FINANCIAL INCLUSION AND FINANCIAL PERFORMANCE OF MICROFINANCE INSTITUTIONS IN KENYA

BY

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DECLARATION

This research project is my original work and has not been submitted by any other person for an award or any other consideration in any other university.

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This research project is submitted for examination with our approval as University Supervisors.

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DEDICATION

This research project is dedicated to my family, workmates, and my employer for the patience and support they have accorded to me during this period.

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ABBREVIATIONS AND ACRONYMS

AMFI	Association of Microfinance Institutions
CBK	Central Bank of Kenya
MFIs	Microfinance Finance Institutions
NGOs	Non-Governmental Organizations
OSS	Operational Self-Sufficiency
ROA	Return on Assets

ABSTRACT

The levels of financial inclusion in Kenya have continued to increase due to robust financial structures that have seen the number of MFIs grow. These MFIs contribute immensely in creating seamless flow and access of affordable financial products to the common people at the bottom of the pyramid. But despite their huge contribution, many of these MFIs still struggle to stay afloat. It remains unclear whether such growth in the financial levels contributes to the financial performance of such firms. Therefore, this research work provides theoretical and conceptual background on the relationship between financial inclusion and the financial performance of MFIs in Kenya. It uses total loan value and deposit accounts to measure financial inclusion levels and data collected from the 14 registered deposit-taking MFIs. However, from the regression analysis done, the paper concludes that, indeed, financial inclusion does not guarantee financial performance. Therefore, the study indicates the need to have empirical research to identify the contributors to the proper financial performance of MFIs.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

As Chakrabarty (2010) put forward, financial inclusion refers to a process by which financial market players such as commercial banks and microfinance institutions appropriate various financial products to the general public. This is usually done by lowering the finance cost and other barriers to enable as many people as possible to access financial products and is generally targeted at the low-income class and the vulnerable groups in society. Easy access to such financial services usually spurs economic activities such as entrepreneurial ventures, thus improving the livelihood of that segment of people at the bottom of the pyramid. Although there is always a high risk in appropriating such services to Low-income groups, many MFIs can still achieve considerable good financial performance (Mersland & Strøm, 2009). Therefore, as financial inclusion levels grow, the financial performance of MFIs is expected to grow due to a vast clientele base.

This research project was guided by three fundamental theories; economic-value added theory, contestable market theory, and finance growth nexus theory. These theories underscore the significant interlink between financial inclusion and financial performance of MFIs. The value-added economic theory proposes the economic value added to the shareholders as a measure of organizational performance instead of the accounting profits (Sabol & Sverer, 2017). However, to get such economic value, MFIs have to realize high returns on assets, which can only be achieved when there is an increase in financial inclusion levels. Contestable market theory, conversely, reiterates the significance of free entry and exit of MFIs to accelerate growth in financial inclusion. With many institutions to choose from, the general public has to make a choice on which MFI provides the best product portfolio (Rosli, 2013). This eventually translates

to high returns, thus the ability to maximize shareholders' wealth. Furthermore, according to finance growth nexus theory, when access to affordable financial products is curtailed, it results in slower financial performance. In essence, the theory argues that increasing access (growth in financial inclusion) promotes the financial performance of MFIs.

Globally, various studies have also acknowledged that MFIs play a pivotal part in the growth of financial inclusion (Mulunga, 2010; Shkodra, 2019). According to Loncar et al. (2013), there were about 10,000 MFIs globally in 2009, and this number has tremendously grown to date. This growth indicates the high demand for financial products, particularly credit facilities. In 2018, for instance, about 139.9 million borrowers gained from products offered by the MFIs compared to the 98 million in 2009 (Convergences Report, 2018). This demonstrated the significant impact that MFIs create in accelerating financial inclusion. Kenya has also witnessed the same growth in its financial inclusion levels. According to Ndii (2009) and FinAccess (2006), financial inclusion in Kenya has marginally grown from 32.7% to 38.4%. Although this growth continues to be witnessed through the growing list of newly set-up MFIs, many such firms still struggle to remain afloat. Therefore, this paper sought to establish how the growth in financial inclusion among many citizens affected the financial performance of various microfinance firms in Kenya.

1.1.1 Financial Inclusion

Although there is no clear definition of financial inclusion, different scholars have described it in distinct ways. According to Hannig and Jansen (2010), for instance, financial inclusion is the exclusion of barriers in the access and usage of quality and affordable financial products. Barriers and bureaucracies such as high costs and legal requirements (need for collaterals) more often make it difficult and expensive to access financial services. If they are removed, many people from the bottom of the pyramid usually have access to affordable products such as credit

facilities, thus increase in financial inclusion. Similarly, Lopez and Winkler (2017) defined financial inclusion as an opportunity for financial intermediaries such as MFIs to appropriate financial products to society's ordinary and vulnerable population. This appropriation, however, must follow either commercial or market-driven approaches.

When ordinary people from the extremity of the pyramid have access to readily available financial products at affordable costs and use them productively to create impact, then such an economy is said to have grown in their financial inclusion index. Lopez and Winkler (2017) outlined that this growth accelerates economic recovery by eradicating poverty and inequalities in access to financial products. Therefore, it is evident that growth in financial inclusion among ordinary citizens is very significant in creating a more balanced financial structure and helps improve the livelihood of the common population, an essential aspect of economic modeling.

Although measuring financial inclusion has remained a subjective topic, different researchers have always designed various approaches to measure the level of financial inclusion. According to Sarma (2012) and Chakrabarty (2010), financial inclusion is measured by looking at the usage and levels of access to various product portfolios MFIs offer. They argue that if the ordinary population is using various financial products, and their impact can be seen, then it shows how financial inclusion has penetrated. Even though these high usage levels might not necessarily mean high penetration of financial inclusion, it shows that information about financial products has penetrated nonetheless. In this project, however, financial inclusion was measured using two variables; the number of deposit accounts and the total loan value the firm advanced to clients for seven years from 2014 to 2020.

1.1.2 Financial Performance of MFIs

Financial performance usually is an instinctive measure of how a given firm can utilize its available resources to generate revenues from its primary business model. Although various definitions exist, what remains critical is that it measures the levels of revenues generated from the core business. Fatihudin (2018) put forward that the extent to which a firm is said to be financially viable can only be deduced from its ability to meet its financial obligations without constraints. This ability is usually portrayed through the firm's sustainability and management efficiencies and shows the general well-being of the firms, especially to its shareholders and the general public, and varies from firm to firm (Mersland & Strom, 2009).

The financial performance of microfinance institutions is an essential pillar in accelerating the growth and development of a more balanced economy. With properly performing MFIs, sustainability and employment creation are usually guaranteed (Serrao et al., 2012). Sustainability forms the basis of the continued provision of financial products to the ordinary population, thus increasing financial inclusion. Also, it attracts more investors in the economy as it can provide affordable and readily available financial products, particularly credit facilities. Furthermore, well-performing MFIs create employment opportunities, especially for ordinary citizens, thus promoting livelihood, a fundamental role of any business entity.

Since the financial performance of any organization is determined by both macro and inherent factors, it is usually measured using various tools. According to Bassem (2012) and Ongore and Kusa (2013), financial performance can be estimated using return on assets, equity, and investments. Shkodra (2019), on the other hand, advocates for the use of OSS and Net Income Margins as the core metric for evaluating the financial capability of an organization. However,

this study focused on the return on assets (ROA) as the fundamental measure of financial development. This is because ROA is within reach of MFIs. The financial performance of such institutions does not only rely on the number of clients it has but also on the internal strategies formulated by such firms.

1.1.3 Financial Inclusion and Financial Performance

The interlink between financial inclusion and financial performance dates back to the 1870s. Bagehot (1873), in his theory, Finance Growth Nexus, demonstrated the significant correlation between finance growth and economic development. This assertion has been demonstrated by different studies that show a significant positive connection between the two variables. The study on financial inclusion and financial sector stability by Aduda and Kalunda (2012) revealed a positive relationship between financial inclusion and performance. Similarly, Musau, Muathe, and Mwangi (2018) also upheld the same view on the role of financial inclusion in the constancy of institutions. In their article, financial inclusion, bank competitiveness, and credit risk of commercial banks in Kenya, they emphasized the significant place of financial inclusion in the expansion of commercial banks in Kenya. The study was carried out in Kenya from 2017 to 2018 and used both descriptive and non-descriptive data from all the 43 commercial banks and reports from CBK.

Moreover, a study by Jehona Shkodra in 2019 on the financial performance of microfinance organizations in Kosovo also revealed a positive relationship between financial inclusion and financial development (Shkodra, 2019). The research focused on the profitability of MFIs as a measure of financial performance. The results demonstrated that the more the clientele, the more profitable the firm, hence a positive correlation. Therefore, theoretically, it is expected that

growth in financial inclusion has a positive connection with the financial performance of MFIs. This is because expansion in the levels of financial inclusion means more clientele base, resulting in a high return on assets for the firm.

1.1.4 Microfinance Institutions in Kenya

The idea of MFIs in Kenya emerged in the early 1990s, about two decades after the concept was conceptualized globally. Since then, the foundation of the development of such MFIs has been anchored on various legislations. According to Donald et al. (2019), MFIs operate under distinct acts of parliament, including the trustees' Act, Building Societies Act, Societies Act, Banking Act, Kenya Post Office Savings Act, Corporation Societies, NGOs Coordination Act, and the Companies Act. This is not limited to the Microfinance Act 2006 that the Central Bank of Kenya enacted to regulate the overall operations of the microfinance institutions.

These MFIs, however, operate either as deposit-taking or non-deposit-taking, and their numbers have continued to soar. According to Ndii (2009), this growth was attributed to the constant increase in financial inclusion and favourable legislation by CBK. It is considered one of the accelerating factors to economic development. As per the Association of Microfinance Institutions in Kenya (AMFI), the governing body of MFIs, there are about 52 registered members. Yet, as outlined by the CBK Report on the Banking Industry Supervision 2020, there are only 14 registered deposit-taking microfinance firms in Kenya and many non-deposit-taking MFIs. These MFIs had 44.2 billion loan advances as of December 2020. Nonetheless, many of these institutions continue to struggle despite increased financial inclusion.

1.2 Research Problem

Growth in financial inclusion has been termed as one of the critical contributors to different organizations' financial stability and performance, particularly in growing economies (Chibba, 2009). Different study findings, for instance, have found a positive relationship between financial inclusion and financial stability (Hannig & Jansen. 2010; Shkodra, 2019; Aduda & Kalunda, 2012). The main strengthening factor behind this correlation is that financial inclusion aims at capital accumulation, which has a ripple consequence on the financial performance of MFIs. This favourable performance is essential to the individual firm and the overall economy as it forms a key pillar of policy formulation. It is essential, therefore, to underscore the significant role of financial inclusion on the financial performance of MFIs.

In recent years, the emergence of increased demand for financial services in various countries has shifted research attention to the correlation between financial inclusion and financial performance in the MFIs industry. In Kenya, various microfinance institutions have created a pool of financial products that have continued to gain traction among the general public. This can be seen with the growing list of new microfinance institutions being set up. However, this growth in financial inclusion has not been pointed as a key contributor to the financial performance of MFIs in Kenya. This is because many of these MFIs continue to struggle and eventually die within two or three years after inception and thus formed the basis of research. Theoretically, one would expect MFIs to perform financially well with the increasing financial inclusion. However, as Mulunga (2010) put forward, this is not the case, thus negating the overall conceptual findings.

Various global studies have also acknowledged the significant role MFIs play in accelerating financial inclusion. The study on the determinant factors influencing the growth of microfinance ventures in Namibia by Mulunga (2010) underscored the importance of clientele in the success of MIFs. He found out that when the number of clients increased, it was an indication that the levels of financial inclusion have increased, which should boost such institutions' performance (Mulunga, 2010). A study carried out on the indicators of financial performance of MFIs in Kosovo also revealed the pivotal role that MFIs play in an economy. Since growth in the client base is a measure of financial inclusion growth, it was equally significant to underpin its role in such institutions' financial performance. According to Shkodra (2019), MFIs in Kosovo were responsive to the growing number of clients seeking financial services. Although these articles admit a positive correlation between interest rates charged by MFIs with high-interest rates fetching a higher profit value, this is not a sure test for good financial performance.

Locally, several studies have been put forward to explore the significant role financial inclusion plays in developing a more stable financial performance of MFIs. According to a study done by Aduda and Kalunda (2012) on the financial inclusion and financial stability of microfinance firms, the authors acknowledged the importance of microfinance institutions as contributors to economic development. Furthermore, in Omwanza and Jagongo (2019) opinion, measuring various microfinance institutions' financial performance is crucial in creating a winning growth strategy. In their article, financial innovation and financial performance of MFIs in Kenya, they demonstrated the financial performance metrics in the microfinance industry and which formed the basic foundation of growth in the sector. However, these studies have fallen short of unraveling the correlation between growth in financial inclusion and financial performance.

Therefore, this research work examined the direct relationship between financial inclusion and the financial performance of MFIs in Kenya.

1.3 Research Objective

The research objective was to determine the effect of financial inclusion on the financial performance of microfinance institutions in Kenya.

1.4 Value of the Study

This research is very significant and vital, especially to various microfinance institutions in Kenya and globally. It forms the basic foundation for policy formulation and crafting of winning practical strategies. One of the strategies of any business is growth and sustainability. Numerous microfinance institutions are always initiated with a commercial bank status in mind. However, lack of proper strategies, especially clientele management, has been a recipe for their collapse despite the growing number of clients. This lack of proper clientele management is attributed to limited knowledge of the value clients create as there has been no clear research work on the same. Therefore, through this study, such firms can be able to formulate proper policies necessary for growth and development.

Furthermore, together with their development partners, the government also stands a chance of benefiting from this research. These players have a crucial role in formulating various economic recovery policies, particularly during this Covid-19 pandemic period. Since the research touches on one of the pillars of economic acceleration, it forms a fundamental pillar of policy formulation and roadmap locally and internationally. This will make such institutions leverage the significance of such policies to the economic development and strategies to reduce closures of small and medium firms in Kenya and globally.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This section outlined the theoretical foundation of different theories that describe financial inclusion and the financial performance of microfinance institutions. It begins by discussing the academic review of some of the approaches that form the basis of the study and then determinant variables that anchor the financial performance of MFIs in Kenya and the empirical studies. Therefore, this formed the foundation for developing the conceptual model at the end of the chapter.

2.2 Theoretical Review

Numerous theories have been advanced by different researchers on financial inclusion and the performance of microfinance institutions. However, in this study, only those that are deemed relevant will be discussed. Some of these theories include; economic value-added, contestable market theory, and finance growth nexus theory.

2.2.1 Economic value-added theory

Economic value added theory emanated from the work done by Franco Modigliani and Merton Miller and was later extended by Stewart and Stern of Stern in the early 1990s (Sabol & Sverer, 2017). The theory argues that organizational performance can be estimated by the economic value added to the shareholders rather than the accounting profits. But this value, however, can only be achieved if such entities can realize high returns on assets they use to generate profits. Therefore, every client that enrolls with any microfinance institution has a value attached. Various microfinance institutions, hence, formulate strategies that are aimed at increasing their client base. This indicates that with growth in financial inclusion (high client base), microfinance

institutions can realize the desired high returns that improve their financial performance (Omwanza & Jagongo, 2019).

On the contrary, the opponents of this theory argue that higher returns alone should not be taken as the sure test for the favourable financial performance of organizations. According to Momanyi, Ragama, and Kibati (2018), high returns without good corporate governance are a waste and may frustrate gains made by such firms. As this may be so, this theory laid a proper foundation under which this research article was based. Establishing the effective financial performance of MFIs in Kenya is anchored on the economic value they add through profitability, management efficiencies, or return on assets. This is what the theory lays its argument on.

2.2.2 Contestable market theory

The contestable market theory postulated by Baumol is a widely used theory that explains the market entry and exit framework. A market is said to be contestable if the entry and exit of players are made easy through the removal of barriers such as costs and legal hurdles (Rosli & Sidek, 2013). In Kenya, the government through CBK has created a productive environment that has allowed various investors to venture into the microfinance industry. Access to affordable and reliable financial products has increased significantly through the years. This has created favourable competition and efficiency in product provision among various microfinance institutions. However, critiques of this theory argue that despite easy entry or exit, the incumbent entities usually have the upper hand in consolidating the clientele if backed with proper strategies. Therefore, this theory is vital to this study as it critically analyzed the effects of such entries in creating a widely spread market environment of financial products.

2.2.3 Finance growth nexus theory

The theoretical relationship between growth in financial inclusion and financial performance has remained one of the oldest theoretical thinking in the field of finance. Dating back to the 1870s, Bagehot (1873), the proponent of finance growth nexus theory, demonstrated the significant interlink between an institution's financial growth and financial inclusion. According to the proponents, lack of access to affordable and safe financial products is a recipe for a slower performance and inequalities. They argue that financial players such as MFIs can create a favourable environment for growth and performance through either' demand leading' or' supply leading' approaches. And, the more productive the environment is, the higher revenues; thus, institutions have the opportunity to improve their performances; return on assets (Serrao et al., 2012).

Those in favour of the hypothesis believe that financial inclusion is the prerequisite for financial development; however, various theoretical disagreements exist. Those advocating for the 'supply leading' approach believe that despite increasing financial products in the market, it does not correlate to the performance of entities (Serrao et al., 2012). Nonetheless, this theory is vital in discussing how growth in financial inclusion influences the financial performance of MFIs in Kenya. It provides a basic landscape for analysis and validation of the relationship between financial inclusion and the financial developments of various microfinance institutions; the basic framework of this study.

2.3 Determinants of financial performance of MFIs

Microfinance institutions are significant in creating an intermediation landscape between financial services and clients, spurring economic development. According to Serrao et al. (2012), the improvement of the performance of entities depends on how well the financial system is

structured. But according to Momanyi, Ragama, and Kibati (2018), having a well-structured financial system alone does not guarantee performance. Factors such as firm size and interest rates affect the financial performance of MFIs.

2.3.1 Firm Size

The firm's size has been touted as one of the key pillars to the growing effectiveness of financial performance. According to Lopez-Valeiras et al. (2016), the firm's size typically determines the level of client base such as firm can amerce. As such, they can grow their revenue scales, thus high return on assets. Although the measurement of firm size takes various aspects, the significant measurement is usually the number of expansions regarding branches the firm can pull. This expansion eventually results in massive asset accumulation. Therefore, it has a direct link to the financial performance of any organization.

2.3.2 Interest rates

Interest rates usually have an indirect association with the financial performance of MFIs, particularly in the area of credit facilities. Although several arguments have been advanced against this statement, it has always shown resilience. According to Kipngetich (2011), lending rates greatly influence the levels of credit facilities any MFI is able to advance. When the rates are kept as low as possible, it attracts many customers due to low finance costs hence huge interest earned. On the flip side, if the interest rates are high, MFIs have an opportunity to gain from the high rates. However, this may discourage the low-income earners making them shun away from such institutions.

2.4 Empirical Review

The microfinance industry finds itself at the center stage of economic growth and development in many countries. Their financial performance, therefore, is essential in pushing for this trend. Locally, various studies have been put forward to underscore the idea of financial inclusion as a pillar to economic accelerations. The financial inclusion and financial sector stability report by Aduda and Kalunda (2012) revealed that financial inclusion is an essential recipe for growth and performance. This study was done in Kenya in 2012 and employed a descriptive research approach. Although it outlined the significance of financial inclusion in driving growth, it failed to explore the relationship between such an increase in financial inclusion and the financial performance of microfinance entities.

Similarly, Musau, Muathe, and Mwangi (2018) also upheld the same view on the contribution of financial inclusion in the constancy of institutions. In their article, financial inclusion, bank competitiveness, and credit risk of commercial banks in Kenya, they emphasize the significant place of financial inclusion in the performance of commercial banks in Kenya. This survey was carried out in Kenya from 2017 to 2018 and used both descriptive and non-descriptive data from all the 43 commercial banks and reports from CBK. Although they tried to clear the uncertainties around the role of financial inclusion, various knowledge gaps have been identified. It focused more on the credit risks and competitiveness as performance measures, which might not always be the case.

The same argument was advanced by Omwanza and Jagongo (2019) in their article on financial innovation and performance. The survey suggested that financial innovation is crucial in the growth of financial performance. However, they failed to acknowledge that the innovation only

creates an enabling environment for a vast client base. As such, they too fell short of establishing the interlink between the financial inclusion and performance of MFIs. This study, therefore, went deep in establishing the direct link between financial incorporation and the financial stability of MFIs.

In 2010, Anna, Magano, and Mulunga researched the factors that influence the financial performance of microfinance institutions in Namibia. This research was well structured with questionnaires, interviews, and an online study and targeted the existing microfinance institutions in Namibia. After the analysis, it was realized that the lack of a considerable client base arising from information asymmetry was the primary factor for the slow financial performance of MFIs in Namibia (Mulunga, 2010). Even though this points to the fact that most of the microfinance firms in Namibia lack client focus, the article did not explore the quantitative benefits that such financial inclusion offers to the entities in developing their growth models.

Moreover, according to the study done in Kosovo by Jehona Shkodra in 2019 on the financial performance of microfinance institutions, such entities' financial performance depends on the profitability realized (Shkodra, 2019). The study was carried out using a quantitative approach with more focus on the financial reports by the Central Bank of Kosovo detailing how the twelve MFIs have performed from 2007 to 2016 (Shkodra, 2019). The article showed that those MFIs with higher interest rates performed better than those charging lower interest rates. Kalliala (2016), on the other hand, established that most of the credit unions in Brazil were the agents of growth in the broadening of the financial inclusion landscape in the country. The article dabbed credit unions correspondents, and financial inclusion, executed in Brazil in 2016 through a descriptive research approach reinstated the everyday talk of financial inclusions' role in the

financial sector's growth. However, this growth could not be tied to the broadening of financial inclusion.

2.5 Summary of Literature Review

Finance growth nexus theory outlines the significance of creating a broad informational base for many citizens to understand the existence of financial products. This is backed up by the value-added theory that holds that financial inclusion makes value in the financial performance of microfinance institutions within a very contestable market. From the studies done by Shkodra, Mulunga, Killiala, Musau, et al., Josiah, and Kalunda, it was clear that financial inclusion is a crucial contributor to the expansion and development of any MFI that intends to grow. According to Shkodra (2019), for instance, having a massive population with relevant information about the existing financial products boosted financial inclusion, thus profitability for MFIs. Josiah, Kalunda, and Mulunga held that financial stability was dependent on the levels of clientele that such firms create.

Although these findings may seemed to hold water, they failed to establish a direct quantitative link between financial inclusion and the overall financial performance of such microfinance institutions. Their conclusions were blank on the role of financial inclusion (huge clientele base) on financial performance. As such, this article explored the quantitative impacts of growth in financial inclusion on the performance of MFIs in Kenya.

2.6 Conceptual Framework

The conceptual landscape outlines the relationship that exists between the independent variable and the dependent variable. In this study, the financial performance of different microfinance institutions was dependent on the levels of financial inclusion. Therefore, financial inclusion was

the independent variable, while the financial performance of MFIs was the dependent variable. As illustrated in the figure below, the levels of financial inclusion were estimated by the number of deposit accounts held by the clients and the total loan value of the individual firm. Similarly, the financial performance was determined by the levels of profitability, particularly the return on assets (ROA).

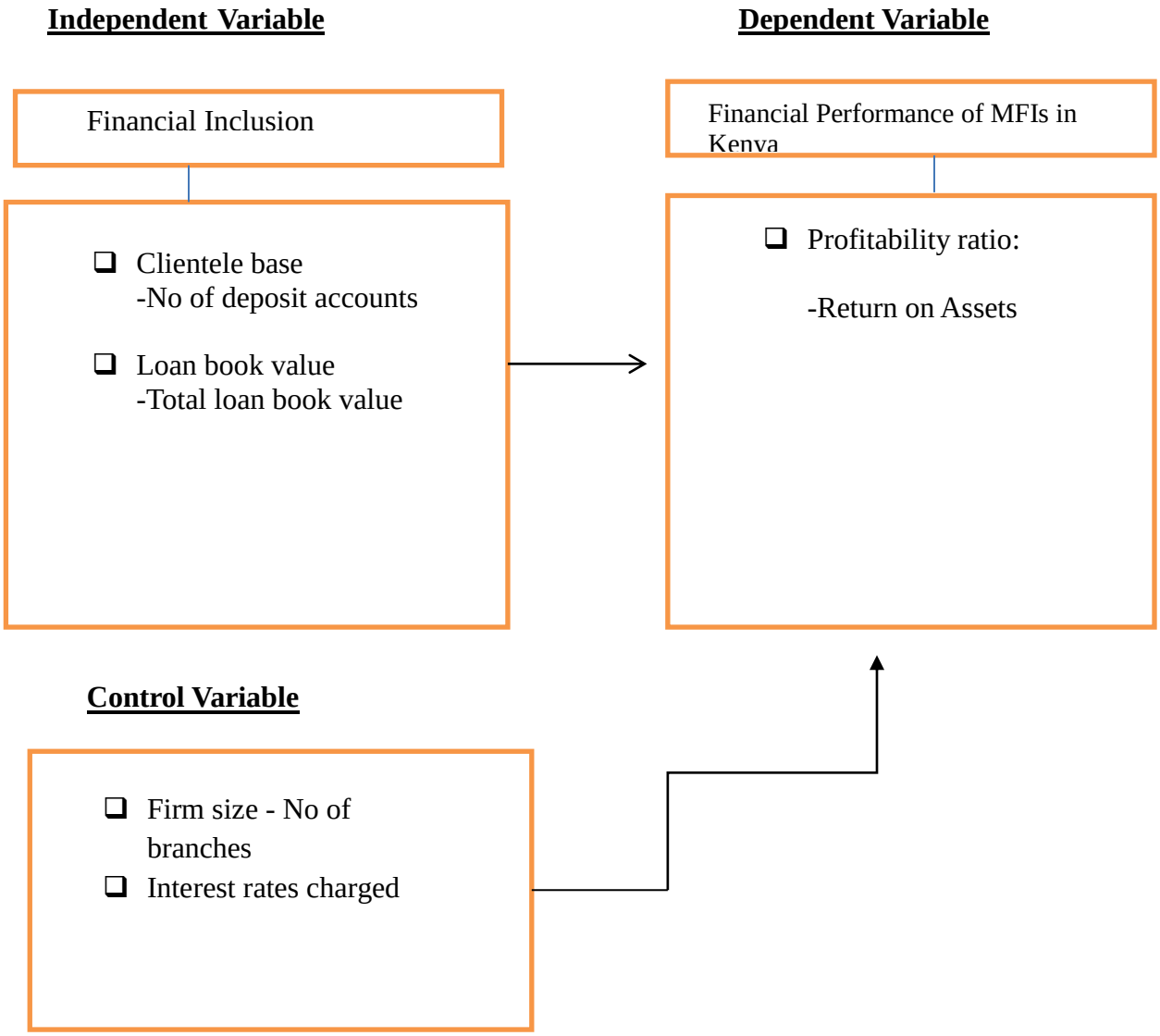

Figure 2. 1: Conceptual Model

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Research Design

Research design is a body-work of guiding principles that any research is anchored upon. It usually forms the basic foundation for developing the conceptual framework, data collection, and analysis by laying down both the philosophical angle of the study and the practical side (Orotho & Kombo, 2008). This study employed the descriptive research approach in developing the conceptual framework, data collection, and analysis. This technique helped in establishing how financial inclusion impacts the financial performance of microfinance institutions in Kenya.

3.2 Study Population

Although there are about 52 registered members of MFIs, as per the Association of Microfinance Institutions, the study focused only on the 14 registered MFIs. These were the only fully registered deposit-taking MFIs by 2020, according to the Bank Annual Supervision report by CBK. Therefore, this formed the focus of the research as most of these firms have their financial statements published; thus, providing a humble time for data collection.

Table 3. 1: List of deposit-taking MFIs sampled

No	Names of registered Deposit-Taking MFIs
1	Faulu Microfinance Bank Limited
2	Kenya Women Microfinance Bank Limited
3	Rafiki Microfinance Bank Limited
4	SMEP Microfinance Bank Limited
5	Maisha Microfinance Bank Limited
6	Caritas Microfinance Bank Limited
7	Sumac Microfinance Bank Limited
8	U & I Microfinance Bank Limited

9	Key Microfinance Bank Limited
10	Uwezo Microfinance Bank Ltd
11	Century Microfinance Bank Limited
12	Daraja Microfinance Bank Limited
13	Choice Microfinance Bank Limited
14	Remu Microfinance Bank Limited

3.3 Data Collection

The study used secondary data from all the 14 deposit-taking microfinance institutions for a period of 7 years from 2014 to 2020. For financial inclusion, the total number of deposit accounts and loan book value were collected. For financial performance, net incomes and total asset values were collected. However, the prevailing interest rates and the total number of branches were also gathered and formed the control variables. These data were extracted from the financial reports posted by the individual firms on their websites and also from the bank supervision annual reports by the CBK on the CBK website. This saved time and also provided an opportunity for accurate data; thus, minimal errors were reported.

3.4 Data Analysis

The study employed the regression analysis technique through excel to establish the relationship between financial inclusion and the financial performance of MFIs. According to Terry (2007), regression analysis is usually a sure model for hypothesis testing between the dependent and independent variables. Therefore, in this study, the model was represented in a mathematical model as follows:

$$\boldsymbol{ROA = \alpha_0 + \alpha_1 C_1 + \alpha_2 L_2 + \alpha_3 I_3 + \alpha_4 B_4}$$

Where;

$\boldsymbol{ROA}$
$-$ *Natural log of return on asset measured by dividing net income with the total asset*

$\boldsymbol{\alpha_0}$ $-$ *constant value*

$\boldsymbol{\alpha_1}$, $\boldsymbol{\alpha_2}$, $\boldsymbol{\alpha_3}$, $\boldsymbol{\alpha_4}$ - Coefficients

$\boldsymbol{C_1}$ *Natural log of total client base measured by the number of deposit accounts*

$\boldsymbol{L_2}$ $-$ *Natural log of the total book loan vale*

$\boldsymbol{I_3}$ $-$ *the interest rate*

$\boldsymbol{B_4}$ $-$ *Size of the firm measured by the number of branches*

3.5 Test of Significance

The study used F-tests, t-tests, and coefficient of determination to establish whether there was a connection between financial inclusion and the financial development of MFIs in Kenya. The use of these statistical tools is usually crucial as they test the hypothesis necessary in decision-making. T-test was used to test the significance of the derived hypothesis, while the F-test was used to measure the variability between the study variables. After that, the coefficient of determination was used to deduce an inference on the correlation level between financial inclusion and financial performance. This is what formed the foundation for recommendation and conclusion.

CHAPTER FOUR: ANALYSIS AND FINDINGS

4.1 Descriptive Results

The objective of the study was to establish the effects of financial inclusion on the financial performance of MFIs in Kenya. This chapter provides the analysis and findings of the results of the regression analysis run after the collection of the desired data. For the financial performance, the values of return on asset were estimated by dividing the aggregated comprehensive income of the MFIs by the aggregated total asset values of the firms, as illustrated in the table below.

Table 4. 1 Estimated Return on Assets

RETURN ON ASSETS							
	YEARS						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
TOTAL COMPREHENSIVE INCOME	787,000,000	350,200,000	(356,000,000)	(533,000,000)	(1,161,000,000)	(254,000,000)	(2,063,000,000)
TOTAL ASSETS	56,918,000,000	69,458,000,000	72,162,000,000	67,599,000,000	70,923,000,000	75,956,400,000	74,752,000,000
ROA	0.0138	0.0050	(0.0049)	(0.0079)	(0.0164)	(0.0033)	(0.0276)

For the independent variables, total aggregated deposit accounts, loans advanced to the clients, average lending interest rates, and the aggregated number of branches were collected and collated as illustrated in table 4.2. The analysis, however, used the natural logs of the total deposit accounts and total loan value. This was necessary due to the large values of the variables.

Table 4. 2 Aggregated net income, loan value, lending rate, and firm size

	CLIENT BASE	LOAN VALUE	AVERAGE INTEREST RATE	FIRM SIZE
YEARS	Aggregated Deposit Accounts	Aggregated Loan value	Average lending rates	Aggregated number of branches
2014	2,254,591	39,309,000,000	15.99%	277
2015	2,158,923	45,746,000,000	17.45%	286
2016	2,303,299	46,678,000,000	16.59%	288
2017	2,081,924	42,842,000,000	13.67%	289
2018	2,026,090	44,180,000,000	13.06%	290
2019	2,331,142	46,106,720,000	12.44%	292
20 20	2,594,354	44,148,000,000	11.75%	354

4.2 Diagnostic Checks

The study performed various diagnostic tests on the descriptive results to ascertain the significance of the regression analysis. The tests included F-tests, t-tests, and coefficient of determination. These tests were used to test the hypothesis of the whole regression analysis and its significance in explaining whether the relationship exists between financial inclusion and the financial performance of MFIs in Kenya.

4.3 Multiple Regression Output

The multiple regression analysis that was conducted gave the output illustrated in table 4.3 below.

Table 4. 3 Regression output

	df	*SS*	*MS*	*F*	*Significance F*
Regression	4	0.001015	0.000254	5.920177	0.149694

Residual	2	0.000086	0.000043
Total	6	0.001101	

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.313	1.348	0.232	0.838	-5.488	6.114	-5.488	6.114
C1	0.195	0.118	1.654	0.240	-0.312	0.702	-0.312	0.702
L2	-0.135	0.107	-1.259	0.335	-0.594	0.325	-0.594	0.325
I3	0.181	0.160	1.129	0.376	-0.509	0.871	-0.509	0.871
B4	-0.001	0.000	-2.535	0.127	-0.001	0.000	-0.001	0.000

4.4 Descriptive Statistics

The descriptive statistics results from the regression analysis revealed the following.

Table 4. 4 Descriptive statistics output

Regression Statistics	
Multiple R	0.96027107
R Square	0.922120527
Adjusted R Square	0.766361582
Standard Error	0.00654683
Observations	7

4.5 Test for Hypothesis

From table 4.4, the results indicate that R squared is 0.922. This means that the independent variable (financial inclusion) measured by the number of clients' deposit accounts (C1), loan value (L2), interest rate (I3), and the number of branches (B4) had a high negative explanatory authority on the financial performance of MFIs. For the whole regression, the F-test value was 5.920 with a p-value of 0.149694 as per table 4.3 above. Since this P-value is greater than 0.05 (F-5.92, P=0.14969>0.05; at 95% confidence level), we fail to reject the null hypothesis. The whole regression analysis is, therefore, statistically not significant, and that the financial inclusion measured by the two variables (total deposit accounts and total loan value) cannot

guarantee the financial performance of the MFI. Hence, the analytical regression model does not hold.

Furthermore, a t-test was also conducted to establish the significant contribution of the individual variable in explaining the dependent variable of the regression model. Results from table 4.3 show that for the client base, t-value was1.654 with a p-value of 0.240; for the loan value, t-value was -1.259 with a p-value of 0.335; for the interest rate charged, t-value was 1.129 with a p-value of 0.376; and for the number of branches, t-value was -2.535 with a p-value of 0.127. These p-values (P=0.24,0.376 , 0.127>0.05) are greater than the conventional 0.05 at 95% confidence level. This indicated that the individual variable does not contribute to the whole dependent variable, which is the financial performance.

Table 4. 5 Effects of client base on the financial performance

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.760985	1.018653	0.747051	0.488653	-1.85755	3.379516	-1.85755	3.379516
C1	-0.12075	0.160393	-0.75285	0.485456	-0.53305	0.291551	-0.53305	0.291551

Results from table 4.5 show that the total number of clients measured by the number of aggregated deposit accounts do not contribute to the performance of the MFIs. As per the regression, the t-value was -0.7528 with a p-value of 0.485. This P-value is greater than the conventional 0.05, thus an indication that the variable does not contribute to the performance of the MFIs.

Table 4. 6 Effects of loan value advanced on the financial performance

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*

Intercept	1.996212	2.369002	0.842638	0.437869	-4.0935	8.085924	-4.0935	8.085924
L2	-0.18809	0.222561	-0.84513	0.436601	-0.7602	0.384019	-0.7602	0.384019

Also, from table 4.6, the contribution of the aggregated total loans advanced to the customers towards the performance of MFIs was also conducted. With a t-value of -0.84513 and a p-value of 0.4366, it was evident that there is no relationship between the advanced total loans and the performance of MFIs. This is because the P-value of 0.4366 is greater than 0.05; thus, we fail to reject the null hypothesis. This is also evident with the interest rate in table 4.7. From this table, the results showed that average lending rates do not contribute to the performance of MFIs. This is because, with a t-value of 2.491, the p-value of 0.05506 is still greater than the required p-value of 0.05; thus, we fail to reject the null hypothesis.

Table 4. 7 Effects of average lending rate on the financial performance

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	-0.07111	0.02644	-2.68929	0.043335	-0.13907	-0.00314	-0.13907	-0.00314
I3	0.452182	0.181491	2.491486	0.055061	-0.01436	0.918719	-0.01436	0.918719

Furthermore, from the results in table 4.8, the higher the number of branches the firms have across the country, the higher they contribute to the financial performance though negatively. As indicated, the t-value was -3.0211 with a p-value of 0.029. This p-value is less than the conventional value ($p=0.029<0.05$). This means that we reject the null hypothesis and conclude that the firm size has a contribution to the performance of the firms. Although the contribution is negative, it is significant nonetheless.

Table 4. 8 Effects of firm size on the financial performance

	Coefficients	*Standard Error*	*t Stat*	*P-value*	*Lower 95%*	*Upper 95%*	*Lower 95.0%*	*Upper 95.0%*
Intercept	0.119345	0.041589	2.869635	0.03501	0.012437	0.226253	0.012437	0.226253
B4	-0.00042	0.00014	-3.0211	0.02937	-0.00078	-6.3E-05	-0.00078	-6.3E-05

4.6 Discussion of Results

Generally, from the analytical tests done, it was evident that the levels of financial inclusion have continued to grow, as illustrated by the advanced total loans and the increasing number of deposit accounts. This growth, however, was not directly linked to the performance of such MFIs. All the three variables, clientele base, loan book value, and lending rates, show no correlation with the financial development of the MFIs as illustrated by their p-values which were greater than the conventional value of 0.05. Only firm size showed a negative relationship with the financial development of the firms. This means that the whole analytical model cannot be used to explain the financial performance measured by return on assets. Therefore, the mathematical model that can be used to predict the financial performance of MFIs would be as follows;

$$\boldsymbol{ROA = \alpha_0 + \alpha_4 B_4}$$

RAO = 0.119345 - 0.00042$\boldsymbol{B_4}$

CHAPTER FIVE: CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter provides a summary of the research findings and a discussion of the viable recommendations thereof. It also enumerates some of the major study limitations that limited the scope of the study, as well as the suggested grey areas for further studies.

5.2 Summary of findings

As outlined from the discussions, the study revealed that the independent variables, client base, and total loans advanced to the customers have no direct relationship with the performance of MFIs. Every MFI contributes immensely to the growth of financial inclusion in the economy, as was shown by the increasing loan value and the deposit accounts maintained by the clients. However, as financial inclusion grows, its contribution is not identifiable with the growth in the financial performance. This is because the MFIs continued to make huge losses despite the growth. Moreover, the study also revealed that the lending rate does not contribute to the performance of MFIs. According to the results, the study failed to establish the relationship between the interest rates and the performance. However, the firm size measured by the number of branches has a negative relationship with the performance of MFIs and which is also not dependable.

5.3 Conclusion and recommendation

From the results and findings, therefore, the study concludes that the performance of MFIs in Kenya cannot be anchored on the growth of financial inclusion as the relationship cannot be established. Hence, the study made the following three recommendations that are deemed appropriate in promoting the desired goal of every business, which is sound financial performance. First, the MFIs should continue to pursue increasing their size by opening branches

in different parts of the country. This will ensure that they increase the client base. However, this must be well thought to reduce the operational costs, which might hinder financial performance.

Secondly, the firms need to also formulate proper governance policies to ensure proper management of their investment and operational portfolios. This will reduce the mismanagement of the firms, thus increasing their performances. Thirdly, the firms also need to control their operational costs and budgets. The study established that most of these firms have huge operational costs, which eat into their ability to create value from their assets. Therefore, if such costs are controlled, the firms' performance would be desirable.

5.4 Limitations of the study

In conducting the research, two major limitations came up. One, some of the MFIs under study did not have their financial reports posted on their official websites. This limited the collection of data directly from the company sources. However, this was mitigated by getting the same reports from the CBK website, which then made the data collection easier. Secondly, different MFIs were inaugurated in different years, and some, for instance, Remu, restructured and changed names. As such, they lacked data for some specific years. To mitigate this, however, the study carried out the aggregation of the data in order to achieve the objective.

5.5 Suggestions for further research

According to the study, it was evident that financial inclusion does not guarantee the financial performance of MFIs in Kenya. Therefore, one of the areas for further studies is to determine then what key factors guarantee the financial performance of MFIs in Kenya.

REFERENCES

Aduda, J., & Kalunda, E. (2012). Financial inclusion and financial sector stability concerning Kenya: A review of the literature. *Journal of Applied Finance and Banking*, *2*(6), 95.

Bagehot, W.(1873), Lombard Street: A Description of the Money Market (available at .org"www.econlib.org).

Bassem, B.S. (2012). Social and financial performance of microfinance institutions: is there a trade-off? Journal of Economics and International Finance 4(4), 92-100

Chakrabarty, K . C, (2010), Financial Inclusion and Banks: Issues and Perspectives, Reserve Bank of India.

Chibba, M, (2009), Financial Inclusion, Poverty Reduction, and the Millennium Development Goals, European Journal of Development Research, Sinclair S, McHard F, Dobbie L.

Fatihudin, D. (2018). How to measure financial performance. *International Journal of Civil Engineering and Technology (IJCIET)*, *9*(6), 553-557.

FinAccess (2006), Financial Sector Deepening, Kenya .pdf"https://www.centralbank.go.ke/wp-content/uploads/2016/06/Directory-of-Licenced-Microfinance-Banks.pdf

Hannig, A, and S. Jansen. 2010. Financial Inclusion and Financial Stability: Current Policy Issues. ADBI Working Paper 259. Tokyo: Asian Development Bank Institute. http://www.adbi.org/workingpaper/2010/12/21/4272.financial.inclusion.stability.

https://amfikenya.com/

https://www.centralbank.go.ke/uploads/banking_sector_annual_reports/1375903848_Bank%20Supervision%20Annual%20Report%202020.pdf

https://www.convergences.org/en/119115/

Kalliala, O. (2016). *Credit union correspondents and financial inclusion in Brazil: an exploratory study* (Doctoral dissertation).

Kipngetich, K. M. (2011). *The relationship between interest rates and financial performance of commercial banks in Kenya* (Doctoral dissertation, University of Nairobi).

Loncar, D., Novak, C., & Cicmil, S. (2013). The global recession and sustainable development: the case of microfinance industry in Eastern Europe.

Lopez, T., & Winkler, A. (2017). The challenge of rural financial inclusion-evidence from micro-finance. Applied Economics 50(4), 1555-1577

Lopez-Valeiras, E., Gomez-Conde, J., & Fernandez-Rodriguez, T. (2016). Firm size and financial performance: intermediate effects of indebtedness. *Agribusiness*, *32*(4), 454-465.

Mersland, R., & Strom, O. (2009). Performance and governance in microfinance institutions. Journal of Banking and Finance 33(4), 662-669

Mersland, R., & Strøm, R. Ø. (2009). Performance and governance in microfinance institutions. *Journal of Banking & Finance*, *33*(4), 662-669.

Momanyi, J., Ragama, P., & Kibati, P. (2018). Effects of corporate governance practices on growth of microfinance institutions in Kenya. *International Journal of Economics, Commerce and Management United Kingdom*, *6*.

Mulunga, A. M. (2010). Factors affecting the growth of microfinance institutions in Namibia. *Unpublished dissertation. Bellville: University of Stellenbosch*.

Musau, S., Muathe, S., & Mwangi, L. (2018). Financial inclusion, bank competitiveness, and credit risk of commercial banks in Kenya. *International Journal of Financial Research*, *9*(1), 203-218.

Ndii, D, (2009), Financial inclusion: Recent developments and lessons from Kenya, Book Chapter. Financial Inclusion In Kenya.

Orotho, A.J., & Kombo, D.K. (2008). Research methods. Nairobi. KU institute of open learning.

Rosli, M.M., Sidek, S. (2013). *Innovation and Firm Performance. Evidence from Malaysian Small and Medium Enterprises.* University Malaysia Kelantan, Malaysia.

Sabol, A., & Sverer, F. (2017). A review of the economic value-added literature and application. *UTMS Journal of Economics*, *8*(1), 19-27.

Sabol, A., & Sverer, F. (2017). A review of the economic value-added literature and application. *UTMS Journal of Economics*, *8*(1), 19-27.

Sarma, Mandira, 2012. Index of Financial Inclusion A measure of financial sector inclusiveness. Berlin Working Papers on Money, Finance, Trade and Development, Working Paper no. 07/2012.

Serrao, A.H. Sequeira and B.V. Hans (2012)., Designing a Methodology to Investigate Accessibility and Impact of Financial Inclusion (March 18, 2012). http://ssrn.com/abstract=2025521 or 5521"http://dx.doi.org/10.2139/ssrn.2025521

Shkodra, J. (2019). Financial performance of microfinance institutions in Kosovo. *Journal of International Studies*, *12*(3), 31-37.

Terry, L. (2007). Quantitative techniques.

APPENDICES

Table 5. 1 Data Collection Sheet

Company Name: _____

Location _____

DESCRIPTIONS	**YEARS**						
	2014	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**
Number of deposit accounts							
Total loan book value for the stated period							
The average interest rate the firm has been charging							
Number of branches the firms have							
Net Income for the stated period							
Total Asset value							

Table 5. 2 Number of Deposit Accounts

NUMBER OF DEPOSIT ACCOUNTS								
	YEARS							
FIRMS	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**TOTALS**
SMEP	426,007	456,314	502,111	503,431	518,111	535,219	546,043	**3,487,236**
FAULU	547,380	504,846	508,472	372,509	397,027	403,881	373,994	**3,108,109**
KWMF	1,153,955	1,029,967	1,039,770	909,559	885,936	951,767	994,701	**6,965,655**
RAFIKI	100,377	122,773	193,907	141,055	130,708	127,805	129,518	**946,143**
MAISHA	-	-	832	87,604	17,336	220,589	452,053	**778,414**
CARITAS	-	2,573	7,321	7,321	21,283	23,079	27,421	**88,998**
SUMAC	1,629	2,599	6,629	4,174	5,613	9,064	11,123	**40,831**
U & I	7,827	8,495	3,245	7,402	7,811	6,290	6,815	**47,885**
KEY	-	-	-	-	-	11,341	10,376	**21,717**
UWEZO	3,211	3,933	4,435	5,349	5,087	5,806	6,078	**33,899**
CENTURY	8,956	16,118	19,759	23,977	25,101	24,409	23,551	**141,871**
DARAJA	-	1,028	2,962	3,963	4,760	4,267	4,465	**21,445**
CHOICE	-	2,771	5,174	6,264	7,317	7,625	8,216	**37,367**
REMU	5,249	7,506	8,682	9,316	-	-	-	-
TOTALS	**2,254,591**	**2,158,923**	**2,303,299**	**2,081,924**	**2,026,090**	**2,331,142**	**2,594,354**	**15,719,570**

Table 5. 3 Firm Size measured by the number of branches

NUMBER OF BRANCHES								
	YEARS							
FIRMS	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**TOTALS**
SMEP	18	18	18	18	18	18	18	**126**
FAULU	43	43	43	43	43	43	43	**301**
KWMF	183	183	183	183	183	183	245	**1,343**
RAFIKI	19	19	19	19	19	19	19	**133**
MAISHA	-	-	1	1	1	1	1	**5**
CARITAS	-	7	7	7	7	7	7	**42**
SUMAC	6	6	6	6	6	6	6	**42**
U & I	3	3	3	3	3	3	3	**21**

KEY	-	-	-	-	1	3	3	**7**
UWEZO	3	3	3	3	3	3	3	**21**
CENTURY	1	1	1	2	2	2	2	**11**
DARAJA	-	1	2	2	2	2	2	**11**
CHOICE	-	1	1	1	2	2	2	**9**
REMU	1	1	1	1	-	-	-	**4**
TOTALS	**277**	**286**	**288**	**289**	**290**	**292**	**354**	**2076**

Table 5. 4 Total Loans Advanced to the customers

TOTAL LOAN VALUE ADVANCED TO CUSTOMERS								
	YEARS							
FIRMS	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**TOTALS**
SMEP	1,635,000,000	1,728,000,000	1,670,000,000	1,670,000,000	1,650,000,000	1,680,000,000	1,760,000,000	**11,793,000,000**
FAULU	14,488,000,000	16,584,000,000	17,594,000,000	16,957,000,000	16,934,000,000	19,234,000,000	17,561,000,000	**119,352,000,000**
KWMF	18,854,000,000	22,090,000,000	22,188,000,000	19,373,000,000	19,997,000,000	18,972,000,000	16,741,000,000	**138,215,000,000**
RAFIKI	3,418,000,000	4,270,000,000	3,661,000,000	2,856,000,000	2,723,000,000	3,040,000,000	4,095,000,000	**24,063,000,000**
MAISHA	-	-	27,000,000	156,000,000	138,000,000	188,000,000	307,000,000	**816,000,000**
CARITAS	-	11,000,000	141,000,000	351,000,000	751,000,000	758,000,000	1,411,000,000	**3,423,000,000**
SUMAC	289,000,000	433,000,000	538,000,000	623,000,000	919,000,000	1,199,000,000	1,314,000,000	**5,315,000,000**
U & I	84,000,000	142,000,000	271,000,000	325,000,000	443,000,000	601,720,000	700,000,000	**2,566,720,000**
KEY	-	-	-	-	231,000,000	158,000,000	98,000,000	**487,000,000**
UWEZO	250,000,000	97,000,000	151,000,000	126,000,000	135,000,000	68,000,000	39,000,000	**866,000,000**
CENTURY	107,000,000	79,000,000	107,000,000	103,000,000	195,000,000	187,000,000	114,000,000	**892,000,000**
DARAJA	-	36,000,000	51,000,000	53,000,000	42,000,000	10,000,000	2,000,000	**194,000,000**
CHOICE	-	19,000,000	35,000,000	31,000,000	22,000,000	11,000,000	6,000,000	**124,000,000**
REMU	184,000,000	257,000,000	244,000,000	218,000,000	-	-	-	**903,000,000**
TOTALS	**39,309,000,000**	**45,746,000,000**	**46,678,000,000**	**42,842,000,000**	**44,180,000,000**	**46,106,720,000**	**44,148,000,000**	**309,009,720,000**

Table 5. 5 Net Comprehensive Income

NET COMPREHENSIVE INCOME								
	YEARS							
FIRMS	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**TOTALS**
SMEP	(97,000,000)	(1,000,000)	(134,000,000)	(32,000,000)	8,000,000	6,000,000	(69,000,000)	**(319,000,000)**
FAULU	401,000,000	115,000,000	43,000,000	143,000,000	181,000,000	369,000,000	(378,000,000)	**874,000,000**
KWMF	486,000,000	395,000,000	224,000,000	19,000,000	(827,000,000)	(402,000,000)	(1,485,000,000)	**(1,590,000,000)**
RAFIKI	21,000,000	29,000,000	(293,000,000)	(392,000,000)	(192,000,000)	(3,000,000)	(42,000,000)	**(872,000,000)**
MAISHA	-	-	(31,000,000)	(42,000,000)	(119,000,000)	(38,000,000)	65,000,000	**(165,000,000)**
CARITAS	-	(60,000,000)	(74,000,000)	(71,000,000)	(85,000,000)	(51,000,000)	5,000,000	**(336,000,000)**
SUMAC	4,000,000	7,000,000	14,000,000	5,000,000	5,000,000	9,000,000	7,000,000	**51,000,000**
U & I	2,000,000	7,000,000	7,000,000	11,000,000	8,000,000	4,000,000	12,000,000	**51,000,000**
KEY	-	-	-	-	(14,000,000)	(13,000,000)	(34,000,000)	**(61,000,000)**
UWEZO	1,000,000	200,000	4,000,000	(9,000,000)	(27,000,000)	(31,000,000)	(18,000,000)	**(79,800,000)**
CENTURY	(34,000,000)	(53,000,000)	(41,000,000)	(63,000,000)	(25,000,000)	(43,000,000)	(60,000,000)	**(319,000,000)**
DARAJA	-	(45,000,000)	(28,000,000)	(47,000,000)	(32,000,000)	(32,000,000)	(40,000,000)	**(224,000,000)**
CHOICE	-	(29,000,000)	(35,000,000)	(38,000,000)	(42,000,000)	(29,000,000)	(26,000,000)	**(199,000,000)**
REMU	3,000,000	(15,000,000)	(12,000,000)	(17,000,000)	-	-	-	**(41,000,000)**
TOTALS	**787,000,000**	**350,200,000**	**(356,000,000)**	**(533,000,000)**	**(1,161,000,000)**	**(254,000,000)**	**(2,063,000,000)**	**(3,229,800,000)**

Table 5. 6 Average Lending Rates

AVERAGE LENDING RATES								
	YEARS							
FIRMS	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**TOTALS**
SMEP	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	**100.95%**
FAULU	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	

KWMF	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
RAFIKI	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
MAISHA	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
CARITAS	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
SUMAC	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
U & I	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
KEY	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
UWEZO	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
CENTURY	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
DARAJA	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
CHOICE	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
REMU	15.99%	17.45%	16.59%	13.67%	13.06%	12.44%	11.75%	
TOTALS	**223.86%**	**244.30%**	**232.26%**	**191.38%**	**182.84%**	**174.16%**	**164.50%**	**100.95%**
AVERAGE	**16.0%**	**17.5%**	**16.6%**	**13.7%**	**13.1%**	**12.4%**	**11.8%**	**7.2%**

Table 5. 7 Total Asset Value

TOTAL ASSET VALUE								
	YEARS							
FIRMS	**2014**	**2015**	**2016**	**2017**	**2018**	**2019**	**2020**	**TOTALS**
SMEP	2,380,000,000.00	2,590,000,000.00	2,650,000,000.00	2,730,000,000.00	2,940,000,000.00	3,300,000,000.00	3,450,000,000.00	**20,040,000,000.00**
FAULU	20,320,000,000.00	25,320,000,000.00	27,030,000,000.00	25,330,000,000.00	27,220,000,000.00	29,300,000,000.00	29,280,000,000.00	**183,800,000,000.00**
KWMF	26,930,000,000.00	31,861,000,000.00	32,153,000,000.00	28,930,000,000.00	29,757,000,000.00	30,612,000,000.00	28,038,000,000.00	**208,281,000,000.00**
RAFIKI	5,975,000,000.00	7,729,000,000.00	7,327,000,000.00	6,727,000,000.00	6,050,000,000.00	5,935,000,000.00	6,005,000,000.00	**45,748,000,000.00**
MAISHA	-	-	171,000,000.00	302,000,000.00	289,000,000.00	1,264,000,000.00	1,665,000,000.00	**3,691,000,000.00**
CARITAS	-	186,000,000.00	574,000,000.00	879,000,000.00	1,244,000,000.00	1,712,000,000.00	2,284,000,000.00	**6,879,000,000.00**
SUMAC	390,000,000.00	608,000,000.00	803,000,000.00	1,137,000,000.00	1,530,000,000.00	2,013,000,000.00	2,310,000,000.00	**8,791,000,000.00**
U & I	137,000,000.00	184,000,000.00	351,000,000.00	406,000,000.00	534,000,000.00	686,400,000.00	805,000,000.00	**3,103,400,000.00**
KEY	-	-	-	-	433,000,000.00	406,000,000.00	307,000,000.00	**1,146,000,000.00**
UWEZO	160,000,	226,000,000.	214,000,000.	212,000,000.	225,000,000.	168,000,000.	134,000,000.	**1,339,000,000.00**

	000.00	00	00	00	00	00	00	
CENTURY	231,000,000.00	197,000,000.00	225,000,000.00	288,000,000.00	431,000,000.00	348,000,000.00	296,000,000.00	**2,016,000,000.00**
DARAJA	-	83,000,000.00	180,000,000.00	168,000,000.00	172,000,000.00	133,000,000.00	124,000,000.00	**860,000,000.00**
CHOICE	-	77,000,000.00	122,000,000.00	136,000,000.00	98,000,000.00	79,000,000.00	54,000,000.00	**566,000,000.00**
REMU	395,000,000.00	397,000,000.00	362,000,000.00	354,000,000.00	-	-	-	**1,508,000,000.00**
TOTALS	**56,918,000,000.00**	**69,458,000,000.00**	**72,162,000,000.00**	**67,599,000,000.00**	**70,923,000,000.00**	**75,956,400,000.00**	**74,752,000,000.00**	**487,768,400,000.00**

Table 5. 8 Natural logs of both loan value, ROA, and total deposit accounts

YEARS	**ROA**	**C1**	**L2**	**B4**	**I3**
2014	0.0138	6.35	10.59	277	16.0%
2015	0.0050	6.33	10.66	286	17.5%
2016	(0.0049)	6.36	10.67	288	16.6%
2017	(0.0079)	6.32	10.63	289	13.7%
2018	(0.0164)	6.31	10.65	290	13.1%
2019	(0.0033)	6.37	10.66	292	12.4%
2020	(0.0276)	6.41	10.64	354	11.8%