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Management control systems, firm size and financial sustainability: the case study of microfinance banks in Kenya.

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MANAGEMENT CONTROL SYSTEMS, FIRM SIZE AND FINANCIAL SUSTAINABILITY: THE CASE STUDY OF MICROFINANCE BANKS IN KENYA

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DECLARATION

I declare that this work has not been previously submitted and approved for the award of a degree by this or any other University. To the best of my knowledge and belief, the thesis contains no material previously published or written by another person except where due reference is made in the thesis itself.

Christine Akinyi Akiza

Signature: ....

Date:4 April, 2025

Approval

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Date…….

ABSTRACT

This thesis examines how management control systems support financial sustainability in Kenyan Microfinance Banks (MFBs), particularly focusing on fourteen licensed microfinance banks (MFBs) in Nairobi. Driven by increasing public demand for accountability and responsible business practices, the research explores the roles of planning, organizational culture, administrative, and cybernetics controls on financial sustainability. The research adopts a positivist philosophy, emphasizing objective measurement and hypothesis testing through quantitative methods and was conducted in the month of May 2024. Grounded in the Resource-Based View and Contingency theories, the study employed an explanatory research design, surveying 182 managers through semi-structured questionnaires and analyzing data using multiple regression. The findings reveal that planning management has a statistically significant positive impact on financial sustainability. Other factors, such as administrative control, a strong organizational culture, and cybernetics control, also contribute to financial sustainability. The study finds that the impact of these management controls is moderated by the size of the organization, underscoring the need to tailor control systems to the specific context of each MFB. The study concludes that by strengthening the management control systems and adapting them to their organizational environment, MFBs can enhance their financial sustainability. The study is limited by its focus on only licensed Microfinance Banks in Nairobi, which may affect the generalizability of the findings to other regions or unlicensed institutions. Additionally, the cross-sectional design and reliance on self-reported data from managers introduce potential response bias and limit the ability to establish causality.

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ABBREVIATIONS AND ACRONYMS

CGAP - Consultative Group to Assist the Poor

COSO- Committee of Sponsoring Organizations

MFBs - Micro Finance Banks

ESG- Environmental, social, and governance

FSS- Financial self sufficiency

HR- Human resource

MFB – Micro Finance Bank

OSS- Operating self sufficiency

PCAOB - Public Company Accounting Oversight Board

ROA- Return on Assets

ROE- Return on Equity

DEFINITION OF TERMS

Management control systems - is used to discuss both formal and informal systems established by a company to assess how well its objectives and strategy have performed in relation to actual results. In other words, it assesses how well a business's operations and the organization carry out and achieve goals (Johnson et al., 2019).

Financial sustainability – in the context of microfinance banks; financial sustainability can be defined as the capability of these banks to attain their operational and administrative expenses from the income of financial services it offers, especially micro-credit. The rationale of this idea is important to enhance the sustainability of the microfinance banks (MFBs) so they can function free outside from funding sources like donation or subsidies (Akinleye & Kolawole, 2020).

Organization culture control - this this refers to the underlying beliefs, assumptions, standards and social conventions that define the unique social and psychological environment of a corporation (Akinleye & Kolawole, 2020)

Planning control – Planning control is a technique used by managers communicate to staff members the clear expectations of the board for the organization a whole, for individual business units, and for the staff members themselves (Malmi & Brown, 2008).

Cybernetics control – this implies the feedback loops applicable in the evaluation of the operation of the business as well as adjusting to address any deviations (Malmi & Brown, 2008).

Administrative control - refers to a variety of adjustments made to work procedures or conduct with the goal of lessening the impact of a hazard. This type of control depends on employee cooperation and does not provide long-term remedies for hazard control in the workplace (Malmi & Brown, 2008).

DEDICATION

I dedicate my work to God Almighty, who has always been there for me and has shown me grace, mercy, and blessings. I also dedicate my work to my family and friends.

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The assistance of the following people was crucial to the accomplishment of this research thesis. I want to start by thanking God for all of His blessings and guidance throughout this endeavor. I want to thank Dr. Mathuva, my supervisor, for all of his help, support, availability, and wise counsel. I would want to thank each and every one of my professors from Strathmore University's Master of Commerce Course Work. Dr. Mumbi deserves special recognition for the unwavering support.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial sustainability in organizations refers to their ability to generate sufficient resources to meet current obligations and invest in future growth without compromising long-term viability. It involves maintaining a balance between income and expenditures while ensuring resilience against financial shocks and changing market conditions. The development of microfinance was as a result of major efforts to fight poverty (Bardhan et al, 2021). The basis for providing financial services to the poor is the belief that Micro Finance Banks (MFBs) will always be there to address social issues like unemployment, poverty, and low living standards. Xu et al. (2019) asserts that not having MFBs is preferable to presence of unsustainable ones. Thus, financial sustainability strengthens the continuous provision of financial services. In contrast to traditional financial institutions, MFBs prioritize both their financial and social obligations (Kumar & Mukhopadhyay, 2013; Bardhan et al, 2021). As a result, financial sustainability is specifically defined because it serves to advance social as well as financial goals. Thus, an MFB's operational profitability and its ability to cover its operational, administrative, and financial expenses are what are meant to be understood when one speaks of financial sustainability. When the cost of capital lending matches the interest rate imposed on clients, the institution attains financial sustainability. Thus, interest rates on loans per unit of principal must be higher than the expenses associated with the loan in order to attain financial sustainability (Said et al., 2019).

The Financial Sustainability movement spurred a discussion on mission drift that later became known as the microfinance schism (Hermes & Lensick, 2020). It is difficult to believe that there is a microfinance divide, especially when considering how financial sustainability affects the breadth of outreach (Quayes, 2012). Financial Sustainability has persisted as a prerequisite for MFBs in spite of contradicting statistics because of the questionable track record of donations, grants, and subsidies in funding development.

Financially sound MFBs have a history of taking advantage of scales, being cost-conscious, encouraging innovation, lowering the costs associated with information asymmetry and adverse selection, reducing moral hazard, and expanding their reach while sustaining the fewest losses (Quayes, 2012). Governments have privatized, ineffective, and loss-making credit programs and

parastatals in an effort to achieve financial sustainability (Public Company Accounting Oversight Board (PCAOB), 2021). The same is happening with MFBs when they switch from donor finance to commercial financing (Forkusam, 2014). Cost-efficiency in microfinance is concretized by moving from the previous paradigm of concessional funding to the new paradigm of commercial funding. The new paradigm supports financial sustainability by promoting efficiency, accountability, transparency, effective capital mobilisation, and reasonable management compensation.

Around the world, including in the United States of America (USA), publicly traded companies are obligated to furnish an integrated audit encompassing internal control over financial reporting and financial statements. Previous research on the effect of short selling on the quality of financial reporting by Jiang and Chen (2019) shows that short sellers closely monitor the reporting quality when they think there is a high chance of managerial exploitation in a situation where the law is weak or in a company with weak internal control. On a global scale, financial institutions adhere to a set of regulations, rules, and directives that guide them towards achieving both their financial and non-financial objectives However, other regulations and policies, such the Companies Act, which is applicable worldwide and is enforced by bank management in every country, were not considered in the research carried out by Jiang and Chen (2019). The current study bridged the gap by considering internal controls as regulations put in place by banks and other companies (COSO, 2013). Since their implementation, MFBs have a much broader scope and are much more well-liked in South Asia than in places like Africa and Latin America. MFBs have, however, expanded significantly in these areas as well. Dahir (2015) stated that experimentation led to the development of microfinance in South Asia. According to a report by the United Nations Office of Special Adviser on Africa (2013), only 12.7% of the poorest households in Africa were able to utilize microfinance services, whereas 78.5% of similar households in Asia were able to do so in 2007. The report also discovered that Africa's poverty rate was 41% higher than the 2015 MDG target. This indicated a gradual reduction in poverty throughout Africa.

MFBs that accept deposits are starting to be recognized and regulated by the official financial system on a regional level. Different governments are trying to figure out how to simplify the laws so that microfinance operations can progress even further. Most Sub-Saharan African countries are working harder to regulate microfinance, according to CGAP survey (2017). Additionally, it showed how microfinance is becoming more integrated into mainstream financial institutions, with certain countries subjecting MFBs to the same regulatory body's prudential oversight and supervision as commercial banks or the same legal framework. As per Tomilova and Dokle (2019), the Consultative

Group to Assist the Poor (CGAP) (2017), just 25% of borrowers in Sub-Saharan Africa are served by conventional banks. Nevertheless, due to the widespread failure of MFBs in sub-Saharan Africa, financial rescue packages for distressed MFBs have been suggested. Ironically, the suggestion made no mention of the financing arrangement that determines financial stability.

Locally, the Microfinance Act of 2006 mandates the registration of microfinance organizations in Kenya. According to a study on poverty alleviation in Kenya by Arandia and Hepp (2021), Kenya is one of the African nations leading the way in understanding the value of MFBs as a tool for eradicating poverty. As a result, the growth and promotion of the MFB sector have received more attention. Notably, Kenya's microfinance business has expanded and is now engaged in semi-formal, formal, and non-formal provider instances (Arandia & Hepp, 2021). In this case, licensed MFBs follow the necessary financial sector regulations, with focus towards reducing poverty by using public funding. The Microfinance Act stated that the regulated MFBs are required to run current accounts, undertake third-party checks, and engage in foreign trade (Moseti, 2015).

Due to its role in promoting financial inclusion, the microfinance sector is crucial to the country's economy (Hossain & Khan, 2016). MFBs financial viability in Kenyan counties has been identified as a significant issue (Sang et al., 2021). An estimate of barely 1% to 2% of microfinance banks globally have adequate financial sustainability, illustrating that this is not a problem that simply affects Kenya (Mia et al., 2022). Microfinance banks in Kenya recorded a loss before tax of Ksh 2.2 billion in 2020 compared to Ksh 330 million in 2019, with the impact of COVID-19 being mostly held responsible for the poor performance (CBK, 2020). Their sustainability, however, was already in doubt prior to COVID-19 because they recorded a loss of Ksh. 1.4 billion in 2018 (CBK, 2020). Notably, the aspect of inadequate internal management capabilities and operational controls has plagued MFBs in Kenya (Ouko & Atheru, 2022).

Microfinance has evolved as a tool to support economic growth by helping Small and medium-sized enterprises (SMEs), the impoverished, and people unable to access the more structured banking system save money and access financial services (Wombo et al., 2020). In this instance, the success of the microfinance sector has aided in its continued acceptance. Sim and Prabhu (2016) contend that as microfinance grow, more financial services are made available to customers in isolated and rural locations. This suggests that greater investments are necessary for MFBs to meet the rapidly changing client needs. Not just in Kenya but in other places as well, there is a sustained lack of access to financial services.

1.1.1 Financial sustainability of MFBs

The necessity to alleviate poverty led to the creation of microfinance groups and a draft of the Microfinance Act (Bayai, 2017). Additionally, Gashayie (2015) asserts that managing MFBs is superior to having unsustainable programs. In this study, "sustainability" implies "financial sustainability," which is the capacity of a microfinance organization to cover its costs only from earned money, without the assistance of donors. Globally, financial sustainability is recognized as a critical factor for organizational resilience and long-term success across sectors (Jiang & Chen, 2019). Internationally, organizations are increasingly expected to balance profitability with responsible resource management, ensuring they can withstand economic shocks and adapt to changing market and regulatory environments. The global financial crises and growing stakeholder scrutiny have further highlighted the need for robust financial strategies and transparent reporting to maintain trust and viability. Notably, much of the literature is concentrated on large organizations in developed economies, often overlooking the unique challenges faced by smaller institutions and those operating in volatile or resource-constrained environments.

Regionally, in Africa, financial sustainability remains a pressing concern, especially for institutions like microfinance banks that serve vulnerable populations (Tomilova & Dokle, 2019). Many African organizations face challenges such as limited access to capital, regulatory constraints, and fluctuating economic conditions, which can threaten their sustainability. Locally, in Kenya, the focus on financial sustainability is particularly acute for microfinance banks, which play a vital role in financial inclusion (Arandia & Hepp, 2021). Kenyan MFBs must navigate unique challenges such as high operational costs, competition, and evolving regulatory requirements, making effective management control systems and adaptive strategies essential for their continued viability and growth. Despite growing research, significant gaps remain regarding the role of internal management control systems, the influence of organizational size, and the contextual factors that affect sustainability outcomes. There is a need for more empirical studies that address these gaps, particularly by examining how tailored management practices and firm characteristics interact to support financial sustainability in the unique Kenyan microfinance context.

Previous studies have discussed financial sustainability measurement and related indicators in a variety of ways. For example, Ayele (2015) mentioned metrics like financial self-sufficiency (FSS), Operating self-sufficiency (OSS), and profitability indicators (Return on Assets, Return on Earnings) that are frequently used to assess financial feasibility. The paper states that operational viability is the first step towards financial viability (the ability to pay for operations without the need for subsidies).

According to the report, an MFB's survival is hampered by its inability to complete OSS, which leaves less money available to lend to borrowers. Due to its simplicity and ease of government and donor verification, OSS was chosen for the study rather than FSS.

1.1.2 Microfinance Banks in Kenya

Policy makers and practitioners in Kenya have rekindled their interest in microfinance as a result of its significant contribution to initiatives aimed at enhancing rural residents' standard of living. The Kenyan microfinance sector encourages small-scale investments that produce a return on the investment while generating enough income from market activities that would not otherwise be realized. Because Micro Finance Banks (MFBs) handle sensitive data on their loan borrowers, agency expenses may be very high in this sector. Furthermore, grant financing and other safety net protections that are available to MFBs that take deposits could encourage risk shifting or slack risk management, which would raise the costs associated with external debt agencies (Visconti, 2016).

The Kenyan Microfinance Act of 2006 allowed deposit-taking MFBs, but these institutions were not established until 2009, when two of the largest MFBs, Kenya Women Finance Trust and Faulu Kenya, made the transformation. Microcredit programs ended up becoming a bank that served primarily people with modest incomes. The tale of how K-Rep, a non-governmental organization in Africa, transitioned from microcredit programs to becoming a bank that only serves low-wage clients in 1999 is widely documented (Central Bank of Kenya, 2013). K-Rep was also the first commercial bank in Kenya. The viability of the institutions and financial inclusion will remain a test for Kenya.

Notably, the microfinance sector appears to have benefited little from the economic recovery in 2022, as lending continued to fall and losses in Profits before Tax, ROA, and ROE were greater (Figure 1.1). The combined loss before taxes for all MFBs increased from KSh. 2.2 billion in December 2020 to KSh. 877 million in December 2021.

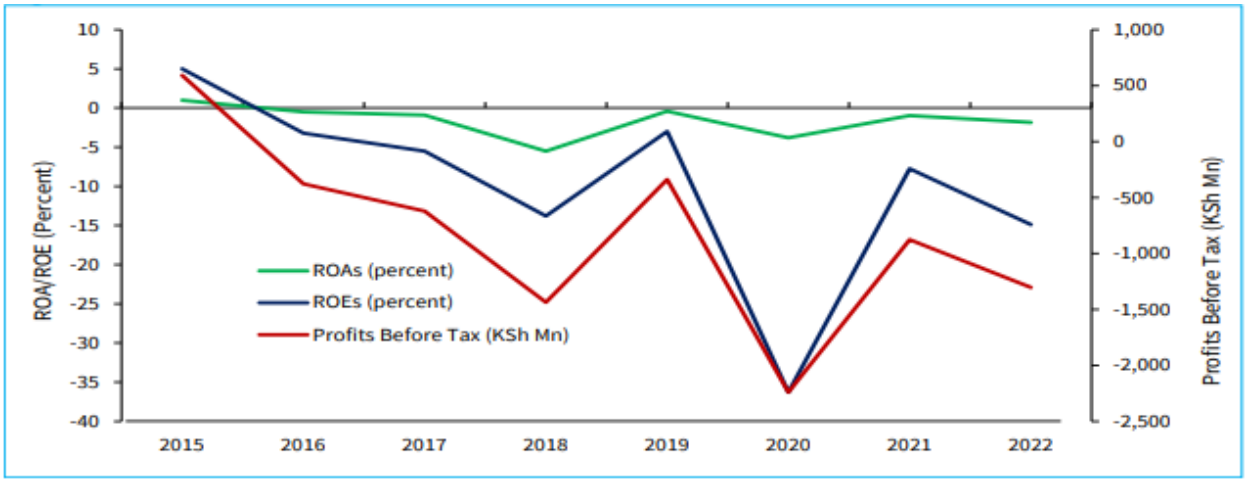

Figure 1.1: Profitability for MFBs (Source: CBK, 2022)

Many of the current microfinance banks have applied for licenses that allow them to accept deposits from members and the public since the microfinance Act was adopted on May 2, 2008.The Microfinance Act's primary goal is to control DTMFB establishment, operations, and business practices in Kenya by means of licensing and oversight. According to a CBK (2022) report, Nairobi is presently home to fourteen (14) deposit-taking MFBs. Over the past six years, there has been a notable rise in the quantity of non-performing loans in Kenya's deposit-taking MFBs. As a result, there is less liquidity currently, which hinders the company's ability to make investments and lowers its financial performance (AMFB, 2017).

According to Ali et al. (2017), an institution's accountability for managing its money is one of the crucial factors that may ultimately decide its financial sustainability. In Sub-Saharan Africa, Kenya has one of the robust microfinance industries. To serve low-income yet economically active people, it offers a large branch network and a variety of institutional structures. The business can take on a variety of forms, including ones that are governed by the CBK, such as investment groups, banking institutions that offer microloans, accumulative savings and credit associations, credit associations, and merry-go-round groups. According to Gichuki (2018), the Association of Microfinance banks - Kenya (AMFB-K) is the body in charge of regulating the industry. The main aim of 2006 Microfinance Act was to give the industry a level playing field and an appropriate legal, regulatory, and supervision framework. The institutions can be generically categorized as commercial banks, regulated MFBs, and uncontrolled MFBs. MFB banks and Deposit Taking Microfinances are governed by the Central Bank of Kenya (CBK) (Warue, 2015). CBK is in charge of licensing and regulating MFBs in order to mobilize public savings and to promote competition, efficiency, and access. Non-deposit taking MFBs, usually referred to as credit only companies, are exempt from CBK regulation since they solely

lend their own money (Nyakinda, 2019). The MFBs in Kenya was the researcher's primary area of interest. The current study aims to ascertain the impact of management control systems on the long-term viability of the finances of microfinance banks based in Kenya

1.1.3 Management Control Systems

A management control system is a company's capacity to utilize accounting and financial data through its management accounting system for sound decision-making to gain a long-term competitive advantage and actualize enhanced financial performance. According to Johnson et al. (2019), management control systems are any tools used in an organization to direct managers' and workers' attention to particular problems, set the stage for decision-making, mould workers' behaviors, and encourage congruence of organizational goals. Because all of the duties that the business performs and aims to accomplish must be imposed by management control systems (Otley, 2016), they are applicable to enforce a variety of organizational goals beyond only financial ones. Both formal and informal restrictions are necessary (Leug & Radlach, 2016). The management control systems are interconnected and have an impact on both the employees and one another, suggesting that they should be researched in tandem. Therefore, to reduce the possibility of under-specification and enable the comparison of all management control systems, a framework comprising both formal and informal controls is necessary (Traxler et al., 2020). For this reason, the management control systems package developed by Malmi and Brown (2008) was pertinent to this investigation, as was the possibility of erroneous conclusions if the management control systems are not investigated comprehensively.

The success and survival of any business in today's complex and dynamic environment depend on its internal control systems (Akinleye & Kolawole, 2020). They maintain the company's position on the road. However, organizations frequently veer off course, which has a detrimental effect on achieving the goals established. A control system, according to Uwadiae (2013), is the collection of norms, procedures, and structures that serve as the foundation for implementing internal control throughout an organization. According to the report, top management is in charge of establishing effective internal controls, including expected norms of behavior. As a result, the total system of internal controls is significantly impacted by the control environment that results. Gelazanskas & Gamage (2014), pointed out that the control system entails the beliefs, knowledge, and behaviors of individuals in charge of governance towards internal control within the entity and their significance within the institution. Notably, the Malmi and Brown (2008) framework has been deemed suitable "to provide a comprehensive understanding of Sustainable Development enforcement in practice" (Leug & Radlach,

2016), this makes it a useful framework for assessing how management control systems contribute to the realization of sustainability.

Malmi and Brown's (2008) architecture for management control systems incorporates both formal and informal controls. These include not only administrative controls but also incentive and compensation systems, cybernetic systems, planning, cultural systems, and more. The top-level cultural controls set the framework within which the other control systems operate. Planning, cybernetic controls, reward, and pay are all interconnected in a loop that goes from left to right and influences employee behavior through goals, measures, and incentives. The final type of management control system is administrative control, which provides a framework for the implementation of incentive and compensation control systems, cybernetic controls, and planning.

An organization's organizational structure, business procedures, rules, and standards that are used to uphold control within the company make up the control system (Akinleye & Kolawole, 2020). The board of directors and executive management of a firm set the expectations of behavior standards inside the organization as well as the company culture and attitude regarding the value of maintaining controls. Furthermore, Umar and Dikko (2018) mentioned communication, integrity enforcement, and ethical principles as components of the control system, while Mire (2016) emphasized that the foundation of the control environment forms the ground for the construction and operation of an effective system of internal control. Any system of internal controls must start with a control environment.

Organization cultural controls are informal controls that aid in enclosing and directing other formal control systems (Malmi and Brown, 2008). In contrast to popular belief, company culture is not considered as a control system in and of itself. Instead, it is seen as a control mechanism when managers use it to shape employee behaviors. As a result, it's critical to make sure that formal and informal control systems are coordinated so they can complement one another rather of acting in opposition to one another. Malmi and Brown (2008) have identified three unique aspects of company culture that can be utilized as a management control system. These components include clan-based rules, values, and symbols. Notably, it takes time for a firm to change its cultural controls, and it has been discovered that top management's enforcement is necessary for a culture, and in particular values, to completely permeate a company. In terms of maintaining financial stability, this is very crucial.

Planning, which includes both long-term plans for the future and more immediate short-term goals, is an ex-ante kind of control (Malmi & Brown, 2008). Planning controls define the goals that must be

attained, direct behavior and effort, and make organizational objectives consistent. In this study, planning serves as a management control mechanism by providing employees with clear goals regarding what the board expects of the company, different business units, and the employees themselves. This influences the behaviors of the employees. One of the benefits of planning control systems is that they can help with coordination inside the organization by ensuring that all business units have objectives that are in line with the overarching strategy and objectives of the organization. This can help to ensure goal congruence within the organization. It is crucial to remember that the planning process must include a strategy for inspiring staff to adhere to the plans. Planning enhances the likelihood that people will take responsibility, which typically produces better results and raises the likelihood that organizational objectives were met. This suggests that objectives provide workers purposeful guidance and that they naturally work towards achieving these targets, which is why all significant facets of a firm should be planned (Arjaliès & Mundy, 2013). Nevertheless, for the planning to be effective, both short- and long-term planning must be done through both local and centralized systems. For sustainability goals to be truly adopted, they should be connected to business goals during the planning phase. Particularly in light of the requirement that the short-term financial rewards match the long-term sustainability objectives.

Cybernetic controls are used to evaluate the operation of the business, plan, and adjust address any deviations (Akinleye & Kolawole, 2020). These feedback loops take the shape of performance metrics and budgets. These metrics might be financial, nonfinancial, or a combination of the two, but they often are accounting-based financial metrics. These metrics are used to hold staff members accountable for the operation of the company and to aid in putting organizational strategy into practice. This is essential to help employees get a more complete picture of the business and to make them aware of its limitations. Performance metrics are chosen for each business unit during this step as well.

The aspect of planning, cybernetic, reward, and compensation controls can all be carried out within the framework of administrative controls (Malmi & Brown, 2008). Administrative controls are divided into three separate categories: Organizational structure, governance frameworks, and policies and procedures. In this case, organizational structures are those that promote or prevent particular workplace interactions. As a result, it's critical for businesses to have a framework that helps them achieve their goals and stimulates interaction among the essential staff (Akinleye & Kolawole, 2020). The term "governance structure" refers to how the management and board of directors affect other employees through the organization's hierarchical structure by projecting authority and requiring

employee accountability. Official policies and procedures cover the use of standard operating procedures, guidelines, and general rules and regulations that apply inside the company. Clarifying what sustainable development means to a firm so that all employees are aware of what it includes is one of the main requirements for businesses to successfully deal with sustainability. This is vital because it fosters goal congruence and lowers the possibility that employees would interpret sustainable development in their own ways.

Finding a connection between internal audit quality, corporate governance characteristics, and financial reporting quality was the main goal of the Kaawaase et al. (2021) study. Ugandan financial institutions were the geographical focus. Research designs that were employed in the study were correlational and cross-sectional. According to the findings, the effectiveness of the board's roles and the quality of its financial reporting are highly correlated. Additionally, financial reporting quality is strongly correlated with internal audit quality. However, board independence was found not a reliable indicator of the accuracy of financial reporting. To assess the quality of financial reporting, the study only looked at qualitative aspects of financial statements. On the other hand, the current study also used quantitative traits. The conceptual framework created by the International Accounting Standards Board was also a major emphasis of the paper.

1.1.4 Company size

The adoption and application of management control systems (MCS) can be strongly impacted by the Company's size (Quinco, 2023). In comparison to smaller businesses, larger corporations typically have more advanced and integrated MCS. They have greater resources to invest in cutting-edge control systems and can take advantage of economies of scale. Large organisations typically have more formalised management control systems (MCS) with well-defined policies, processes, and reporting frameworks. They might make use of more controls, such as information systems, performance metrics, and budgets. Due to their complexity, large organisations need strong MCS in order to monitor performance, coordinate activities, and match employee behaviour with organisational objectives. Strong control systems are necessary in large organisations that use decentralised decision-making (Quinco, 2023).

Small and Medium Enterprises (SMEs) may find it difficult to deploy sophisticated MCS because of their frequently more straightforward organizational structures and constrained budgets (Quinco-Cadosales & Famacion-Quinco, 2022). Still, a lot of SMEs apply a variety of MCS techniques. MCS in SMEs is typically more relaxed, informal, and centered on immediate operational management as

opposed to long-term strategic control. A crucial part of SME control systems is played by owner-managers. SMEs frequently utilize relational controls, financial oversight, and client-focused controls. In contrast to formal systems, they might rely heavily on unofficial communication, clan control, and individual supervision. Particularly, family-owned SMEs have been seen to employ fewer MCS in comparison to non-family SMEs. Notably, one important contingency factor that influences how MCS is designed and used is Company size. SMEs typically rely on less formal, more straightforward control mechanisms that are more suited to their size and structure than large companies, which typically have more complex control systems. On the other hand, a growing number of SMEs are utilizing MCS to boost their expansion and competitiveness. In general, company's size affects how MCS is designed and implemented, with smaller organizations demanding more flexible and adaptable techniques and larger organizations demanding more formal, sophisticated systems.

1.2 Problem Statement

The Central Bank of Kenya (CBK) (2021) reports that just four of the 13 MFBs (30.7%) reported profits for their performance in 2020. The remaining 69.2% suffered losses. The report also indicated that the big MFBs suffered higher losses than in the prior time frame. Furthermore, according to CBK (2021), the deposit-taking MFBs have witnessed a significant rise in non-performing loans in recent years, which has been connected to the borrowers' declining ability to make payments. This demonstrates the difficulty MFBs face in striking a balance between economic expansion and institutional control as well as operational management, which exposes the firms to the risk of non-performance. Due to fraud and mishandling of assets meant to provide income, MFBs lax control protocols have cost members and institutions a great deal of money. Insufficient controls have also led to managerial corruption and cooperation with external auditors, impeding organizations from achieving their objectives (Wambua et al., 2021). Moi University SACCO, for instance, did not fulfil the necessary financial ratios. The process of liquidation was started since the company did not have enough funds to pay its debts (SASRA, 2020). Further, challenges in control systems have also been brought about by technological advancements, necessitating the creation of novel organizational control strategies, which ultimately impacts on the financial sustainability of these institutions (PROCASUR Africa Report, 2012 as cited in Wanjala & Riitho, 2020).

The increasing riskiness of the portfolio has sparked worries about sustainability. Changamu et al. (2023) study on deposit-taking SACCOS's loan portfolio diversification and liquidity risk indicates that the SACCO Societies Regulatory Authority (SASRA) must create rules controlling credit

advances for private usage. Keeping members' financial requirements met while controlling liquidity and resource levels is still a major concern for cooperative financial institutions in Africa.

Despite the crucial role that microfinance banks (MFBs) play in advancing financial inclusion and supporting economic development in Kenya, their financial sustainability remains a persistent challenge. Existing literature reveals several knowledge gaps in understanding how management control systems influence the financial sustainability of MFBs. For instance, Mutonyi (2003) and Kahindi (2006) note that many Kenyan MFBs struggle with implementing effective planning and administrative controls, often due to limited resources and resistance to change. Additionally, empirical studies such as Mwiti (2022) and Mugwika & Kavale (2022) highlight the importance of organizational culture and cybernetic controls, yet there is limited research on how these controls interact or are tailored to the unique context of Kenyan MFBs. Furthermore, much of the existing research is either conceptual or based on case studies, with few studies employing robust quantitative methods to empirically test these relationships across multiple institutions. This methodological gap limits the generalizability and practical applicability of previous findings.

Moreover, the moderating role of company size in the relationship between management control systems and financial sustainability has not been sufficiently explored in the Kenyan context. While some studies (Ishmail et al., 2023; King'ori et al., 2017) suggest that firm size can impact financial performance, there is a lack of empirical evidence on how company size specifically moderates the effectiveness of management controls in MFBs. Addressing these gaps, this study aims to: (i) examine the effect of planning, organizational culture, administrative, and cybernetic controls on the financial sustainability of MFBs in Kenya, and (ii) determine whether company size significantly moderates these relationships.

In terms of conceptual gaps, further study is required to fully understand the theoretical underpinnings of the connection that exists between financial sustainability and management control systems. Furthermore, little is known about the precise cognitive domains that control systems affect. Most of the research that have been done so far on methodological gaps employ cross-sectional designs, which prevents the use of longitudinal data and causality attribution. In this scenario, there is a need for enhanced study strategies, particularly the utilization of mixed methodologies. The impact of particular MCS practices on financial sustainability has not been thoroughly studied in the body of research that currently exists. It is necessary to investigate further the interactions between various MCS components and financial sustainability. Furthermore, not much research has been done

examining the relationship between MCS and financial sustainability across various sizes of microfinance banks.

1.3 Research objectives

1.3.1 General Objective

The main objective of this study was to determine the effect of management control system on the financial sustainability of Microfinance Banks in Kenya.

1.3.2 Specific Research Objective

The following were the specific objectives of the study:

i. To establish the effect of planning control on financial sustainability of Microfinance Banks in Kenya.
ii. To establish the effect of organizational culture control on financial sustainability of Microfinance Banks in Kenya.
iii. To assess the effect of the administrative controls on financial sustainability of Microfinance Banks in Kenya.
iv. To establish the effect of Cybernetic Controls on the financial sustainability of Microfinance Banks in Kenya.
v. To determine the moderating effect of company size on the relationship between management control system and financial sustainability of Microfinance Banks in Kenya.

1.4 Research Questions

In order to achieve the above objectives, the following research questions guided the study.

i. What is the effect of the planning control function on the financial sustainability of Microfinance Banks in Kenya?
ii. How does organizational culture control influence the financial sustainability of Microfinance Banks in Kenya?
iii. What impact does administrative control have on the financial sustainability of Microfinance Banks in Kenya?
iv. How does cybernetic control affect the financial sustainability of Microfinance Banks in Kenya?
v. Does company size have moderating effect on the relationship between the management control system and financial sustainability of Microfinance Banks in Kenya?

1.5 Scope of the study

This study investigated the effect of management control systems on Financial Sustainability of Microfinance Banks in Kenya from the year of registration by CBK to 2023. The study was conducted in Kenya amongst the fourteen Microfinance Banks with headquarters in Nairobi Kenya. The study took place in the year 2024. The population for the study comprised all management-level staff within these fourteen licensed MFBs, as they are directly involved in the implementation and oversight of management control systems. From this population, a sample of 182 managers was selected using stratified random sampling to ensure representation across different banks and management levels.

1.6 Significance of the study

This study holds significant value for multiple stakeholders. Firstly, for policymakers, the study provides a deeper understanding of how management control systems influence the financial sustainability of MFBs, which is crucial for formulating effective legislation and regulatory frameworks. This aligns with Kenya's Vision 2030, a comprehensive blueprint aimed at transforming Kenya into a middle-income industrialized country by 2030 through economic growth and development. The financial sector, including microfinance, plays a pivotal role in this vision by deepening financial access, mobilizing savings, and supporting MSMEs, which are vital for inclusive growth. By highlighting the patterns and effectiveness of internal controls in MFBs, the study informs policy decisions that can enhance financial stability, transparency, and inclusion-key objectives under Vision 2030 and related medium-term financial sector plans.

Secondly, the study benefits consultants and practitioners who advise investors, governments, and MFB management on sustainable outreach and operational practices. The insights gained can guide the development of robust internal control frameworks that improve financial performance and risk management. This is particularly important given ongoing reforms and innovations in Kenya's financial sector, such as digital financial services and regulatory initiatives to license and supervise deposit-taking microfinance institutions. Strengthening internal controls will help MFBs manage risks, maintain portfolio quality, and ensure accurate financial reporting-challenges underscored by the Central Bank of Kenya and sector stakeholders.

Thirdly, business owners funded by MFBs stand to gain by understanding how effective management controls contribute to institutional sustainability. This knowledge empowers them to align their efforts

with institutional objectives, fostering a mutually supportive relationship that enhances both business growth and the financial health of MFBs.

Lastly, academicians and scholars will find this study a valuable source of knowledge and a foundation for future research on microfinance institutions in Kenya and similar contexts. The study fills a theoretical gap by focusing on the Kenyan microfinance sector, which faces unique opportunities and challenges in internal control implementation and financial sustainability. Methodologically, it contributes empirical data and analysis that can refine models of management control effectiveness. Practically, it offers actionable recommendations to improve microfinance governance and sustainability.

Generally, this study enriches the existing body of knowledge by emphasizing the necessity of strong internal control systems in Kenya's microfinance industry to manage risks, monitor portfolio quality, and ensure transparency. These factors are critical for expanding financial inclusion, supporting MSMEs, and ultimately achieving the broader economic goals of Vision 2030, including poverty reduction, job creation, and sustainable development.

1.7 Chapter summary

The chapter focused on management control systems (MCS) and financial sustainability in Kenyan MFBs, with the goal of addressing important gaps regarding comprehension of the association between MCS and financial sustainability. The impact of MCS on MFBs sustainability in Kenya was the main focus of the study. The background emphasized the need to fill conceptual and contextual gaps in previous research by highlighting the importance of MCS in improving financial sustainability from a global, regional, and local perspective. The problem statement, the study's aims, its significance, and its scope were all highlighted in this chapter. The review of earlier research, including theoretical and conceptual frameworks, is presented in the next chapter.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section's literature review establishes the foundation for the investigation by providing an overview of the field's current state of knowledge, pointing out any gaps, and placing the study in the context of a larger academic discussion. It gives underlying information and rationale for the approach and research question(s). The chapter comprises of the subsections on theoretical framework, empirical literature review and conceptual framework. The chapter also provides a critique of the literature reviewed, a discussion of research gaps, and a chapter summary.

2.2 Theoretical Literature Review

The literature review's multi-theoretical framework enables a more thorough, sophisticated, and creative examination of the research subject. It results in a more comprehensive theoretical model and offers fresh angles for further investigation. Further, the process allows the researcher to build on the advantages of several theories to enable a more thorough examination of the research topic. Thus, understanding the problem better comes from looking at it from other angles. A more contextualized and nuanced explanation of the phenomenon under study can be developed by the researcher by applying various theories, therefore, raises the study's credibility.

2.2.1 Resource-based View Theory

According to Barney's (1991) resource-based view (RBV) thesis, a firm's competitive advantage stems from its management control structure. The resources and competencies that have specific qualities, such as value, scarcity, lack of imitation, and irreplaceability, are the basis of a firm's competitive advantage in relation to RBV. The RBV framework defines a firm as a specific combination of competencies and resources that may be leveraged to accomplish a plan and obtain a competitive edge. The proponents of this viewpoint contend that rather than focusing on the external competitive environment, businesses should search within for sources of competitive advantage. RBV proponents argue that using resources already in place in creative ways to capitalize on opportunities is far more feasible than trying to pick up new abilities at every turn. According to the RBV model, resources play a crucial part in helping companies achieve higher levels of organizational performance. The key advantage of the RBV idea is that it provides direction for the firm's strategy and acts as its primary source of return. According to Barney (1991), the RBV sees administrative processes, managerial experience, and informational ability as valuable commodities with the potential to generate economic rents.

The use of a management control system is positively connected with a company's ongoing success, stability, growth, survival, and sustainability in the current and future settings, situations, and conditions. Because of this, companies deliberately employ management control systems to support the continuation and sustainability of their operations. It has a big impact on how viable a business is going to be in the long run (Barney, 1991). Management control system components are the independent variable in this study. A management control system can help you become more competitive and keep your attention on the management goals. Management control systems can help businesses achieve their objectives and foster organizational success. Additionally, in the current and future competitive contexts, management control systems are thought to be crucial for developing business prospects. Organizational renewal, management development, business excellence, and a firm's financial sustainability are all generally favorably impacted by management control systems. It is probable to decide, influence, and explain how much organizational renewal, management growth, commercial excellence, and firm sustainability are changing.

The resource-based view is subject to criticism, just like most business theories. For instance, due to the expansive definitions of resources, it may be challenging to choose the proper level of analysis. Additionally, certain resources are subjective, such as a company's reputation or knowledge. In this study this theory was used to support variables: organization culture control, administrative control and financial sustainability.

The study's specific objectives are directly informed by RBV, as each seeks to examine how distinct internal control mechanisms (planning, administrative, cultural, and cybernetic controls) contribute to financial sustainability (the dependent variable). The resource-based view (RBV) suggests that effective deployment and integration of these controls can create unique organizational capabilities, enabling MFBs to achieve superior financial performance and resilience in a competitive and dynamic environment (Barney, 1991). Within the conceptual framework, the independent variables-planning management, administrative controls, organizational culture, and cybernetic controls-are conceptualized as key strategic resources under the RBV lens. The dependent variable is financial sustainability, reflecting the outcome of how well these internal resources are harnessed. Additionally, firm size is introduced as a moderating variable, recognizing that the impact of these resources may vary depending on the scale and capacity of the MFB. Thus, RBV provides the theoretical foundation for hypothesizing that MFBs with well-developed and appropriately tailored management control

systems, especially when aligned with organizational size, are more likely to achieve and sustain financial health.

2.2.2 The Contingency Theory

Austrian psychologist Fred Edward Fiedler proposed the contingency hypothesis in 1964. According to the theory, there is no perfect management style, company structure, or decision-making process; instead, the optimum course of action is determined by a combination of internal and external circumstances. The proponents of the theory contend that there is no one best way to organize a company, and that no strategy is better in every circumstance (Donaldson, 2006). Therefore, unless two organizations are identical, they shouldn't necessarily have similar internal control systems. Therefore, the specifications and needs for internal control systems may vary based on the organizational situation. Pock (2007) noted that when control systems are successfully tailored to an organization's contingency features, improved organizational performance and effective internal control systems result. Additionally, according to Donaldson (2006), there is a relationship between the contingency features that, in accordance with contingency theory, establish the structure of the control system and the internal control system. According to contingency theory, the organizational context affects how control systems are designed and implemented. It is postulated that improved fit between the contingency variable and the control system will lead to increased organizational performance. The theory was used to support planning control and cybernetics control variables.

Contingency Theory directly informs these objectives by suggesting that the impact of each control system on financial sustainability will vary depending on organizational context, particularly firm size and operational environment. Thus, the study seeks to determine which management controls are most effective under different conditions within Kenyan MFBs. Within the conceptual framework, the independent variables (planning management, administrative controls, organizational culture, and cybernetic controls) represent the different management control systems whose effectiveness is presumed to be contingent on contextual factors. The dependent variable is financial sustainability, which is the outcome of interest. Firm size is introduced as a moderating variable, reflecting the Contingency Theory's assertion that the relationship between management controls and financial sustainability is not fixed but depends on the size and complexity of the organization. By integrating Contingency Theory, the study justifies the examination of how and why the effectiveness of management control systems may differ across MFBs of varying sizes, thereby providing a nuanced understanding of what drives financial sustainability in the Kenyan microfinance sector.

2.3 Empirical Review

2.3.1. Cybernetics Control and Financial sustainability

Henock (2019) examines 46 savings and credit cooperative organizations (SACCOs) for the year 2016 in Eastern Ethiopia. According to Henock, the link between adjusted financial income and adjusted operating expenses—also known as the SACCOs' self-sufficiency, which is a profit indicator—defines financial sustainability. Additionally, he investigates the relationship between financial sustainability and operational performance, return on assets or profitability, the debt-to-equity ratio, deposit mobilization, contribution, yield, interest rate, and the size and age of SACCOs. The author discovers a connection between the selected financial sustainability metric and the debt-to-equity ratio, operational performance, return on asset, contributions, and deposit mobilization. If a theoretical framework is provided at all, it is clear that this work lacks a closed, underlying theory. Nonetheless, the present investigation closed the gap by employing two theoretical stances. Most of the time, the financial sustainability metrics do not provide an explanation for their selection or methodology, which draws its data from a broad range of financial indicators. In contrast, the current research issue looks at how the management control system affects the financial sustainability of microfinance banks, whereas Henock's study explores the financial sustainability of SACCOs and factors impacting it. The purpose of the current study is to examine the relationship between internal control systems and financial performance, with a particular emphasis on licensed microfinance banks. By offering insights into management techniques that can improve financial performance and sustainability in licensed microfinance banks, this study aims to close the knowledge gap on the influence of internal control systems on financial sustainability in the microfinance sector.

Additionally, Dessalegn (2018) looked at Omo Microfinance banks' (OMFB) level of financial sustainability. For five years (2012-2016), secondary data from financial statements were used in the study. The descriptive method was employed to analyze secondary data. The following criteria were taken into consideration: return on asset, operating expense, active client per staff member, borrower per loan officer, outreach to clients, savings, and operational self-sufficiency. The study's findings showed that every variable, aside from saving, pointed to OMFB's inadequate financial viability. Ethiopia's Omo Microfinance Institution serves as the study's background. Although the subject of this study is Kenyan microfinance banks that accept deposits, the circumstances are different. The current study explores the effect of internal control systems on financial performance in microfinance banks, whereas Dessalegn's work looks at the financial sustainability of OMFB. The goal of the current study is to close the knowledge gap about the connection between financial sustainability in the microfinance

industry and internal control systems. In terms of scope, while the current study looks at several licensed microfinance organizations, Dessalegn's analysis concentrates on OMFB, a single institution. In terms of theoretical model, while the current study takes a more organized approach and incorporates theories and models to explain financial performance, Dessalegn's study lacked a defined theoretical foundation.

Kisanyanya (2018) assessed how management control methods affected the financial health of public universities in Vihiga County, Kenya. The study examined the effects of information and communication, monitoring, control settings, risk assessment, control activities, and higher education institutions in Kenya's Vihiga County on their financial performance. Information was obtained from the sampled respondents through a survey. Both multiple regression and descriptive analysis were used to analyze the data. The study found that the institutions maintained sufficient job separation between the finance and accounts divisions, frequent internal audit reports, and physical controls to prevent excessive cash distribution. These were all acceptable and effective control mechanisms. Although they both look at how management control systems affect financial performance, there are several significant differences between the two studies. While the current study uses theories like RBV and continuity theory to explain the relationship between management control systems and financial sustainability, Kisanyanya's study does not specifically identify a theoretical framework.

Henock (2019), Dessalegn (2018), and Kisanyanya (2018) each investigate factors influencing financial sustainability and performance in different organizational contexts, yet they diverge in scope, methodology, and theoretical grounding. Henock's study focuses on SACCOs in Eastern Ethiopia, examining the interplay between financial sustainability and a variety of financial indicators such as debt-to-equity ratio, operational performance, and deposit mobilization. Notably, while Henock identifies significant relationships between these variables and financial sustainability, his work lacks a closed, underlying theoretical framework, relying instead on a broad set of financial metrics without thoroughly justifying their selection or methodology. In contrast, Dessalegn (2018) centers on a single microfinance institution, OMFB, analyzing financial sustainability over a five-year period using descriptive methods and variables like return on assets and operational self-sufficiency. Dessalegn's findings reveal inadequate financial viability across most indicators, except savings, and similarly, his study lacks a robust theoretical foundation, instead offering a descriptive account of OMFB's financial state. Kisanyanya (2018), meanwhile, shifts the focus to public universities in Kenya, exploring how management control methods-such as information and communication, monitoring, and physical

controls-affect financial performance. Unlike the other two studies, Kisanyanya employs both descriptive and regression analyses to assess the effectiveness of internal controls, finding that mechanisms like job separation and internal audits are effective in safeguarding institutional finances. However, like Henock and Dessalegn (2018), Kisanyanya does not explicitly anchor the analysis in a formal theoretical framework.

The current research distinguishes itself from these prior studies by explicitly incorporating theoretical models, such as the Resource-Based View (RBV) and continuity theory, to systematically examine the relationship between internal control systems and financial sustainability within licensed microfinance banks. This approach addresses the theoretical gaps in the earlier studies, offering a more structured and explanatory framework for understanding how management practices influence financial outcomes. Furthermore, while Henock and Dessalegn primarily investigate financial sustainability from a performance indicator perspective-often without clarifying their methodological choices-the current study narrows its focus to the effect of internal control systems, aiming to provide actionable insights for improving financial sustainability in the microfinance sector. Thus, while all three authors contribute to understanding financial sustainability and control mechanisms, the current study advances the discourse by integrating theoretical perspectives and concentrating on the internal control-financial performance nexus in a broader sample of licensed microfinance banks.

2.3.2. Administrative control and financial sustainability

Sulaiman and Zakari (2019) assessed the financial sustainability and risks of seven Malaysian Waqf Institutions for 2014, employing content analysis and ratio analysis to evaluate variables such as equity balance, administrative costs, revenue concentration, and operating margin. Their findings were stark: only one institution met the criteria for financial sustainability across all four components, highlighting significant vulnerabilities within the sector. The study's reliance on descriptive approaches and ratio analysis meant it did not examine broader management or control mechanisms, nor did it incorporate measures like monitoring accounting policies or financial disclosure, which are included in the current study. This marks a methodological and conceptual gap, as the present research utilizes regression analysis to explore the relationship between financial sustainability and management control systems, offering a more dynamic and explanatory approach.

In contrast, Adetula et al. (2016) analyzed the internal control systems of four Nigerian tertiary institutions using survey data and descriptive statistics. Their findings revealed that while many

internal control components were adequately established, the independence of internal audit departments was lacking, which could undermine administrative controls and, by extension, financial sustainability. The current study builds on this by specifically investigating how independent internal audit functions, as part of broader management control systems, influence financial sustainability-thus moving beyond mere description to examine causal relationships.

Said et al. (2019) and Marwa and Aziakpono (2015) provide further comparative context. Said et al. used trend analysis and found that none of the four Islamic SACCOS in Tanzania were financially sustainable, focusing on operational and financial self-sufficiency ratios. Marwa and Aziakpono, analyzing 103 microfinance banks in Tanzania with regression and T-tests, found that about half were sustainable and that effective control systems correlated with improved revenue collection and sustainability. These studies, while methodologically diverse, reinforce the importance of robust internal controls and management systems for financial sustainability.

In summary, Sulaiman and Zakari's work is primarily diagnostic, highlighting financial weaknesses through ratio analysis but not addressing the mechanisms that could improve sustainability. Adetula et al. and Marwa and Aziakpono, meanwhile, emphasize the role of internal controls and management systems, aligning more closely with the current study's focus. The present research distinguishes itself by integrating advanced statistical methods (regression analysis) and a broader set of management control variables, thereby offering a more comprehensive understanding of how internal control systems can drive financial sustainability in microfinance banks.

2.3.3. Organization culture Control and Financial sustainability

Joseph and Kibera (2019) investigated the impact of organizational culture on the operations of microfinance banks (MFBs) in Kenya using a descriptive cross-sectional survey. They found that organizational culture significantly influences non-market performance and is a key source of sustained competitive advantage in the microfinance sector. Their results highlighted that market culture, in particular, promotes long-term sustainability and financial independence, with the debt-to-equity ratio suggested as a better financial performance indicator than the commonly used return on assets (ROA). The study also emphasized the importance of internal integration and external adaptation as performance outcomes shaped by organizational culture. However, Joseph and Kibera did not specify a theoretical framework, unlike the current study, which applies contingency and resource-based view (RBV) theories to explain how management control systems affect financial

sustainability. Both studies focus on Kenyan microfinance banks, but the current research uniquely addresses how organizational culture as a control mechanism influences financial sustainability in licensed microfinance banks.

Morgan and Vorhies (2018) similarly examined the influence of organizational culture, specifically market orientation, on business performance through a survey grounded in conflicting values theory and behavioral theory of the firm. Their findings showed that market-oriented cultures and behaviors significantly enhance financial performance by fostering value-adding activities beyond traditional market orientation behaviors. While both Morgan and Vorhies and the current study share a focus on organizational culture and financial success, Morgan and Vorhies emphasize market orientation as a cultural dimension, whereas the current study centers on the broader role of management control systems in enhancing financial sustainability in microfinance banks.

Amaka (2012) and Masanja (2018) explored internal control systems' impact on organizational financial management and performance in different contexts. Amaka's study of a Nigerian bottling company underscored the critical role of internal controls in ensuring truthful and equitable financial reporting, highlighting the necessity of robust control systems for sound financial management. Masanja's research on a Tanzanian local government authority identified internal control problems-such as unethical behavior, poor remuneration, and inadequate fraud prevention-as significantly correlated with poor financial performance. Unlike Masanja's descriptive-explanatory design, the current study employs regression analysis and purposive sampling to investigate how internal control systems influence financial sustainability in Kenyan microfinance banks, offering a more analytical and focused approach on financial institutions.

In summary, Joseph and Kibera (2019) and Morgan and Vorhies (2018) provide empirical evidence on the positive role of organizational culture-especially market culture and market orientation-in driving financial performance and sustainability in microfinance and business contexts. However, their studies lack explicit theoretical frameworks or focus narrowly on cultural dimensions. Amaka (2012) and Masanja (2018) highlight the importance of internal controls in financial management but in non-microfinance settings. The current study advances this body of knowledge by integrating theoretical models (contingency and RBV theories) and employing regression analysis to specifically examine how organizational culture and management control systems collectively impact the financial

sustainability of licensed microfinance banks in Kenya, thus filling gaps in theory, methodology, and contextual focus.

2.3.3. Planning control and financial sustainability

Urquia (2018) examined the relationship between internal control systems and financial performance at Surigaodel Sur State University using a mixed-methods approach that combined quantitative and qualitative techniques, including case study, correlation, and survey research. The study collected data from 13 staff members, primarily deans and finance/accounting personnel, through questionnaires and interviews, and analyzed it using SPSS with tabular presentations. Key findings revealed that top management was actively involved in initiating and monitoring institutional activities, though the internal audit department was found ineffective. Despite some challenges, internal control systems were generally functional, with a significant positive correlation identified between internal controls and financial performance, evidenced by proper categorization of income and expenses and asset growth. In contrast, the current study focuses solely on a quantitative methodology, employing regression analysis to evaluate the impact of management control systems on financial sustainability in licensed microfinance banks. This approach allows for a more focused statistical examination of the relationship between internal controls and financial outcomes, specifically within the microfinance sector, rather than higher education institutions.

Complementing Urquia's findings, Caputo et al. (2017) stressed the importance of integrating both external and internal factors into sustainable management control systems to enhance social, environmental, and economic efficiency. Their mixed-methods study highlighted organizational restructuring, skilled staffing, and long-term planning as critical for embedding sustainability into control systems. While Caputo et al. also used a mixed-methods design, the current study's quantitative focus and application to microfinance institutions provide a distinct context and methodological rigor for assessing financial sustainability.

Further evidence from studies on microfinance institutions (MFIs) supports the critical role of internal controls in financial performance. For example, research in diverse contexts (For instance Buea, Cameroon) demonstrates that components of internal control systems-such as control environment, risk assessment, and control activities-significantly influence financial outcomes, with strong ethical governance and risk mitigation correlating positively with profitability. These studies, like the current one, use quantitative methods and regression analyses to establish causal links between internal

controls and financial performance, emphasizing the necessity of robust control frameworks for operational efficiency, risk management, and regulatory compliance.

In summary, Urquia (2018) provides valuable insights into the positive correlation between internal control systems and financial performance in a higher education context using mixed methods, while Caputo et al. (2017) extend the discussion to sustainable management controls with a similar methodological approach. The current study diverges by applying a purely quantitative approach, focusing on licensed microfinance banks in Kenya, and employing regression analysis to rigorously quantify how management control systems affect financial sustainability. This methodological and contextual specificity enables the current research to fill gaps in understanding the direct impact of internal controls on financial outcomes within the microfinance sector.

2.3.4 Company size Moderating Effect

Mukhtaruddin et al. (2018) examined the firm's characteristics, corporate governance quality and corporate social responsibility disclosure. The goal of the study was to determine how company characteristics—such as size, age, and profitability—affect CSR disclosure (CSRD). Good corporate governance (GCG) is measured by board of commissioner quality (BCQ) and audit committee quality (ACQ). Twenty-five mining companies that were listed between 2011 and 2013 on the Indonesia Stock Exchange (IDX) and that disclosed social responsibility information in their annual reports comprise the sample. Purposive sampling was the method used to choose the sample. The findings show that BCQ significantly affects CSRD. SIZE, AGE, PRO, and ACQ, however, were found to have no bearing on CSRD. The focus, variables, methods, theoretical framework, and context of the two researches are different. The goal of the current study is to give a more thorough understanding of how organization size modifies the relationship between financial sustainability and management control systems in microfinance.

The study by Lin et al. (2019) provided evidence on the impact of firm size on corporate financial performance in the automotive sector. The dynamic link between the GIS and the CFP in respect to Company size was ascertained by the investigation. In order to achieve this, the study gathered information from the CSRHub database for 163 global automakers from 2011 to 2017. The dynamic panel data system was employed in the study to estimate this link. The empirical findings showed that the GIS had a favorable impact on the CFP. Additionally, the study also found that the negative association between the GIS and the CFP was reduced by the firm size. Smaller businesses were more

likely to seek out variation and visibility in order to gain access to superior resources, as seen by the higher returns on green innovation investments that they displayed compared to bigger businesses. While the current study used regression analysis, Lin et al. (2019) used a dynamic panel data method to estimate the association. Notably, by enabling the assessment of the link between these variables across time, the dynamic panel data system improves the analysis of business size and financial performance. Because it can account for potential changes in Company size and financial performance over time and represent the dynamic character of these interactions, this technique is especially helpful when evaluating the relationship between firm size and financial performance.

2.4 Research Gap

The management control system is a common internal control system component employed by many of the researchers in the articles presented in the literature review (Kipyego and Naibei, 2017; Dessalegn, 2018; Kisanyanya, 2018; Umar and Dikko, 2018; Amaka, 2012). Information and communication were also employed by Kariuki (2017), Mensah (2016), and finally Kimotho (2015) who also used one component, risk assessment. In accordance with the study's goals, the researcher used the four management control system components. Other academics have employed correlation design, although in fields other than banking. Most studies in this field have examined Kenya's commercial banks' performance from a broad perspective. These researchers include Muthusi (2017), Kariuki (2017), and Mwangi (2014), all whose study perspectives were as broad as they claimed. The study was limited to specific authorized MFBs in Kenya by the researcher. To clearly show the relationship, cause, and effect between the studied variables, the researcher used causal and correlational designs as the research approach.

The review of the literature shows how little is known about the impact of management control systems on long-term financial viability. The strength and significance of the relationships between each component of the management control system and the capacity to maintain financial viability, as well as the relationships between each component and the capacity to maintain financial viability, are other objectives of this study. These are two subjects that have not been sufficiently discussed in the literature review. The findings of this investigation broadened our knowledge in these domains.

2.5 Summary of the Literature Review

Many of the studies that are being reviewed show how management control systems are connected to and affect the financial stability of authorized MFBs. The literature review identifies the critical elements that impact the authorized MFBs financial viability in relation to management control

systems. The literature reviewed for this study focuses on three areas: the impact of planning control, organizational culture control, cybernetics control, and administrative control on financial sustainability.

Table 2.1: Summary of gaps in literature

Author (year)	Topic	Results	Research gap	Contribution of the current study
Dessalegn (2018)	Omo Microfinance banks' (OMFB) capacity to sustain itself financially	The study results indicated that all the variables except saving pointed deficient financial sustainability	There was a contextual gap, which focused only on one microfinance institution making it difficult for generalization purposes	The current study expanded the scope to encompass different deposit taking microfinance banks
Kisanyanya (2018)	The impact of internal control techniques on public universities' financial stability	The institutions had adequate and effective control measures in place to prevent excessive allocation of finances.	There was a methodological gap, whereby that study included all the factors influencing internal audit with no elaborate analysis on how the individual factors influence financial sustainability.	The current study focuses on management control system as a major factor.
Adetula et al. (2016)	An assessment of Nigerian higher education institutions'	The results revealed adequate positioning of many internal	The institutions' internal audit departments were found not	To close the gap, the current study made use of

Author (year)	Topic	Results	Research gap	Contribution of the current study
	management control systems	control system components.	independent revealing a methodological gap.	the explanatory research design.
Said et al. (2019)	Analysis of the four Islamic SACCOS in Tanzania for financial viability	There is a direct correlation between ROA and financial sustainability	There was a contextual gap since the study only used the independence of the control system as independent variables. Also lack of a control variable	There was the use of the management only control system components as the independent variable.
Joseph and Kibera (2019)	Organizational culture's impact on Kenya's microfinance banks' performance	The results demonstrate that performance outside of the market is strongly impacted by organizational culture. Long-term sustainability and financial independence are fostered by the organizational culture.	Conceptually, it is challenging to state categorically the type and degree of influence organizational culture has on performance without several evidence across various contexts and over time. This revealed a conceptual gap.	It is key that management control system considers all aspects of culture to ensure proper management and organization operations in the market.

Author (year)	Topic	Results	Research gap	Contribution of the current study
Amaka (2012)	The effect of internal control systems on an organization's financial management	Financial management of any organization cannot do without internal control	The study only considered the rising interest in local government internal audits serving as the study's driving force but not control environment.	The current study considered all aspects of control environment as the driving force for financial sustainability.
Masanja (2018)	The effect of internal control flaws on some local government authority's financial performance in the district of Arumeru	Poor compensation, insufficient fraud control and prevention, undetected misbehavior, impunity, and organizational financial performance were all statistically significantly correlated.	The major gap was conceptual because the challenges outlined were statistically insignificant.	The use of relevant data for control environment promoted more accurate findings on financial sustainability.
Urquia (2018)	The connection between financial performance and internal control systems.	There is a substantial correlation between internal control systems and financial success, and	The study focused only on selected institutions of learning revealing a contextual gap.	The information in the current study covers a wide range of financial institutions and

Author (year)	Topic	Results	Research gap	Contribution of the current study
		internal control systems do operate, albeit with occasional glitches.		the relationship between financial sustainability and management control systems.
Naibei and Kipyego (2017)	The impact of internal accounting control systems on improving banking organizations' performance.	The effectiveness of banks and their internal accounting control system were significantly correlated. Performances in the bank increase as a result of an efficient internal check.	The results of the study were confined to Kericho County, revealing a contextual gap.	In order to provide more targeted findings, the current study focuses on how management control systems affect the financial stability of microfinance firms.
Ejoh and Ejom (2014)	The connection between financial performance and internal control measures in Nigerian tertiary institutions.	The analysis discovered that the roles in the finance and accounting departments of the organizations are clearly defined. Moreover, no	There is a conceptual gap in the study since integrity and ethical ideals were not highlighted as some of the main contributions of internal control.	The current study incorporates the aspects of independence and integrity as key elements of control environment.

Author (year)	Topic	Results	Research gap	Contribution of the current study
		meaningful correlation has been observed between the financial performance and internal control operations.		

2.6 Conceptual Framework

The term "conceptual framework" refers to a visual representation of the subject matter and the assumed correlations between the variables. Researchers measure the independent variable to ascertain how it relates to the dependent variable (Curtis et al., 2016). Financial sustainability was the dependent variable in this study, with the independent variables being organization culture controls, planning controls, administrative controls, and cybernetics controls with Company size being the moderating variable.

The conceptual framework for this study is grounded in the Resource-Based View (RBV) and Contingency Theory, which together provide a robust theoretical foundation for examining the relationships among the study variables. RBV posits that internal resources-such as planning management, administrative controls, organizational culture, and cybernetics controls-are strategic assets that can drive financial sustainability when effectively harnessed within microfinance banks. Contingency Theory complements this by asserting that the effectiveness of these management control systems is not universal but depends on contextual factors, particularly firm size, which may moderate their impact on financial sustainability. Thus, the framework illustrates how the independent variables (management control systems) influence the dependent variable (financial sustainability), with firm size acting as a moderating variable, reflecting the interplay between internal capabilities and organizational context as explained by the underpinning theories.

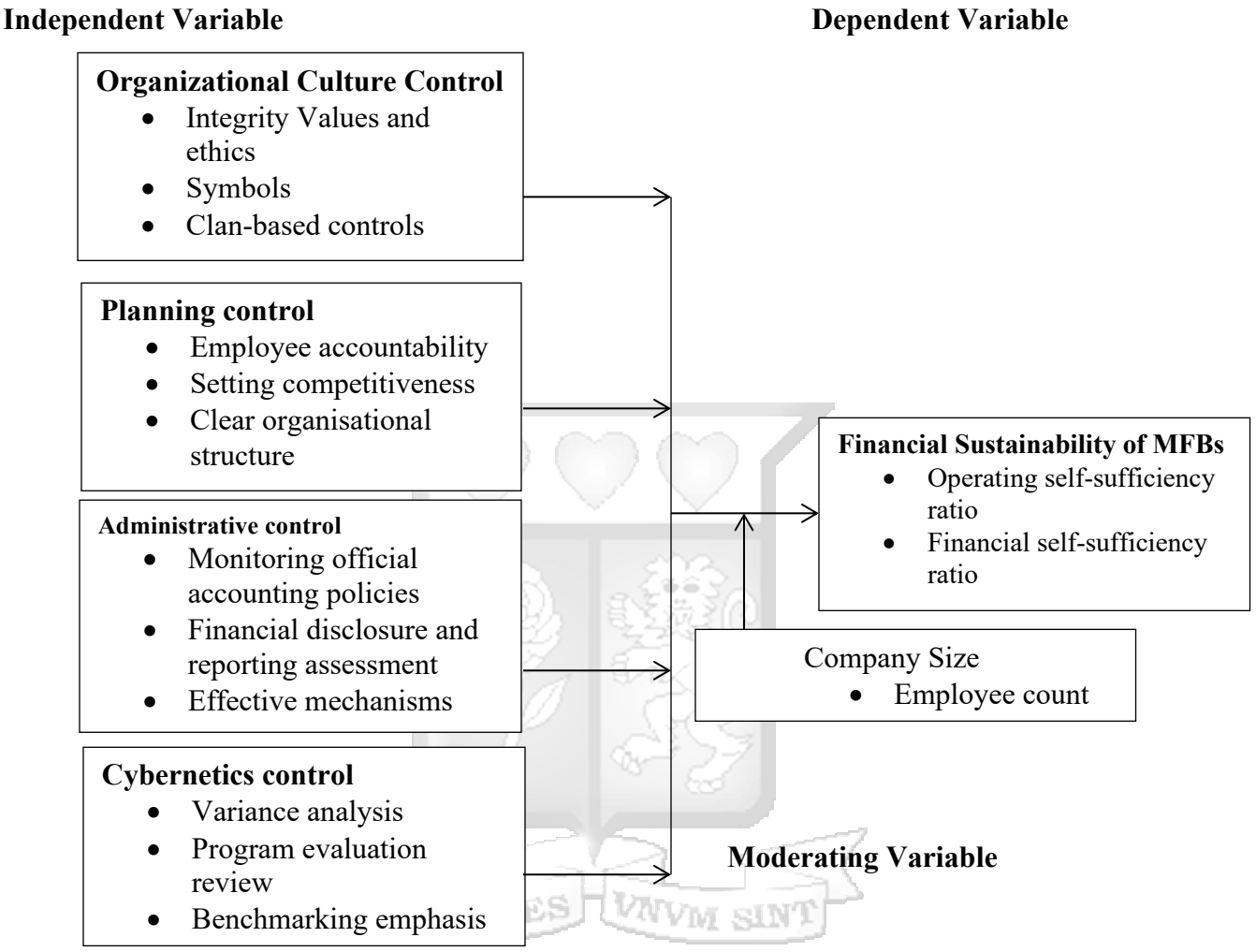

Figure 2.1: Conceptual Framework Model (Source: Author, 2024)

2.6.1 Operationalization of the Variables

2.6.1.1. Planning control

This was one of the independent variables, and methods like techniques, rules, guidelines, policies, and procedures were used to help ensure that managers act to lower risks (Malmi and Brown, 2008). Policy, rule, procedure, guidelines, physical controls, and task segregation were all included as control activities in this study. The Human Resources department clearly discloses the terms of employment, including how much professional progress is expected of the employee (Akinleye & Kolawole, 2020).

Further, the policies and practices as applicable in this study facilitate decision-making on numerous company issues more quickly. A clear and effective organizational structure, as well as the establishment of competition, high standards, and achievement throughout the MCS planning process, are some of the metrics that were used to assess the degree of planning.

2.6.1.2. Organization culture Control

In this study, organization culture as an independent variable was applicable within the workplace context (Akinleye & Kolawole, 2020). Organizational culture in this study entailed an organization's expectations, experiences, philosophy, as well as the values that guide financial management in relation to individual behavior, and is expressed in member self-image, inner workings, interactions with the outside world, and future expectations (Malmi and Brown, 2008). Culture is based on shared attitudes, beliefs, customs, and written and unwritten rules that have been developed over time and are considered valid. Some of the measures entail the degree to which fidelity, shared commitment, and achievement of common goals hold the organization together.

2.6.1.3. Administrative control

This is one of the independent variables of the study and entails an organization's board of directors committee in charge of monitoring the financial reporting procedure (Malmi & Brown, 2008). The body oversee the organization's internal control system, the audit process, the financial reporting process, and compliance with legal and regulatory requirements (Akinleye & Kolawole, 2020). The measures entailed oversight of regulatory compliance, monitoring accounting policies, financial disclosure and reporting assessment. Based on the pattern of shareholding displayed in public financial statements of sample businesses, the audit committee's value is determined by considering the percentage of the company's stock owned by directors who serve as audit committee members along with their immediate family members who serve on the board.

2.6.1.4. Cybernetics Control

For the purpose of explaining and demonstrating sustainable development goals to employees in a way that is understandable and comparative, it can be extremely helpful to be able to translate them into figures or quantifiable indicators (Malmi & Brown, 2008). The complexity of sustainability makes it difficult to translate into quantifiable indicators and traditional performance metrics are frequently insufficient for monitoring sustainable development (Malmi & Brown, 2008). This makes it a difficult

task. Traditional metrics were developed to assess financial losses and gains, but the metrics required to monitor sustainability must be able to measure something more ephemeral, namely value.

To make sure that all managers and employees are working towards goals and objectives that are current and in alignment with the overall strategy, it is crucial to regularly align the performance measurements with the corporate strategy. Materiality is one of the most well-known metrics that have been developed to gauge worth. According to the International Integrated Reporting Council (2013), Businesses use the concept of materiality to sort through potential benefits and the importance of an investment to different stakeholders when deciding which investments to make. It considers both quantitative and qualitative components of the company's financial, operational, strategic, and reputational views over the long and short terms, and it focuses on identifying, evaluating, and prioritizing issues that are relevant to the business (IIRC, 2013). Thus, determining materiality for a firm is an inherently subjective process that can result in a variety of results based on the values and views of the person doing the calculation. A three-item scale measuring the weight given to variance analysis, programme assessment review, and benchmarking (quality, cost, practices, and procedures) was used to assess Cybernetic MCS.

2.6.1.5 Moderating variable: Company size

Company size was included in this study as a moderating variable, and its effects, along with other context-related factors like technology and strategy, were taken into consideration (Lin et al., 2019). Many factors can be used to determine size, such as earnings, sales volume, assets, share value, and workforce. However, the majority of MCS studies that used contingencies did so by defining and measuring size as the number of employees. Depending on the context and MCS dimensions being researched, a precise size measurement may be crucial. The standards of accounting law are used to measure firm size in this study. This law classifies firms into three categories: small, medium, and large, based on total assets, revenues, and average annual worker count.

Company size is considered a moderating variable because it influences the strength of the relationship between independent variables (such as management controls, profitability, or investment opportunities) and the dependent variable (like financial sustainability or firm value). In other words, company size does not directly cause changes in financial outcomes but affects how other factors impact those outcomes. For example, larger firms often have more resources, established processes,

and market power, which can amplify or dampen the effects of management controls or financial policies. Studies have shown that the positive impact of certain variables (e.g., investment opportunity set, profitability, or managerial ownership) on firm performance or value can be weaker or stronger depending on the size of the company. Larger companies may experience diminishing returns from some controls or policies due to complexity and bureaucracy, while smaller firms might be more sensitive to such factors.

Empirical research supports this moderating role of company size across various contexts. For instance, in construction firms, company size was found to weaken the positive effect of investment opportunities and profitability on firm value, indicating that as firms grow, these relationships change in magnitude. Similarly, in corporate governance studies, firm size strengthened the influence of managerial and institutional ownership on earnings quality. These examples illustrate that company size shapes how internal and external factors translate into financial performance.

Therefore, in this study, company size is modeled as a moderator to capture these nuanced effects. By including interaction terms between company size and other predictors, it is possible to assess whether the impact of management control systems on financial sustainability varies across firms of different sizes. This approach provides a deeper understanding of organizational dynamics and helps tailor strategies that consider firm scale.

2.6.1.6. Dependent variable: Financial sustainability

The MFB's ability to sustain and grow its services without needing constant inflows of subsidies is referred to as its financial sustainability (Akinleye & Kolawole, 2020). Financial sustainability can be measured on two different levels. Upon reaching operational self-sustainability (OSS), a lesser degree of success is attained by the MFB. This is when operating income is sufficient to pay for ongoing expenses including salaries and wages, supplies, loan losses, and other administrative costs. A higher criterion is financial self-sustainability (FSS), which denotes that the MFB may also pay for the costs of funds and other types of subsidies when they are priced at market values. Reaching this level is crucial because it shows that even if all subsidies were cut, the MFB would still be profitable. Yet, this does not always guarantee institutional viability over the long run. MFBs must keep accurate financial records and adhere to accepted accounting principles that offer complete transparency for revenue, costs, loan recovery, and any losses in order to measure financial sustainability. This requirement is

not met by many MFBs. The most commonly used measures of profitability and sustainability are operational and financial self-sufficiency, adjusted return on equity, and adjusted return on assets.

Table 2.2: Operationalization of variables

Variable	Category	Indicators	Metrics	Supporting Literature	Labels
Financial Sustainability	Dependent variable	Good financial accounts and practices	• Operating self-sufficiency ratio • Financial self-sufficiency ratio	Akinleye & Kolawole (2020)	Ratio Scale
Administrative Control	Independent variable	Management influence on employees	• Implemented Policies and Procedures	Malmi and Brown (2008) Akinleye & Kolawole (2020)	Ordinal
Planning Control	Independent variable	Clear goals	• Employee assuming accountability	Akinleye & Kolawole (2020)	Ordinal
Cybernetics Control	Independent variable	• Materiality • Financial costs	• Feedback loops	IIRC (2013) Malmi and Brown, (2008)	Ordinal
Organization culture Control	Independent variable	• Leadership behaviors • Organizational practices • Communication channels	• Adaptability	Malmi and Brown (2008) Akinleye & Kolawole (2020)	Ordinal
Company size	Independent variable	• Number of employees	• Total assets, revenues and average number of employees annually.	Lin et al. (2019)	Ordinal

2.6.2 Hypothesis development

Determining important factors and constructs associated with financial sustainability and management control systems was the first step in the process of formulating hypotheses on this topic. First required identifying the critical variables pertaining to Financial Sustainability (financial performance, support, and sustainable existence of organizations), especially in the context of microfinance banks, and Management Control Systems (associated to the development, execution, and efficacy of management control systems within organizations). Second, research on the relationship between management control systems and financial sustainability was reviewed, considering variables including performance measurement systems, internal controls, and strategic management techniques. Furthermore, as sustainable practices might affect financial performance, the relationship between sustainability reporting and management control systems was investigated.

Alternative Hypothesis (H1) states that MFBs financial sustainability is positively impacted by efficient management control systems.

Hypothesis Development for Planning Control and Financial Sustainability of Microfinance Banks in Kenya

The role of planning control in enhancing the financial sustainability of microfinance banks in Kenya is critical, given the dynamic and often challenging operating environment these institutions face. Planning control involves setting objectives, developing strategies, allocating resources, and monitoring progress to ensure that organizational goals are met effectively and efficiently. According to Mutonyi (2003) and Kahindi (2006), strategic planning within Kenyan microfinance institutions is still evolving, with challenges such as inadequate resources, limited top management involvement, and resistance to change hindering effective implementation. Despite these challenges, effective planning control is essential for microfinance banks to navigate external uncertainties, optimize resource use, and improve financial outcomes. Internal controls, including planning control, have been shown to significantly impact financial performance in microfinance institutions (International Academic Journal of Economics and Finance, 2014). Proper planning control ensures that institutions can anticipate risks, align operations with strategic goals, and maintain financial discipline, all of which contribute to sustainability. Conversely, poor planning may lead to inefficiencies, misallocation of resources, and financial instability.

Based on this background, the following hypotheses are proposed:

Null Hypothesis (H01): Planning control function has no significant effect on the financial sustainability of Microfinance Banks in Kenya.
Alternative Hypothesis (HA1): Planning control function has a significant effect on the financial sustainability of Microfinance Banks in Kenya.

Organizational Culture Control and Financial Sustainability of Microfinance Banks in Kenya

The influence of organizational culture on the financial sustainability of microfinance banks in Kenya has been widely recognized in recent studies. Organizational culture encompasses the shared values, beliefs, norms, and practices that shape employee behavior and decision-making within an institution. Research indicates that a positive and adaptive organizational culture can enhance performance by fostering commitment, improving communication, and facilitating effective strategy implementation (Mwiti, 2022).

For example, studies on commercial banks in Kenya have found that various cultural types-such as adhocracy, clan, hierarchy, and market cultures-have significant positive effects on organizational performance (Mugwika & Kavale, 2022). Similarly, research on microfinance institutions highlights that internal organizational factors, including culture, significantly influence performance outcomes (Mwiti, 2022). A strong organizational culture aligns employees with institutional goals, promotes innovation, and supports resilience in a competitive and volatile business environment.
Given this background, the following hypotheses are proposed to test the effect of organizational culture control on financial sustainability in Kenyan microfinance banks:

Null Hypothesis (H02): Organizational culture control has no significant effect on the financial sustainability of Microfinance Banks in Kenya.
Alternative Hypothesis (HA2): Organizational culture control has a significant effect on the financial sustainability of Microfinance Banks in Kenya.

Administrative Control and Financial Sustainability of Microfinance Banks in Kenya

Administrative control refers to the policies, procedures, and processes that govern the day-to-day operations of an institution to ensure efficiency, compliance, and accountability. In the context of microfinance banks in Kenya, effective administrative controls are crucial for safeguarding resources,

preventing fraud, and ensuring that financial activities align with regulatory requirements and organizational goals.

Empirical evidence highlights the significant role of internal controls-including administrative controls-in enhancing financial performance. For example, a study published in the International Academic Journal of Economics and Finance (2014) found that segregation of duties, authorization and approval of accounting transactions, and internal audit functions positively affect the financial performance of microfinance institutions in Kenya. Proper administrative controls reduce risks of misappropriation and operational inefficiencies, thereby contributing to financial sustainability.

Furthermore, regulatory frameworks established by the Central Bank of Kenya (CBK) impose stringent administrative requirements on microfinance banks to ensure prudential management and protect depositors' interests. Compliance with these regulations through robust administrative controls supports institutional stability and sustainability. In the end, the research hypothesis was put forth as follows:

Null Hypothesis (H03): Administrative control has no significant effect on the financial sustainability of Microfinance Banks in Kenya.
Alternative Hypothesis (HA3): Administrative control has a significant effect on the financial sustainability of Microfinance Banks in Kenya.

Cybernetic Control and Financial Sustainability of Microfinance Banks in Kenya

Cybernetic control refers to the systems and processes used by organizations to monitor performance, provide feedback, and adjust ensure that objectives are met effectively. In the context of microfinance banks in Kenya, cybernetic controls often include digital monitoring tools, cybersecurity measures, and real-time data analytics that help institutions manage risks, enhance operational efficiency, and safeguard financial assets. The increasing reliance of microfinance institutions (MFIs) on digital platforms for transactions and customer engagement has heightened their vulnerability to cyber threats such as data breaches, phishing, and ransomware attacks (Odhiambo, 2018). According to the Association of Microfinance Institutions Kenya (AMFI-K), enhancing cyber resilience through comprehensive cybersecurity training and resource allocation is critical for protecting client data and maintaining trust. The Central Bank of Kenya (CBK) also identifies cyber risk as a top concern for innovation in banking, with 71% of microfinance banks acknowledging it as a major threat (CBK

Report, 2023). Studies further show that management support, resource availability, and regulatory frameworks significantly influence the cyber resilience of MFIs, which in turn affects their operational stability and financial sustainability.

Given this context, cybernetic control plays a vital role in ensuring that microfinance banks can detect, respond to, and recover from cyber incidents, thereby safeguarding their financial health and sustainability. Effective cybernetic control systems enable continuous monitoring and timely corrective actions, which are essential for maintaining service continuity and customer confidence. Based on this understanding, the following hypotheses are proposed:

Null Hypothesis (H04): Cybernetic control has no significant effect on the financial sustainability of Microfinance Banks in Kenya.
Alternative Hypothesis (HA4): Cybernetic control has a significant effect on the financial sustainability of Microfinance Banks in Kenya.

Company size is posited to have a significant moderating effect on the relationship between management control systems and financial sustainability of Microfinance Banks in Kenya. Larger firms typically possess more resources, sophisticated infrastructures, and greater capacity to implement and benefit from management controls effectively, as suggested by the Resource-Based View and Contingency theories. Empirical studies in Kenya support this assertion; for instance, research by Ishmail et al. (2023) found that firm size significantly moderates the relationship between credit risk and financial performance of microfinance banks, with larger institutions better positioned to manage risks and sustain profitability. Similarly, studies on corporate governance and market risk in Kenyan microfinance institutions have demonstrated that firm size enhances the strength of these relationships, improving financial outcomes. Therefore, the hypothesis was developed as follows:

Alternative hypothesis (HA5): Company size significantly moderates how management control systems influence financial sustainability in Kenyan microfinance banks.
Null hypothesis (H05): Company size has no significant moderating effect on how management control systems influence financial sustainability in Kenyan microfinance banks.

2.7 Chapter Summary

The review of the literature on the impact of management control systems on the financial sustainability of MFBs emphasizes the importance of effective management control systems in maintaining these institutions' long-term financial viability. The study is based on a number of researches that looked at the connection between financial sustainability in microfinance organizations and management control systems. The study's theoretical foundation is based on the contingency and RBV theories. Further, the conceptual review as well as critique of the previous literature is also provided in this section.

This includes the summary of research gaps as well as operationalization of the study variables.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

Information about the research methods utilized for data collection, analysis, and presentation is provided in this section. It covers the design of the study, the environment, the participants, the sampling plan, the sample size, the research instruments, the piloting process, the data collection techniques, the ethical issues, and the data processing procedures.

3.2 Research Philosophy

Several research philosophies guide the approach to scientific inquiry (Ali, 2024). Interpretivism emphasizes understanding social phenomena from the perspectives of those involved, often using qualitative methods to explore meanings, experiences, and context-specific realities. Pragmatism adopts a flexible approach, focusing on practical solutions and using mixed methods to address research questions based on what works best in a given context. Critical realism seeks to uncover underlying structures and mechanisms that shape observable events, blending both qualitative and quantitative techniques. In contrast, positivism is rooted in the belief that reality is objective and can be measured through empirical observation and statistical analysis. This philosophy relies on quantifiable data, hypothesis testing, and generalizable findings. Given the study's aim to objectively examine the relationships between management control systems, firm size, and financial sustainability using structured questionnaires and statistical analysis, the positivist philosophy was deemed most appropriate (Ali, 2024).

This study utilized an epistemological research methodology that informed the positivist paradigm (Tamminen & Poucher, 2020). Goundar (2012) define epistemology as the theory of the process of knowing that exists to expand this into a set of reality, how what already exists may be known, and what criteria must be satisfied for anything to be referred to as knowledge.

The positivist approach was used for this investigation in accordance with the philosophical premise for a number of reasons (Ali, 2024). The primary justification is that it works with the quantitative research strategy employed in this study. The ideas from quantitative research must also be combined with a strategy and philosophy to provide a workable solution. Consequently, this study employed the quantitative research technique because it makes it simple and broad for the researcher to examine, interpret, and evaluate statistical data.

The research methodology for this study was built on the positivist paradigm (Goundar, 2012). The positivist research paradigm is founded on the ideas that theory should come before facts and that statistical evidence from testable hypotheses should support conclusions. Because it enables the reporting of findings as they are observed and the explanation of the new knowledge gained from the investigation, the positivist paradigm with an element of epistemology was used in this study. Through factual observation and data quality evaluation from the insurance businesses where the generalization about their performance is generated, the study's research philosophy seeks to ascertain the truth about the internal audit performance (Cohen et al., 2011).

3.3 Research design

Research design is the process of setting up conditions for data collection and analysis with the goal of balancing methodological efficiency with relevance to the study's purpose (Kothari, 2017). Research design determines the overall strategy for integrating the different components of a study. Descriptive designs focus on systematically describing characteristics or functions of a phenomenon without investigating causal relationships. Exploratory designs are used when little is known about a topic, aiming to generate insights, new ideas, or hypotheses for further research, often using qualitative methods. Case study designs provide in-depth analysis of a single unit or a small number of cases, offering rich contextual understanding but limited generalizability. Explanatory (or causal) designs, on the other hand, are used to determine cause-and-effect relationships between variables, typically employing quantitative data and statistical techniques (Kothari, 2017). Since the objective of this study was to assess the causal influence of management control systems and firm size on the financial sustainability of microfinance banks, an explanatory research design was selected as the most suitable approach.

The research used an explanatory research approach, which entails gathering information that responds to the research questions. Explanatory design investigates the causes of events when there is limited information available (Pandey & Pandey, 2021). The design was important in this study since it helped with understanding the subject matter, how or why the process happens, and creating projections for the future.

3.4 Population and Sampling

The population of the study were all microfinance banking institutions in Kenya with headquarters in Nairobi. According to the Central Bank of Kenya Supervision Annual Report (2023), there are fourteen MFBs in Kenya. The research thus carried out a census of the 14 institutions. The study targeted CEOs, Finance department, Risk department, Legal department, IT department, Credit

department and operations department managers from MFBs in Kenya. The management team who works in the institutions and are directly in charge of the various departments were the respondents and served as the unit of analysis. On the other hand, the unit of observation comprised of the fourteen MFBs institutions.

3.5 Sampling Procedure

The process of choosing a representative sample from the target population is known as sampling (Cooper & Schindler, 2014). The sample size for the study was chosen using proportionate stratified random sampling technique across all the departments from various MFBs (Table 3.1). Because of the small number of expected respondents, the study thus used census methodology.

Table 3.1: Sample population

MFBs	CEOs	Finance Dept.	Risk Dept.	Credit Dept.	Operations Dept.	Legal Dept.	IT dept.	
LOLC	1	2	2	2	2	2	2	
Faulu	1	2	2	2	2	2	2	
KWFT	1	2	2	2	2	2	2	
SMEP	1	2	2	2	2	2	2	
Rafiki	1	2	2	2	2	2	2	
Salaam	1	2	2	2	2	2	2	
Branch	1	2	2	2	2	2	2	
SUMAC	1	2	2	2	2	2	2	
On It	1	2	2	2	2	2	2	
U&I	1	2	2	2	2	2	2	
Umba	1	2	2	2	2	2	2	
Caritas	1	2	2	2	2	2	2	
Choice	1	2	2	2	2	2	2	
Muungano	1	2	2	2	2	2	2	
TOTAL	14	28	28	28	28	28	28	182

Source: (Author, 2024)

3.6 Data collection method

This study used primary data which was collected by use of questionnaire instruments (Cooper & Schindler, 2014). Particularly, semi structured questionnaires were administered to 182 respondents from the fourteen licensed microfinance banks (MFBs) in Nairobi Kenya. This approach empowered the gathering of quantitative data and provided an opportunity to outline and analyze how management control systems affect financial sustainability in these institutions. Through questionnaires, the research was in a position to gather the opinion of the main managerial human capital, thereby contributing to the findings of the research, by considering the current real experience of the MFB.

The data collected were then subjected to regression analysis with a view of establishing the correlation between different categories of management controls and financial sustainability.

3.6.1 Data collection Instruments

The research instrument for this study was a semi-structured questionnaire that was created using a Likert scale since it asks respondents to rate how much or how strongly they agree or disagree with each statement that is made about each construct. The options vary from lowest to maximum scores, which are 1 to 5, according to this kind of grading scale. Strongly disagree (SD) equals 1, severely disagree (D) equals 2, disagree (N) equals 3, agree (A) equals 4, and strongly agree (SA) equals 5**.**

3.7 Data Analysis

Data analysis was done by use of Statistical Package for the Social Sciences (SPSS version 26) statistical software where both descriptive and inferential statistics were applicable (Cooper & Schindler, 2014). Inferential statistical tools include the correlation and regression analysis models which were used to assess the relationship between the variables. The study used linear regression to test the hypothesis and examined the immediate effects of management control system on financial sustainability. This is how the model is written:

The regression model: $Y = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 \ldots + e$……(i)

Y – Financial sustainability

X_1 – Planning control

X_2 – Organization culture control

X_3 – Administrative control

X_4 – Cybernetics control

The dependent variable is represented by the financial sustainability. Planning, cybernetics, administrative, and cultural controls are the key explanatory variables. The coefficients of MCS variables are expected to differ amongst the four systems, supporting the theory. A control variable was included in the study that is said to be able to affect how management control systems affect financial sustainability. Participants were prompted to indicate the size of their firm based on either annual income or operating costs.

The modified equation incorporating the moderation variable *Z* (where *Z* interacts with *X*1) is:

$$Y=\alpha+\beta_1 X1+\beta_2 X_2+\beta_3 X_3+\beta_4 X_4+\beta_5 Z+\beta_6 (X_1 \cdot Z)\ldots. +e \text{…….(ii)}$$

Explanation of Terms:

Y - Dependent variable

X1, X2, X3, X4…-Independent variables

Z -Moderator variable

(X1·Z) -Interaction term representing the moderation effect

e - Error term

α,βi - Coefficients to be estimated

3.7.1 Diagnostic Tests

Multicollinearity and normality tests were performed in this study (Cooper & Schindler, 2014). Through the application of the Shapiro-Wilk test of residuals, the assumption of normality is assessed in order to determine the likelihood that the data set was distributed normally. In the study model, multiple correlation indicates that at least two probing variables are closely connected, and multicollinearity testing was conducted using the Variance Inflation Factors (VIF). According to the homogeneity assumption, the normal P-P plot was useful for homogeneity testing and the fallacies of term weaknesses should be comparable for the values of the independent variables.

3.7.2 Moderation Regression model Analysis

In this study, hierarchical regression analysis was employed to examine the moderating effect of organization size on the relationship between Independent Variable and Dependent Variable. Interaction terms was included in the regression model to assess whether company size significantly alters this relationship. Modified regression analysis was used to address specific objective five by determining the moderating effect of organization size on the link between management control systems and financial sustainability. According to Troy et al. (2008), the model for moderator analysis is not additive, in contrast to previous regression models. As a result, the model's coefficients are interpreted using un-standardized coefficients as opposed to standardized coefficients (Whisman and Mc Clelland, 2005). Moderator analysis was employed to determine the relationship between the explanatory factors.

The possibility of multicollinearity in regression coefficient estimation can occur due to the multiplicative components of moderated regression analyses (MRA) having a high correlation with their constituents. The solution to this problem was found in mean centering, a method that has been demonstrated to lessen multicollinearity in multiplicative regression models (Howell, 2007). In order to do this, interaction terms had to be calculated before centering all the variables.

A moderated regression analysis was performed by regressing the independent variable, the potential moderating variable, and the cross-product interaction term that exists between the prospective

moderating variable and the independent variable against each other. If the cross-product interaction parameter generates a significant change in the R-square value, the moderating variable is recognized as having a significant impact on the development of the association between financial sustainability and the criterion variable. To avoid multicollinearity in a multiplicative regression model, mean centering was employed to ensure that all construct measures were mean centered before calculating interaction terms.

3.8 Research Quality

3.8.1 Reliability

How regularly a procedure analyses something is referred to as its reliability. The measurement is deemed to be reliable if the same result can be consistently obtained using the same procedures under the same conditions. The internal reliability of the questionnaire's questions was assessed using the Cronbach Alpha reliability coefficient. When moves closer to 1.0 of the scale's elements, a stronger internal consistency is demonstrated in this situation (Venkatesh et al, 2016). Cronbach demonstrates both the consistency and degree of changeable reliability. When the instrument passes the reliability test with an alpha value of 0.7 or higher, it is deemed to be acceptable and dependable.

3.8.2 Validity

When a measure is said to be valid, it means that its findings fairly represent the variable for which it was intended. In the study, both concept and content validity were applicable. While content validity refers to the instrument's ability to successfully cover all the material that it should with relation to the variable, construct validity is the capacity to infer test results from the concept that is the subject of the study. With the supervisor's support, content validity in this study was guaranteed (Cooper & Schindler, 2014).

3.9 Ethical Issues

Respondents received complete and accurate information about the study from the researcher so they may make an informed decision about participating or not. The researcher needed to uphold a strong level of confidentiality when handling the information provided by the respondents. The necessary institutions and authorities granted the researcher permission.

3.10 Chapter summary

The research approach employed in the study was summarized in this section. The chapter also described the research's philosophical foundation. The positivist research paradigm was applied in this

instance. Additionally, information about the explanatory research approach was given with the significance of reproducibility and transparency is emphasized. The design of the study, the rationale for the design decisions, and the procedures for gathering data through semi-structured questionnaires and doing statistical analysis with SPSS software were all covered in this section.

CHAPTER FOUR
PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The various statistical techniques used to examine the effect of management control system on the financial sustainability of licensed micro finance institutions in Kenya are discussed in this chapter. Descriptive and inferential statistics are used to display and analyze field data.

4.2 Response Rate

In the field data collection 156 of the 182 expected respondents were able to complete and return the questionnaires, yielding an 86% response rate. Since Sekaran (2016) claims that any response rate above 75% is considered to be optimum, the response rate was thought to be satisfactory. This indicates that the response rate was quite good. According to Roscoe's rule of thumb, a sample size between 30 and 500 is generally suitable for behavioral studies, but the exact required sample size depends on the number of variables being analyzed (Low et al., 2025). Larger numbers of variables require larger sample sizes to ensure sufficient statistical power and stable estimates in multivariate analyses such as regression or structural equation modeling.

Table 4.1 Reliability Statistics

Variables	Reliability Statistics	
	Cronbach's Alpha	N of Items
Planning Control	.880	5
Organizational culture control	.873	4
Administrative control	.834	5
Cybernetics control	.788	4
Company size	.812	4

(Author, 2024)

The reliability statistics presented in Table 4.1 indicate that the various constructs measured exhibit strong internal consistency, as evidenced by their Cronbach's Alpha values. Specifically, "Planning Control" has the highest reliability at 0.880, followed closely by "Organizational Culture Control" at 0.873, both of which exceed the commonly accepted threshold of 0.70 for good reliability. "Administrative Control" also demonstrates acceptable reliability with a Cronbach's Alpha of 0.834. Meanwhile, "Cybernetics Control" has a slightly lower reliability at 0.788, yet still falls within an acceptable range. Lastly, "Company Size" shows a Cronbach's Alpha of 0.812, indicating it too is

reliable. Overall, these results suggest that the measurement scales used for these variables are consistent and dependable, enhancing the validity of subsequent analyses based on this data

4.3 Profile of the Respondents

The study aimed to ascertain the respondents' diverse profiles, including their gender, degree of education, and degree of staff training in the present MFBs. Table 4.1 displays the results on respondent demographics.

Table 4.1: Demographics of Respondents

Gender		
	Frequency	Percent
Female	71	45.5
Male	85	54.5
Total	156	100.0
Education Level		
Certificate/Diploma	70	44.9
Undergraduate	45	28.8
Master Degree	34	21.8
PhD	7	4.5
Total	156	100.0
Staff trained		
No	56	37.8
Yes	68	44.4
Neutral	32	20.5
Total	156	100.0

(Author, 2024)

Table 4.1 illustrates the gender distribution amongst the respondents, the males represented more than half of the sample (55%) while female were represented by (46%). When asked what level of education they had attained, the results illustrate that (44.9%) were Certificate/Diploma, (28.8%) of them had a Bachelor's degree, (23%) had a Master's degree (21.8%) and the least number of respondents (4.5%) had a Ph.D. This demonstrates that the majority of respondents in this study were educated, had a university degree as their highest level of education, and could provide the information necessary to thoroughly analyze the study objectives. Further, the results illustrated that majority of the staff were trained (44.4%).

4.4 Descriptive Statistics

The descriptive study results based on the variable's mean and standard deviation are presented in this section. The study's independent variables included administrative control, cybernetics control,

planning control, and organizational culture control. The MFBs financial sustainability was the outcome variable. Determining the impact of management control systems on the financial sustainability of microfinance bank was the main objective of the research. The results based on means and standard deviations calculated from replies provided on a 5-point Likert scale are shown in Table 4.2. The data gathered on this scale represented the degrees of agreement between the responses on the metrics employed. Specifically, the standard deviation quantifies the degree to which the responses depart from the true mean. In this case, a standard deviation of approximately one suggests that the participants' responses to the research questions on the questionnaire differed. Mean ratings that are closer to 1 denote a severe disagreement, whilst those that are closer to 5 indicate a strong agreement. Different levels of neutrality or agreement are indicated by mean scores ranging from 2 to 4. The table 4.5 shows that the mean for the variables used in the research ranged between 2 to 3 showing that participants had different levels of agreement with the measures of the variables. The individual mean, median and SD for each measure are shown in Appendix V.

Table 4.2: Composite Mean and Standard Deviation

	Mean	Std. Deviation	N	Likert score
Financial Sustainability	2.1506	.87145	156	Disagree to Neutral
Cybernetics controls	1.5353	.67229	156	Strongly disagree to disagree
Administrative controls	2.5615	1.13777	156	Disagree
Organization controls	3.0849	1.31630	156	Neutral to Agree
Planning control	2.9615	1.22871	156	Neutral

(Author, 2024)

The composite mean and standard deviation results presented in Table 4.2 provide insights into the perceptions of various control mechanisms and financial sustainability among the 156 respondents. The mean score for Financial Sustainability is 2.1506, indicating a generally low perception of financial health, as scores are below the midpoint of a typical Likert scale. In contrast, Cybernetics Controls received the lowest mean score of 1.5353, suggesting significant concerns or inadequacies in this area. Conversely, Organization Culture Controls has the highest mean at 3.0849, reflecting a more favorable view of organizational culture's effectiveness.

The standard deviations across the variables indicate varying levels of consensus among respondents. For instance, Administrative Controls (SD = 1.13777) and Organization Culture Controls (SD = 1.31630) show greater variability in responses, suggesting differing experiences or opinions on their effectiveness. In contrast, Cybernetics Controls has a lower standard deviation (SD = 0.67229), indicating more agreement among respondents regarding its perceived deficiencies. Overall, these findings highlight areas that may require targeted improvements, particularly in financial sustainability

and cybernetics controls, while also recognizing the strengths present in organizational culture controls.

Table 4.3: Descriptive Statistics

Table 4.3: Descriptive Findings: Summary of Responses

Variable	N	Mean	Likert Scale Interpretation	Std. Deviation
Responses on Planning control				
The practice of employee accountability in the institution has improved for the last five years	156	2.89	Neutral	1.39
All levels of competitiveness are clearly set	156	2.91	Neutral	1.53
There is a clear organizational structure	156	3.02	Neutral	1.52
The terms of employment are clearly disclosed for the financial department	156	3.01	Neutral	1.52
Determination of employee expectations for career advancement are clearly outlined	156	2.97	Neutral	1.52
Response on organizational culture control and financial sustainability				
Accountability on the part of the institution's staff has been influenced by integrity and ethical ideals	156	3.16	Neutral to Agree	1.42
Competence and dedication have impacted an institution's effectiveness in general	156	3.03	Neutral	1.49
The institution uses appropriate symbols that ensure transparent financial reporting	156	3.03	Neutral	1.51
The personnel are competent and have appropriate skills	156	3.13	Neutral to Agree	1.75
Response on administrative controls and financial sustainability				
The finances are used according to financial regulations and policies in the institution	156	2.93	Neutral	1.73
There is effectiveness in the monitoring of official accounting policies	156	3.37	Agree	1.80

Variable	N	Mean	Likert Scale Interpretation	Std. Deviation
There is financial transparency in the system reports at the MFI	156	3.39	Agree	1.79
Cybernetic Controls on the financial sustainability				
The financial reporting mechanism is effective and efficient	156	1.54	Strongly Disagree	0.77
Financial disclosure and reporting assessment is done frequently	156	1.58	Strongly Disagree	0.85
All the program evaluation undergo review annually	156	1.40	Strongly Disagree	0.70
Management and financial benchmarking emphasis are done frequently	156	1.73	Strongly Disagree	1.11
The operations of the MFI are done according to budgetary allocations	156	1.49	Strongly Disagree	0.81

(Author, 2024)

The descriptive statistics (Table 4.3) reveal varied perceptions among respondents regarding each of the items from each variable of the management control systems and financial sustainability practices within their microfinance institutions. Several items related to organizational structure, employee accountability, and competence received mean scores around 3.0, indicating a generally neutral stance. For example, respondents neither strongly agreed nor disagreed that employee accountability has improved over the last five years (mean = 2.89), and that organizational structures and employment terms are clearly defined (means around 3.0). This neutrality suggests that while these areas may be adequately managed, there is room for enhancement to foster stronger organizational clarity and accountability.

On the other hand, aspects related to financial reporting and monitoring showed more positive perceptions. Items such as the effectiveness of monitoring official accounting policies (mean = 3.37) and financial transparency in system reports (mean = 3.39) were rated closer to agreement, indicating that respondents perceive these controls as relatively well implemented. This reflects some confidence in the institutions' financial oversight mechanisms. However, several critical areas scored notably low,

with means ranging between 1.40 and 1.73, reflecting strong disagreement or dissatisfaction. These include the frequency of financial disclosure and reporting assessments, program evaluation reviews, benchmarking emphasis, budgetary adherence, and application of variance analysis. The low scores in these areas highlight significant weaknesses in the institutions' financial control and evaluation processes, which could undermine financial sustainability.

Furthermore, perceptions of overall financial management accountability, institutional stability, environmental proactiveness, and certainty of survival were generally negative or disagreeing (means between 1.76 and 2.38). This suggests concerns about the long-term viability and resilience of the institutions, emphasizing the need for stronger strategic and financial management practices. In summary, while some foundational controls such as organizational structure and financial transparency are perceived as adequate, the findings point to critical gaps in financial evaluation, reporting frequency, and strategic accountability.

4.4.1 The effect of planning control function on financial sustainability of Microfinance Banks in Kenya

The first objective comprised of six statements measuring planning control effect on financial sustainability of the Microfinance Banks. The results were as shown in Table 4.3. The scores on planning control and financial sustainability presented in Table 4.3 reveal important insights into respondents' perceptions. The mean scores indicate that respondents generally perceive planning control positively, with mean scores that fall within the "Neutral" range of the Likert scale (2.60–3.39) (See Lickert scale interpretation guide Appendix V). This aligns with empirical literature that emphasizes the critical role of effective planning in enhancing organizational performance and financial sustainability.

The responses related to planning control in the institution consistently yielded mean scores that fall within the "Neutral" range of the Likert scale (2.60–3.39) as aforementioned. Specifically, perceptions regarding improvement in employee accountability (mean = 2.89), clarity of competitiveness levels (mean = 2.91), existence of a clear organizational structure (mean = 3.02), disclosure of employment terms in the financial department (mean = 3.01), and clarity in outlining employee expectations for career advancement (mean = 2.97) all indicate a neutral stance among respondents. The standard deviations, ranging from 1.39 to 1.53, suggest a moderate spread of opinions but no strong consensus toward agreement or disagreement. This neutrality implies that respondents neither strongly endorse nor reject the effectiveness of planning control mechanisms within the institution.

This finding is consistent with previous studies that highlight the complexities and challenges organizations face in implementing effective planning controls. Overall, these results underscore the significance of robust planning mechanisms as highlighted in the literature, which posits that strong management control systems are essential for achieving financial sustainability, particularly in microfinance banks where accountability and transparency are increasingly demanded by stakeholders. The Mean score as shown in the table indicated that majority are fairly positive on the effects of the variable on the outcome. The agreement was on the issues that MFBs had improved on employee accountability. In this case, respondents also stated that the MFBs require a clear distinction on all levels of competitiveness with clarity on their organizational structures.

4.4.2 The effect of organizational culture control on financial sustainability of Microfinance Banks in Kenya

The study also sought to establish whether organizational culture control had effects on financial sustainability of Microfinance Banks. From the results in Table 4.3, it was evident that the corporate values and culture affects the level of financial sustainability of the MFBs in Kenya, since the majority were shown to agree with the statements used to measure the variable with mean scores (Agree- 2.8; Strongly agree – 4). The findings were as shown in Table 4.3.

For organizational culture control and its influence on financial sustainability, most mean scores also fall within the "Neutral" range (Lickert Scale Interpretation guide Appendix V). Staff accountability influenced by integrity and ethical ideals (mean = 3.16) and the competence and dedication impacting institutional effectiveness (mean = 3.03) both suggest a fairly neutral perception. The use of appropriate symbols for transparent financial reporting (mean = 3.03) also aligns with this neutrality. However, the perception of personnel competence and appropriate skills (mean = 3.13) and accountability influenced by integrity (mean = 3.16) are slightly higher, bordering on "Neutral to Agree." The standard deviations here (1.42–1.75) indicate some variability in responses, but overall, there is no strong agreement or disagreement on the effectiveness of organizational culture control in supporting financial sustainability

The neutral score indicates that some respondents are ambivalent about the relationship between organizational culture control and financial sustainability, reflecting a lack of consensus. The results suggest that while there is some acknowledgment of positive effects, there remains a significant proportion of respondents who may not fully endorse this view. This aligns with findings in Section 2.3.3 of this thesis, which emphasizes the importance of a supportive organizational culture in

enhancing financial sustainability in microfinance bank. The finding indicates that organizational culture can foster better management practices and accountability, ultimately contributing to improved financial outcomes.

4.4.3 The effect of the administrative controls on financial sustainability of Microfinance Banks in Kenya

The study further pursued to understand whether administrative controls affected the level of financial sustainability of Microfinance Banks in Kenya. The findings were as illustrated in Table 4.3.

The scores on administrative controls and financial sustainability presented in Table 4.3 provide valuable insights into respondents' perceptions. Administrative controls received a slightly more positive evaluation. The use of finances according to regulations (mean = 2.93) remains neutral, but the effectiveness in monitoring official accounting policies (mean = 3.37) and financial transparency in system reports (mean = 3.39) are at the upper end of the "Neutral" range, approaching "Agree." This suggests that respondents are somewhat more confident in the administrative controls related to financial sustainability, though not overwhelmingly so. This suggests a general consensus that administrative controls are perceived as beneficial. The higher mean score indicates that a significant proportion of respondents recognize the positive influence of administrative controls. The relatively high standard deviations (up to 1.80) reflect some diversity in opinion among respondents.

4.4.4 The effect of Cybernetic Controls on the financial sustainability of Microfinance Banks in Kenya

The researcher also evaluated the effect of Cybernetic controls on the financial sustainability of MFBs in Kenya. The results were as illustrated in Table 4.3. The scores on the effect of Cybernetic Controls on financial sustainability presented in Table 4.3 provide critical insights into respondents' perceptions. Cybernetic controls-such as the effectiveness and efficiency of financial reporting mechanisms, frequency of financial disclosure and reporting assessments, annual program evaluations, benchmarking, and adherence to budgetary allocations-received the lowest mean scores, all within the "Strongly Disagree" range (means between 1.40 and 1.73). Respondents indicated that these cybernetic control mechanisms are not effectively implemented in the institution. The low standard deviations (around 0.70–1.11) suggest strong consensus in this negative assessment.

The mean score for "Strongly Disagree" indicates that a notable proportion of respondents do not perceive Cybernetic Controls as detrimental to financial sustainability. Also, the mean score for

"Disagree" suggests that while some respondents may not fully endorse the effectiveness of these controls, they also do not strongly reject their potential benefits. The low mean score indicates a lack of consensus among respondents regarding the impact of Cybernetic Controls, suggesting uncertainty or indifference about their effectiveness.

4.4.5 Financial Sustainability

The indicator scores (Table 4.4) provided an all-encompassing perspective on the MFBs financial sustainability by evaluating their capacity to produce income, control costs, and sustain profitability over a period of five years (2019-2023). The MFBs utilised in this study appear to be neither highly sustainable nor extremely unsustainable, based on metrics. It suggests that while the MFBs are steady, they might eventually run into difficulties keeping their financial sustainability.

Table 4.4: Scores on the measures of financial sustainability

		Frequency	Percent
Valid	Very Low Sustainability OSS&FSS ratio <1	2	14.29
	Low Sustainability OSS&FSS ratio 0.5-0.8	5	35.71
	Moderate Sustainability OSS&FSS ratio 0.9-1	4	28.57
	High Sustainability OSS&FSS 1.1-1.5	1	7.14
	Very High Sustainability OSS &FSS >1.5	1	7.14
	Total	14	100.0

(Author, 2024)

Table 4.4 shows the frequency distribution of financial sustainability ratings of the licensed MFBs in Kenya, which presents a worrying sign as to the general health of the institutions in question. Interestingly, 35.71% of the studied MFBs belong to Low Sustainability group, with OSS and FSS being in the range of 0.5-0.8, meaning that the institutions are highly dependent on external funds to fund their operations. This echoes Mersland and Strøm's (2010) empirical research findings that reveal that most MFBs in developing countries are either not sustainable or are only partly sustainable owing to ineffective managing and resource limitations. Also, only 14.29% of the MFBs was classified as having Very Low Sustainability enhances the existing understanding that such institutions have a lot of troubles in keeping their sustainable operation without extra subsidies.

On the other hand, the relevant data (table 4.4) indicate that the proportion of MFBs with the OSS and FSS ratios exceeding 1 and, therefore, classified as having High or Very High Sustainability is significantly smaller – 7.14%. This mean that few institutions are able to finance their expenditure

needs through their incomes showing a good financial condition and self-reliant with little or no dependence on donor funding. These are in line with the assertion by Ledgerwood (1999) who argues that improved financial sustainability of MFBs depends on the ability to effectively manage and adapt to difficult operating conditions.

4.4.6 Moderating effect of Company size

The relevance of the Company size variable as a moderator is indicated by the frequency scores on the moderating influence of employee count on the link between management control systems and financial sustainability (Table 4.5).

Table 4.5: Descriptive on measures of Company size

		Frequency	Percent
Valid	Very small scale <20 employees	2	14.29
	Small scale 21-50 employees	4	28.57
	Medium scale 51-100 employees	5	35.71
	Large scale 101-250 employees	2	14.29
	Very large scale >250 employees	1	7.14
	Total	14	100.0

(Author, 2024)

Table 4.8 displays the frequency distribution of the number of employees among licensed microfinance banks (MFBs) in Kenya which give insights to the operational characteristics of the sector. In detailed breakdown, it is evident that most of the institutions are in the Medium Scale hiring 51- 100 employees accounting for 35.71%. This result is also consistent with the extant literature, which argues that management control systems of medium-sized MFBs are strong because better financial sustainability outcomes can be achieved (Mersland & Strøm, 2010). On the other hand, the low percentages of; very small scale (14.29 %) and very large-scale MFB's (7.14%) mean that many of the MFBs may be facing the fact that most organizations are likely to experience problems of scalability and resource deployment. This distribution further underscores the fact that there is need to adopt institution specific management practices due to the varying contexts and capacities within these institutions.

Furthermore, it has been identified that there could be issue with financial sustainability of all MFBs and mainly the small and large MFBs. It is quite eye-opening to see that while 14.29% of the institutions fall under the category of very small and a mere 7.14% fall under that of very large, there seems to be a near absence of institutions at the two extremes of the employee count. This observation is in harmony with Ledgerwood (1999) who postulated and advocated that very small MFBs as well

as very large MFBs may face certain unique efficiencies alongside resource management issues. Small MFBs then present problems of constrained capital while large MFBs present problems related to size and bureaucracy. Hence, knowing how the MFB size influences the relationship between management control systems and financial sustainability is vital in creating a differential approach for improving MFBs performance of different scales of operation. As such, this perspective enhances the development of interventions to promote the financial sustainability of microfinance in Kenya.

4.5 Diagnostic Tests

This sub-section focuses on the statistical methods used to assess the assumptions underlying the analysis conducted in the study, particularly regarding the relationships between management control systems and financial sustainability in microfinance banks.

4.5.1 Multicollinearity

The tolerance values range from 0.577 to 0.780, and the Variance Inflation Factor (VIF) values range from 1.282 to 1.732. Generally, a tolerance value below 0.10 or a VIF above 10 suggests problematic multicollinearity. In this case, all tolerance values are well above 0.10, and all VIF values are below 2, indicating that multicollinearity is not a significant concern in this model. This suggests that the independent variables—Planning Control (PC3), Organizational Culture Control (OrgC3), Administrative Control (AdmC3), and Cybernetics Control (CybC3)—are sufficiently independent of one another, allowing for reliable estimation of their individual effects on financial sustainability.

Table 4.6: Collinearity

Collinearity Statistics		
Variables	Tolerance	VIF
PC3	.679	1.472
OrgC3	.577	1.732
AdmC3	.641	1.561
CybC3	.780	1.282

(Author, 2024)

4.5.2 Normality Test

The results from the normality tests presented in Table 4.7 indicate that several variables exhibit characteristics consistent with a normal distribution. The Kolmogorov-Smirnov test shows p-values for FS3 (0.113), PC3 (0.200), OrgC3 (0.169), AdmC3 (0.200), CybC3 (0.128), and Size3 (0.152), all exceeding the conventional alpha level of 0.05. This suggests that there is no significant deviation

from normality for these variables, indicating that they can be reasonably assumed to be normally distributed within the sample of 156 respondents.

Table 4.7: Test of Normality

Tests of Normality						
	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
FS3	.136	156	.113	.912	156	.110
PC3	.106	156	.200*	.943	156	.551
OrgC3	.109	156	.169	.928	156	.149
AdmC3	.192	156	.200*	.854	156	.967
CybC3	.236	156	.128	.795	156	.249
Size3	.135	156	.152	.917	156	.130

a. Lilliefors Significance Correction

(Author, 2024)

Additionally, the Shapiro-Wilk test (table 4.7) reinforces these findings, with p-values for FS3 (0.110), PC3 (0.551), OrgC3 (0.149), AdmC3 (0.967), CybC3 (0.249), and Size3 (0.130) also exceeding the 0.05 threshold. These results further support the conclusion that all tested variables do not significantly deviate from a normal distribution, allowing for the application of parametric statistical methods in subsequent analyses. Overall, the data appears to meet the assumptions necessary for many common statistical tests, enhancing the reliability of any conclusions drawn from this dataset.

4.6 Inferential Statistics

The study's objective was to ascertain how Kenyan licenced microfinance firms' financial sustainability was impacted by their management control system. Planning control (PC), organisational culture control (OrgC), administrative control (AdmC), Cybernertics control (CybC), and financial sustainability (FS) were the variables that were examined. The moderating impact of the Company's size was also incorporated in the analysis.

4.6.1 Correlational Analysis

The Pearson's correlation coefficient (r) was utilized in this study to assess and confirm the causal relationships between various management control systems and financial sustainability within Kenyan microfinance banks. A two-tailed significance criterion was set at a 0.05 level of confidence, allowing for the identification of both positive and negative correlations among the variables. According to the established criteria, a correlation coefficient (r) between 0.5 and 0.7 indicates a very strong positive

association, while values between 0.3 and 0.49 signify a moderate positive relationship. Conversely, if r is below 0.29, it suggests a weak positive link, while an r value less than 0 implies a negative correlation, and an r value of 0 indicates no relationship. By employing Pearson's correlation, the study aims to establish a clear understanding of how these variables interact, ultimately contributing to the broader discourse on financial sustainability in the microfinance sector in Kenya. The results of the relationships are shown in table 4.8.

Table 4.8: Pearson's Correlation

Correlations

		FS3	CybC3	AdmC3	OrgC3	PC3
Financial Sustainability (FS3)	Pearson Correlation	1				
	Sig. (2-tailed)					
	N	156				
Cybernetics control (CybC)	Pearson Correlation	.321**	1			
	Sig. (2-tailed)	.000				
	N	156	156			
Admin control (AdmC)	Pearson Correlation	.427**	.440**	1		
	Sig. (2-tailed)	.000	.000			
	N	156	156	156		
Organization culture control (OrgC)	Pearson Correlation	.227**	.044	.426**	1	
	Sig. (2-tailed)	.004	.590	.000		
	N	156	156	156	156	
Planning control (PC)	Pearson Correlation	.312**	-.017	.225**	.565**	1
	Sig. (2-tailed)	.000	.829	.005	.000	
	N	156	156	156	156	156

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

(Author, 2024)

The Pearson's correlation coefficients presented in Table 4.8 reveal significant relationships between financial sustainability (FS3) and various management control systems within Kenyan microfinance banks. The correlation between Financial Sustainability (FS3) and Cybernetics Control (CybC3) shows a moderate positive association ($r = 0.321$, $p < 0.01$), indicating that as the effectiveness of cybernetic controls increases, financial sustainability also tends to improve. Similarly, the correlation with Administrative Control (AdmC3) is even stronger ($r = 0.427$, $p < 0.01$), suggesting that robust administrative practices are significantly associated with enhanced financial outcomes. The correlation with Organization Culture Control (OrgC3) is also positive but weaker ($r = 0.227$, $p < 0.01$), indicating that while organizational culture plays a role in financial sustainability, its impact is less pronounced than that of administrative controls.

Additionally, the correlation with Planning Control (PC3) is moderate ($r = 0.312$, $p < 0.01$), further supporting the notion that effective planning contributes positively to financial sustainability. Notably, the correlation between Cybernetics Control and Planning Control shows a slight negative relationship ($r = -0.017$), suggesting that while both are important, they may not be directly aligned in their implementation or effects within these institutions.

The findings from Table 4.8 regarding the Pearson's correlation coefficients provide significant insights into the relationships between financial sustainability and various management control systems in Kenyan microfinance banks. The correlations indicate that Administrative Control (AdmC3) has the strongest positive association with Financial Sustainability (FS3) ($r = 0.427$, $p < 0.01$). This finding supports the work of authors such as Muriuki et al. (2021), who emphasize the importance of strong administrative frameworks in achieving sustainable financial outcomes in microfinance settings. Furthermore, the correlation between Planning Control (PC3) and Financial Sustainability (FS3) ($r = 0.312$, $p < 0.01$) also supports existing literature, which highlights that effective planning is essential for long-term financial viability (Owino & Muli, 2022). The moderate correlation with Cybernetics Control (CybC3) ($r = 0.321$, $p < 0.01$) suggests that while these controls contribute positively to financial sustainability, their impact may not be as strong as that of administrative controls. This observation is consistent with findings from Karanja (2023), who notes that while cybernetic controls are important for monitoring and evaluation, they must be complemented by other management practices to fully realize their potential in enhancing financial sustainability.

4.7 Regression Analysis

Regression analysis was done for each individual variable to find out how different operationalizations of the variable affected the variety in their relationships.

4.7.1 Model summary

The results shown in Table 4.9 indicate that the model is appropriate for describing the degree of correlation between the concepts of financial sustainability and management control systems. The independent variables included in this analysis were determined to have an adequate impact on financial sustainability. This indicates that 54.7 percent of the difference in firm performance was explained by the independent variables included in the study. This was supported by the coefficient of determination, or R-square, which came in at 0.547. This coefficient indicates that 45.3% of the

variation in financial sustainability at MFBs can be attributed to extra variables that were not included in the study.

Table 4.9: Model summary

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.740[a]	.547	.535	.59425	.547	45.583	4	151	.000	1.550

a. Predictors: (Constant), PC, CybC, AdmC, OrgC
b. Dependent Variable: FS

(Author, 2024)

4.7.2 Analysis of Variance (ANOVA)

Table 4.10 presents the results of ANOVA tests, which indicate that the computed F value of 45.483 was greater than the F critical value and the P value of 0.0001 was less than the significance threshold of 0.05. This implies that the findings were statistically significant and that the relationship model suited the data well. The results also imply that the independent variables are credible measures of organization's financial sustainability. The results also imply that the independent variable were significant predictors of financial sustainability. This was further supported by the reported p=0.000, which was below the typical likelihood of the 0.05 significant level.

Table 4.10: ANOVA

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64.387	4	16.097	45.583	.000[b]
	Residual	53.323	151	.353		
	Total	117.710	155			

a. Dependent Variable: FS
b. Predictors: (Constant), PC, CybC, AdmC, OrgC

(Author, 2024)

4.7.3 Regression Coefficients

Table 4.11 shows the estimated regression coefficients, t-statistics, and p-values for the effect of management control systems on financial sustainability. The regression model connecting the independent and dependent variables is addressed by these coefficients. The study's findings showed that there was a statistically significant positive correlation between management control systems and organization's financial sustainability (r = 2.451, t = 13.990, p =.000). Therefore, the study accepted

the alternative hypothesis that management control systems had a significant impact on financial sustainability because the t and p values were significant, which meant that the null hypothesis was rejected. The model's constant term (intercept) 2.451 indicates the expected baseline level of financial sustainability when all predictors are zero.

Among the predictors, cybernetics control (CybC3) has a strong positive and statistically significant effect on financial sustainability ($B = 0.816$, $\beta = 0.630$, $t = 10.150$, $p < 0.001$). This suggests that improvements in monitoring, feedback, and control systems substantially enhance the financial sustainability of microfinance banks. In contrast, administrative control (AdmC3) shows a significant negative relationship with financial sustainability ($B = -0.561$, $\beta = -0.732$, $t = -10.704$, $p < 0.001$). This indicates that higher levels of administrative control are associated with lower financial sustainability, which may reflect inefficiencies or overly rigid administrative procedures that hinder financial performance.

Organizational control (OrgC3) has a positive and statistically significant but smaller effect ($B = 0.031$, $\beta = 0.198$, $t = 2.746$, $p = 0.007$), implying that clearer structures and processes contribute modestly to better financial outcomes. Finally, planning control (PC3) exhibits a significant negative effect on financial sustainability ($B = -0.176$, $\beta = -0.248$, $t = -3.725$, $p < 0.001$), suggesting that certain aspects of planning control may negatively impact financial sustainability, possibly due to inflexibility or misalignment with operational needs. Overall, the results highlight the critical role of cybernetics control in promoting financial sustainability, while cautioning against potential drawbacks of excessive administrative and planning controls. Organizational control also plays a supportive role in enhancing financial outcomes.

Table 4.11: Regression Coefficients

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.451	.175		13.990	.000
	CybC3	.816	.080	.630	10.150	.000
	AdmC3	-.561	.052	-.732	-10.704	.000
	OrgC3	.031	.048	.198	2.746	.007
	PC3	-.176	.047	-.248	-3.725	.000

a. Dependent Variable: FS3

(Author, 2024)

Based on these, the regression model: $Y = \alpha + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e$ therefore becomes;

$$Y = 2.451 + 0.816\ X_1 + (-0.561)\ X_2 + 0.031\ X_3 + (-.176)\ X_4 + e\text{……..ii}$$

The intercept (2.451) represents the estimated financial sustainability when all independent variables are zero. For every one-unit increase in Cybernetics Control (X_1), financial sustainability is expected to increase by 0.816 units, holding other factors constant. This positive coefficient indicates a strong beneficial effect of cybernetic controls on financial sustainability. For every one-unit increase in Administrative Control (X_2), financial sustainability decreases by 0.561 units, holding other variables constant. This negative coefficient suggests that higher administrative control may adversely affect financial sustainability, possibly due to rigidity or inefficiency. For every one-unit increase in Organizational Control (X_3), financial sustainability increases slightly by 0.031 units, indicating a modest positive impact. For every one-unit increase in Planning Control (X_4), financial sustainability decreases by 0.176 units, suggesting that certain planning control practices might negatively influence financial sustainability. The error term (e) captures all other factors affecting financial sustainability not included in the model.

4.8 Establishing the Moderating Effect of Company size on the Relationship between management control systems and Financial Sustainability

The study's fifth goal was to determine whether organisation size affected the relationship between financial sustainability and management control systems. The research question for this aim was truly realised by the use of moderated regression analysis (MRA). The awareness that a good moderating variable could strengthen a weak correlation between variables served as the driving force for this (Judd et al., 2014). Contextual factors can also be included as moderator variables to eliminate

contradicting study outcomes, especially when it comes to financial performance. This method made use of hierarchical regression, which necessitates adding the interaction variable (size) in step 2 after entering the variables related to management control systems and financial sustainability in step 1. Standardised values were applied to the interaction variable in order to reduce the degree of any strong correlation between the independent and dependent variables and the new interaction, hence reducing concerns regarding multi-collinearity (Ondoro, 2014). Table 4.12 presents the summary regression coefficients.

Table 4.12: Estimated Regression Coefficients for Variables in the moderation effect of Company size

Coefficients[a]								
		Unstandardized Coefficients		Standardized Coefficients			Collinearity Statistics	
Model		B	Std. Error	Beta	t	Sig.	Tolerance	VIF
1	(Constant)	2.451	.175		13.990	.000		
	PC3	.276	.047	-.248	-3.725	.000	.679	1.472
	OrgC3	.131	.048	.198	2.746	.007	.577	1.732
	AdmC3	.561	.052	-.732	10.704	.000	.641	1.561
	CybC3	.816	.080	.630	10.150	.000	.780	1.282
2	(Constant)	1.872	.195		9.596	.000		
	PC3	-.108	.045	-.152	-2.375	.019	.624	1.601
	OrgC3	.091	.045	.138	2.046	.043	.561	1.782
	AdmC3	-.495	.050	-.646	-9.925	.000	.600	1.665
	CybC3	.687	.078	.530	8.813	.000	.704	1.421
	Size3	.203	.038	.296	5.286	.000	.814	1.228
3	(Constant)	2.455	.160		15.380	.000		
	PC3	.310	.077	-.296	-2.735	.007	.206	4.843
	OrgC3	.276	.095	.417	2.921	.004	.119	8.422
	AdmC3	.768	.129	1.003	5.972	.000	.086	11.642
	CybC3	.598	.176	.462	3.392	.001	.131	7.647
	PCInteraction	.162	.031	.316	1.986	.049	.096	10.439
	OrgCInteraction	.086	.036	.541	2.360	.020	.046	21.701
	AdmCInteraction	.106	.045	.578	2.357	.020	.040	24.871
	CybCInteraction	.012	.054	.045	.225	.023	.061	16.431

a. Dependent Variable: FS3

(Author, 2024)

The estimated regression coefficients presented for the moderation effect of company size reveal critical insights into how various management control systems influence financial sustainability (FS3) in Kenyan microfinance banks. In Model 1, the coefficients indicate that Planning Control (PC3) has a significant negative effect on financial sustainability ($B = -0.276$, $p < 0.001$), while Administrative Control (AdmC3) shows a strong positive effect ($B = 0.561$, $p < 0.001$). This suggests that while

effective administrative controls are crucial for enhancing financial sustainability, planning controls may require reevaluation to ensure they contribute positively. The Cybernetics Control (CybC3) also has a substantial positive impact (B = 0.816, p < 0.001), indicating its importance in monitoring and improving financial outcomes.

Importantly, in model 2 firm size (Size3) as moderating variable has a positive and significant coefficient (B = 0.203, p < 0.001), indicating that larger microfinance banks tend to exhibit higher financial sustainability, possibly due to economies of scale or greater resource availability.

In Model 3, which includes interaction terms, the coefficients for the interaction effects reveal additional dynamics. For instance, the interaction term for Planning Control (PCInteraction) is significant (B = 0.162, p = 0.049), suggesting that the effectiveness of planning control on financial sustainability is moderated by company size. Similarly, Administrative Control Interaction (AdmCInteraction) also shows a significant positive effect (B = 0.106, p = 0.020), implying that larger organizations may benefit more from strong administrative controls in terms of financial sustainability. Additionally, they support the work of Muriuki et al. (2021) and Owino & Muli (2022), who emphasize the importance of contextual factors such as organizational size in enhancing the impact of management practices on financial performance in microfinance banks.

The regression equations derived from the analysis of management control systems and their effects on financial sustainability in Kenyan microfinance banks provide a quantitative framework for understanding these relationships. The first model, which excludes interaction terms, is expressed as:

$$FS3=2.451+0.276X1+0.131X2+0.561X3+0.816X4\ldots+e\ldots\ldots\ldots\ldots..(iii)$$

This equation indicates that all four management control systems (Planning Control, Organizational Culture Control, Administrative Control, and Cybernetics Control) have a positive impact on financial sustainability (FS3). Notably, Administrative Control (AdmC3) has the strongest coefficient (0.561), suggesting it plays a critical role in enhancing financial sustainability. This finding aligns with the empirical literature by Muriuki et al. (2021), which emphasizes the importance of robust administrative practices in achieving financial health in microfinance banks.

In the second model, which includes interaction terms to assess the moderating effect of company size, the equation is represented as:

FS3=2.455+0.310X1+0.276X2+0.768X3+0.598X4+0.162X6(X1.Z)+0.086X7(X2.Z)+0.10 X8(X3.Z)+0.012X9(X4.Z)……..(iv)

The addition of interaction terms reveals that the effectiveness of management controls is moderated by company size, particularly highlighted by the significant coefficients for PCInteraction (0.162) and AdmCInteraction (0.106). This suggests that larger organizations may experience greater benefits from effective planning and administrative controls in terms of financial sustainability.

When presenting the moderation coefficient, the un-standardized coefficient should be utilised because it depicts simple effects rather than the main effects that are revealed in the additive regression model (Whisman & McClelland, 2005).

In the model, the intercept and XY slope are influenced by the Z (moderating variable) intercepts and line YX slope. The moderator model's unstandardized co-efficient is equal to 0.103. This indicates that the slope connecting X to Y increases by.178 for every unit increase in Z. An additional result is that MFBs financial sustainability improves by (.103) for every unit increase in management control system. Notably, table 4.13 displays summary statistics for the moderator regression model.

Table 4.13: Model Summary of Effect of size on the Relationship between Management control systems and financial sustainability Model

				Std. Error		Change Statistics			
Model	R	R Square	Adjusted R Square	of the Estimate	R Square Change	F Change	df1	df2	Sig. F Change
1	.740[a]	.547	.535	.59425	.547	45.583	4	151	.000
2	.802[b]	.644	.625	.53394	.097	10.010	4	147	.000

a. Predictors: (Constant), CybC3, PC3, AdmC3, OrgC3
b. Predictors: (Constant), CybC3, PC3, AdmC3, OrgC3, PCInteraction, AdmCInteraction, CybCInteraction, OrgCInteraction

(Author, 2024)

The Model Summary results (Table 4.13) show significant findings regarding the impact of management control systems on financial sustainability in Kenyan microfinance banks. In the first model, the correlation coefficient (R) is 0.740, and the R Square value is 0.547, suggesting that approximately 54.7% of the variance in financial sustainability can be explained by the predictors: Cybernetics Control (CybC3), Planning Control (PC3), Administrative Control (AdmC3), and Organization Culture Control (OrgC3). This strong relationship is further supported by a significant F Change statistic of 45.583 ($p < 0.001$), indicating that the model is statistically significant.

In the second model, which includes interaction terms (PCInteraction, AdmCInteraction, CybCInteraction, OrgCInteraction), the R value increases to 0.802, with an R Square of 0.644. This indicates that the addition of interaction terms improves the explanatory power of the model to about 64.4%. The F Change statistic of 10.010 ($p < 0.001$) further confirms that the interactions significantly contribute to explaining financial sustainability. These findings suggest that not only do management control systems play a vital role in financial sustainability, but their effectiveness can also be influenced by their interactions, particularly moderated by factors such as company size. These results align with empirical literature findings, particularly those highlighted in this research study, which assert that effective management control systems are crucial for enhancing financial sustainability in microfinance banks. Additionally, studies by Muriuki et al. (2021) emphasize the importance of understanding how different management practices interact to impact overall performance. The increase in explanatory power with the inclusion of interaction terms supports the notion put forth by Owino & Muli (2022) that a nuanced approach to management controls—considering their interrelationships—can lead to better financial outcomes.

4.9 Hypothesis testing

Linear regression was used to evaluate the hypothesis. The criteria used in hypothesis testing state that the p-value must be 0.05 or greater in order for the study's null hypothesis to be accepted. A p-value of less than 0.05 meant that the study hypothesis should be rejected. Stated otherwise, if the p-value was less than 0.05, it was concluded that the model proved significant, had reliable predictors of the dependent variable, and that the outcomes were just coincidental. If the p-value was more than 0.05, the model was not significant and was not used to explain variations in the dependent variable. The first null hypothesis H_{01}indicated that PC had no significant effect on financial sustainability.
The research null hypothesis was found to be unsupported by the data ($p=0.0001 < 0.05$), as indicated by Table 4.12 results. This suggests a strong positive correlation between the MFBs financial sustainability and Planning control.

The second objective of the analysis was to evaluate how organizational culture control affected its financial sustainability over time. The research null hypothesis (H_{02}) stated that there was no appreciable relationship between the organizational culture control and the financial sustainability of MFBs. It was found that there is a positive significant link between organization culture control and MFBs financial sustainability (Table 4.12, $p=0.001 < 0.05$) and that the research null hypothesis was less than 0.05, so rejected.

The third objective of the study was to look at how administrative control affects financial sustainability. The research concept was that there should be no significant correlation between (H_{03}). In order for the study's null hypothesis to pass the acceptance test, the p value needed to be above 0.05. The research null hypothesis is rejected by the results, which show that p=0.001, which was less than 0.05, and it is consequently declared that there is a significant positive correlation between administrative control and financial sustainability.

The fourth objective was to determine the effect of cybernetics control on the MFBs financial sustainability. The null hypothesis stated thus; cybernetic control has no significant effect on financial sustainability of licensed MFBs in Kenya. The findings demonstrate that there is a significant positive association between cybernetics control and financial sustainability (p=0.001, which was less than 0.05), rejecting the research null hypothesis.

The fifth objective was to examine the moderating effect of Company size on the relationship between management control system and financial sustainability of MFBs. The null hypothesis (H_{05}) stated; Company size has no significant moderating effect on the relationship between management control system and financial sustainability. However, the results showed that ($p<0.001$) which is a significant value, therefore, rejecting the null hypothesis. This shows that size has a significant moderating effect on the relationship between management control system and financial sustainability.

Based on the results of the regression analysis, the financial sustainability of the licensed microfinance Banks in Kenya was positively impacted by the management control system variables (planning control, cybernetics control, administrative control, and organization culture control). The results are consistent with the findings of Hamed (2023) on the role of internal control systems in ensuring financial performance sustainability. The study demonstrated a statistically significant positive relationship between an organization's financial sustainability and its management control systems. This implies that fostering financial sustainability can benefit greatly from the use of efficient management control systems. The positive correlation suggests that better financial sustainability outcomes may result from the strengthening and efficient application of management control systems, such as planning control, cybernetics control, administrative control, and organizational culture control, within an organization.

Organizations may create strategic goals that are clear, distribute resources effectively, and track their progress towards those goals by putting in place strong planning control procedures. Cybernetics

control, which can include data-driven decision-making and the utilization of information technologies, can improve operational effectiveness and assist organizations in recognizing and mitigating any risks. Administrative control systems support risk management, regulatory compliance, and general operational efficacy. Last but not least, a strong corporate culture that promotes moral conduct, openness, and responsibility can help create an atmosphere that is favorable to financial sustainability. The research on cybernetic control and planning control links to the Contingency Theory by emphasizing the role that organizational culture and learning, managerial style and decision-making, Company size and complexity, and environmental factors play in selecting and optimizing control systems. These links show how the strategic implications of cybernetic control and planning control in various organizational contexts can be understood using Contingency Theory.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This section offers a synopsis of the analysis, recommendations, and, in the end, directions for further research. The study conclusion is derived from the research objectives. A summary of the main findings, conclusions, and suggestions of the study is provided in compliance with its objectives, based on the results of the descriptive and inferential statistical analyses that were performed to evaluate the research hypothesis.

5.2 Summary of the Findings

This study's main objective was to determine the effect of management control system on the financial sustainability of licensed micro finance banks in Kenya. With regard to financial sustainability of MFBs in Kenya, the study primarily intended to focus on the following specific objectives: first to establish the effect of planning control on financial sustainability of Microfinance Banks. Secondly, to establish the effect of organizational culture control on financial sustainability of Microfinance Banks in Kenya. Thirdly, to assess the effect of the administrative controls on financial sustainability of Microfinance Banks. Fourth, to establish the effect of cybernetic control on the financial sustainability of MFBs in Kenya and to assess the moderating effect of Company size on the relationship between management control system and financial sustainability of Microfinance Banks. A small-scale survey involving 156 respondents was used to collect quantitative data.

The study found that various components of management control systems significantly influence the financial sustainability of microfinance banks in Kenya. Specifically, planning management exhibited a strong positive effect, indicating that effective strategic planning enhances financial performance. Administrative controls, organizational culture, and cybernetic controls also contributed positively, demonstrating that well-structured internal processes, a supportive organizational environment, and continuous monitoring mechanisms are critical for sustaining financial health. Furthermore, firm size was found to moderate these relationships, suggesting that the impact of management controls varies depending on the scale of the institution. Larger microfinance banks tend to leverage these controls more effectively, leading to better financial outcomes. Overall, the findings underscore the importance

of tailoring management control systems to organizational context to improve financial sustainability in the microfinance sector.

5.3 Discussion of Findings

5.3.1 Planning control on financial sustainability of Microfinance Banks

The results of the first objective indicated that planning control as a dimension of management control system plays a key role when it comes to financial sustainability aspect of the MFBs. This is consistent to the study by Ngari (2017), who investigated the connection between Kenyan microfinance bank's financial performance and their strategic planning. The study looked at the scope of strategic planning techniques and how they affect long-term financial viability, including goal-setting, market analysis, and resource allocation. The results showed a favorable correlation between financial performance and strategic planning, indicating that strong planning control supports microfinance organizations' ability to maintain a stable financial position.

Similarly, the results are also consistent with a study conducted by Kimani et al. (2017), which examined the connection between Kenyan microfinance organizations' financial sustainability and their strategic planning. The study focused on how elements of strategic planning, like risk management, goal-setting, and performance tracking, affected metrics of financial sustainability like profitability and portfolio quality. The results showed a favorable correlation between financial sustainability and strategic planning, highlighting the role that planning control plays in ensuring long-term financial viability.

5.3.2. Organizational culture control on financial sustainability of MFBs in Kenya

The results revealed that organizational culture control had a statistically significant relationship with financial sustainability. This research suggests that MFBs with excellent organizational culture control have higher financial sustainability levels. The degree to which an MFB has put in place procedures, guidelines, and mechanisms to guarantee efficient governance and control inside the organization is referred to as organizational culture control. The positive correlation suggests that MFBs financial sustainability tends to improve as organizational cultural control rises.

The results were consistent with study by Munyao et al. (2015), who investigated the connection between Kenya microfinance banks' financial sustainability and their organizational culture. The study looked at how cultural elements including employee behavior, leadership styles, values, and norms affect financial performance metrics. The results indicated that a robust organizational culture with

client-centric methods, transparency, and ethical behavior had a good impact on the long-term financial viability of microfinance companies. The scholarly literature has increasingly focused on the function of organizational culture in microfinance firms. Sustainability and financial performance can be favorably impacted by a strong corporate culture that prioritizes reliability, openness, customer-oriented methods, and ethical behavior. Ngunjiri et al. (2016), who looked into the effect of organizational culture on the profitability of microfinance firms in Kenya, corroborated these ideas. Their study looked at how staff dedication, teamwork, creativity, and customer orientation affect financial success as cultural dimensions. The results showed a strong correlation between economic viability and a positive organizational culture, indicating that cultural elements are important for the long-term viability of microfinance organizations.

In their research, Ogeto et al. (2019) also looked at how organizational culture affected Kenyan microfinance banks' financial performance. Their study looked into how cultural elements like teamwork, communication styles, shared values, and management styles affect financial metrics like return on equity and return on assets. The results demonstrated that a robust organizational culture and financial performance are positively correlated, highlighting the significance of culture control in improving financial sustainability. A comparison of organizational culture's effects on Kenyan microfinance firms' financial sustainability was also conducted by Munene et al. (2020). Their research demonstrated the beneficial effects of a supporting organizational culture on financial sustainability metrics including profitability and portfolio quality. This culture is defined by strong leadership, motivated employees, and shared values. The study stressed that in order to attain financial sustainability, it is critical to cultivate a culture that values openness, moral conduct, and employee involvement.

According to these research, financial sustainability can be improved by having an organizational culture that is positive and consists of norms, values, leadership styles, and staff behaviors that support the objectives of microfinance organizations. The literature frequently highlights employee dedication, an employee-centered culture, open and accountable procedures, and productive teamwork as key elements. Further, the study's findings are consistent with the Resource-Based View theory by highlighting the strategic significance of internal resources like organizational culture in fostering competitive advantage and long-term success in the microfinance industry. These findings back up the idea that organizational culture is a key factor in determining the financial sustainability and performance of microfinance banks.

5.3.3 Administrative controls on financial sustainability of licensed MFBs

Administrative control had a statistically significant relationship with financial sustainability. Given that the p-value was less than 0.05, it is improbable that this link happened by coincidence. The statistically significant association between administrative control and financial sustainability indicates that increasing administrative control has a beneficial impact on financial sustainability.

The results were found to be consistent to Kemboi et al. (2018) findings on how administrative controls affected Kenyan microfinance banks' ability to remain financially stable. It looked at a number of administrative control techniques, such as regulatory compliance, risk management strategies, and internal control systems. The results indicated that by lowering credit risk, raising overall operational efficiency, and improving loan recovery rates, efficient administrative controls had a beneficial impact on financial sustainability. In their study, Mutisya et al. (2019) also investigated how administrative control affected Kenyan microfinance organizations' financial results. The study evaluated how governance methods, internal audit, credit risk evaluation, loan tracking, and other control measures affected financial metrics including productivity and inventory quality. The results showed that strong administrative controls reduced credit risk, made sure rules were followed, and generally improved financial performance.

The significance of administrative controls for the long-term viability of Kenyan microfinance organizations' finances was also evaluated by Karanja et al. (2020), who revealed similar results. The study looked at how control mechanisms like internal auditing, credit risk management, and loan evaluation processes work. The results showed that better financial sustainability outcomes, such as lower default rates, better loan recovery, and increased operational performance, were linked to efficient administrative controls. The Resource-Based View (RBV) hypothesis places a strong emphasis on an organization's internal assets and competencies as sources of long-term competitive advantage. Considering MFBs, administrative control can be seen as an important intangible resource that enhances their long-term viability and competitive edge.

5.3.4 Cybernetic control on the financial sustainability of MFBs in Kenya

In this case cybernetics control was found to have significant positive influence on financial sustainability of the MFBs. The noteworthy positive correlation implies that a rise in cybernetics control inside MFBs is associated with an enhancement of their financial sustainability.

The findings of the study showed that cybernetics control and financial sustainability (FS) had a moderately positive relationship. In this instance, cybernetic controls usually entail the monitoring and management of operations within microfinance banks through the use of computerized systems, analytical tools, and technology-driven procedures. Research by that emphasizes the potential advantages of information systems and technological advances in the microfinance sector. This resonates the findings from Wakibi, et al. (2024) who investigated how networks, independence, and innovative approaches to sustainability interplay inside microfinance banks (MFBs). Similarly, Ali et al. (2021) investigated the impact of ICT on the MFBs performance. The results showed that institutional affiliation has a favorable impact on MFBs financial performance. Specifically, MFBs that invest in ICTs and are part of a network typically have greater performance.

Through ICT, organizations can engage underrepresented groups, increase operational effectiveness, strengthen risk management, and broaden their service offerings. Microfinance banks can increase their financial sustainability and promote financial inclusion by utilizing ICT tools and platforms. The findings align with the research conducted by Adusei et al. (2017), which examined the correlation between the financial performance of microfinance banks in Sub-Saharan Africa and their embrace of ICT. According to their research, the usage of ICT—such as management computer systems and mobile banking platforms—had a beneficial impact on financial performance metrics like economic viability, operational effectiveness, and investment quality. The study highlighted how ICT may increase operational performance, lower transaction costs, and improve access to financial services. The effect of ICT on the financial performance of Ugandan microfinance banks was investigated by Nalukenge et al. (2019). The study evaluated how financial sustainability metrics including return on equity, return on assets, and portfolio quality relate to ICT adoption and operational effectiveness. The results showed a positive correlation between ICT adoption and financial performance, which is consistent to the current study, indicating that greater financial stability is a result of improved ICT skills.

5.3.5 Company size and the relationship between management control system and financial sustainability of MFBs.

The results showed that Company size was a significant moderator on the relationship between the independent and dependent variables in the study. The fact that larger MFBs often reap greater benefits from these variables than do smaller ones emphasizes the significance of scale in the microfinance industry.

In comparison to smaller institutions, larger MFBSs are shown to be in a better position to establish efficient control systems that drive their financial performance. Thus, a significant factor influencing the relationship between the financial sustainability and the management control system is the size of the MFBS. The results align with the research conducted by Lin et al. (2019), which furnished proof about the influence of Company size on the financial performance of corporations in the automobile industry.

Larger companies typically have stronger management control systems, which has a beneficial effect on their ability to sustain their finances, according to the study. This is due to the fact that larger companies can invest more of their resources and capabilities in putting in place and keeping up efficient control systems, which improves their financial performance. On the other hand, due to resource constraints, smaller organizations can find it difficult to set up and maintain efficient control systems, which could result in financial instability. This emphasizes how crucial it is to take Company size into account when assessing how management control systems and financial sustainability are related.

5.4 Conclusions

The study's primary goal was to determine how Kenyan licensed microfinance banks' financial sustainability was impacted by their management control system. The study's findings showed that the planning, cybernetics, administrative, and organizational culture control components of successful management control systems had a favorable impact on these institutions' ability to maintain their financial stability.

One of the main conclusions was that better financial sustainability was directly correlated with the adoption of robust internal control measures, which included appropriate administration, planning, and culture. Strong risk assessment and mitigation procedures in place gave microfinance banks greater resilience to unforeseen events and obstacles. It implies that MFBs have a higher chance of achieving long-term financial success if they give priority to, invest in, and support efficient control systems as well as a positive organizational culture.

The study also emphasized how crucial performance assessment is to improving financial sustainability. The likelihood of microfinance banks meeting their financial objectives and sustaining

stability over time was higher when they had frequent monitoring procedures and clearly defined performance measures. The use of cybernetics control in promoting financial sustainability was another important discovery. Having effective and integrated information systems control allowed microfinance organizations to increase overall financial performance, optimize decision-making, and streamline operations. Overall, the study made clear how important management control systems are to guaranteeing Kenya's licensed microfinance banks' financial stability. Encouraging these institutions to adopt performance measurement systems, cybernetics control, and effective internal controls can help them become more financially stable and sustainable over time.

According to the RBV theory, a firm's internal competencies and resources are its main sources of long-term competitive advantage. The research findings in the context of MFBs indicate that a number of internal elements, including income diversification, administrative control, and organizational culture, can be seen as important resources that support their competitive advantage and financial sustainability. According to the research findings, which are consistent with the RBV theory, MFBs that successfully utilize their internal resources and competencies have a higher chance of achieving exceptional financial performance as well as long-term sustainability. With the use of these resources, MFBs may innovate, adapt to changing conditions, and offer their clients distinctive value propositions, all of which help them gain a long-term competitive edge in the microfinance industry. The results of the research provide credence to the idea that the financial sustainability of MFBs is largely determined by a confluence of internal resources and competencies as well as beneficial external factors like regulation and oversight. The aforementioned results align with the tenets of the Resource-Based View theory, emphasizing the tactical significance of capitalizing on internal resources to foster competitive advantage and sustained prosperity within the microfinance sector.

The results of the study provided some validation and support for the theories that were employed, including the Agency Theory and the Contingency Theory. The study's conclusions about the effect of internal control systems on financial sustainability provided support for the contingency theory, which holds that the optimal strategy for managing an organization relies on the particular circumstance or setting. According to the study, internal control systems have a big impact on how good an organization is at guaranteeing its financial stability. This bolsters the notion that appropriate management techniques vary depending on the situation. The study also provided some evidence for the Agency Theory, which holds that the interaction between principals and agents can affect organizational outcomes. According to research on the relationship between internal control systems

and financial success, well-designed internal control systems can reduce the likelihood of agency-related issues like theft and fraud by making sure organizational resources are used effectively. Since the study did not offer a thorough framework for comprehending the intricate relationships between internal control systems, organizational performance, and agency difficulties, it was unable to completely validate the theories. The study's conclusions did not apply to other organizational contexts; instead, they were restricted to the banking sector.

5.5 Contribution to Knowledge

The present research work can be considered as a useful and significant contribution to the field of microfinance research since it focuses on the complex dynamics between management control systems and financial performance in Kenyan MFBs. The findings show that there is a positive relationship between the suggested model of planning management and financial sustainability, with focus on administrative controls, organizational culture and cybernetic controls. As a result, this study not only supports the two theories used, the Resource-Based View and Contingency theories, but also addresses the knowledge gap, whereby particular management practices are shown to enhance financial performance of MFBs.

Additionally, the study fills the gap by incorporating the moderating role of company size in the MCS–financial sustainability linkage. This finding is important for two reasons: first, it contributes to the idea that MFBs can be managed differently based on their size; second, it indicates that larger MFBs may necessitate different approaches to management in comparison with small MFBs counterparts. Through presenting evidence that substantiates these claims, the study provides policy and practical implications for governments and professionals operating in the microfinance arena. Finally, it contributes also to the academic body of knowledge, but more importantly, it becomes a valuable source of information that key players in the sector can apply to strengthen the MFBs and, in doing so, foster the achievement of the country’s overarching economic objectives.

5.6. Recommendations

5.6.1 Policy recommendation

Establishing and improving internal control systems should be the primary goal of microfinance organizations. This entails creating precise guidelines and protocols for managing finances, guaranteeing accountability and transparency, and carrying out frequent internal audits. Institutions can promote financial sustainability by reducing the risk of financial mismanagement and fraud through the reinforcement of control mechanisms. Moreover, create rules and regulations that take the institution's size into account and allow for scalability and flexibility while putting management

control systems in place. Smaller MFBs that could lack the means or ability to set up and maintain a reliable control system should receive customized support.

5.6.2 Managerial recommendation

Strong risk management procedures should be put in place by MFBs in order to recognize, evaluate, and reduce any threats to their long-term financial viability. Additionally, make sure that risk management procedures are routinely reviewed and updated. Working together with industry associations, regulators, and other relevant parties is necessary to ensure adherence to pertinent laws and regulations and to promote policies that foster the expansion and long-term viability of the microfinance business.

5.7 Suggestion for Further Studies

In order to better understand the long-term impacts of management control systems on financial sustainability, future research ought to consider emphasis on performing a longitudinal study. In this instance, researchers can evaluate the durability and sustainability of the observed impacts by monitoring the performance of microfinance banks over an extended period of time. This can provide researchers important insights into the long-term consequences of efficient management control systems.

5.8 Study Limitations

The purpose of this study was to determine how the management control structure affected the MFBs ability to be financially sustainable in Kenya. There was the restriction on respondents' access, which was lessened by obtaining their approval before requesting that they complete the questionnaires and by using the NACOSTI study authorization. The researcher faced an additional challenge due to the delicate and tactical character of certain information that was sought. This challenge was lessened, though, by reassuring the respondents that their identities would remain anonymous during the processing of the research data, and by substituting codes for individual respondent identities.

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APPENDICES

APPENDIX 1: NACOSTI LICENSE

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: **399148**

Date of Issue: **14/February/2024**

RESEARCH LICENSE

This is to Certify that Ms.. Christine Akinyi Akiza of Strathmore University, has been licensed to conduct research as per the provision of the Science, Technology and Innovation Act, 2013 (Rev.2014) in Nairobi on the topic: EFFECT OF MANAGEMENT CONTROL SYSTEMS ON FINANCIAL SUSTAINABILITY OF LICENSED DEPOSIT TAKING MICROFINANCE INSTITUTIONS IN KENYA for the period ending : 14/February/2025.

License No: **NACOSTI/P/24/33184**

399148

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

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APPENDIX II: RESEARCH QUESTIONNAIRE

Demographic Features of the Respondents

1. Gender: a) Male [ ] b) Female [ ]
2. Education level: a) PhD b) Master degree c) Undergraduate d) Certificate/Diploma
3. Presence of well-trained staff: a) Yes b) No

B: Planning control

Indicate your level of agreement on the following statements on the relationship between Planning control and financial sustainability of licensed DTMFBs. (1=Strongly Disagree (SD), 2=Disagree (D), 3=Not sure, 4=Agree (A) and 5 =Strongly Agree (SA)).

	Measures	**SD**	**D**	**Not Sure**	**A**	**SA**
4.	The practice of employee accountability in the institution has improved for the last five years					
5.	All levels of competiveness are clearly set					
6.	There is a clear organizational structure					
7.	The terms of employment are clearly disclosed for the financial department					
8.	Determination of employee expectations for career advancement are clearly outlined					

9. Are there other planning controls that determine the level of financial sustainability in your organization (YES/NO)

Explain if

(Yes)……..

C: Organizational culture control

Indicate your level of agreement on the following statements on the relationship between organizational culture control and financial sustainability of licensed DTMFBs. (1=Strongly Disagree (SD), 2=Disagree (D), 3=Not sure, 4=Agree (A) and 5 =Strongly Agree (SA)).

	Measures	SD	D	Not Sure	A	SA
10.	Accountability on the part of the institution's staff has been influenced by integrity and ethical ideals.					
11.	Competence and dedication have impacted an institution's effectiveness in general.					
12.	The institution use appropriate symbols that ensures transparent financial reporting					
13.	The personnel competent and have appropriate skills					

14. Are there (If any) other organization cultures that influence the MFBs financial sustainability (Yes/No)

Explain if yes ……

D: The administrative controls

Indicate your level of agreement on the following statements on the relationship between administrative control and financial sustainability of licensed DTMFBs. (1=Strongly Disagree (SD), 2=Disagree (D), 3=Not sure, 4=Agree (A) and 5 =Strongly Agree (SA)).

	Measures	SD	D	Not Sure	A	SA
15.	The finances are used according to financial regulations and policies in Institution					
16.	There is effectiveness in the monitoring of official accounting policies					
17.	There is financial transparency in the system reports at the MFB					
18.	The financial reporting mechanism is effective and efficient					
19.	Financial disclosure and reporting assessment is done frequently					

20. Outline (if any) other administrative controls applicable in determining institution's financial sustainability ……

E: Cybernetics controls

Indicate your level of agreement on the following statements on the relationship between Cybernetics controls and financial sustainability of licensed DTMFBs. (1=Strongly Disagree (SD), 2=Disagree (D), 3=Not sure, 4=Agree (A) and 5 =Strongly Agree (SA)).

	Measures	**SD**	**D**	**Not Sure**	**A**	**SA**
20.	All the program evaluation undergo review annually					
21.	Management and financial benchmarking emphasis are done frequently.					
22.	The operations of the MFB are done according to budgetary allocations					
23.	The institution applies variance analysis in their reports					

F: Financial sustainability

(Questions for Assessing Operating and Financial Self-Sufficiency Ratios)

Please provide the following financial information for your organization for the most recent fiscal year:

1. **Total Revenue**

What was your organization's total revenue for the fiscal year? (Please specify the amount in your local currency)

……

2. **Total Operating Expenses**

What were your organization's total operating expenses for the fiscal year? (Please specify the amount in your local currency)

……

3. **Total Debt Service**

What was your organization's total debt service (interest and principal payments) for the fiscal year? (Please specify the amount in your local currency)

……..

G: Company size

Indicate the range of employee count within your institution

1. Less than 20 employees
2. 21-50 employees
3. 51-100 employees
4. 101-250 employees
5. More than 250 employees

Indicate your level of agreement on the following statements on the measures of moderating effect of Company size (employee count) on the relationship between management control systems and financial sustainability of licensed MFBs. (1=Strongly Disagree (SD), 2=Disagree (D), 3=Not sure, 4=Agree (A) and 5 =Strongly Agree (SA)).

	1		**2**		**3**		**4**		**5**	
The effectiveness of management control systems in enhancing financial sustainability is significantly greater in microfinance banks with a larger employee count compared to those with fewer employees.										
Microfinance banks with a higher number of employees are better able to implement and benefit from planning management controls, leading to improved financial sustainability outcomes.										
The positive impact of organizational culture on financial sustainability is more pronounced in larger microfinance banks than in smaller ones										
Administrative controls are more effectively utilized in microfinance banks with larger employee counts, resulting in enhanced financial sustainability compared to those with fewer employees.										

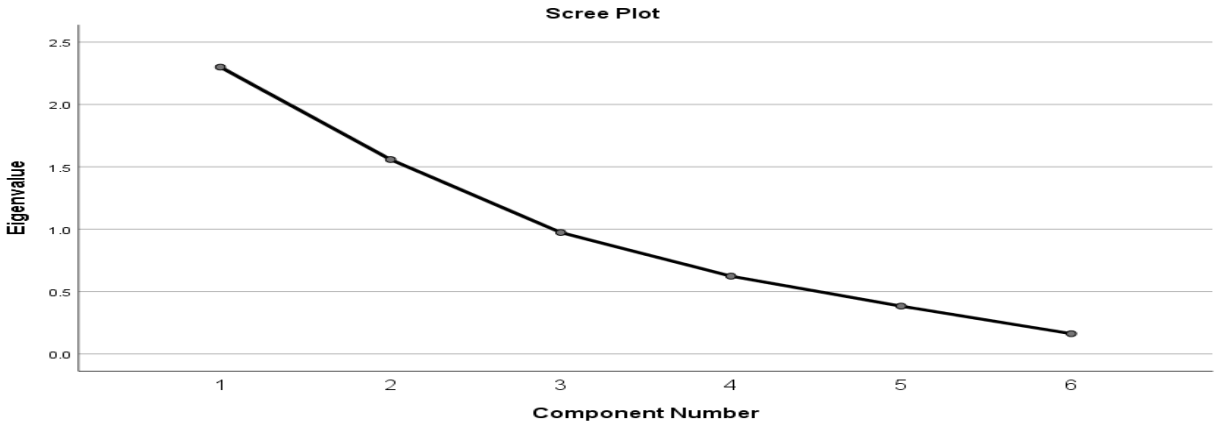
APPENDIX III: LIST OF MFBs IN KENYA

1) Faulu Microfinance Bank Limited
2) Rafiki Microfinance Bank Limited
3) Caritas Microfinance Bank Limited
4) Choice Microfinance Bank Limited
5) Sumac Microfinance Bank Limited
6) Salaam Microfinance Bank Limited
7) On It Microfinance Bank Limited
8) Kenya Women Microfinance Bank Limited
9) SMEP Microfinance Bank Limited
10) LOLC Microfinance Bank Limited
11) U&I Microfinance Bank Limited
12) Umba Microfinance Bank Limited
13) Branch Microfinance Bank Limited
14) Muungano Microfinance Bank PLC

(Source: CBK, 2023)

APPENDIX IV: STATISTICAL RESULTS

SCREE PLOT & EIGEN VALUES



EIGEN VALUES

Total Variance Explained

Component	Initial Eigenvalues Total	% of Variance	Cumulative %	Extraction Sums of Squared Loadings Total	% of Variance	Cumulative %	Rotation Sums of Squared Loadings[a] Total
1	2.300	38.328	38.328	2.300	38.328	38.328	2.074
2	1.386	23.107	57.458	1.386	23.107	57.458	1.673
3	1.558	25.972	64.300	1.558	25.972	64.300	1.860
4	.973	16.224	80.524				
5	.623	10.390	90.914				
6	.383	6.383	97.297				
7	.162	2.703	100.000				

Extraction Method: Principal Component Analysis.
a. When components are correlated, sums of squared loadings cannot be added to obtain a total variance.

APPENDIX V: DESCRIPTIVES
Table Va:

Table 4.3: Descriptive Findings: Summary of Responses

Variable	N	Mean	Likert Scale Interpretation	Std. Deviation
Responses on Planning control				
The practice of employee accountability in the institution has improved for the last five years	156	2.89	Neutral	1.39
All levels of competitiveness are clearly set	156	2.91	Neutral	1.53
There is a clear organizational structure	156	3.02	Neutral	1.52
The terms of employment are clearly disclosed for the financial department	156	3.01	Neutral	1.52
Determination of employee expectations for career advancement are clearly outlined	156	2.97	Neutral	1.52
Response on organizational culture control and financial sustainability				
Accountability on the part of the institution's staff has been influenced by integrity and ethical ideals	156	3.16	Neutral to Agree	1.42
Competence and dedication have impacted an institution's effectiveness in general	156	3.03	Neutral	1.49
The institution uses appropriate symbols that ensure transparent financial reporting	156	3.03	Neutral	1.51
The personnel are competent and have appropriate skills	156	3.13	Neutral to Agree	1.75
Response on administrative controls and financial sustainability				
The finances are used according to financial regulations and policies in the institution	156	2.93	Neutral	1.73
There is effectiveness in the monitoring of official accounting policies	156	3.37	Agree	1.80
There is financial transparency in the system reports at the MFI	156	3.39	Agree	1.79

Variable	N	Mean	Likert Scale Interpretation	Std. Deviation
Cybernetic Controls on the financial sustainability				
The financial reporting mechanism is effective and efficient	156	1.54	Strongly Disagree	0.77
Financial disclosure and reporting assessment is done frequently	156	1.58	Strongly Disagree	0.85
All the program evaluation undergo review annually	156	1.40	Strongly Disagree	0.70
Management and financial benchmarking emphasis are done frequently	156	1.73	Strongly Disagree	1.11
The operations of the MFI are done according to budgetary allocations	156	1.49	Strongly Disagree	0.81
Financial Sustainability				
The institution applies variance analysis in their reports	156	1.52	Strongly Disagree	0.77
There is accountability exercised on financial management over the past five years in your institution	156	2.34	Disagree	1.26
The institution has a stable financial position	156	2.12	Disagree	1.18
The institution operates efficiently and proactively towards environmental threats	156	2.38	Disagree	1.36
There is certainty of survival of the institution	156	1.76	Strongly Disagree to Disagree	1.14

Likert Scale Interpretation Guide
1.00 – 1.79: Strongly Disagree
1.80 – 2.59: Disagree
2.60 – 3.39: Neutral
3.40 – 4.19: Agree
4.20 – 5.00: Strongly Agree

DISAGGREGATE REGRESSION ANALYSIS

Planning Control (PC3)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.312[a]	.097	.091	.83069	.097	16.582	1	154	.000	.863

a. Predictors: (Constant), PC3

b. Dependent Variable: FS3

ANOVA[a]

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	11.443	1	11.443	16.582	.000[b]
	Residual	106.267	154	.690		
	Total	117.710	155			

a. Dependent Variable: FS3

b. Predictors: (Constant), PC3

Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	2.806	.174		16.121	.000
	PC3	-.221	.054	-.312	-4.072	.000

a. Dependent Variable: FS3

Organizational Culture Control (OrgC3)

Model Summary[b]

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.227[a]	.051	.045	.85151	.051	8.344	1	154	.004	.943

a. Predictors: (Constant), OrgC3

b. Dependent Variable: FS3

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	6.050	1	6.050	8.344	.004[b]
	Residual	111.660	154	.725		
	Total	117.710	155			
a. Dependent Variable: FS3						
b. Predictors: (Constant), OrgC3						

Coefficients[a]						
		Unstandardized Coefficients		Standardized Coefficients		
Model		B	Std. Error	Beta	t	Sig.
1	(Constant)	2.614	.174		15.005	.000
	OrgC3	-.150	.052	-.227	-2.889	.004
a. Dependent Variable: FS3						

Administrative Control (AdmC3)

Model Summary[b]										
				Std. Error of the	Change Statistics					
Model	R	R Square	Adjusted R Square	Estimate	R Square Change	F Change	df1	df2	Sig. F Change	Durbin-Watson
1	.427[a]	.182	.177	.79050	.182	34.370	1	154	.000	1.212
a. Predictors: (Constant), AdmC3										
b. Dependent Variable: FS3										

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.477	1	21.477	34.370	.000[b]
	Residual	96.233	154	.625		
	Total	117.710	155			
a. Dependent Variable: FS3						
b. Predictors: (Constant), AdmC3						

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	2.989	.156		19.117	.000		
	AdmC3	-.327	.056	-.427	-5.863	.000	1.000	1.000
a. Dependent Variable: FS3								

Cybernetics Control (CybC3)

Model Summary[b]										
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics					Durbin-Watson
					R Square Change	F Change	df1	df2	Sig. F Change	
1	.321[a]	.103	.097	.82814	.103	17.636	1	154	.000	.559
a. Predictors: (Constant), CybC3										
b. Dependent Variable: FS3										

ANOVA[a]						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	12.095	1	12.095	17.636	.000[b]
	Residual	105.615	154	.686		
	Total	117.710	155			
a. Dependent Variable: FS3						
b. Predictors: (Constant), CybC3						

Coefficients[a]								
Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.	Collinearity Statistics	
		B	Std. Error	Beta			Tolerance	VIF
1	(Constant)	1.513	.166		9.127	.000		
	CybC3	.416	.099	.321	4.200	.000	1.000	1.000
a. Dependent Variable: FS3								

APPENDIX VI: ETHICAL APPROVAL

Strathmore UNIVERSITY

21st March 2024

Mrs Akiza Christine,
akizachristine1@gmail.com

Dear Mrs Akiza,

RE: Effect of Management Control System on Financial Sustainability of Licensed Deposit Taking Microfinance Institutions in Kenya

This is to inform you that SU-ISERC has reviewed and **approved** your above **SU-masters** research proposal. Your application reference number is **SU-ISERC2021/24.** The approval period is from **21st March 2024 to 20th March 2025.**

This approval is subject to compliance with the following requirements:

i. Only approved documents including (informed consents, study instruments, MTA) will be used.
ii. All changes including (amendments, deviations, and violations) are submitted for review and approval by SU-ISERC.
iii. Death and life-threatening problems and serious adverse events or unexpected adverse events whether related or unrelated to the study must be reported to SU-ISERC within 72 hours of notification.
iv. Any changes anticipated or otherwise that may increase the risks or affected safety or welfare of study participants and others or affect the integrity of the research must be reported to SU-ISERC within 72 hours.
v. Clearance for the export of biological specimens must be obtained from relevant institutions.
vi. Submission of a request for renewal of approval at least 60 days prior to the expiry of the approval period. Attach a comprehensive progress report to support the renewal.
vii. Submission of an executive summary report within 90 days of completion of the study to SU-ISERC.

Before commencing your study, you will be expected to obtain a research license from National Commission for Science, Technology, and Innovation (NACOSTI) https://research-portal.nacosti.go.ke/ and obtain other clearances needed.

Yours sincerely,

Mr Ambrose Rachier,
Chairperson; SU-ISERC

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