

**LIQUIDITY MANAGEMENT PRACTICES AND FINANCIAL PERFORMANCE OF
MICROFINANCE BANKS IN NAIROBI CITY COUNTY, KENYA**

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DECLARATION

This project has not been lifted or subsequently submitted to another university.

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Supervisor's Declaration

I confirm that this project has been undertaken by the student named above under my guidance and supervision.

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DEDICATION

This project is a dedication to my parentages; Millicent Aluodo and Charles Aluodo, My wife Pheone Adhiambo, and my children Amarrah Aluodo and Joe Aluodo for their continued motivation and advice.

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LIST OF ABBREVIATIONS

ACP:	Average Collection Period
CBK:	Central Bank of Kenya
DTMFI:	Deposit Taking Microfinance institutions
FLR:	Funding Liquidity Risk
GOP:	Gross Operation Profit
MFB:	Microfinance Banks
MFI:	Microfinance Institutes
ROI:	Return on Investment
ROTA:	Return on Total Assets
SMEs:	Small Micro Enterprises
WCM:	Working Capital Management

OPERATIONAL DEFINITION OF TERMS

Cash Management:	Management of firm's resources to obtain optimum interest income from available funds or idle cash
Cash Ratio:	A ratio used in finance to compare the liquidity of a company by contrasting its cash and cash equivalents and current liabilities.
Financial performance:	It is a measure assessing the organization's ability to produce income and handle the financial concerns of shareholders, managing assets, and addressing liabilities.
Profit:	Gained amount after deducting the costs incurred in providing product and services.
Liquidity Management:	The process of planning and monitoring current assets within the corporate short-term assets and liabilities in and out of the business, and current liabilities owned by an MFI.
Liquidity Management Practices:	These are techniques used to devise and monitor short term assets and short-term liabilities in and out of the business.
Microfinance banks:	Small-scale financial institutions providing banking services, like loans and savings, to individuals and small businesses lacking access to traditional banks.
Non-Performing Loan:	Loans classified as being outstanding for more than thirty days or over two instalments and deemed as sub-standard or loss loans.

ABSTRACT

Microfinance banks are financial institutions that provide loans, insurance, saving platforms and other financial products to various individuals. Thus, these institutions require sufficient liquid assets to enable them to meet their routine financial obligations. However, in Kenya, microfinance banks have been recording a declining trend regarding their financial performance over time, leading to grave concerns. Thus, this study aimed to assess liquidity management practices and their effect on Nairobi City County's Microfinance Banks' financial performance. The main goal was to evaluate how the management strategies regarding their liquidity impact Nairobi City County's microfinance banks' financial performance. Emphasizing the impact of cash, operational cash flows, and operational effectiveness on Microfinance Banks' financial performance in Nairobi City County is one of the specific goals. The analysis and elucidation of the literature was facilitated by the examination of the Cash Conversion Cycle theory, Transactional Cost Theory, Keynesian Liquidity theory, and Miller-Orr model. Moreover, the theories guided the empirical model to be applied in this study. Moreover, a descriptive research design with a regression analysis model was embraced in determining the predictor variables' impact on the explained variable. A census study was done since all the microfinance banks were involved, and the necessary secondary data was sought from each organization. A data review guide was utilized to gather secondary data, which was obtained from the Central Bank of Kenya and covered the years 2017 to 2022. The data was analyzed using Statistical Package for the Social Sciences software. Graphs and tables were utilized to display the results. According to the study, operational cash flow management and cash management significantly and favourably impacted the financial performance of Kenyan microfinance institutions. Nonetheless, the financial performance of Kenya's microfinance institutions was significantly impacted negatively by operational efficiency management. As per the study's findings, microfinance banks in Kenya carry out cash budget preparation, bank reconciliation, cash inflow and outflow recording, cash expense payment, and cash surplus investment. As a result, they manage their funds carefully. Furthermore, the stability and functioning of the financial system depend heavily on efficient cash flow management. It entails keeping an eye on money coming in from investments, sales, and outside funding sources as well as tracking money going out to pay for bills, obligations, and loan repayments. Microfinance banks are able to balance inflows and outflows, lower the risk of liquidity crises, and take advantage of growth possibilities by managing cash flow well. This allows microfinance institutions to make well-informed choices regarding debt management, expansion strategies, and investments—all of which are essential for overall financial success. The study found that the financial performance of microfinance institutions in Nairobi County, Kenya, was negatively impacted by operational efficiency management. The financial performance of Kenya's microfinance institutions would, therefore, be negatively impacted by a high percentage of non-performing loans. To maximize the beneficial effects on financial performance, the study suggests adhering to the statutory minimum liquidity ratio. Since excessive liquidity and illiquidity reduce the institutions' profitability, microfinance banks should implement effective cash management procedures. In order to maintain an ideal level and control cash for the efficient operation of day-to-day operations, the study also suggests that microfinance banks develop a policy on cash management.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Liquidity management ensures organizations remain in operation for a foreseeable future. According to Mwambui and Koori (2019), managing liquidity effectively is an essential part of how financial institutions, notably microfinance banks (MFBs), operate. Liquidity management is therefore a crucial factor influencing MFBs' financial performance. Besides, a company's ability to pay suppliers and employees as well as prepare for sustainable expansion are just a few of the short- and long-term effects of liquidity management (Soukhakian & Khodakarami, 2019).

Mwambui and Koori (2019) note that the 2008-2009 global financial crisis resulted in an inverse relationship of financial performance and liquidity management of Kenya's financial institutions. Microfinance banks in Kenya encounter significant liquidity challenges due to their unique operating environment (Ogola, 2021). Firstly, irregular and unpredictable cash flows from micro-borrowers can disrupt the banks' liquidity position, leading to difficulty in fulfilling both the short-term and investment obligations. Additionally, these banks often have limited access to interbank markets, constraining their ability to source emergency funds. Furthermore, reliance on small-scale deposits makes their liquidity sensitive to changes in customer behavior and economic conditions (Aktas et al., 2015).

Inefficient liquidity management can lead to increased costs associated with emergency borrowing, while inadequate funds can hinder loan disbursement, potentially slowing down economic activities in the communities they serve (Mwambui & Koori, 2019). These liquidity issues can undermine the banks' financial stability, operational efficiency, and growth prospects (Anton et al., 2021).

Addressing these challenges requires the implementation of robust liquidity management strategies that aided in balancing the short-term liquidity with longer-term sustainability goals, ensuring these microfinance Banks continue to empower underserved populations while maintaining financial resilience (Ogola, 2021).

Effective liquidity management entails planning for and managing current organizational assets and obligations to minimize the risk that the company will untimely meet its debt obligations and, thus, fail to overinvest in its assets (Habib & Mourad, 2022). Further, it provides guidelines to the senior executive and the management to determine where adjustments are required in terms of investment to enable the going concern of the business. Globally, financial institutions place a significant emphasis on working capital since it acts as a liquidity management buffer (Baños-Caballero et al., 2020). Thus, liquidity is valuable in economic turmoil, given that without effective liquidity management, a company's operations can come to a standstill (Baraza, 2014).

Liquidity management is essential in every economic sector since it indicates an organization's prospects. In enterprises, liquidity management is increasingly essential in managing a firm's routine operations while evaluating potential success or insolvency (Soukhakian & Khodakarami, 2019). The degree to which money intended to boost a company's profitability and revenue generation is invested and used depends on the enterprise's liquidity (Njue, 2020). To analyze the effect of Liquidity management, focus can be directed on key variables such as operating cash flow management, operating efficiency management, and cash management.

According to Onchangwa (2019), liquidity management entails planning, organizing, and controlling components such as short-term loans, bank balances, inventories, payables, receivables, overdrafts and cash. Also, it can be defined as the procedure for overseeing a firm's working capital patterns (Mwambui & Koori, 2019). By analyzing the liquidity status of a company, it allows

interested parties to determine whether a firm is efficiently run or not. The key purpose of liquidity management is to make corrective actions and ensure that the success of the company is guaranteed and that a company operates effectively as compared to its competitors (Baños-Caballero, et al, 2020).

Also, Onchagwa (2019) notes that effective liquidity management creates a competitive edge for companies as they outdo competitors in their operations. Furthermore, it helps to ensure that an organization operates with adequate cash flow that guarantees timely meeting of the short-term expenses and debts (Habib & Mourad, 2022). Thus, liquidity management entails managing current liabilities and assets and ensuring that a desirable relationship exist between these two variables as they are vital in guaranteeing a firm's financial success.

The management of liquidity is essential to firms since it is critical in eliminating inherent risk that might arise should a firm be unable to meet short-term obligation while also limiting firms from overinvesting in assets (Soukhakian & Khodakarami, 2019). Liquidity management aims at ensuring that firms are able to maximize their value by and consequently increase the worth of shareholders. However, ineffective Liquidity management exposes the company to high insolvency risks.

According to Rimsha et al (2018), liquidity management is a crucial task that significantly impacts the company's overall financial success. The procedure comprises cash items, debtors, and creditors; a company can efficiently minimize costs associated with liabilities while optimizing the return on assets through efficient management of the current obligations and assets (Habib & Mourad, 2022). Liquidity management cuts across all companies operating in an economy as it serves to secure seamless operations by enabling firms to meet short-term obligations and liabilities

in addition to operating, expenses (Dong & Su, 2010). Riri (2019) acknowledges that effective liquidity management is essential in maximizing shareholders wealth while Hassan (2017) notes that effective and efficient liquidity management practices improve the financial returns of a company. Liquidity management, according to Kipngetich (2019), is an essential practice that ensures a business has enough cash on hand has adequate cash reserves to fulfill its short-term commitments. It has an impact on a company's solvency and financial performance. An effective liquidity management positively impacts the profitability and solvency of finance firms, while poor liquidity management can lead to poor financial performance and even insolvency (Riri, 2019).

Kipngetich (2019) further states that effective liquidity management can be achieved by managing the maturity mismatch or refinancing risk between the assets and liabilities of a business. Indicators of poor liquidity management include falling poor marketability of assets, insufficient debt, and asset values. Mwashian and Miroga (2018) in their study note that managing liquidity is an essential aspect of financial management, which necessitates cautious handling and preparation for a business venture to be profitable and successful. Effective liquidity management is important for SACCOs to meet their short-term obligations and increase profitability. Mwashian and Miroga (2018) found that SACCOs with superior liquidity management techniques outperform those with inferior techniques in terms of profitability. On the other hand, SACCOs that encounter overexposure to liquidity risk may encounter difficulties like bank runs, runaway investors downgraded ratings, and more stringent financing, which can negatively impact their profitability (Dufera, 2010).

In central Asia and Eastern Europe, these countries have experienced a 38% growth in MFBs while North Africa and Middle East have recorded the highest growth rate of MFIs at 41%. Notably Asia has the highest recorded number of MFB subscribers at twelve million borrowers. In Africa, Ghana is noted as having the oldest traditional banking system used to mobilize funds to facilitate small

and micro enterprises. In its part, Kenya is considered as one of the most developed and dynamic economies with a robust microfinance sector with numerous financial institutions that are inclined towards serving the financially disadvantaged (Njue, 2020). Regardless, the regulation of the MFIs in Kenya has only been recently implemented meaning that innovations in this industry were easily implemented and there existed no minimum capital requirements (Gibson, 2012). Prior to implementation of the MFI Act of 2006 in Kenya, these institutions were self-regulated and relied on financing from international organizations (Riri, 2019). However, regulations aimed at protecting savers and ensuring these institutions are supervised to increase their reliability and ensure accountability in their operations.

The Kenyan MFI industry has experienced significant transformation since its inception whereby minimum capital has been introduced while the best performing MFIs have transitioned into fully fledged commercial banks and they contribute to the country's financial stability (Kathuo, 2015). Also, they are crucial sources of information in the developing nations and facilitate individuals without capital market access (Onchagwa, 2019). Thus, assessing the functioning of their operations is critical to provide a future outlook and recommending the best strategy to guarantee their long-term survival.

1.1.1 Liquidity Management Practices

Liquidity management practices are strategies and processes that organizations implement to effectively monitor, control, and optimize their available liquid assets, such as cash and near-cash resources (Njue, 2020). These practices aim at guaranteeing that companies have enough and adequate working capital while also maximizing returns on excess cash. Effective liquidity management involves maintaining a balance between the need for immediate cash availability and the desire to invest funds for higher returns (Njeru et al., 2015). Techniques may include cash flow

forecasting, setting up contingency reserves, short-term investment strategies, and maintaining relationships with financial institutions to access credit if needed (Riri, 2019). Sound liquidity management practices are essential for financial stability, operational continuity, and seizing growth opportunities while minimizing the risk of liquidity shortages.

Companies need to manage their liquidity because it generates profit from sales, which fuels expansion. Moreover, it offers the cash flow and liquidity necessary for a company to remain stable and viable. According to Weston and Coperland (1986), a number of factors related to liquidity management make it a worthwhile area of research. For example, surveys show that the majority of financial managers' time is spent on the company's routine internal procedures, which can be properly classified as liquidity management.

The evolving landscape of microfinance in the United States has necessitated effective liquidity management among microfinance banks that are aiming to maintain financial stability and fulfill their mission of providing financial services to underserved communities (Omowole et al., 2024). Recent trends in liquidity management practices among these institutions reflect a dynamic interplay of regulatory developments, technological advancements, and strategic innovations.

Groh et al. (2025) reports that the regulatory environment significantly influences liquidity management practices in microfinance banks. In the wake of financial upheavals, such as the collapse of Silicon Valley Bank and the rescue of Credit Suisse in 2023, regulators have scrutinized existing liquidity frameworks (Groh et al., 2025). The Basel Committee on Banking Supervision, for instance, identified flaws in global liquidity rules, prompting considerations for adjustments to ensure banks can withstand rapid liquidity shocks. These proposed changes aim to enhance the

resilience of financial institutions, including microfinance banks, by ensuring they maintain adequate liquid assets to meet sudden cash outflows.

The Federal Reserve in the United States has been proactive in addressing liquidity concerns as alluded to by Lorie Logan, the presidents of Dallas Federal Reserve Bank. He suggested allocating a portion of the Fed's balance sheet to loans and repurchase agreements, potentially through daily auctions of discount-window loans (Menand & Younger, 2023). This initiative aims to encourage banks to view borrowing from the Fed as a standard liquidity management tool, thereby reducing the stigma associated with discount window usage. Such measures could normalize borrowing practices and promote better liquidity distribution across the banking system, benefiting microfinance institutions that often operate with tighter liquidity margins.

Njue (2020) asserts that microfinance organizations offer financial services to low-income clients, individuals, or businesses who have been passed over by more established formal institutions like commercial banks. Banks in developing nations such as Algeria and Ghana are important in the success of the microfinance and retail business sectors. This is based on the argument that banks are important as far as the sources of financing for these institutions are concerned (Padachi, 2016). The analysis of the cash and WCM assets held by the Bank of Ghana reveals that WCMs are associated with financial planning in the short run and cash levels; as liquidity remains to be a good indicator of performance in the short-term (Njue, 2020).

Profitability of these firms depends majorly on numbers of borrowers and not high interest rates. Since they charge less interest rate, they have more people and small enterprises borrowing short term loans that have higher returns (Riri, 2019). When rates are well managed the micro finance institutions tend to reinvest at least 50% of the profits back in the business for it to grow. The

institutions' capital management works with little recurrent expenditure (Njue, 2020). This is managed by using minimum staff some of whom earn wages through commissions with a retainer salary.

According to Baños-Caballero, et al. (2020), an extremely important part of managing a company's routine operations denotes the management approach adopted with regards to liquidity. The persistently difficult economic and financial market conditions have prompted businesses worldwide to step up their efforts to improve efficiencies and remove risks from their working capital management. As a result, effective liquidity management makes it possible for businesses to maintain an optimal financial performance. Onchagwa (2019) contends that it is commonly believed that if liquidity is inefficiently and poorly handled, there may be differences in the firm's assets and liabilities. Throughout this process, present assets and liabilities are planned for and managed to ensure minimization of dangers posed by inability to pay short-term debts as well as keeping excessive investment in these assets at bay.

Operational cash flow management is a crucial element in evaluating how the strategies used to manage liquidity effect the MFI's financial performance. It refers to how effectively a bank manages its cash and cash equivalents concerning its total assets. Assessing operational cash flow involves evaluating the percentage of liquid assets relative to total assets base (Ibrahim et al., 2023). An higher ratio regarding cash and cash equivalent in relation to total assets suggests a more robust capacity to fulfill immediate obligations, finance activities, and handle unforeseen financial demands. However, excessively high levels of cash might suggest underutilization of resources, leading to missed growth opportunities (Murkor et al., 2018).

Cash management as an element of liquidity management involves decision-making concerning how a company utilizes available financial resources or cash most effectively and productively and yields high returns. Notably, cash is the most liquid asset that companies have and which directly impacts the financial performance of an enterprise (Habib & Mourad, 2022). In the case of MFIs, an illiquid institution cannot honor its immediate financial commitments. Cash management entails controlling cash payments, receipts, and disbursements (Habib & Mourad, 2022). For MFBs, cash flow is estimated by estimating the difference between cash payments and receipts over a specific period.

According to Riri (2019), the most efficient cash management policy entails a shorter cash conversion cycle whereby the available cash quickly goes through the cycle of business activities. Thus, this calls for creating an equilibrium between the opportunity cost of having insufficient cash on hand against too much cash. An efficient cash management policy minimizes the cost of losing investment opportunities due to having too little cash as well as minimizing interest costs associated to short term liabilities (Habib & Mourad, 2022). For this study, cash management was analyzed in terms of the cash ratio which showcases the speed at which the company can convert cash investments into cash receipts. A higher cash ratio, which denotes better liquidity, indicates an organization's capacity to meet short-term financial obligations without relying on outside funding (Jørgensen, 2011). To manage cash, organizations engage in cash flow management, cash planning, investing surplus cash, and targeting an optimum cash level.

Another key variable in analyzing liquidity management in microfinance banks is operational efficiency. It is a crucial variable in assessing liquidity management strategies on the financial performance of MFIs. It denotes a bank's efficiency in utilizing its resources to maximize output and minimize input, ultimately influencing profitability and sustainability (Kitonyi, 2019). In the

context of microfinance, operational efficiency is often assessed by metrics such as the ratio of NPLs to total loans. A lower NPL ratio indicates effective risk management and loan quality. The best operational efficiency level varies based on factors like the economic environment and risk appetite. While a low NPL ratio is generally favorable, an excessively low ratio might suggest overly conservative lending practices, limiting financial inclusion and potential returns (Afolabi, 2020). Therefore, a critical assessment of operational efficiency involves striking a balance between minimizing NPLs and optimizing the use of resources to foster responsible and inclusive financial services, aligning with the microfinance bank's mission.

1.1.2 Financial Performance of Microfinance Banks

A firm's subjective capacity to utilize its assets to produce revenue and evaluate the financial implications of its financial policies and operations is measured by its financial performance. Variables like profitability and liquidity can be used to gauge a company's financial status (Njue, 2020). Profitability quantifies how much money a firm makes from its inputs. Net Income, ROA, Operating profit margin and ROE are four effective indicators of a company's success (Onchagwa, 2019). The current value of its assets and liquidity gauges the company's capacity to pay its debts on time and maintain owner's equity.

Majority of companies assess financial performance in monetary or financial terms and this forms a basis for evaluating the policies and operations being implemented. In addition to ROA, ROE, NI, and operating profit margin, companies also use variables such as Return on Capital Employed (ROCE), GPM, NPM, and ROI to assess the financial performance (Njue, 2020). Essentially, the analysis of financial performance calls for an in-depth review of a company's working capital variables such as cash flow, borrowings and the routine operational costs (Njeru et al., 2015). For

MFBs, they are required to assess and report their financial performance on a quarterly, semi-annual, and annual basis (Riri, 2019).

The regular reporting frequency of the MFBs financial performance is founded on the realized knowledge that microfinance Bank said in sustaining the stability of the banking and micro banking industry (Onchagwa, 2019). MFBs' prospects of withstanding negative shocks is weakened by poor financial performance, that impact solvency (Suryanto et al., 2018). An improvement in financial performance helps to allow lenders to recoup their whole investment or turn a profit, creating institutions that can stand on their own for a long time without needing ongoing support from the government or donations. The degree to which service users bear the entire cost of service provision directly determines MFB's financial performance (Jørgensen, 2011). Thus, size, credit risk, liquidity risk, operational efficiency, and capital levels are some of the key variables influencing the MFIs financial performance.

Riri (2019) alludes that the capacity MFBs to provide underlined services at the lowest possible cost is known as operational efficiency, which indicates how successful MFIs are optimizing their processes while accounting for input and/or output costs. Effective cost control should guarantee an efficient use of the loanable MFB's resources, potentially increasing MFB's profitability (Riri, 2019). Significant risks to sustainable microfinance relates to inefficiency because many institutions still lack the necessary efficiency needed to expend the costs.

In this study, an appropriate metric for evaluating the financial success of microfinance banks is net profit after tax as it evaluates their efficiency in generating profits relative to their total assets. Net profit after tax stands as a robust metric for analyzing the financial performance of microfinance banks due to its comprehensive assessment since it gauges profit generation (Njue, 2020).

This study concentrated on the MFBs and focused on establishing how their liquidity management practices are impacting their financial performance. Also, the study intended to identify the steps taken by these institutions as they strive to sustain their operations with the limited financial resources at their disposal that is generated from deposits and interests on the disbursed loans. The interest in microfinance Banks is due to their ability to grow into large and successful commercial banks with high banking market share and huge loan portfolios (Riri, 2019).

1.1.3 Microfinance Banks in Kenya

According to Mwambui and Koori (2019), microfinance banks play a vital role in Kenya by fostering financial inclusion and socio-economic development. They empower low-income individuals and marginalized communities with access to credit, financial services, enabling savings, and insurance. This empowers entrepreneurs, stimulates small businesses, and enhances livelihoods, contributing to poverty reduction and economic growth. Microfinance banks also support rural development, women's empowerment, and education through targeted lending (Wasiuzzaman, 2015). Their impact extends beyond finance, fostering social cohesion and resilience. By channeling resources to underserved segments, microfinance banks enhance financial literacy, build assets, and facilitate economic participation, ultimately contributing to Kenya's inclusive and sustainable development.

In Kenya, there are two types of microfinance institutions and they are classified based on regulation. The Microfinance Policy governs the MFBs, which are also known as microfinance banks, and they are subject to regulation by the Central Bank of Kenya (Mwambui & Koori, 2019). Some of MFBs are credit only enterprises and they only need an operational license to proceed with their objective of lending out cash to the public (Suryanto et al., 2018). Notably, these MFBs are

deposit-taking establishments that are closely monitored by the legislative, regulatory, and supervisory framework that governs Kenya's microfinance sector (Njue, 2020).

According to the CBK (2023), in Kenya, thirteen MFBs aid in providing affordable financing alternatives to the population and numerous enterprises in Kenya. Essentially, their services encourage entrepreneurship while providing competition to the banking institutions operating in Kenya. In addition to providing finances to entrepreneurs, microfinance banks are credited for improving the financial deepening within the country and this has been achieved through offering of numerous financial products to the Kenyan economy (Kathuo, 2015).

Thus, the management of these MFBs working capital needs to be analyzed and tailored to increase its efficiency and consequently improve their financial position given they are vital Kenya's economic growth (Njue, 2020). A study on the liquidity management and MFBs' financial performance in Nairobi produced vital information that directed the MFBs, considering the many obstacles these institutions face (Soukhakian & Khodakarami, 2019). Consequently, it assisted them in developing sound liquidity management practices that maximize shareholders wealth while also guaranteeing a long-term future for the company.

1.2 Statement of the Problem

Microfinance banks (MFBs) play a crucial role in providing financial services to individuals and small businesses that are often excluded from the formal banking sector. However, their sustainability and financial performance largely depend on effective liquidity management as was noted by Soukhakian and Khodakarami (2019). When microfinance banks cannot obtain the required funds, it poses a significant challenge to their daily operations. A report by the CBK (2021)

indicates that MFBs in Kenya are facing a financial performance problem as evidenced by recorded declining industry profitability.

A key pointer to the financial struggles of microfinance banks in the country is the recent significant drop in their profitability and return on assets. As per CBK (2021), the microfinance banks have recorded declining profits before tax of Kenya shilling 1,002,000,000 in 2014, 592,000,000 in 2015, -377,000,000 in 2016, -622,000,000 in 2017, -1,437,000,000 in 2018, -339, 000,000 in 2019, -2,240,000,000 in 2020 and -877,000,000 in 2021. Thus, it is evident that microfinance banks are experiencing financial performance problems that need to be remedied. Multiple scholars have often attributed such challenges to poor liquidity management while proposing sound management of financial institutions' liquidity as a reliable remedy the financial bottlenecks (Kapur, 2021; Osei, 2024; Al Janabi, 2024).

Despite the critical role of liquidity management in ensuring the stability and profitability of MFBs, there is limited empirical evidence on how different liquidity management practices influence their financial performance, particularly in Nairobi City County, which hosts the highest concentration of microfinance banks in Kenya. Previous studies have mainly focused on commercial banks, leaving a gap in understanding the unique liquidity challenges faced by MFBs, which operate in a more constrained regulatory and economic environment.

Additionally, the majority of research, including that conducted by Habib (2022), Onchangwa (2019), Anton (2021), Banos-Caballero (2020), and Riri (2019), focuses on the financial performance and working capital management and frequently uses secondary data extracted from the audited financial reports; this has been the case for businesses in other industries, including supermarkets, deposit-taking MFIs in other areas, and NSE-listed companies. However, the current

study focused only on the MFBs in Nairobi City County. The resulting information can be generalized and used by the deposit taking and non-deposit taking MFBs. It is these different study criteria that motivate the current study and the goal is to present a fresh viewpoint on liquidity management techniques and their effect on the MFBs' financial performance in Nairobi City County.

1.3 Research Objectives

1.3.1 General Objective

To assess the effect of liquidity management practices on the financial performance of microfinance banks in Nairobi City County, Kenya.

1.3.2 Specific Objectives

- i. To examine the effects of cash management practices on financial performance of microfinance banks in Nairobi City County, Kenya.
- ii. To establish the effects of operational cash flow management on financial performance of microfinance banks in Nairobi City County, Kenya.
- iii. To ascertain the effects of Operational efficiency on financial performance of microfinance banks in Nairobi City County, Kenya.

1.4 Research Hypothesis

- i. Cash management practices have no significant effect on financial performance of micro finance banks in Nairobi City County.
- ii. Management of operational cash flow has no significant effect on financial performance of micro finance banks in Nairobi City County.

- iii. Operational efficiency has no significant effect on financial performance of micro finance banks in Nairobi City County.

1.5 Significance of the Study

There is a growing number of microfinance organizations in Kenya, and this is indicative that there is a high demand for financial intermediation services in Kenya, and, more, there is demand for loan financing even at high interest rates. However, to protect the borrowers and to regulate the market, the Central bank of Kenya has begun regulating these institutions. Due to strict regulations by the CBK, it is essential to assess how these microfinance banks manage their working capital in their quest to have an improvement in their financial performance. From this research, crucial information might be gained to guide the regulation of microfinance banks and it can facilitate the legislation against exploitative microfinance banks to protect the borrowers. Also, the study might be significant as it might bring to light the numerous challenges facing microfinance banks and this is essential in assisting them to adjust their operations to ensure that they make significant profits that can sustain their operations.

Policy makers in Kenya can use the study's insights to formulate informed policies that enhance microfinance sector regulation, financial inclusion, and sustainable growth, fostering economic development and stability. Regulators in Kenya can utilize study findings to refine regulatory frameworks, ensuring effective oversight of microfinance banks, promoting financial stability, and safeguarding consumer interests. Also, the study might offer theoretical insights and practical knowledge, aiding academia in understanding microfinance dynamics and providing practitioners actionable insights for informed decision-making and improved operational strategies. It might also increase knowledge regarding this topic.

1.6 Scope of the Study

In Kenya, there are numerous microfinance institutions but for the purpose of this study, only the licensed microfinance banks were involved in the study. Notably, all these microfinance banks were headquartered in Nairobi and as such, the essential information that was not published was sought through the various headquarters present in Nairobi City County. The County was selected for the study because it hosts the highest concentration of microfinance banks in Kenya. The study focused on the thirteen microfinance banks in Kenya and it adopted a quantitative research approach while the data utilized was for 5 years, from 2017 to 2022. The time scope provides a comprehensive view of their growth trajectories and adaptations.

1.7 Limitation of the Study

This study was limited only to MFBs in Nairobi County and the utilization of secondary data included the assessment of financial performance of Nairobi based MFBs in relation to their practices of managing their liquidity. Thus, not all MFIs qualified to be included in the study and only secondary data from the thirteen licensed microfinance banks was utilized. Also, the findings were limited to the duration under consideration, which failed to capture the most recent developments. Consequently, this potentially limited ability to generalize the findings to other periods and regions.

1.8 Organization of the Study

The organization of this project involved five chapters. The introductory segment provided a brief overview of the underlying problem, the objectives, the study's significance as well as the limitations. The second chapter involved reviewing the theories guiding the study as well as the empirical literature that provided gaps supporting this study. The third chapter detailed the study's

applicable methodology. Chapter four comprised of statistical analyses of the relevant data while the final chapter summarizes the findings thereof before concluding the project with well-considered recommendations.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This segment reviewed various literature based on underlying objectives which involve; approaches regarding the management and Nairobi County's MFBs financial performance. This segment was divided into; theoretical framework, empirical review, and conceptual framework. Further, a review summary denotes the end of this chapter.

2.2 Theoretical Literature Review

Liquidity management was anchored by various theories. This segment reviewed the various theories; Keynesian liquidity preference, transactional cost, and cash conversion cycle theories.

2.2.1 Keynesian Liquidity Preference Theory

John Maynard Keynes developed this theory in the year 1936. The theory underlines the demand for liquid money and its relationship in determining interest rate as highlighted by the demand and supply of money (Brady, 2017). According to this theory, money demand does not connote borrowing it but instead the need to constantly have it in liquid form. Thus, it alludes to the critical role of liquidity management in fostering positive performance among financial institutes as they endeavor to meet their short term financial obligations without borrowing. Whereas liquidity underscores the level or degree of transforming a given asset or asset to money, it also underlines how fast the asset can be transformed to its monetary value. Thus, this theory is pegged on the fact that individuals and firms alike hold money for holding cash, which embraces transaction, precautionary, and speculative motives.

Financially strapped businesses are forced to forgo costly opportunity costs by lowering elevated transaction costs while selling convertible assets when multiple investment projects with positive net present values (NPVs) are identified. At the same time, they must simultaneously look for other funding sources (Dittmar et al., 2003). Nonetheless, trade credit aids in financing the business activities of smaller firms, an aspect that contradicts the notion that larger firms have ultimate access to capital from the capital markets (Bellouma, 2014; Petersen & Rajan, 1997) who could otherwise provide financing that is interest-free to financially constrained firms. The limitations of this theory include the fact that it assumes that the supply and demand for money are the only factors influencing interest rates. Also, it ignores other variables that can affect interest rates, like risk, inflation expectations, and the state of the financial system as a whole. The theory presupposes a steady correlation between the amount of money and income, which suggests a steady velocity of money (Brady, 2017). In actuality, money's velocity can vary greatly, particularly during times of economic instability. This theory was vital as it revealed the impact of operational cashflow management and operational efficiency management on MFBs profitability in Kenya.

2.2.2 Transactional Cost Theory

In 1937, Ronald Coase instituted this theory before being reviewed in 1975 by Oliver Williamson. Transaction costs denote the expenses that are incurred with an aim of realizing economic exchanges or gains. Moreover, this theory aims at underlining why there are variations in markets. For instance, it seeks to underline why some markets are capable of accommodating several organizations as opposed to others which often accommodate fewer firms (North, 2016). According to Ogola (2021), transactional costs that are incurred by microfinance banks entail costs such as; cost incurred in searching information, enforcing policies, bargaining for various deals.

Similarly, transactional costs can negatively impact the profitability status of microfinance banks especially in instances where there is no control of such costs to a certain level. Microfinance banks exist in imperfect markets which are characterized by multiple firms; thus, there is need to ensure the costs are cut or made liquid significantly giving rise to transactional cost theory (Ogola, 2021). Also, transactional cost theory emphasizes on costs incurred during the borrowing process. For instance, Teece (2014) underscores that MFBs often serve clients with limited access to formal financial services, and the transaction costs associated with reaching and serving these clients can be relatively high. The costs of client screening, loan appraisal, and monitoring can impact the financial performance of MFBs. Effective management of transaction costs in the lending process, such as streamlining loan application procedures and utilizing technology for efficient data collection, can help reduce costs and improve financial performance (North, 2016).

Microfinance banks in as much as they aid in provision of credit facilities to various firms, their sole purpose includes generation of income or profits in the course of operations. Part of efficient financial management include cost minimization as well as having adequate revenue to offset the costs once they are experienced in the firm (North, 2016). Moreover, the theory calls for taking into consideration a probable level of costs that firm can incur while still maintaining a given level of profitability (Teece, 2014). This theory has a few limitations which include the fact that the idea of transaction costs, which can be difficult to quantify objectively, is the foundation of the theory. Information search costs, negotiating costs, and enforcement costs are examples of transaction costs. The amount of these costs might vary depending on the situation and be subjective. Transactional cost theory assumes that economic agents are rational and aim to minimize transaction costs. In reality, individuals and organizations may not always behave rationally due to bounded rationality, cognitive limitations, or behavioral biases. Therefore, this theory formed an

integral basis in elucidating how financial performance is critical in guaranteeing the continuity of a business and the prospect of meeting its short-term obligations. Besides, it aided in underlining the relationship between financial performance of MFBs and various aspects such as cash management.

2.2.3 Cash Conversion Cycle Theory

Before Jordan expanded it further in 2003, Blinder and Maccini devised the cash conversion cycle in 2001. This theory underlines the significance of having a timeline between turning cash outflows into cash inflows in a firm. Therefore, the theory alludes that it is critical to have an underlined number of days to determine appropriate funding to pay a firm's current obligations and thereby remain in business. Thus, cash conversion cycle denotes the duration between disbursement time and cash collection time. Therefore, the cash conversion cycle plays a vital role in highlighting the time taken for an investment in the production process before it is ultimately converted to cash (Attari et al., 2012). Cash conversion cycle is integral especially among microfinance institutions as it provides a basis for differentiating between elements of profitability and bankruptcy in the institutions given that microfinance institutions are often financed using cash as opposed to profits (Onyele & Onyekachi-Onyele, 2020).

Keown et al. (2003) asserts that cash conversion cycle is essential in guaranteeing that firms make suitable consideration as far as time for transforming inputs to cashflows is concerned. The cash conversion cycle theory is closely tied to liquidity management in MFBs. For instance, Onyele and Onyekachi-Onyele (2020) highlights that efficient cash conversion cycle management helps MFBs maintain optimal levels of liquidity by aligning the timing of cash inflows from loan repayments with cash outflows for operational expenses and funding requirements. Samosir (2018) states that in order for MFBs to maintain effective liquidity, they must make sure they have enough money to

support lending activities, pay their debts, and handle unforeseen liquidity requirements. Sufficient liquidity improves MFBs' stability and financial performance. Besides, Wang (2019) posits that efficient management of the cash conversion cycle allows MFBs to optimize their cash flow and reduce increased use of external sources of funds. MFBs can produce internal cash flows that can be used for lending activities by shortening the duration to convert loan disbursements into loan repayments, eliminating the requirement for expensive external borrowings (Onyele & Onyekachi-Onyele, 2020). The theory stands out a valuable illumination of the current study's subject on cash management and the bank's financial performance.

2.2.4 Miller-Orr Model of Cash Management

Miller-Orr cash management theory was first developed by Jack Treynor and Manfred W. Keusch, before it was later modified by Merton H. Miller and Daniel Orr in 1966 (Moraes & Nagano, 2013). According to Miller-Orr financial model, organizations frequently allow their financial balances to fluctuate between the upper and lower bounds. The model was created in the context of financial management with the goal of giving businesses a workable framework for managing their cash balances more effectively while taking transaction costs and the trade-off between retaining excess cash and making regular cash transfers into account. The limits for both the upper and lower bounds point at the levels whereby the company should maintain its cash balances. The model helps a company to regulate its cash. For instance, when the company's cash hits the upper limit, it can opt to purchase various saleable securities in a bid to ensure it returns to the required levels. Similarly, when the cash balance of the firm hits the lower level, the company can trade in some of its securities to ensure it can accumulate funds to fix the issue.

The theory is integral in determining the optimal time for initiating a cash transfer while taking into consideration the deviations that exist from the target cash balance. Also, it pinpoints the point or

instance whereby there is need to transfer cash especially when it hits the higher limit to ensure it is at the required or acceptable range (Moraes & Nagano, 2013). The model has various assumptions which include the fact that cashflows are stochastic and they follow a normal distribution. The Miller-Orr model is vital in underlining various aspects of liquidity management practices in Microfinance institutions in Kenya. As a result, this theory helped to clarify how cash management techniques affect and were crucial to the financial performance of licensed Nairobi City County's MFBs.

2.3 Empirical Review

2.3.1 Cash management practices and financial performance of MFBs

Research was done in 2019 by Mwambui and Koori within Nairobi County to examine microfinance banks' financial performance in relation to the management of their liquidity. 39 respondents from 13 carefully chosen banks made up the sample for this descriptive research design study. In order to choose three respondents from the 13 banks, the study also employed purposive sampling. Questionnaires were utilized to help collect primary data for the study. The study's findings indicated that there is not much of a correlation between capital sufficiency and the MFBs in Nairobi County's financial performance. However, the results indicated a weak positive association between the financial performance of Nairobi County's microfinance institutions and their cash management practices.

Wangai and Mungai (2019) conducted research on liquidity management's impact on the financial performance of Nairobi County's MFBs. Expectancy, trade-off, and agency theories were all included in the survey. The study employed a purposive and sampling design to select the sample population, and it adopted a descriptive research design. 89 individuals in the study had their information gathered using questionnaires. The results showed that the financial results of

microfinance banks in the Starehe constituency are positively correlated with their management approaches.

Mwaniki (2012) determined the link between practices relating to WCM and fiscal performance of the Kenya's MFIs deposit taking. The selected research design was descriptive with the population entailing all deposit-taking microfinance institute up to 2011. Additionally, several regression models were employed in the study to ascertain whether a relationship existed between the variables being examined. The results of the study demonstrated that working capital management strategies and return on asset—a metric used to illustrate the profitability of the highlighted companies—have a link. Furthermore, the findings hinted at a negative link between ROA and every other working capital component.

2.3.2 Operational Cashflow Management and financial performance of MFBs

Sathyamoorthi et al. (2020) studied the impact of liquidity management on the financial performance of banks in Botswana. A number of proxies for liquidity management were used in the study, including the ratios of cash and cash equivalents to total assets, cash to deposits, loans to deposits, loans to total assets, liquid assets to total assets, and liquid assets to deposits. The metrics used for this analysis were ROA and ROE. Over a nine-year period, from 2011 to 2019, all nine of the commercial banks in Botswana were included in the survey. This descriptive study's monthly secondary data came from the Bank of Botswana Financial Statistics database. The analysis employed to examine the data, use regression analysis, correlation analysis, and descriptive statistics. Regression study showed a negligible positive correlation between return on equity and return on assets. Overall, the study's conclusions imply that by managing liquidity factors more effectively, commercial banks could improve their performance.

In a study by Mwangudza et al. (2020) on management's approaches to liquidity and financial performance of Kenya's teachers' DT SACCOs, the aim involved evaluating the existing link between managing liquidity and fiscal feat of underlined DT Saccos, as well as ways in which Saccos' sizes mitigates this effect. Financial performance, represented by surplus, was linked to liquidity management ratios outlined by SASRA, while a descriptive survey was adopted data between 2011 and 2018 was collected, encompassing eighteen licensed DT Saccos serving teachers. The study demonstrated that capability and acquired capital had a significant influence on Teachers DT Saccos' financial success using a combination of descriptive and inferential data. However, factors like cash position, total deposit, and core deposit showed insignificant effects on their financial performance. The study highlighted Saccos' size is a significant factor that influences the relationship between liquidity management and financial performance, advocating for more robust liquidity monitoring policies and enhanced oversight.

Onyemaechi and Nneka (2022) investigated the impact of cash management on the financial performance of particular Nigerian manufacturing enterprises. The research included a purposive sample of twenty-six enterprises chosen from the consumer and industrial products sub-sectors, representing the population of 55 manufacturing firms listed on Nigeria's securities market. The collection of secondary data was enabled using an ex post facto approach from the NSE website and annual reports that each company gave. The hypotheses were tested using panel least square regression analysis. According to the results, cash management had a large negative impact on Tobin's Q and returns on assets, while returns on equity had a negative but non-significant effect.

2.3.3 Operational Efficiency management and MFB's financial performance

In a research on the impact of liquidity management on deposit-taking saccos' financial success in Nairobi County, Songe (2015) sought to understand the roles that management of liquidity and

financial performance play. Further, underlying aim involved filling in several highlighted conceptual and measurement gaps in the effect of liquidity management on the financial performance of these Saccos in Nairobi. Secondary data from their published financial statements was gathered through Sasra in order to ensure data reliability throughout the examination of 27 licensed Deposit-taking Saccos under the Sacco Society Regulatory Authority from 2010 to 2014. Utilizing descriptive statistics, regression analysis, and correlation methods, the study assessed the relationship between FLR, liquidity, quick ratio, operational efficiency, total assets' log, and financial performance that is measured by the level of profit before tax over total assets. Results indicated a positive association between financial performance and quick ratio, liquidity, operational efficiency, funding liquidity risk, and log of total assets. Consequently, the study pinpoints that Deposit-taking Saccos should implement robust liquidity management practices to enhance their financial performance.

Afolabi (2020) in his study titled Effect of Non-Performing Loans on Microfinance Banks' Performance in Nigeria. A Granger Causality Approach was used to examine the effects of credit risk indicators, specifically non-performing loans and loan-loss provisions, on the financial performance of microfinance banks in Nigeria. Secondary data from 2012 to 2018 from six chosen microfinance banks were studied using a Vector Autoregressive (VAR) Model by utilizing the Granger causality technique. The investigation inside Nigerian microfinance banks revealed a one-way causal relationship between loan-loss provisions and returns on assets, as well as between non-performing loans and loan-loss provisions. Thus, the study concluded that non-performing loans had a significant effect on the financial performance of these microfinance institutions. It recommends that these institutions consistently and strategically monitor their loan portfolios by

establishing tailored credit limits at various levels, aligning with their credit policies and risk tolerance.

Ibrahim et al. (2023) studied the impact of liquidity management on the financial standing of money market funds (MFs) that accept deposits in Nairobi City County, Kenya. Specific objectives included assessing how current ratio, operating cash flow management, capacity ratio, and loan repayment ratio influence these institutions' financial performance. The study drew upon anticipated income theory, liability management theory, liabilities management theory, liabilities preference theory and shift-ability theory. With secondary data from published statements and annual reports covering the years 2016 to 2020 and a descriptive survey approach, quantitative analysis employed descriptive statistics and panel regression. Results indicated that effectively managing current ratios, operating cash flows, capacity ratios, and loan repayment ratios significantly and positively affected the financial performance of these microfinance institutions. Enhancing operating cash flow by reducing credit repayment periods and instituting rigorous loan recovery measures could significantly improve financial performance.

Table 2.1 Summary of Literature Review

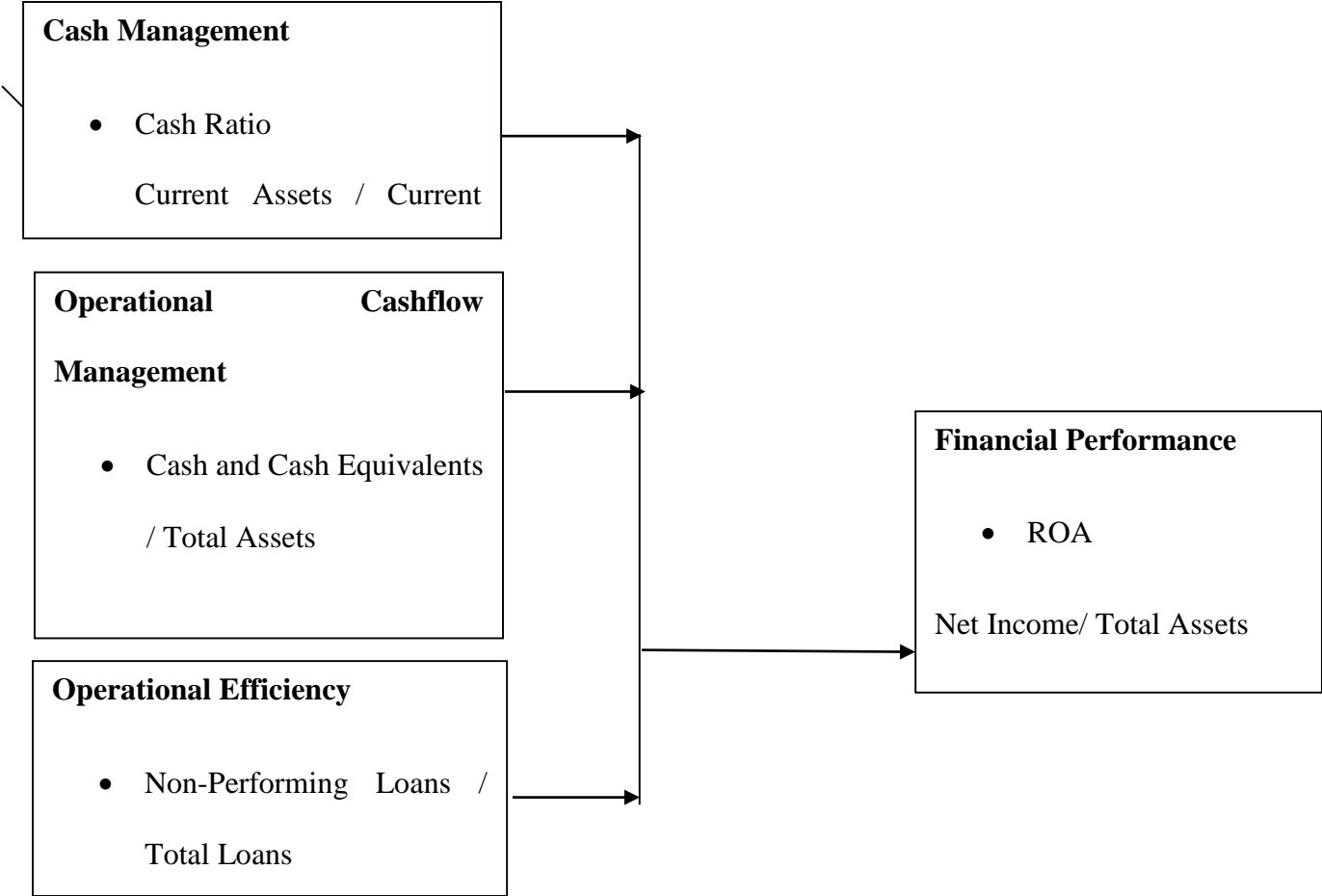
Author	Title of Study	Results	Research Gaps	Addressing the Gaps
Wambui and Koori (2019).	Effect of liquidity management on Nairobi County microfinance institutions' financial performance	The financial success of Nairobi County's microfinance institutions is positively correlated with capital sufficiency, albeit weakly.	The study's scope involved a duration between 2011 and 2017.	This study's scope was between 2014 to 2022.

Wangai and Mungai (2019)	Practices in financial management and their effect on the MFIs financial health in Starehe Constituency in Nairobi County	The Starehe constituency's microfinance banks' financial results and management practices are positively correlated.	The study delved on financial management practices of MFIs.	This study focused on liquidity management practices.
Mwaniki (2012)	Relationship between DT MFIs' financial performance in Kenya and their WCM practices	There is a positive correlation between working capital management strategies and ROA.	The survey considered firms that existed up to 2011	This research considered firms that existed as at 2022 and are licensed.
Sathyamoorthi et al., (2020)	The effect of liquidity management on the commercial banks' financial performance in Botswana	There is a moderately positive association between total assets, return on equity, and return on assets with cash and cash equivalents. Commercial banks can improve performance by optimizing liquidity management.	Botswana denotes the location of the study between the year 2011 and 2019.	Kenya served as the study's location, and its timeframe was set between 2017 and 2022.
Mwagudza et al. (2020)	How Kenyan teachers' DT Saccos handle their cash and financial performance	Sacco's capacity and purchased money have a big impact on its financial results. The effects of total deposit, core deposit, and cash position are negligible. One important moderating factor is the size of the Saccos.	Inadequate examination of all liquidity management ratios' influence. Limited scope in assessing the interplay of liquidity management with long-term	Conduct a comprehensive analysis of all liquidity ratios' impact on financial performance. Explore how liquidity management interacts with long-term performance drivers to enhance

			performance drivers.	performance sustainability
Onyemaechi & Nneka (2022)	Financial Performance of Nigerian Manufacturing Companies: The Effect of Cash Management	Cash management has a significant negative impact on asset returns and Tobin's Q.	The focus of study involved 26 Manufacturing firms in Nigerian	13 MFBs in Kenya were considered in this study.
Songe (2015)	Liquidity management's impact on Saccos that accept deposits	Liquidity, funding liquidity risk, quick ratio, operational effectiveness, and financial performance are all positively correlated.	Study has limited duration (2010-2014) and was based on DT Saccos	Population of study was MFBs while the scope of study was a more recent period (2017-2022)
Afolabi (2020)	A Granger Causality Analysis is used to Assess the Effect of NPLs on Nigerian MFB Performance	NPLs have a significant influence on microfinance banks in Nigeria since there is a one-way causal relationship between loan-loss provisions and returns on assets, as well as between NPLs and loan-loss provisions.	In addition to being carried out in Nigeria, the study only focuses on non-performing loans as the key variable affecting financial performance of MFBs	The study was to be based on Kenyan MFBs and the default rate ratio is a measure of operational efficiency.
Ibrahim et al., (2023)	Liquidity management's impact on Nairobi County MFIs' financial performance when they take deposits	The financial success of deposit-taking MFIs in Nairobi County is positively impacted by capacity ratios, loan repayment ratios, current ratios, and operating cash flows.	The scope covered the years 2016 to 2020 and only focused on MFBs which had been formed 5 years earlier.	This study's scope spans from 2017 to 2022 for an up-to date and comprehensive analysis and involved all MFBs.

Source: Researcher (2023).

Figure 2.1: Conceptual Framework



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter highlights the research approach through which different aspects of the project was handled. Moreover, the content of this chapter entailed the research's approaches regarding; the design, population, methods of collecting and analysis of data.

3.2 Research Design

It denotes a roadmap giving researchers the most control over the likely variables that inevitably affected their findings and, ultimately, the validity of their conclusions (Vogt et al., 2012). Descriptive research design was used in this study since it helped to describe the phenomena being studied. Besides, the research design was selected given its simplistic nature as well as being easy to apply. Also, the observations of the study's subjects was undertaken in a natural environment that do not require manipulation, an element that is further attainable when using descriptive research design. The descriptive research design also provided a basis for applying a composite approach in both collection and analysis of the data. As Mugenda and Mugenda (2012) allude, descriptive research design ensured that the researcher can identify various variables that can be tested and subsequently serve as a precursor to future studies. AS such, it provides a crucial foundation for elaborating the link between the study's variables.

3.3 Empirical Model

Three components of working capital was considered in an empirical model included in this study. The regression model included

$$Y_{1it} = B_0 + B_1X_{1it} + B_2X_{2it} + B_3X_{3it} + \epsilon_{it}$$

Where:

Y₁ = Financial performance of microfinance institutions on a specific year.

B₀ = is the constant term (return on assets regardless of having a proper WC management.

t = time

X₁ = Cash Management of Microfinance i at time t

X₂ = Operational Performance of Microfinance institution i at time t

X₃ = Operational Efficiency of Microfinance institution i at time t.

i = specific microfinance institutions considered in the study.

ε = error term.

B₁ = X₁'s coefficient

B₂ = X₂'s coefficient

B₃ = X₃'s coefficient

3.4 Target Population

The term "target population," as defined by Mugenda and Mugenda (2012), refers to a collective group or collection of people, things, or even events that have certain characteristics in common that are essential for a particular study or fit certain criteria. Based on the definition, it is critical for target population to be homogeneous. The 13 MFBs in Nairobi City County formed the target population of the survey.

3.5 Sampling Design

A sample is a chosen subset of respondents who are typical of the total population (Kothari, 2004). All 13 of the regulated microfinance banks was taken into account in this study, which used a census sample design. The decision to use census sampling is attributable to a relatively smaller target population as denoted by 13 microfinance banks.

3.6 Data Collection

This study entailed collection of secondary data. Secondary data entails information that has been published by various microfinance banks or the CBK (Mugenda and Mugenda, 2012). A data evaluation guide attached to the appendix gathered information not available on the websites of the various MFBs.

Table 3.1 Operationalization and measurement of variables

Variables	Types	Scale	Measurements
Cash Management	Independent	Ratio	Cash ratio
Management of operational cashflow	Independent	Ratio	Cash and Cash Equivalents / Total Assets
Operational Efficiency	Independent	Ratio	Non-Performing Loans / Total Loans
Financial Performance	Dependent	Ratio	ROA

The researcher applied for NACOSTI letter as well as use the authorization letter from Kenyatta University's Graduate School to aid in successful data collection process. The CBK's yearly fiscal reports was the source of the data collection as well as the information contained in the set MFIs.

3.7 Data Analysis

In order to give the gathered data both order and significance, Mugenda and Mugenda (2003) argue that data analysis is essential. Software for data analysis in this project was SPSS 22. Moreover, this study embraced panel regression analysis given that this study considers time as far as its independent variables are concerned.

3.8 Diagnostic Tests

3.8.1 Multicollinearity

Cortina (1993) connotes that when there is a high degree of correlation between the independent variables, multicollinearity is always present. Existence of multicollinearity therefore is critical in determining the impact of independent variable in this study on dependent variable. In order to establish whether multicollinearity exists, the VIF test was conducted. If the VIF factor is larger than 10, multicollinearity had been identified (Daoud, 2017). In case multicollinearity exists, the highly correlated predictors were removed.

3.8.2 Normality

The purpose of this test is to determine whether or not the data is distributed according to the Gaussian distribution, which is an essential statistical tool (Das & Rahmtullah, 2016). This test helped ensure that the data is successfully analyzed. The Jacque-Bera test was used in this investigation to determine normalcy. According to Das and Rahimtullah (2016), the normalcy assumption was rejected if the Jacque-Bera statistic is substantial and noteworthy. In the event that normalcy is present, the significance level and confidence intervals were determined using a comparatively more cautious p-value (.01 as opposed to .05).

3.8.3 Hausman Test

This research embraced Hausmann test to determine if there is need to employ a random effect model. In the absence of correlation, the random effects model was embraced (Wooldridge, 2021). However, in the existence of correlation, this research adopted a fixed-effects model. If there is positivity in the study, it was rectified using the test statistic relating to absolute value since it does not interfere with the variables' null distribution.

3.8.4 Heteroscedasticity

According to Gajewski and Li (2015), heteroscedasticity arises if there exist error terms that have non-constant variance. Thus, this research adopted the Godfrey to test for the existence of heteroscedasticity. Determine whether the error variance is homoscedastic by using the study's null hypothesis. To assess the parameters of the model when heteroscedasticity is present, the investigator utilized the OLS estimator algorithm.

3.8.5 Test for Autocorrelation

Wooldridge (2021) contends that autocorrelation exists where there is a random errors distribution that are both independent and identical. Because autocorrelation has a substantial impact on the validity of inferential analysis, it is crucial to choose appropriate statistical methods and increase the precision of the estimator (Wooldridge, 2021). In this study, the serial correlation was assessed using the Woodridge test for autocorrelation. Serial autocorrelation was highlighted by the null hypothesis, but the alternative would indicate otherwise. In the event that autocorrelation occurred in the investigation, the Cochrane-Orcutt solution was used.

3.8.6 Normality Test

Since the Gaussian distribution is a key tenet of statistics, this test was carried out to make sure the data adhere to it (Das & Rahimtullah, 2016). By performing the test, an accurate analysis was carried out successfully. The Jacque-Bera test for normalcy was used in this investigation. The normalcy assumption was rejected when the Jacque-Bera statistic has a statistically significant value (Das & Rahimtullah, 2016). In the event of normalcy, the researcher would carry out the significance tests and confidence intervals using a more cautious p-value (.01 rather than .05).

3.9 Ethical Consideration

Ethics reflects an individual's morals, habits, customs and beliefs (Barr et al., 2011). This research-maintained integrity, transparency and quality throughout the research process. Additionally, the information gathered only utilized to further the study's specified goals.

CHAPTER FOUR

RESEARCH FINDINGS, INTERPRETATION AND DISCUSSIONS

4.1 Introduction

The chapter provides research outcomes, interpretation and discussions. The outcomes are presented in terms of descriptive statistics, diagnostic tests, correlation and regressions findings as showcased.

4.2 Response Rate

Secondary data was collected from 13 MFBs in Nairobi City County. The collected data covered years 2018 to 2022. The response rate was 100% since the researcher was able to get all the information from the 13 firms. Therefore, all the 65 observations were included in the study.

4.3 Descriptive Analysis

Table 4.1: Descriptive Statistics

Variable	Obs	Mean	Std.Dev	Min	Max
Financial performance	65	0.052	0.058	-0.059	0.236
Cash management	65	4.723	6.012	0.051	29.935
operational cash flow management	65	0.141	0.088	0.001	0.368
operational efficiency management	65	0.734	0.296	0.005	0.933

Source: Researcher (2024)

One of the most important stages of statistical data analysis is descriptive analysis. It offers a concise analysis of the data distribution that aids in the identification of mistakes and anomalies. The study presented the data patterns using the minimum, maximum, mean, and standard deviation which connote the four conventional measures of descriptive statistics. Table 4.1 shows descriptive data, followed by interpretations.

The microfinance banks' financial performance was evaluated using ROA. According to the findings, Nairobi County, Kenya's microfinance banks' average return on assets (ROA) from 2018 to 2022 was 0.103. The maximum ROA was 0.236 while the minimum ROA was -0.059. At 0.058, the standard deviation was quite low. The findings show that, from 2018 to 2022, the average return on assets (ROA) for microfinance banks was poor, at -5.9%. Furthermore, the analysis unequivocally shows that, between 2018 and 2022, some microfinance banks generated enormous returns on assets (ROA) of 23.6%. The low standard deviation fluctuations indicate that there was no difference in the ROA of the various microfinance institutions from the mean. These findings agreed with Mwambui and Koori (2019) who also indicated that most Micro finance banks in Kenya were not performing well.

Cash ratio was used to assess the cash management. The study results in Table 4.1 shows the average cash ratio was 4.723. Additionally, the data indicate that the greatest cash management was 29.935, and the minimum was 0.051. There was a significant difference in the cash ratios of microfinance banks, as underlined by the high standard deviation of 6.012. The results showed that most firms had a high cash ratio while other were extremely low which could have been the result for their poor performance. The study's conclusions concurred with those of Mwambui and Koori (2019), who discovered a strong correlation between cash management and the microfinance banks in Nairobi County's financial performance.

Cash and Cash Equivalents / Total Assets assessed the operational cash flow management. The study results in Table 4.1 shows the average operational cash flow management was 0.141. The outcomes showed that the minimum and maximum management operational cash flow were 0.001 and 0.368 respectively. The standard deviation was minimal, at 0.088, suggesting little variance across microfinance banks in terms of their operational cash flow management. This infers that

operational cashflow management of most micro finance banks was too low which could have been the reason for their poor performance. The results of the study supported the findings of Ibrahim et al. (2023), who discovered that these microfinance organizations' financial performance was considerably and favorably impacted by operating cash flows.

Non-Performing Loans / Total Loans was used to assess the operational efficiency management. The study results in Table 4.1 shows the average operational efficiency management was 0.734. According to the results, the operational efficiency management ranged from a minimum of 0.005 to a maximum of 0.368. There was a low standard deviation of 0.296 indicating low variation from one micro finance bank to another micro finance bank in terms of their operational efficiency management. This infers that operational efficiency management of most micro finance banks was too low which could have been the reason for their poor performance. The study further agreed with Afolabi (2020) who found that operational efficiency management had an effect on microfinance banks' performance.

4.4 Diagnostic Tests

Mostafa et al. (2023) state that before beginning the actual process of data analysis, several tests must be conducted. Therefore, the study undertook relevant tests of the data that was collected including the heteroskedasticity, multicollinearity, normality and the Hausman tests.

4.4.1 Test for Normality

Table 4.2: Skewness and Kurtosis

Variable	Obs	Pr(Skewness)	Pr(Kurtosis)	chi2(2)	Prob>chi2
ROA	65	0.182	0.284	1.921	2.700
Cash management practices	65	0.412	0.554	1.945	2.292
Operational cash flow management	65	0.046	0.288	2.166	1.526
Operational efficiency management	65	-0.598	0.439	2.646	2.524

Source: Researcher (2024)

Test for normality in a collected data is often intended to examine whether the responses were normally distributed (Noel et al., 2021). The study used skewness and kurtosis to test for normalcy.

The results are shown in table 4.2.

The minimum skewness was -0.598 (operational efficiency management) while the maximum skewness was 0.412. The minimum kurtosis was 0.288 while the maximum kurtosis was 0.554. To demonstrate a normal univariate distribution, asymmetry and kurtosis values between -3 and +3 are regarded as appropriate. Additionally, p values greater than 0.05 were found for every value, suggesting that every variable had a normal distribution.

4.4.2 Test for Multicollinearity

Table 4.3: Test for Multicollinearity

Variable	VIF	1/VIF
Cash management	1.05	0.955
Operational cash flow management	1.05	0.955
Operational efficiency management	1.04	0.961
Mean	1.04	

Source: Researcher (2024)

A significant degree of similarity between independent variables indicates the presence of multicollinearity. Multicollinearity was examined using the Variance Inflation Factor. The general criterion for decision-making states that substantial multicollinearity causes the coefficients in the regression model to be poorly estimated if VIF is more than 10. Conversely, the presence of the tolerance index indicates multicollinearity between the regressors and is identified if the value is closer to zero. Table 4.3 shows results:

Multicollinearity is not present, as shown by Table 4.3's results, where all variables had VIFs less than 10 and means that were likewise below 10. In the same way, tolerance values for all the variables under study were more significant than 0.1, indicating absence of multicollinearity.

4.4.3 Test for Heteroscedasticity

When a residual's variance is uneven throughout a range of measured values, the condition is known as heteroskedasticity. For the purpose of testing the null hypothesis in this investigation, the Breusch-Pagan test was utilized to guarantee that the residuals of every observation varied consistently as presented below in table 4.4 below.

Ho: Constant variance

Variables: fitted values of ROA

chibar2(01)=8.03

Prob>chi2 = 0.230

Source: Researcher (2024)

The fact that variable probability had a p value greater than 0.05 suggests that there was no heteroskedasticity among the variables.

4.4.4 Hausmann Test for Model Specification

Table 4.5: Hausman Test

	(b)	(B)	(b-B)	sqrt(diag(V_b-	V_B))
	fixed	Random	Difference	S.E.	
Cash management	0.004	0.004	0.000	0.001	
Operational cash flow management	0.162	0.180	-0.018	0.027	
Operational efficiency management	0.073	-0.081	0.154	0.146	
Test:					
		b = consistent under Ho and Ha; obtained from Xtreg			
		B = efficient under Ho; obtained from Xtreg			
		Ho: difference in coefficients not systematic			
		$chi2(3) = (b-B)'[(V_b-V_B)^{-1}](b-B)$			
	= 1.27				
	Prob>chi2 = 0.7351				

Source: Researcher (2024)

The test was applied to choose the best model for regression analysis of the panel data, The Hausman test was then performed after the fixed and random effects models had been run. It was meant to guide on the suitable choice of the two models, depending on the realized p-value in comparison to the critical value. A fixed effect model would be adopted in an event that the critical value exceeds the resultant p- value; else a random effect model should be adopted. The outcomes were displayed in table 4.5.

Prob>chi2 = 0.7351 indicates that the test yielded a p- value exceeding 0.05. Therefore, random effects model was considered suitable for the data and the ensuing sections of the analysis solely relied on the model findings.

4.5 Inferential Analysis

Regression analysis and correlation analysis were two examples of inferential statistics that were useful in exploring the possible statistical associations among the variables (Kothari, 2004). The data were put through a number of tests prior to the inferential analysis being started. Consequently, the correlation and regression results were included in this section.

4.5.1 Correlation Results

Table 4.6: Correlation Analysis

		Financial performance	Cash management	Operational cash flow management	Operational efficiency management
Financial performance		1			
Cash management	Correlation value	0.526	1		
	P value	0.000			
Operational cash flow management	Correlation value	0.394	0.150	1	
	P value	0.001	0.214		
Operational efficiency management	Correlation value	-0.399	-0.171	-0.151	1
	P value	0.001	0.158	0.212	

Source: Researcher (2024)

Testing the possible statistical associations among variables is often done using correlation analyses, where the correlation can be perfectly positive (+1) or perfectly negative (-1) on the extreme ends of the correlation spectrum. The variables had significant negative and strong positive correlations, respectively, when the value was around -1 or +1. Weak correlation exists between variables when the correlation value is around zero (0). Here, the tests were on the statistical association between the microfinance banks' financial performance and their liquidity management strategies using Pearson Correlation. The correlation findings were shown in Table 4.6.

A favorable and statistically significant association ($r=0.526$, $p=0.000$) between cash management and financial performance, according to the study result shown in Table 4.6. The implication is that financial performance of Kenya's microfinance banks has a positive correlation with cash management procedures to a moderate degree. Consequently, microfinance banks' performance would rise as they improved their cash management procedures. The results of the study supported similar ones by Mwambui and Koori (2019), which reported a weak positive link between Nairobi-based microfinance institutions' financial performance and their cash management practices.

Additional findings showed that banks' practices of managing their operational cash flow had a good and statistically significant association ($r=0.394$, $p=0.001$) with their financial performance. Therefore, a tenuous positive association between banks' practices of managing their operational cash flow and their financial success was established. Microfinance banks would therefore perform better if they improved their operational cash flow and cash management. According to Ibrahim et al. (2023), operating cash flows had a considerable and favorable impact on these microfinance organizations' financial performance. The study's findings supported their findings.

Subsequent findings showed that operational efficiency management and financial performance were negatively associated at a statistically significant level ($r=-0.399$, $p=0.001$). This suggests that

the microfinance banks financial performance has no bearing on operational efficiency management. Microfinance banks would so function better if they improved their operational efficiency management. The research also supported the findings of Afolabi (2020), who discovered that non-performing loans impacted the performance of microfinance banks in Nigeria.

4.5.2 Regression Results

Table 4.7: Random-effects Regression Model

Financial performance	Coef.	Std. Err.	Z	P> z 	[95% Conf. Interval]
Cash management	0.004	0.001	4.000	0.000	0.002 0.006
operational cash flow management	0.176	0.059	2.990	0.003	0.061 0.291
operational efficiency management	-0.055	0.028	-1.980	0.047	-0.110 -0.001
_cons	0.048	0.025	1.960	0.050	0.000 0.096
R squared	0.588				
F statistics	39.79				
Prob> chi2	0.000				

Source: Researcher (2024)

With the use of P-values and coefficients, regression analysis facilitates the determination of the link between the variables. Variations among the variables are related to one another in terms of units, as shown by the coefficients. A specific variable is considered significant in defining any adjustments on the dependent variable in the presence of at least 10% or 5% P values at respective confidence intervals of 90% or 95%. To ascertain the association between the banks' financial performance and the independent variables (management of cash, operational cash flow, and operational efficiency), regression analysis was applied and the resultant model presented as;

$$\text{Financial performance} = 0.048 + 0.004X_1 + 0.176X_2 - 0.055X_3$$

Where X_1 denotes Cash management, X_2 denotes operational cash flow management, X_3 is operational efficiency management

Table 4.7 shows an R-squared of 0.588, which suggests that operational cash flow management, operational efficiency management, and cash management techniques taken together accounted for 58.8% of the variances in microfinance institutions' financial performance. The remaining 41.2% can be ascribed to elements outside the scope of this investigation.

The findings also portrayed that financial performance is significantly and positively associated ($\beta = 0.004$, $p = 0.000$) with the banks' management of cash. The first hypothesis, or H_{01} , proposed the absence of any statistically significant associations between the two variables. However, the actual findings established the grounds for rejecting the null hypothesis with a 0.000 P-value. The results support Mwambui and Koori (2019) in their findings that reported positive but statistically weak association of the financial performance of Nairobi County's microfinance institutions and their cash management practices. The study's conclusions concurred with those of Wangai and Mungai (2019), who reported management techniques and microfinance companies' financial results as having positive correlations.

Subsequent findings indicated that financial performance had significant and positive statistical link with the institutions' operational cash flow management ($\beta = 0.176$, $p = 0.003$). The second hypothesis, H_{02} , postulated the absence of any statistically significant link between the banks' management of operational cash flow and their financial performance. However, the findings established that management of operational cash flow significantly impacted the banks' financial performance, rejecting the null hypothesis at $P\text{-value}=0.003$. The conclusions concurred with those of Ibrahim et al. (2023), who discovered a substantial and favorable impact of operating cash flows on these microfinance organizations' financial performance. The study's conclusions concurred with those of Songe (2015), who found that operating cash flow management and financial success were positively correlated.

Additional findings indicated that there was a substantial and negative impact of operational efficiency management on financial performance ($\beta=-0.055$, $p=0.047$). The third hypothesis, or H_03 , claimed that the financial performance of Nairobi City County's microfinance banks is not statistically significantly impacted by operational efficiency management. It is determined that operational efficiency management has a statistically significant impact on the financial performance of microfinance institutions in Nairobi City County, with a P value of 0.047, less than 0.05, rejecting the null hypothesis. The research also confirmed the findings of Afolabi (2020), who discovered that non-performing loans had an impact on the operations of microfinance banks. According to Chimkono, Muturi, and Njeru (2016), the average lending interest rate, cost efficiency ratios, and non-performing loan ratio all significantly impacted Malawian banks' performance. These conclusions were supported by the study. The results of the study were in conflict with those of Mrindoko, Macha, and Gwahula (2020), who found that there was a non-significant negative correlation between NPLR and both Return on Equity (ROE) and Return on Asset (ROA).

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The study's summary is given in this chapter. The outcomes and the goals also served as a reference for the conclusions and suggestions. The areas for more research are also presented in this section.

5.2 Summary of the Study

Financial performance is a suitable financial metric for measuring the prospects of businesses and organizations as far as their survival and continuity are concerned. When microfinance banks cannot obtain the required funds, it poses a significant challenge to their daily operations. MFBs have a crucial role to play in intermediation process, and this cannot be compromised. However, MFBs in Kenya are facing a financial performance problem as indicated by recoded declining profitability in the industry. The major problem with microfinance banks' financial performance is their recent, significant drop in profitability and return on assets. Evaluating the impact of liquidity management strategies on the financial performance of microfinance banks in Nairobi City County is the main goal. The specific goals are to highlight how MFIs' financial performance in Nairobi City County is impacted by cash, operational cashflows, and operational efficiency management. The literature was evaluated and explained with the help of the Keynesian liquidity theory, the Miller-Orr model, the transactional cost theory, and the Cash Conversion Cycle theory.

In Nairobi City County, Kenya, the first goal was to look at how cash management techniques affected the microfinance banks' financial performance. According to correlation analysis, the financial performance of Kenya's microfinance institutions in Nairobi County is positively correlated with cash management strategies in a relatively significant way. Based on regression analysis, the financial performance of microfinance banks in Nairobi County, Kenya was found to

be positively and significantly impacted by cash management techniques. According to the hypothesis' findings, the financial performance of Nairobi City County's microfinance institutions is significantly impacted by cash management strategies.

Secondly, the study examined the impact of managing the sampled bank's operating cash flow on their financial performance. The bank's financial performance exhibits a weak positive link, according to correlation studies with the management of their operating cash flow. Additionally, the regression analyses of the banks' financial performance against management of their cash flow revealed positive and statistically significant associations. The hypothesis's findings demonstrated that the financial performance of Nairobi City County's microfinance institutions is significantly impacted by operating cash flow management.

Investigating how operating efficiency management affected the banks' financial performance was the third goal. The financial performance of the microfinance institutions in Nairobi County, Kenya, does not exhibit a strong negative correlation, according to the correlation results. The financial success of microfinance banks in Nairobi County, Kenya was significantly impacted negatively by operating efficiency management, according to regression analysis results. According to the hypothesis results, the financial performance of Nairobi City County's microfinance institutions is significantly impacted by operating efficiency management.

5.3 Conclusion

According to the study's findings, cash management techniques significantly and favorably impacted the microfinance banks' financial performance in Nairobi County, Kenya. In order to pay for cash expenses and invest cash surpluses, Kenya's microfinance banks develop cash budgets, record cash inflows and outflows, and do bank reconciliation. As a result, they manage their funds carefully. Moreover, the monitoring authority of microfinance banks provides them with ongoing

guidance and oversight on responsible cash management procedures in an effort to preserve financially sustainable businesses.

According to the study's findings, microfinance banks in Nairobi County, Kenya, performed better financially as a result of operating cash flow management. For the success and stability of the finances, effective cash flow management is essential. It entails keeping tabs on money coming in from investments, sales, and outside funding as well as money flowing out to pay bills, make loan payments, and fulfill other obligations. Microfinance banks can lower the risk of liquidity crises and take advantage of development possibilities by managing cash flow well. This involves striking a balance between inflows and outflows. Informed decision-making on investments, expansion strategies, and debt management are critical for the overall prosperity of microfinance banks.

The investigation concluded that operational efficiency management significantly and negatively impacted the financial results of Kenya's Nairobi County's microfinance institutions. The financial performance of Nigeria's microfinance institutions would therefore be negatively impacted by a high percentage of non-performing loans. Low operational profits, loanable funds, and interest income are indicators of a high non-performing loan (NPL) level, which also lowers the return on assets.

5.4 Recommendations of the Study

5.4.1 Cash Management Practices and Financial Performance

To improve the positive influence on financial performance, the microfinance banks' policy makers should develop guidelines that will guarantee the banks maintain the statutory minimum liquidity ratio. Microfinance banks should make sure they have effective cash management procedures because both too much and too little liquidity reduce the organizations' earnings. The policy makers should ensure there is cash pooling parameters such as target cash balance, cash concentration,

holding cost and marketable securities should be considered in micro finance banks operations for enhanced fiscal performance

5.4.2 Operational Cashflow Management and Financial Performance

The report suggests that policy makers at microfinance banks create a cash management policy with the goal of preserving an ideal level and managing cash to ensure the seamless operation of the bank's daily operations. The Kenyan Central Bank should also urge the outside auditors to assess microfinance institutions' performance using cash flow ratios prior to rendering an impartial view on the financial statement. Making informed investment selections will be made possible by the comprehensive information provided on the company's financial performance.

5.4.3 Operational Efficiency and Financial Performance

Managers of microfinance banks must carefully review borrowers' references and documentation during the credit analysis phase in order to minimize information asymmetry and, consequently, the default risk, which raises NPLs. In order to close informational gaps and improve access to comprehensive, accurate, and trustworthy information about borrowers, microfinance banks must implement robust credit information systems. Furthermore, the study has advanced a scientific and practical methodology that will aid in future research on bank stability, profitability, and credit risk management.

5.5 Recommendations for Further Research

Since the project majorly focused on liquidity management strategies and microfinance banks' financial performance within Nairobi City County, its findings may not be fully applicable in other jurisdictions. Therefore, future research may explore the association of these variables among similar banks in the context of counties, such as Kiambu County, Machakos, or other similar counties.

Additionally, the R squared was not 100%, suggesting that additional liquidity management techniques may have an impact on the banks' financial performance. Therefore, more research can concentrate on examining the financial performance against other metrics such as deposit ratio (DR), cash reserve ratio (CRR) and loan to deposit ratio (LDR).

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APPENDIX

Appendix I: List of Microfinance Banks in Nairobi County

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

Source: CBK (2023)

Appendix II: Data Collection Sheet

Name of the Microfinance Bank.....

Year	Total Assets	Net Profit	Current Assets	Current liabilities	Cash and Cash Equivalents	Non-Performing Loans	Total Loans
2017							
2018							
2019							
2020							
2021							
2022							