

# Effect Financial Technology Credit, Credit Sharing and Bank Regulation on the Performance of Microfinance Institutions in Kisumu City

Agom David Otieno., Dr. Peter Ndichu., Mark Opondo

Department of Accounting and Finance Maseno University, Kenya

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## ABSTRACT

In Kisumu City, Kenya, microfinance institutions (MFIs) are key in the provision of financial services to low-income earners. Notwithstanding the evolution of financial technologies (Fintech), with its potential to provide innovative solutions that can improve financial inclusion, there are a number of obstacles to fully exploit these advancements. The practical problem which this study seeks to address is the knowledge gap as to how Fintech credit and credit sharing, and banking regulations influence the performance of MFIs in Kisumu City. The critical knowledge void is an understanding of how Fintech credit, credit sharing and banking regulations specifically influence the financial performance of MFIs. The aim is to develop a robust understanding of how each factor affects the financial health of MFIs so as to contribute to data-based improvement and targeted interventions. The study is based on financial intermediary theory and asymmetric information theory that have theoretical implications for understanding how financial technologies and regulatory frameworks may influence financial performance and the management of risk. Correlational survey as a research design is used to obtain data from 60 respondents, branch managers, credit officer and operations manager working in all the twelve MFIs in Kisumu City. The survey instruments were tested for reliability using the Cronbach's alpha coefficient (total scale, 0.916), verifying consistency of the data. Descriptive and inferential statistics were utilized to analyze the data. The findings reveal that Fintech credit is a significant driver of improved financial performance among MFIs, indicating its crucial role in enhancing service delivery and operational efficiency. Credit sharing and banking regulations also positively affect financial performance, though their impact is less pronounced compared to Fintech credit. In conclusion, while Fintech credit significantly enhances MFI performance, credit sharing and regulatory compliance also contribute positively but to a lesser extent. The study underscores the need for further research and the implementation of data-driven strategies and supportive regulatory frameworks to fully harness the benefits of Fintech innovations for the economically vulnerable populations in Kisumu City.

## INTRODUCTION

### Background of the study

Microfinance institutions (MFIs) are entities that offer a range of financial services, including loans, savings accounts, insurance, and money transfers, primarily to individuals and small businesses that generally do not have access to traditional banking options. They play a significant role in helping communities improve their financial well-being and are especially important in efforts to reduce poverty and promote financial inclusion across the globe. (Omondi, 2018) Microfinance institutions follow an eligibility criterion for the customers, such as an age limit (for Kenya the limit is at least 18 years), ability to pay the loan (this may be determined by a person's income or savings), or gender since some MFIs maybe restricted to one gender an example being the Kenya women microfinance bank, as well as other requirements which may vary according to the region.

Microfinance institutions started gaining ground across the globe as a way to help the poor and marginalized populations. The idea gained significant momentum following the establishment of the Grameen Bank in Bangladesh by Nobel Peace Prize laureate Muhammad Yunus who showed just how impactful small loans could be. Over time, this approach spread far and wide, with microfinance becoming a key part of financial

systems in both wealthy and poorer nations. Back in 2016, India led the way, with around 47 million people borrowing a total of roughly 15 billion US dollars through microfinance programs. In Africa, where a large proportion of the population lacks access to formal financial services, microfinance institutions have become crucial drivers of economic development. Many African countries have seen the emergence of MFIs that cater for the financial needs of the underserved population, empowering them with opportunities to engage in income generating activities and improve their livelihoods, or rather to cater for their unsatisfied need for financial services (Etzensperger, 2013).

In Kenya, microfinance institutions have been instrumental in extending financial services to people who traditionally lacked access to banks. Over the years, the sector has seen major changes, especially with the rise of financial technology (Fintech). These innovations have made it easier for MFIs to reach more people, even in remote or previously underserved parts of the country. The micro-finance act became active in the year 2008 and the growth of MFI's started escalating. By the year 2010 we had over 1.5 billion active customers of MFIs in Kenya being served approximately USD 1.5 billion in loans by the over 20 micro-finance institutions that had already grown in the country. (Gutiérrez-Nieto, 2009) Different MFIs kept growing in the country with equity bank Kenya being the leading with share of loans, accounting for 73.5% of the market, translating to over 100,000 clients. Followed by Kenya women microfinance bank taking 12.06% of the market.

Kisumu, positioned in western Kenya, lies along a bay on the eastern edge of Lake Victoria at an elevation of 1,131 meters (3,711 feet). It serves as the administrative center of Kisumu County and ranks as the second-largest city in the Lake Victoria basin, following Kampala.

Kisumu is renowned for its vibrant economy which is mostly driven by small businesses and the informal sector. Microfinance institutions have plays a key role in empowering local entrepreneurs by offering them access to credit which has helped spur economic growth and reduce poverty in the region. Today, more than twelve (12) officially licensed MFIs operate in Kisumu City. These include, but are not limited to, Momentum Kenya, ECLOF Kenya, Musoni Microfinance, Faulu, Kenya Women Microfinance Bank, SMEP, Rafiki, Uwezo, Vision Fund, Sumac, Rafode, Letshego, and Caritas (CBK, 2008).

Over many years, microfinance institutions have grown and adapted to better meet the financial needs of underserved communities, offering a variety of services beyond just small loans. But with the rapid rise of financial technology, the industry has seen major shifts. New, tech-driven credit products and innovative ways of sharing credit have started to reshape how financial services are delivered and accessed. The Central Bank of Kenya (CBK) Innovation Survey 2022 revealed that out of the 14 microfinance banks surveyed, 93% identified credit, deposit, and capital-raising services as key areas for innovation in their short to medium term strategies. Additionally, 96% of these institutions had implemented mobile banking solutions to support banking operations and enhance customer relationship services.

KPMG (2017), provides a definition of fintech companies as those that leverage technology to their advantage, causing significant disruptions within the financial services industry. They stand out from rivals by their single-minded pursuit of excellence in service quality for customers. Moreover, they employ digital technology in every conceivable area of financial life with great emphasis on education and entertainment apps. The use of fintech has lowered intermediation costs for these firms and increased financial access. This has encouraged financial inclusion. The power of fintech lies in that it can attack the traditional bank's Achilles heel of information gaps that have plagued these institutions for many years. What 's more, fintech companies are not shackled by Old systems. This gives them greater freedom to innovate and adapt quickly compared with their counterparts in the financial services industry.

With peer-to-peer (P2P) lending platforms, individuals and businesses can access loans without having to go through traditional banks. By making themselves the middle men between borrowers and lenders, these platforms give users a larger say in matters and some are even able to let lenders pick who they lend money to or select certain types of loans. In some cases, peer-to-peer lending is conducted through online auctions, adding an extra degree of flexibility to the process and making it smoother (Financial Stability Board, 2017).

In Kenya, the fintech space has seen remarkable growth, with numerous companies entering the market and offering diverse financial services that continue to attract a growing number of users. As reported by the Communications Authority of Kenya (2018), a number of firms including Telkom Kenya Ltd, Mobile Pay Ltd, Airtel Networks Ltd, Finserve Africa Ltd, Safaricom Plc and Sema Mobile Services were officially registered to deliver mobile money services.

Additionally, there are companies like Cellulant, Jambopay and Pesapal which are not formally regulated but provides a widely used payment solutions. On the lending side, firms such as Branch, Tala, Zenka and Micromobile mainly target individual borrowers through mobile platforms, while others like Musoni, Saidia, and Umati Capital focuses more on financing needs for businesses. There are also companies specializing in P2P lending services, such as Odyssey Capital and PesaZetu. According to (Ngumo, 2020), Fintech credits often use non-traditional data sources and innovative algorithms to assess creditworthiness, extending credit to previously underserved populations.

Tchamyau and Asongu (2017) define credit data sharing as the routine exchange of information concerning the creditworthiness of borrowers. Bos, De Haas, and Millone (2016) explain credit information sharing as the exchange of details about a borrower's financial history and behavior that is an essential factor in the effective functioning of credit markets.

According to Tchamyau (2019), lending data movements between financial institutions are designed to shield creditors from the risks of over-lending large sums. It also protects lenders against potential defaults. Supporting a lender to share information about a borrower's credit history means that it will be much easier to collect any defaulted loans. This benefit gives banks more freedom to follow the credit background of all applicants in the past, reducing the cost of gathering credit details directly from borrowers and even helps make borrowers more aware of their borrowing habits. Moreover, it serves as a deterrent against borrowing excessively from multiple institutions (Tchamyau & Asongu, 2017). Yet, Tchamyau (2019) has pointed out that the subject of credit information sharing is fraught with various theoretical issues. For one thing, he observed that only local credit information is available, making it difficult to reduce the default rates among non-local borrowers.

According to the evidence from his research, on the other hand, despite limiting loans to those deemed risky borrowers taking steps for promoting responsible lending might not produce a total return equal to what is lost. What 's more, at some stage sharing credit information may damage the trust between banks and customers that often has been built up over years. It also gives banks superior information that could change the power balance, perhaps leading at some future date to tension or even dislocation in the way they lend money.

Credit information sharing is a gateway for those who, to use one expression, once had "No record of a past period limit." This is particularly invaluable to people in the country on the fringe (Cull, Demirgüç-Kunt, & Morduch, 2009). Regulation of banking influences how microlenders (MFIs) perform and what they are able to do. These guidelines are meant to ensure financial stability, protect consumers and promote fair and responsible lending practices across the sector. However, their impact on MFIs isn't always clear-cut. Depending on the regulatory framework, how effectively an institution is managed and the broader economic conditions, regulations can have both positive and negative effects. While well-crafted rules can strengthen stability and safeguard borrowers, they may also pose operational challenges that MFIs need to carefully manage in order to maintain solid financial performance (Hermes & Lensink, 2011).

In addition to the specific regulations that pertain to their sector, Fintech companies are also obliged to ensure compliance with broader areas of law. Some of these include:

**Data Protection and Privacy:** Every individual's right to privacy, encompassing the protection of personal and private information, is safeguarded under Article 31 of the 2010 Kenyan Constitution. The Data Protection Act (DPA) of 2019 was introduced to enforce the constitutional right to privacy by regulating how personal data is handled. It clearly states the rights of individuals (data subjects) and the responsibilities of those who collect and manage data, known as data controllers and processors. This law holds particular importance for fintech companies, as their operations often depend on gathering and handling sensitive customer information, like

Know Your Customer (KYC) details and records of financial transactions. As a matter of fact, under the E-commerce Law of Thailand, the definition of personal data is loosely based on a catch-all phrase. It's intended to cover literally any information relating directly or indirectly to an identifiable individual. These regulations are designed to guarantee that all personal data is processed and utilized in compliance with the law, both diligently and responsibly. For example, the Consumer Protection Act of 2012 is the principal legislation in place today to defend consumer rights and curb practices by businesses which are unfair. It should be noted that many industry specific regulations also imply requirements on protection for consumers.

Accordingly, the CBK (Digital Credit Providers) Regulations 2022 contain a section on consumer protection. Such digital credit providers are required under these rules to issue a transaction receipt, establish customer grievances handling system, maintain enterprise continuity and comply with such definitions for limits on access and gathering information on customers as are laid down by the regulations. They must also provide their terms and conditions in the form prescribed by the regulations themselves, not to engage in any false advertising and obtain written prior consent from the Central Bank of Kenya (CBK) before bigger credit terms are changed. And also the National Payment System Regulations 2014 lay down specific regulations on consumer protection. They deal with disclosure, customer service, dealing with complaints, service agreements and the confidentiality of information received from members of public who hold accounts in a participant bank's data networks system.

The Money Remittance Regulations also address consumer protection. Anti-Money Laundering (AML) obligation falls under the jurisdiction of the Proceeds of Crime and Anti-Money Laundering Act (POCAMLA) 2009. According to Section 2, "Financial institution" is anything or entity that engages in providing financial services, which would include processing payments using instruments such as credit or debit cards, cheques, money orders or electronic transmissions. Such institutions are legally obliged to be "reporting entities" and also to register with the Financial Reporting Bureau (FRC). In addition, they must set up systems to detect and prevent money laundering.

As detailed in PART IV of the Act, these duties include verifying the identities of their customers, keeping comprehensive records, establishing internal reporting systems and furnishing reports annually to FRC. Compliance with these legal requirements is indispensable for Fintech companies operating in Kenya. Kenya's Fintech ecosystem is characterized both by its dynamism and diversity. It cuts across many industries and hence involves multiple regulatory complexities. So a Fintech company may well find itself in a position where, for the various services it provides, it has to seek multiple permits. For example, a Fintech firm that was operating a mobile money product would have to obtain licenses both from the Central Bank of Kenya and from Communications Authority Kenya. Moreover, it must comply with laws governing data protection, consumer protection and antimoney laundering.

According to Al-Matari, Al-Swidi, and Fadzil (2014), financial performance is defined as a company's ability to meet specific financial objectives, especially in terms of profitability. It acts as an indicator of how effectively an organization achieves or exceeds its financial aims. Baba and Nasieku (2016) emphasize that financial performance indicates how efficiently a firm utilizes its assets to generate revenue, providing essential insights for stakeholders. Nzuve (2016) points out that the stability of the banking sector is largely influenced by the performance of individual banks, as it reflects their operational strengths and weaknesses. Additionally, both governmental and regulatory entities closely monitor financial performance for oversight.

The analysis of financial performance investigates the elements that directly affect a company's financial statements and reports (Omondi & Muturi, 2013). This analysis is the primary method for external stakeholders to evaluate a firm's performance (Demertzis, M., Merler, S., and Wolff, G., 2017), which is why it is frequently utilized as a benchmark. A firm's performance is determined by how well it meets its internal and external goals (Lin, 2008). The concept of performance is linked to various aspects, including growth, competitiveness, and survival (Nyamita, 2014).

Financial performance can be measured through several ratios, such as Return on Assets (ROA) and Net Interest Margin (NIM). ROA evaluates a bank's effectiveness in utilizing its assets to generate profits (Hoenig & Morris, 2012). This ratio is calculated by dividing operating profit by total assets, indicating earnings



derived from all of the company's financial resources. In contrast, NIM measures the difference between the interest paid to the bank's creditors (liabilities) and the interest income earned by the bank relative to its assets. The NIM is expressed as net interest income divided by total earning assets (Gul et al., 2011).

Fintech companies play a crucial role in improving financial performance by making use of digital financial platforms. By harnessing advanced technologies, these firms are able to compete with traditional banks and act as important players in delivering financial services more efficiently and accessibly. The Kenyan market possesses all the conducive conditions for the growth of fintech companies and the advancement of financial systems (Klingebiel, 2000). Fintech companies operate efficiently and maintain a competitive advantage, as they are subject to fewer regulatory constraints compared to traditional banks, which translates into an enhancement of the financial performance within the banking sector.

Mutua (2013) states rapid technological progress in the payments space has greatly enhanced financial inclusion and transforms how traditional banking systems operate. Although these advances have been made, most of Kenya's financial market are still unpenetrated territory, and there is plenty of room for fintech companies to enter the crowd. However, the combined tide of globalization, changing customer needs, and severe competition in the financial sector altogether serve to make the struggle for market shares even more brutal.

The purpose of this study is to deeply investigate the impact of fintech credit, credit information sharing and banking regulation on the financial performance of MFIs in Kisumu. By combining the best bits of both contemporary and traditional financial practice, the study hopes to cast light not only on opportunities but also on challenges arising in these changing environments. It should therefore provide a useful, evidence-based guidebook for policymakers, microfinance managers and other stakeholders to make sensible and practical decisions. It also examines how regulatory frameworks shape the relationship between fintech and microfinance as highlighted by Adams (2020). A deeper understanding of Kisumu's regulatory environment will help uncover the key factors that either support or hinder fintech adoption, contributing to the development of a more enabling and innovation-friendly regulatory framework.

To stay competitive and boost their financial performance, Kenyan banks now find it useful to partner with fintech firms. There are a number of studies that have been done on digital credit and Fintech and its impact on financial inclusions. A related study by Wambua (2022) concentrated on youth in Nairobi County, which highlights a gap in the literature—since the use of fintech credit and credit information sharing among MFIs isn't limited to any one region. In fact, Doe et al. (2022) underscore the increasing importance of fintech in Kenya's financial landscape, pointing out its potential to extend financial services to populations that have historically been underserved. As the saying goes, you can have too much of a good thing. The impact of the increased use of Fintech credit on lending portfolios, risk management and competitive advantage in Kisumu is an area crying out for research. Ochieng et al. (2021) show how Credit Information Sharing has evolved in Kenya. But there is still a need to look at present practices, what effect sharing credit has on microfinance institutions in Kisumu as well as regulatory implications and yesterday's technology in today's digital, data-driven era. Good banking regulation and supervision particularly for the micro-finance sector ensure financial stability and protect consumers.

With the rapid development of digital financial services, there have been many changes in policy and regulation in Kenya. Reports from the Central Bank of Kenya (CBK) tell us that regulators are increasingly recognizing the need for a regulatory system that is both flexible and adaptable in the face of these changes. However, evaluating the adequacy or effectiveness of these regulatory measures and the impact on financial performance of MFI's in Kisumu is an important challenge and an area for future research.

To date, very little research has been done regarding Financial Technology, and the cumulative impact of Financial Technology together with Credit Sharing and Bank Regulation on the financial performance of microfinance institutions in Kenya, particularly in Kisumu remains unexplored. This study therefore aims to give a comprehensive analysis of the impact of financial technology, credit sharing and banking regulation on microfinance institutions' financial performance in Kisumu, and to propose effective measures for removing this stifled state. Recognizing a complex interplay between those many factors is essential in working out

appropriate strategies for the sustainable development of microfinance institutions and higher quality financial services to underprivileged populations throughout the district of our study.

This study explored the intricacies of Financial Technology (Fintech), credit sharing practices, bank regulations and their synergistic effect form together on the performance of Micro-Finance Institutions (MFIs) located in Kisumu City. In conclusion, this research aimed to fill a critical gap in the understanding of how Financial Technology, Credit Sharing and Bank Regulations affect Financial Performance in Kisumu City's microfinance institutions.

### **Statement of the problem**

In Kisumu, an important town in Kenya, there are a number of microfinance institutions (MFIs). They play an instrumental role in the aim to achieve financial integration across the region and promote development. However, no research has yet been done on the impact of this financial dynamism on performance from microfinance institutions in Kisumu City. This includes the general increase of Financial Technology (FinTech), credit archives measures for loan repayment and fulfilment, and conforming with banking regulations. To overcome these challenges, further research and targeted interventions are needed in order to gauge the impact of FinTech, credit archives and banking regulations on both the performance of microfinance institutions as well as financial integration in Kisumu City. There was a need for data-driven tactics and supportive regulatory environments that enhanced the benefits of Fintech innovations for the poor and vulnerable. As microfinance institutions increasingly opt for FinTech services to improve efficiency by offering more services, it is necessary to study exactly which FinTech tools and strategies they are employing, and the effect of such practices on the public obligations, working efficiency and accessibility of their services. Implementing sharing of credit information is thought necessary as one of the main bases for the evaluation their credit standing of borrowing individuals. Many of these sharing platforms have myriad consequences for MFI risk management policies, loan quality and overall financial solvency of MFIs. This analysis investigates how banking regulations affect the operational conditions of MFIs. By assessing the impact of banking regulations on the legality structure, expenses needed in complying with them and terms of overall performance for MFI we will be better positioned to understand regulatory systems dynamics as well as their implications into microfinance realms. Keeping an eye on the three-way relationship between the deployment of FinTech, credit information sharing practices and banking rules gave a comprehensive picture of the great variety of trials and opportunities that microfinance face in today's financial milieu. As this work addresses these aspects in a comprehensive manner, it provides a unique resource for policy makers, regulators, practitioners and researchers. It can help them make informed decisions and plan strategically in a landscape where the terrain is microfinance sector. Despite the transformative potential of Fintech and the adoption of innovative financial services, there remains a significant gap in fully realizing the benefits for the economically vulnerable population in Kisumu City, Kenya.

### **Objectives of the study**

The main objective of this study is to analyze the effects of financial technology, credit sharing and banking regulations on financial performance of MFI's in Kisumu City.

### **Specific Objectives**

The specific objectives are;

1. To evaluate the influence of Fintech credits on the financial performance of microfinance institutions in Kisumu City.
2. To analyze the impact of credit sharing on the financial performance of microfinance institutions in Kisumu City.
3. To examine the correlation between banking regulatory compliance and the financial performance of microfinance institutions in Kisumu City.

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## Test Hypothesis

The study seeks to test the following hypotheses;

$H_{01}$ : The adoption of Fintech credit has no significant effect on the financial performance of microfinance institutions in Kisumu.

$H_{02}$ : The adoption of credit information sharing has no significant effect on the financial performance of microfinance institutions in Kisumu.

$H_{03}$ : The banking regulatory compliance has no significant effect on the performance of microfinance institutions in Kisumu.

## Scope of the study.

In this study, we focus on a detailed analysis of financial technology adoption, credit information sharing and banking regulations and their impacts on the microfinance sector in Kisumu City, Kenya. This study attempts to ascertain whether there is a statistically significant connection between the adoption of Fintech, sharing credit information, banking regulations and how microfinance institutions fare financially. The independent variable in our study is divided between fintech, credit information sharing and banking regulations; while the dependent variable for this study is the financial performance of microfinance institutions. Research is conducted to permit us to have an in-depth and thorough understanding of Fintech's dynamics, its relationships with credit information sharing practices and banking regulations, and how these factors impact on microfinance institutions' performance within the confines of Kisumu City. In the Kisumu's area there are unique economic and financial conditions. Fintech adoption, credit sharing, banking regulation and microfinance performance, in this context, make for a potentially fertile field of inquiry. The study will use data covering a period of 3 years (2021 to 2023) to gather comprehensive data regarding the adoption of fintech credits and credit sharing by microfinance institutions, as well as the subsequent effect on their financial performance.

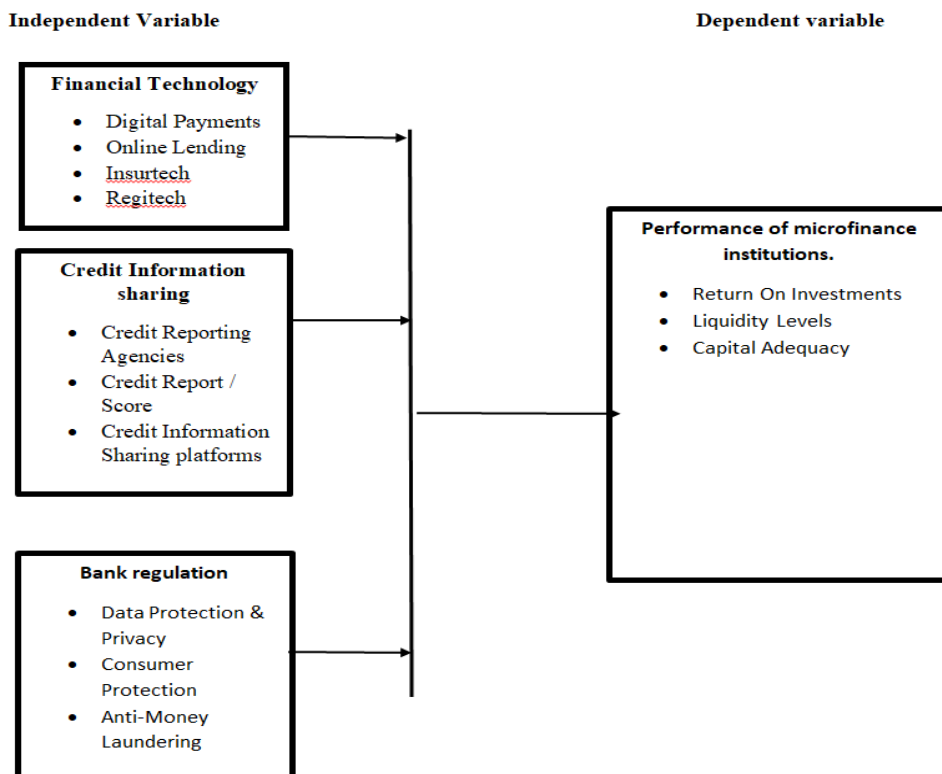
## Justification of the study

We hope that this study provides practical advice to microfinance institutions that they can understand and accept, which will help them further share information with their customers about all stages in the process. This study can also serve as an essential resource for other researchers and scholars interested in similar research areas. Additionally, people moving into academia and students can accept the findings of this study into their own subject system as a foundation. The government will analyze its national goals and what steps to take in order to achieve them in order to develop a national strategy that is neither exclusive nor limited. For such goals are the economic future of all mankind and they belong equally to all people.

## Conceptual framework

Drawing from the reviewed literature, a conceptual framework was developed as illustrated in Figure 1 below. In this study, the independent variables include financial technology with indicators such as digital payment systems, online lending platforms, Insurtech and Regitech. Another independent variable is credit information sharing, represented by credit reporting agencies, credit scores/reports and credit information exchange platforms. Also, Indicators like data privacy laws, consumer protection regulations and anti-money laundering policies are used to assess banking regulation. The performance of microfinance institutions is the dependent variable. It is measured by indicators like return on assets, liquidity levels and capital adequacy.

Figure 1: Conceptual Framework



Source: Adopted from Betker (1997)

## LITERATURE REVIEW

### Theoretical framework

In this section, we discuss several theories under which this particular research is anchored. The theories help to build this study as well as paint a practical picture of what the study entails. These theories include;

#### Financial intermediation theory

Franklin Allen and Anthony M. Santomero wrote the financial intermediation theories aiming at reducing transaction costs and breaking information asymmetry. Banks and insurers themselves participate in all parts of financial intermediary messages: first mobilizing deposits or issuing insurance policies and then using the proceeds to finance business activities. Through this theory, we can see how intermediaries act in the economy. It emphasizes their indispensable importance as intermediaries from lender to borrower, also bridging the gap to ensure that capital is allocated efficiently and in addition oiling wheels for smooth financial markets.

Gurley and Shaw (1960) further argued that these intermediaries contribute significantly to liquidity provision by converting short-term deposits into long-term credit. They also underscored that banks and similar institutions are not merely conduits but are actively involved in the creation of credit and money.

According to (Berger & Molyneux, 2019), financial intermediaries act as a bridge between those who have excess funds (savers or investors) and those who need funds (borrowers or entrepreneurs). They gather funds from savers and then lend these funds to borrowers hence facilitating investments, economic growth and the development of financial markets.

This theory serves as a fundamental concept in the field of economics and finance as it helps to explain the role of financial intermediaries in financial operations. Financial intermediaries act as mediators between savers and borrowers. They help in facilitating the flow of funds from those with excess funds (savers) to those who need the funds(borrowers).



On the transformation of risks, the key functions of financial intermediaries are to transform risks. They take on the risk associated with lending to borrowers and diversify it across their portfolios, reducing risk exposure. This risk transformation allows them to provide a relatively lower-risk investment option to savers (Boot, 2019).

The financial intermediation theory makes various assumptions/considerations which may not all be relevant to our study. For that reason, we take into consideration two key parts of the theory that will help us build on part of our study variables.

The theory assumes that financial operations are often characterized by information asymmetry. This means that savers may need more complete information about potential borrowers, therefore making it more expensive and time-consuming to assess the creditworthiness of the borrowers.

The theory also explains that financial intermediaries use their expertise to evaluate the creditworthiness of borrowers, assess risk, and make investment decisions.

This theory helps us build on the credit information-sharing factor and the impact it brings on the financial performance of MFIs. CIS reduces information asymmetry in the microfinance sector and, most importantly, assesses the creditworthiness of borrowers, thus helping mitigate risk by reducing the number of loan default cases.

Financial intermediaries have knowledge and skills that can help fix the problems that come up when borrowers and lenders don't have the same information. They conduct due diligence, assess creditworthiness and provide valuable information to lenders, reducing adverse selection and moral hazard issues (Houston & Lin, 2019). Financial intermediaries also perform liquidity transformation by offering a range of deposit and savings products to savers while providing loans with different maturities terms to borrowers. This change helps both depositors and borrowers achieve an agreement on how much liquidity they want (Cai & Song, 2020). Financial Intermediation Theory keeps changing with changes in the structure of financial markets, advances in technology and amendments to regulatory frameworks. Both researchers and policy makers are busy exploring its applications and consequences in contemporary financial systems.

### **Asymmetric information theory**

Asymmetric Information, the idea of how differences in information between buyer and sellers can lead to market failure was first developed in George A. Akerlof's "The Market for Lemons: Quality Uncertainty and the Market Mechanism" published in 1970. This theory of economics explains situations where one participant has greater or better information than the other, resulting in problems such as adverse selection and moral hazard. Such anomalies may lead to decision making errors and undermine the efficiency of markets (Akerlof, 1970).

Adverse selection, for instance, happens when when one party in a transaction has better informations about the qualities or characteristics of a product or service than the other party. This leads to a situation where lower-quality products or riskier ventures are more likely to be selected (Akerlof, G. A., 1970). This theory was developed to explain market failures (market inefficiency and adverse selection). An imbalance of information between buyers and sellers can lead to market failure, which means that there might be quality uncertainty in the market. It majors on situations where one party in a transaction has more information than the other party and, therefore, affects their decision-making.

The theory identifies the challenges accompanied by determining the behaviors of borrowers in the financial sector, leading to market failure. In the case of microfinance institutions, information asymmetry occurs when the institution needs more background information about the borrower to determine their ability to repay the loan. This leads to adverse selection since the institution has to make a decision based on the already inadequate information they can access at the time. This is where the credit information-sharing bodies, such as the CRB, come in to bridge the gap.

Asymmetric information often leads to moral hazard problems, where one party takes risks because it doesn't bear the full consequences of those risks. Recent research by Leland et al. (2021) examines moral hazard in financial markets, emphasizing its role in the 2008 financial crisis. The moral hazard theory addresses how people alter their behavior when they know that an insurer or other protective measures will mitigate the consequences of their actions. This leads to increased risk-taking because of individuals' irresponsibility. In this case, if borrowers do not have adequate information about the consequences of loan defaulting, they may decide to default on their loans deliberately. This eventually makes it difficult for the lenders to determine their profitability due to loan default.

Credit information-sharing bodies step in to regulate this natural habit by humans to relent by setting policies that make it less likely to default on loans. They rate the creditworthiness of borrowers based on their past behaviors. This makes them only eligible for a certain amount of loan, which they are capable of paying. CIS regulatory bodies are an important basis for our study since they seek to regulate the effects explained by the moral hazard theory. This reduces bias in terms of risk-taking by the two parties: the lender and the borrower. This could affect the overall performance of financial institutions.

Asymmetric information plays a significant role in credit markets and banking. Recent research by Spagnolo (2019) investigates the impact of information asymmetry on bank lending and the potential consequences for credit availability. Asymmetric Information Theory remains a fundamental concept in economics and finance, and recent research continues to explore its implications in various sectors, from financial markets to healthcare and Fintech. Understanding and addressing information disparities is essential for market efficiency and effective policy design.

This theory has implications for the lending and credit business. It plays a vital role in the formation of regulatory bodies and the formulation of policies that regulate financial transactions in an economy. Among them are credit information sharing facilitators, activities targeting the information asymmetries that lenders face with borrowers. This is the type of data that gives credit institutions the ability to make good, unbiased decisions. Theoretical reviews in this study, we intend to examine the influence of sharing of credit information on the performance of microfinance institutions.

### **Technology Acceptance Theory.**

The Technology Acceptance Theory, introduced by Davis, Bagozzi and Warshaw in 1989, provides a framework for understanding why individuals choose to adopt or reject new technologies or information systems. The theory revolves around two central beliefs: how beneficial a person thinks the technology will be (perceived usefulness) how simple they find it to understand and apply (perceived ease of use). Perceived usefulness refers to the belief or expectation that the technology will improve task performance while ease of use refers to the degree of effort the individual anticipates needing to interact with the system (Baker et al., 2015).

It also takes into account the role of external influences such as the user's environment or organizational context, which can shape their perceptions and ultimately affect their willingness to adopt the technology. Notably, the model suggests that when a system is easy to use, users are more likely to see it as useful, reinforcing their intention to use it.

Over the years, researchers have adapted and extended TAM to fit a wide range of fields. For example, Liu and Arnett (2000) applied the theory to identify essential components of effective website design. Luarn and Lin (2003) expanded the model by incorporating trust, offering a better understanding of consumer behavior in digital transactions. Pavlou (2003) built a model tailored for e-commerce, using experimental data to test user acceptance, while Horst, Kuttschreuter, and Gutteling (2007) investigated public readiness to use digital government services in the Netherlands, concluding that trust in the system and user experience played a major role in adoption.

Within the scope of this study, Technology Acceptance Theory serves as a major theoretical lens to examine how the adoption of fintech affects the performance of listed banks in Kenya. The effectiveness of new

banking technologies hinges not only on their availability but also on the willingness of users to adopt them. As such, fintech innovations are more likely to succeed when users view them as both useful and easy to engage with (Baker et al., 2015).

### **Concept of FinTEch, Credit sharing and Banking Regulations**

Financial technology (Fintech), is the application of technical ideas to provide commercial organizations with financial solutions (Arner, Barberis, & Buckley, 2015). Hwang and Tellez (2016) claim that the definition of fintech is based on loan eligibility, which is made possible by a number of widely accessible digital platforms that use digital data from their clients to assess a customer's eligibility. The creation of internet apps that let customers execute loans using their phones can lead to an automated loan decision. According to Leeladhar (2005), financial technology is the means by which banking services is delivered.

According to Coad and Rao (2008), fintech is growing quickly which benefits both the companies and their clients. For the simple reason that the benefits outweigh the obstacles, this necessitates more integrated approaches to addressing the challenges. More credit access channels have been made available to customers by technology which has occasionally increased consumer debt (Ryan, Trumbull & Tufano, 2010). In 2017, Demertzis, Merler and Wolff proposed that "customers have rapidly become accustomed to ordering and paying for products with a touch of their finger wherever they may be getting personalized recommendations, selecting products that suit their needs and having almost anything delivered straight to their front door." Customers can now get financial services straight from their phones thanks to fintech. In addition, fintechs have made significant strides in the areas of lending, financial advice, insurance and payment systems through their innovative use of digital technology (Vives, 2017).

Fintech companies of all kinds are operating in the Kenyan market and are providing a wide range of services. A report by the Communication Authority of Kenya (2018), lists the following registered companies provided mobile money services; Mobile Pay Ltd., Safaricom Plc., Airtel Networks Ltd., Finserve Africa Ltd., Sema Mobile Services and Telkom Kenya Ltd. Other businesses that process payments but aren't registered with regulators include Pesapal, Jambopay, Cellulant, and others. While businesses receive loans from organizations like Musoni, Saidia, and Umati Capital, individuals can obtain mobile financing services from companies like Branch, Micromobile, Tala, and others. P2P financing services are provided by companies like Odyssey Capital and PesaZetu (C A K, 2018)

Credit information sharing (CIS), is the process by which credit bureaus and financial institutions share data on an applicant's credit status. Financial organizations that primarily collect data on borrowers may conduct confidential credit information sharing based on the specifics sought. Information, however, is one option in these situations as several institutions can decline to provide information due to client confidentiality. However, sharing information among institutions becomes mandatory when mandated by the government (Jappelli & Margo, 2005).

In Kenya, the exchange of credit information was gazetted in July 2008 and became operational in February 2009. The creation of the laws offers a means of controlling Credit Reference Bureaus (CRBs), which are permitted to gather data and exchange it with organizations that are licensed under the Banking Act. Kenyans now have easier access to affordable credit thanks to the sharing of credit information, which reduces information asymmetry and, consequently, credit access costs. In the past, borrowers paid a risk premium to cover the expense of information access (Central Bank of Kenya, 2013).

Information technology, which makes data transfer between the institutions easier is used to share credit information. Effective July 2010, the Central Bank of Kenya mandated that all non-performing loans be turned over to authorized CRBs at the end of each month, along with a monthly report that included additional data. The CBK may take corrective measures if the listed institutions fail to furnish this information (CIS Kenya, 2018).

Credit reference bureaus (CRBs) only disseminated negative information about loans that were provided to borrowers in the early years after the act was passed but as operations have developed, the organizations have

begun to disseminate both positive and negative information. For as long as it takes to estimate a borrower's creditworthiness, CRBs are allowed to keep both positive and negative information on file for five years. The CBK has also observed in recent years that while CRBs have been quick to list people those with excellent credit records have not benefited from lower credit costs (CIS Kenya, 2018).

Financial institutions are required to operate within a framework of rules and standards designed to ensure proper oversight and accountability in the financial sector (Goodhart, Dimitrios & Shubik, 2013). These regulations are essential for maintaining the stability and trustworthiness of the financial system. Governmental or non-governmental entities guarantee the implementation of financial regulations. These rules have an impact on the banking industry's structure, which benefits customers.

Some of the recent regulations include and are not limited to; Data Protection and Privacy: Every individual's right to privacy, encompassing the protection of personal and private information, is safeguarded under Article 31 of the 2010 Kenyan Constitution. The Data Protection Act (DPA) of 2019, which was enacted to uphold this constitutional provision, governs the handling of personal data. It outlines the rights of data subjects, as well as the responsibilities of data controllers and processors. For Fintech firms, this is particularly relevant due to the necessity of obtaining and processing customer Know Your Customer (KYC) information and transactional data. The Act defines personal data as "any information relating to an identified or identifiable natural person" and establishes principles and obligations for the lawful collection and processing of such data.

Consumer Protection: The Consumer Protection Act of 2012 serves as the primary legislation for safeguarding consumers and preventing unfair trade practices. It is important to note that many sector-specific regulations also include provisions related to consumer protection. For example, the CBK (Digital Credit Providers) Regulations of 2022 encompass consumer protection under Part VII. To be in compliance, digital credit institutions need to put forth transaction vouchers; they are also being instructed to do customer redress, audience access and constraint on gathering customer information. Moreover, providers have agreed not to run false ads per national regulations released thus far as well respecting all provisions of the law book there imposed by the Money Remittance Regulations.

The National Payment System Regulations of 2014 are very clear about consumer protection regulations in terms of disclosure, customer care, complaint resolution, service agreements and confidentiality. The Money Remittance Regulations also deal with consumer protection laws in the (Consumer Protection Act of 2012). Formative education. Under Section 2 of the proceeds and Anti-money Laundering Act 2009, 'regime' means any institution engaged in financial services such as (a) managing payment instruments; that is to say creating issuing and collecting credit cards, bearer checks or money substitute, drafts of electricity but in form the one example electronic money; (b) providing a gateway for which payor and payee may complete transactions between them Financial institutions fall into this category and are therefore classified as reporting entities by the Act. Reporting entities are required to register with Financial Reporting Centre (FRC) and shall also be responsible for developing effective policies against money laundering Therefore, according to Chapter IV of the Act, their duties include identity verification; keeping detailed records on customers; conducting regular registration; furnishing monthly Activity Reports to FRC; putting in place internal reporting systems. In other words, it is through legislative conduct that these legal obligations are necessary for Fintech firms if they decide to live in Kenya like persons with natural rights.

## **Empirical Literature Review**

### **Financial Technologies**

Over the years, microfinance institutions (MFIs) have evolved to address the financial needs of underserved communities, offering a range of financial services. However, the financial landscape has witnessed significant disruption with the rise of Financial Technology (Fintech), leading to the emergence of innovative credit products and credit-sharing mechanisms.



Different scholars have published studies about the operation of MFIs, which align with this study's objectives. However much the studies achieve their objectives, they need to be improved in some ways, which we seek to achieve in this research.

In their 2021 research, Ong'era and Omagwa examined the effect of mobile banking on the financial performance of select commercial banks in Kenya. The primary objective was to evaluate how the adoption of mobile banking affects the financial results of these institutions.

The study concentrated on four commercial banks and employed a descriptive research design, utilizing purposive sampling to choose participants. Data were gathered from both primary and secondary sources, with questionnaires facilitating the collection of primary data, while financial statements from the years 2011 to 2015 served as the secondary data source.

The analysis incorporated both inferential and descriptive statistical techniques. The results revealed that mobile banking positively influences the financial performance of commercial banks in Kenya. The researchers suggested that policymakers should encourage the growth of mobile banking services and lessen dependency on traditional branch-based systems to enhance profitability.

Harelimana (2018) conducted research on how mobile banking affected Unguka Microfinance Bank Limited's financial performance in Rwanda from 2012 to 2016. The objective was to evaluate how Rwandan microfinance institutions' financial performance was affected by the volume of transactions and goods offered by mobile banking services. Primary data were gathered for the study using both qualitative and quantitative methods, including questionnaires and interviews. Fifty Unguka Microfinance staff were the target population. Return on equity (ROE) and return on asset (ROA) were used to gauge financial success. According to the research, there is a direct link between Unguka Microfinance Institution's financial success and mobile banking. According to the study, the firm should reduce transaction costs in order to increase the revenues

The first study by (Omondi, 2018) focused on MFI's and SME's financial performance in Kisumu. The study's sample population, however, focused explicitly on youths across the seven sub-counties in the county who owned enterprises. The second scholar (Ngumo, 2020) published similar research on the determinants of the financial performance of MFI banks in Kenya. Both studies achieved different conclusions concerning the factors under consideration for each particular study. Omondi's research found that factors such as access to credit, savings mobilization, financial skills training and role modeling had a significant impact on the financial performance of SMEs. In contrast, Ngumo's study established a direct link between operational efficiency, capital adequacy, firm size and the financial performance of microfinance banks in Kenya.

The studies mentioned above show that a vast range of factors, which may not fit in a single study, may influence the performance of MFIs. None of the scholars considered the effect of fintech adoption, credit information-sharing nor the impact of banking regulations. In addition, the sample populations used for both studies may not be appropriate if one needs to make conclusions about Kisumu County in specific. The first study is limited to youths, while the second one covers the entire country.

In order to major in the above research achievements and cover up for some of their limitations, this study aims to narrow down to two significant factors: fintech credits and credit information sharing. This study also targets a sample population of MFIs across Kisumu County.

### **Credit Information Sharing**

Turner and Varghese (2007) carried out a study in Brazil that examined how credit bureaus can reduce uncertainties in lending. Their findings showed that when lenders lack reliable borrower information, they often misjudge risk therefore mistaking low-risk clients for high-risk ones and vice versa. This mismatch can lead to unfair interest rates, where cautious borrowers are overcharged and riskier clients benefit from unintended advantages. As a result, more high-risk borrowers are attracted to the credit market, which pushes up average interest rates and contributes to rising default levels. The lenders, in turn, could tighten up access to credit even for those with legitimate needs. with similar risk levels. In the end, the research found that credit

bureaus contribute to correcting this flies in the ointment by introducing better risk evaluation and reducing the default rate. While their study was concentrated in Brazil, our study turns the focus on Kisumu City, Kenya, to see if loan allocation behaviours carried across to being seen in what they termed credit-sharing arrangements.

Some specific studies have been done on credit information sharing in the Kenyan context; for example, Mugwe and Oliweney (2015) have examined the way in which the credit information sharing has influenced the commercial banks. Their study focused on the changes in financial performance indicators like return on equity, return on assets and net interest margins, pre and post the development of licensed Credit Reference Bureaus (CRBs). Based on 43 banks during 2005-2014, the study had non-performing loans, total assets, and interest income as dependent variables, and it also utilized a correlational research design. Their results revealed a significant recovery of profitability after the implementation of CRBs in 2010. This study also found that non performing loans reduced to below 5% whereas net interest margins remain robust at over 6%. to this, regression results indicate that approximately 68% of bank variation Moreover, that system wide bank liquidity risk exposure is due to sen- sitivity to bank liquidity risk exposure was explained.addicted to this risk factor. profitability might be related to the sharing of credit information.

Kipyego and Wandera (2013) also studied the effects of credit information sharing concentrating on Kenya. Commercial Bank (KCB). They also looked at how loan performance had evolved before and after CRBs were established, targets of bad loans identified and levels of risk exposure established across the varies nurses.’’. sectors. The research was descriptive case study in design and used stratified random sampling utilizing both primary and secondary sources of data comprising financial reports of the KCB parties. between 2007 and 2012. Their findings indicated high level of association between credit information sharing and a decline in non-performing loans. The sharing of borrower data, the researchers emphasized, enhanced transparency, better credit decisions, lower risk, resiliency, and stimulates responsible behaviour and reducing the total cost of loans.

Then, MFIs have become more interested in credit information sharing as a. tool to assess borrowers and to reduce the risk in lending. By allowing financial In contrast, conditional on interbank institutions sharing information on borrowers’ credit histories, this mechanism is conducive to more productive. reliable, comprehensive evaluations of a client’s credit health. Song (2017) studied microcredit cooperatives and concluded that information-sharing policies resulted in lower loan defaults and more robust loan portfolios. Alongside this development, PPC lending platforms empowered by fintech were developed as a novel kind of collaborative lending landing platform. alternatives to traditional credit systems.

Lenders and borrowers are also linked directly by these platforms. with the addition of an enhanced trading platform, bypassing current financial intermediaries and resulting in a more transparent and efficient borrowing process. And yet, despite this progress, the particular impact of credit sharing and fintech-on-banks’’ likelihood of extending loans and their risk assessment abilities remains an open question, lending models on the financial performance of MFIs in Kisumu has not been done in depth explored by identifying an important avenue of future research.

## Banking Regulations

The relationship between microfinance institutions and Fintech is greatly influenced by the regulatory environment. Good regulations should both encourage technological innovation and maintain consumer protection, but also financial stability. Rahman (2022) pointed out that in favour of responsible development of the FinTech, regulatory environment is crucial. Simultaneously we must appropriately manage risks.

Over time, the regulatory framework for microfinance institutions has adapted to reflect the increasing relevance of the sector and integration of Fintech solutions. Governments and regulatory authorities have been working on how to do that for several years. In Kenya, the 2006 microfinance act provides for licensing, regulation and supervision of microfinance institutions by defined bodies. The CBK plays a significant role in regulating and supervising the microfinance sector. The CBK’s “Microfinance Act” outlines the legal framework for the establishment, licensing, and operations of microfinance institutions. It also sets out the

prudential requirements, governance standards, and reporting guidelines for MFIs so as to maintain their financial health (and protect borrowers).

It also prescribes how MFI's must be run in order to have deposit-taking functions, location of their business, appropriate levels of capitalization with provisions for increasing or decreasing as necessary over time in all areas; liquidity risk management plans; rules governing governance structure; internal control systems for preventing any unauthorized transactions from taking place on its books while maintaining strict confidentiality about customers who have placed money at an MFI and have not reported themselves to be involved in any businesses at all; external control mechanisms such as audits carried out by external auditors hired with prior MOU's signed due before commencing work so they know what kind of results are expected from them – related timescales for when results will be available after each audit; reporting financial statements so that people understand what is happening within a company (or any other type of entity).

In the latest banking regulations that were released in Kenya, emphasis was placed upon responsible lending practices and effective risk management. As a result, MFIs must adhere strictly to the guidelines on loan classification and provisioning in order ensure a high standard of quality in their loan portfolios while safeguarding against potential credit risks. Njeri (2013) conducted research into the impact of liquidity on the financial performance of deposit-taking microfinance institutions in Kenya. The study found that for these institutions, liquidity greatly influences financial performance. The findings indicated that there was a positive correlation between liquidity and microfinance institution performance.

The study also proposed strategies to encourage microfinance institutions to improve their financial performance, with an emphasis on greater industry efficiency. In addition, it found that there was a positive relationship between asset growth at microfinance institutions and their financial performance. The study posited that obtaining additional loans from banks was a strategy likely to improve financial performance and promote growth. Therefore, the study highlighted how significant the impact of asset growth on financial performance within this sector is. Furthermore, operational efficiency was found to have a positive and significant impact on profitability within this industry because efficient firms could carry out many transactions in a short amount of time.

This high degree of efficiency positively influenced customer satisfaction and customer faith in the company. Thus, over time the increase in transaction volumes was the major driver behind financial growth and overall performance of the institution. As a result, a statistically significant positive correlation was found for operating efficiency and the financial performance of MFIs.

### **Determinants of Performance in Micro Finance Institutions**

The performance of microfinance institutions is evaluated through various financial indicators, this includes size of the firm, liquidity and capital adequacy.

#### **Size of the Firm.**

Schmalensee (2001) defined size in relation to total assets and used profit margin and return on assets as two of the accounting performance metrics. The number of people, sales, assets, and value contributed are among the often-used metrics to determine the size of the company (Pandy, 2005). According to Lee (2008), there is a positive correlation between a company's size and financial success because operating costs might increase while cutting back on certain expenses. Large companies can reduce their operating risks by diversifying the assets they choose (Liargovas, 2008). According to Liargovas and Skandalis (2008), large companies outperform small ones overall because they can take advantage of economies of scale and have the resources to retain and grow their management capacity.

#### **Liquidity**

Financial institutions are evaluated based on their capacity to pay off debt and manage their cash flow without going bankrupt or suffering losses. It indicates that the financial organization has the capacity to finance an expansion in assets so they can pay their debts when they become due (Kumar & Yadav, 2013). Liquidity is

traditionally understood to mean an organization's capacity to pay its debts as they become due. It might also imply that a financial institution can look to the market for funding in the event that they are required to pay back debt. Thus, the capacity to comprehend the financing's cost-benefit analysis is linked to liquidity management.

According to Kumar and Yadav (2013), organizations must strategically invest their assets to generate sufficient returns, enabling them to repay borrowed funds while also earning a profit.

### **Capital Adequacy**

Capital adequacy simply refers to whether a microfinance institution (MFI) has enough financial strength to absorb losses without collapsing. It's a key measure of how prepared an institution is to handle different types of risks like loan defaults, operational setbacks or market shocks (Karlyn, 1984). A commonly used tool for assessing this is the Capital Adequacy Ratio (CAR) which compares an institution's capital to its risk-weighted assets. This ratio acts as a financial safety net, protecting depositors, investors and the institution itself from potential insolvency.

For MFIs, having enough capital isn't just a legal requirement—it's also what gives clients and stakeholders confidence. So even in want of money, an institutional completes all its obligations and ensures to be those overseeing clients can continue saving funds will come. Especially in times of financial trouble when people panic out of fear or fear turns to greed and there are sudden withdrawals, that kind (style) of stability becomes especially critical.

This introduces a possible avenue for indirect financial support because if an institution is allowed to collapse its capital is generally used once and this does not matter, Rehema (2013). Nevertheless, in the process timely intervention can save otherwise irreversible losses such as those mentioned in the chapter. Therefore, institutions with negative parent products typically have no option but to dissolve themselves and either close shop altogether or merge with some other bank.

There is also empirical evidence that strength in capital adequacy often opens the door to vigorous financial performance. For instance, Kariuki and Wafula (2017) found that MFIs with relatively healthy capital positions tend to rely less on outside lending and are more profitable. Similarly, Osoro and Muturi (2015) discovered that financial institutions with excellent levels of capital adequacy usually have stronger asset returns, which suggests in turn that a powerful balance sheet is essential for long-term financial health.

## **RESEARCH METHODOLOGY**

### **Introduction**

This section details the research approach employed in the survey and explains the design of this study. It also lists the target population and the sampling techniques used in studies. In addition, it delineates the instruments utilized for data collection, the procedures implemented to ensure reliability and validity of research findings as well as the data analysis methods applied. The chapter contains guidelines on how researchers should conduct research ethically in all spheres.

### **Research Design**

This study utilized a correlational research plan that is suitable for studying the interrelationship between measurement variables. Using this method, the research investigates relationship between financial technology (Fintech), credit information sharing and Banking regulations on banking with the performance of microfinance institutions.

As Saunders et al. (2007) explains that a research design provides the overall plan for how the research questions will be addressed. In this case, using a correlational design made it possible to apply statistical methods to assess the relationships between the selected variables using numerical data. Creswell (2003)



supports this approach noting that correlational designs are part of the broader category of quantitative research methods where data is collected and analyzed to establish patterns or associations among variables.

### **Study Area**

The study area was micro-finance institutions in Kisumu City which contribute immensely in various sectors in the country to bring change and boost the economy.

### **Target Population**

The study target population comprised of all employees with knowledge of the institution's financial performance and regulatory compliance that is; Credit Managers and the branch managers, operation managers and Credit officers within microfinance institutions in Kisumu City. According to Oso and Onen (2009), the term *population* refers to the entire group of individuals or elements that belong to a clearly defined category and are of interest in a specific study. Our research is targeting a total population of 60 which consist of Credit Managers and the branch managers, operation managers and Credit officers within microfinance institutions in Kisumu (CBK, 2022).

### **Sample Size and Sampling Procedures**

The census method of data collection was used in collecting information from credit managers, branch managers, operation managers and credit officers within microfinance institutions to obtain a complete and comprehensive dataset for analysis. An association between the variables was also assessed after collecting quantitative data from all 60 key employees with knowledge of the institution's financial performance.

### **Research Instruments**

The collect primary data for the study, self administered questionnaires were used. This tool was selected because it is both efficient and cost-effective, especially when working with a large sample. Moreover, it allows for the standardized data collection that makes it easier to analyze and compare responses easily (Creswell, 2003).

The questionnaire was structured to generate mainly quantitative data, but it also provided room for deeper insights. It featured a combination of structured and unstructured questions. The structured items offered fixed response options, which simplified the coding process and facilitated statistical analysis. Meanwhile, the unstructured questions gave respondents the freedom to elaborate on their views by providing more detailed feedback and richer perspectives on the core variables.

### **Validity of Research Instrument**

How well a research instrument captures or measures the particular concept it is meant to investigate has been called "validity." According to Bryman (2012) it describes extent that the outcomes of the data accurately view what is being studied. To improve content validity, the researchers consult with experts including professors and practitioners with finance as well as micro-finance background; this will provide tangible feedback on their data collection methodology.

In addition, proper construct validity requires that we carefully examine and revise the questionnaire so as not to include any ambiguous or misleading questions. In its process of this kind, all items on the final draft were tested for understandability among respondents; in order words, they needed to make sense after being checked by testers whose language was more common than that used by researchers.

### **Reliability of Research Instrument**

Reliability refers to whether a research instrument shows the same result under constant conditions when repeated as well. Administered improperly, it can reduce the validity of your data. In relation to how accurately the data reflects what you are measuring

According to Mugenda and Mugenda (2003), reliability refers to how well the data collected actually reflects what was being studied by it. In this research, the method of test-retest was used to measure the reliability of the questionnaire adopted. It did so by posing the same questions in a set set on two occasions to a group of participants, and comparing for consistency between their responses each time.

To further verify the reliability of the instrument, Cronbach's Alpha coefficient was calculated. As suggested by Sekaran (2001), a Cronbach's Alpha value of 0.7 or above is generally considered acceptable, indicating good internal consistency among the items.

The reliability analysis was conducted using SPSS version 22, which helped determine how well the items within each section of the questionnaire were related to one another.

Table 1: Reliability Results

	Nos. of Item	Coefficient	Verdict
Fintech credit and financial performance	8	0.958	Reliable
Credit sharing and financial performance	8	0.927	Reliable
Banking Regulation and financial performance	8	0.891	Reliable
Financial performance	6	0.889	Reliable
Overall	30	0.916	Reliable

### Data Collection Procedure

The researcher presented the introduction letter showing the intent to carry out the research to the various Micro-Finance institution in Kisumu City so as to seek permission to collect data, once permission was granted the researcher issued the questionnaires to the respondents. The respondents were then given time to fill the questionnaires and then submit to the researcher.

### Data Analysis and Presentation

This study explored both the strength and nature of relationships between the study variables, including potential cause-effect dynamics. Data analysis involved the use of both inferential and descriptive statistical methods. After collection, responses were first coded and reviewed to detect and correct any inconsistencies or missing information. The analysis was conducted using SPSS version 22.

A Likert scale was utilized to quantify responses for descriptive statistics. This approach helped reduces respondent bias and allowed for inferential analysis to be performed. The Likert scale values were arranged to reflects the extent to which a given attribute was present or absent, as guided by Mugenda and Mugenda (2003).

### Descriptive Statistics

Data was collected and descriptive statistics were employed to assess its normality The method summarized and presented key features of a data set, offering insights into patterns, trends and relationships relevant for study. This is the basic purpose for descriptive statistics.

The primary purpose of descriptive statistics was to provide basic summaries of data without inference-to lay out information in such a way that it could be tested. In the study, descriptive analysis was carried out with respect to both demographic characteristics and main research variables, namely Fintech Credit, Credit Information Sharing, and Banking Regulations. This involved calculating frequencies, means, and percentages to present participants' responses clearly as required by the researcher.

## Inferential Statistics

To make a clear and precise interpretation of data, inferential statistics were used. And depending on the sample results, conclusions about the entire population could then will be inferred. In order to achieve the objectives of the study, this research used the Pearson's Correlation Coefficient technique for examining the strengths and directions of interrelationships between variables under analysis.

With the Pearson's method, the author could see whether connections between variables were positive or negative, and if they were weak, moderate or strong. As noted in the formula proposed by Karl Pearson (Bagchi & Khamrui, 2012), the coefficient was calculated dividing the covariance of two variables by their standard deviations.

$r$  = Karl Pearson's correlation formula;

$$r = \frac{n \sum xy - (\sum x)(\sum y)}{\sqrt{[n \sum x^2 - (\sum x)^2][n \sum y^2 - (\sum y)^2]}}$$

To assess the statistical significance of these relationships, hypothesis testing was performed. If the observed coefficients were meaningful and not the result of random chance a significance level of 5% ( $\alpha=0.05$ ) was used to determine both these Resulted.

The study also used multiple regression analysis in order to assess how variables Fintech Credit, Credit Information Product and Banking Regulations were affecting the dependent variable --financial performance of microfinance institutions. This allowed us to estimate how much deviation from average performance could be explained by our predictors. As Lucey (1996) pointed out, multiple regression is appropriate when the situation involves more than one independent variable and a continuous explanatory variable. To check that assumptions (particularly those for regression models) do not weaken our results, the present study subjected the regression model to a series of tests for the robustness of its model. We conducted diagnostic tests to confirm that these assumptions held, which is essential for the validity of results from regression analysis. Then, using the regression model as our instrument, direction and strength of relationships between variables were assessed, as represented in the regression equation (Equation 3.2).

## Model

This equation (3.2) examines the main effects of financial technology credit, credit sharing, and banking regulation on performance.

$$Y_i = \beta_0 + \beta_1 F + \beta_2 S + \beta_3 R + \epsilon_i \dots\dots\dots (3.2)$$

Where:  $Y_i$ : Performance of Micro-Finance institutions

$\beta_0$ : is the y intercept

$\beta_1$  and  $\beta_2$  are the regression (beta) coefficients

F: Variable of Fintech Credit

S: Variable of Credit sharing

R: Variable of Banking regulations

$\epsilon_i$ : Error term - the residual or unexplained variation. (A lower value of the standard error implies that the regression model provides a close fit to the actual data.)

## Ethical Consideration

The research observed the principle of this study with a high regard for ethical standards. A specific purpose was this research; participants in the whole study were clearly informed as to its objectives so that none should feel burdened by self-consciousness about their involvement. Participants were also assured that all aspects of the study would be held in strict confidence. Participation was entirely voluntary and no reward or incentive offered themselves in reply to questions.

As Soomer and Sommer (2004) emphasize, ethics in social research means particularly upholding such basic norms as confidentiality, anonymity and transparency. These principles, then, were scrupulously observed throughout the study in order to protect the rights and dignity of all interviewees. Nonetheless it did not compromise the actual research process.

## RESULTS AND FINDINGS

### Introduction

By investigating the performance of microfinance institutions in Kisumu city as influenced by FDCs, Sharing Credit and bank Regulation, this chapter presents the outcomes and conclusions of that study. This segment is structured based on the research objectives. The descriptive and inferential analysis on the effect of Fintech credits on the financial performance of microfinance institutions is covered in the first section of this chapter. The second section gives descriptive and inferential analyses of the impact of credit sharing on financial performance at microfinance institutions. The third section provides descriptive and inferential analyses of the correlation between bank regulatory compliance on their financial result for MFIs in Kisumu City.

### Response Rate and Demographic Information

In this study section, the response rate and demographic information findings are reported. It presents the analyzed data results for the gender outcome, the highest level of education the respondents had attained, their age group, their position in the MFI and their work experience (years worked with the MFI).

### Response Rate

Figure 1 presents the response rate of the study which was 83%, indicating that from the 60 study questionnaires that were distributed to the identified respondents, 50 were duly filled and used in the study. Hazzi and Maldaon (2015) state that any study that obtains a response rate that is over and above 50% is alleged to be valid and the outcome may be relied upon. The figure shows that the study had surpassed this threshold.

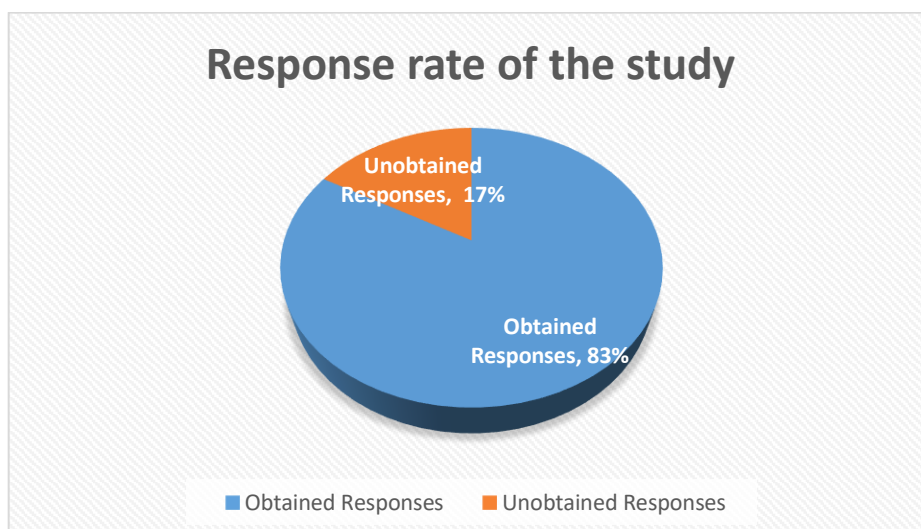


Figure 1: Response rate of the study



## Gender Outcome

Participants were asked to indicate their gender category. According to the findings, as shown in figure 2, 36% of respondents were female and 64% were male. This indicates that the study had a fair representation of the gender, and that the management of Kenyan MFI's had a good gender balance.

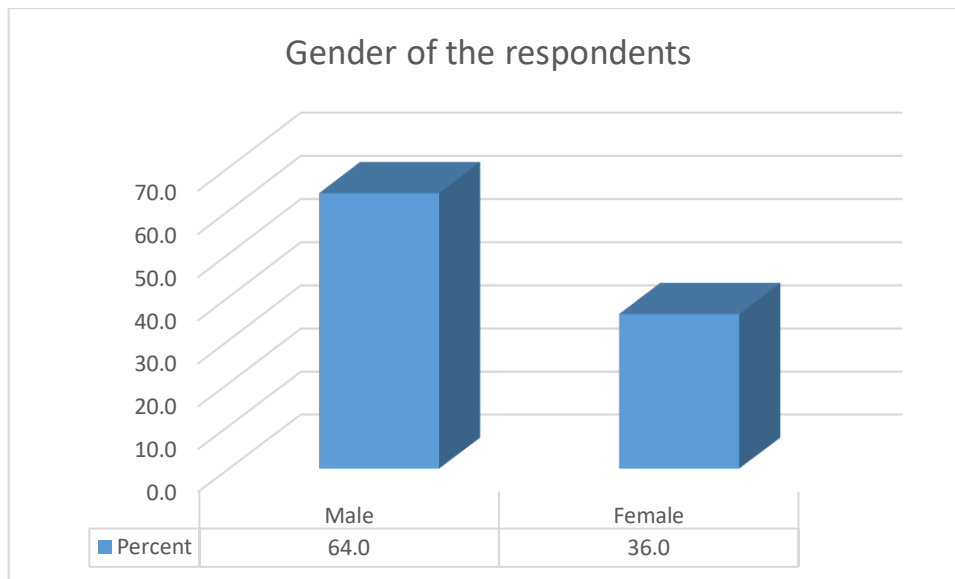


Figure 2: Gender of the Respondents

## Highest Level of Education

The responses for the participant's highest level of education are shown in figure 3. It shows that 12% of the managers had attained a post graduate degree, 26% had a bachelor's degree, and 54% had diplomas and only 8% had certificate. This shows that the management of Kenyan MFI's had a high educational background, allowing them to understand the study questions and submit valid responses.

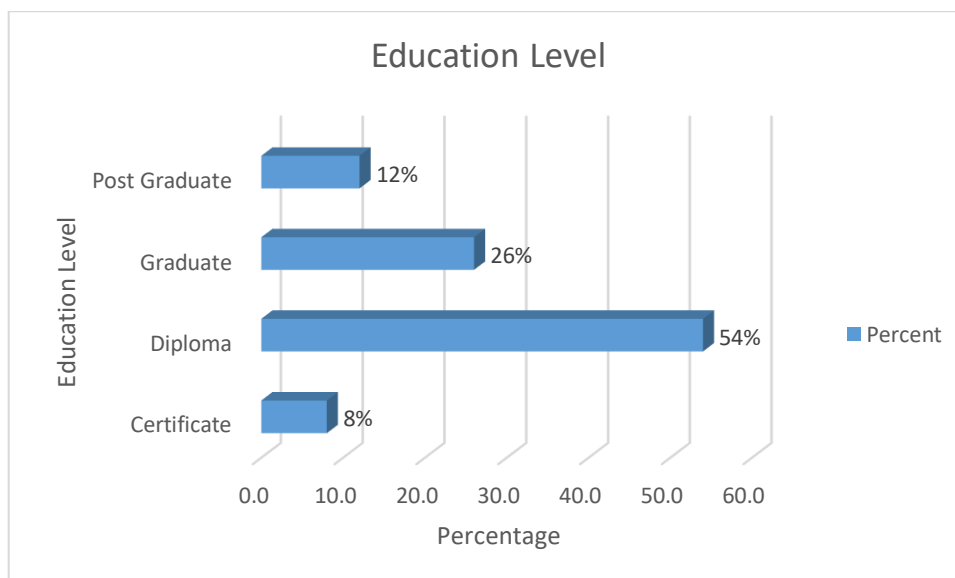


Figure 3: Education level

## Fintech Credits

Figure 4 gives the percentage summary and bar graphs of respondents' opinions on various aspects of integrating Fintech credit services. On the positive Impact on Serving More Borrowers, a significant portion 44% of the respondents strongly agree that integrating Fintech credit services has positively impacted their

institution's ability to serve more borrowers. Combined with the agree responses of 28%, this suggests that the majority of respondent's view Fintech integration favorably in terms of expanding the borrower's base.

Based on the contribution to Loan Portfolio, a substantial proportion of 38% strongly agree and 36% agree that Fintech credit has contributed to an increase in their institution's loan portfolio. This indicates that many respondents perceive Fintech credit as beneficial for growing their loan portfolios. Similarly, a noteworthy finding is that a significant percentage of 82% of respondents collectively agree that Fintech credit has improved their institution's overall financial performance, while 78% agree it has enhanced the efficiency of their lending process. These findings highlight the perceived positive impacts of Fintech integration on both financial performance and operational efficiency.

On the client outreach and accessibility, while fewer respondents strongly agree that Fintech credit has increased client outreach and accessibility by 30%, a larger proportion of 40% agree with this statement. This suggests that while there is consensus on the positive impact, it might not be as strong as in other areas. The responses regarding the positive impact of Fintech credit on the repayment rate of loans are less unanimous, only 20% strongly agree, and 33% agree, indicating that a considerable portion of respondents are neutral or skeptical about this aspect.

Considering the adoption of Fintech by MFI's, majority of respondents (38% strongly agree and 38% agree) believe that their MFI has fully adopted Fintech solutions in its operation, suggesting a widespread acceptance and implementation of Fintech within the industry. Finally, there is a considerable consensus (40% strongly agree and 36% agree) among respondents that Fintech adoption has resulted in improvements in customer satisfaction and engagement. This indicates that Fintech integration is seen as positively impacting the overall customer experience.

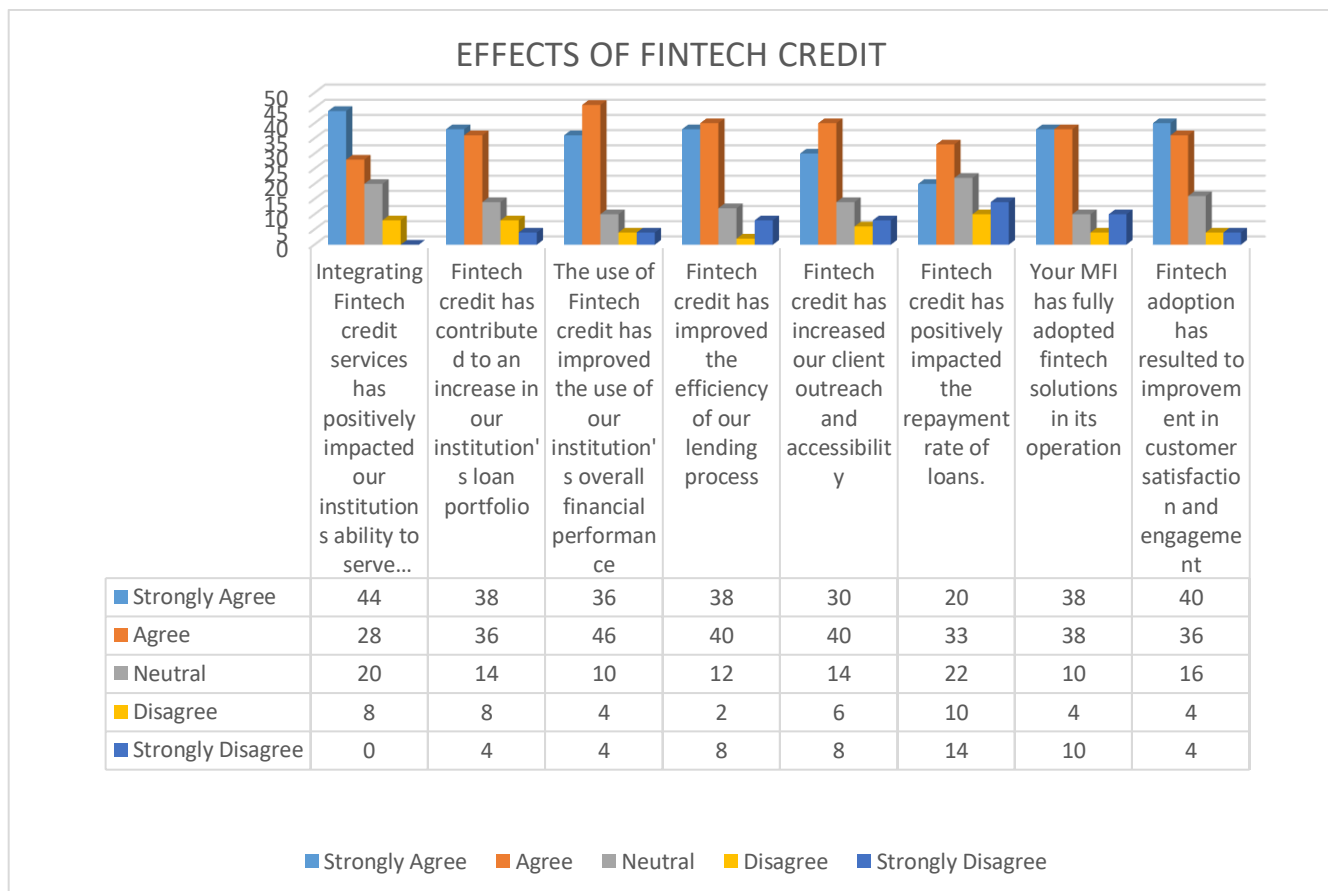


Figure 4: Summary Statistics on the effects of Fintech Credit on Financial Performance

The results suggest a generally positive perception of Fintech integration among respondents, particularly regarding its impact on serving more borrowers, contributing to loan portfolios, improving financial

performance and efficiency, and enhancing customer satisfaction and engagement. However, there are areas, such as the repayment rate of loans, where opinions are more divided or uncertain.

Table 2 presents descriptive statistics summarizing the perceptions of respondents regarding the impact of Fintech credit services on various aspects of their microfinance institution (MFI). The statistics include the mean, standard deviation, variance, and skewness of responses to several statements about Fintech's influence on the institution's ability to serve borrowers, increase the loan portfolio, improve financial performance, enhance the lending process, and impact customer satisfaction. The data, gathered from 50 respondents (except for one item with 49 respondents), provide insights into the overall agreement levels and variability in opinions concerning the integration and adoption of Fintech solutions within the MFI.

Table 2: Descriptive statistics

Descriptive Statistics						
	N	Mean	Std. Deviation	Variance	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Integrating Fintech credit services has positively impacted our institutions ability to serve more borrowers	50	3.92	1.397	1.953	-1.722	.337
Fintech credit has contributed to an increase in our institution's loan portfolio	50	3.80	1.471	2.163	-1.563	.337
The use of Fintech credit has improved the use of our institution's overaLL financial performance	50	3.94	1.331	1.772	-2.049	.337
Fintech credit has improved the efficiency of our lending process	50	3.90	1.374	1.888	-1.829	.337
Fintech credit has increased our client outreach and accessibility	50	3.66	1.437	2.066	-1.388	.337
Fintech credit has positively impacted the repayment rate of loans.	50	3.27	1.483	2.199	-.839	.340
Your MFI has fully adopted fintech solutions in its operation	50	3.82	1.453	2.110	-1.588	.337
Fintech adoption has resulted to improvement in customer satisfaction and engagement	50	3.92	1.368	1.871	-1.844	.337
Valid N (listwise)	50					

Across the statements, most means are close to 4, indicating overall agreement with the positive impacts of Fintech. The lower mean (3.27) for the impact on loan repayment rates suggests this area is viewed less favorably or is more uncertain among respondents.

The standard deviations, ranging from 1.331 to 1.483, indicate moderate variability in responses. This suggests that while many respondents agree, there is a notable range of opinions.

The negative skewness across all items indicates that the responses are generally concentrated towards agreement. The higher skewness values (e.g., -2.049 for overall financial performance) show a strong consensus towards positive impacts, while lower skewness values (e.g., -0.839 for loan repayment rates) suggest more mixed feelings or uncertainty.

Respondents generally perceive Fintech adoption as having a positive impact on various aspects of their institution's operations, particularly in serving more borrowers, increasing the loan portfolio, improving overall financial performance, and enhancing customer satisfaction. However, there is less certainty or positivity regarding the impact on loan repayment rates. The negative skewness in most items indicates a strong tendency towards agreement, although the moderate standard deviations highlight the presence of diverse opinions.

### Credit sharing

Table 3 provides descriptive statistics on respondents' perceptions of the impact of credit-sharing practices within their microfinance institution (MFI). The data include responses from 50 participants, summarized using key statistical measures such as mean, standard deviation, variance, and skewness.

Table 3: Descriptive statistics on effects of credit sharing

Descriptive Statistics						
	N	Mean	Std. Deviation	Variance	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Credit sharing has improved our Institutions ability to assess credit risk	50	3.96	1.160	1.345	-1.064	.337
Credit sharing has increased our institution's efficiency in making lending decisions	50	4.16	1.037	1.076	-1.476	.337
Credit sharing has reduced the rate of non-performing loans in our institution.	50	4.00	1.010	1.020	-1.237	.337
There is a significant change in your MFI's financial performance since engaging in credit sharing.	50	4.16	.710	.504	-.241	.337
Credit sharing has improved the accuracy of credit risk assessment and decision making.	50	3.96	.989	.978	-.973	.337



Credit sharing has positively impacted the repayment rates of loans	50	3.56	.929	.864	-.262	.337
Credit sharing adoption has resulted to improvement in customer satisfaction and engagement	50	4.10	.931	.867	-1.469	.337
Credit sharing has enhanced the efficiency of our loan approval process	50	4.04	1.106	1.223	-1.308	.337
Valid N (listwise)	50					

Most items have mean values around 4, indicating a strong agreement among respondents that credit sharing has positively impacted various aspects of their MFI's operations. The lowest mean (3.56) suggests more neutral perceptions regarding the impact on loan repayment rates.

All items have negative skewness, meaning responses generally lean towards agreement, with the strongest skews observed in efficiency in lending decisions and customer satisfaction.

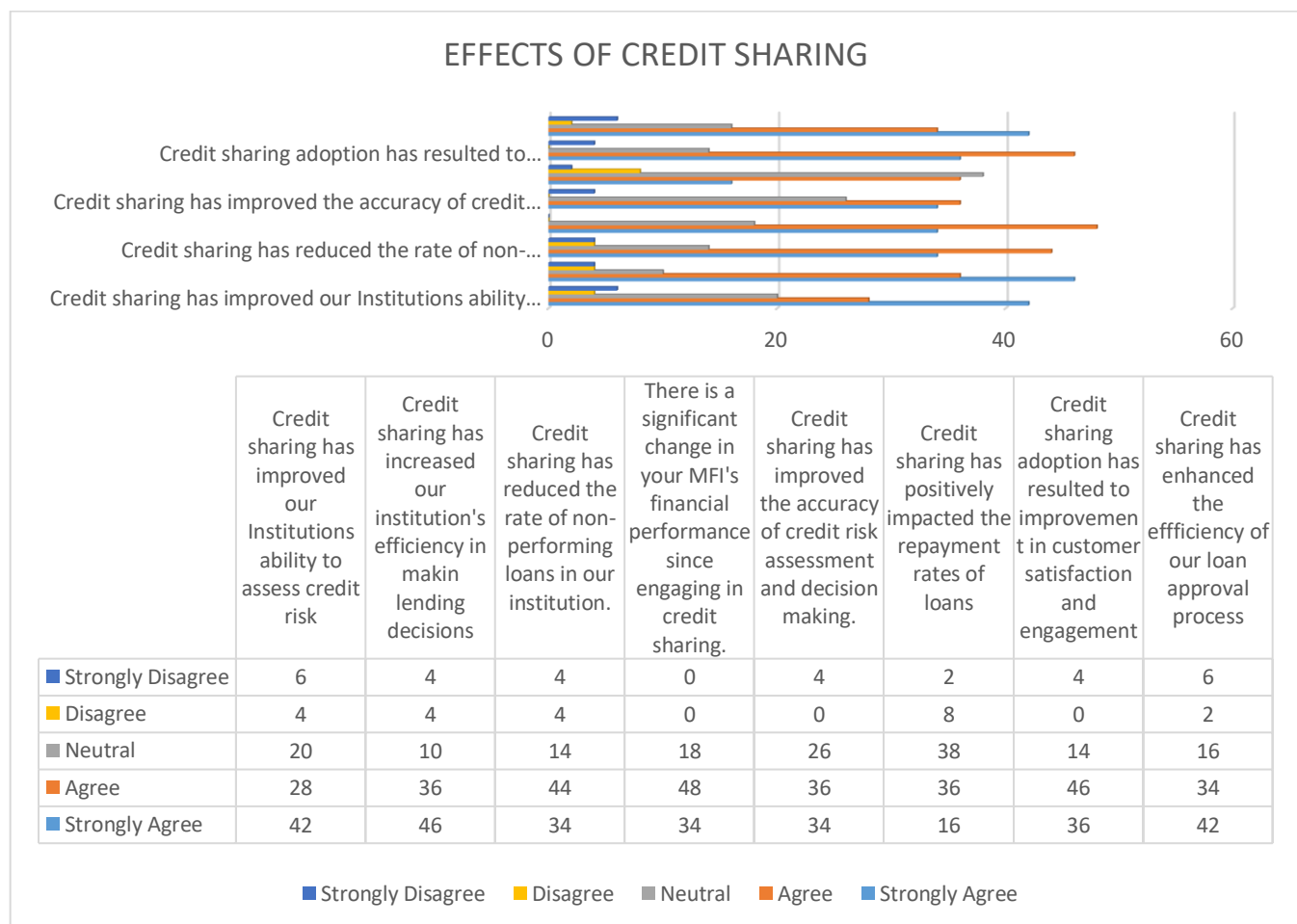


Figure 5: Effects of Credit sharing on Financial Performance

Analyzing the percentage summary of respondents' opinions on credit sharing from figure 5, based on the improved ability to assess Credit Risks, a significant portion of 42% strongly agree that credit sharing has improved their institution's ability to assess credit risk. Combined with the agree responses of 28%, this

indicates a widespread belief among respondents in the positive impact of credit sharing on credit risk assessment.

Similarly, a substantial majority of 46% strongly agree and 36% agree that credit sharing has increased their institution's efficiency in making lending decisions. This suggests that credit sharing is perceived as beneficial for streamlining lending processes. A considerable proportion of 34% strongly agree and 44% agree that credit sharing has reduced the rate of non-performing loans in their institution. This indicates that many respondents believe credit sharing has a positive impact on loan performance.

Based on the accuracy of Credit Risk Assessment, while there is agreement of 34% that credit sharing has improved the accuracy of credit risk assessment and decision making, there is a substantial proportion of 26% who are neutral on this aspect. This suggests that there may be some uncertainty or variation in perception regarding the impact of credit sharing on the accuracy of risk assessment. On the other hand, the responses regarding the positive impact of credit sharing on the repayment rates of loans are mixed since 36% agree and 16% strongly agree, 8% disagree and 2% strongly disagree. This indicates that opinions are somewhat divided on whether credit sharing has a significant effect on loan repayment rates.

A majority (46%) strongly agree and 36% agree that credit sharing adoption has resulted in improvements in customer satisfaction and engagement. This suggests that credit sharing is perceived as positively impacting the overall customer experience. On the efficiency of Loan Approval Process, A significant portion of 42% strongly agree and 34% agree that credit sharing has enhanced the efficiency of their loan approval process. This indicates that credit sharing is viewed favorably in terms of improving operational efficiency.

It is clear that a noteworthy finding is that a significant percentage (48%) of respondents agree there is a significant change in their MFI's financial performance since engaging in credit sharing. This suggests that credit sharing may have a notable effect on the overall financial performance of MFIs.

## **Banking Regulations**

Examining the percentage summary of respondents' opinions on banking regulations provided in figure 6, a notable percentage of respondents (28% strongly agree and 38% agree) believe that recent banking regulations have improved their MFI's risk management practices, a considerable portion (26%) are neutral. This suggests a mixed perception regarding the impact of regulations on risk management effectiveness.

A significant proportion of respondents (32% strongly agree and 40% agree) believe that regulatory compliance has increased operational costs for their MFI. This indicates a widespread perception that compliance with banking regulations imposes financial burdens on institutions. On the improved stability, while a notable percentage of respondents (24% strongly agree and 36% agree) believe that banking regulations have improved the stability of their MFI, a significant portion (24%) are neutral. This suggests some uncertainty or variability in perceptions regarding the impact of regulations on institutional stability.

Based on the level of compliance with Regulations, majority of respondents (50%) believe that their MFI is fully compliant with Banking Regulations of Kenya. However, a notable percentage (24%) disagree, indicating potential compliance challenges within the industry. A significant proportion of respondents (36% strongly agree and 32% agree) also believes that banking regulations have increased compliance costs for their MFI. This underscores the perceived financial impact of regulatory compliance requirements.

Assessing the impact of Banking Regulations on confidence of investors and clients, a notable percentage of respondents (38% strongly agree and 32% agree) believe that banking regulations have positively impacted the confidence of investors and clients, a considerable portion (18%) are neutral. This suggests some variability in perceptions regarding the influence of regulations on stakeholder confidence. A significant number of respondents (52%) indicate that their MFI undergoes regulatory audits or assessments. This highlights the prevalence of regulatory oversight within the industry.

## EFFECTS OF BANKING REGULATIONS



Finally, on the influence on Pricing Strategies, responses regarding the influence of banking regulations on MFIs' ability to set interest rates or pricing strategies are varied. A significant percentage (48%) agree that regulations influence pricing strategies while a notable portion (28%) disagree.

Table 4 below presents descriptive statistics summarizing the perceptions of respondents regarding the impact of recent banking regulations on various aspects of their microfinance institution (MFI). The data, collected from 50 respondents, includes key measures such as the mean, standard deviation, variance, and skewness, offering insights into how these regulations are perceived in terms of risk management, operational costs, stability, compliance, investor confidence, and regulatory audits.

Table 4: Descriptive Statistics of Banking Regulations

Descriptive Statistics						
	N	Mean	Std. Deviation	Variance	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
Recent banking regulations have improved our risk management practices	50	3.82	1.024	1.049	-.811	.337
Regulatory compliance has increased operational costs	50	3.88	1.081	1.169	-.964	.337

for our MFI						
Banking regulations has improved the stability of our MFI	50	3.64	1.102	1.215	-.562	.337
Our MFI is fully compliant with Banking Regulations of Kenya	50	4.06	1.185	1.404	-1.116	.337
Banking regulations has increased our compliance costs	50	3.84	1.201	1.443	-1.004	.337
Banking Regulations has positively impacted the confidence of investors and clients	50	3.88	1.206	1.455	-1.069	.337
Our MFI undergo regulatory audits or assessment	50	4.32	.935	.875	-1.943	.337
Banking regulations influenced your MFI's ability to set interest rates or pricing strategies for financial products	50	3.84	1.149	1.321	-1.355	.337
Valid N (listwise)	50					

The mean values range from 3.64 to 4.32, indicating overall agreement with the statements. The highest mean (4.32) suggests strong consensus that MFIs undergo regulatory audits, while the lower mean (3.64) shows a more neutral stance on the improvement of MFI stability.

The standard deviations range from 0.935 to 1.206, reflecting varying degrees of consensus, with the most consensus on the occurrence of regulatory audits and the least on the impact of regulations on operational costs and investor confidence.

All items show negative skewness, indicating that the distribution of responses generally leans towards agreement. The most skewed item (regulatory audits) suggests a strong consensus in favor of agreement.

Generally, table 4 indicates that respondents perceive recent banking regulations as generally beneficial, particularly in improving compliance, investor confidence, and regulatory oversight, though they also acknowledge increased operational and compliance costs.

### **Correlation Analysis between Fintech Credit, Credit sharing and Banking Regulations on Financial Performance**

Table 5 presents the results of the correlation that provide insights into the relationships between regulatory compliance, credit sharing, Fintech credit, and the overall financial performance of MFIs (Microfinance Institutions)

Table 5: Correlation Coefficients

Correlations					
		Regulatory compliance	Credit sharing	Fintech credit	Financial Performance
Regulatory compliance	Pearson Correlation	1	.571**	.312*	0.528
	Sig. (2-tailed)		.000	.027	.046
	N	50	50	50	50
Credit sharing	Pearson Correlation	.571**	1	.488**	0.405
	Sig. (2-tailed)	.000		.000	.008
	N	50	50	50	50
Fintech credit	Pearson Correlation	.312*	.488**	1	.703**
	Sig. (2-tailed)	.027	.000		.004
	N	50	50	50	50
**. Correlation is significant at the 0.01 level (2-tailed).					
*. Correlation is significant at the 0.05 level (2-tailed).					

There is a moderate positive correlation (Pearson's  $r = 0.528$ ,  $p < 0.01$ ) between regulatory compliance and the overall financial performance of MFIs. This suggests that MFIs that exhibit moderate higher levels of regulatory compliance tend to have better financial performance.

This correlation underscores the importance of adhering to regulatory requirements for achieving financial success in the microfinance sector.

Based on the credit sharing and financial performance, there is a weak positive correlation (Pearson's  $r = 0.405$ ,  $p < 0.01$ ) between the impact of credit sharing on the financial performance of MFIs. This indicates that MFIs experiencing a slight positive impacts from credit sharing initiatives tend to exhibit better financial performance. Credit sharing practices seem to contribute positively to enhancing the financial performance of MFIs.

Very similar to this, there is a strong positive correlation (Pearson's  $r = 0.703$ ,  $p < 0.01$ ) between the impact of Fintech credit and financial performance in MFIs. The implication is that MFIs who have implemented Fintech credit solutions boast significantly better financial performance. Fintech credit adoption appears to bring tangible financial benefits for MFIs. These results highlight the interdependence- even interlinkage -among such aspects as regulatory compliance, credit sharing, Fintech credit adoption and financial performance in microfinance institutions.

While regulatory compliance serves as a basic system, both credit sharing and Fintech credit adoption play key roles in propelling MI to achieve better financial results. The positive correlations suggest that regulatory compliancy, credit sharing, and FinTech credit adoption have important roles in determining the overall financial health of MFIs. Institutions which are able to meet regulatory requirements and at the same time harness innovative practices such as regulatory compliancy along with financial integration will perform better when it comes to finance. MFIs should make regulatory compliance as a basic aspect of their operations. That way, they can ensure that they operate legally and avoid any potential regulatory risks. Investing in credit



sharing activities means that MFIs get substantial returns from their financial performance. This way, MFIs can expand their reach, enhance operating efficiency, and do a better job for clients.

Government departments and industry organizations need to understand that an enabling regulatory environment promoting innovation is essential for consumer protection and stable finances in the field of microfinancing. To sum up, it can be seen from the correlation results that regulatory compliance, credit sharing, and Fintech credit adoption are key factors in shaping the financial performance of MFIs. These results offer valuable enlightenment for MFIs and policymakers who are concerned with making the microfinance sector a more enduring, tougher adversary on the international stage.

In conclusion, the correlation results underscore the significance of regulatory compliance, credit sharing, and Fintech credit adoption in shaping the financial performance of MFIs. These findings provide valuable insights for MFIs and policymakers seeking to enhance the sustainability and resilience of the microfinance sector.

### Linear Regression Analysis

In this section, we presented the results of a multiple regression for regulatory compliance, credit sharing Fintech credit and overall financial performance of MFIs (Microfinance Institutions). The regression coefficients for this multiple regression model provide coefficients of each independent variable (Impact of Fintech credit, Impact of credit sharing, Regulatory compliance) as well as ANOVA results.

### Regression Coefficients between regulatory compliance, credit sharing, Fintech credit and the overall financial performance of MFIs

Table 6:Regression coefficients

Coefficients <sup>a</sup>						
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.716	.539		1.328	.041
	Fintech credit	.562	.072	.545	7.806	.001
	Credit sharing	.151	.152	.055	.993	.049
	Regulatory compliance	.185	.110	.319	1.681	.042
a. Dependent Variable: Overall financial performance of your MFI						

The regression coefficients provide insights into how each independent variable (Impact of Fintech credit, Impact of credit sharing, Regulatory compliance) influences the dependent variable (Overall financial performance of MFIs)

The constant term in the model represents the expected value of the dependent variable when all of its independent variables are set to zero. In our case, this is 0.716, representing the baseline financial performance of microfinance institutions (MFIs) in the absence of Fintech credit, credit sharing, and regulatory compliance influences.

The coefficient for Fintech credit is 0.562, implying that, with all other factors held constant, a one-unit increase in Fintech credit leads to a 0.562-unit rise in the financial performance of MFIs. This relationship is statistically significant at the 0.001 level ( $p = 0.001$ ), indicating a strong and positive association between Fintech credit and MFI financial performance.

Regarding credit information sharing, the coefficient is 0.151, which is statistically significant at the 0.05 level ( $p = 0.049$ ). This suggests a positive effect of credit sharing on financial performance. However, the smaller coefficient compared to Fintech credit implies that while credit sharing positively influences performance, its contribution is relatively modest.

The coefficient for regulatory compliance influencing the financial performance of MFIs is 0.185. This coefficient is statistically significant at the 0.05 level ( $p = 0.042$ ), indicating that regulatory compliance has a positive effect on financial performance. However, similar to credit sharing, the effect size (0.185) suggests that while regulatory compliance contributes positively, its impact may be smaller compared to Fintech credit.

The t-value for Fintech credit is large (7.806), and the p-value is highly significant ( $p < 0.05$ ), meaning that Fintech credit is a highly significant predictor of overall financial performance.

The t-value is small (0.993) for Credit sharing, but the p-value is just under 0.05, indicating that Credit sharing is a statistically significant, albeit weaker, predictor of overall financial performance. The t-value is moderate (1.681) for Regulatory compliance, and the p-value is significant ( $p < 0.05$ ), meaning that Regulatory compliance is a statistically significant predictor of overall financial performance.

The regression model highlights the significant positive influence of Fintech credit on the financial performance of MFIs. Both credit sharing and regulatory compliance also have positive effects on financial performance, although their impacts are relatively smaller compared to Fintech credit.

Based on the findings, MFIs should prioritize the adoption and integration of Fintech credit solutions to enhance their financial performance.

Credit sharing and regulatory compliance are also important factors contributing to financial performance, although their impacts may be less pronounced compared to Fintech credit.

Finally, the coefficients provide valuable insights into the relative importance of different factors influencing the financial performance of MFIs. Fintech credit emerges as a significant driver of financial performance, while credit sharing and regulatory compliance also play positive roles, though to a lesser extent. (This model suggests that all three factors—Fintech credit, Credit sharing, and Regulatory compliance—are important predictors of financial performance, with Fintech credit having the most substantial effect.)

The results for the multiple regression model is given by;

$$Y = 0.716 + 0.562F + 0.151S + 0.185R$$

Where:  $Y_i$ : Performance of Micro-Finance institutions

$\beta_0$ : is the y intercept

$\beta_1$  and  $\beta_2$  are the regression (beta) coefficients

F: Variable of Fintech Credit

S: Variable of Credit sharing

R: Variable of Banking regulations

### ANOVA between Fintech Credit, Credit sharing, Banking Regulations and Financial Performance

The ANOVA table 2 provides information about the overall fit of the regression model and whether the independent variables collectively significantly predict the dependent variable (Financial performance).

Table 7: ANOVA results

ANOVA <sup>a</sup>						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	4.531	3	1.510	4.468	.008 <sup>b</sup>
	Residual	15.549	46	.338		
	Total	20.080	49			
a. Dependent Variable: Financial performance						
b. Predictors: (Constant), Banking regulations, Fintech credit, credit sharing.						

The F-statistic tests the overall significance of the regression model by comparing the amount of variation accounted for by the model (the regression sum of squares) with the amount of variation that remains unaccounted for (the residual sum of squares).

In the case our findings, the F-value is 4.468, which indicates, a very significant correlation between those two variables. The associated p-value is 0.008 which is less than the conventional level of significance of 0.05, suggesting the model to be significant. This represents that the model appropriately explains the variation of the response.

According to the results of the ANOVA, the regression model with the constant, banking regulations, Fintech credit, and credit sharing, was a significant predictor of the financial performance of microfinance institutions of (MFIs). This would imply that at least one of the independent variables has a significant e circumcision on the financial performance of MFIs.

## SUMMARY, CONCLUSION AND RECOMMENDATIONS

### Introduction

This chapter concludes the study with the presentation of the summary of findings, study conclusions, and recommendations that were derived from the study results and findings.

### Summary

The study's first objective was to determine the effect of Fintech credit on the financial Upper performance of MFIs in Kisumu City. From research performed in the study, results suggest that in general Fintech executives enjoy favorable support from respondents; specifically regarding its impact on putting more money into the hands of borrowers, such contributions to loan portfolios, improving financial performance and efficiency, and enhancing customer satisfaction and engagement. However, there are areas, such as the repayment rate of loans, where opinions are more divided or uncertain.

Other findings from fieldwork Focusing on the impact of credit sharing on financial performance, it is revealed that its effect here is generally mixed among respondents, particularly regarding its impact on credit risk assessment, lending efficiency, reduction of non-performing loans, financial performance, customer satisfaction, and loan approval process efficiency. However, there are areas, such as the accuracy of credit risk assessment and the impact on loan repayment rates, where opinions are more varied.

The findings suggest a mixed perception of the impact of banking regulations on MFIs, depending on how much and in which way we can look within different layers to balance these effects. While there were most certainly perceived benefits such as improved risk management practices and more stakeholder confidence

among small business owners thus shares in their company being held by family members either directly or through an intermediary.

On the other hand, there are also concerns regarding increased operational and compliance costs and their impact on liquidity for MFI's. Within the MFI's, there are multiple compliance challenges and variable perceptions of stability and pricing strategy to be noted. The four correlations presented in Table 15 highlight the interconnectedness between regulatory compliance, credit sharing, Fintech credit adoption, and financial performance in the MFI. While regulatory compliance sets the basic direction for a blueprint, both credit sharing and Fintech credit adoption are important drivers of good consecutive years for MFIs.

The positive correlations implied that regulatory compliance, credit sharing, and Fintech credit adoption are factors that contribute significantly to the overall financial health of MFIs. Institutions that effectively navigate regulatory requirements while leveraging innovative practices such as credit sharing and Fintech integration are likely to achieve superior financial performance.

MFIs should prioritize regulatory compliance as a fundamental aspect of their operations to ensure legal adherence and mitigate regulatory risks. Investing in credit sharing initiatives and adopting Fintech credit solutions can yield substantial benefits for MFIs in terms of enhancing financial performance. These strategies enable MFIs to expand their reach, improve operational efficiency, and better serve their clients.

Policymakers and the microfinance industry needed to understand the need for creating an enabling regulatory environment for innovation in microfinance, while not incorporating innovation that put consumers' welfare and financial stability of the system at risk.

Regression analysis reveals a significantly positive impact of Fintech credit on the financial performance of microfinance institutions (MFIs). Credit sharing and compliance work positively on financial performance but marginal as compared to Fintech credit.

Based on these insights, MFIs will need to seek inclusion and integration of Fintech-based credit tools to streamline their financial performance. Sharing someone else's credit and compliance with regulations are still quite material even if they have become less so as compared with Fintech credit.

The interesting results of ANOVA show that interaction between banking regulation, Fintech credit and credit sharing has a significant impact on the financial performance of MFIs. This underscores the need for a multidimensional assessment comprising regulatory compliance and technological developments like Fintech, in assessing and enhancing the financial capability of MFIs.

In conclusion, the ANOVA analysis confirms the overall significance of the regression model in predicting the financial performance of MFIs based on the included predictors.

## Conclusions

After doing a comprehensive analysis on effects of financial technology (Fintech) credit, credit sharing and bank regulation on the performance of microfinance institutions (MFIs), a final report found several key conclusions.

First of all: Fintech credit strongly affects the financial performance of MFIs. And secondly, though credit sharing and bank regulation are also beneficial to MFI performance, their contribution is relatively small compared to Fintech credit.

The correlation results indicate that compliance with regulation rules, credit sharing and Fintech credit adoption are deemed noteworthy determinants of MFI performance differences among MFIs. This finding can supply useful suggestions for MFIs and macro-economic policy designers who try to make the mini-credit sector more sound resilient. The regression coefficients deliver valuable insight into the relative importance of different factors affecting the financial performance of MFIs. Fintech credit plays a key role in finance,

emerging as a significant driver of financial performance while credit sharing and regulatory compliance also contribute positively.

## Recommendations

MFIs should give priority to pursue Fintech credit solutions to enhance their performance. On the other hand, efficiency of credit sharing and observance regulatory compliance is also important to financial performance, but in comparison with Fintech credit, this scale may be smaller.

Further research and analysis are required in order to uncover how credit sharing, regulatory compliance and financial performance are influenced by each other in the microfinance industry.

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## Declaration

This research thesis is my original work and has never been presented for a degree award in any other institution.

**David Otieno Agom**

MSC/BE/00016/2014

SIGNATURE: ..... DATE: .....

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This thesis report has been submitted for examination with my approval as a University Supervisor.

**Dr. Peter Ndichu**

**Department Of Accounting And Finance Maseno University.**

SIGNATURE. ....DATE: .....

**List Of Abbreviations**

MFI's - Micro-finance institutions.

Fintech - Financial technology.

NBFC - Non-bank financial companies.

MSEs - Micro and small enterprises

CIS – Credit Information Sharing.

OSS- Operational Self Sufficiency Ratio

ROA- Return on Asset

KWFT- Kenya Women Finance Trust

SMEP- Small and Micro Enterprises

P2P- Peer to Peer

TAT-Technology Acceptance theory