

**EFFECT OF INTEREST RATES SPREAD ON THE FINANCIAL  
PERFORMANCE OF DEPOSIT TAKING MICROFINANCE INSTITUTIONS IN  
KENYA**

**BY**


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## DECLARATION

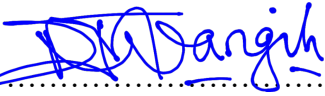
This research project is my original work and has not been submitted for a degree award in any other University.

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D63/32974/2019

This research project has been presented for examination with my approval as the University supervisor.

Signature .....  ..... Date ..... 10 November 2022 .....

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## **DEDICATION**

I dedicate this project to the family to whom I belong. You love me, you support me. I love you too.

## **ACKNOWLEDGEMENT**

I am indebted to God for His peace of mind, grace, and blessings that doubled in the course of this study.

To my supervisor, Prof. Cyrus Iraya, thank you for the generous guidance throughout the project. Your invaluable guidance, mentorship, commitment, and time ensured I did everything in the stipulated time.

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## ABBREVIATIONS

<b>BFI</b> s	Banks and financial institutions
<b>CBK</b>	Central Bank of Kenya
<b>CBR</b>	Central Bank rate
<b>DTM</b>	Deposit Taking Microfinance
<b>DTMFI</b> s	Deposit-taking Microfinance Finance Institutions
<b>FI</b>	Financial Institutions
<b>GDP</b>	Gross Domestic Products
<b>GNP</b>	Gross Net Products
<b>IRS</b>	Interest rate spreads
<b>KBA</b>	Kenya Banker's Association
<b>MFI</b> s	Microfinance Institutions
<b>NPL</b> s	Non-Performing Loans
<b>ROA</b>	Return on Assets
<b>ROE</b>	Return on Equity
<b>SCP</b>	Structure Conduct Performance
<b>SPSS</b>	Statistical Package for Social Science



## ABSTRACT

To realize the sustainability of financial institutions among Microfinance Institutions, the interest of clients should be factored in and prioritized. Since the clients are presupposed to make rational decisions, therefore, the increment in the interest rate enhances the income to the bank but discourages the potential clients. This study aimed at finding the effect of interest rates spread and the financial performance of Deposit Taking Microfinance Institutions in Kenya. The major theories that supported this study comprised agency theory, microcredit theory, and liquidity preference theory. The study maximized descriptive research design. The assessment used this approach because it gives information that can be used to generalize the results to the entire population. Furthermore, the research computed the calibration of elements before settling on the relevance operationalization metrics. This survey adopted the census method thereby prioritizing all the fourteen DTMFIs in Kenya from 2017 to 2021. Furthermore, the data was sourced by secondary methods. The information used came from published financial statements of Deposit Taking Microfinance Institutions in Kenya. The study was sourced from published statements and CBK. The survey covers four-year period from 2017 to 2021. Additionally, the linear model was used to determine if the rate of interest spread had a significant effect on the performance of DMFIs in Kenya. Further, the predictor variables of the study include the interest rate spread, management efficiency, and operational cost efficiency. The predicted variable is ROA, which measures financial performance. Contextually, the assessment concentrated on the 14 DTMFIs located in Kenya operational in a timeframe of 5years. Empirically, the analysis made included multicollinearity, autocorrelation and the normality test were spearheaded. In this research output, the study postulated that the interest rate spread, and operational efficiency recorded a negative correlation towards financial performance as portrayed in the ( $r=-0.15712$ ,  $r=-0.20809$ ) respectively. Management efficiency had a positive correlation of  $r=0.448862$  towards the dependent variable. The computation R-Square Adjusted was expounded on the model summary of regression post with 0.171. Therefore, showing that a 17.1% variation in financial performance caused by operational cost efficiency, Interest rate spread, and management efficiency. The remaining variations of 79.3% are caused by factors not captured in the study. In addition, the findings in the coefficient of determination posted that interest rate spread had a negative effect on financial performance by 4% when all factors were held at 0. Nevertheless, management efficiency posted a positive effect on the financial performance of 26.6% while operational cost efficiency portrayed a negative effect of 4.3% when all other factors are equated to 0. The conclusion is that this formulation can be useful in the prediction. In a nutshell, the investigation recommended periodic revision of rules, policies, and standards to meet the market dynamic transformations and technological innovation. Therefore, deposit-taking microfinance institutions should strive for quality portfolios, and quality systems for evaluation, monitoring, and correcting variance. It is worthwhile suggesting the study of interest rates spread as a predictor variable with capital structure as the mediating variable and corporate governance as the intervening and lastly financial performance as a regressed variable can give a more in-depth understanding.

## **CHAPTER ONE: INTRODUCTION**

### **1.1 Background of the Study**

The Micro Finance Institutions signify a critical part in prosperity and economic development. The interest rate spread has been a yardstick for the attainment of financial stability (Ndegwa, Waweru, and Huka (2016). Attainment of sustainability in financial institutions, increasing customer capacity-building, and receiving poor clients delicately hinges on charged interest rates. To attain sustainability of financial institutions the Microfinance Institution requires that these institutions cover the lending cost out of the generated earnings from the pending institutional portfolio and ensure that the cost of institution operations is at its minimum (Robinson, 2001). Targeting poor customers for lending is associated with high prices because of many transaction costs, which has remained a concern to microfinance institutions.

The major theories that support this study comprise agency theory, microcredit theory, and liquidity preference theory. According to Jensen and Meckling (1976), agency theory analyses principal-agent contracts that enhance the indispensable rudimentary mandate of corporate governance in accomplishing financial sustainability. Yunus (1970) proposed micro-credit theory to stipulate the importance of micro-credit in poverty alleviation. It states the importance of propelling the organization and clients through the utilization of microcredit. Keynes (1936) formulated the liquidity preference theory to postulate the importance of charging interest based on time and risk. Furthermore, it emphasizes precautionary, transactional, and speculative cash. The three theories boost interest spread rate trajectory.

Kumar and Ranjula (2013) stated the importance of interest spread in micro-financial institutions through the utilization of friendly policies. Microfinance institutions are striving to attain financial performance despite the increasing competition. One of the suggestions made by IMF (2005) is that to thrive, microfinance institutions need to be extensive and effective. Interest can be categorized as short-term and long-term. Ngetich and Wanjau (2011) explored the impact of interest rate spread in comparison with the non-performing assets of the banking sector in Kenya. The research established that interest rate spread increases the cost of loan repayment. Ngugi (2013) focused on financial intermediary deficiencies while focusing on the 43 financial institutions. The longer the loan repayment time frame, the lower the interest rate, and vice versa. Edakasi and Apunyo (2011) emphasized that the increment in interest rates leads to a reduction in the customers borrowing and their ability to repay the loan. This causes immense loan defaulting. The international banking sector experience varying operational aspects that mandate a continuous change in the interest rate.

### **1.1.1 Interest Rate Spread**

The interest rate spread is defined as the difference arising from the interest rate payable by banks to the depositors and the interest that is receivable from loans to clients (Gitau, 2014). The interest rate spread portrays the microstructure attributes of the banking industry and the procedural environment (Ngugi, 2001). In the past years, their financial industry has been experiencing a rise in financial intermediaries due to information asymmetry and transaction costs among the agents. Mwangi (2014) stipulated the importance of intermediaries such as microfinance institutions. The role played by the

intermediaries is finding solutions to the problems that have brought friction related to information and transaction.

Microfinance, interest rate spread, and financial performance are special in the economy (Ngetich and Wanjau, 2011). Even though microfinance institutions target the poor, many transactions end up lending a lot from numerous transactions. Interest rate spread reflects the difference arising from fee rates charged on the depositor's verse the one charged on lenders. In a nutshell, the presence of intermediaries in the financial institution reinforces the marshaling of savings, diversity, heterogeneity, and pooling the risks and resource re-allocation. After the receipt of deposits and loans, the income from the financial institutions is not synchronized.

The interest spread rate has been measured using different methods. Were and Wambua (2013) explored the determinants informing the interest rate spread. The variables analyzed were bank size, credit risk, and liquidity by utilizing assets, the ratio of non-performing loans total loan to return, as well as operational cost. Guvan (2010) explored the factors influencing the interest rate spread. The study utilized the market share based on assets, ROA, overheads, Debt versus Equity, and loan-market share m. The focal point of this study is management efficiency, interest rate spread, and operational efficiency. This research seeks to measure the interest spread rate using the three variables in the deposit-taking microfinance institutions in Kenya.

### **1.1.2 Financial Performance**

Financial performance relates to the outcome of the prudential management of resources (Ngugi, 2013). Moreover, it portrays the subjective measurement of the soundness and

financial health of the organization (Ngetich and Wanjau, 2011). Financial performance is a metric showing the ability of the firm to operate at full capacity efficiently and effectively. Kipkirui (2020) posits that financial performance is a yardstick for holistic organizational development and going concern. Therefore, financial performance is reflected in profitability. It is a special tool for achieving organizational goals coupled with strategies that seek to improve coordination and enhance economies of scale.

Financial performance is attributed to management efficiency. It shows the well-being of the organization (Gitau, 2014). Financial performance provides crucial information in a snapshot to the economic and potential users. Investors rely on financial performance to make sound judgments. ROA and ROI represent the maximization of assets to upgrade value. The top companies prioritize financial performance as a key performance indicator. Mwangi (2014) postulated the importance of financial performance in justifying judicious management.

Financial performance has been measured using several avenues including ROA, earning after tax, ROI, and net profit after tax (Gitau, 2014). Financial performance has sustained great dedication and commitment to the determination of financial sustainability, the financial health of the company, and competitiveness. It demonstrates the efficiency and effectiveness of the business undertaking. The financial fitness of the company presents a progressive company. It improves financial strength, stability, and liquidity. This study seeks to utilize the ROA to measure performance.

### **1.1.3 Interest Spread Rate and Financial Performance**

Interest rate spread and financial performance are intertwined. So far, little research has been conducted to investigate the link between interest rate spread and the DTMFIs. Deposit Taking Microfinance Institutions in Kenya and the world. The analysis made by Cull et al. (2007) indicated that voluminous studies investigated the performance of microfinance reliance on the cross-sectional data, which does not give the possibility of capturing the adaptation dynamics in the business.

The interest rate spread variations have been stated to have links with the revenues (Okech, 2013). The changes in interest rate spread have a likelihood of impacting economic development (Gitau, 2013). Skyrocketing interest rate demotivates the clients, hence minimal borrowings. This can translate to minimal savings hence shrinkage in the continuity of investment. Furthermore, a reduction in saving results in negative repercussions on the financial performance of the banking sectors.

Ngetich and Wanjau (2013) indicated that borrower scrutinizes interest rate changes to make informed decisions. The clients are presupposed to make rational decisions. Hence, the increment in the interest rate enhances the income to the bank but discourages potential clients. Therefore, the firms may lose the economies of scale in the operation of loans. The majority of the studies have concentrated on the interest rate spread in the banking industry and minimal studies on deposit-taking microfinance. This research predicts a positive link between interest rate spread and the performance of the DTMFIs in Kenya.

#### **1.1.4 Deposit-Taking Microfinance Institutions in Kenya**

The 2008 Micro-Finance act favored microfinance institutions because it gave these financial institutions the capacity to take deposits. Before the microfinance act, these MFIs were not accepting deposits, and therefore, they relied on other financial institutions like commercial banks (Deposit Taking Microfinance Institutions, 2008). The MFIs were required to apply for licenses to accept the deposits.

The 2008 act led to the emergence of deposit-taking microfinance banks, which are still in operation today. However, the Central Bank of Kenya has placed strict conditions and terms that discourage most microfinance from accepting deposits. The 2008 act provides the deposits taking microfinance institutions to render all financial services, including savings, and giving credits to its customers (CBK, 2008).

#### **1.2 Research Problem**

The surpluses and deficits regarding the depositors and lenders driven by asymmetric information have increased depositing and lending, hence promoting financial performance. The reduction of interest rate spread indicates a less expensive loan or high discount. When the borrowing becomes cheaper the reward on deposit increases, thereby, the lending as well as the output increase. The higher the volume of loans borrowed, the higher the financial performance due to the economies of scale. Mang'eli (2010) opined that the decrease in the income resulting from the interest rate spread causes a decline in saving hence a reduction in financial performance. The interest rate spread is crucial in the advancement of deposits and financial performance (Gitau, 2014). Higher interest rate spread has influenced financial performance (Ngugi, 2013). The high costs associated with intermediaries discourage investors. Moreover, it discourages savers and creates

inadequacy hence it is a great bottleneck to performance. One of the agendas is the support of financial sector reforms. Low IRS can be associated with minimum information, transaction, high monitoring cost, and ineffective management. Therefore, there is an intertwining association between IRS and the financial performance.

The implication is that the economic prospect of growth is still intact. With continuous economic growth, Kenya must have efficient and accessible financial institutions that will help support business growth as the country is moving towards reliance on service industries. The availability of numerous financial institutions such as deposit-taking microfinance plays a critical role in developing countries and developed countries (Gavin, 2010). The majority of the country is poor, and therefore, more financing opportunities are required to ensure the financial growth of the poor in Kenya. This can only be achieved if the country has deposit-taking microfinance institutions to fund the poor. CBK (2010) report indicated that about 6.4 million people rely on the informal sector. The Statistica (2020) report points out that the informal sector has grown significantly in the past seven years. Approximately 14.5 million people work in the informal sector, while 3 million people are employed in the formal sector (Statistica, 2021).

Global studies have shed light on the interest rate spread. Chikalipah (2013) indicated that tough competition was the major predicament to interest rate spread and financial performance. According to Onyekachi and Okoye (2013), the lenders are the monopoly in the markets. Therefore, they set the lending and deposit rate. This can cause poor allocation of resources. Consequently, there is increased inefficiency in resource allocation, which should spur economic growth and development. The presence of



intermediaries has resulted in greater risk spread. Cotler and Ahmazan (2013) opined that interest rate spread reflects the difference arising from fees rates charged to the depositors versus the one charged to lenders. Hence, there is a need to provide quality policies to lubricate financial performance. Kumar and Runjula (2013) postulated that the reduction of interest rate spread indicates a less expensive loan or high discount. When the borrowing becomes cheaper the reward on deposit increases, thereby, lending as well as the output increases. The greater the intensity of loans borrowed the higher the financial performance due to the economies of scale.

Local research that has been done so far has primarily focused on various perspectives instead of the consequence of the interest rate spread on MFIs services. Therefore, it is needful to focus on the reaction of interest rates spread to the financial performance of microfinance institutions. Studies from scholars such as Ndegwa, Waweru, and Huka (2016) concluded that interest spread is the epicenter of business performance. Additionally, Kariuki and Ngahu (2019) opined that the performance of microfinance is critical for economic development. Bella (2021) illustrated the significant role of microfinance in economic growth. These are useful examples of studies that focused on perspectives rather than the impacts and the connection between the interest rate spread and the financial performance of microfinance institutions. Ngugi (2014) focused on the Interest Rate Spread of the Banking sector. Internationally, Cotler and Ahmazan (2013) explored the interest rate spread in Asia. However, there are contextual and methodological which the current study strives to address. The local studies portrayed conceptual gaps being bridged by this study. The above studies lack information regarding the existing association between interest rate spread and performance because

they investigated the impact on MFI products and how the MFI services influence the customers' decision to take credits. This research strives to respond to the question on; what is the effect of interest rate spread on the financial performance of DTMFIs in Kenya?

### **1.3 Research Objective**

This study aims to find the effect of interest rates spread and the financial performance of Deposit Taking Microfinance Institutions in Kenya.

### **1.4 Value of the Study**

This research will be useful in policy formulation. The findings are supreme in the formulation of policies and laws that guide the interest rate spread. Policies act as the roadmap toward the growth of DTMFIs. Furthermore, the government can utilize the findings in the protection of MFIs at the bud stage. The MFI sector is a major source of employment in Kenya and globally.

This study presents information paramount to the DTMFIs. The information in this research uncovers the existing association connecting IRS and FB. Therefore, the data is critical and applicable in determining the measures that MFI and CBK can take to ensure the expansion of MFI and Disposable income to the economy. The information is also essential to the Executive of MFIs when making policies that ensure the growth of these institutions' services, efficiency, and productivity.

The study results are paramount to the researchers because it blueprints a base for further research on this topic and other related topics. The scholars will find the information herein necessary for discussions related to MFIs and the performance of financial

institutions, including Banks. This paper can be used as reference material during research about this study topic. The paper also provides tips related to other research topics.

## **CHAPTER TWO: LITERATURE REVIEW**

### **2.1 Introduction**

This segment is very important in highlighting the theoretical foundation of the study. Furthermore, it highlights the determinants and empirical reviews that enhance the understanding. It summarizes the research gaps emanating from the literature and provides a diagrammatic representation in form of a flow chart demonstrating the existing relationship between the predicted and predictor variable.

### **2.2 Theoretical Framework**

The theories underpinning the study embrace agency theory, micro-credit theory, and liquidity preference theory. The theory has an immense interrelationship with the management of microfinance as well as the interest spread rate. It dispenses the holistic blueprints that inform financial performance.

#### **2.2.1 Agency Theory**

Jensen and Meckling (1976) coined the theory to show the separation of ownership. The management should strive to ensure the MFI's objectives are achieved. The interest spread rate should be centered on the demands of the shareholders. Managers of MFIs must always pursue the interest of the organization. The egocentric interests must be eliminated at all costs. The interest of the organization and personal interest must be balanced to eliminate conflict of interest.

The theory is relevant in the separation of ownership and management. The principal-agent association should be harmonious with great adherence to accountability, due diligence, and utmost good faith (Kipkirui, 2020). The control measures in place including auditing, monitoring, and forensic accounting must adhere to laid down

policies to realize the objectives. Management should endeavor to enhance performance, efficiency, sustainability, and effectiveness, and generate value on the shareholder's wealth.

The theory advocate for incremental cost in the form of agency cost. The supervision, monitoring, and auditing cost can lead to an increase in the operation cost. This can cause a skyrocketing increment in the interest charge to the clients. The bigger the interest rate spread, the lower the borrowing rate. Moreover, the governance of firms may utilize asymmetric information failed to adhere to laws and policies. The cost resulting from errors and mistakes from the management can translate to a huge cost to the MFIs. The pursuit of personal interest is a gross violation of procedures.

### **2.2.2 Micro-Credit Theory**

Yunus (1970) embedded the microcredit theory as a driving force for the poor population. The theory advocated for the utilization of resources through borrowing and repayment. It emphasizes the need for well-designed policies to guide borrowing and repayment. The utilization of micro-credit products can help in the realization of the full potential. It enhances the massive poverty alleviation among the poor in the nation.

The theory is based on the rationale that capitalism as an economic means is based on the fact that all people are egocentric by nature. As such, the majority of those who participate in business do so out of the need to make more profits. They are not very much concerned about the welfare of their clients. However, there are a few individuals in business who consider the interests of their customers. Generally, it is assumed that every entrepreneur will maximize financial profit and social return. This assumption led

to the emergence of various groups of entrepreneurs as explained by Kandahar and Demopoulos, (2004).

Therefore, this theory sums up that the over-emphasis on increasing interest will reduce the rates at which customers take loans. Customers' social behavior will also influence the financial performance of MFIs in Kenya. Most private profit-making enterprises have concentrated on the welfare of their clients as opposed to developing profit-oriented capitalistic enterprises which are unfriendly to poverty reduction, Drake (2004).

### **2.2.3 Liquidity Preference Theory**

Keynes (1936) formulated the theory to advocate for a higher interest rate in cases of high risk. A comparative analysis regarding risk level and time is a prerequisite for coining the interest rate. The theory stipulated the importance of money for daily operations in form of transactional motive. The money can also be used in unexpected predicaments or speculating investments. The theory argues that microfinance institutions should develop desirable monetary policies which will have a positive influence on demand and investment.

The theory is relevant since it stipulates concrete monetary policy aimed at bringing positive influence on the rate of interest in a way that will raise the financial performance of the MFIs. This theory is based on the premise that income and employment fluctuate constantly (Gitau, 2014). The clients prioritize holding cash over investing. It is therefore paramount to microfinance in the development of policies and interest rates based on risk and time.

The criticism is that; the demand and supply of money and employment will always affect the financial performance of microfinance institutions. In a nutshell, whenever there is demand and supply and the rate for employment is low, then the savings will be low and uptake for loans will also be minimal. This will in turn have a negative impact on the performance of MFIs. When there are high rates of employment and high demand and supply for money, then the rate of performance interests will be high. A high rate of financial performance indicates great success in the operations and future of microfinance institutions.

### **2.3 Determinants of Financial Performance**

The determinants of the financial performance of MFIs include interest rate spread, management efficiency, and operating cost efficiency. The ability and capability of the DTMFIs rely on the three factors to achieve their financial performance. The research explores interest rate spread, management efficiency, and operating cost efficiency.

#### **2.3.1 Interest Rate Spread**

The interest rate spread is the variance associated with the interest rate payable to depositors and the interest rate receivable from clients (Ngugi, 2013). The amount is based on time and risk. The higher the associated risk, the higher the rate of interest rate spread. Furthermore, the principal is determined by the lifespan of repayment. The risk looks at a wide array of factors including the borrower's credit score. The money lend out is repaid with interest to compensate for the risk and time. The changes in interest can widen the gap of interest rate spread. DTMFIs have a direct channel with most Kenyan people. The borrowed money is repaid in installments over a stipulated period.

### **2.3.2 Management Efficiency**

The benefit of established and well-structured management cannot be overemphasized. It is critical in ensuring proper control of the organization and interlocking functions. It enhances productivity, and innovation and guides the organization toward goals. It is an important pillar of sophistication and empowerment. Furthermore, it spearheads the optimum utilization of resources to achieve efficiency and effectiveness. In addition, it is critical for futuristic planning and forecasting to sail through intense competition while innovating new ways and lifting improvements to create the best products in the market. It creates a holistic environment for prosperity (Were and Wambua, 2013).

### **2.3.3 Operational Cost Efficiency**

Operational cost efficiency refers to the ratio of firm input to output. It enhances effective operation while eliminating waste. It is realized through retaining customers, reduction of compliance costs, lowering processing costs, increasing speed, and promoting business agility. The fundamental objective of operational cost efficiency is to generate more profits by eliminating unnecessary processes and increasing quality. It elevates business to stability. The driving force of operational cost efficiency includes quality products and services, efficient production, and timely delivery. Firms should always pursue continuous improvement (Mwangi, 2014).

## **2.4 Empirical Review**

Onyekachi and Okoye (2013) explored the consequences of bank lending rates on performance. The research was undertaken in Nigeria with a special analysis of Nigerian MFIs. The researcher was interested in lending rate and monetary policy as the predictor variables. The data was collected through secondary means and analyzed using



econometric regression. The nature of the data was time series spanning from 2000 to 2010 and the quantitative research design was optimized. The findings postulate that both monetary policy and lending rate had a strong positive correlation with performance. However, the research was undertaken in Nigeria, hence the need for local study.

Adofu and Andu (2010) analyzed the effectiveness of interest rates on the deregulation of agricultural firms. The research focal point was agricultural MFIs. The findings indicated the significant role of interest rates in promoting economic development. The study recommended monetary authorities create friendly policies regarding interest rates for both the MFIs and clients. Nevertheless, the research did not look at the interest spread rate in Kenya.

Kumar and Runjula (2013) analyzed interest rates and financial performance. The study focused on the global 379 MFIs covering 71 countries internationally. The research undertook a lifespan of 6 years that is 2003-2008. The study analyzed the lending rate, leverage, risk, and economic growth as well as size. The study found a positive association between interest rate and performance. However, local research that bridges conceptual and contextual is crucial in Kenya.

Bella (2011) explored the impact of the global financial crisis on MFIs. The research was motivated by the prevailing international financial crisis, economic collapse, and predicaments on borrowing. The research concentrated on loan size and product age. The study stated that the global capital market affected the lending rate. Furthermore, the empirical analysis demonstrated that loan size as well as productivity affected lending

rates. In addition, MFI size played a significant role in the determination of interest rates. This study did not look at interest spread hence there is a need for a comprehensive study.

Cotler and Almazan (2013) examined determinants of lending rates. The study analyzed 1299 MFIs distributed in 84 countries. The study scrutinized loan size, cost of funding, and efficiency. The research showed a negative association in Asia only. The other countries, the competition portrayed a negative association with loan size. The findings were mixed and inconclusive. The study was done internationally with a wide focus on several countries and there is demand for local research to bridge conceptual and contextual gaps.

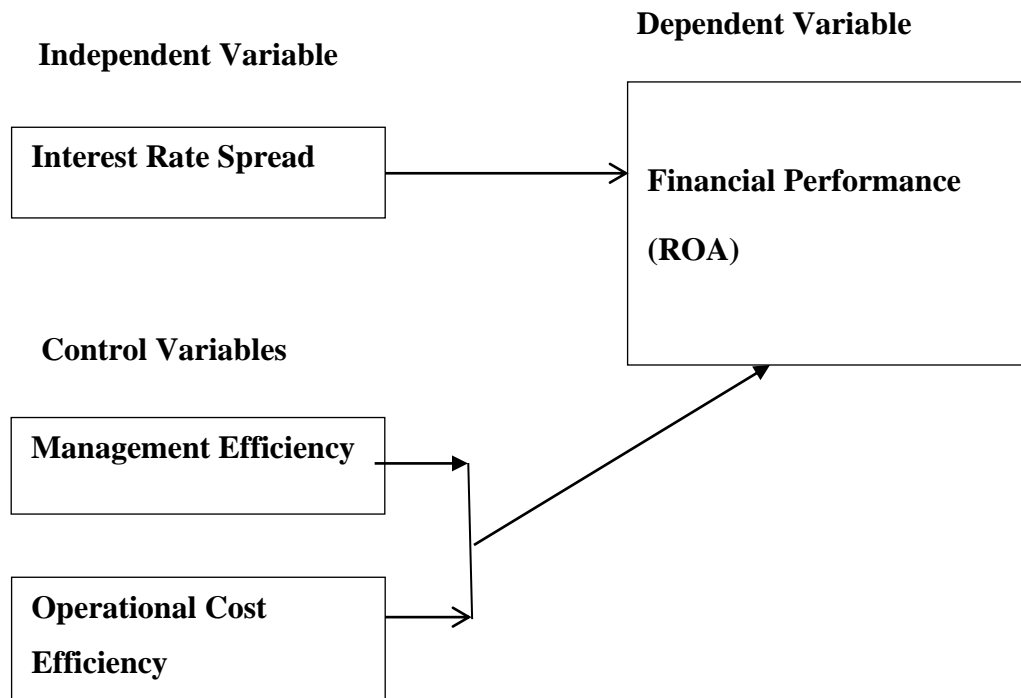
Chikalipah (2014) studied facets of lending tariffs in Sub-Saharan Countries. The research utilized unbalanced panel data. The research scrutinized 292 MFIs in 34 Sub-Saharan Countries. The period of study spanned from 2003 to 2011. The predictor variables included financial cost, operation expenses, ROA, and inflation. The findings did not conclusively state the effect of lending rates on MFI's performance. Therefore, this study is an eye-opener in bridging the contextual and conceptual gap.

Kinuthia (2014) explored the determinants of lending rates. The study's focal point was the deposit-taking MFIs. The data was obtained through both primary and secondary methods. The research targeted 36 respondents and undertook inferential statistics on the assembled data. The study opined that a healthy loan portfolio is a quality of the clients. The MFIs assessed the liquidity, repayment capacity, earnings, and profitability before approval. The study did not analyze the interest spread rate and performance which this study intends to bridge.

Mwangi (2014) explored lending rates and financial performance. The research period spanned from 2009 to 2013. The secondary data was retrieved from published information in the CBK. The study utilized a multivariate regression model for analysis and ANOVA. The study advocated for the judicious management of MFIs to ensure quality performance. However, the study did not cover interest rate spread hence this study. Therefore, the research studies interest rate spread and performance.

### **2.5 Conceptual Framework**

The conceptual framework is the flowchart representing the association among the variables. It is a diagrammatic representation showing the link between the predictor and predicted variables. Management efficiency and operational cost efficiency are the control variables in the study.



**Figure 2.1: Conceptual Model Source: Researcher, 2022**

### **2.6 Summary of Literature Review and Research Gaps**

Ndegwa, Waweru, and Huka (2016) findings posit a positive relationship between interest rates and MFIs' liquidity. Kinuthia (2014) postulated that greater interest rates scare away potential borrowers. Chikalipah (2014) indicated that interest is crucial in the sound judgment facing the lenders in the organizations. The financial health of the lending firms is informed by both the lending rate and the lending rate spread.

Kariuki and Ngahu (2019) posit that default risk as well as liquidity risk had a negative association with loan performance. Bella (2021) associated the global predicaments with the interest rate spread. The study emphasized reducing the gap to encourage borrowers.

A large pool of borrowers leads to higher economies of scale. This in turn leads to the efficiency and productivity of loans. The study covered Sub-County hence the need for more research.

From the research studies highlighted above, ranging from international to African studies and then to Kenyan research, it is critical to indicate that the findings have provided neutral, negative, and positive findings. Furthermore, the mixed and inconclusive findings can be associated with varying explanatory and explained variables. In addition, different methodologies applied might have resulted in a wide array of findings. Therefore, this study seeks to bridge the conceptual, contextual, theoretical, and methodology gaps.

## **CHAPTER THREE: RESEARCH METHODOLOGY**

### **3.1 Introduction**

This segment blueprints the research methodology which provides substantial knowledge regarding the process. It addressed research design which is the roadmap for data computation. The sufficiency and adequacy of the population were also assessed. In addition, the data analysis using wide spectrum of techniques helped in the conclusive research. The chapter appraised the design as useful in the research. It turned the wheel of the study by incorporating valuable methods. It bridges the chapters to provide a more comprehensive analysis.

### **3.2 Research Design**

Cooper and Schindler (2003) stated the fundamental aspects of descriptive in the findings of the facts. Moreover, the design is useful in the elaboration of the research layout, and the process of getting quality results. The effectiveness of research design translates to quality, accurate and in-depth assessment. The design is crucial in the determination of association. Kothari (2004) stated that descriptive design entails a problem-solving process. It enhances the assessment of the association between the explanatory and explained variables. Burns (2003) stated design as a layout demonstrating studies are undertaken with minimal predicaments. This study uses this approach because it gives information that can be used to generalize the results to the entire population. Therefore, the results from the data gathered in this research were used to generalize the existing relationship to all microfinance institutions in Kenya. The design is appropriate and applicable in determining if there is an association between the interest rate spread verse the microfinance performance in Kenya.

### **3.3 Population**

The study population plays an integral role in the research investigation. Besides being the cornerstone for the data collection, it was supreme in the data analysis. Moreover, the research analyzes the calibration of elements before settling on the relevance of operationalization metrics. This survey adopted the census method and includes fourteen DTMFIs in Kenya from 2017 to 2021. It made quality use of secondary data from CBK. In addition, other information relevant to this study was obtained from the official microfinance institution websites.

### **3.4 Data collection**

Data collection is consequential in the study. It illuminates the methods and process of obtaining data. It encapsulates how the study fits the scope. The data collected include the lending and deposit rate to expound on the interest rate spread. The non-interest-related cost versus the total asset was utilized to explain the management efficiency. The operating cost versus the total operating income was crucial in the explanation of operational efficiency. The data was sourced from secondary methods. The information used comes from published financial statements of sampled MFIs in Kenya. The study was sourced from published statements and CBK. The survey covers four-year period from 2017 to 2021.

### **3.5 Analysis and Presentation of Data**

The data collected was reviewed to ensure completeness, edited, coded, and classified for analysis. The study data was used to construct a linear correlation between the interest rate spread and the MFI financial performance. The linear model was used to determine if

the rate of interest spread had a significant effect on the performance of MFIs in Nairobi. The performance of the MFIs was measured using the ROA.

### 3.5.1 Analytical Model

The analysis was done through SPSS. The results were provided in form of multiple linear regression analysis. The predictor variables of the study include the interest rate spread, management efficiency, and operational cost efficiency. The predicted variable is ROA, which measures financial performance. Resnik (2003) postulated that the empirical model is a yardstick that measures the relationship of a regression model.

$$Y = \alpha_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$$

Y = Financial Performance (ROA = Net Income divided by Total Assets).

$\alpha_0$  = y-intercept of the regression is the constant variable.

$X_1$  = Interest Rate Spread (Difference between the Lending rate and Deposit rate)

$X_2$  = Management Efficiency (non-interest related income divided by total assets)

$X_3$  = Operational Cost Efficiency (operating cost divided by the total operating income)

$\varepsilon$  = error term

### 3.5.2 Diagnostic Test

The research was utilized in the linearity test to establish the association using scatter graphs. It was used in linear regression to show an association. The multicollinearity



was done via the Variance Inflation Factor which explained the correlation among the predictor variables. The presence of highly correlated explanatory variables could have informed the dropping of highly correlated variables as a remedy. Autocorrelation was also analyzed using Durbin-Watson. It was useful in the assessment of the historic pattern. In case of lapses in autocorrelation, the momentum factor analysis boosts the findings. This elaborates on the association between the explained and explanatory variables. Furthermore, the analysis and testing of stationery and model specification will be performed through regression.

### **3.5.3 Test of Significance**

The researcher was assessed to portray the prevailing associations between the predictor variable (lending rate, management efficiency, and operational cost) and dependent variables (Return on Assets). Regression will be valuable in determining the degree and nature of the linkage between the predictor and predicted variable. Moreover, the F-Test will use values:  $P > 0.05$  verse  $P \leq 0.05$  interpreted for insignificance and statistical significance respectively.

## CHAPTER FOUR: DATA ANALYSIS, RESULTS, AND DISCUSSIONS

### 4.1 Introduction

This chapter is the lifeblood defining the outcomes of the interest rates spread on the financial performance. Contextually, the investigation concentrated on the 14 DTMFIs located in Kenya operational in a timeframe of 5 years. The data was retrieved from CBK. This forms a substantial basis for research analysis. The data generated was remarkable for exhaustive computation. The descriptive in addition to inferential computation aided the far-reaching outcome.

### 4.2 Descriptive Statistics

The data were collected from 14 DTMFIs in Kenya from 2017-2021. The summary statistics below show the minimum, maximum, mean, and standard deviation of each variable that was under the study. The financial performance recorded a mean of 0.041206 and a standard deviation of 0.0132178. Interest rate spread in that period had a mean of 0.187430 and a standard deviation of 0.1025459 while management efficiency had a mean of 0.240293 and a standard deviation of 0.207411. In that period operational cost efficiency had a mean of 0.084094 and a standard deviation of 0.0220289.

**Table 4.1 Descriptive Statistics**

<b>Descriptive Statistics</b>					
	<b>N</b>	<b>Minimum</b>	<b>Maximum</b>	<b>Mean</b>	<b>Std. Deviation</b>
Financial Performance	70	.0237	.0733	.041206	.0132178
Interest Rate Spread	70	.0662	.4818	.187430	.1025459
Management efficiency	70	.1056	.2849	.240293	.207411
Operational cost eff	70	.0396	.1234	.084094	.0220289
Valid N (list-wise)	70				

From the intensive computed outcome in Table 4.4, ROA (financial performance) registered a mean of 0.41206 with a maximum of 0.0733 after the standard deviation of 0.132178. This defines that on DTMFIs made great ROA within the timeframe of 5 years. Fortunately, all the firms made a profit since all the values are positive with no negative figures. The standard deviation value was the slightest thereby coining the minimal deviation from the average. The mathematical analysis of the interest rate spread showed a minimum figure of 0.0662 but recorded the highest value of 0.4818 with a mean of 0.187430. Additionally, its standard deviation was expounded by 0.1025459. Therefore, it can be elaborated that DTMFIs charge an interest rate spread of 6.62% but had an outlier of 48.18%. However, on average all DTMFIs charge 18.7430%. Further, management efficiency computation posted a minimum value of 0.1056 while its maximum was 0.2849 with an average of 0.2849. Nevertheless, its standard deviation elaborated on the variability of 0.207411. Likewise, the operational efficiency lowest value was 0.0396 while its highest value was 0.1234, with an average of 0.084094 and a standard deviation of 0.0220289, thereby low variability.

### **4.3 Diagnostic Test**

The systematic analysis was epitomized to determine the relevance, accuracy, and distinctive nature of the data. This test focused on testing the data for modelling fitness. The analysis made includes multicollinearity, autocorrelation, and the Normality test. This computation aided the overall strategy chosen for the integration of data in a wide array of components to increase coherency, logically and effectively thereby minimizing detrimental while addressing the research problem.

### 4.3.1 Multicollinearity test

This test was carried out to inspect whether the regressor variables in the research have collinearity challenges. It involved optimizing the Tolerance and VIF values. It aided in decision-making on which variable can be eliminated from the equation given minimal linear relationship or multicollinearity. The presence of Multicollinearity is rubberstamped by the Tolerance values of every factor smaller than 0.2 in addition to VIF values that are higher than 10. The processing of the computation of data resulted in interest rate spread, management efficiency, and operational cost efficiency values of 0.914, 0.826, and 0.896. These specific values realized are higher than 0.2. Moreover, it is reinforced by VIF values of 1.094, 1.211, and 1.116 respectively which are smaller than 10. This can then be interpreted as the regressor variables posted absence of multicollinearity.

**Table 4.2 Collinearity Computation**

Model	Collinearity Statistics	
	Tolerance	VIF
	(Constant)	
1	Interest Rate Spread	.914
	Management efficiency	.826
	Operational cost efficiency	.896

### 4.3.2 Autocorrelation

The test was expedited to measure the similarities between the adjacent points. The driving resoluteness was to observe the pattern of the data. It, therefore, concentrated on the lagged nature of the data in addition to the trend. In a nutshell, this test posted the

difference between the original value and the prevailing value as time changes. From the findings, the Durbin Watson value obtained was 1.628 as seen in this table 4.2. This value lies within the required Durbin-Watson values range.

**Table 4.3 Model Summary of Autocorrelation**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Change	Square Change	F	df1	df2	
1	.455 <sup>a</sup>	.207	.171	.0120373	.207	5.733	3	66	.002	1.628

a. Predictors: (Constant), Operational cost-effective, Interest Rate-Spread, Management Efficiency

b. Dependent Variable: Financial Performance

#### 4.2.3 Test for Normality

This analysis justified the normality of the data used in the research. The findings were reached after extensive and comprehensive computation using both Shapiro-Wilk and Kolmogorov tests. The law posits that if the significant figures of every factor on either side are below 0.05 the data exhibit a normal distribution. The findings inferred in Table 4.3 generalizes that all the variables posted significance values less than the required p-value of 0.05. This then portrays that the data were normally distributed.

**Table 4.4 Tests of Normality**

	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
Financial Performance	.125	70	.008	.909	70	.000
Interest Rate Spread	.151	70	.000	.886	70	.000
Management efficiency	.396	70	.000	.469	70	.000
Operational cost eff	.081	70	.020*	.962	70	.032

\*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

#### 4.4 Correlation Analysis

After intensive descriptive computation, Pearson was expedited to blueprint the correlation amid the regressor verse the regressed variable. Therefore, it pinpoints the degree, magnitude as well as direction. The analysis was geared towards understanding the correlation between interest rate spread and financial performance. This analysis simply illustrates the relationships amid the investigation factors. It spans from positive to negative (+1, -1). In this research outcome, the study found that the Interest rate spread and operational efficiency recorded a negative correlation towards financial performance as portrayed in table 4.5 ( $r=-0.15712$ ,  $r=-0.20809$ ) respectively. Management efficiency had a positive correlation of  $r=0.448862$  towards the dependent variable.

**Table 4.5 Pearson Correlation**

	<b>Financial- Performance</b>	<b>Interest- Rate</b>	<b>Management- efficiency</b>	<b>Operational- cost-efficiency</b>
Financial Performance	1			
Interest-Rate- Spread	-0.15712	1		
Management- efficiency	0.448862	-0.29316	1	
Operational-cost- efficiency	-0.20809	0.090808	-0.322	1

#### 4.5 Regression Analysis

Regression analysis is the cornerstone statistical technique that is leveraged in firms to assess the degree to which specific predictor variables cause changes in the dependent variables. It is supreme in the performance of linear computation to illustrate the line of best fit. It increases confidence, thereby allowing the making of informed decisions relating to the behaviour of predictor variables, and efficient allocation of resources,

ultimately boosting the bottom line. The driving force towards this comprehensive analysis was the crucial role of regression in forecasting by allowing essential crunching of the numbers to aid decision-making. The regression computation serves as the predictive analytics in the events of numerous opportunities and risks in the business. Moreover, it optimizes the business process to come up with defined operation efficiency, hence eliminating guesswork. It gives chief latitude to well crafted-predictions relying on the actual data. It plays a significant mandate in supporting decisions that bombard businesses. Additionally, the analysis is special in the recognition of mistakes and correcting errors. Finally, it pinpoints the areas related to spiking and reduction in sales thereby causing improvement, innovation, and creativity in the association. The researcher confronted the assumptions by critical computation and analysis to check on the effect of operational cost efficiency, Interest rate, and management efficiency on financial performance.

#### **4.5.1 Model Summary**

The summary in Table 4.6 posted R and R-square to expound on the association. The regression computation enhanced prediction making. R is the correlation of the study variables. It illustrates forecasting while reinforcing business decisions by giving necessary information correlating predictor and predicted factors. A 45.5% correlation of variables is under scrutiny. R-Square Adjusted is the coefficient of determination for the variables factored in the assessment. This model summary of regression post 0.171 shows that a 17.1% variation in financial performance is caused by operational cost efficiency, Interest rate spread, and management efficiency. The remaining variation of 82.9% is caused by factors not captured in the study.

**Table 4.6 Model Summary of Regression**

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.455 <sup>a</sup>	.207	.171	.0120373	.628

a. Predictors: (Constant), Operational cost efficiency, Interest Rate Spread, Management Efficiency

b. Dependent Variable: Financial Performance

#### 4.5.2 Analysis of Variance

Table 4.7 demonstrates the output of ANOVA computation. ANOVA is the cornerstone for the comparison and evaluation of variation. Hence a significant P-Value portrays a low likelihood that values for whole groups are equal. From the statistical computation and standpoint, it is imperative to posit that the variance among groups is greater than the variance within each group. Notably, ANOVA gives overall differences. Therefore, it demonstrates a substantial degree of significance. From the output it is clear that the significant value is 0.002 hence below 0.05 meaning there is a statistical significance. Additionally, the F-Value of 5.733 also affirms the same outcome since it is greater than the recommendable value of either 1 or below.

**Table 4.7 Analysis of Variance**

Model		Sum of Squares	of Df	Mean Square	F	Sig.
1	Regression	.002	3	.001	5.733	.002 <sup>b</sup>
	Residual	.010	66	.000		
	Total	.012	69			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Operational cost efficiency, Interest Rate Spread, Management Efficiency



**Table 4.8 Coefficient of Determination**

Model	Coefficients						
	Unstandardized Coefficients		StandardizedT Coefficients	Sig.	95.0% Confidence Interval for B		
	B	Std. Error	Beta		Lower Bound	Upper Bound	
(Constant)	-.018	.022		-.844	.402	-.062	.025
Interest Rate Spread	-.004	.015	-.028	-.246	.806	-.033	.026
1 Management efficiency	.266	.077	.418	3.463	.001	.113	.420
Operational cost efficiency	-.043	.069	-.071	-.613	.542	-.181	.096

a. Dependent Variable: Financial Performance

With these findings, the researchers developed a predictor formula as

$$Y = -0.018 - 0.004 X_1 + 0.266 X_2 - 0.043 X_3$$

Whereby

Y = Financial Performance

X<sub>1</sub> = Interest Rate

X<sub>2</sub> = Management Efficiency

X<sub>3</sub> = Operational Cost Efficiency

Grounded on the test above computation and significance test the formula can summarize as

$$Y = -0.018 + 0.266 X_2$$

#### **4.6 Discussion**

Descriptive statistics aided the presentation of data in more meaningful ways. It summarized data to conclude on pattern and allowed conclusion regarding the hypothesis. The descriptive statistics in this research showed that in the 5 years, the span of financial performance ranged from 0.0237 to 0.0733. The interest rate spread ranged from 0.662 to 0.4818. Management efficiency recorded a minimum value of 0.1056 and a maximum value of 0.2849. Operational cost efficiency had the lowest value of 0.0396 and maximum value of 0.1234. Additionally, Interest rate spread recorded the highest fluctuation with 10.25459% followed by operational cost efficiency with 2.20289%. The management efficiency and ROA recorded minimal variation with a standard deviation of 2.07411% and 1.32178% respectively.

The model summary for the regression calculation illustrated that there was a 45.5% correlation among the variables under assessment. The R-Square exemplified that the 20.7% variation in financial performance was caused by operational cost efficiency, interest rate spread, and management efficiency. Nonetheless, the remaining variation of 79.3% is caused by factors not captured in the study. This wrap-up that even though operational cost efficiency, interest rate, and management efficiency are influencers of ROA among DTMFIs, there is a wide array of variables not captured in this study.

The findings were in concurrence with Mwangi (2014) who postulated negative nexus between financial performance and interest rate spread. Nevertheless, the investigation contradicted the output by Kumar and Runjula (2013) position that performance versus the interest rate exhibits a positive association. The postulation by Adofu and Andu (2010) highlighted the positive nexus between financial performance interest rate and

lending rate. Onyekachi and Okoye (2013) utilization of econometric regression to illustrate the movement of lending rate and monetary in the same direction with performance, hence supporting the positive correlation.

The findings in the coefficient of determination showed that interest rate spread had a negative effect on the financial performance of 4% when all factors were held at 0. Management efficiency had a positive effect on the financial performance of 26.6% while Operational cost efficiency had a negative effect of 4.3% when all other factors had to be equated to 0. These findings led to the generation of the formula;  $Y = -0.018 - 0.004 X_1 + 0.266 X_2 - 0.043 X_3$ , which can be used to predict the future of financial performance under these variables. Nonetheless based on the significance test  $Y = -0.018 + 0.266 X_2$

## **CHAPTER FIVE: SUMMARY, CONCLUSION, AND RECOMMENDATIONS**

### **5.1 Introduction**

Chapter five is the cornerstone for summarizing the study to give a snapshot overview. The study considers the discussion to pinpoint the critical areas. Additionally, provides conclusive information on the findings before giving recommendations. Thereafter, the study accentuates the limitation that faced the study and tries to suggest the preceding researchers.

### **5.2 Summary**

The study maximized annual secondary information on the management and operating efficiency published in CBK. The interest rate spread, and the ROA were collected to aid the analysis. The period of study spanned from 2017-2021. ROA regression was explained as a function of interest rate spread, management efficiency, and operating cost efficiency. The three determinants pinpointed a good nexus between the independent and ROA.

The financial performance posted an average of 0.041206 and an SD of 0.0132178. Interest rate spread recorded 0.187430 and SD of 0.1025459 while management efficiency, average at 0.240293 and SD of 0.207411. In that timeframe, operational cost efficiency posted an average of 0.084094 and an SD of 0.0220289. Subsequently, regression was analyzed to boost the prediction. R resulted in 0.455 and R Square 0.207 while R Adjusted was 0.171. Hence, it defines that 17.1% fluctuation was enabled by operational cost efficiency, interest rate spread, and management efficiency. Nevertheless, 82.9% of differences were linked to other enablers excluded in the assessment.

From the data that was mathematically computed, the regressor factor recorded no multicollinearity problem as the Tolerance values were higher than 0.2 and the VIF values lower than 10. The figures range within the stipulated threshold. The data of the variables were normally distributed as seen in the findings of the normality test. The autocorrelation lie within the Durbin-Watson values ranges at 1.628.

The Pearson mathematical calculation defined the degree and magnitude of association. The regressed factor was the financial performance with its proxy ROA. Moreover, it illustrates the direction of movement for the explanatory variable verse the explained variable. The computation was geared to provide greater insight into the association. Therefore, the values of Pearson linkage ranged from +1 to -1. The findings affirmed the conclusion by Mwangi (2014) illustration that management efficiency explained ROA positively.

### **5.3 Conclusion**

The study portrayed negative linkages between the ROA verse the interest rate spread and operational efficiency ( $r=-0.15712$ ,  $r=-0.20809$ ) respectively. Nonetheless, management efficiency coined a positive correlation verse the ROA of  $r=0.448862$ . The DTMFIs should improve the relay of the information to minimize uneven and unequal dissemination. Management efficiency and operational cost-effectiveness is the cornerstone of the prudent and efficient return on assets. Therefore, the DTMFIs should spearhead intensive monitoring and screening to solve predicaments, hazards, and adverse selection detriment resulting from imperfect information distribution.

The financial intermediaries are the epicenter in the relay of information. The interest rate spread is special since it explains the difference between the lending rate versus the deposit rate. The explanation of the computation of regression insinuated that the values were meaningful in forecasting. The association of the investigation variables consisted of explanatory and explained variables. From the analysis 0.455 posted the association of variables prioritized in this scrutiny, hence representing 45.5%. The model summary posted regression R-Square of 0.171 stating that 17.1% of explanations of changes in ROA were associated with interest rate spread, management efficiency, and operational cost efficiency. The remnant portion of 82.9% entails the numerous variables which were not factored in the study.

From the in-depth scrutiny, it is imperative to paraphrase that when all variables were held constant the autonomous figure of financial performance (ROA) was -0.018. Moreover, the addition of a single unit of interest rate spread triggers a negative adjustment on ROA by 0.4% whenever other enablers were kept unchanged. A unit and positive adjustment in the management efficiency translates to 26.6% if all determinants were kept unchanged. In addition, a unit increment in the operational cost efficiency causes a negative adjustment on ROA of 4.3% when all variables are held stable.

This is summarized as

$$Y = -0.018 - 0.004 X_1 + 0.266 X_2 - 0.043 X_3$$

Further analysis of computation recorded that  $Y = -0.018 + 0.266X_2$  meaning an increase in management efficiency holding other factors stable causes a positive change in financial performance by 26.6%.

The greater interest rate spread explains greater variation among DTMFIs which discourages investors and borrowers. This explains a larger deviation in the lending and deposit rates hence a higher interest rate spread. The minimal interest rate is good for borrowers hence encouraging them to borrow more. The management and operational cost efficiency are crucial in encouraging higher ROA and economic growth. Therefore, the interest rate spread, management efficiency, and operational cost efficiency should be analysed systematically and rigorously to minimize higher-risk segments among DTMFIs.

#### **5.4 Recommendation**

The operational cost inefficiency and management ineffectiveness pose serious challenges to the ROA of DTMFIs. The management and operations must be maintained at an optimum level to gear the ROA. The minimal focus on these pivotal points poses a serious threat to the business in longevity. Additionally, Quality checks and balances encourage holistic ROA thereby translating to firms' growth. In addition, the businesses have greatest opportunity to showcase their capabilities by minimizing cost and increasing efficiency, productivity, and effectiveness.

DTMFIs should strive for a quality portfolio, and quality systems for evaluation, monitoring, and correcting variance. Importantly, organizations have a wide array of procedures, policies, and core values that guide creditworthiness, management, and operational effectiveness as well as effectiveness. The address to these issues step-wise gives chief latitude to organizational ROA. This study recommends balance and checks mechanisms to protect the investors, shareholders, management, and employees among other stakeholders.

The scrutiny recommends periodic revision of rules, policies, and standards to meet the fast-paced changes in the commercial market. The implementation of current technology help in the judicious management, operation, and monitoring of both lending and deposit rates. To increase productivity technology should be factored in for quality results. Technological advancement enhances smooth and convenient undertaking. It eliminates bureaucracy and increases diversification for sourcing higher ROA. Interestingly, interest rate spread is crucial for longevity plans. Higher interest rates can stagnate growth and heighten the volume and number of bad debts. Financial analysts and business advisors should undertake extensive analysis of fundamental analysis to aid in determining the appropriate interest level as well as deposit rate. Additionally, the technical computation should be calculated to give in-depth knowledge of the threats, clients' needs, and quality portfolios. Numerous technological systems should be incorporated to monitor the daily creditworthiness of potential and present clients. The default risk should be mitigated while applying stringent regulations.

The government should come up with policies that protect DTMFIs in Kenya. This initiative can promote standard operation among all the firms. The DTMFIs and Banking sectors should benchmark from each other and foster their productivity. This can increase efficiency and improve ROA. Credit policies should not compromise in the pursuit of management and operational cost efficiency. The portfolio yields and customers' needs should be addressed periodically to remain competitive with high ROA.

### **5.5 Limitations of the Study**

The study exhibited some limitations in the course of data collection and analysis. Foremost, the research utilized the secondary data already published by CBK. The data



was not-firsthand information, yet the study did not have verifiable areas to seek clarity and validate the data. The researcher presupposed that the data was accurate and free from errors.

The study concentrated on 14 DTMFIs leaving other SACCOS unattended. The concentration of these firms was to bridge the existing gaps but contrary to that the findings may not apply to other SACCOs. Moreover, the study maximized the descriptive and inferential computation thereby locking out other methodology techniques. Although the study resolved problems and bridged the gaps, it did not factor in many other methodologies needed for the study.

### **5.6 Suggestion for Further Research**

This study encourages further scrutiny of interest spread rate spread verse the dividend payout among the MFIs in Kenya to give a holistic dimension. A study can also be done in the context of SMEs concentrating on lending and depositing. This will be paramount in contrasting output, therefore, making meaningful decisions.

The upcoming studies can make good use of primary data to give firsthand information. Moreover, qualitative information should also be factored in to pinpoint the cornerstone which may not be represented in figures. Interest rates spread as a predictor variable with capital structure as the mediating variable and corporate governance as the intervening and lastly, financial performance as a regressed variable can give a more in-depth understanding.

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## APPENDICES

### Appendix I: List of Licensed Deposit-Taking Microfinance as of 31<sup>st</sup> December 2021

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

**Appendix II: Data Collection Instrument**

<b>Name</b>	<b>ROA</b>	<b>Interest Rate Spread</b>	<b>Interest rate</b>	<b>Deposit rate</b>	<b>Management Efficiency</b>	<b>Non-Interest Related Income</b>	<b>Total Assets</b>	<b>Operational Cost Efficiency</b>	<b>Operating Cost</b>	<b>Total operation income</b>

### Appendix III: Data Collected

Financial Performance	Interest Rate	Management efficiency	Operational cost efficiency
0.0272	0.1362	0.2413	0.0746
0.0255	0.3337	0.2410	0.0767
0.0238	0.3193	0.2409	0.0798
0.0275	0.3193	0.2403	0.0844
0.0261	0.3312	0.2398	0.0826
0.0269	0.3568	0.1056	0.0837
0.0277	0.3312	0.2510	0.0847
0.0314	0.3443	0.2507	0.0892
0.0337	0.1812	0.1299	0.0921
0.0364	0.4418	0.2394	0.0955
0.0488	0.1537	0.1357	0.0476
0.0451	0.4818	0.2857	0.0522
0.0396	0.1562	0.2368	0.0591
0.0386	0.4693	0.1857	0.0603
0.0381	0.1768	0.2356	0.0977
0.0415	0.2393	0.2356	0.1019
0.0342	0.3143	0.2764	0.0659
0.0336	0.0662	0.2849	0.0666
0.0319	0.0837	0.1964	0.0687
0.0330	0.0837	0.2764	0.0673
0.0365	0.0993	0.2849	0.0879
0.0448	0.0868	0.1815	0.0776
0.0584	0.1193	0.2760	0.0606
0.0625	0.1468	0.2843	0.0554
0.0732	0.1043	0.2697	0.0415
0.0717	0.1193	0.2780	0.0396
0.0728	0.1668	0.2090	0.0426
0.0733	0.1818	0.2688	0.0420
0.0710	0.1193	0.2697	0.0449
0.0693	0.0893	0.1936	0.0469
0.0378	0.1918	0.2374	0.0614
0.0409	0.1268	0.2375	0.0574
0.0368	0.1368	0.2773	0.0626
0.0304	0.0918	0.2471	0.0706

0.0296	0.1443	0.1571	0.0716
0.0258	0.0918	0.2369	0.0763
0.0237	0.1468	0.2568	0.0797
0.0329	0.2043	0.2365	0.0911
0.0295	0.1018	0.2166	0.0869
0.0316	0.1318	0.2365	0.0896
0.0400	0.1468	0.2167	0.1001
0.0436	0.2168	0.2370	0.1045
0.0463	0.1343	0.2367	0.1079
0.0472	0.1293	0.2566	0.1091
0.0460	0.3487	0.2667	0.1075
0.0463	0.2368	0.2565	0.1079
0.0571	0.3018	0.2656	0.1214
0.0587	0.2368	0.1957	0.1234
0.0543	0.0868	0.2158	0.1179
0.0544	0.1493	0.2658	0.1181
0.0261	0.1218	0.2776	0.0827
0.0281	0.0918	0.2563	0.0851
0.0348	0.3368	0.2661	0.0935
0.0375	0.3043	0.2761	0.0969
0.0414	0.2118	0.2160	0.1018
0.0436	0.2268	0.2158	0.1046
0.0450	0.0768	0.2458	0.1062
0.0450	0.1693	0.2658	0.1063
0.0460	0.1243	0.2758	0.1075
0.0445	0.1793	0.2358	0.1057
0.0265	0.0662	0.2275	0.0755
0.0238	0.0712	0.2383	0.0797
0.0278	0.2068	0.2479	0.0848
0.0357	0.1168	0.2073	0.0946
0.0362	0.1593	0.2373	0.0953
0.0404	0.0693	0.2069	0.1005
0.0440	0.2093	0.2366	0.1050
0.0461	0.2343	0.2665	0.1077
0.0478	0.1468	0.2363	0.1097
0.0471	0.0887	0.2659	0.1089



## Appendix IV: Summary of Analysis

### Model Summary<sup>b</sup>

R	R Square	Adjusted R-Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
				R Square Change	F Change	df1	df2	Sig. F Change	
.455 <sup>a</sup>	.207	.171	.0120373	.207	5.733	3	66	.002	.628

### Descriptive Statistics

Descriptive Statistics					
	N	Min	Max	Mean	SD
FP	70	.0237	.0733	.041206	.0132178
Interest Rate	70	.0662	.4818	.187430	.1025459
Management-efficient	70	.1056	.2849	.240293	.0207411
Operational-costeff	70	.0396	.1234	.084094	.0220289
Valid N (listwise)	70				

### Coefficient

Coefficients <sup>a</sup>								
Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
		B	Std. Error				Beta	Lower Bound
1	(Constant)	-.018	.022		-.844	.402	-.062	.025
	Interest Rate	-.004	.015	-.028	-.246	.806	-.033	.026
	Management-efficient	.266	.077	.418	3.463	.001	.113	.420
	Operational-cost efficient	-.043	.069	-.071	-.613	.542	-.181	.096

a. Dependent Variable: Financial Performance