EFFECT OF LIQUIDITY MANAGEMENT ON FINANCIAL PERFORMANCE OF FIRMS LISTED AT THE NAIROBI SECURITIES EXCHANGE

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DECLARATION

I, the undersigned, declare that this is my original work and has not been presented to any institution or university other than the University of Nairobi for examination.

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This research project has been submitted for examination with my approval as the University Supervisors.

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DEDICATION

It is with genuine gratitude and warm regard that I dedicate this research project to my family and friends. To my husband Royford Kimathi Mugambi and my children Morris Munene Kimathi, Sandra Gacheri Kimathi and Muthoni Mwende Kimathi you have been a pillar to my progress in life and an encouragement to pursue my studies. My Mother Zipporah Mwamba you always pushed me to achieve what you were not able and I am proud that I have achieved that. It's through your dedication and love that I have made it. My sibling William Mwamba, I thank you for believing in me and for your prayers and support. God Bless you all.

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ANOVA   Analysis of Variance

CMA   Capital Markets Authority

DT SACCO   Deposit Taking Savings and Credit Cooperatives

NSE   Nairobi Securities Exchange

ROA   Return on Assets

ROE   Return on Equity

ROI   Return on Investment

UAE   United Arab Emirates

VIF   Variance Inflation Factors

ABSTRACT

A company's ability to rapidly fulfill its short-term commitments thanks to adequate liquidity lowers the danger of default and financial difficulties. Additionally, it offers the flexibility to fund strategic projects and take advantage of advantageous investment opportunities, which supports long-term development and profitability. Effective liquidity management may also minimize borrowing costs, boost creditworthiness, and lessen the need for expensive external funding, all of which have a favorable influence on the firm's overall financial health. The objective of this study was to determine the effect of liquidity management on financial performance of firms listed at the NSE. This study was anchored on trade-off theory and supported by free cash flow theory, and agency theory. The research employed a descriptive approach, relying on secondary data extracted from annual financial reports spanning from 2018 to 2022. The target population comprises the entire spectrum of firms listed at the NSE, with a final dataset of 270 observations from 54 firms providing a complete dataset. Descriptive statistics, correlation analysis, and regression analysis form the core of the methodology, offering a multifaceted examination of the relationships between the variables. The model summary and analysis of variance tables indicated that the regression model was collectively significant in explaining the variance in ROA, with an R Square value of 0.368. Liquidity management emerged as a highly significant predictor, with a positive coefficient of 0.519, reinforcing its importance in influencing financial performance. Managerial efficiency also demonstrated a significant positive impact on ROA, with a coefficient of 0.229. On the other hand, firm size did not exhibit a statistically significant relationship with ROA. The study concludes that liquidity management and managerial efficiency play pivotal roles in influencing financial performance among NSE-listed firms. Firms with effective liquidity management strategies and efficient managerial practices tend to experience higher ROA. However, the study does not find a significant relationship between firm size and financial performance. Recommendations for policymakers include incorporating guidelines and incentives within the regulatory framework to encourage firms to adopt effective liquidity management practices. Policymakers might also consider educational initiatives to enhance financial literacy regarding the significance of liquidity management. Further research could explore the moderating effects of industry-specific characteristics, incorporate longitudinal dimensions for a more dynamic analysis, and investigate mediating variables that were not considered in this study.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Liquidity management has the potential to have a substantial influence on how well financial service providers operate financially. When a company maintains optimal levels of liquidity, it can meet its short-term obligations, seize profitable investment opportunities, and withstand economic downturns, ultimately enhancing its financial stability and performance (Kirimi, Kithinji, & Gatauwa, 2023). Adequate liquidity reduces the risk of insolvency and increases the firm's creditworthiness, leading to lower borrowing costs and improved access to external funding. On the other hand, strong financial performance, characterized by higher profitability and cash generation, provides more resources to invest in liquidity management strategies, such as improving working capital management or investing in liquid assets (Hidayat & Dewi, 2023).

The study drew support from trade-off theory, free cash flow theory, and agency theory. The research anchor theory is trade-of theory by Myers (1984) as it suggests that there is an optimal level of liquidity that balances the costs and benefits of maintaining liquidity. Efficient liquidity management can positively impact financial performance by optimizing the trade-off between holding too much and too little cash. Free cash flow theory by Jensen (1986) argues that effective liquidity management can lead to increased free cash flows, which, when invested wisely or distributed to shareholders, can positively influence financial performance and shareholder value. Jensen and Meckling (1976) agency theory explains how firm specific factors such as managerial efficiency influences liquidity management, which in turn affect free cash flows and ultimately impact financial performance.

The NSE plays a pivotal role in the Kenyan economy, and understanding how liquidity management influences the financial stability, profitability, and risk exposure of listed companies is essential for investors, regulators, and policymakers. It provides valuable insights into investment decisions, risk management, capital allocation efficiency, corporate governance, and sector-specific dynamics (Ochieng, Jagongo & Ndede, 2020). Furthermore, this research can contribute to academic knowledge and serve as a reference for future studies, ultimately benefiting the broader financial and economic landscape of Kenya and the East African region.

1.1.1 Liquidity Management

Liquidity management refers to the strategic process of efficiently managing a company's cash flow and liquid assets to ensure the availability of adequate funds to meet short-term obligations and capitalize on investment (Ariefianto et al., 2022). It involves monitoring and optimizing the inflow and outflow of cash, managing working capital, and maintaining an appropriate level of liquid assets such as cash, marketable securities, and easily convertible assets (Jeanne & Sandri, 2023). Effective liquidity management, according to Zaharum et al. (2022), aims to balance holding enough liquidity to protect against financial risks with using excess liquidity for value-creating uses. This balance ultimately contributes to the financial stability, operational effectiveness, and overall performance of an organization.

A company's capacity to effectively manage its liquidity is of utmost significance since it is a key factor in determining its financial stability, ongoing business operations, and future opportunities for expansion. A business can assure its capacity to rapidly fulfill short-term financial commitments, such as paying suppliers, covering operational costs, and completing client orders, by maintaining an adequate level of liquidity

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(Satya, Bijoy & Sahay, 2022). Additionally, enough liquidity acts as a safety net during downturns in the economy or other unanticipated circumstances, lowering the likelihood of financial difficulties and possible insolvency. A company may also benefit from profitable investment possibilities, finance strategic projects, and extend its operations thanks to good liquidity management, which promotes long-term growth and competitiveness (Olowokudejo & Ajijola, 2022).

Previous researchers have operationalized liquidity management in various ways to measure its impact on financial performance and other aspects of a firm. As per Jihadi et al. (2021) commonly used liquidity metrics include the current ratio, quick ratio, cash ratio, and working capital ratio, which focus on the company's ability to meet short-term obligations with its current assets. Researchers have also employed turnover ratios, such as inventory turnover and accounts receivable turnover, to assess the efficiency of converting assets into cash. Additionally, the cash conversion cycle, a measure of the time it takes to convert resources into cash flows, has been used to evaluate liquidity and working capital management. The current study measured liquidity management as the ratio of current assets to current liabilities due to its wider applicability in the financial sector.

1.1.2 Financial Performance

Financial performance refers to the assessment and evaluation of a company's financial health and efficiency in generating profits and returns for its stakeholders (Al-Eitan & Bani-Khalid, 2019). It involves analyzing various financial metrics, ratios, and indicators to measure the company's profitability, liquidity, solvency, efficiency, and overall financial soundness (Kwaltommai et al., 2019). Key components of financial performance analysis include assessing revenue growth, profitability margins, cash

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flow generation, return on investment, asset utilization, debt management, and shareholder value creation. By evaluating financial performance, stakeholders can gauge the company's ability to generate sustainable profits, effectively manage its resources and risks, and deliver value to shareholders, providing insights into the organization's overall financial well-being and success (Ali & Oudat, 2020).

An organization's financial performance is a crucial sign of its sustainability and health. It offers useful information into how well the company is bringing in money, controlling its spending, and adding value for all of its stakeholders, including shareholders, staff members, clients, and suppliers (Barauskaite & Streimikiene, 2021). One of the key benefits of financial success is the capacity to make informed choices about investing in the business, whether it be via the purchase of shares, the granting of loans, or other sources of funding. By evaluating financial performance metrics like profitability, liquidity, solvency, and efficiency, stakeholders can assess the organization's ability to generate returns and manage risks and, as a result, make better-informed decisions about their investment options (Cho, Chung & Young, 2019).

Profitability, liquidity, solvency, and efficiency are a few examples of the metrics that may be used to evaluate financial performance (Gartenberg, Prat, & Serafeim, 2019). A company's profitability is determined by how much profit it is making in relation to its sales or investments. This covers figures for return on assets (ROA), net income, and gross profit margin. How quickly a corporation can fulfill its immediate financial commitments is measured by its liquidity. Metrics like the current ratio, quick ratio, and cash ratio are examples of this (Barardehi, Bernhardt & Davies, 2019). A company's capacity to fulfill its long-term financial obligations is gauged by its level of solvency. Metrics like the debt-to-equity ratio and the interest coverage ratio fall

under this category. Efficiency assesses how effectively a business uses its resources and assets to produce sales and profits. Metrics like the asset turnover ratio and inventory turnover ratio fall under this (Nugroho & Sugiyanto, 2023). The current study measured financial performance using ROA as used before by Ali and Oudat (2020).

1.1.3 Liquidity Management and Financial Performance

The relationship between liquidity management and financial performance can vary across industries, economic cycles, and company sizes. Different sectors may have varying liquidity requirements and sensitivities to market conditions. During economic downturns or times of financial instability, companies with robust liquidity management practices are better equipped to weather the storm and emerge stronger (Sapuan et al., 2021). Conversely, those with poor liquidity management might struggle to survive. On the other hand, during periods of economic growth and favorable market conditions, companies with more aggressive liquidity management strategies might outperform their competitors by seizing growth opportunities (Afiezan, Wijaya & Claudia, 2020).

A company's ability to rapidly fulfill its short-term commitments thanks to adequate liquidity lowers the danger of default and financial difficulties (Alhassan & Islam, 2021). Additionally, it offers the flexibility to fund strategic projects and take advantage of advantageous investment opportunities, which supports long-term development and profitability. Effective liquidity management may also minimize borrowing costs, boost creditworthiness, and lessen the need for expensive external funding, all of which have a favorable influence on the firm's overall financial health (Hussain & Rasheed, 2022).

Sathyamoorthi, Mapharing and Dzimiri (2020) notes that an overly cautious strategy to managing liquidity, such as holding onto surplus cash, may have a detrimental effect on financial performance. Holding excessive liquidity can lead to missed investment opportunities and lower returns, potentially hindering the company's growth and competitiveness. In such cases, the opportunity cost of holding excess cash might outweigh the benefits of increased financial stability. Striking the right balance between liquidity and profitability is crucial to optimizing financial performance.

1.1.4 Firms Listed at the Nairobi Securities Exchange

The NSE is the oldest and largest stock exchange in East Africa. The Nairobi Securities Exchange was established in 1954 and was once known as the East African Stock Exchange (Lindvall, 2020). The Kenyan economy benefits greatly from the NSE. It offers investors the chance to take part in the expansion of the Kenyan economy as well as a platform for businesses to raise funds. Additionally, the exchange is a significant resource for data on the Kenyan economy (Murgor & Saxunova, 2022). There are 65 companies listed at the Nairobi Securities Exchange (NSE) as of June 2023. This number has slightly increased from 61 enterprises in 2021 (CMA, 2023) but has generally remained constant over the past few years.

The state of liquidity among firms listed at the NSE has been variable. Liquidity fluctuate due to various economic and market factors. Some large and well-established companies, known as blue-chip stocks, tend to have relatively higher liquidity, with regular trading activity. However, smaller and less-liquid stocks experience less trading volume and, consequently, lower liquidity. NSE listed firms focus on optimizing their working capital by effectively managing accounts receivable, accounts payable, and

inventory levels. This ensures that they have sufficient cash on hand to meet day-to-day operational needs (Chasha, Kavele & Kamau, 2022)

In recent years, the financial performance of companies listed on the NSE has been inconsistent. Profits have increased for certain businesses while declining for others. Profits have been increasing generally, but recently, the rate of expansion has decreased. There are some encouraging signals despite the uneven financial performance of companies registered on the NSE (Masare, 2022). Both the NSE's market capitalization and the number of companies listed there have been increasing. This implies that investors remain upbeat about the Kenyan stock market's future (Onsongo, Muathe, & Mwangi, 2020).

1.2 Research Problem

It is anticipated that there would be a positive but complex link between liquidity management and financial success. For a company to be financially stable and run efficiently, effective liquidity management, which is characterized by maintaining an ideal balance between cash inflows and outflows, is crucial. A company's ability to rapidly fulfill its short-term commitments thanks to adequate liquidity lowers the danger of default and financial difficulties (Alhassan & Islam, 2021). Effective liquidity management may also minimize borrowing costs, boost creditworthiness, and lessen the need for expensive external funding, all of which have a favorable influence on the firm's overall financial health (Hussain & Rasheed, 2022).

Firms listed at the NSE have diverse levels of liquidity. While some listed firms are doing well, others have had issues. A 2023 study by Deloitte found that 15% of NSE-listed firms had a current ratio below 2:1, and 10% of firms had a quick ratio below 1:1. These firms are at a higher risk of financial distress. There is some evidence to

suggest that financial performance can benefit from liquidity management. For instance, a research by Waweru and Atheru (2022) indicated that companies with better liquidity are likely to report better financial performance. NSE provides a useful backdrop for examining if liquidity management affects companies' financial performance.

Previous studies exist in this area but there are research gaps. Alqemzi et al. (2022) examine the effect of liquidity management on the financial performance of firms in the United Arab Emirates. The study found a positive and significant relationship between liquidity management and financial performance. Zimon et al. (2021) aimed to examine the impact of liquidity management on the financial performance of in construction companies operating in the Podkarpackie Province. The study found a positive relationship between liquidity management and financial performance. Ramlan (2020) aimed to examine the effect of liquidity management on the financial performance of listed companies in Malaysia. The study discovered a positive and strong link between financial success and liquidity management. All these investigations were conducted in a distinct setting thus; their results cannot be applied to the current situation.

Locally, Kimutai (2022) studied the influence of liquidity management on the financial performance of DT Saccos in Kericho County and concluded that liquidity management has a favorable effect on performance. Chasha, Kavele and Kamau (2022) appraises the linkage between working capital management, liquidity and financial performance in Kenya with a keen interest on small and medium enterprises. The study revealed a positive effect of working capital management on profitability. This research is motivated by the fact that despite the existence of prior studies, there exist contextual,

conceptual and methodological gaps that need to be filled. Conceptually, prior studies have operationalized liquidity management differently and this can explain differences in research findings. Contextually, majority of the available surveys are on commercial banks, SMEs and SACCOs and therefore need to investigate if similar findings hold for listed firms. Methodologically, most of the previous studies have employed ordinary least square to which has its shortcomings when dealing with panel data. The current study employed a panel regression model. The current research was based on these gaps and attempted to answering the research question; what is the effect of liquidity management on financial performance of firms listed at the NSE?

1.3 Research Objective

To determine the effect of liquidity management on financial performance of firms listed at the NSE

1.4 Value of the Study

The findings of the study can be of immense practical value to microfinance bank managers and practitioners. Improved knowledge about the relationship between liquidity management and financial performance can help firms listed at the NSE optimize their liquidity strategies. Bank managers can make informed decisions on maintaining the right level of liquidity to meet their financial obligations while maximizing returns on investments.

Policymakers can use the study's findings to develop specific liquidity management frameworks tailored to the unique characteristics of microfinance institutions. By promoting best practices in liquidity management, policymakers can enhance the stability and resilience of firms listed at the NSE, ultimately contributing to the overall

health of the financial sector and supporting financial inclusion initiatives in the country.

The study also contributes to the existing body of knowledge in the field of finance and microfinance. In the context of Kenyan microfinance institutions, it offers empirical support for the precise link between liquidity management and financial performance. By supporting or refuting presumptions on how liquidity management affects the financial stability of microfinance firms, the findings might add to current financial theories.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter covers the theoretical framework, the determinants of financial performance, empirical literature review, a summary of research gaps and a conceptual framework.

2.2 Theoretical Framework

This segment examines the theories that underpin the study of liquidity management and financial performance. The study was anchored on trade-off theory and supported by free cash flow theory as well as the agency theory.

2.2.1 Trade-off Theory

This was the anchor theory of the current study and it was pioneered by Myers (1984). The theory postulates that firms face a fundamental trade-off when deciding their capital structure, balancing the benefits of debt financing, such as tax shields on interest payments, against the costs associated with financial distress and bankruptcy (Myers, 1984). This theory underscores the notion that there is an optimal level of debt for each firm, at which the tax advantages are balanced precisely with the financial distress costs, resulting in the maximization of the firm's overall value (Agyei, Sun & Abrokwah, 2020). It does, however, acknowledge that the optimal debt level is firm-specific and must be carefully considered by financial managers to strike the right balance between debt and equity financing. These factors include a firm's industry, risk profile, and growth prospects (Hutapea et al., 2020).

The theory is criticized for oversimplifying the intricacies of making financial decisions in the actual world. The fact that it presumes businesses have complete

knowledge of the ideal level of debt, which is sometimes difficult to estimate owing to uncertainty in future cash flows and financial risks, is a key critique (Serrasqueiro, Armada & Nunes, 2021). Additionally, because tax laws and rates differ between nations and sectors, the theory's emphasis on tax advantages from interest payments may not be generally applicable. Furthermore, managerial preferences and risk aversion, two behavioral characteristics that might affect a firm's capital structure decisions, may not be sufficiently accounted for by the trade-off theory (Jarallah, Saleh & Salim, 2019).

According to the trade-off theory, businesses must choose between the advantages and disadvantages of maintaining liquid assets. The firm's financial stability is increased by holding surplus cash, but missed investment opportunities might lead to lesser returns. Maintaining low levels of liquidity, however, might result in a financial crisis and higher borrowing prices. Firms listed at the NSE can improve their financial performance by balancing liquidity and profitability.

2.2.2 Free Cash Flow Theory

According to the theory, which was developed by Jensen (1986), a company's value is maximized when its core operations generate surplus cash flows that are not only enough to cover operational and capital expenditure needs but also leave extra money available for discretionary uses like debt reduction, shareholder distributions, or strategic investments. According to this idea, free cash flows are a crucial factor in determining a company's intrinsic worth and its capacity to generate value for shareholders. This theory asserts that FCF is a source of financial flexibility that enables an organization to pursue growth opportunities, lower financial risks, and increase shareholder wealth, underscoring its significance as a crucial financial metric

in evaluating the overall financial health and sustainability of an organization (Saeed & Qazi, 2022).

Critics claim that by concentrating only on the creation and distribution of surplus cash, it oversimplifies the complexity of corporate finance. They argue that this approach could not sufficiently take into account the strategic justifications for holding onto capital for upcoming expenditures, such as financing R&D, mergers and acquisitions, or market growth (Faruqi et al., 2019). Detractors also draw attention to the possible short-termism that can result from an exclusive concentration on immediate cash distributions to shareholders, which may jeopardize a company's prospects for long-term success. A company's future competitiveness and profitability might be harmed if an excessive focus on optimizing free cash flows results in disregarding essential investments in innovation and competitive positioning (Sugiana & Hidayat, 2023).

This theory provides a crucial lens through which to view the influence of effective liquidity management on the production of excess cash available for strategic allocation. The study can evaluate how firms use these cash flows to affect their financial performance by looking at the relationship between liquidity management and the generation of free cash flows. This aligns with the theory's emphasis on FCF as a crucial driver of shareholder value and corporate sustainability in an era of globalization.

2.2.3 Agency Theory

This theory was developed by Jensen and Meckling (1976). The theory postulates that in situations where there is a separation between ownership and control, conflicts of interest arise between the principals and agents due to divergent goals and information asymmetry. The theory suggests that agents may act in their own self-interest,

prioritizing personal objectives over the interests of the principals. The principals, on the other hand, seek to align the agents' behavior with their own objectives and maximize the value of their investments.

Agency theory has faced several criticisms. It is argued that the theory oversimplifies the complex nature of the principal-agent relationship by assuming that individuals are purely self-interested and rational, neglecting other factors such as trust, social norms, and ethical considerations (Tekin & Polat, 2020). In addition, the theory has been criticized for its limited scope in addressing non-financial goals and outcomes, such as environmental sustainability and social responsibility. The theory has also been accused of offering little guidance on how to effectively address agency problems and implement practical solutions (Evans & Tourish, 2019).

Agency theory was relevant in the current study as it focuses on the relationship between principals and agents and their conflicting interests. Liquidity management plays a significant role in aligning these interests. By maintaining adequate liquidity, managers can demonstrate their ability to meet short-term obligations, reducing agency costs and instilling confidence in shareholders. Effective liquidity management also helps in preventing excessive risk-taking by managers and safeguards the long-term financial performance of the firm.

2.3 Determinants of Financial Performance

This section covers factors that are theoretically expected to influence financial performance of firms. The factors discussed in this section are liquidity management, firm size, and managerial efficiency.

2.3.1 Liquidity Management

The capacity of a business to fulfill its immediate financial responsibilities, such as paying invoices and debts when they become due, is referred to as liquidity. As it enables the firm to take advantage of investment opportunities and weather unforeseen financial shocks, sufficient liquidity is essential for a company's financial health and growth (Guerini, Nesta, Ragot & Schiavo, 2020). High levels of liquidity can protect against financial risks and uncertainties from the standpoint of financial performance, enabling a business to continue operations and make money. On the other hand, inadequate cash levels may result in lost opportunities, greater borrowing costs, and even insolvency (Pattiruhu & Paais, 2020).

It's crucial to remember, too, that excessive liquidity can sometimes hurt a company's financial success. Lowered returns on investment and decreased profitability might arise from holding excessive amounts of cash or other liquid assets (Sari & Sedana, 2020). Furthermore, certain financial organizations could conceal underlying financial issues with excessive liquidity, which might eventually result in lower financial performance. Therefore, although while a link between liquidity and financial performance is typically assumed to be positive, the ideal degree of liquidity might vary depending on a number of variables, such as the sector the firm operates in, its business plan, and its risk appetite (Hacini, Boulenfad & Dahou, 2021).

2.3.2 Firm Size

Larger companies frequently have more access to resources like capital, talent, and technology, which may enable them to take advantage of growth possibilities and achieve economies of scale (Kamau, 2023). These advantages might improve financial performance by boosting revenue generation, cutting costs, and boosting profitability.

Additionally, larger companies may have more negotiation power with clients and suppliers, which might result in more favorable pricing terms and profit margins. They may also be more resilient to economic downturns and other external shocks as a result of their greater diversity and broader networks (Yang & Wang, 2023).

The relationship between firm size and financial performance, however, can also be influenced by other contextual factors, such as competition, regulation, and market saturation (Khan, Jia, Lei, Niu, Khan, & Tong, 2023). Sometimes, smaller businesses can be more creative and nimble, allowing them to seize special market opportunities that larger businesses might overlook and respond more quickly to changing market conditions. The optimal business size can therefore vary by industry and environment and be impacted by a variety of different circumstances, even while a positive association between company size and financial performance is often believed (Weinzimmer, Esken, Michel, McDowell & Mahto, 2023).

2.3.3 Managerial Efficiency

Managerial efficiency refers to the ability of a company's management team to effectively allocate resources, make strategic decisions, control costs, and generate profits. It is widely recognized that well-managed firms tend to exhibit higher levels of operational effectiveness and financial performance (Cho & Lee, 2019). In turn, these positive management attributes can have a direct impact on stock returns. Effective managers can identify growth opportunities, allocate resources judiciously, and adapt to changing market conditions, all of which contribute to a company's ability to generate strong financial results (Naushad, Faridi & Faisal, 2020).

Investors often reward firms with efficient management by bidding up the prices of their stocks, leading to capital appreciation and potentially higher stock returns

(Karamoy & Tulung, 2020). Conversely, poorly managed firms may struggle to capitalize on opportunities, leading to underperformance, which can result in lower stock returns or even negative returns. Investors are generally inclined to invest in firms with competent and efficient management teams, which underscores the significance of managerial efficiency in influencing stock returns (Huu Nguyen et al., 2020).

2.4 Empirical Review

Local as well as global researches have determined the link between liquidity management and financial performance, the objectives, methodology and findings of these studies are discussed.

2.4.1 Global Studies

Alqemzi et al. (2022) examine the effect of liquidity management on the financial performance of firms in the United Arab Emirates (UAE). The researchers used a mixed-method approach, combining quantitative analysis of financial ratios and qualitative interviews with finance managers of selected UAE firms. The study found a positive and significant relationship between liquidity management and financial performance. Firms with higher liquidity ratios exhibited better financial performance, indicating that effective liquidity management positively influenced profitability and shareholder returns. The study reveals a contextual gap as it was conducted in UAE whose social and economic setting is different from Kenya where the current study will be conducted.

Zimon et al. (2021) aimed to examine the impact of liquidity management on the financial performance of in construction companies operating in the Podkarpackie Province. The researchers used financial ratios to measure liquidity management, including the current ratio, quick ratio, and cash ratio. They also employed profitability

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indicators like return on assets (ROA) and return on equity (ROE) to assess financial performance. The study found a positive relationship between liquidity management and financial performance. Firms with efficient liquidity management demonstrated higher profitability, suggesting that effective liquidity management positively influenced overall financial performance. The study presents a contextual gap as it was conducted in a developed context and its findings might not hold in other contexts.

Ramlan (2020) aimed to examine the effect of liquidity management on the financial performance of listed companies in Malaysia. Regression analysis was employed by the researchers. The study discovered a positive and strong link between financial success and liquidity management. Higher liquidity ratios were associated with improved financial performance in the companies, indicating a beneficial influence of effective liquidity management on profitability. Because Malaysia was the study's primary emphasis, it provides a contextual gap and cannot be generalized to other nations.

Sadeghi (2019) investigate the effect of liquidity management on the financial performance of Iranian commercial banks. The researchers used panel data analysis to examine a sample of 106 commercial banks over a five-year period. They measured liquidity management using the cash conversion cycle and assessed financial performance using ROA and ROE. The study revealed a significant negative relationship between liquidity management and financial performance. Banks with longer cash conversion cycles tended to have lower profitability. This study focused on manufacturing firms and therefore need to investigate if the findings hold in a listed firm setting.

2.4.2 Local Studies

Kimutai (2022) sought to determine the influence of liquidity management on the financial performance of DT Saccos in Kericho County. The descriptive method was used for this study. Employees of Deposit Taking SACCOs in Kericho County made up the research population. Ten percent served as the study's sample, and a stratified random sampling method was employed to choose the sample. The saccos was used to divide the research population into groups for analysis. Questionnaire were utilized to gather primary data. Descriptive and correlation analysis was used to examine the gathered data. The study concluded that liquidity management has a favorable effect on performance. The study presents a methodological gap as it utilized primary data and therefore need for a study utilizing secondary data to complement the findings.

Waweru and Atheru (2022) study the impact of working capital management on the financial performance of supermarkets in Nairobi, Kenya. Assessing the impact of fast ratio, creditor turnover, and inventory turnover on the financial performance of supermarkets in Nairobi, Kenya, was one of the particular goals. The study discovered that the quick ratio significantly improved the financial performance of Nairobi's supermarkets in Kenya. The study also showed that the performance of Nairobi's supermarkets in Kenya was unaffected by creditor changeover. The study also discovered that the financial performance of Nairobi's supermarkets in Kenya was unaffected by inventory turnover. According to the study, businesses should make an effort to have acceptable quick ratio levels. The study presents a conceptual gap as the effect of liquidity management on performance was not examined.

Wanjiru and Jagongo (2022) investigate the effect of liquidity risk on financial performance of DT-SACCOs in Kenya. The study adopted a descriptive research

design with data comprising of secondary, panel data which was collected from the 175 DT-SACCOs for the period of five years between the years 2016-2020. Census sampling was adopted where all the 175 DT-SACCOs were considered in the analysis. Data was collected from audited financial statements and other relevant reports submitted by the DT-SACCOs to SASRA. The study revealed that liquidity risk negatively influenced performance of DT SACCOs. The study presents a conceptual gap as the focus was on liquidity risk. Further, the context was DT SACCOs and the findings might not hold among firms listed at the NSE.

Ochieng, Jagongo and Ndede (2020) aimed at investigating how accounts receivables management, inventory management, accounts payables management and cash management influences the financial performance of manufacturing and allied category of firms listed at the NSE. The research utilized explanatory survey research design. The population of interest in this study constituted of all listed firms in the category of manufacturing and allied quoted at the NSE for the period of eleven years (2006 to 2016). The findings of the research indicated that there was a positive association of working capital management on the financial performance of manufacturing and allied category of firms. The study further indicated that firm size had a significant and positive moderating effect on the interaction between WCM and financial performance. This study presents a conceptual gap as it did not address the direct effect between liquidity management and financial performance.

2.5 Summary of the Literature Review and Research Gaps

Based on the available literature, there are several research gaps in the relationship between liquidity management and financial performance of firms listed at the NSE. These gaps can be classified into conceptual, contextual, and methodological

categories. Conceptually, there is a need for a theoretical framework that explicitly outlines the underlying mechanisms through which liquidity management affects financial performance of firms listed at the NSE. The existing literature mostly focuses on case studies and descriptive analyses, without providing a clear conceptual framework to guide the analysis.

Contextually, most of the existing literature on liquidity management and financial performance has focused on developed economies, with limited attention given to emerging markets such as Kenya. This makes it difficult to generalize findings to the Kenyan context, which has its unique characteristics and challenges. Further, most of the studies on liquidity management and financial performance have focused on specific segments, such as banks and manufacturing, with limited attention given to all firms listed at the NSE.

Methodologically, most of the existing literature on liquidity management and financial performance of firms listed at the NSE is qualitative, descriptive, and based on case studies. There was a need for more quantitative studies that can provide robust statistical evidence on the relationship between liquidity management and financial performance. Further, many of the existing studies do not adequately control for confounding factors that may affect the relationship. There was a need for more studies that can effectively isolate the impact of liquidity management on financial performance while controlling for other factors that may affect the outcome.

2.6 Conceptual Framework

Displayed in figure 2.1 is the predicted relationship between the variables. The predictor variable was liquidity management given by the ratio of current assets to current liabilities. The control variables were firm size given by total assets natural log

and managerial efficiency given by the ratio of operating revenue to operating expenses. The response variable was financial performance given by ROA.

Independent variables   **Dependent variable**
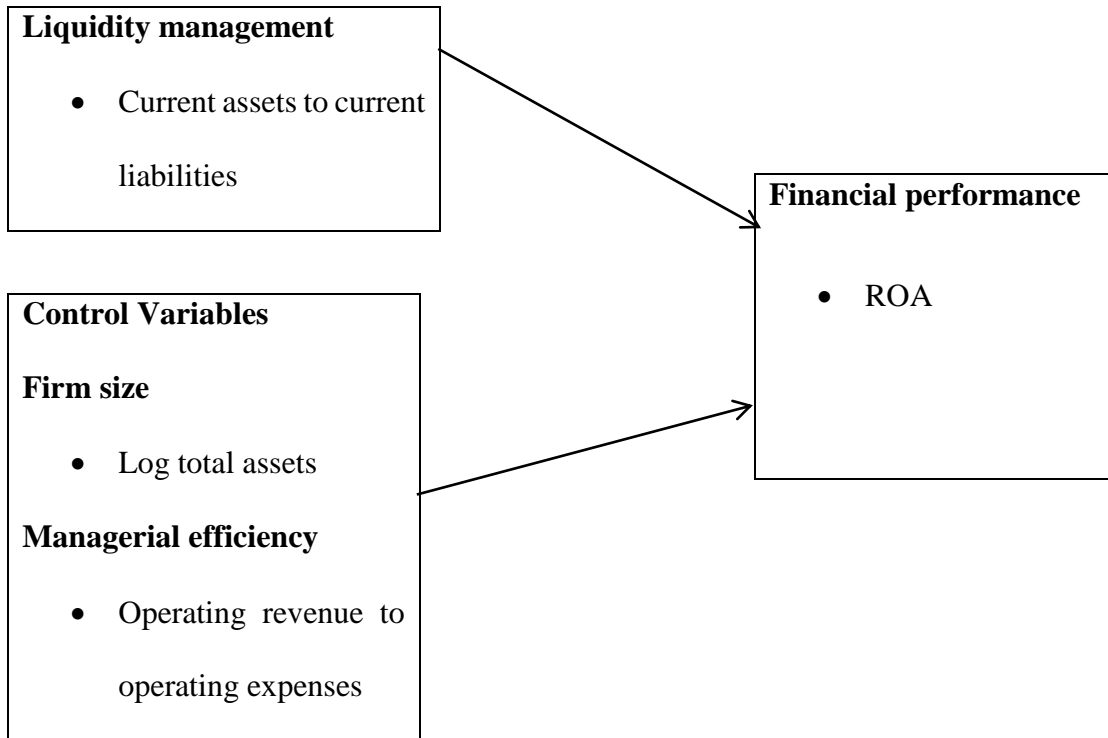
Figure 2.1: The Conceptual Model

Source: Researcher (2023)

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

The chapter describes the methodology that was adopted to answer the research objective. The chapter covered the research design, the target population, data collection and analysis procedure.

3.2 Research Design

A descriptive research design was adopted in this study. This is because the study aimed to establish the relationship between liquidity management and financial performance of firms listed at the NSE using secondary data. The use of descriptive research design enabled the researcher to analyze numerical data and test hypotheses statistically. This provided more accurate and objective results that can be replicated and generalized to a larger population. Additionally, quantitative research allowed for a larger sample size, which increases the representativeness of the findings. The data collected was analyzed using statistical software, which helped to eliminate errors and biases that may arise in manual analysis (Cooper & Schindler, 2018).

3.3 Population

A population is all observations from a collection of interest like events specified in an investigation (Burns & Burns, 2018). The study population was the 65 firms listed at the NSE as at December 2022 (see appendix I). The study was a census of all the 65 firms listed at the NSE.

3.4 Data Collection

Secondary data was relied on in this investigation which was extracted from annual published financials of the firms listed at the NSE from 2018 to 2022 and captured in

data collection forms. The reports were extracted from the NSE financial publications of the specific firms listed at the NSE annual reports. The specific data collected included net income, total assets, current assets, current liabilities, operating revenue and operating expenses.

3.5 Data Analysis

SPSS software version 27 was used to analyze the data. Descriptive analysis involved calculating measures such as mean, median, mode, standard deviation, and range to describe the distribution of variables such as liquidity management, financial performance, firm size, and managerial efficiency among firms listed at the NSE. Correlation analysis involved examining the strength and direction of the relationship between liquidity management and financial performance, as well as the relationship between financial performance and other variables such as firm size, and managerial efficiency. Multiple regression analysis was used to estimate the effect of liquidity management on financial performance while controlling for other factors that may influence the relationship.

3.5.1 Analytical Model

The following equation was applicable:

$Y_{it} = \beta_0 + \beta_1 X_{1t} + \beta_2 X_{2t} + \beta_3 X_{3t} + \varepsilon_t$

Where: Y = Financial performance given by net income to total assets

β_0 = y intercept of the regression equation.

β_1, β_2, β_3 = are the regression coefficients

X_1 = Liquidity management as measured by the ratio of liquid assets to total assets

X_2 = Firm size as measured by the natural logarithm of total assets

X_3 = Managerial efficiency as given by the ratio of operating revenue to operating expenses

ε =error term

3.5.2 Diagnostic Tests

The researcher conducted diagnostic tests to ensure that the assumptions of the statistical tests used in the analysis are met. Diagnostic tests helped to identify potential problems such as outliers, multicollinearity, heteroscedasticity, and normality of residuals, which may affect the validity and reliability of the results. Table 3.1 shows the tests that were conducted.

Table 3.1: Diagnostic Tests

Assumption	Description	Type of Tests	Interpretations	Treatment
Normality Test	Normally distributed data assumes a bell-shaped curve. It implies that errors should be distributed normally.	Jarque-Bera test.	$p > 0.05$ suggest that variables are distributed normally.	Data can be transformed using logs and square roots.
Autocorrelation test		Durbin Watson Statistic	Durbin Watson statistic between 1.5 and 2.5	Data was transformed using logs and reciprocal techniques.
Homoscedasticity	Homogeneity of variance is a presumption that outcome variable exhibits similar magnitude of variation across entire values of explanatory variables.	Breusch Pagan Test	$P > 0.05$ implies homoscedasticity	Data can be transformed using logs and reciprocal techniques.
Stationarity test	To evaluate whether or not a variable has a unit root and whether or not it is stationary	Levin-Liu test	If p values are below 0.05, unit roots exist.	Use Natural log of variables
Multicollinearity test	Multicollinearity is a situation where the explanatory variables are highly correlated.	Variance Inflation Factor	VIF factor >10 infers presence of multicollinearity.	Obtaining additional data and omitting collinear variables.

3.5.3 Tests of Significance

The t-test and F-test were used to test the significance of individual coefficients and overall model fit, respectively. The F-test was used to test the overall significance of the regression model. It compared the variance explained by the model to the variance that cannot be explained by the model. The t-test was used to test the significance of individual coefficients in a regression model.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter primarily presents the analysis of the data collected, the results and the discussion of findings where the current study findings are related with previous studies. Specifically, the chapter covers the descriptive analysis, diagnostic tests, correlation, and regression analysis conducted to achieve the objective of this research study.

4.2 Descriptive Analysis

Table 4.1 contains summary statistics for the study variables, which are essential for understanding the distribution and characteristics of the data. The data was collected for a 5-year period (January 2018 to December 2022). 54 firms had complete data set for the study period leading to 270 data points that were considered adequate.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	270	-.540	.420	.06838	.107699
Liquidity management	270	.343	11.648	2.21406	1.771086
Firm size	270	6.846	11.577	9.27741	1.156347
Managerial efficiency	270	.025	1.419	.50279	.250332
Valid N (listwise)	270				

Source: Research Findings (2023)

For the response variable, financial performance (ROA), the mean value of 0.06838 indicates that, on average, firms in the study exhibit a return on assets of approximately 6.838%. The standard deviation of 0.107699 reflects the dispersion of individual observations around this mean, suggesting a moderate level of variability in financial

performance among the sample firms. The minimum and maximum values of -.540 and .420, respectively, demonstrate the range of ROA across the 270 observations.

For the predictor variable, liquidity management, the mean value of 2.21406 signifies the average ratio of current assets to current liabilities for the sampled firms. The standard deviation of 1.771086 indicates a notable degree of variability in liquidity management practices among the firms. The minimum and maximum values of 0.343 and 11.648, respectively, showcase the diversity in liquidity management strategies across the sample.

For the control variable of firm size, measured by the natural logarithm of total assets, the mean value of 9.27741 indicates the average size of the firms in the study. The standard deviation of 1.156347 suggests a relatively lower degree of variability in firm size compared to liquidity management. The minimum and maximum values of 6.846 and 11.577, respectively, demonstrate the range of firm sizes in the dataset.

The control variable of managerial efficiency, represented by the ratio of operating revenue to operating expenses, has a mean value of 0.50279. This suggests that, on average, firms have a managerial efficiency ratio of approximately 50.279%. The standard deviation of 0.250332 indicates a moderate degree of variability in managerial efficiency across the sample.

4.3 Diagnostic Tests

The researcher conducted diagnostic tests to ensure that the assumptions of the statistical tests used in the analysis were met. Diagnostic tests helped to identify potential problems such as outliers, multicollinearity, heteroscedasticity, and normality of residuals, which can influence the validity and reliability of the results. The diagnostic tests conducted are discussed under section 4.3.1 to 4.3.5.

4.3.1 Multicollinearity Test

Table 4.2 contains statistics related to multicollinearity, which is a condition in regression analysis where two or more independent variables in a model are highly correlated with each other. Multicollinearity can lead to issues in regression analysis, making it difficult to determine the individual impact of each variable on the dependent variable.

Table 4.2: Multicollinearity Test for Tolerance and VIF

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Liquidity management	0.511	1.957
Firm size	0.476	2.141
Managerial efficiency	0.685	1.460

Source: Research Findings (2023)

The results indicate a moderate degree of correlation between the independent variables in the regression model. While the tolerance values are below 1, suggesting some correlation, the VIF values are also below the commonly used threshold of 5, indicating that multicollinearity is not severe for any of the variables.

4.3.2 Normality Test

Table 4.3 shows the results of the Jarque-Bera normality test for the study. The results of the Jarque-Bera test for normality indicate the goodness-of-fit of the data to a normal distribution. Higher p-values are generally desirable as they suggest that the data does not significantly deviate from a normal distribution. All the variables in the analysis, have p-values above the common significance level of 0.05. This suggests that there is no strong evidence to reject the null hypothesis that these variables follow a normal distribution.

Table 4.3: Normality Test

	Jarque-Bera Coefficient	P-value
ROA	3.294	0.126
Liquidity management	3.591	0.202
Firm size	4.431	0.406
Managerial efficiency	2.765	0.417

Source: Research Findings (2023)

4.3.3 Heteroscedasticity Test

The results of the Breusch-Pagan/Cook-Weisberg test for heteroscedasticity provide evidence regarding the homoscedasticity assumption in regression analysis. In this case, a higher p-value, such as the one obtained (0.2136), indicates that there is no strong evidence to reject the null hypothesis, suggesting that heteroscedasticity is not significantly present in the regression model. This implies that the variance of the residuals, or errors, across different levels of the independent variables does not differ significantly, which is a fundamental assumption of linear regression.

Table 4.4: Heteroscedasticity Test

Breusch-Pagan / Cook-Weisberg test for heteroscedasticity		
chi2(1)	=	0.3874
Prob > chi2	=	0.2136

Source: Research Findings (2023)

4.3.4 Autocorrelation Test

The Durbin-Watson statistic is used to detect autocorrelation, which is the presence of serial correlation or dependence among the residuals of a regression model. In this case, the Durbin-Watson statistic has a value of 1.869. The range of possible values for the Durbin-Watson statistic is between 0 and 4. A value close to 2 suggests that there is little to no autocorrelation in the residuals, indicating that the error terms are not systematically related to each other across observations. A value of 1.869 falls within

the range of values close to 2, suggesting that there is no strong evidence of autocorrelation in the model's residuals. Therefore, based on this statistic, it appears that the assumption of no autocorrelation is not violated, and the residuals are reasonably independent across observations in the regression model.

Table 4.5: Test of Autocorrelation

Durbin Watson Statistic
1.869

Source: Research Findings (2023)

4.3.5 Stationarity Test

The results of the Levin-Lin Chu unit-root test in Table 4.6 indicate that all the variables tested exhibit stationarity. A p-value of 0.0000 typically suggests strong evidence against the presence of a unit root, which, in turn, implies that these variables are stationary time series. In this context, the results indicate that the variables in question are suitable for analysis without the need for differencing or transformations to make them stationary.

Table 4.6: Levin-Lin Chu unit-root test

Levin-Lin Chu unit-root test		
Variable	**Statistic**	**p value**
ROA	8.2031	0.0000
Liquidity management	7.8718	0.0000
Firm size	7.2385	0.0000
Managerial efficiency	6.7943	0.0000

Source: Research Findings (2023)

4.5 Correlation Analysis

Table 4.7 shows the correlation coefficients between the independent variables and the dependent variable, ROA. The correlation coefficient is a measure of the linear relationship between two variables.

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Table 4.7: Correlation Analysis

		ROA	Liquidity management	Firm size	Managerial efficiency
ROA	Pearson Correlation	1			
	Sig. (2-tailed)				
Liquidity management	Pearson Correlation	.300**	1		
	Sig. (2-tailed)	.000			
Firm size	Pearson Correlation	.112	-.063	1	
	Sig. (2-tailed)	.067	.301		
Managerial efficiency	Pearson Correlation	.232**	-.010	-.044	1
	Sig. (2-tailed)	.000	.865	.467	

**. Correlation is significant at the 0.01 level (2-tailed).
b. Listwise N=270

Source: Research Findings (2023)

For liquidity management, there is a statistically significant positive correlation of 0.300 with ROA ($p < 0.01$). This indicates that as liquidity management, measured by the ratio of current assets to current liabilities, increases, there tends to be a positive association with financial performance (ROA). The positive correlation suggests that firms with more effective liquidity management may experience higher returns on assets.

Firm size, as measured by the natural logarithm of total assets, shows a positive correlation of 0.112 with ROA, but it is not statistically significant at the 0.05 level ($p = 0.067$). This implies a weak positive relationship between firm size and financial performance. The lack of statistical significance suggests caution in drawing strong conclusions about the relationship between firm size and ROA.

Managerial efficiency, represented by the ratio of operating revenue to operating expenses, exhibits a statistically significant positive correlation of 0.232 with ROA ($p < 0.01$). This indicates that firms with higher managerial efficiency tend to have a

positive association with financial performance. It suggests that efficient management practices may contribute to improved returns on assets.

4.6 Regression Analysis

Regression analysis was conducted to determine the effect of the selected independent variables on the performance of counties. The results are as shown in Table 4.8, 4.9 and 4.10.

Table 4.8: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.606[a]	.368	.353	2.49869

a. Predictors: (Constant), Managerial efficiency, Liquidity management, Firm size

Source: Research Findings (2023)

The model summary provides an overview of the overall fit of the regression model. the R Square value of 0.368 indicates that approximately 36.8% of the variability in the dependent variable (ROA) is explained by the independent variables included in the model. The Adjusted R Square, which accounts for the number of predictors in the model, is 0.353, suggesting that even after adjusting for the number of variables, the model still explains a substantial portion of the variance in ROA.

Table 4.9: Analysis of Variance

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.229	3	.076	7.019	.000[b]
	Residual	2.891	266	.011		
	Total	3.120	269			

a. Dependent Variable: ROA
b. Predictors: (Constant), Managerial efficiency, Liquidity management, Firm size

Source: Research Findings (2023)

The ANOVA table tests if the model, as a whole, is statistically significant. The p-value associated with the F-statistic is highly significant ($p < 0.05$), indicating that the overall regression model is statistically significant in explaining the variance in ROA. This suggests that at least one of the independent variables in the model is a significant predictor of the dependent variable.

Table 4.10: Model Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	.048	.055		.883	.378
	Liquidity management	2.725	.335	.519	8.127	.000
	Firm size	.009	.006	.095	1.612	.108
	Managerial efficiency	.098	.025	.229	3.874	.000
a. Dependent Variable: ROA						

Source: Research Findings (2023)

The coefficients table provides detailed information about each predictor's contribution: Liquidity management shows a highly significant positive relationship with ROA ($p < 0.01$), with a coefficient of 0.519. This implies that, on average, for a one-unit increase in liquidity management (measured by the ratio of current assets to current liabilities), ROA is expected to increase by 0.519 units. Firm size, however, does not show a statistically significant relationship with ROA ($p = 0.108$), as its coefficient is not significantly different from zero. This suggests that, in this model, firm size may not be a significant predictor of financial performance. Managerial efficiency demonstrates a highly significant positive relationship with ROA ($p < 0.01$), with a coefficient of 0.229. This implies that, on average, for a one-unit increase in managerial efficiency (measured by the ratio of operating revenue to operating expenses), ROA is expected to increase by 0.229 units.

The coefficient of regression model was as below;

ROA= 0.048 + 0.519 Liquidity management+ 0.229 Managerial efficiency

4.6 Discussion of Research Findings

In this study, the researcher investigated the effect of liquidity management, firm size, and managerial efficiency on the financial performance of 65 firms listed at the NSE. Grounded in trade-off theory, free cash flow theory, and agency theory, the study utilized secondary data extracted from annual financial reports spanning from 2018 to 2022. The analysis encompassed descriptive, correlation, and regression analyses. Descriptive statistics revealed the central tendencies and variabilities of the variables, highlighting the diversity in liquidity management strategies, firm sizes, and managerial efficiency among the sampled firms. The correlation analysis indicated significant positive associations between financial performance (ROA) and liquidity management as well as managerial efficiency, while firm size exhibited a positive but no significant correlation.

The regression analysis further delved into the simultaneous impact of liquidity management, firm size, and managerial efficiency on ROA. The model, as reflected in the Model Summary and Analysis of Variance tables, was found to be statistically significant, explaining approximately 36.8% of the variance in ROA. Liquidity management emerged as a highly significant predictor of financial performance, with a positive coefficient, suggesting that effective liquidity management positively influences ROA. Managerial efficiency also demonstrated a significant positive impact on ROA. However, firm size did not exhibit a statistically significant relationship with financial performance in this context.

The findings of the present study align with several empirical studies conducted

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globally, providing valuable insights into the relationship between liquidity management and financial performance. Similar to Alqemzi et al. (2022) in the United Arab Emirates (UAE), the current study reveals a positive and significant association between liquidity management and financial performance. Firms with effective liquidity management, measured by the ratio of current assets to current liabilities, demonstrated improved profitability and shareholder returns. This consistent result across different geographical regions supports the notion that maintaining optimal liquidity is a key factor in enhancing overall financial performance.

Furthermore, the study resonates with the findings of Zimon et al. (2021) in the Podkarpackie Province, who identified a positive relationship between liquidity management and financial performance in construction companies. The incorporation of various financial ratios, such as the current ratio, quick ratio, and cash ratio, in both studies reinforces the robustness of the positive association. Effective liquidity management, as evidenced by efficient ratios, contributes to higher profitability, illustrating the global relevance of liquidity management practices in shaping financial outcomes.

Locally, the findings are in line with Kimutai (2022), who investigated the influence of liquidity management on the financial performance of DT Saccos in Kericho County, Kenya. The study concluded that liquidity management has a favorable effect on performance. Similarly, Waweru and Atheru (2022) focused on supermarkets in Nairobi, Kenya, and found that a higher quick ratio significantly improved the financial performance of these businesses. These local studies provide additional support for the positive impact of liquidity management on financial performance, reinforcing the global and local significance of effective liquidity management practices.

CHAPTER FIVE: SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

This chapter delves into a comprehensive overview of the study's core outcomes and implications. The chapter begins by summarizing the key findings. Next, the study draws insightful conclusions based on the empirical evidence. The chapter also critically assess the study's limitations, acknowledging the boundaries of the research and potential areas for future exploration. The chapter also covers practical recommendations derived from the findings, aiming to guide policymakers and decision-makers in enhancing liquidity management and optimizing financial performance.

5.2 Summary of Findings

The objective of this study was to examine the influence of liquidity management on the financial performance of 65 firms listed at the NSE, with additional considerations for firm size and managerial efficiency. The research was grounded in trade-off theory, free cash flow theory, and agency theory. Methodologically, secondary data extracted from the annual financial reports of these firms spanning from 2018 to 2022 was utilized. The study population was effectively captured through a listwise N of 270, with data analysis involving descriptive statistics, correlation analysis, and regression analysis. Liquidity management was operationalized as the ratio of current assets to current liabilities, firm size as the natural logarithm of total assets, and managerial efficiency as the ratio of operating revenue to operating expenses.

The correlation analysis, as presented in the correlation table, revealed important insights into the relationships between the variables. Liquidity management showed a

statistically significant positive correlation with financial performance (ROA), indicating that effective liquidity management was associated with higher ROA. Managerial efficiency also exhibited a significant positive correlation with ROA. However, firm size, while positively correlated, did not reach statistical significance, suggesting a weak association. These correlation coefficients provided a foundation for understanding the preliminary relationships between the variables.

The model summary and analysis of variance tables indicated that the regression model was collectively significant in explaining the variance in ROA, with an R Square value of 0.368. Liquidity management emerged as a highly significant predictor, with a positive coefficient of 0.519, reinforcing its importance in influencing financial performance. Managerial efficiency also demonstrated a significant positive impact on ROA, with a coefficient of 0.229. On the other hand, firm size did not exhibit a statistically significant relationship with ROA. The findings from the regression analysis added depth to the understanding of how these variables collectively contribute to financial performance within the context of the firms listed at the NSE.

5.3 Conclusion

In conclusion, the findings of this study underscore the significant impact of liquidity management on the financial performance of firms listed at the NSE. The positive correlation and the robust positive coefficient in the regression analysis suggest that effective liquidity management, as measured by the ratio of current assets to current liabilities, plays a pivotal role in enhancing returns on assets. Firms that implement sound liquidity management strategies are likely to experience improved financial performance, aligning with the predictions of trade-off theory and free cash flow

theory. This emphasizes the importance of maintaining a balance between current assets and liabilities to optimize overall financial outcomes.

For managerial efficiency, the results consistently indicate a noteworthy influence on financial performance. The positive correlation, coupled with a significant positive coefficient in the regression model, highlights that firms with more efficient management practices, as measured by the ratio of operating revenue to operating expenses, tend to achieve higher ROA. This aligns with the expectations of agency theory, emphasizing the role of effective managerial decision-making in positively shaping a company's financial health. The study suggests that optimizing managerial efficiency can contribute to enhanced financial performance among the sampled firms.

In contrast, the analysis suggests that firm size, as measured by the natural logarithm of total assets, does not exert a statistically significant impact on financial performance in the context of the studied firms listed at the NSE. While there is a positive correlation, the lack of statistical significance in the regression analysis implies that firm size may not be a key determinant of variations in ROA within this sample. This finding challenges conventional assumptions and prompts a nuanced understanding of the interplay between firm size and financial performance in the specific context of the NSE-listed firms involved in this study.

5.4 Recommendations for Policy and Practice

Policymakers may consider emphasizing the importance of effective liquidity management practices within the regulatory framework for firms listed at the NSE. Providing guidelines and incentives for companies to adopt prudent liquidity management strategies can contribute to overall financial stability and sustained performance. Policymakers might explore mechanisms to encourage transparency and

disclosure regarding liquidity positions, helping investors make more informed decisions. Furthermore, educational initiatives and workshops could be developed to enhance the financial literacy of both management and investors regarding the significance of sound liquidity management in achieving robust financial performance.

For practitioners, the study suggests that adopting and refining effective liquidity management practices should be a priority. Firms could benefit from regularly reviewing and adjusting their liquidity positions, taking into account current economic conditions and market dynamics. Additionally, practitioners might consider integrating advanced financial modeling and forecasting tools to optimize liquidity and respond proactively to changing financial landscapes. Collaboration with financial institutions and leveraging financial technology solutions can also be explored to enhance liquidity management efficiency and effectiveness.

While managerial efficiency was identified as a significant predictor of financial performance, practitioners may find value in investing in continuous professional development for their management teams. Training programs focusing on strategic decision-making, cost-effectiveness, and resource optimization can contribute to improved managerial efficiency. Moreover, fostering a corporate culture that encourages innovation and adaptive management practices can further enhance a company's ability to navigate complex business environments. Additionally, firms could explore benchmarking exercises against industry peers to identify areas for improvement and implement best practices in managerial efficiency.

5.5 Limitations of the Study

The reliance on secondary data extracted from annual financial reports may introduce biases due to variations in reporting practices across firms. Inconsistencies in data

quality and the potential omission of relevant variables not disclosed in the financial reports might affect the accuracy and comprehensiveness of the analysis. Additionally, the study's focus on NSE-listed firms limits the generalizability of the findings to firms in different industries or operating in diverse economic environments. Different sectors may exhibit distinct financial dynamics, and economic conditions can vary, potentially impacting the observed relationships between liquidity management, managerial efficiency, firm size, and financial performance.

The study's exclusive use of quantitative methods may overlook qualitative aspects that could provide a more nuanced understanding of the observed relationships. Qualitative data, such as interviews or surveys, could offer insights into the contextual factors influencing liquidity management, managerial decisions, and financial performance. This study's quantitative approach provides a statistical overview but may miss the rich narrative that qualitative methods can uncover, limiting the depth of interpretation.

Furthermore, the study's temporal scope, spanning from 2018 to 2022, may not capture more recent changes in economic conditions, regulatory environments, or market dynamics. Rapid shifts in global events, such as economic recessions or financial crises, can significantly impact the financial performance of firms. Therefore, the findings may not fully represent the current state of the relationships examined in the study.

The chosen variables in the study, while representative of key financial and managerial aspects, may not encompass all relevant factors influencing financial performance. The exclusion of additional variables that could be pertinent to the study's objectives may limit the comprehensive understanding of the intricate dynamics involved in the relationship between liquidity management, managerial efficiency, firm size, and financial performance.

5.6 Suggestions for Further Research

Future research could explore the moderating effects of industry-specific characteristics on the observed relationships. Different industries may exhibit distinct financial structures and challenges, and examining these relationships within specific sectors could provide more tailored insights. Industry-specific analyses could uncover nuances in the impact of liquidity management, managerial efficiency, and firm size on financial performance, guiding industry-specific strategies and interventions.

Incorporating a longitudinal dimension into future studies could enhance the understanding of how these relationships evolve over time. Examining financial data over more extended periods could reveal trends, cyclical patterns, and the long-term impact of liquidity management and managerial decisions on financial performance. This temporal perspective could also capture the effects of external shocks, economic cycles, and changes in regulatory environments, providing a more dynamic understanding of the studied relationships.

Researchers might explore the mediating effects of additional variables that were not considered in this study. For instance, organizational culture, innovation, or environmental sustainability practices could act as mediators, influencing the strength and direction of the relationships between liquidity management, managerial efficiency, firm size, and financial performance. Investigating these mediating variables could uncover additional layers of complexity in the interplay between financial and managerial factors.

Comparative studies across different stock exchanges or international contexts could offer valuable insights into how cultural, regulatory, and economic variations influence the relationships under investigation. A cross-country analysis may reveal whether the

observed relationships are consistent across diverse financial markets or if there are unique factors influencing financial performance in specific regions. Such comparative research could inform global business strategies and contribute to a more holistic understanding of the complex dynamics at play in the financial and managerial realms.

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APPENDICES

Appendix I: Firms Listed at the NSE

1. Eaagads Ltd
2. Kapchorua Tea Co. Ltd
3. Kakuzi
4. Limuru Tea Co. Ltd
5. Rea Vipingo Plantations Ltd
6. Sasini Ltd
7. Williamson Tea Kenya Ltd
8. Car and General (K) Ltd
9. Absa Bank Kenya PLC
10. Stanbic Holdings Plc.
11. I&M Holdings Ltd
12. Diamond Trust Bank Kenya Ltd
13. HF Group Ltd
14. KCB Group Ltd
15. National Bank of Kenya Ltd
16. NCBA Group PLC
17. Standard Chartered Bank Ltd
18. Equity Group Holdings
19. The Co-operative Bank of Kenya Ltd
20. BK Group PLC
21. Express Ltd
22. Sameer Africa PLC
23. Kenya Airways Ltd
24. Nation Media Group
25. Standard Group Ltd
26. TPS Eastern Africa (Serena) Ltd
27. Scangroup Ltd
28. Uchumi Supermarket Ltd
29. Longhorn Publishers Ltd
30. Deacons (East Africa) Plc
31. Nairobi Business Ventures Ltd
32. Athi River Mining Ord 5.00
33. Bamburi Cement PLC Ord 5.00
34. Crown Paints Kenya PLC.
35. E.A. Cables PLC
36. E.A. Portland Cement Ltd
37. Total Kenya Ltd
38. KenGen Ltd
39. Kenya Power & Lighting Co Ltd
40. Umeme Ltd
41. Jubilee Holdings Ltd Ord 5.00
42. Sanlam Kenya PLC
43. Kenya Re-Insurance Corporation Ltd
44. Liberty Kenya Holdings Ltd
45. Britam Holdings Ltd

46. CIC Insurance Group Ltd
47. Olympia Capital Holdings ltd
48. Centum Investment Co Ltd
49. Trans-Century Ltd
50. Home Afrika Ltd
51. Kurwitu Ventures
52. Nairobi Securities Exchange Ltd
53. B.O.C Kenya Ltd
54. British American Tobacco Kenya Ltd
55. Carbacid Investments Ltd
56. East African Breweries Ltd
57. Mumias Sugar Co. Ltd
58. Unga Group Ltd
59. Eveready East Africa Ltd
60. Kenya Orchards Ltd
61. Flame Tree Group Holdings Ltd
62. Safaricom PLC
63. Stanlib Fahari I-REIT
64. Laptrust Imara I-REIT
65. New Gold Issuer (RP) Ltd

Source: NSE (2022)

Appendix II: Raw Data

ID	Year	ROA	Liquidity management	Firm size	Managerial efficiency
1	2022	-0.130	1.766	10.630	0.513
1	2021	-0.030	2.909	10.708	0.456
1	2020	0.180	5.958	10.715	0.676
1	2019	0.070	11.648	10.567	0.745
1	2018	0.080	7.503	10.473	0.723
2	2022	0.170	2.123	10.660	0.274
2	2021	0.180	3.237	10.528	0.325
2	2020	0.150	1.082	10.622	0.289
2	2019	0.120	2.279	10.603	0.295
2	2018	0.140	1.303	10.634	0.275
3	2022	0.040	1.594	9.973	0.643
3	2021	0.050	1.438	9.987	0.666
3	2020	0.050	1.013	9.954	0.664
3	2019	0.070	0.911	9.911	0.653
3	2018	0.090	2.355	9.839	0.637
4	2022	0.160	3.047	9.519	0.116
4	2021	0.150	3.001	9.489	0.132
4	2020	0.160	2.807	9.473	0.166
4	2019	0.200	2.973	9.404	0.147
4	2018	0.250	2.834	9.343	0.127
5	2022	0.070	3.249	9.769	0.701
5	2021	0.080	6.252	9.704	0.691
5	2020	0.040	2.076	9.657	0.702
5	2019	0.040	2.051	9.586	0.650
5	2018	0.100	2.674	9.469	0.538
6	2022	-0.070	1.940	9.847	0.733
6	2021	-0.050	1.022	9.878	0.661
6	2020	0.050	0.721	9.923	0.595
6	2019	0.420	0.699	9.897	0.608
6	2018	0.090	0.803	9.833	0.550
7	2022	-0.010	1.052	10.437	0.383
7	2021	0.180	2.357	10.445	0.355
7	2020	0.340	2.297	10.364	0.403
7	2019	0.010	2.681	10.196	0.573
7	2018	0.140	2.348	10.208	0.561
8	2022	0.380	2.620	8.888	0.289
8	2021	-0.150	1.316	9.035	0.551
8	2020	0.420	1.196	9.179	0.431
8	2019	-0.160	1.174	8.969	0.765

ID	Year	ROA	Liquidity management	Firm size	Managerial efficiency
8	2018	0.080	1.206	8.973	0.580
9	2022	0.130	1.228	9.759	0.248
9	2021	0.140	1.056	9.705	0.241
9	2020	0.150	1.096	9.481	0.358
9	2019	0.070	1.112	9.586	0.228
9	2018	0.080	1.160	9.570	0.221
10	2022	0.050	1.123	11.577	0.514
10	2021	0.050	4.511	11.565	0.530
10	2020	0.220	6.296	11.535	0.587
10	2019	0.050	10.089	11.398	0.693
10	2018	0.060	4.258	11.276	0.607
11	2021	0.120	1.107	10.384	0.592
11	2020	0.120	1.146	10.240	0.508
11	2019	0.130	1.382	10.379	0.693
11	2018	0.070	1.536	10.449	0.763
12	2022	0.050	1.464	11.534	0.795
12	2021	0.050	1.283	11.474	0.785
12	2020	0.050	1.168	11.440	0.697
12	2019	0.060	1.305	11.344	0.668
12	2018	0.070	1.197	11.248	0.683
13	2022	0.060	1.161	11.165	1.307
13	2021	-0.030	1.585	11.192	1.229
13	2020	-0.160	0.946	11.260	1.033
13	2019	-0.160	1.085	11.172	0.810
13	2018	0.010	1.024	11.089	0.746
14	2022	-0.010	1.469	11.209	0.156
14	2021	0.330	0.984	11.202	0.174
14	2020	0.270	1.334	11.196	0.336
14	2019	0.230	1.540	11.129	0.322
14	2018	0.200	1.259	11.110	0.377
15	2022	0.170	1.115	9.473	0.393
15	2021	0.030	4.144	9.517	0.444
15	2020	-0.170	6.657	9.574	0.384
15	2019	0.020	7.954	9.586	0.328
15	2018	0.010	8.475	9.564	0.270
16	2022	0.150	3.345	10.120	0.142
16	2021	0.050	0.951	10.226	0.104
16	2020	0.060	1.097	10.205	0.090
16	2019	0.160	1.422	10.174	0.188
16	2018	0.410	1.486	9.957	0.295
17	2022	0.040	1.736	9.649	0.582

ID	Year	ROA	Liquidity management	Firm size	Managerial efficiency
17	2021	-0.020	1.237	9.644	0.529
17	2020	0.080	0.950	9.639	0.569
17	2019	-0.040	0.935	9.613	0.462
17	2018	0.080	0.968	9.619	0.507
18	2022	0.080	1.224	10.580	0.437
18	2021	0.100	1.643	10.559	0.465
18	2020	0.090	1.032	10.534	0.486
18	2019	0.080	0.923	10.512	0.495
18	2018	0.070	0.897	10.602	0.615
19	2022	0.060	1.157	10.273	1.006
19	2021	-0.180	0.502	10.277	0.797
19	2020	-0.020	0.465	10.277	0.966
19	2019	-0.020	0.563	10.339	0.366
19	2018	-0.050	1.400	10.377	0.446
20	2020	0.060	0.624	9.699	1.419
20	2019	-0.540	0.740	9.807	0.867
20	2018	-0.500	0.693	9.838	0.520
21	2022	0.110	0.636	10.011	0.466
21	2021	0.090	2.205	9.964	0.381
21	2020	0.030	2.524	9.938	0.383
21	2019	0.090	3.374	9.905	0.394
21	2018	0.100	2.833	9.909	0.471
22	2022	0.090	3.020	10.054	0.279
22	2021	0.070	4.402	10.085	0.285
22	2020	0.150	2.328	10.104	0.295
22	2019	0.160	1.771	10.077	0.266
22	2018	0.190	1.895	10.059	0.280
23	2022	0.230	2.131	9.348	0.277
23	2021	0.260	0.955	9.347	0.240
23	2020	0.050	1.219	9.366	0.261
23	2019	0.090	1.156	9.362	0.240
23	2018	0.090	1.116	9.420	0.216
24	2022	0.130	1.078	10.824	0.820
24	2021	0.110	1.524	10.791	0.888
24	2020	0.150	1.488	10.826	0.801
24	2019	0.190	1.277	10.798	0.855
24	2018	0.170	1.300	10.761	0.868
25	2021	0.140	1.100	8.965	0.078
25	2020	0.140	0.630	8.881	0.091
25	2019	0.200	1.595	8.633	0.148
25	2018	0.080	1.487	8.649	0.191

ID	Year	ROA	Liquidity management	Firm size	Managerial efficiency
26	2022	0.040	1.285	9.978	0.239
26	2021	-0.060	1.410	9.922	0.265
26	2020	0.130	0.343	9.951	0.221
26	2019	0.000	0.672	9.932	0.229
26	2018	0.080	2.973	9.931	0.253
27	2022	0.040	2.834	9.308	0.303
27	2021	0.120	3.249	9.331	0.294
27	2020	0.000	6.252	9.297	0.280
27	2019	0.080	2.076	9.285	0.284
27	2018	0.020	2.051	9.318	0.382
28	2022	0.100	2.674	8.418	0.283
28	2021	0.120	2.828	8.451	0.271
28	2020	-0.040	2.910	8.497	0.267
28	2019	-0.050	3.463	8.530	0.236
28	2018	0.040	3.601	8.535	0.241
29	2022	0.030	4.359	8.574	1.139
29	2021	0.110	1.766	8.579	0.939
29	2020	-0.040	2.909	8.645	0.728
29	2019	-0.220	5.958	8.679	0.673
29	2018	-0.110	11.648	8.682	0.587
30	2022	-0.130	7.503	10.243	0.476
30	2021	0.030	2.123	10.230	0.437
30	2020	0.040	3.237	10.199	0.388
30	2019	0.030	1.082	10.202	0.347
30	2018	0.000	2.279	10.208	0.346
31	2022	0.040	1.303	10.139	0.348
31	2021	0.060	1.594	10.130	0.347
31	2020	0.070	1.438	10.096	0.310
31	2019	0.060	1.013	10.123	0.357
31	2018	0.050	0.911	10.105	0.369
32	2022	0.070	2.355	8.157	0.683
32	2021	0.090	3.047	8.191	0.679
32	2020	-0.200	3.001	8.048	0.594
32	2019	0.060	2.807	7.900	0.763
32	2018	0.060	2.973	7.654	0.754
33	2022	0.130	2.834	9.651	1.087
33	2021	0.060	3.249	9.594	1.053
33	2020	-0.010	6.252	9.587	1.011
33	2019	-0.010	2.076	9.570	0.906
33	2018	-0.070	2.051	9.486	0.889
34	2022	0.030	2.674	8.147	0.530

ID	Year	ROA	Liquidity management	Firm size	Managerial efficiency
34	2021	0.060	2.271	8.708	0.526
34	2020	-0.050	1.838	8.781	0.537
34	2019	0.000	2.358	8.712	0.452
34	2018	0.030	2.522	8.109	0.403
35	2022	0.030	1.310	9.324	0.046
35	2021	-0.080	1.175	9.304	0.075
35	2020	0.130	1.170	9.283	0.075
35	2019	0.120	1.167	9.227	0.084
35	2018	0.190	1.138	9.060	0.364
36	2022	0.220	0.448	10.251	0.560
36	2021	0.260	1.042	10.267	0.524
36	2020	0.220	1.059	10.271	0.526
36	2019	0.290	1.112	10.261	0.555
36	2018	0.300	1.125	10.230	0.025
37	2020	0.260	1.159	10.428	0.718
37	2019	0.250	1.144	10.310	0.710
37	2018	0.090	1.145	10.372	0.636
38	2022	-0.200	1.033	9.269	0.491
38	2021	-0.090	1.271	9.271	0.492
38	2020	-0.020	1.278	8.838	0.448
38	2019	0.090	1.172	8.877	0.423
38	2018	0.080	1.166	8.836	0.437
39	2020	0.120	1.558	9.358	0.486
39	2019	0.160	1.623	9.396	0.392
39	2018	0.200	1.638	9.293	0.280
40	2022	-0.090	1.505	8.267	0.468
40	2021	0.070	1.265	8.316	0.450
40	2020	0.060	1.287	8.354	0.442
40	2019	-0.010	1.278	8.382	0.341
40	2018	0.080	1.222	8.414	0.283
41	2022	0.069	1.047	8.267	0.400
41	2021	0.069	1.169	8.316	0.318
41	2020	0.066	1.125	8.354	0.399
41	2019	0.058	1.100	8.382	0.400
41	2018	0.080	1.042	8.414	0.335
42	2022	0.069	1.240	8.291	0.326
42	2021	0.069	1.198	8.343	0.338
42	2020	0.066	1.159	8.347	0.376
42	2019	0.058	1.148	8.369	0.337
42	2018	0.075	1.081	8.399	0.460
43	2022	0.075	2.095	8.035	0.679

ID	Year	ROA	Liquidity management	Firm size	Managerial efficiency
43	2021	0.077	2.365	8.083	0.414
43	2020	0.058	2.520	8.164	0.737
43	2019	0.067	2.253	8.219	0.546
43	2018	0.072	2.313	8.229	0.390
44	2020	0.071	2.941	7.966	0.440
44	2019	0.073	2.381	8.089	0.420
44	2018	0.069	2.632	8.096	0.380
45	2022	0.066	4.950	8.484	0.202
45	2021	0.044	2.717	8.509	0.368
45	2020	0.037	3.021	8.576	0.331
45	2019	0.020	3.247	8.670	0.308
45	2018	0.031	3.571	8.703	0.280
46	2022	0.068	4.739	7.290	0.211
46	2021	0.070	2.174	8.043	0.460
46	2020	0.075	2.941	8.138	0.340
46	2019	0.069	3.289	8.170	0.304
46	2018	0.071	3.436	8.215	0.291
47	2022	0.070	2.967	7.609	0.337
47	2021	0.072	2.660	7.670	0.376
47	2020	0.053	1.473	7.782	0.679
47	2019	0.071	2.415	7.001	0.414
47	2018	0.071	1.357	7.000	0.737
48	2022	0.049	1.832	8.334	0.546
48	2021	0.049	2.564	8.377	0.390
48	2020	0.046	2.941	8.441	0.340
48	2019	0.051	2.273	8.533	0.440
48	2018	0.041	1.656	8.579	0.604
49	2022	0.086	2.083	8.300	0.480
49	2021	0.086	2.500	8.360	0.400
49	2020	0.097	2.941	8.451	0.340
49	2019	0.082	4.167	8.531	0.240
49	2018	0.072	4.348	8.544	0.230
50	2022	0.070	4.950	7.670	0.202
50	2021	0.072	2.717	7.782	0.368
50	2020	0.063	3.021	8.234	0.331
50	2019	0.064	3.247	8.298	0.308
50	2018	0.068	3.571	8.312	0.280
51	2022	0.053	1.197	6.846	0.714
51	2021	0.059	1.161	6.895	0.833
51	2020	0.062	1.585	7.740	0.875
51	2019	0.055	0.946	7.813	0.875

ID	Year	ROA	Liquidity management	Firm size	Managerial efficiency
51	2018	0.052	1.085	7.815	0.875
52	2022	0.051	1.024	6.945	0.875
52	2021	0.040	1.469	6.985	0.714
52	2020	0.063	0.984	7.010	0.714
52	2019	0.064	1.334	7.019	0.714
52	2018	0.059	1.540	7.016	0.750
53	2022	0.057	1.259	7.014	0.875
53	2021	0.047	1.115	7.135	0.778
53	2020	0.043	4.144	7.237	0.778
53	2019	0.046	6.657	7.301	0.778
53	2018	0.041	7.954	7.350	0.750
54	2022	0.085	8.475	7.280	0.750
54	2021	0.079	3.345	7.293	0.750
54	2020	0.071	0.951	7.331	0.889
54	2019	0.079	1.097	7.344	0.778
54	2018	0.068	1.422	7.351	0.750
55	2022	0.057	1.486	7.664	0.909
55	2021	0.052	1.736	7.716	0.909
55	2020	0.043	1.237	7.792	0.889
55	2019	0.042	0.950	7.834	0.875
55	2018	0.037	0.935	7.919	0.875
56	2022	0.063	0.968	8.267	0.875
56	2021	0.071	1.224	8.316	0.875
56	2020	0.069	1.643	8.354	0.400
56	2019	0.061	1.032	8.382	0.500
56	2018	0.069	0.923	8.414	0.571