance of Microfinance Institutions in Kenya

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9320.831	4	2330.208	35.978	.000[b]
	Residual	8095.935	125	64.767		
	Total	17416.767	129			

a. Dependent Variable: Performance

b. Predictors: (Constant), Debt EBITDA, Debt Asset, Debt Capital, Debt Equity

Note, Source *(Field data)*

The ANOVA model showed that the joint prediction of all the independent variables as depicted in Table 4.17b was statistically significant (F = 35.978, ρ=.000). Thus, the model was fit to predict performance using debt to asset, debt to equity, debt to capital and debt to EBITDA.

Table 4.17c

Coefficients[a] of Financial Leverage Alternatives on Performance of Microfinance Institutions in Kenya

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.772	1.357		.569	.571
	Debt Asset	4.184	.510	.501	8.200	.000
	Debt Equity	.650	.105	.391	6.163	.000
	Debt Capital	6.185	2.207	.175	2.803	.004
	Debt_EBITDA	.385	.133	.180	2.888	.005

a. Dependent Variable: Performance

Note, Source *(Field data)*

Findings of coefficient of estimate in table 4.17c showed that debt asset had the highest significant and positive Influence on performance of microfinance institutions in Kenya (β_1= 0.501, p-value = 0.00<α = 0.05), followed by debt to equity which also had positive and significant Influence

(β_2= 0.391, p-value = 0.00<α = 0.05). Debt to EBITDA was the third most influential variable at (β_3= 0.180, p-value = 0.00<α = 0.05) and finally debt to capital had the least significant and positive Influence on performance of microfinance institutions in Kenya (β_4= 0.175, p-value = 0.004<α = 0.05). This relationship therefore confirmed that in general, financial leverage alternatives had a significant and statistically significant Influence on the performance of MFIs in Kenya. Based on the above results, the study derived the new multiple linear regression model as shown below.

$$Y = 0.772 + 4.184X_1 + 0.650X_2 + 6.185\,X_3 + 0.385\,X_4 + \varepsilon$$

4.7 The Moderating Influence of Firm Size on the relationship between financial leverage alternatives and performance of Microfinance Institutions in Kenya

The fifth goal of this study was to determine how firm size plays a moderating role in triggering the association between financial leverage alternatives and financial institutions' performance in Kenya. Therefore, a null hypothesis was established based on this objective;

H_{05}: The link between financial leverage options and the performance of Microfinance Institutions (MFIs) in Kenya is not statistically significantly moderated by firm size.

The study adopted the following panel data hierarchical regression analysis;

$$Y_{it} = \beta_i + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_5\, Z_{it} + \varepsilon_{it} \ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots\ldots v$$

To examine the moderating Influences with respect to the procedure that Baron and Kenny (1986) recommended, two stages were taken. Regression analysis was used in step one of the moderation model to evaluate the association between the achievement of Microfinance Institutions (MFIs) and financial leverage choices (independent variable), excluding the moderator (Firm size). If F computed is greater than F crucial, the model is statistically significant at P < 0.05. The results generated are shown in Table 4.18a, b and c.

Table 4.18a

Model Summary of Firm Size on the relationship between financial leverage alternatives and performance of Microfinance Institutions in Kenya

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.732[a]	.535	.520	8.04782
2	.744[b]	.554	.536	7.91508

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

b. Predictors: (Constant), Debt_EBITDA, Debt Asset, Debt Capital, Debt Equity, X5Z

Note, Source *(Field data)*

The results in table 4.18a shows the moderating association between financial leverage alternatives, Firm size and performance, indicating that financial leverage alternatives and Firm size explained 55.4 % of the changes in performance of Microfinance Institutions in Kenya. Model one findings depicted that financial leverage alternatives solely explained 53.5% of the variation in firm performance and once combined with firm size, a 55.4% of the variation is explained in terms of firm performance. This means that the link among financial leverage options and the performance of microfinance organizations in Kenya is influenced by business size by 1.9%. The multiple regression model is further demonstrated in Table 4.18b, which shows the degree of significance in the connection between the moderating variable, dependent variable, and dependent variable.

Table 4.18b

ANOVA of Firm Size on the relationship between financial leverage alternatives and performance of Microfinance Institutions in Kenya

	Model	Sum of Squares	df	Mean Square	F	Sig.
1	Regression	9320.831	4	2330.208	35.978	.000[b]
	Residual	8095.935	125	64.767		
	Total	17416.767	129			
2	Regression	9648.348	5	1929.670	30.802	.000[c]
	Residual	7768.418	124	62.649		
	Total	17416.767	129			

a. Dependent Variable: Performance

b. Predictors: (Constant), Debt_EBITDA, Debt Asset, Debt Capital, Debt Equity

c. Predictors: (Constant), Debt_EBITDA, Debt Asset, Debt Capital, Debt Equity, X_5Z

Note, Source *(Field data)*

The whole model was important for demonstrating the association between leveraged financial alternatives and the performance of MFIs, with firm size serving as a moderating factor as indicated by F = 30.802 and .05. This is illustrated by the ANOVA findings in table 4.18b. A computed f-statistic of 30.802, which is higher than the crucial f-statistic of 2.29, validated the result. As a result, the moderating effect of company size on the connection between the predictor and response variables was predicted by this model.

Table 4.18c

Coefficients[a] Firm Size on the relationship between financial leverage alternatives and performance of Microfinance Institutions in Kenya

		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	.772	1.357		.569	.571
	Debt Asset	4.184	.510	.501	8.200	.000
	Debt Equity	.650	.105	.391	6.163	.000
	Debt Capital	6.185	2.207	.175	2.803	.006
	Debt_EBITDA	.385	.133	.180	2.888	.005
2	(Constant)	.462	1.341		.344	.731
	Debt Asset	4.176	.502	.500	8.323	.000
	Debt Equity	1.000	.185	.602	5.403	.000
	Debt Capital	5.924	2.173	.167	2.726	.007
	Debt_EBITDA	.269	.141	.126	1.912	.048
	X_5Z	2.099	.000	.247	2.286	.024

a. Dependent Variable: Performance

Note, Source *(Field data)*

The revelations from table 4.18c depicted that the association between financial leverage alternatives and firm size was significant and positively related with performance of firms as measured by β =0.122 and p=0.042. The new model is;

$$Y = -0.0462 + 4.176X_1 + 1.000X_2 + 5.924X_3 + 0.269X_4 + 2.099X_5Z + \varepsilon$$

4.8 Summary of Hypotheses Testing Results

Table 4.19 illustrates a summary of both simple linear regression and hierarchical regression model and shows (R^2) and Δ in (R^2) for main and interaction Influence and also for the decision on the hypothesis that was being formulated.

Table 4.19

Hypotheses Testing Results

Objective	Hypothesis Formulated	Model	*F Calculated> F critical*	Decision
		Main Influence		
i) To assess the Influence of Debt to Asset on performance of Microfinance Institutions in Kenya.	**H_{01}**: Debt to Asset has no statistically significant Influence on performance of Microfinance Institutions in Kenya.	$Y_{it} = \beta_0 + \beta_1 X_{it} + \varepsilon_{it}$……...i	44.519>5.18	Null Rejected
iii) To evaluate the Influence of Debt to Equity on performance of Microfinance Institutions in Kenya.	**H_{02}:** Debt to Equity has no statistically significant Influence on performance of Microfinance Institutions in Kenya.	$Y_{it} = \beta_0 + \beta_2 X_{it} + \varepsilon_{it}$……...ii	34.278>5.18	Null Rejected
iii) To establish the Influence of Debt to Capital on performance of Microfinance Institutions in Kenya.	**H_{03}:** Debt to Capital has no statistically significant Influence on performance of Microfinance Institutions in Kenya.	$Y_{it} = \beta_0 + \beta_3 X_{it} + \varepsilon_{it}$……...iii	11.801>5.18	Null Rejected
iv) To examine the Influence of Debt to Earnings before Interest, Tax, Depreciation and Amortization on performance of Microfinance Institutions in Kenya.	**H_{04}:** Debt to Earnings before Interest, Tax, Depreciation and Amortization (EBITDA) has no statistically significant Influence on performance of Microfinance Institutions in Kenya.	$Y_{it} = \beta_0 + \beta_4 X_{it} + \varepsilon_{it}$……...iv	10.88>5.18	Null Rejected
	Moderation – Firm Size		**ρ – values** **R^2**	
v.To establish firm size's moderating Influence on the relationship between financial leverage alternatives and performance of Microfinance Institutions in Kenya.	**H_{05}**: Firm size has no statistically significant moderating Influence on the relationship between financial leverage alternatives and performance of Microfinance Institutions (MFIs) in Kenya.	$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \beta_5 X_5 Z_{it} + \varepsilon$	30.802>2.29 0.537	Null Rejected

Note, Source *(Author)*

The summary of hypothesis in table 4.19 indicates that the study attempted to establish and test the null hypothesis which ultimately was proven not to hold and therefore all the research hypotheses were rejected.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Findings

The aim of this study was to understand the Influence of financial leverage alternatives on performance of Kenyan microfinance institutions with a focus on the moderating role of firm size. A purposive sampling technique was applied and a total of 13 microfinance banks' data was sought, collected and analyzed. The nature of this study was longitudinal and therefore a ten years period (2011 – 2020) data was collected from the CBK's Annual Bank Supervision reports and analyzed through SPSS software version 22. The data was extracted from statements of comprehensive income and statements of financial position and in particular: of total debt, total assets, total equity, total capital and total earnings before interest, tax depreciation and amortization (EBITDA) which were computed to determine the various financial leverage alternatives/ratios.

The study further settled on total assets (ignoring total number of branches and total number of employees) as the most suitable moderating variable (indicator of firm size) which was therefore used as a measure for determining its moderating Influence on the relationship between financial leverage alternatives and performance. To measure performance, the study used Return on Equity (ROE) as the optimal indicator because it gauges the value of a firm based on the total shareholders' equity and the dividend payout. In line with the five outlined objectives of this study, the findings are clearly outlined according to each objective while drawing relevant conclusions and recommendations for future studies. In particular, this chapter gives a summary of the findings with regards to the Influence financial leverage alternatives (debt to asset ratio, debt to equity ratio, debt to capital ratio and debt to EBITDA ratio) on performance of Microfinance Institutions in Kenya and the moderating Influence of firm size on the relationship between these variables.

5.1.1 Influence of Debt to Asset ratio on Performance of Microfinance Institutions

The first objective of the study was to assess the Influence of Debt to Asset ratio on performance of Microfinance Institutions in Kenya. Collateral available to pay debt was used as the construct for debt to asset ratio. The ratio for debt to asset is determined by dividing the total debt by total assets and the ratio acquired is used as an indicator for signify the degree of optimality in relation to each other. When the ratio is less than one (<1), it indicates that the firm has got more assets

than liabilities hence optimal liquidity and vice versa. From the data that was collected, it was observed that all firms had an optimal debt to asset ratio across the ten year period because all the ratios calculated were below one (<1). This meant that all the MFBs were in a position to settle their financial obligations as and when they fall due.

The results in chapter four revealed that debt to asset ratio had a positive, moderate and statistically significant correlation with performance of microfinance institutions in Kenya. Further, the Analysis of Variance (ANOVA) results generated showed that the model fitness for debt to asset ratio was statistically significant in predicting performance of Microfinance Institutions in Kenya. The implication of all these results confirmed that debt to asset ratio was statistically significant in influencing the performance of Microfinance Institutions in Kenya. This therefore led to the rejection of the null hypothesis; 'debt to asset ratio has no statistically significant Influence on performance of microfinance institutions in Kenya. This therefore affirms that the variable of debt to asset is a critical component to consider charting a performance strategy for MFIs in Kenya.

5.1.2 Influence of Debt to Equity ratio on Performance of Microfinance Institutions

The second objective sought to evaluate the Influence of Debt to Equity ratio on the performance of Microfinance Institutions in Kenya. Equity available to pay the debt instrument was used as the construct for debt to equity ratio. Debt to equity ratio is determined dividing the total debt against total equity. The result for ratios will always vary depending with the performance of the firms but the most optimal ratio is that which is less than one (<1) which indicates that the shareholders of a firm have contributed a greater portion of a firm's equity as compared to available debt. From the observed ratios for the ten years (2011-2020, as shown in the data collection sheets), it was implied that most firms tried to keep the ratio within the manageable levels whereby, firms with more assets were observed to have opted for more debt than those with less assets.

From the analysis, it was found that debt to equity ratio explained a 21.1% level of variance towards performance of MFIs in Kenya. It was further revealed that debt to equity had a positive, moderate and statistically significant influence towards performance of Microfinance Institutions in Kenya. Further, an Analysis of variance (ANOVA) model fitness depicted that debt to equity ratio was statistically significant in predicting performance of MFIs in Kenya. It was therefore determined that debt to equity had a positive, moderate and statistically significant Influence on the performance of Microfinance Institutions in Kenya. This resulted to the rejection of the Null

hypothesis relating to this objective. Therefore, managers of Microfinance Institutions should be keen when choosing a financing formula for their firms so as not to affect performance.

5.1.3 Influence of Debt to Capital ratio on Performance of Microfinance Institutions

Objective three of the study sought to establish the Influence of Debt to Capital ratio on performance of Microfinance Institutions in Kenya. Capital is a composition of the initial investment funds that shareholders start a business with. The debt to asset ratio is computed by dividing total debt by total capital (Total Debt + Total Equity) to find the ratio that will determine the position of a firm from the liquidity perspective. When the ratio is above one (>1), it means that the firm has got more debt than capital hence stand the risk of running into insolvency becomes high and vice versa. From the observations recorded in the data collection sheet, it was noted that the Microfinance Institutions had their debt to capital ratios mostly below one (<1) which was a good sign that they had their debt levels managed.

The findings in chapter four revealed that debt to capital ratio was explained an 8.4% variance as a measure of influence on the performance of Microfinance Institutions in Kenya. A further Analysis of variance (ANOVA) revealed that the model fitness for the Influence of debt to capital ratio on performance was statistically significant to predict the performance of MFIs in Kenya. The correlation analysis further showed that debt to capital had a weak, positive and statistically significant relationship with performance of Microfinance Institutions in Kenya. This therefore led to the rejection of the Null Hypothesis; 'debt to capital has no statistically significant Influence on the performance of Microfinance Institutions in Kenya'. This therefore means that a critical consideration of the capital structure of Microfinance Institutions is required by managers of these firms in order to enhance performance.

5.1.4 Influence of Debt to EBITDA ratio on Performance of Microfinance Institutions

The fourth objective of the study was meant to examine the Influence of Debt to EBITDA ratio on performance of Microfinance Institutions in Kenya. EBITDA include profits that a firm earns before declaring its tax obligations, depreciation on assets and wearing out on software and other intangible assets such as goodwill. Debt to EBITDA ratio was calculated by dividing the Total debt by Total EBITDA. Any ratio yielded that is less than three (<3) is considered optimal. From the data collected, it was observed that on average, all the Microfinance institutions had their ratios

above three (3>) which meant that their liquidity state was worrisome and correctional steps were necessary to enable these firms yield profits.

The analysis from chapter four revealed that debt to Earnings Before Interest, Tax, Depreciation and Amortization ratio was statistically significant to influence the performance of MFIs in Kenya. An Analysis of Variance (ANOVA) model fitness further revealed that the relationship between debt to EBITDA ratio and performance was statistically significant in predicting performance of Microfinance Institutions in Kenya. This was supported by correlational analysis results which revealed that debt to EBITDA had a weak, positive and statistically significant Influence on performance of Microfinance Institutions in Kenya. This resulted to the rejection of the debt fourth Null Hypothesis that argued that debt to EBITDA has no statistically significant relationship on performance of Microfinance Institutions in Kenya.

5.1.5 Moderating Influence of Firm Size on the Relationship between Financial Leverage Alternatives and Performance of Microfinance Institutions in Kenya

The fifth objective of this study sought to establish the moderating Influence of firm size on the relationship between financial leverage alternatives and the performance of Microfinance Institutions in Kenya. The study settled on total assets as the optimal indicator for firm size and conducted an analysis of its moderating Influence on the relationship between the independent variable and dependent variable. From the analysis, it was revealed that firm size had a statistically significant moderating influence on the relationship between financial leverage alternatives and performance of microfinance firms in Kenya. This was supported by the correlational results that revealed that firm size was a statistically significant variable in influencing the relationship between financial leverage alternatives and performance of Microfinance Institutions in Kenya. This findings therefore guided the study in rejecting of the Null hypothesis that argued that firm size had no statistically significant moderating Influence on the relationship between financial leverage alternatives and performance of MFIs in Kenya.

5.2 Conclusion

This study examined the components of financial leverage (Debt to asset ratio, debt to equity ratio, debt to capital ratio and debt to EBITDA ratio) and their Influence on performance of the

Microfinance institutions in Kenya for a period of ten years (2011-2020). Based on the literatures reviewed and the analysis of data, the following conclusions were drawn;

5.2.1 Debt to Asset ratio and Performance of Microfinance Institutions

Lenders are always interested to understand the level of asset that firms own before advancing debt to those firms. This is be guided by the ratio of these two elements (debt & Asset) which are also required to be carefully reviewed by the borrowing firm(s) (MFIs in this case) so as to ensure optimal performance that will ultimately yield lucrative returns to the shareholders. The study noted a steady growth in the levels of assets of MFIs over the years under this study and further noted that the firms kept borrowing so as to finance their activities. An increase in the asset portfolio for the MFIs was a good sign for their growth. However, their performance appeared to be on a struggling trajectory regardless of the continued borrowing behavior which means that the managers of these firms did not carefully review their financing options hence they ought to practice prudent debt management skills to avoid insolvency.

The findings of this study reveals that the relationship between debt to asset ratio and performance of Microfinance Institutions in Kenya is positive, moderate and statistically significant. Therefore, in as much as this attribute is very significant in determining the performance of firms, it should be noted that there is need for those involved to engage a concept of financial prudence and strategic planning so as to improve the performance of their institutions regardless of the size of these firms because in any case, the expectations of the shareholders are always the same (that they earn prospective returns on their investments). This calls for the need to examine further the debt to asset ratio and how it can be managed in order to boost performance of firms. These insights may not only apply to the context Microfinance Firms but also to general firms in the economy.

5.2.2 Debt to Equity ratio and Performance of Microfinance Institutions

Debt to equity ratio is a critical determinant in the forecast of performance firms (Microfinance Institutions in this case). The study notes that equity is an important component in the capital structure of Microfinance Institutions and forms a pillar of the core capital for these firms. This is supported by Myers' Pecking Order theory of 1984 that insinuates that firms have a formula of determining their sources of financing where internal sources (equity & reserves) are primarily considered. The study noted that firms were optimally controlling their borrowing trends as the

ratio mostly fell below a ratio of less than one (1<) meaning that they were prudently managing their capital structure composition. It was henceforth noted that this variable was statistically significant in predicting performance as the findings from chapter four revealed that debt to equity had a positive and moderate Influence on performance of Microfinance Institutions in Kenya

The performance indicator of debt to equity ratio is basically Return on Equity (ROE) which was also used by this study as the main indicator of performance of MFIs in Kenya. Equity is the primary source of financing for most if not all firms across the globe hence, the managers of these firms are also need to be keen when investing these funds because they belong to the owners/shareholders who anticipate for better returns on their investments. The model of wealth maximization is anchored on this attribute and therefore firms should strive routinely to see their performance becomes attractive thus increasing the value of their share. Firm managers should therefore invest wisely on the borrowed funds in order to meet the shareholders' objective of wealth maximizations. A balance between the level of debt and equity should be at the epicenter of this consideration as these managers endeavor to build a healthy capital structure for their firms.

5.2.3 Debt to Capital ratio and Performance of Microfinance Institutions

Capital comprise of both a firm's debt and equity. This study compared the component against the total debt of a firm to determine the overall ratio and revealed that most firms optimally controlled their debt to capital ratio in relation to overall performance. From the general analysis done in the chapter four of this study, it was noted that debt to capital ratio had a weak, moderate and statistically significant relationship with performance of MFIs in Kenya. Debt and capital are critical components in the capital structure of a firm and should be prudently administered so as to ensure growth of firms of any background. The ratio gives an opportunity to firm owners (shareholders) and investors to determine the level of risk involved when investing in a particular business model that may easily trigger the returns of a company. It was further noted that firms with higher debt to capital ratios were riskier than those with low ratios because they needed to keep the same level of business activities so as to meet their debt servicing obligations. Therefore, MFI managers are advised to maintain the capital structure levels within manageable range to avoid liquidity pressure. This component therefore contributes objectively towards the capital structure and firm performance debate which has been going on for decades.

5.2.4 Debt to EBITDA ratio and Performance of Microfinance Institutions

Debt to EBITDA ratio was among the five objectives of this study which was measured in relation to performance of Microfinance Institutions in Kenya. The data computed from financial statements provided revealed contrasting outputs that signaled a diverse ratio from among Microfinance Institutions in Kenya. The ratio compared with performance in the correlation analysis revealed that debt to EBITDA had a weak positive and statistically significant Influence on the performance of MFIs in Kenya. It would obviously imply that if the Net income of these firms is higher in portfolio, it would have the debt levels managed optimally because in most cases, firms use their returns (income) to pay or meet their financial obligations. This attribute was also noted to hold the least significance when comparing it with MFIs' performance.

It should be noted that firm managers are under indelible obligation of ensuring that their firms yield attractive earnings because it is a key indicator in determining profitability of any institution. To note, MFIs under this study yielded very minimal profits over the years which signals a red flag on their performance. If a firm performs well, its profitability will obviously be attractive all year round and that will mean that its growth will be eminent thus a show of their ability to meet financial obligations any time they are due. It is therefore advisable that micro finance Institutions and firms in general should consider keeping the debt levels optimal and design new strategies which can increase profitability and pave way for growth and sustainability. Furthermore, firms are encouraged to be more strategic, especially on how they can maximize their profits because this if one of the main indicators of growth and sustainability.

5.2.5 The relationship between financial leverage alternatives and the performance of microfinance institutions in Kenya as moderated by firm size.

Firm size defines the overall portfolio that is held by companies and is weighed out in terms of the total assets held by a firm, the total number of employees in the firm and the number of branches that are being managed. As it was noted, the 13 MFIs (sample size) had different asset portfolios over the years of which most of them would increase each year. This study considered the firm size as a moderating variable between financial leverage alternatives (independent variable) and the performance of microfinance institutions (dependent variable). The basis of measure of firm size was narrowed to total assets out of which the correlational results affirmed that firm size (as measured by total assets) had a statistically significant Influence on the relationship between

financial leverage alternatives and performance of Microfinance Institutions in Kenya. It is expected that as a firm expands in its size, it attracts additional financial needs/expenses to meet the growing demands and therefore, prudent choices should be made to avoid running into limbo. The choice of capital structure can be influenced by a firm's size while performance is influenced by the capital structure used. From these findings, firm managers are be advised to manage their asset expansion strategies so as to yield the best returns out of their investments. Furthermore, finance managers are asked to manage well the asset portfolio, especially when considering seeking external financing.

5.3 Implications for Theory

Theoretical frameworks around sources of finance and how they influence performance have been formulated by many scholars in the field of finance; Modigliani and Miler (1958), Myers (1984), Kraus and Litzenberger (1973) among others. The relevance of these theories also lie squarely within the objectives of this study that sought to establish the Influence of financial leverage alternatives on the performance of microfinance institutions (MFIs) in Kenya while considering the moderating role of firm size. The study considered the Modigliani and Miller theory as the lead theory which was further supported by the Trade-Off theory and the Pecking Order Theory. All the three theories are related to the capital structure of a firm that mostly revolve around a mix of debt and equity. However, the findings drawn by this study brought out mixed thoughts in relation to the aforementioned theories.

The Modigliani and Miler theory and the Trade-off theory agree with each other in most accounts because the Trade-off theory is basically built based on the findings of the Modigliani and Miller theory. Similarly, the findings from this research work have agreed to most accounts from these theories and also disagreed to some at equal measure. For instance, the study agrees with the arguments of Modigliani and Miller that the asset related risk and the capacity of revenue generated by a firm’s assets are critical in measuring the value of a firm which this study refers to as performance. However, this study disagrees with the MM’s argument that a firm’s market value is never affected by its capital investment decisions which include the decisions on allotment of dividends. In most cases, the value of a share is used as a determinant to understanding the value of a firm. One of the factors that gives investors confidence and assurance on whether or not to invest in a firm is the fact that a firm is able to generate returns from its shares in form of dividends

which must be distributed in accordance to the firms' prevailing policies. This study further contradicts the argument of MM theory that policies due not stand in the way while determining the cost of capital and value of a firm. This study believes that policies such as credit policy, dividend policy and investment policies are critical in determining the present and future value of a firm.

The observation made on the financing decisions by the MFIs under this study also conform to the Pecking Order theory which insinuates that shareholders/investors are risk averse and follow a specific order of financing beginning with the internal sources such as retained earnings. It was therefore noted from the statements of financial positions that whenever a financing was required by the MFIs, retained earnings stood as the first line of consideration. This believes that managers of MFIs have an advantage of information regarding their firms and should be at the forefront in charting the best strategies for their firms which is also a concurrence of the arguments by Myers' Pecking order theory. This study however believes that corporate tax (30% of net income) is a key factor that affects performance of a firm which is ignored by the Pecking order theory.

5.4 Implications for Policy and Practice

5.4.1 Implications for Policy

Policies are cardinal tools in the administration and management of firms and therefore, Microfinance Institutions are not exceptional. They help in the enhancing operations of firms which is aimed at delivering better performance. Some of the most important policies for microfinance institutions include, finance policy, credit/loans policy, investment policy, dividend policy, human resource policy among others. All these policies should be aligned to the long term strategic plans of the MFIs so as to be able to address both internal and external institutional needs which in many cases aim at maximizing both shareholders' profit and wealth. In line with this study, all the aforementioned policies are paramount and ought to be SMART (specific, measurable, achievable, relevant and time-bound) so as to seal any loopholes or lapses leading to poor performance. However, of utmost importance is the credit policy which defines the procedures to be considered when firms opt to seek finances for investment purposes.

The findings of this study revealed that debt to asset ratio, debt to equity ratio and debt to capital ratio were squarely controlled by the MFIs. However, debt to EBITDA ratio was not optimally observed which led to an ultimate Influence on the performance of MFIs as measured by Return

on Equity. This creates a gap in the logical perspective. With the borrowing/debt trends observed over the years, it should be implied that returns be attractive to earn the shareholders good dividends. This is however not the case thus provoking the need for enhanced credit and investment policies by these firms. It is therefore imperative that the finance managers should formulate SMART policies relating to debt and investment for them to grow optimally. Further, these managers should as well ensure that the policies remain dynamic to the changing economic environment and strictly adhered to so as in the long run, they stand to enhance both their managerial and finance functions and earn the trust form their shareholders.

Policy is administered both by the MFIs' management and by the Government through the Central Bank of Kenya (CBK). The CBK reports have however revealed that the MFIs/MFBs are not performing optimally even when considering the fact that they are continually capitalized through debt. The results are alarming and therefore call for a review in its (CBK) policy system so as to enhance prudent loaning process with the intended outcome (good performance). These policies should not be cast on stone. It should be noted that there are emerging issues that transpire on a day to day basis depending on the economic changes that are sometimes caused by government and global economic conditions. This may at times be triggered by the political stability of the country and other factors that lead to inflation and related economic setbacks. This study therefore calls for periodic reviews of these policies. The review is geared towards ascertaining whether the laid down policies are in conformity with the ever changing economic times. It is also imperative that the policies remain anchored to the long term strategic plans of microfinance institutions where key investment decisions are outlined and their implementation matrix defined.

5.4.2 Implications for Practice

The sustainability of a firm entirely depends on its performance. For these firms to perform better, those in charge; Manager & directors should always remain hands on, all the year round so as to realize attractive benefits in terms of dividends for the shareholders. For public limited companies, the published statements are laid bare to the public for the users of financial statements (Government, Shareholders, Investors, and Scholars etc.) to consume, interpret and decide (especially, for investors) on how to collaborate with these firms. For investors, they focus on the audit reports with particular interest on the statement of comprehensive income and statement of financial position. For the regulators of the Microfinance Institutions/MFBs (CBK), the statements

will also inform their decision on how to treat these firms in future. If the performance meets the expectation, the relationship will continue but if it falls below the expected minimum, it will lead to delisting or de-regulation.

Firm size is considered a measure of profitability and productivity of a company and it is mostly what investors wish to know about an organization before considering to invest in it. The indicators of firm size comprise of total number of branches, total number of employees and total assets. From the observed data (sample), these indicators kept on fluctuating (upwards & downwards) at different points in time during the ten year period. The indications of this would mean that these firms were struggling to remain in business by attempting to adjust their asset bases (selling their assets) and even working around right sizing of their human capital as a way of leveraging and sustaining the economic pressure in the industry. The implication of this would mean that firms that fail to sustain this economic strains will be on a rundown and this will result to more harsh conditions that will include, but not limited to take-overs, mergers/amalgamation, insolvency and/or ultimate winding up.

5.6 Recommendations for Future Research

This study aimed to establish the Influence of financial leverage alternatives on the performance of microfinance institutions in Kenya while considering firm size as a moderating variable on the relationship between financial leverage alternatives and performance. The findings of this study were clearly been outlined in chapter four and all of the four variables did prove to be scientifically and statistically correlated hence significant to draw conclusions about this study. This study had specifically considered the Influence of financial leverage alternatives (debt to asset, debt to equity, debt to capital and debt to EBITDA) on performance of microfinance institutions using firm size as a moderating variable. Financial leverage was just one among other components of leverage. The study therefore recommends that other forms of leverage such as operating leverage and combined average be tested in future studies to establish their relationship with firm performance. Operating leverage is a combination of fixed cost and variable cost while combined leverage comprises both financial leverage and operating leverage. Hence, new studies should be done to determine their Influence on performance of microfinance institutions in Kenya. This can be done to test and compare the findings with this study and other studies.

The nature of this study was longitudinal and focused on ten year period ranging from 2011-2020. This study recommends that a similar study be conducted but be made cross-sectional in methodology and also using primary data. This is because primary data will be more current and may present the most current state of affairs. Further, a study should be conducted to establish the Influence of financial leverage alternatives on the performance of microfinance institutions during the Covid-19 pandemic while considering the use of primary data. The study may consider a collection of both quantitative and qualitative data for analysis so as to compare the findings with those that have been made before. The study methodology can also be changed to compare of the findings correspond.

This study explored the alternatives of financial leverage and how they influence performance of microfinance institutions in Kenya using total assets as a moderating variable indicator for firm size. Firm size however has got two other elements which include total number of employees and total number of assets. This study therefore suggests that future studies can be conducted to establish the relationship between financial leverage alternatives and performance of microfinance institutions using other moderating variables relating to firm size (total number of employees and total number of branches). The results of the outcome of those studies can therefore be compared with the findings of this study. Further, different moderating variables such as age of the firm can be considered to compare the findings.

This study also aimed to establish various financial leverage alternatives and how they affect performance of microfinance institutions in Kenya. The study methodology narrowed the sample size specifically to microfinance banks which are of course unique in their operations. Microfinance institutions have been categorized to different clusters depending on the nature of their operations. This includes Microfinance Banks, Credit-Only Microfinance banks and Wholesale lenders. Each category operates in a unique framework but serves the interest of their clients (the poor). This study therefore suggests that future studies can be done using a different sample size/cluster of either credit only MFIs or Wholesale lenders so as to compare the findings. Lastly, microfinance is of global interest. From the introduction of this study, it was noted that microfinance activities are conducted in almost every part of the world as these firms strive to support the social and financial needs of the low income earning population. This study was specifically conducted in Kenya which is considered a middle income earning nation. This means that there are other parts of the world with a poorer population than those in Kenya. Therefore, this

study suggests that future research be conducted in other countries where microfinance institutions are also in pursuit of their objective of poverty alleviation and economic growth among the poor so as to compare the findings. Most preferably, in Africa or Asia where poverty index is high.

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APPENDICES

Appendix I: Data collection sheet Year of review……

APPENDIX I										
S/no	**Name of MFB**		**Debt/Asset Ratio**	**Debt/Capital Ratio**	**Debt/Equity**	**Debt/EBITDA**	**Firm Size**			**Perfo**
							Number of branches	**Number of employees**	**Total Assets 'millions'**	**R**
1	Kenya Women MFB PLC									
2	Faulu MFB Limited									
3	Rafiki MFB Limited									
4	SMEP MFB Limited									
5	Caritas MFB Limited									
6	Sumac MFB Limited									
7	Key MFB Limited									
8	U & I MFB Limited									
9	Uwezo MFB Limited									
10	Daraja MFB Limited									
11	Maisha MFB Limited									
12	Century MFB Limited									
13	Choice MFB Limited									

Appendix II: Ratios/Formulas & Interpretations

$$\textbf{Debt - to- Asset Ratio} = \frac{\text{Total Debt}}{\text{Total Assets}}$$

Where: Significance and interpretation of the ratio is as follows;

i. Where the ratio is equal to one (=1): Shows that a firm is highly levered because it has more liabilities as its assets.

ii. Where the ratio is above one (>1): Is an indication the firm has got more liabilities than assets and therefore with a lot of financial obligations than it is likely to meet and not advisable to lend to.

iii. Where the ratio is less than one (<1): Shows that a company is stable and its assets are more as compared to its liabilities and therefore able to settle its financial needs when called to do so.

$$\textbf{Debt-to-Equity Ratio} \quad \frac{\text{Total Debt}}{\text{Total Equity}}$$

Where The ratios significance and interpretation a

i. Where the ratio is equal to one (=1): Is an indication that creditors and shareholders 'equity in the firm are equally contributed to by them.

ii. Where the ratio is greater than one (>1): Is an indication that the creditors of the firm have contributed a greater portion in terms amount lent to the firm as compared to the total contribution of the shareholders in form of equity .

iii. Where the ratio is less than one (<1): Is an indication that shareholders of the firm have contributed a greater portion of firms in terms of equity as compared to their creditors.

$$\textbf{Debt-to-Capital Ratio} = \frac{\text{Total Debt}}{\text{Total Debt + Total Equity}}$$

Where;

The ratios significance and interpretation are as follows;

i. Where the ratio is equal to one (=1): Means that creditors and shareholders have equal contribution towards the firm's assets of the business.
ii. Where the ratio is above one (>1): Is an indication that the firm has more debt than capital hence the firm stands at the risk of bankruptcy.
iii. Where the ratio is less than one (<1): Is an indication that the firm's debt level is at a controllable stage therefore has less risk and can be loaned to with all factors considered.

$$\textbf{Debt-to-EBITDA Ratio} = \frac{\text{Total Debt}}{\text{EBITDA}}$$

Where:

Generally, a firm with a ratio of less than 3 is considered to be in a normal financial state while firms with a ratio above 4 or 5 are considered to be at risk of financial difficulties and may not be able to handle their debts. Firm finance managers should therefore consider keeping the debt levels at minimum to allow their firms to have continuity in their operations. EBITDA is used to measure a company's solvency and margin of safety with regard to interest payment period.

$$\textbf{Return on Assets} = \frac{\text{Profit before tax}}{\text{Total Assets}} * 100 \qquad \textbf{Return on Equity (ROE)} = \frac{\text{Profit before tax}}{\text{Shareholders' Equity}} * 100$$

Appendix III: Target Population/ List of Microfinance Institutions

No	Name of Microfinance Institution	Category/Cluster
1	Caritas MFB Limited	MF Bank
2	Century MFB Limited	MF Bank
3	Choice MFB Limited	MF Bank
4	Daraja MFB Limited	MF Bank
5	Faulu MFB Limited	MF Bank
6	Kenya Women MFB PLC	MF Bank
7	Rafiki MFB Limited	MF Bank
8	Key MFB Limited	MF Bank
9	SMEP MFB Limited	MF Bank
10	Sumac MFB Limited	MF Bank
11	U & I MFB Limited	MF Bank
12	Uwezo MFB Limited	MF Bank
13	Maisha MFB Limited	MF Bank
14	Muungano MFB PLC	MF Bank
15	Eclof Kenya	(Credit Only) FI
16	Vision Fund Kenya Ltd	(Credit Only) FI
17	BIMAS Ltd	(Credit Only) FI
18	Letshego Kenya Ltd	(Credit Only) FI
19	Zenka Finance Ltd	(Credit Only) FI
20	Yehu Microfinance Trust	(Credit Only) FI
21	Jitegemee Credit Scheme	(Credit Only) FI
22	Fincredit Services Ltd	(Credit Only) FI
23	Juhudi Kilimo Co. Ltd	(Credit Only) FI
24	Musoni Kenya Ltd	(Credit Only) FI
25	Select Management Services Ltd	(Credit Only) FI
26	Greenland Fedha Ltd	(Credit Only) FI

27	Platinum Credit Ltd	(Credit Only) FI
28	Habitat For Humanity International	(Credit Only) FI
29	Real People Ltd	(Credit Only) FI
30	Neema Health, Education & Empowerment Programme Ltd	(Credit Only) FI
31	Ushindi Bora Ltd	(Credit Only) FI
32	Hand in hand Eastern Africa Ltd	(Credit Only) FI
33	Nyali Capital Limited	(Credit Only) FI
34	Premier Credit Limited	(Credit Only) FI
35	Moneyworth Investment Limited	(Credit Only) FI
36	Hazina development Trust Limited	(Credit Only) FI
37	Spring Board Capital Limited	(Credit Only) FI
38	Progressive Credit Limited	(Credit Only) FI
39	Logitude Finance Ltd	(Credit Only) FI
40	Jiweze Ltd	(Credit Only) FI
41	ASA Ltd	(Credit Only) FI
42	Kipepeo Microcredit Limited	(Credit Only) FI
43	Liberty Afrika Technologies Limited	(Credit Only) FI
44	Diversity Microcredit Ltd	(Credit Only) FI
45	Momentum Credit Ltd	(Credit Only) FI
46	Weighbridge Venture Ltd	(Credit Only) FI
47	My Credit Ltd	(Credit Only) FI
48	PAWDEP Ltd	(Credit Only) FI
49	MESPT (Microenterprises Support Programme Trust) Ltd	Wholesale MFI

50	Soluti Finance East Africa Ltd	Wholesale MFI
51	Oiko Credit Ltd	Wholesale MFI
52	Swiss Contact	Development Institution
53	Stima Sacco	SACCO

Source: Association of Microfinance Institutions (2021)

Appendix IV: Map of Area of Study

Appendix V: University Introductory Letter

KISII UNIVERSITY

Telephone : 020 2610479
Facsimile : 020 2491131
Email :fcommerce@kisiiuniversity.ac.ke

P. O. Box 408-40200
KISII, KENYA.
www.kisiiuniversity.ac.ke

SCHOOL OF BUSINESS AND ECONOMICS

OFFICE OF THE COORDINATOR, POST-GRADUATE PROGRAMMES

Ref: KSU/SBE/DCB12/00025/18

Tuesday, 26th April, 2022.

The Director,
National Commission for Science, Technology &
Innovation (NACOSTI)
NAIROBI.

Dear Sir,

REF: APPLICATION FOR A RESEARCH PERMIT FOR MORONYA ASHA HESBORN REG. NO. DCB12/00025/18

The above named is a PhD student in our institution who intends to carry out a Research. The intended study is titled; **"Effect of Financial Leverage Alternatives on Performance of Microfinance Institutions in Kenya: A Moderating role of Firm Size.**

The purpose of this letter is to request you to give him a research permit to enable him conduct the research.

Thank you.

KISII UNIVERSITY
CO-ORDINATOR, POST-GRADUATE PROGRAMMES

Dr. Joshua Wafula, PhD
COORDINATOR, POST-GRADUATE PROGRAMMES

JW/ab

KISII UNIVERSITY IS ISO 9001:2008 CERTIFIED

Appendix VI: Research License

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY & INNOVATION

Ref No:**784981**

Date of Issue: **04/May/2022**

RESEARCH LICENSE

This is to Certify that Mr. HESBORN ASHA MORONYA of Kisii University, has been licensed to conduct research in Kisii, Nairobi on the topic: EFFECT OF FINANCIAL LEVERAGE ALTERNATIVES ON PERFORMANCE MICROFINANCE INSTITUTIONS IN KENYA. A MODERATING ROLE OF FIRM SIZE. For the period ending: 04/May/2023.

License No: **NACOSTI/P/22/17221**

784981

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE.TECHNOLOGY & INNOVATION

Verification QR Code

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The Grant of Research Licenses is guided by the Science, Technology and Innovation (Research Licensing) Regulations, 2014

CONDITIONS

The License is valid for the proposed research, location and specified period

1. The License any rights thereunder are non-transferable
2. The Licensee shall inform the relevant County Director of Education, County Commissioner and County Governor before commencement of the research
3. Excavation, filming and collection of specimens are subject to further necessary clearance from relevant Government Agencies
4. The License does not give authority to transfer research materials
5. NACOSTI may monitor and evaluate the licensed research project
6. The Licensee shall submit one hard copy and upload a soft copy of their final report (thesis) within one year of completion of the research
7. NACOSTI reserves the right to modify the conditions of the License including cancellation without prior notice

National Commission for Science,
Technology and Innovation off Waiyaki
Way, Upper Kabete,
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registry@nacosti.go.ke Website:
www.nacosti.go.ke

Appendix VII: Personal letter for secondary data collection from CBK

MORONYA ASHA HESBORN,

P.O BOX 4415-40200,

KISII

30TH MAY 2022

THE DIRECTOR RESEARCH DEPARTMENT,

CENTRAL BANK OF KENYA.

P.O BOX…….

NAIROBI.

Dear Sir/Madam,

RE: PERMISSION TO COLLECT SECONDARY DATA FOR MY DOCTORATE STUDY.

Am a doctorate student at Kisii University pursuing a degree in Doctor of Philosophy (PhD) in Business Administration- Finance option with DCB12/00025/18 as my registration number. Am in my final year whereby am currently conducting a research on **'the effect of financial leverage alternatives on performance of microfinance banks in Kenya. A moderating role of firm Size'.** Having successfully defended my proposal, I have been allowed by the university school of business and licensed by the national commission for science, technology and innovation (NACOSTI) to proceed for secondary data collection which am supposed to get from the central bank of Kenya.

The purpose of this letter is therefore to make my kind request to your office to support me in this academic process. My research seeks to collect a ten years (2010-2019) financial information for 13 microfinance banks that is majorly reflected on these banks' statements of financial position or from the audited books of the said institutions. The banks are as listed below;

1. CARITAS MFB LIMITED
2. CENTURY MFB LIMITED
3. CHOICE MFB LIMITED
4. DARAJA MFB LIMITED
5. FAULU MFB LIMITED

6. KENYA WOMEN MFB PLC
7. RAFIKI MFB LIMITED
8. KEY MFB LIMITED
9. SMEP MFB LIMITED
10. SUMAC MFB LIMITED
11. U & I MFB LIMITED
12. UWEZO MFB LIMITED
13. MAISHA MFB LIMITED
14. MUUNGANO MFB PLC

As an ethical practice, the data to be collected will purely be used for academic purposes and in strict confidence as required. Attached herewith is a copy of the university letter recommending me for the said research, a NACOSTI license permit, an extract of my research title, data collection of chapter three and data collection tool for your perusal.

I look forward to your response towards my request.

Yours faithfully.

Moronya Asha Hesborn

Contact: 0786157008/0742000138

Appendix VIII Field data

Collected Data									Year of review 2011
S/no	Name of MFB	Debt/Asset Ratio	Debt/ Capital Ratio	Debt/ Equity Ratio	Debt/ EBITDA Ratio	Firm Size			Performance
						Number of branches	Number of employees	Total Assets 'millions'	ROE (%)
1	Kenya Women MFB PLC	0.42	0.79	3.73	28.07	19	125	17,036.00	13.30
2	Faulu MFB Limited	0.47	0.81	4.36	11.23	27	26	5,141.00	0.18
3	Rafiki MFB Limited	0.23	0.43	0.74	(4.55)	3	17	441.00	(16.30)
4	SMEP MFB Limited	0.45	0.78	3.61	8.12	6	26	1,998.00	13.10
5	Caritas MFB Limited	-	-	-	-	-	-	-	-
6	Sumac MFB Limited	-	-	-	-	-	-	-	-
7	Key MFB Limited	-	-	-	-	3	15	124.00	(13.00)
8	U & I MFB Limited	-	-	-	-	-	-	-	-
9	Uwezo MFB Limited	-	-	-	-	2	9	59.00	(21.28)
10	Daraja MFB Limited	-	-	-	-	-	-	-	-
11	Maisha MFB Limited	-	-	-	-	-	-	-	-
12	Century MFB Limited	-	-	-	-	-	-	-	-
13	Choice MFB Limited	-	-	-	-	-	-	-	-

Collected Data									Year of review 2012
S/no	Name of MFB	Debt/ Asset Ratio	Debt/ Capital Ratio	Debt/ Equity Ratio	Debt/ EBITDA Ratio	Firm Size			Performance
						Number of branches	Number of employees	Total Assets 'millions'	ROE (%)
1	Kenya Women MFB PLC	0.39	0.77	3.42	6.23	24	159	20,384.00	10.68
2	Faulu MFB Limited	0.28	0.79	3.52	5.94	30	73	7,638.00	15.80
3	Rafiki MFB Limited	0.24	0.76	3.10	54.25	4	26	1,838.00	5.71
4	SMEP MFB Limited	0.27	0.50	0.99	3.63	7	43	2,290.00	13.39
5	Caritas MFB Limited	-	-	-	-	-	-	-	-
6	Sumac MFB Limited	-	-	-	-	-	-	-	-
7	Key MFB Limited	-	-	-	-	3	2	181.00	(11.76)
8	U & I MFB Limited	-	-	-	-	-	-	-	-
9	Uwezo MFB Limited	-	-	-	-	2	1	78.00	(3.64)
10	Daraja MFB Limited	-	-	-	-	-	-	-	-
11	Maisha MFB Limited	-	-	-	-	-	-	-	-
12	Century MFB Limited	-	-	-	-	-	-	-	-
13	Choice MFB Limited	-	-	-	-	-	-	-	-

Collected Data									Year of review 2013
S/no	Name of MFB	Debt/ Asset Ratio	Debt/ Capital Ratio	Debt/ Equity Ratio	Debt/ EBITDA Ratio	Firm Size			Performance
						Number of branches	Number of employees	Total Assets 'millions'	ROE (%)
1	Kenya Women MFB PLC	0.23	0.63	1.72	3.81	28	232	21,752.00	19.71
2	Faulu MFB Limited	0.17	1.38	2.62	2.62	31	110	12,434.00	29.70
3	Rafiki MFB Limited	0.20	0.62	1.62	7.77	13	27	3,679.00	3.22
4	SMEP MFB Limited	0.20	0.44	0.78	5.55	7	80	2,490.00	4.14
5	Caritas MFB Limited	-	-	-	-	-	-	-	-
6	Sumac MFB Limited	0.03	0.42	0.04	(8.00)	3	1	307.00	(8.74)
7	Key MFB Limited	0.05	0.12	0.12	(2.00)	3	1	337.00	(6.06)
8	U & I MFB Limited	-	-	-	-	2	1	80.00	4.44
9	Uwezo MFB Limited	0.05	0.07	0.07	(1.67)	2	2	107.00	(4.48)
10	Daraja MFB Limited	-	-	-	-	-	-	-	-
11	Maisha MFB Limited	-	-	-	-	-	-	-	-
12	Century MFB Limited	-	-	-	-	2	2	164.00	(42.22)
13	Choice MFB Limited	-	-	-	-	-	-	-	-

Collected Data									Year of review 2014
S/no	Name of MFB	Debt/ Asset Ratio	Debt /Capital Ratio	Debt/ Equity Ratio	Debt/ EBITDA Ratio	Firm Size			Performance
						Number of branches	Number of employees	Total Assets 'millions'	ROE (%)
1	Kenya Women MFB PLC	0.16	0.48	0.92	3.70	29	550	26,985.00	15.13
2	Faulu MFB Limited	0.07	0.26	0.35	1.90	32	263	20,320.00	11.41
3	Rafiki MFB Limited	0.16	0.48	0.95	8.55	17	5	5,975.00	1.88
4	SMEP MFB Limited	0.17	0.42	0.71	(5.21)	7	79	2,378.00	(21.08)
5	Caritas MFB Limited	-	-	-	-	-	-	-	-
6	Sumac MFB Limited	0.17	0.26	0.36	5.67	3	1	390.00	2.12
7	Key MFB Limited	0.01	0.02	0.02	1.67	3	1	395.00	0.96
8	U & I MFB Limited	-	-	-	-	2	4	137.00	3.61
9	Uwezo MFB Limited	0.07	0.12	0.13	5.50	2	4	160.00	2.44
10	Daraja MFB Limited	-	-	-	-	-	-	-	-
11	Maisha MFB Limited	-	-	-	-	-	-	-	-
12	Century MFB Limited	-	-	-	-	2	3	231.00	(51.32)
13	Choice MFB Limited	-	-	-	-	-	-	-	-

Collected Data									
								Year of review 2015	
S/no	**Name of MFB**	**Debt/ Asset Ratio**	**Debt/Capital Ratio**	**Debt/ Equity Ratio**	**Debt/ EBITDA Ratio**	**Firm Size**			**Performance**
						Number of branches	**Number of employees**	**Total Assets 'millions'**	**ROE %**
1	Kenya Women MFB PLC	**0.26**	**0.64**	**1.75**	**6.53**	**31**	**672**	**31,861.00**	**11.89**
2	Faulu MFB Limited	**0.11**	**0.38**	**0.62**	**5.97**	**39**	**381**	**25,324.00**	**4.26**
3	Rafiki MFB Limited	**0.20**	**0.60**	**1.48**	**9.59**	**17**	**6**	**7,729.00**	**4.41**
4	SMEP MFB Limited	**0.22**	**0.47**	**0.89**	**17.45**	**7**	**37**	**2,592.00**	**(0.62)**
5	Caritas MFB Limited	-	-	-	-	**1**	**1**	**186.00**	**(68.18)**
6	Sumac MFB Limited	**0.24**	**0.41**	**0.69**	**4.24**	**4**	**2**	**608.00**	**6.28**
7	Key MFB Limited	**0.10**	**0.17**	**0.21**	**(1.90)**	**3**	**3**	**397.00**	**(10.77)**
8	U & I MFB Limited	-	**0.14**	**0.17**	**1.64**	**2**	**5**	**184.00**	**8.41**
9	Uwezo MFB Limited	-	-	-	-	**2**	**4**	**226.00**	**1.11**
10	Daraja MFB Limited	-	-	-	-	**1**	**2**	**83.00**	**(52.24)**
11	Maisha MFB Limited	-	-	-	-	-	-	-	-
12	Century MFB Limited	**0.11**	**0.29**	**0.42**	**(0.38)**	**2**	**6**	**197.00**	**(109.43)**
13	Choice MFB Limited	-	-	-	-	**1**	**2**	**77.00**	**(70.18)**

Collected Data									Year of review 2016
S/no	Name of MFB	Debt/ Asset Ratio	Debt/ Capital Ratio	Debt/ Equity Ratio	Debt/ EBITDA Ratio	Firm Size			Performance
						Number of branches	Number of employees	Total Assets 'millions'	ROE (%)
1.	Kenya Women MFB PLC	0.28	0.66	1.91	6.50	32	617	32,153.00	6.81
2.	Faulu MFB Limited	0.16	0.50	1.01	9.14	39	437	27,369.00	2.26
3.	Rafiki MFB Limited	0.27	0.73	2.70	(6.09)	17	15	7,327.00	(61.88)
4.	SMEP MFB Limited	0.23	0.54	1.17	(6.64)	7	49	2.66	(27.91)
5.	Caritas MFB Limited	-	-	-	-	3	15	574.00	(27.31)
6.	Sumac MFB Limited	0.28	0.48	0.92	3.98	4	6	803.00	7.32
7.	Key MFB Limited	0.19	0.27	0.36	(7.44)	3	3	362.00	(9.24)
8.	U & I MFB Limited	0.05	0.39	0.16	1.12	2	3	351.00	10.17
9.	Uwezo MFB Limited	-	-	-	-	2	4	214.00	1.68
10.	Daraja MFB Limited	-	-	-	-	2	4	180.00	(54.87)
11.	Maisha MFB Limited	-	-	-	-	2	4	171.00	(52.81)
12.	Century MFB Limited	0.08	0.38	0.61	(0.46)	3	3	225.00	(132.26)
13.	Choice MFB Limited	0.04	0.10	0.11	0.10	2	3	122.00	(108.69)

Collected Data									Year of review 2017
S/no	Name of MFB	Debt/Asset Ratio	Debt/ Capital Ratio	Debt/ Equity Ratio	Debt/ EBITDA Ratio	Firm Size			Performance
						Number of branches	Number of employees	Total Assets 'millions'	ROE %
1.	Kenya Women MFB PLC	0.23	0.59	1.44	6.66	32	616	28,931.00	0.79
2.	Faulu MFB Limited	0.14	0.44	0.79	4.95	37	333	25,325.00	4.95
3.	Rafiki MFB Limited	0.24	0.83	4.69	(5.65)	17	16	6,727.00	(108.39)
4.	SMEP MFB Limited	0.21	0.54	1.16	(10.72)	7	50	2,734.00	(23.95)
5.	Caritas MFB Limited	0.02	0.07	0.07	(0.28)	5	13	879.00	(26.01)
6.	Sumac MFB Limited	0.35	0.61	1.57	6.08	5	11	1,137.00	3.98
7.	Key MFB Limited	0.15	0.24	0.31	(3.06)	3	5	354.00	(14.97)
8.	U & I MFB Limited	0.10	0.19	0.24	1.77	2	7	406.00	9.88
9.	Uwezo MFB Limited	-	-	-	-	3	6	212.00	(7.10)
10.	Daraja MFB Limited	-	-	-	-	2	4	168.00	(115.38)
11.	Maisha MFB Limited	-	-	-	-	2	3	302.00	(74.63)
12.	Century MFB Limited	0.06	0.58	1.38	(0.29)	3	4	288.00	(484.62)
13.	Choice MFB Limited	0.07	0.21	0.27	(0.19)	2	5	136.00	(145.95)

Collected Data									Year of review 2018
S/no	Name of MFB	Debt/ Asset Ratio	Debt/ Capital Ratio	Debt/ Equity Ratio	Debt/ EBITDA Ratio	Firm Size			Performance
						Number of branches	Number of employees	Total Assets 'millions'	ROE (%)
1.	Kenya Women MFB PLC	0.27	0.67	1.99	(32.61)	32	590	29,582.00	(25.65)
2.	Faulu MFB Limited	0.16	0.56	1.28	5.74	37	233	27,225.00	7.91
3.	Rafiki MFB Limited	0.12	0.36	0.56	(3.44)	17	17	6,050.00	(21.39)
4.	SMEP MFB Limited	0.17	0.49	0.95	11.59	7	25	2,942.00	(3.12)
5.	Caritas MFB Limited	0.02	0.09	0.10	(0.31)	5	18	1,244.00	(32.32)
6.	Sumac MFB Limited	0.41	0.66	1.96	4.88	5	15	1,530.00	5.02
7.	Key MFB Limited	0.32	0.49	0.91	(4.34)	3	5	433.00	(27.45)
8.	U & I MFB Limited	0.13	0.29	0.43	3.27	2	4	534.00	7.69
9.	Uwezo MFB Limited	-	-	-	-	3	6	225.00	(21.83)
10	Daraja MFB Limited	0.03	0.13	0.22	(0.11)	2	4	172.00	(191.30)
11	Maisha MFB Limited	-	-	-	-	2	5	289.00	(1,487.50)
12	Century MFB Limited	-	0.01	0.02	(0.04)	3	5	431.00	(37.88)
13	Choice MFB Limited	0.12	(0.67)	(0.40)	(0.21)	2	3	98.00	196.67

Collected Data									Year of review 2019
S/no	Name of MFB	Debt/ Asset Ratio	Debt/ Capital Ratio	Debt/ Equity Ratio	Debt/ EBITDA Ratio	Firm Size			Performance
						Number of branches	Number of employees	Total Assets 'millions'	ROE %
1	Kenya Women MFB PLC	0.27	0.52	2.18	21.65	32	358	30,613.00	(13.65)
2	Faulu MFB Limited	0.15	0.37	0.58	4.31	37	343	29,682.00	12.08
3	Rafiki MFB Limited	0.11	0.20	0.25	15.49	17	24	5,935.00	(0.32)
4	SMEP MFB Limited	0.15	0.32	0.48	5.79	7	17	3,314.00	3.77
5	Caritas MFB Limited	0.05	0.14	0.16	(1.79)	5	33	1,712.00	(21.16)
6	Sumac MFB Limited	0.40	0.55	1.22	5.29	5	8	2,013.00	5.47
7	Key MFB Limited	0.33	0.31	0.45	(6.65)	3	3	406.00	(23.13)
8	U & I MFB Limited	0.23	0.31	0.45	7.75	2	9	686.40	4.62
9	Uwezo MFB Limited	-	-	-	-	3	6	168.00	(60.68)
10	Daraja MFB Limited	-	-	-	-	2	4	133.00	(511.11)
11	Maisha MFB Limited	-	-	-	-	2	8	1,264.00	(4.76)
12	Century MFB Limited	0.05	0.30	0.43	(0.44)	3	5	348.00	(195.45)
13	Choice MFB Limited	0.24	(0.37)	(0.27)	(0.70)	2	2	79.00	(57.14)

Collected Data									Year of review 2020
S/no	Name of MFB	Debt/ Asset Ratio	Debt/ Capital Ratio	Debt/ Equity Ratio	Debt/ EBITDA Ratio	Firm Size			Performance
						Number of branches	Number of employees	Total Assets 'millions'	ROE %
1	Kenya Women MFB PLC	0.25	0.75	3.01	(8.71)	28	299	28,038.00	(63.83)
2	Faulu MFB Limited	0.07	0.41	0.69	(34.19)	37	468	29,279.00	(16.37)
3	Rafiki MFB Limited	0.12	0.54	1.17	(51.86)	17	35	6,005.00	(9.69)
4	SMEP MFB Limited	0.11	0.48	0.92	(7.86)	7	7	3,446.00	(22.58)
5	Caritas MFB Limited	-	-	-	-	5	48	2,284.00	1.95
6	Sumac MFB Limited	0.32	0.67	2.07	6.12	5	13	2,310.00	3.13
7	Key MFB Limited	0.36	0.50	1.02	(6.47)	3	7	307.00	(31.48)
8	U & I MFB Limited	0.29	0.55	1.19	605.00	2	10	805.00	9.14
9	Uwezo MFB Limited	-	-	-	-	3	6	134.00	(23.00)
10	Daraja MFB Limited	-	-	-	-	2	4	124.00	(83.33)
11	Maisha MFB Limited	-	-	-	-	2	11	1,665.00	7.52
12	Century MFB Limited	0.03	(0.30)	(0.23)	(0.15)	3	5	296.00	(153.85)
13	Choice MFB Limited	0.09	(0.08)	(0.28)	(0.20)	2	1	54.00	40.00

Appendix IX: Central Bank of Kenya Reports/Data (2011-2020)

Appendix IX

DTMs' BALANCE SHEET AND PROFIT & LOSS ACCOUNT - DECEMBER 2011 - Ksh. M

		FAULU KENYA	KWFT	SMEP	REMU	RAFIKI	UWEZO	TOTAL
A	**STATEMENT OF FINANCIAL POSITION**							
1.0	**ASSETS**							
1.1	Cash Balances(Both Local and Foreign)	113	242	7	5	10	1	378
1.2	Short term Deposits with banks	384	3,743	267	56	254	10	4,734
1.3	Kenya Government Securities	282	58	192	5	-	-	507
1.4	Advances to customers	3,238	11,200	1,445	41	104	32	16,060
1.5	Due from related organisations	0	-	-	-	-	-	0
1.6	Other Receivables	237	97	33	3	5	1	377
1.7	Deffered Tax	50	229	3	3	6	4	296
1.8	Other Investment	0	154	-	-	-	0	154
1.9	Investment in associate companies	20	-	-	-	-	-	20
1.10	Intangible assets	219	9	10	2	20	2	261
1.11	Property and Equipment	627	1,304	20	10	41	8	2,011
	TOTAL ASSETS	**5,141**	**17,036**	**1,966**	**124**	**441**	**59**	**24,798**
2.0	**LIABILITIES**							
2.1	Cash Collaterals held	-	-	-	6	4	3	14
2.2	Customer Deposits	1,965	7,077	792	14	98	8	9,953
2.3	Borrowings	2,426	7,187	909	-	100	-	10,622
2.4	Deferred Income	2	-	-	-	-	-	2
2.5	Deferred Tax Liability	-	-	-	-	-	-	0
2.6	Due to related organisation	4	-	22	-	75	-	101
2.7	Other Liabilities	188	847	24	5	29	1	1,093
	TOTAL LIABILITIES	**4,594**	**15,111**	**1,747**	**25**	**306**	**12**	**21,784**
3.0	**SHARE CAPITAL & RESERVES**							
3.1	Share Capital	120	100	60	116	150	58	604
3.2	Share Premium	274	1,201	157	2	-	-	1,633
3.3	Retained Earnings	24	526	18	(18)	(17)	(11)	521
3.4	Revaluation Reserve	89	-	-	0	-	0	90
3.5	Statutory Reserve	49	98	17	-	1	-	165
	TOTAL SHARE HOLDERS FUNDS	**556**	**1,925**	**252**	**100**	**135**	**47**	**3,014**
	TOTAL LIABILITIES AND EQUITY	**5,141**	**17,036**	**1,966**	**124**	**441**	**59**	**24,798**
B	**STATEMENT OF COMPREHENSIVE INCOME**							
1.0	**Income**							
1.1	Interest on Loan Portfolio	968	3,367	357	5	4	6	4,706
1.2	Fees and Commission on Loan Portfolio	159	284	65	2	4	2	515
1.3	Government Securities	23	8	19	1	-	-	50
1.4	Deposit and Balances with Banks and Financial Inst.	35	240	3	7	11	0	295
1.5	Other Investments	-	-	-	-	-	0	0
1.6	Other Operating Income	71	205	29	0	1	0	307
1.7	Non Operating Income	10	3	9	-	-	0	23
	Total Income	**1,267**	**4,085**	**502**	**14**	**20**	**9**	**5,897**
2.0	**Expenses**							
2.1	Interest and fee Expenses on Deposits	27	115	1	0	1	0	144
2.2	Other Fees and Commissions expense	11	1,030	-	-	0	0	1,040
2.3	Provision for Loan Impairment	29	(224)	53	2	-	2	-139
2.4	Staff Costs	504	1,590	178	12	23	6	2,313
2.5	Directors Emoluments	4	51	3	-	0	1	59
2.6	Rental Charges	77	150	34	3	3	2	270
2.7	Depreciation Charges	93	166	8	2	3	1	273
2.8	Amortization Charges	13	3	7	1	1	1	26
2.9	Other Administration Expense	289	949	106	8	10	3	1,365
2.10	Non Operating Expense	5	-	-	-	-	2	7
	Total Expense	**1,051**	**3,830**	**390**	**27**	**41**	**19**	**5,358**
3.0	**Operating Profit**	**216**	**256**	**112**	**(13)**	**(22)**	**(10)**	539
4.0	Interest and fee Expenses on Borowed finance Costs	215	-	79	-	-	-	294
5.0	**Profit /Loss Before Tax**	**1**	**256**	**33**	**(13)**	**(22)**	**(10)**	**245**
6.0	Current Tax	3	144	7	-	-	-	154
6.1	Deferred Tax	11	(120)	-	-	6	(2)	-105
7.0	**Net Profit (After taxes and before Donations)**	**(13)**	**232**	**26**	**(13)**	**(15)**	**(8)**	208
8.0	Donations for Operating Expense	15	71	-	-	-	-	86
9.0	**Net Profit after taxes**	**2**	**302**	**26**	**(13)**	**(15)**	**(8)**	**294**
10.0	Surplus on revaluation of building	35	-	-	-	-	-	35
11.0	Defferd tax on revalution surplus	(11)	-	-	-	-	-	-11
	Total Comprehensive Income	**27**	**302**	**26**	**(13)**	**(15)**	**(8)**	319

Source: DTMs' Published Financial Statements

Appendix IX

DTMs BALANCE SHEET AND PROFIT & LOSS ACCOUNT-DECEMBER 2012- Ksh. M

		FAULU KENYA	KWFT	SMEP	REMU	RAFIKI	UWEZO	TOTAL
A	**STATEMENT OF FINANCIAL POSITION**							
1.0	**ASSETS**							
1.1	Cash Balances (Both Local and Foreign)	175	1,028	14	5	22	1	1,245
1.2	Short term deposits with banks	978	4,092	523	62	1,067	19	6,741
1.3	Government securities	292	19	100	-	-	-	411
1.4	Advances to customers	4,949	12,873	1,454	86	508	38	19,908
1.5	Due from related organisations	-	-	-	-	-	-	-
1.6	Other receivables	380	358	34	6	52	6	836
1.7	Deferred Tax	-	218	15	5	4	5	247
1.8	Other investment	-	-	-	4	-	-	4
1.9	Investment in associate companies	34	-	-	-	-		34
1.10	Intangible assets	87	16	9	3	19	1	135
1.11	Property and equipment	743	1,780	141	10	166	8	2,848
	TOTAL ASSETS	**7,638**	**20,384**	**2,290**	**181**	**1,838**	**78**	**32,409**
2.0	**LIABILITIES**							
2.1	Cash collaterals held	1,516	6,861	-	7	18	4	8,406
2.2	Customer deposits	2,949	2,493	1,014	61	468	18	7,003
2.3	Borrowings	2,162	7,869	617	-	434	-	11,082
2.4	Deferred income	-	-	-	-	-	-	-
2.5	Deferred tax liability	30	-	-	-	-	-	30
2.6	Due to related organisations	2	20	1	-	741	-	764
2.7	Other liabilities	365	838	38	11	37	1	1,290
	TOTAL LIABILITIES	**7,024**	**18,081**	**1,670**	**79**	**1,698**	**23**	**28,575**
3.0	**SHARE CAPITAL & RESERVES**							
3.1	Share capital	120	125	461	125	150	68	1,049
3.2	Share premium	274	1,380	84	3	-	-	1,741
3.3	Retained earnings	4	628	58	(26)	(32)	(13)	619
3.4	Revaluation reserve	88	-	-	-	-	-	88
3.5	Statutory reserve	128	170	17	-	22	-	337
	TOTAL SHAREHOLDERS' FUNDS	**614**	**2,303**	**620**	**102**	**140**	**55**	**3,834**
	TOTAL LIABILITIES AND EQUITY	**7,638**	**20,384**	**2,290**	**181**	**1,838**	**78**	**32,409**
B	**STATEMENT OF COMPREHENSIVE**							
1.0	**Income**							
1.1	Interest on Loan Portfolio	1,133	4,065	467	15	91	20	5,791
1.2	Fees and Commission on Loan Portfolio	251	611	65	3	21	3	954
1.3	Government Securities	23	4	23	-	-	-	50
1.4	Deposit and Balances with Banks and Financial	78	248	16	7	90	-	439
1.5	Other Investments	-	-	-	-	-	-	-
1.6	Other Operating Income	194	65	27	1	-	1	288
1.7	Non-Operating Income	9	-	8	-	24	-	41
	Total Income	**1,688**	**4,993**	**606**	**26**	**226**	**24**	**7,563**
2.0	**Expenses**							
2.1	Interest and Fee Expense on Deposits	125	247	4	2	22	1	401
2.2	Other Fees and Commissions expense	27	60	-	-	43	-	130
2.3	Provision for Loan Impairment	38	38	32	2	12	5	127
2.4	Staff Costs	520	1,935	203	17	56	6	2,737
2.5	Director's Emoluments	9	69	5	-	14	3	100
2.6	Rental Charges	76	171	40	4	11	2	304
2.7	Depreciation Charges	83	205	12	2	9	2	313
2.8	Amortization Charges	12	4	4	1	3	1	25
2.9	Other Administrative Expense	432	1,001	136	10	48	6	1,633
2.1	Non-Operating Expense	4	-	-	-	-	-	4
	Total Expenses	**1,326**	**3,730**	**436**	**38**	**218**	**26**	**5,774**
3.0	**Operating Profit**	**362**	**1,263**	**170**	**(12)**	**8**	**(2)**	**1,789**
4.0	Interest and Fee Expense on Borrowings(Finance Costs)	265	1,017	(87)	-	-	-	1,195
5.0	**Profit/(Loss) before tax**	**97**	**246**	**83**	**(12)**	**8**	**(2)**	**420**
6.0	Current Tax	3	62	-	-	-	-	65
6.1	Deferred Tax	36	11	29	5	3	-	84
7.0	**Net Profit (After Taxes and Before Donations)**	**58**	**173**	**54**	**(7)**	**5**	**(2)**	**281**
8.0	Donations for Operating Expense	-	-					**-**
9.0	**Net Profit After Taxes**	**58**	**173**	**54**	**(7)**	**5**	**(2)**	**281**
10.0	Surplus on revaluation of building	-	-	-	-	-		**-**
11.0	Deferred tax on revaluation surplus	-	-	-	-	-		**-**
	Total Comprehensive Income	**58**	**173**	**54**	**(7)**	**5**	**(2)**	**281**

Source: DTMs Published Financial Statements

Appendix IX

	MFBs BALANCE SHEET AND PROFIT & LOSS ACCOUNT-DECEMBER 2013- Ksh. M	FAULU KENYA	KWFT	SMEP	REMU	RAFIKI	UWEZO	CENTURY	SUMAC	U & I	TOTAL
A	**STATEMENT OF FINANCIAL POSITION**										
1.0	**ASSETS**										
1.1	Cash Balances (Both Local and Foreign)	480	1,032	71	12	212	1	9	24	9	1,850
1.2	Short term deposits with banks	971	3,398	290	131	965	9	7	-	12	5,783
1.3	Government securities	753	116	-	-	-	-	-	-	13	882
1.4	Advances to customers	8,725	14,530	1,799	161	1,866	73	82	204	36	27,476
1.5	Due from related organisations	-	-	-	-	-	-	-	6	1	7
1.6	Other receivables	557	233	71	10	188	6	16	20	2	1,103
1.7	Deferred Tax	2	241	-	6	21	4	31	4	1	310
1.8	Other investment	-	-	-	4	-	-	-	-	-	4
1.9	Investment in associate companies	38	-	-	-	-	0	1	0	0	39
1.10	Intangible assets	178	37	12	2	26	3	-	7	-	265
1.11	Property and equipment	730	2,165	247	11	401	11	18	42	6	3,631
	TOTAL ASSETS	**12,434**	**21,752**	**2,490**	**337**	**3,679**	**107**	**164**	**307**	**80**	**41,350**
2.0	**LIABILITIES**										
2.1	Cash collaterals held	1,486	7,498	21	9	7	8	11	-	-	9,040
2.2	Customer deposits	7,198	5,456	1,253	174	1,412	24	55	99	34	15,705
2.3	Borrowings	2,090	4,995	511	16	754	5	-	8		8,379
2.4	Deferred income	15	-	-	-	568	-	-	-		583
2.5	Deferred tax liability	-	30	17	-	8	-	-	-		55
2.6	Due to related organisations	1	686	5	-	364	-	-	-		1,056
2.7	Other liabilities	846	190	31	6	100	3	8	17	1	1,202
	TOTAL LIABILITIES	**11,636**	**18,855**	**1,838**	**205**	**3,213**	**40**	**74**	**124**	**35**	**36,020**
3.0	**SHARE CAPITAL & RESERVES**										-
3.1	Share capital	120	146	464	158	500	83	165	150	45	1,831
3.2	Share premium	274	1,558	80	6	-	-	-	33	-	1,951
3.3	Retained earnings	58	992	46	(33)	(34)	(16)	(75)	(3)	-	935
3.4	Revaluation reserve	104	-	42	-	-	-	-	3	-	149
3.5	Statutory reserve	242	201	20	1		-	-	-	-	464
	TOTAL SHAREHOLDERS' FUNDS	**798**	**2,897**	**652**	**132**	**466**	**67**	**90**	**183**	**45**	**5,330**
	TOTAL LIABILITIES AND EQUITY	**12,434**	**21,752**	**2,490**	**337**	**3,679**	**107**	**164**	**307**	**80**	**41,350**
B	**STATEMENT OF COMPREHENSIVE INCOME**										
1.0	**Income**										-
1.1	Interest on Loan Portfolio	1,624	4,708	477	27	304	19	7	56	9	7,231
1.2	Fees and Commission on Loan Portfolio	376	852	77	7	53	4	4	22	4	1,399
1.3	Government Securities	55	8	-	-	111	-	-	-	2	176
1.4	Deposit and Balances with other institutions	102	173	46	9	-	-	2	-	-	332
1.5	Other Investments	-	-	-	1	78	-	-	-	-	79
1.6	Other Operating Income	197	72	18	2	9	1	1	2	-	302
1.7	Non-Operating Income	8	-	-		-	-	-		1	9
	Total Income	**2,362**	**5,813**	**618**	**46**	**555**	**24**	**14**	**80**	**16**	**9,528**
2.0	**Expenses**										-
2.1	Interest and Fee Expense on Deposits	378	413	17	9	49	1	3	1	-	871
2.2	Other Fees and Commissions expense	101	56	-	2	16	-	1	2	-	178
2.3	Provision for Loan Impairment	70	106	36	1	24	-	3	12	1	253
2.4	Staff Costs	606	2,132	229	22	168	14	21	12	5	3,209
2.5	Director's Emoluments	8	73	9	-	1	1	1	3	-	96
2.6	Rental Charges	90	193	47	5	52	2	3	7	2	401
2.7	Depreciation Charges	80	255	12	2	25	2	2	7	1	386
2.8	Amortization Charges	17	7	5	1	4	1	1	2	-	38
2.9	Other Administrative Expense	557	1,266	170	12	119	6	17	35	4	2,186
2.1	Non-Operating Expense			1	-	-	-			1	2
	Total Expenses	**1,907**	**4,501**	**526**	**54**	**458**	**27**	**52**	**81**	**14**	**7,620**
3.0	**Operating Profit**	**455**	**1,312**	**92**	**(8)**	**97**	**(3)**	**(38)**	**(1)**	**2**	1,908
4.0	Interest and Fee Expense on Borrowings(Finance Costs)	218	741	(65)	-	82	-	-	15	-	991
5.0	**Profit/(Loss) before tax**	**237**	**571**	**27**	**(8)**	**15**	**(3)**	**(38)**	**(16)**	**2**	**787**
6.0	Current Tax	72	200	8		6	-	(11)	-	1	276
6.1	Deferred Tax		(24)	13	2		(1)	-	(5)	-	(15)
7.0	**Net Profit (After Taxes and Before Donations)**	**165**	**395**	**6**	**(6)**	**9**	**(2)**	**(27)**	**(11)**	**1**	**530**
8.0	Donations for Operating Expense	-	4								4
9.0	**Net Profit After Taxes**	**165**	**391**	**6**	**(6)**	**9**	**(2)**	**(27)**	**(11)**	**1**	**526**
10.0	Surplus on revaluation of building	25	-	60	-	-					85
11.0	Deferred tax on revaluation surplus	(7)	-	(18)	-	-					(25)
	Total Comprehensive Income	**183**	**395**	**48**	**(6)**	**9**	**(2)**	**(27)**	**(11)**	**1**	**590**
	Source: MFBs Published Financial Statements										

Appendix XI

MICROFINANCE BANKS STATEMENT OF COMPREHENSIVE INCOME - DECEMBER 2014

		KWFT	FAULU	RAFIKI	SMEP	REMU	SUMAC	CENTURY	UWEZO	U & I	TOTAL
1.0	**Income**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**
1.1	Interest on Loan Portfolio	5,092	2,753	605	530	42	84	20	25	17	9,169
1.2	Fees and Commission on Loan Portfolio	865	594	86	81	8	18	8	10	8	1,678
1.3	Government Securities	34	79			-		-	-	1	114
1.4	Deposit and Balances with Banks and Financial	238	364	131	23	13	0	2	-	-	771
1.5	Other Investments		-			0		-	-	-	0
1.6	Other Operating Income	204	87	148	19	4	4	2	-	-	469
1.7	Non- Operating Income		5	0		-		-	1	1	7
	Total Income	**6,433**	**3,882**	**970**	**654**	**69**	**108**	**32**	**37**	**27**	12,210
2.0	**Expenses**										-
2.1	Interest and Fee Expense on Deposits	635	919	133	55	11	20	10	3	0	1,786
2.2	Other Fees and Commissions expense	71	163	24		2	2	2	-	-	264
2.3	Provision for Loan Impairment	231	132	38	102	2	6	8	0	2	521
2.4	Staff Costs	2,370	1,057	300	262	29	14	22	15	8	4,076
2.5	Director's Emoluments	84	8	1	10	-	4	2	1	1	110
2.6	Rental Charges	244	113	109	61	6	6	4	3	2	546
2.7	Depreciation Charges	312	81	6	25	2	6	2	2	1	437
2.8	Amortization Charges	12	22	6	6	1	2	5	2	0	57
2.9	Other Administrative Expense	1,333	638	242	205	13	35	17	9	8	2,500
2.10	Non-Operating Expense		-		4	-		-		2	6
	Total Expenses	**5,292**	**3,134**	**858**	**729**	**65**	**96**	**71**	**35**	**23**	10,304
3.0	**Operating Profit**	**1,140**	**748**	**112**	**(76)**	**3**	**12**	**(39)**	**2**	**3**	1,906
4.0	Interest and Fee Expense on Borrowings/Finance	443	316	93	- 42	1	8	0	-	-	821
5.0	**Profit/(Loss) before tax**	**697**	**432**	19	(117)	2	4	(39)	2	3	1,002
6.0	Current Tax	251	133	2	-	-	-	-	(1)	- 2	383
6.1	Deferred Tax	(11)	-		- 20	1	0	5		1	- 24
7.0	**Net Profit (After Taxes and Before Donations)**	**456**	299	21	(97)	3	4	(34)	1	2	655
8.0	Donations for Operating Expense	18	-			-				-	18
9.0	**Net Profit After Taxes**	**474**	**299**	**21**	**(97)**	**3**	**4**	**(34)**	**1**	**2**	674
9.1	Other Comprehensive Income										-
9.2	Surplus on revaluation of building	-	145		-	-	-	-		-	145
9.3	Deferred tax on revaluation surplus	-	- 44		-	-	-	-		-	- 44
	Total comprehensive income	**474**	**401**	**21**	**(97)**	**3**	**4**	**(34)**	**1**	**2**	775

Appendix X

MICROFINANCE BANKS BALANCE SHEET - DECEMBER 2014

		KWFT	FAULU	RAFIKI	SMEP	REMU	SUMAC	CENTURY	UWEZO	U & I	TOTAL
	STATEMENT OF FINANCIAL POSITION										
1.0	**ASSETS**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**	**Ksh.M**
1.1	Cash and bank balances	2,148	297	207	77	17	31	22	10	30	2,839
1.2	Short term deposits with banks	2,594	2,544	1,318	309	150		13	-	11	6,940
1.3	Government securities	224	780		-	-		-	-	-	1,004
1.4	Advances to customers	18,854	14,488	3,418	1,635	184	289	107	125	84	39,184
1.5	Due from related organisations	-	-	402	-	-	8	-	-	2	412
1.6	Other receivables	374	634	362	45	14	12	14	6	2	1,462
1.7	Tax recoverable	13	13	17	25	-		36	-		103
1.8	Deferred tax Asset	251		14	4	7	5	-	4	1	287
1.9	Other investment	-	0		-	3	0	-	-	-	3
1.10	Investment in associate companies	1	42		-	-		-	-	-	43
1.11	Intangible assets	64	156	22	12	4	6	21	7	2	293
1.12	Property and equipment	2,463	1,366	214	271	14	40	19	8	6	4,401
	TOTAL ASSETS	**26,985**	**20,320**	**5,975**	**2,378**	**395**	**390**	**231**	**160**	**137**	**56,972**
2.0	**LIABILITIES**										
2.1	Cash collaterals held	-	1,341	4	-	8	-	7	-	16	1,376
2.2	Customer deposits	17,119	12,646	2,873	1,325	166	128	127	64	36	34,486
2.3	Borrowings	4,216	1,339	958	396	5	68	-	11	-	6,994
2.4	Deposit & balances due to banking institutions	-	-	523	-	-	-	-	-	-	523
2.5	Deferred tax liability	-	69	-	-	-		-	-	-	69
2.6	Due to related organisations	476	-	489	3	-		-	-	-	969
2.7	Other liabilities	568	1,136	116	99	6	6	20	3	2	1,956
	TOTAL LIABILITIES	**22,379**	**16,533**	**4,962**	**1,823**	**186**	**202**	**155**	**78**	**55**	**46,372**
3.0	**SHARE CAPITAL & RESERVES**										-
3.1	Share capital	186	480	1,000	464	222	151	185	99	80	2,868
3.2	Share premium	2,851	2,503		80	14	36	-	-	-	5,484
3.3	Retained earnings	1,326	257	(34)	(52)	- 31	1	- 109	(17)	2	1,344
3.4	Revaluation reserve	-	205		42	0		-	-	-	248
3.5	Statutory reserve	243	342	47	22	2		-	-	-	656
3.6	**Total Shareholders' funds**	**4,606**	**3,787**	**1,013**	**555**	**208**	**189**	**76**	**82**	**83**	10,600
	TOTAL LIABILITIES AND EQUITY	**26,985**	**20,320**	**5,975**	**2,378**	**395**	**390**	**231**	**160**	**137**	**56,972**

Appendix XI

MICROFINANCE BANKS PROFIT & LOSS ACCOUNT - DECEMBER 2015

		KWFT	FAULU	RAFIKI	SMEP	REMU	SUMAC	CENTURY	UWEZO	U & I	CARITAS	CHOICE	DARAJA	TOTAL
1.0	**Income**	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
1.1	Interest on Loan Portfolio	6,021	3,227	874	478	51	120	26	40	31	0	1	2	10,873
1.2	Fees and Commission on Loan Portfolio	697	405	132	65	12	13	9	9	9	0	1	1	1,353
1.3	Government Securities	2	85	-	-	-	-	-	-	-	-	-	-	88
1.4	Deposit and Balances with Banks and Financial Inst.	232	536	251	6	9	1	3	-	-	10	-	4	1,053
1.5	Other Investments	-	-	-	-	0	-	-	-	-	-	1	-	1
1.6	Other Operating Income	411	101	132	69	3	2	5	1	-	0	-	1	725
1.7	Non- Operating Income	-	1	-	-	-	-	-	-	1	-	-	-	2
	Total Income	**7,363**	**4,355**	**1,390**	**618**	**76**	**135**	**43**	**50**	**42**	**10**	**3**	**8**	**14,095**
2.0	**Expenses**													
2.1	Interest and Fee Expense on Deposits	942	1,387	231	39	14	30	8	4	2	1	0	0	2,657
2.2	Other Fees and Commissions expense	51	220	13	- 0	3	4	3	-	-	1	0	-	294
2.3	Provision for Loan Impairment	263	165	83	4	7	5	22	6	3	0	0	0	559
2.4	Staff Costs	2,669	1,048	406	227	41	16	31	18	9	24	19	15	4,524
2.5	Director's Emoluments	91	12	1	10	0	5	2	0	1	1	1	1	126
2.6	Rental Charges	252	165	105	67	8	8	5	4	2	9	3	2	630
2.7	Depreciation Charges	353	125	11	29	3	6	4	2	2	4	1	3	541
2.8	Amortization Charges	22	25	7	8	1	2	5	2	0	3	3	3	82
2.9	Other Administrative Expense	1,466	759	373	201	20	27	21	11	8	28	16	18	2,948
2.10	Non-Operating Expense	-	-	-	-	-	-	-	-	3	0	-	-	3
	Total Expenses	**6,106**	**3,908**	**1,229**	**586**	**97**	**101**	**101**	**48**	**30**	**70**	**43**	**43**	**12,364**
3.0	**Operating Profit**	**1,257**	**447**	**161**	**33**	**(21)**	**34**	**(58)**	**2**	**11**	**(60)**	**(40)**	**(35)**	**1,730**
4.0	Interest and Fee Expense on Borrowings(Finance Costs)	699	264	115	37	0	21	0	-	2		-	-	1,138
5.0	**Profit/(Loss) before tax**	**558**	**183**	**46**	**(4)**	**- 21**	**13**	**(58)**	**2**	**9**		**(40)**	**(35)**	**592**
6.0	Current Tax	172	67	17		-	6	-	1	3	-0	-		265
6.1	Deferred Tax	(8)	-	-	-3	- 6	0	(5)	-	-1	-	-11	10	-23
7.0	**Net Profit (After Taxes and Before Donations)**	**394**	115	29	(1)	- 15	7	(53)	0.2	7	(60)	(29)	(45)	616
8.0	Donations for Operating Expense	1	-			-				-				1
9.0	**Net Profit After Taxes**	**395**	**115**	**29**	**(1)**	**(15)**	**7**	**(53)**	**0.2**	**7**	**(60)**	**(29)**	**(45)**	616
9.1	Other Comprehensive Income		-								-	-		-
9.2	Surplus on revaluation of building	-	-		-	-	-	-		-	-	-		-
9.3	Deferred tax on revaluation surplus	-	-		-	-	-	-		-	-	-		-
9.4	**Total comprehensive income**	**395**	**115**	**29**	**(1)**	**(15)**	**7**	**(53)**	**0.2**	**7**	**(60)**	**(29)**	**(45)**	616

Appendix X

MICROFINANCE BANKS BALANCE SHEET - DECEMBER 2015 -Ksh. M

		KWFT	FAULU	RAFIKI	SMEP	REMU	SUMAC	CENTURY	UWEZO	U&I	CARITAS	CHOICE	DARAJA	TOTAL
STATEMENT OF FINANCIAL POSITION														
1.0	**ASSETS**													
1.1	Cash and bank balances	914	276	519	161	7	4	3	8	1	2	1	1	1,898
1.2	Short term deposits with banks	5,334	4,756	2,255	191	80	55	28	89	27	128	13	5	12,961
1.3	Government securities	-	721	-	-	-	-	-	-	-	-	-	-	721
1.4	Advances to customers (net)	22,094	16,584	4,270	1,728	257	433	79	97	142	11	19	36	45,749
1.5	Due from related organisations	-	-	-	-	-	-	-	-	-	-	-	-	-
1.6	Other receivables	-	-	-	-	-	-	-	-	-	-	-	-	-
1.7	Tax recoverable	153	171	11	25	8	-	2	-	-	-	-	-	371
1.8	Deferred tax Asset	212	-	34	-	13	5	41	3	2	0	11	15	335
1.9	Other investment	400	43	-	-	3	0	-	-	-	-	-	-	445
1.10	Investment in associate companies	1	-	-	-	-	-	-	-	-	-	-	-	1
1.11	Intangible assets	155	465	50	72	9	24	26	8	2	15	20	15	861
1.12	Property and equipment	2,598	2,307	589	415	19	88	19	22	11	30	14	12	6,123
	TOTAL ASSETS	**31,861**	**25,324**	**7,729**	**2,592**	**397**	**608**	**197**	**226**	**184**	**186**	**77**	**83**	69,465
2.0	**LIABILITIES**													
2.1	Cash collaterals held	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2	Customer deposits	17,806	16,690	4,191	1,287	158	135	105	42	59	85	17	14	40,589
2.3	Borrowings	8,206	2,671	1,544	576	40	144	22	-	18	-	-	-	13,220
2.4	Deposit & balances due to banking institutions	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5	Deferred tax liability	-	58	-	32	-	-	-	-	-	-	-	-	90
2.6	Due to related organisations	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	Other liabilities	1,157	1,605	950	52	3	121	18	5	2	13	4	3	3,932
	TOTAL LIABILITIES	**27,169**	**21,024**	**6,686**	**1,947**	**202**	**400**	**144**	**47**	**78**	**98**	**21**	**16**	57,832
3.0	**SHARE CAPITAL & RESERVES**													
3.1	Share capital	186	480	1,000	464	222	163	215	197	97	170	84	96	3,373
3.2	Share premium	2,851	2,900	-	80	16	36	-	-	-	-	2	8	5,892
3.3	Retained earnings	1,339	237	(38)	(53)	(47)	8	(162)	(17)	9	(82)	(29)	(37)	1,129
3.4	Revaluation reserve	-	213	-	133	0	-	-	-	-	-	-	-	346
3.5	Statutory reserve	316	470	81	22	4	-	-	-	-	-	-	1	893
3.6	**Total Shareholders' funds**	**4,692**	**4,299**	**1,043**	**645**	**195**	**207**	**53**	**180**	**107**	**88**	**57**	**67**	**11,633**
	TOTAL LIABILITIES AND EQUITY	**31,861**	**25,324**	**7,729**	**2,592**	**397**	**608**	**197**	**226**	**184**	**186**	**77**	**83**	**69,465**

Appendix XI

MICROFINANCE BANKS PROFIT & LOSS ACCOUNT - DECEMBER 2016

		KMFT	FAULU	RAFIKI	SMEP	CARITAS	SUMAC	REMU	U & I	UWEZO	DARAJA	MAISHA	CENTURY	CHOICE
1	**Income**	**KShs M**	**KShs M**	**KShs M**	**KShs M**	**KShs M**	**KShs M**	**KShs M**	**KShs M**	**KShs M**	**KShs M**	**KShs M**	**KShs M**	**KShs M**
1.1	Interest on Loan Portfolio	6,228	3,753	922	420	7	187	61	53	40	10	2	36	7
1.2	Fees and Commission on Loan Portfolio	708	480	86	46	3	11	8	12	16	1	1	7	3
1.3	Government Securities	1	173	0	0	0	0	0	0	0	0	0	0	0
1.4	Deposit and Balances with Banks and Financial Inst.	227	295	115	22	26	1	6	0	0	3	7	0	0
1.5	Other Investments	0	0	0	0	0	0	0	0	0	0	0	0	1
1.6	Other Operating Income	358	114	96	81	2	2	5	0	0	3	0	2	0
1.7	Non- Operating Income	0	4	0	0	0	0	0	1	0	0	0	0	0
	Total Income	7,523	4,818	1,218	569	38	201	80	66	56	17	10	46	11
2	**Expenses**													
2.1	Interest and Fee Expense on Deposits	874	1,760	329	76	9	30	11	11	0	4	2	10	2
2.2	Other Fees and Commissions expense	130	172	8	0	0	6	1	0	0	0	0	2	0
2.3	Provision for Loan Impairment	145	188	238	46	2	13	7	2	8	5	1	-4	1
2.4	Staff Costs	2,776	1,038	432	246	37	27	34	13	17	22	26	34	19
2.5	Director's Emoluments	93	18	0	11	4	4	2	2	1	3	1	2	3
2.6	Rental Charges	293	250	105	78	17	12	9	4	5	4	4	8	5
2.7	Depreciation Charges	382	170	31	27	10	9	3	2	4	3	3	9	2
2.8	Amortization Charges	38	37	9	12	6	6	1	2	2	3	2	0	4
2.9	Other Administrative Expense	1,392	704	396	168	26	37	21	14	17	18	17	26	23
2.1	Non-Operating Expense	2	0	0	0	0	0	0	0	0	0	0	0	0
	Total Expenses	**6,126**	**4,339**	**1,548**	**663**	**112**	**144**	**88**	**50**	**53**	**63**	**56**	**87**	**60**
3	**Operating Profit**	**1,396**	**480**	**-330**	**-94**	**-74**	**57**	**-9**	**16**	**3**	**-45**	**-47**	**-41**	**-49**
4	**Interest and Fee Expense on Borrowings(Finance Costs)**	**1,072**	**382**	**131**	**52**	**0**	**39**	**8**	**4**	**0**	**0**	**0**	**0**	**1**
5	**Profit/(Loss) before tax**	**324**	**98**	**-461**	**-146**	**-74**	**18**	**-17**	**12**	**3**	**-45**	**-47**	**-41**	**-50**
6	**Current Tax**	**73**	**55**	**0**	**0**	**0**	**4**	**0**	**5**		**0**	**0**	**0**	**0**
6.1	Deferred Tax	28	0	-163	-12	0	0	-5	0	0	-17	-15	0	-15
7	**Net Profit (After Taxes and Before Donations)**	**224**	**43**	**-298**	**-134**	**-74**	**14**	**-12**	**7**	**4**	**-28**	**-31**	**-41**	**-35**
8	**Donations for Operating Expense**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
9	**Net Profit After Taxes**	**224**	**43**	**-298**	**-134**	**-74**	**14**	**-12**	**7**	**4**	**-28**	**-31**	**-41**	**-35**
	Other Comprehensive Income	0	0	0	0	0	0	0	0	0	0	0	0	0
	Surplus on revaluation of building	0	0	0	0	0	0	0	0	0	0	0	0	0
	Deferred tax on revaluation surplus	0	0	0	0	0	0	0	0	0	0	0	0	0
	Total comprehensive income	224	43	-298	-134	-74	14	-12	7	4	-28	-31	-41	-35
	Source: MFBs Published Financial Statements													

Appendix X

MICROFINANCE BANKS BALANCE SHEET - DECEMBER 2016

		KENYA WOMEN	FAULU	RAFIKI	SMEP	CAMFIN	SUMAC	REMU	U & I	UNIKO	FAIDA	MAENDA	CENTURY	CHOICE	TOTAL
		KShs M	KShs M	KShs M	KShs M	KShs M	KShs M	KShs M	KShs M	KShs M	KShs M	KShs M	KShs M	KShs M	KShs M
	A) STATEMENT OF FINANCIAL POSITION														
1	ASSETS														
1.1	Cash and bank balances	957	298	875	50	7	5	5	8	7	33	3	3	18	2,268
1.2	Short term deposits with banks	5,331	3,622	2,092	418	343	61	58	47	7	27	75	12	10	12,102
1.3	Government securities	19	1,750	0	0	0	0	0	0	0	0	0	0	0	1,769
1.4	Advances to customers (net)	22,189	17,955	3,661	1,677	141	538	244	271	151	51	27	107	35	47,047
1.5	Due from related organizations														
1.6	Other receivables	499	1,329	244	61	16	91	8	3	32	11	23	29	5	2,352
1.7	Tax recoverable	86	198	12	27	0	0	9	0	0	0	0	2	0	334
1.8	Deferred tax Asset	184	0	196	0	0	10	18	2	3	32	0	41	26	512
1.9	Other investment	0	0	0	0	0	0	0	0	0	0	0	0	0	0
1.1	Investment in associate companies	1	46	0	0	0	0	2	0	0	0	0	0	0	50
1.11	Intangible assets	99	565	54	94	21	46	9	8	3	16	14	12	16	956
1.12	Property and equipment	2,790	1,606	193	331	47	52	8	12	12	10	29	19	12	5,121
	TOTAL ASSETS	32,153	27,369	7,327	2,659	574	803	362	351	214	180	171	225	122	72,510
2	LIABILITIES														
2.1	Cash collaterals held	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.2	Customer deposits	17,156	17,371	2,985	1,451	287	233	106	209	29	85	78	141	66	40,198
2.3	Borrowings	9,074	4,387	2,011	624	0	227	67	19	0	0	0	19	5	16,435
2.4	Deposit & balances due to banking institutions	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.5	Deferred tax liability	0	73	0	20	0	0	0	0	0	0	0	0	0	93
2.6	Due to related organizations	0	0	0	0	0	0	0	0	0	0	0	0	0	0
2.7	Other liabilities	1,167	1,196	1,585	30	16	96	6	5	7	13	4	33	5	4,163
	TOTAL LIABILITIES	27,398	23,027	6,581	2,126	303	557	179	233	36	98	82	193	76	60,889
3	SHARE CAPITAL & RESERVES														
3.1	Share capital	186	480	1,000	541	427	163	223	105	197	120	120	234	105	3,900
3.2	Share premium	2,851	2,900	0	2	0	61	16	0	0	27	0	0	5	5,861
3.3	Retained earnings	1,435	248	-285	-184	-156	23	-61	13	-19	-65	-31	-203	-64	651
3.4	Revaluation reserve	0	212	0	133	0	0	0	0	0	1	0	0	0	346
3.5	Statutory reserve	284	503	31	40	0	0	6	0	0	0	0	0	0	864
3.6	Total Shareholders' funds	4,756	4,342	745	533	271	246	184	118	179	82	89	31	46	11,622
	TOTAL LIABILITIES AND EQUITY	32,153	27,369	7,327	2,659	574	803	362	351	214	180	171	225	122	72,510
	Source: MFBs Published Financial Statements														

APPENDIX XI

MICROFINANCE BANKS PROFIT & LOSS ACCOUNT - DECEMBER 2017

		KENYA WOMEN	FAULU	RAFIKI	SMEP	CARITAS	SUMAC	REMU	U & I	UWEZO	DARAJA	MAISHA	CENTURY	CHOICE	TOTAL
1.0	**Income**	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh.M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
1.1	Interest on Loan Portfolio	6,121	3,566	651	430	34	214	51	76	25	13	29	24	13	11,249
1.2	Fees and Commission on Loan Portfolio	422	443	32	76	9	15	7	12	20	4	3	12	3	1,059
1.3	Government Securities	4	321	-	-	-	-	-	-	-	-	-	-	-	325
1.4	Deposit and Balances with Banks and Financial Inst.	191	160	21	15	39	1	5	-	-	2	4	-	-	438
1.5	Other Investments	-	-	-	-	-	-	0	-	-	-	-	-	2	2
1.6	Other Operating Income	238	101	90	42	5	2	5	-	0	2	0	3	-	488
1.7	Non- Operating Income	53	63	-	-	-	-	-	13	-	-	-	-	-	129
	Total Income	7,029	4,653	794	563	88	232	69	102	46	20	37	38	19	13,690
2.0	**Expenses**														
2.1	Interest and Fee Expense on Deposits	810	1,457	196	73	17	45	7	19	1	9	12	20	7	2,672
2.2	Other Fees and Commissions expense	99	114	3	-	-	8	1	-	-	-	-	-	-	225
2.3	Provision for Loan Impairment	101	232	91	26	5	4	5	2	3	6	8	3	4	490
2.4	Staff Costs	2,759	1,032	345	258	53	31	40	20	24	30	28	32	27	4,677
2.5	Director's Emoluments	109	15	-	12	5	4	1	2	1	3	2	1	[redacted]	157
2.6	Rental Charges	316	276	97	86	19	12	9	5	7	3	4	10	5	849
2.7	Depreciation Charges	392	158	34	24	15	10	2	3	4	3	5	2	3	653
2.8	Amortization Charges	41	63	9	14	3	7	1	2	1	4	3	7	4	160
2.9	Other Administrative Expense	1,386	585	366	123	42	46	20	28	17	22	26	26	19	2,705
2.10	Non-Operating Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Expenses	6,012	3,932	1,140	616	158	167	86	80	58	80	87	101	71	12,590
3.0	Operating Profit	1,017	721	(346)	(54)	(70)	65	(17)	22	(12)	(60)	(50)	(63)	(53)	1,100
4.0	Interest and Fee Expense on Borrowings/Finance Costs)	980	499	106	67	1	54	8	6	-	-	-	-	1	(1,100)
5.0	Profit/(Loss) before tax	37	222	(452)	(120)	(71)	10	(25)	16	(12)	(60)	(50)	(63)	(54)	2,200
6.0	Current Tax	18	69	-	-	-	5	-	5	-	-	-	-	-	98
6.1	Deferred Tax	-	10	(123)	(88)	-	-	(7)	-	(3)	(13)	(8)	-	(16)	(249)
7.0	Net Profit (After Taxes and Before Donations)	19	143	(329)	(32)	(71)	5	(17)	11	(9)	(47)	(42)	(63)	(38)	2,351
8.0	Donations for Operating Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.0	Net Profit After Taxes	19	143	(329)	(32)	(71)	5	(17)	11	(9)	(47)	(42)	(63)	(38)	2,351
	Other Comprehensive Income	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Surplus on revaluation of building	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Deferred tax on revaluation surplus	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total comprehensive income	19	143	(329)	(32)	(71)	5	(17)	11	(9)	(47)	(42)	(63)	(38)	2,351

Source: Microfinance Banks Published Financial Statements (December 2017)

APPENDIX X

MICROFINANCE BANKS BALANCE SHEET - DECEMBER 2017

		KENYA WOMEN	FAULU	RAFIKI	SMEP	CARITAS	SUMAC	REMU	U & I	UWEZO	DARAJA	MAISHA	CENTURY	CHOICE	TOTAL
		Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
A) STATEMENT OF FINANCIAL POSITION															
1.0	**ASSETS**														
1.1	Cash and bank balances	1,260	297	109	24	8	7	5	17	7	4	2	2	1	1,743
1.2	Short term deposits with banks	4,421	1,890	2,348	426	418	227	63	24	38	19	55	78	18	10,025
1.3	Government securities	-	2,500	-	-	-	-	-	-	-	-	-	-	-	2,500
1.4	Advances to customers (net)	19,374	16,958	2,856	1,677	351	623	218	325	126	53	156	103	31	42,849
1.5	Due from related organisations														
1.6	Other receivables	349	954	876	92	42	164	17	18	6	18	25	30	10	2,601.0
1.7	Tax recoverable	129	238	15	27	-	-	9	2	0	-	-	2	-	422
1.8	Deferred tax Asset	183	-	320	68	-	9	26	0	5	45	24	38	42	760
1.9	Other investment	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.10	Investment in associate companies	1	49	-	-	-	0	1	-	-	-	3	-	-	54
1.11	Intangible assets	103	1,290	54	109	22	46	10	8	17	12	13	10	26	1,721
1.12	Property and equipment	3,214	2,439	203	420	60	107	15	20	29	28	39	35	34	6,643
	TOTAL ASSETS	28,931	25,325	6,727	2,734	879	1,137	354	406	212	168	302	288	136	67,597
2.0	**LIABILITIES**														
2.1	Cash collaterals held	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2	Customer deposits	16,374	16,450	2,524	1,607	565	413	124	200	29	95	231	222	81	38,916
2.3	Borrowings	6,774	3,572	1,954	579	20	395	52	39	-	-	-	18	10	13,413
2.4	Deposit & balances due to banking institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5	Deferred tax liability	-	134.86	-	-	-	-	-	-	-	-	-	-	-	135
2.6	Due to related organisations	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	Other liabilities	1,076	684	1,832	46	20	78	11	5	13	20	5	34	7	3,832
	TOTAL LIABILITIES	24,224	20,840	6,310	2,232	605	886	187	244	42	115	236	275	99	56,296
3.0	**SHARE CAPITAL & RESERVES**														
3.1	Share capital	186	480	1,000	541	500	163	223	138	197	136	130	293	133	4,121
3.2	Share premium	2,851	2,900	-	2	-	61	16	-	-	27	10	-	5	5,872
3.3	Retained earnings	1,404	294	(597)	(217)	(227)	27	(78)	23	(28)	(112)	(73)	(280)	(102)	36
3.4	Revaluation reserve	-	260	-	133	-	-	(1)	-	-	1	-	-	-	393
3.5	Statutory reserve	266	551	13	42	-	-	7	-	-	-	-	-	-	880
3.6	Total Shareholders' funds	4,707	4,485	417	501	273	251	167	162	169	52	67	13	37	11,301
	TOTAL LIABILITIES AND EQUITY	28,931	25,325	6,727	2,734	879	1,137	354	406	212	168	302	288	136	67,597

Source: Microfinance Banks Published Financial Statements (December 2017)

APPENDIX XI

MICRO FINANCE BANKS PROFIT & LOSS ACCOUNT - DECEMBER 2018

		KENYA WOMEN	FAULU	RAFIKI	SMEP	CARI-TAS	SUMAC	KEY	U & I	UWEZO	DARAJA	HAI-SHA	CEN-TURY	CHOICE	TOTAL
1.0	Income	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
1.1	Interest on Loan Portfolio	5,050	3,571	611	502	93	280	52	85	25	17	47	51	11	10,395
1.2	Fees and Commission on Loan Portfolio	690	621	57	56	24	27	9	17	18	4	6	13	2	1,545
1.3	Government Securities	1	311	-	-	-	-	-	-	-	-	-	-	-	313
1.4	Deposit and Balances with Banks and Financial Inst.	143	163	62	12	34	5	5	-	-	0	1	4	-	431
1.5	Other Investments	-	-	-	-	-	-	1	-	-	-	-	-	0	1
1.6	Other Operating Income	74	126	74	83	7	3	6	-	1	2	0	13	2	389
1.7	Non- Operating Income	-	5	-	-	-	-	-	8	-	-	-			12
	Total Income	**5,958**	**4,797**	**803**	**654**	**158**	**315**	**73**	**109**	**43**	**24**	**55**	**82**	**14**	**13,085**
2.0	**Expenses**														
2.1	Interest and Fee Expense on Deposits	794	1,627	165	95	27	37	8	22	1	13	25	29	8	2,851
2.2	Other Fees and Commissions expense	71	172	3	-	-	9	4	-	-	-	-	-	1	260
2.3	Provision for Loan Impairment	328	115	95	5	29	16	22	2	7	0	61	(5)	6	682
2.4	Staff Costs	2,766	958	346	234	82	41	37	21	26	24	30	36	27	4,629
2.5	Director's Emoluments	121	13	-	11	8	13	1	3	0	1	2	2	3	178
2.6	Rental Charges	319	292	102	80	24	16	9	5	9	4	5	10	4	879
2.7	Depreciation Charges	385	189	140	27	16	10	3	3	3	3	5	3	3	787
2.8	Amortization Charges	43	144	8	14	3	5	1	2	2	3	3	8	6	244
2.9	Other Administrative Expense	1,379	517	154	147	52	39	19	23	25	20	43	25	14	2,457
2.10	Non-Operating Expense				0	-	-		6	-	-	-		-	6
	Total Expenses	**6,206**	**4,025**	**1,013**	**612**	**240**	**187**	**105**	**87**	**74**	**68**	**174**	**107**	**72**	**12,972**
3.0	**Operating Profit**	**(248)**	**772**	**(210)**	**42**	**(83)**	**128**	**(32)**	**22**	**(31)**	**(44)**	**(119)**	**(25)**	**(58)**	**114**
4.0	**Interest and Fee Expense on Borrowings(-Finance Costs)**	**796**	**498**	**64**	**58**	**3**	**112**	**10**	**9**	-	-	-	-	**1**	**1,551**
5.0	**Profit/(Loss) before tax**	**(1,044)**	**274**	**(274)**	**(16)**	**(85)**	**16**	**(42)**	**13**	**(31)**	**(44)**	**(119)**	**(25)**	**(59)**	**(1,437)**
6.0	**Current Tax**	-	**93**	-	**6**	-	**11**	-	**4**	-	-	-	-	-	**114**
6.1	Deferred Tax	(217)	-	(82)	-	-	-	(29)	1	(4)	(12)	-	-	(17)	(360)
7.0	**Net Profit (After Taxes and Before Donations)**	**(827)**	**181**	**(192)**	**(22)**	**(85)**	**5**	**(14)**	**8**	**(27)**	**(32)**	**(119)**	**(25)**	**(42)**	**(1,192)**
8.0	**Donations for Operating Expense**	-	-	-	-	-	-	-	-	-	-		-	-	-
9.0	**Net Profit After Taxes**	**(827)**	**181**	**(192)**	**(22)**	**(85)**	**5**	**(14)**	**8**	**(27)**	**(32)**	**(119)**	**(25)**	**(42)**	**(1,192)**
	Other Comprehensive Income	-	-		-	-	-	-	-	-	-	-			-
	Surplus on revaluation of building	-	-	-	30	-	-	-	-	-	-	-	-	-	-
	Deferred tax on revaluation surplus	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total comprehensive income	**(827)**	**181**	**(192)**	**8**	**(85)**	**5**	**(14)**	**8**	**(27)**	**(32)**	**(119)**	**(25)**	**(42)**	**(1,192)**

APPENDIX X

MICRO FINANCE BANKS BALANCE SHEET - DECEMBER 2018

		KENYA WOMEN	FAULU	RAFIKI	SMEP	CARITAS	SUMAC	KEY	U & I	UWEZO	DARAJA	MAI-SHA	CENTU-RY	CHOICE	TOTAL
		Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
A) STATEMENT OF FINANCIAL POSITION															
1.0	**ASSETS**														
1.1	Cash and bank balances	2,371	349	107	32	28	280	44	59	26	26	15	19	15	3,371
1.2	Short term deposits with banks	2,996	3,670	1,627	627	326	-	62	-	-	-	54	136	-	9,497
1.3	Government securities	-	1,880	-	-	6	-	-	-	-	-	-	-	-	1,886
1.4	Advances to customers (net)	19,997	16,935	2,723	1,647	751	919	231	443	135	42	138	195	22	44,179
1.5	Due from related organisations	-	54	-	0	0	0	0	0	0	0	0	0	0	60
1.6	Other receivables	346	1,364	575	87	44	218	26	12	32	25	16	14	10	2,770
1.7	Tax recoverable	150	168	25	27	-	5	-	-	0	-	-	2	-	377
1.8	Deferred tax Asset	401	461	592	62	-	0	55	-	9	57	24	38	26	1,723
1.9	Other investment	-	-	-	-	-	-	1	-	-	-	-	-	-	1
1.10	Investment in associate companies	1	52	-	-	-	-	-	1	-	-	3	-	-	56
1.11	Intangible assets	126	1,336	7	29	16	25	2	2	4	9	14	5	11	1,587
1.12	Property and equipment	3,195	956	394	430	74	76	13	17	18	14	25	22	14	5,246
	TOTAL ASSETS	**29,582**	**27,225**	**6,050**	**2,942**	**1,244**	**1,530**	**433**	**534**	**225**	**172**	**289**	**431**	**98**	**70,754**
2.0	**LIABILITIES**														
2.1	Cash collaterals held	-	589	-	-	-	-	6	1	-	-	-	-	-	596
2.2	Customer deposits	16,139	17,941	2,295	1,896	934	500	123	285	16	121	262	341	108	40,961
2.3	Borrowings	8,088	4,431	723	487	26	625	139	72	-	5	-	1	12	14,607
2.4	Deposit & balances due to banking institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5	Deferred tax liability	-	-	-	-	-	-	-	1	-	-	-	-	-	1
2.6	Due to related organisations	-	74	-	2	-	-	-	-	-	-	-	-	-	76
2.7	Other liabilities	1,283	727	1,752	44	22	86	12	6	66	24	18	23	9	4,070
	TOTAL LIABILITIES	**25,511**	**23,761**	**4,769**	**2,428**	**981**	**1,211**	**280**	**365**	**82**	**149**	**280**	**365**	**128**	**60,310**
3.0	**SHARE CAPITAL & RESERVES**														
3.1	Share capital	186	480	2,500	571	571	197	223	139	197	139	190	371	142	5,905
3.2	Share premium	2,851	2,900		2	-	110	16		-	27	17	-	5	5,929
3.3	Retained earnings	1,034	475	(1,232)	(223)	(313)	12	(86)	30	(55)	(145)	(199)	(310)	(177)	(1,189)
3.4	Revaluation reserve	-	256		163	-	-	0		-	-	-	-		419
3.5	Statutory reserve	-	(646)	13		5	-	0		-	2		5		(620)
3.6	**Total Shareholders' funds**	**4,071**	**3,464**	**1,281**	**513**	**263**	**319**	**153**	**169**	**142**	**23**	**8**	**66**	**(30)**	**10,443**
	TOTAL LIABILITIES AND EQUITY	**29,582**	**27,225**	**6,050**	**2,942**	**1,244**	**1,530**	**433**	**534**	**224**	**172**	**289**	**431**	**98**	**70,754**

APPENDIXI XI :MICROFINANCE BANKS PROFIT AND LOSS ACCOUNT - DECEMBER 2019

		KENYA WOMEN	FAULU	RAFIKI*	SMEP	CARI-TAS	SU-MAC	KEY	U & I	UWEZO	DARAJA	MAI-SHA	CEN-TURY	CHOICE*	TOTAL
1.0	Income	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
1.1	Interest on Loan Portfolio	4,916	4,340	555	653	131	331	49	95	27	11	56	56	6	11,228
1.2	Fees and Com-mission on Loan Portfolio	626	655	56	56	24	27	4	21	14	2	8	12	0	1,507
1.3	Government Securities	-	393	-	-	-	-	-	-	-	-	-	-	-	393
1.4	Deposit and Bal-ances with Banks and Financial Inst.	187	138	107	52	57	17	6	-	-	0	6	4	-	574
1.5	Other Investments	-	-	-	-	-	-	-	-	-	-	-	-	2	2
1.6	Other Operat-ing Income	246	115	89	76	13	3	5	-	2	1	17	10	0	578
1.7	Non- Operating Income	-	2	-	-	-	-	-	0	-	-	-	-	-	2
	Total Income	5,976	5,643	807	838	226	378	64	117	43	14	87	82	8	14,283
2.0	Expenses														
2.1	Interest and Fee Ex-pense on Deposits	684	1,744	173	165	48	69	8	27	0	9	35	35	6	3,003
2.2	Other Fees and Com- missions expense	54	219	4	-	-	11	2	-	-	-	-	-	-	290
2.3	Provision for Loan Impairment	4	563	(172)	72	26	16	4	3	2	5	9	14	(6)	539
2.4	Staff Costs	2,531	909	373	229	86	47	36	26	15	15	33	31	14	4,344
2.5	Director's Emolu-ments	180	14	4	10	6	11	2	5	2	1	2	3	0	240
2.6	Rental Charges	398	126	103	26	3	19	6	6	7	4	6	1	4	709
2.7	Depreciation Charges	355	256	92	28	33	11	3	3	3	2	3	8	2	799
2.8	Amortization Charges	46	176	6	20	5	7	0	0	3	2	6	6	6	283
2.9	Other Administra-tive Expense	1,343	623	183	204	64	38	24	27	81	21	31	27	8	2,675
2.1	Non-Operating Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total Expenses	5,594	4,630	766	755	271	227	84	97	114	60	125	125	35	12,882
3.0	Operating Profit	381	1,013	41	83	(44)	151	(20)	20	(71)	(46)	(38)	(43)	(27)	1,401
4.0	Interest and Fee Expense on Bor-rowings(Finance Costs)	906	556	46	63	7	133	14	13	-	0	-	-	2	1,740
5.0	Profit/(Loss) before tax	(525)	456	(4)	19	(51)	18	(34)	8	(71)	(46)	(38)	(43)	(29)	(339)
6.0	Current Tax	(123)	145	(1)	-	-	9	-	3	-	-	-	-	-	32
6.1	Deferred Tax	-	-	-	13	-	-	(21)	-	(40)	(14)	-	-	-	(62)
7.0	Net Profit (After Taxes and Before Donations)	(402)	312	(3)	6	(51)	9	(13)	4	(31)	(32)	(38)	(43)	(29)	(309)
8.0	Donations for Oper-ating Expense	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.0	Net Profit After Taxes	(402)	312	(3)	6	(51)	9	(13)	4	(31)	(32)	(38)	(43)	(29)	(309)
	Other Comprehen-sive Income	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Surplus on revalua-tion of building	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Deferred tax on re-valuation surplus	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total comprehen-sive Income	(402)	312	(3)	6	(51)	9	(13)	4	(31)	(32)	(38)	(43)	(29)	(309)
	*Unaudited Financial Statements														

APPENDIX X: MICROFINANCE BANKS BALANCE SHEET - DECEMBER 2019

		KENYA WOM-EN	FAULU	RAFI-KI*	SMEP	CARI-TAS	SU-MAC	KEY	U & I	UWEZO	DARA-JA	MAI-SHA	CEN-TURY	CHOICE *	TOTAL
		Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
A) STATEMENT OF FINANCIAL POSITION															
1.0	ASSETS														
1.1	Cash and bank balances	2,875	408	90	35	26	14	30	7.18	2	1	5	1	0	3,494
1.2	Short-term deposits with banks	3,182	2,582	1,580	723	703	441	92	52.17	22	8	129	52	21	9,587
1.3	Government Securities	-	3,469	-	-	15	-	-	-	-	-	-	-	-	3,484
1.4	Advances to customers (net)	18,972	19,777	3,040	1,682	758	1,199	158	601.72	68	10	188	187	11	46,652
1.5	Due from related organi-zations														
1.6	Other receiv-ables	269	295	275	324	53	242	41	2.16	15	25	30	25	5	1,601.2
1.7	Tax recover-able	183	-	41	24	-	-	-	0.46	0	-	-	2	-	250
1.8	Deferred tax Asset	448	585	595	48	-	4	76	-	50	71	24	38	26	1,964
1.9	Other invest-ment	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.10	Investment in associate companies	1	54	-	-	-	0	-	-	-	-	848	-	-	903
1.11	Intangible assets	104	1,347	55	154	32	60	1	9.17	17	6	15	6	23	1,829
1.12	Property and equipment	4,578	1,165	260	324	125	53	8	13.55	(5)	12	26	37	(6)	6,589
	TOTAL ASSETS	30,613	29,682	5,935	3,314	1,712	2,013	406	686.40	168	133	1,264	348	79	76,353
2.0	LIABILITIES														
2.1	Cash collater-als held	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.2	Customer deposits	15,774	20,092	2,576	2,143	1,353	631	99	356	25	107	446	256	83	43,941
2.3	Borrowings	8,247	4,366	635	481	79	800	133	155	-	-	-	19	19	14,934
2.4	Deposit & balances due to banking institutions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.5	Deferred tax liability	-	-	-	-	-	-	-	0.75	-	-	-	-	-	1
2.6	Due to relat-ed organisa-tions	-	-	-	-	-	-	-	-	-	-	-	-	-	-
2.7	Other liabilities	2,746	1,447	1,458	186	39	254	26	2	26	35	18	52	11	6,300
	TOTAL LIA-BILITIES	26,767	25,906	4,668	2,810	1,471	1,685	259	513	51	142	465	326	114	65,175
3.0	SHARE CAPITAL & RESERVES														
3.1	Share capital	186	480	2,500	543	600	197	230	139	203	139	1,017	373	166	6,772
3.2	Share premium	2,851	2,900	-	2	-	110	16	-	-	27	20	-	5	5,932
3.3	Retained earnings	630	141	(1,313)	(208)	(360)	22	(99)	34	(86)	(177)	(237)	(351)	(206)	(2,209)
3.4	Revaluation reserve	-	255	-	154	-	-	-	-	-	2	-	-	-	411
3.5	Statutory reserve	179	-	79	12	2	-	-	-	-	-	-	-	-	272
3.6	Total Share-holders' funds	3,846	3,776	1,267	504	241	329	147	173	117	(9)	799	22	(35)	11,177
	TOTAL LIA-BILITIES AND EQUITY	30,613	29,682	5,935	3,314	1,712	2,013	406	686.40	168	133	1,264	348	79	76,353
	Source : Central Bank of Kenya														

APPENDIX XI: MICRO FINANCE BANKS PROFIT AND LOSS ACCOUNT - DECEMBER 2020																
		KENYA WOMEN	FAULU	RAFIKI*	SMEP	CARITAS	SUMAC	KEY	U & I	UWEZO	DARAJA*	MAISHA	CENTURY	MUUNGANO	CHOICE*	TOTAL
1.0	Income	Ksh. M	Ksh.M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
1.1	Interest on Loan Portfolio	4,079	3,948	620	475	172	358	26	106	10	3	101	39	2	6	9,946
1.2	Fees and Commission on Loan Portfolio	513	558	71	56	31	24	1	28	5	0	7	4	2	1	1,301
1.3	Government Securities	-	457	-	-	1	-	-	-	-	-	-	-	-	-	458
1.4	Deposit and Balances with Banks and Financial Inst.	199	95	66	31	66	11	7	-	-	-	9	-	8	-	493
1.5	Other Investments	-	-	12	-	-	-	-	-	-	-	-	1	-	1	14
1.6	Other Operating Income	267	124	117	58	14	6	3	-	1	1	69	9	0	0	669
1.7	Non- Operating Income	-	4	-	-	-	-	-	-	0	-	205	-	-	-	209
	Total Income	5,058	5,185	886	620	285	400	38	135	16	4	390	53	11	9	13,090
2.0	Expenses															
2.1	Interest and Fee Expense on Deposits	858	1,866	171	120	65	101	6	34	0	9	70	27	2	6	3,334
2.2	Other Fees and Commissions expense	66	237	4	-	-	10	0	-	-	-	-	-	0	-	317
2.3	Provision for Loan Impairment	625	952	(37)	33	1	20	1	5	4	(1)	89	22	0	3	1,719
2.4	Staff Costs	2,215	903	374	241	88	59	25	22	10	11	38	26	10	9	4,029
2.5	Director's Emoluments	170	12	5	7	5	12	0	6	1	1	2	4	1	-	227
2.6	Rental Charges	382	139	112	24	6	20	4	4	5	4	5	1	1	4	710
2.7	Depreciation Charges	332	275	87	28	33	11	1	3	2	2	5	8	3	2	791
2.8	Amortization Charges	40	91	2	17	1	6	0	0	3	2	7	5	3	3	179
2.9	Other Administrative Expense	1,187	770	181	201	75	42	17	19	13	16	111	20	6	7	2,665
2.1	Non-Operating Expense	-	-	-	-	-	-	-	3	1	-	-	-	-	-	3
	Total Expenses	5,874	5,244	899	671	274	281	54	96	40	44	326	112	26	34	13,974
3.0	Operating Profit	(816)	(59)	(14)	(51)	11	119	(17)	39	(23)	(40)	65	(59)	(15)	(25)	(884)
4.0	Interest and Fee Expense on Borrowings (Finance Costs)	691	417	46	47	6	108	17	21	-	-	-	2	-	0	1,356
5.0	Profit/(Loss) before tax	(1,507)	(476)	(60)	(98)	5	11	(34)	18	(23)	(40)	65	(60)	(15)	(26)	(2,240)
6.0	Current Tax	-	118	(18)	-	-	4	-	6	-	-	-	-	-	-	110
6.1	Deferred Tax	-	(195)	-	(29)	-	-	-	0	(6)	-	-	-	-	-	(230)
7.0	Net Profit (After Taxes and Before Donations)	(1,507)	(399)	(42)	(69)	5	7	(34)	12	(18)	(40)	65	(60)	(15)	(26)	(2,120)
8.0	Donations for Operating Expense	22	-	-	-	-	-	-	-	-	-	-	-	-	-	-
9.0	Net Profit After Taxes	(1,485)	(399)	(42)	(69)	5	7	(34)	12	(18)	(40)	65	(60)	(15)	(26)	(2,120)
	Other Comprehensive Income	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Surplus on revaluation of building	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Deferred tax on revaluation surplus	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
	Total comprehensive income	(1,485)	(399)	(42)	(69)	5	7	(34)	12	(18)	(40)	65	(60)	(15)	(26)	(2,120)
*Unaudited Financial Statements																
Source: MFBs Published Financial Statements																

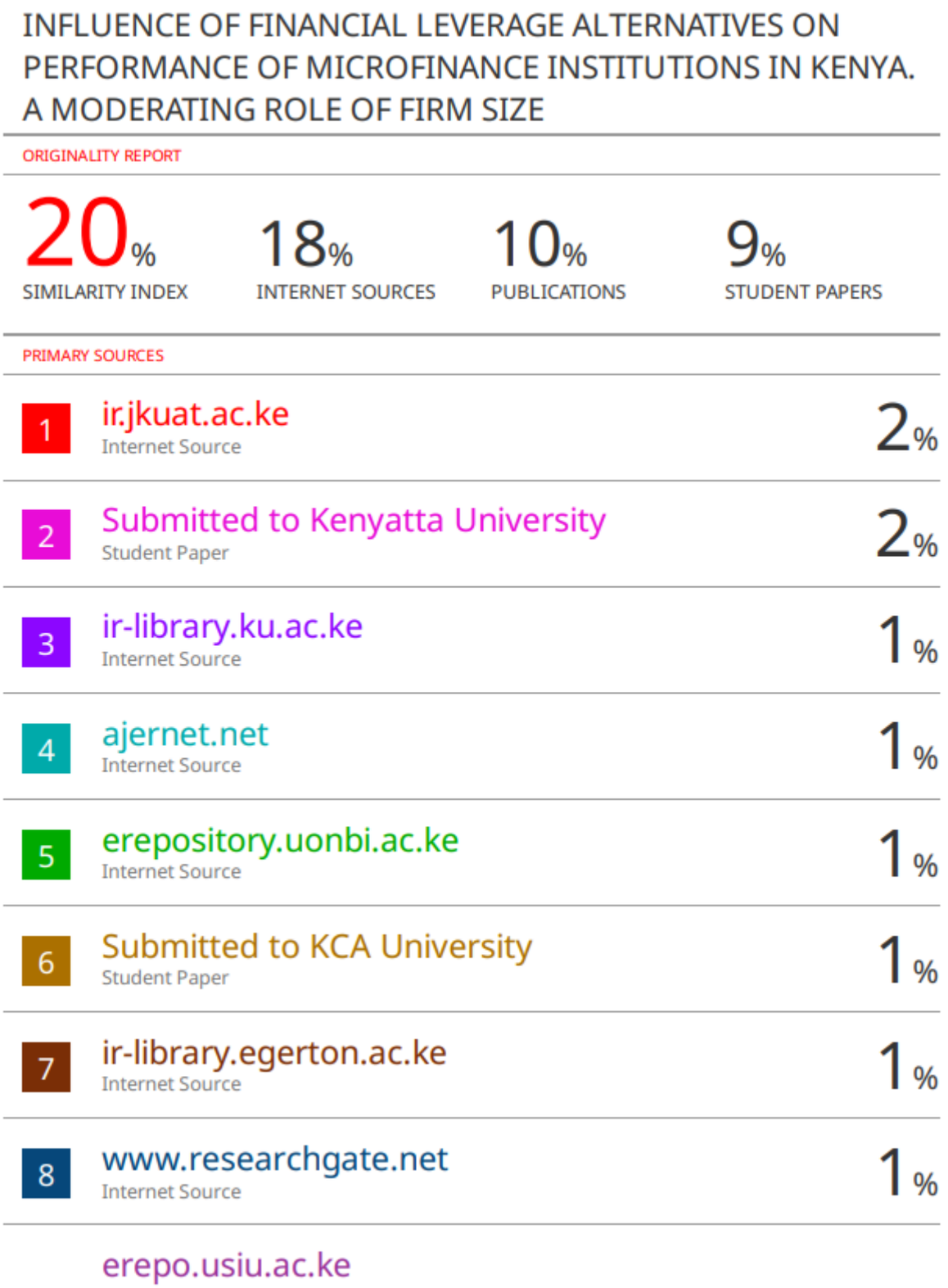
APPENDIX X: MICRO FINANCE BANKS BALANCE SHEET - DECEMBER 2020

		KENYA WOMEN	FAULU	RAFIKI*	SMEP	CARITAS	SUMAC	KEY	U & I	UWEZO	DARAJA*	NAISHA	CENTURY	MUUNGANO	CHOICE*	TOTAL
		Ksh.M	Ksh.M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M	Ksh. M
A) STATEMENT OF FINANCIAL POSITION																
1.0	**ASSETS**															
1.1	Cash and bank balances	703	399	79	41	24	15	4	8	1	0	3	2	0	0	1,280
1.2	Short term deposits with banks	4,490	3,099	948	682	643	568	85	72	11	7	195	65	65	6	10,935
1.3	Government securities	-	4,294	-	-	15	-	-	-	-	-	-	-	-	-	4,309
1.4	Advances to customers (net)	16,741	17,561	4,095	1,761	1,411	1,314	98	700	39	2	307	114	29	6	44,179
1.5	Due from related organisations															
1.6	Other receivables	413	383	89	390	55	294	34	4	20	29	38	45	1	3	1,797
1.7	Tax recoverable	200	337	53	29	-	-	3	-	0	1	-	2	6	-	632
1.8	Deferred tax Asset	448	771	18	78	-	8	76	-	55	71	24	38	4	26	1,616
1.9	Other investment	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
1.10	Investment in associate companies	1	61	333	-	-	-	-	-	-	-	113	-	-	-	507
1.11	Intangible assets	336	1,348	60	155	32	62	10	4	17	4	21	1	17	24	2,092
1.12	Property and equipment	5,042	2,374	389	465	137	111	7	21	8	14	985	31	27	13	9,622
	TOTAL ASSETS	**28,038**	**29,279**	**6,005**	**3,446**	**2,284**	**2,310**	**307**	**805**	**134**	**124**	**1,665**	**296**	**132**	**54**	**74,879**
2.0	LIABILITIES															
2.1	Cash collaterals held	-	-	-	-	-	-	-	-	-	-	-	-	1	-	-
2.2	Customer deposits	16,335	22,931	3,027	2,398	1,943	978	74	368	10	97	781	270	47	98	49,356
2.3	Borrowings	7,108	2,017	726	401	-	728	110	236	-	-	-	9	-	5	11,340
2.4	Deposit & balances due to banking institutions	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
2.5	Deferred tax liability	-	-	-	-	-	-	-	0.89	-	-	-	-	-	-	1
2.6	Due to related organisations	-	-	-	-	-	-	-	-	-	-	-	-	1	-	1
2.7	Other liabilities	2,235	1,423	1,633	214	85	253	15	3	25	75	19	56	15	17	6,069
	TOTAL LIABILITIES	**25,678**	**26,371**	**5,386**	**3,012**	**2,028**	**1,958**	**199**	**608**	**34**	**172**	**801**	**335**	**63**	**119**	**66,766**
3.0	**SHARE CAPITAL & RESERVES**															
3.1	Share capital	186	480	2,500	545	610	212	230	151	203	139	1,017	373	91	154	6,890
3.2	Share premium	2,851	2,900	-	2	-	110	16	-	-	27	20	-	-	5	5,932
3.3	Retained earnings	(676)	(748)	(1,961)	(293)	(379)	29	(138)	46	(103)	(217)	(377)	(414)	(21)	(225)	(5,479)
3.4	Revaluation reserve	-	275	-	154	-	-	-	-	-	2	205	-	-	-	637
3.5	Statutory reserve	0	-	79	26	26	-	0	-	-	-	-	3	-	-	133
3.6	**Total Shareholders' funds**	**2,361**	**2,907**	**619**	**434**	**256**	**351**	**108**	**197**	**100**	**(48)**	**864**	**(39)**	**69**	**(65)**	**8,113**
	TOTAL LIABILITIES AND EQUITY	**28,038**	**29,279**	**6,005**	**3,446**	**2,284**	**2,310**	**307**	**805**	**134**	**124**	**1,665**	**296**	**132**	**54**	**74,879**

*Unaudited Financial Statements

Source: MFBs Published Financial Statements

Appendix X: Plagiarism Report



INFLUENCE OF FINANCIAL LEVERAGE ALTERNATIVES ON PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA. A MODERATING ROLE OF FIRM SIZE

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Appendix XI: Publication

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EFFECT OF FINANCIAL LEVERAGE ALTERNATIVES ON PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA: A MODERATING ROLE OF FIRM SIZE

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Abstract

The study generally investigated the effect of financial leverage on performance of Microfinance Institutions (MFIs) in Kenya with a moderating role of firm size. The study developed a specific focus on the financial leverage components of debt to asset ratio, debt to equity ratio, debt to capital and debt to EBITDA and how each of these attributes affect performance of MFIs in Kenya. The study was guided by the trade-off, pecking order and Modigliani and Miler theories. A descriptive research design was adopted with a target population of 53 MFIs where a sample size of 13 MFIs (Microfinance Banks) was drawn using purposive sampling design. This was a longitudinal study (2011-2020) which used descriptive and inferential statistical methods of number of cases, Minima, Maxima and Means to interpret the data. The analyzed data was presented in form of Tables, Frequencies and Graphs. The analysis was done through SPSS version 22 where Analysis of Variance (ANOVA) was applied to establish the level of significance for the study results and test for hypothesis. The study confirmed that both debt to assets ratio and debt to equity ratio had a positive, moderate and statistically significant effect on performance while debt to capital and debt EBITDA had a weak, positive and significant

correlation on performance. The study recommended that further studies be conducted to establish the effect of other forms of leverage such as operating leverage and combined leverage on performance of firms in Kenya.

Keywords: Microfinance Institutions, Trade off theory, EBITDA, Panel data, Longitudinal study, Firm size