RELATIONSHIP BETWEEN FIRM LIQUIDITY AND FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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DECLARATION

This research project is my original work and has not been presented for any award in any other university

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

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DEDICATION

I dedicate this paper to my family.

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LIST OF ABBREVIATIONS

ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
GLS	Generalized Least Squares
KBA	Kenya Banking Association
KCB	Kenya Commercial Bank
KES	Kenya Shillings
LIDQ1	Liquid Assets to Total Assets
LIDQ2	Liquid Assets To Total Interest-Bearing Liabilities
ROA	Return On Assets
ROE	Return On Equity
ROI	Return On Investment
ROIC	Return On Invested Capital
SPSS	Statistical Package for Social Sciences

ABSTRACT

Liquidity plays a significant role in the corporate financial performance of commercial banks. A bank should ensure that it does not suffer from lack of or excess liquidity to meet its short-term compulsions which may create financial performance issues. This study sought to determine the relationship between firm liquidity and financial performance of commercial banks in Kenya. This study utilized descriptive and correlational research design. This research targeted 39 commercial banks in Kenya between 2017 and 2021. The data sources were secondary. A data collection sheet was used to collect the data Commercial banks' annual reports were used to collect the data. Between 2017 and 2021, data were collected from commercial banks in Kenya. The annual reports were sourced from Central Bank of Kenya where all commercial banks publish their annual financial reports with. panel data was adopted for analysis. This research made use of annual data relating to the commercial banks between 2017 and 2021. Descriptive correlation and regression analysis were done via STATA 14. The study carried out diagnostic tests of multicollinearity, normality, heteroskedasticity and specification test. To examine the significance of the model the investigation adopted F-statistics via Analysis of Variance. From the findings, correlation analysis showed that firm liquidity had a correlation coefficient of -0.1063 indicating that firm liquidity had a weak negative relationship with financial performance. On the other hand, firm size showed a strong positive relationship with financial performance (Corr=0.6068). Capital Adequacy showed a weak negative relationship with financial performance (Corr=-0.0799) while asset quality showed a negative weak relationship shown by correlation coefficient of -0.0112. The correlation coefficient of firm size was significant while that of firm liquidity, capital adequacy and asset quality were insignificant. The study concludes that firm liquidity has a negative insignificant relationship with financial performance of commercial banks in Kenya. Firm size has a positive significant relationship; capital adequacy has an insignificant negative relationship; while asset quality has a negative insignificant relationship with financial performance of commercial banks in Kenya. The study recommends that commercial banks7in Kenya reduce their liquidity to optimal levels; increase their assets; reduce the unproductive assets; increase their revenue streams and levels; reduce their total liabilities; issue more shareholder's capital; sell their non-performing loans to collection agencies; and increase the gross loans extended to customers optimally. Future studies should adopt other factors influencing financial performance, other measures of variables, other periods of study; and adopt primary data.

CHAPTER ONE: INTRODUCTION

1.1 Background of the study

Liquidity is essential to every banking institution's continuous sustainability, according to Dzapasi (2020). Hence, one of the most crucial tasks performed by bankers is maintaining liquidity. Effective liquidity management can lower the likelihood of major issues (Anye, 2018). In fact, the significance of liquidity extends beyond the scope of a specific banker because a lack of liquidity at one organization can exert effects on the entire financial systems. In order to analyse liquidity, management must continuously assess the lender's liquidity status and consider how financing needs are expected to change in light of several circumstances, notably unfavourable ones (Patrick, 2018).

Three theories supported this study. These include modern portfolio, shiftability and liquidity management preference theory. Modern portfolio theory posits that firms select investments based on discounted future expected returns (Markowitz, 1952). Thus, banks should choose viable ways of investing in assets that enhance and maximize profitability on financial performance concerning the asset base. According to the shiftability theory, bankers do not have to depend on maturity provided they hold a sizeable quantity of assets capable of being transferred to alternative bankers for cash without suffering a meaningful loss during an emergency (Ngwu, 2006). According to the liability management theory, lenders can satisfy existing liquidity needs by requesting more money from the markets to cover borrowings and deposits withdrawals (Dodds, 1982).

Liquidity is critical for the survival of commercial banks in Kenya. Increased liquidity risk would create a financial crisis in the Kenyan banking sector which may lead to the collapse of commercial banks. For example, liquidity risk has destroyed more than three commercial banks in the last ten years. A good example is the Dubai Bank stated that had experienced severe liquidity risks and capital deficiencies which made the bank unable to pay meet its expenses and other liabilities when they fell due. Othe banks that collapsed due to liquidity challenges was Imperial Bank limited and Chase Bank limited. Liquidity issues also led to the National bank being put under the management of KCB bank. The bank also showed poor financial performance ratios, contributing to the problems.

1.1.1 Firm Liquidity

Firm liquidity is the ease with which an asset, or security, can be converted into ready cash without affecting its market price (Foucault, Pagano, Roell & Röell, 2013). Carvalho (2015) defines liquidity as the company's ability to pay off its short-term liabilities such as accounts payable that come due in less than a year. On the other hand, Soprano (2015) define liquidity as a company's ability to raise cash when it needs it while Duttweiler (2011) define a company's liquidity as a measure of how easily it can meet its short-term financial obligations. Liquidity is the amount of money readily available for investment and spending (Holmstrom & Tirole, 2011). It consists of cash, Treasury bills, notes, and bonds, and any other asset that can be sold quickly.

Firm liquidity is important to an organization in various ways. It gauges a company's capacity to turn assets into money. It is swift and simple to convert liquid assets for money. A company's ability to get loans, conquer financial obstacles, and make financial plans would ultimately be aided by robust liquidity (Panigrahi, Raul & Gijare, 2018). In

the daily functions of lenders, liquidity is extremely crucial. Strong liquidity gives the bank more options to raise capital, which increases its capacity for credit and different types of investments (Adam, Safitri & Wahyudi, 2018). Knowing a business's liquidity is crucial for determining how capable a business is of paying its liquid liabilities and liquid debts while evaluating its viability (Yameen, Farhan & Tabash, 2019). Any extra funds can be utilized to expand the business and distribute dividends to its shareholders.

Firm liquidity is measured through liquidity ratios. According to Herawati and Fauzia (2018), the ratios include current, quick, and cash. Purnomo (2018) measured liquidity through ratios of liquid assets to total assets (LIDQ1) and liquid assets to total interest-bearing liabilities (LIDQ2). Loan to deposit ratio, gross loans to assets, liquid risky asset to total asset, Capital to total asset ratio is used as liquidity indicators (Chowdhury & Zaman, 2018). Li et al (2020) measured liquidity through current ratio while Muriithi and Waweru (2017) measured liquidity through liquidity coverage ratio (LCR). This study used gross loans-to-assets ratio to measure liquidity.

1.1.2 Financial Performance

Hadani and Coombes (2015) defined financial performance as the disparity around income and expenses accrued over a financial year. On the other hand, Financial performance has several facets and relates to how well a business is doing in terms of generating revenues and expanding (Njeri, 2014). Financial performance was described by Barker (2004) as the method through which a company uses its limited resources to produce as much productivity or profits as possible. Financial performance, as per Feng and Wang (2000), is the method of evaluating a company 's financial features only for the

purpose of judging its effectiveness and performance with regard to its accounting documents and reports.

According to Ongore and Kusa (2013), investors get insight into a firm's general wellbeing by looking at the financial performance. It also gives a firm's financial health and efficiency. Tariq et al. (2014) emphasizes that financial performance is a key factor for smooth operations of a corporation in a dynamic setting. Financial performance is also necessary for a financial institution for continued operations and reasonable returns for shareholders (Gitman, Juchau & Flanagan, 2015). The management team, stockholders, and various stakeholders involved with the corporation place a high value on financial performance. This is so since a business' financial status paints a comprehensive image of its position.

Financial performance is measured in different ways by researchers. Chowdhury and Zaman (2018) measured through return on assets (ROA) and return on equity (ROE). Charmler, Musah, Akomeah and Gakpetor (2018) measured financial performance through return on equity (ROE). On the other hand, Li et al (2020) measured financial performance in terms of Return on Equity (ROE). Oladipupo and Okafor (2013) measured financial performance in terms of return on investment (ROI), return on equity (ROE), return on invested capital (ROIC) and return on assets (ROA). This study used return on assets to measure financial performance.

1.1.3 Firm Liquidity and Financial Performance

Theoretically, lenders with certain liquid assets do better financially, but there is a limit beyond which, all other things being constant, a lender's performance declines (Charmler, Musah, Akomeah & Gakpetor, 2018). The ultimate objective of any commercial bank is

to maximize the profit (Musau, Muathe & Mwangi, 2018). However, maintaining the commercial bank's liquidity is also a crucial goal. The challenge that bank managers faces is that raising earnings at the expense of liquidity might result in serious issues for the bank.

Empirically, liquidity and financial performance showed mixed results. For example, Safi, Muiruri and Ernest (2021) also found that liquidity related positively with financial performance. Alim, Ali and Metla (2021) supported this where they found that the higher liquidity increases banks' performance in commercial banks. On the other hand, Sabir (2021) found that improvements in the bank's liquid assets position had negative implications on the banks' financial performance. This is supported by Li et al (2020) who found that liquidity had significant adverse effect on the firms' financial performance; and Chowdhury and Zaman (2018) who found that a negative relation existed between bank performance and liquidity indicators. However, Charmler, Musah, Akomeah and Gakpetor (2018) found an insignificant negative relationship between return on equity (ROE) and liquidity. This shows that it is not clear on how liquidity and financial performance relate.

1.1.4 Commercial Banks in Kenya

42 bankers make up Kenya's commercial banking industry, which is segmented dependent on respective asset value, capitalization, proportion of accounts, and loan amount (CBK, 2021). According to the established standards, large banks are those bankers for whom the aggregate weighted score is larger than 5%. (or tier 1 banks). Banks categorised as medium grouping bankers (or second tier institutions) have an aggregated composite index ranging from 1 to 5 percent, whereas bankers classed as

small group banking institutions have an aggregated composite index of below 1 % (third tier). Kenya now has 8 tier 1 banking firms, 11 tier 2 banking firms, and 21 tier 3 banking firms (CBK, 2020).

According to the CBK (2021), the commercial banks sector experienced a decline in financial performance in 2021. For example, the profit before tax decreased to KES 88.003 billion for the period ended December 2020 from KES 110.110 billion in December 2019. The banking sector average liquidity ratio for the year ended December 2020 stood at 54.9% against 46.2% in December 2019. This shows that the banks experienced an increase in the level of liquidity. The rise in the ratio is significantly attributed to growth in total liquid assets against short-term liabilities. The liquidity ratio was in excess of the required ratio of 20 percent. The study seeks to establish the relationship between liquidity and financial performance of commercial banks to see whether the financial challenges result from the banks' liquidity.

1.2 Research Problem

Liquidity plays a significant role in the corporate financial performance of commercial banks in Kenya. It is impossible to overstate the significance of liquidity as it relates to company financial performance in modern businesses (Alhassan & Islam, 2021). A bank should ensure that it does not suffer from lack of or excess liquidity to meet its short-term compulsions which may create financial performance issues. The dilemma in liquidity management is to achieve the desired trade-off between liquidity and profitability, which is a key element of corporate financial performance (Hristova et al, 2019).

Commercial banks in Kenya have been facing financial performance issues in the last five years. For example, the banking sector showed a decline in profits by 30% in 2020 (KBA, 2021). Individual banks also experienced reduction in their financial performance metrics with various banks making losses in the recent years. For example, KCB's profits reduced from 37 billion KES to 25 billion in 2020. On the other hand, the banks showed a rise in their levels of liquidity in the year. The banking sector showed an average liquidity ratio of 54.9% in 2020 against 46.2% of 2019. This shows that a knowledge gap exists where the relationship between financial performance and liquidity of commercial banks is not clear.

Globally researchers have studied the concepts of liquidity and financial performance. Chowdhury and Zaman (2018) studied the effect of liquidity risk on performance of Islamic banks in Bangladesh; while Alim, Ali and Metla (2021) studied the effect of liquidity risk management on financial performance of commercial banks in Pakistan. Regionally, Safi, Muiruri and Ernest (2021) studied the liquidity management requirement and financial performance of commercial banks in Rwanda; while Li et al (2020) researched the liquidity and firms' financial performance nexus in the Ghana Stock Exchange. The studies showed mixed results on the relationship between liquidity and financial performance.

In Kenya, Harrison and Muiru (2021) looked at the effects of selected financial management practices on financial performance of commercial banks in Kenya. Other studies include Waswa, Mukras and Oima (2018) researched the impact of liquidity on financial performance of the sugar industry. Waweru (2018) studied the impact of liquidity on financial performance of agricultural companies listed at the Nairobi

Securities Exchange while Gweyi, Olweny and Oloko (2018) looked at the effect of liquidity risk on financial performance of deposit-taking savings and credit societies. From the local studies, various research gaps exist in liquidity and financial performance in commercial banks. Contextual gaps exist where the researchers focused on different firms and sectors. For example, Waswa, Mukras and Oima (2018) focused on the sugar industry; Waweru (2018) on agricultural companies; and Gweyi, Olweny and Oloko (2018) on savings and credit societies. Methodological gaps also exist where the researchers have used different methodologies than those adopted by this research. Conceptual gaps also exist in the research. For example, Harrison and Muiru (2021) looked at financial management practices other than liquidity about financial performance. The studies have also looked at liquidity management other than liquidity. This brings the question: what is the relationship between firm liquidity and financial performance of commercial banks in Kenya?

1.3 Research Objective

To determine the relationship between firm liquidity and financial performance of commercial banks in Kenya

1.4 Value of the Study

Management in banking sector would be briefed about how liquidity affects financial performance. They will be able to improve the banks' financial performance by making well-informed judgments on liquidity. The survey offers understanding to shareholders who keep track of how influences impact the progression of respective investment, thereby educating them as to the way liquidity influences the bank's performance. Current

and potential shareholders can utilise this information to help them make investing choices.

The governments and regulators can improve current regulations or suggest new ones in light of the survey's findings and suggestions thru the regulating body, the Central Bank of Kenya. This would improve the efficiency of banks performance while also strengthening liquidity position. This investigation closes an information vacuum for both academics and researchers. Its results serve as a foundation for additional connected research, subsequent references, and the development of new hypotheses.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

This chapter provides the literature on which this research is based on. The literature was both empirical and theoretical. The chapter also gives the conceptual framework sh0owubg the relationship among variables. The determinants of financial performance were also indicated in this chapter.

2.2 Theoretical Review

2.2.1 Modern Portfolio Theory

By precisely selecting the quantities of multiple assets, modern portfolio theory aims to maximise expected return for a certain degree of riskiness, or alternatively minimise risk for any specific degree of expected return. According to this hypothesis, businesses make investment decisions relying on discounted future expected returns. Firms should therefore diversify across industries and asset classes to minimize risk exposure. It aims at balancing the risk – return tradeoff by having a balanced portfolio. Finance managers have used the theory to build a balanced asset portfolio through the procedure for creating financial plans to secure and use available funds on assets which will yield the best results (Markowitz, 1952).

Banks typically have a lot of obligations, thus they may have customers who are interested in purchasing various banking- and non-banking-related services including insurance, bank assurance, stock brokerage, factoring, asset management, and other related services. Thus, banks should choose viable ways of investing in assets that enhance and maximize profitability on financial performance concerning the asset base.

2.2.2 Shiftability Theory

Moulton (1918) created the shiftability idea. The main primary concepts underpin this hypothesis: A lender needs set up its portfolio in order to have the appropriate liquidity; Its majority of investments are made in supplementary securities to attain liquidity with minimal to no value loss. These stocks encompass treasury bills, corporate bonds, and stocks authorised by reputable firms. Banks could also obtain cash from reserve bank in times of need by merely holding the instruments as security (Ngwu, 2006).

According to the shift-ability theory, banks do not have to depend on maturities provided they hold a sizeable quantity of assets which could get transferred to alternative banks for money without suffering a significant loss. Whenever the requirement for liquidity emerges, an asset has to be instantly transferrable not suffering a financial cost. This applies to short-term market assets that may be liquidated right once should bankers need to generate money. However, the shift-ability theory stipulates that almost all bankers must have such assets which could be transferred to reserve bank, which serves as lender of last resort, in a generalized disaster when all lenders seek liquidity.

There are parts of this hypothesis that are true. Banks now accept reliable assets that can be transferred to different banks. Treasury bonds, bills of exchange, major company shares, and debt instruments are all recognised as liquid assets. This has prompted banks to offer term loans. The need to keep a sizable quantity of idle cash balance reserve has diminished as a result of the shiftability theory. It has offered a different approach to the real bill doctrine or theory wherein there exists a chance of risk due to the economic downturn when purchasing and selling manufactured goods and raw materials. The

probability of income can be raised and the likelihood of risk could be decreased with the use of shiftability theory (Cai & Thakor, 2008).

The Shiftability theory was used in the study to comprehend the impact of managing liquidity risk on the financial performance of Kenyan commercial banks. According to the shiftability theory, a bank's liquidity is ensured if its assets can be transferred to other banks prior to actually maturation as necessary. Asset transfers to the central bank instead of other bankers are implied by shiftability. Lender of last resort in this case is the central bank (Acharya & Naqvi, 2012).

2.2.3 Liability Management Theory

Dodds (1982) developed this idea. According to the liability management theory, bankers can satisfy their liquidity needs by requesting more money from the market to cover borrowings and deposits withdrawals (Dodds, 1982). Old liquidity standards, such as keeping liquid assets, are no longer necessary. An particular bank might just get reserves from various avenues by establishing new obligations on itself, based on the liabilities management perspective. Time certificates of deposit issuing, loans from other banks, lending from Central Bank, obtaining capital money through the issue of shares, and using retained earnings are some of such avenues.

By many writers, liability management theory has indeed been critically examined (Ahmadyan & Shahchera, 2018; Celik Girgin, Karlis & Nguyen, 2018). The widespread assumption is that a bank might consider it challenging to secure the needed liquidity at a time of hardship because the market's confidence may have been significantly impacted and credit rating could usually be missing. Liabilities, nevertheless, provide as a significant supply of liquidity for a sound bank.

2.3 Determinants of Financial Performance

2.3.1 Firm Liquidity

Liquidity of a business refers to its capacity to pay commitments as they fall due, either through the use of cash on hand or the conversion of short-term assets into cash (Oladipupo & Okafor, 2017). A business can pay its obligations with available cash or assets that are swiftly transformed into cash (Owolabi & Obida, 2012). The degree to which banks could satisfy liabilities due within a year using cash and its equivalents that are readily converted into cash, is referred to as liquidity. Consequently, the capability of management to fulfil their financial obligations to lenders without selling its existing assets is what gives rise to liquidity (Taiwo & Mike, 2021).

According to Kontu and Mihanovi (2019), having a sufficient amount of liquid assets enables businesses to fund current operations and make investments when external financing is not accessible. Highly liquid businesses can pay for unforeseen expenses and upcoming liabilities. According to (Suryaningsih & Sudirman, 2020), bankers' liquidity might affect the amount of credit given to customers. Dzapasi (2020) pointed out that boosting bank liquidity can be more detrimental than helpful.

2.3.2 Firm Size

Firm size is a key determinant of financial performance among firms. Eyigege (2018) states that firm size is a firm's production capability. Dang, Li and Yang (2018) note that a large firm experience lesser production cost than small firms, which is reflected in high net income. Firm size is measured in terms of assets (Olawale, Ilo & Lawal, 2017), employees (Ozcan, Unal and Yener, 2017), capital base (Kartikasari & Merianti, 2016),

market share (Kuncová, Hedija & Fiala, 2016) or sales revenue (Dang, Li & Yang, 2018). This study measured firm size in terms of assets.

Firm size has shown mixed results in its effect on firm's financial performance. For example, Akinyi and Oima (2019) showed that firm size positively affected financial performance. On the other hand, Ayuba aet al (2019) found a negative relationship between firm size and financial performance. Further, Eyigege (2018) found no significant effect of firm size on financial performance. This created the need to investigate how firm size as a variable would affect the financial performance of commercial banks within the period between 2017 and 2021.

2.3.3 Capital Adequacy

Core capital and total risk-weighted assets are indeed the two components of capital adequacy. One can look at equity inside a corporation in one of two different ways. It is a money paid by shareholders of an insurer in return for the rights to collect all prospective profits, according to Aburime (2008). Additionally, the founders' money is accessible to help the company. Capital volume is calculated using the equity capital ratio to the total asset (Patin, Rahman & Mustafa, 2020). Profit and capital were found to have a positive correlation, as was to be predicted (Almaqtari et al., 2019). In their study, Le and Ngo (2020) discovered a strong and favourable association between capital sufficiency and profitability.

Empirically, Opeyemi et al (2019) established that capital adequacy had a positive relationship with financial performance. However, Irawati, Maksum, Sadalia and Muda (2019) found no association between capital adequacy and financial performance. Antoun, Coskun and Georgiezski (2018), on the other hand, showed a negative

relationship. This created the need to study capital adequacy and its connection with the financial performance of banks.

2.3.4 Asset Quality

Tangibility of assets is the level of assets used in a company's operations (Kaplan & Norton, 2004). The tangibility of assets is a metric that compares the value of fixed assets to the value of the company's total assets. A company with higher capital equipment levels runs better since it boosts the firm's long - term valuation (Ayuba et al, 2019). In this investigation, we'll look at tangibility in perspective of NPL ratio.

Ramzan, Amin and Abbas (2021) found that asset quality had a favourable link with the financial performance of the companies analyzed. Akingunola, Olawale and Olaniyan (2018), on the contrary, discovered an inverse association between asset quality and financial performance. As per Kassi et al (2019), no meaningful association exists between asset tangibility and financial performance. This demonstrates that the link between assets quality and financial performance is indecisive and requires further investigation.

2.4 Empirical Studies

2.4.1 Global Studies

The impact of liquidity risk on the performance of Islamic banks in Bangladesh was studied by Chowdhury and Zaman in 2018. Performance of the Islamic bank under liquidity risk from 2012 to 2016. To determine how liquidity affects bank performance, correlations and multivariate analyses are used. Significant link across bank performance

and liquidity metrics was discovered. Regression study, in contrast, revealed an inverse relationship across bank performance and liquidity measures.

The impact of liquidity risk management on the financial performance of commercial banks in Pakistan was studied by Alim, Ali, and Metla in 2021. Panel data were employed in this survey's Ordinary Least Squares analysis. Utilizing data repositories from State Bank of Pakistan webpage, financial information for all bankers trading in Pakistan from 2006 to 2019 was collected. It has been determined that improved liquidity improves bank performance in Pakistani commercial banks.

Based on a case study of the Bank of Kigali, Safi, Muiruri, and Ernest (2021) investigated the liquidity management requirements and financial performance of commercial banks in Rwanda. The 110 sizes were selected from those populace using systematic random and stratification selection techniques. Data was collected from participants via questionnaires, and documentary analysis was also employed. SPSS was used to collate, categorize, analyse, and evaluate the data. The study found that prudential credit management practises at the Bank of Kigali significantly improve the bank 's performance. This is because the lender's liquidity management requirements are thought to have a favourable relationship with the bank's financial performance. The study came to the conclusion that financial performance is significantly influenced by loan management practises.

Researchers Charmler, Musah, Akomeah, and Gakpetor (2018) examined how Ghanaian commercial banks' performance was affected by liquidity. The survey's group of 21 banks was collected over a period of ten years, from 2007 to 2016. Descriptive statistical analysis, pearson correlation, and multivariate analysis were used to examine the data.

The findings demonstrate that employing various bank liquidity metrics, liquidity correlated positively to return on assets. According to the findings, banking institutions' average liquid asset to total asset ratio is 20%, and their average liquid asset to total interest-bearing liability ratio is 1.19.

Sabir (2021) studied the connection between liquidity risk and the financial success of Turkish private banks. The paper estimated a bank performance-liquidity model utilising secondary data that covered the years 1964 to 2016 using an autoregressive distribution lag model. The long-run johansen co - integration test was done. The findings also demonstrated that while gains in bank capital have a beneficial impact on bank performance, increases in the lender's liquid asset positions have a detrimental impact on the lender's financial performance. However, it was determined that the bank's asset quality and financial performance are negatively correlated.

Li et al. (2020) used panel data from non-financial enterprises listed on the Ghana Stock Exchange to investigate the relationship between liquidity and firms' financial performance. The study used panel data that was extrapolated from the publicly available annual reports of 15 businesses for the years 2008 to 2017. The Return on Equity (ROE) of a company is strongly impacted negatively by liquidity, according to estimates from a random effects generalised least squares (GLS) regression, but only marginally positively by the cash flow ratio. Finally, a causality test revealed that no additional causal relationship between other variables was demonstrated, with the exception of Current Ratio and ROE, which are accompanied by a bidirectional relationship.

2.4.2 Local Studies

The impact of several financial management techniques on the financial performance of Kenyan commercial banks was studied by Harrison and Muiru in 2021. All 43 banks served as the sample group for descriptive research design that was used in this investigation. In her investigation, she combined primary and secondary sources. Secondary data was gathered from the commercial banks in Kenya's approved yearly financial statements, while primary data was gathered via a questionnaire. Correlation and regression were utilised as descriptive and inferential statistics. According to the report's results, Kenyan banking institutions' financial results was favourably impacted by liquidity management. According to the report's results, Kenyan banking institutions' financial performance is positively impacted by capital structure management practises.

Work on the impact of liquidity on the financial performance of the Kenyan sugar industry was conducted in 2018 by Waswa, Mukras, and Oima. This investigation employed a cross-sectional retrospectively research approach utilising a sample of five sugar companies from June 30, 2005, to June 30, 2016. The research used a technique called purposeful sampling. The financial statements of the five selected sugar manufacturing companies were one of the secondary information from which the data were gathered. Using the data that were available, the sugar factories were chosen. They are South Nyanza, Mumias, Nzoia, Muhoroni, and Chemelil. The findings of the estimation of a random effects regression model indicate a poor correlation between liquidity management and company performance.

At the Nairobi Securities Exchange, Waweru (2018) conducted research on the impact of liquidity on the financial performance of agricultural enterprises. The seven NSE-listed companies were the intended audience. Researchers used secondary data sources. Data

was gathered for the period from January 2008 to December 2017, with a yearly analysis unit. The investigation used correlation analysis, linear regression, and ordinary least squares (OLS) estimates to determine the link between liquidity and firm performance. According to the report, there is a strong positive correlation between liquidity and the success of companies listed on the NSE. The quick ratio variable, which measures liquidity, would grow by one unit, and this could improve the firm's performance by 0.271 units.

The impact of liquidity risk on the financial performance of deposit-taking savings and credit societies in Kenya was studied by Gweyi, Olweny, and Oloko in 2018. The research design used in the study was descriptive. The 164 deposit-taking Sacco societies authorised to conduct deposit-taking Sacco activity in Kenya for the fiscal year ending December 31, 2016, were the survey's primary audience. The study used a census and took into account all deposit taking Saccos. Secondary data was gathered from the audited financial statements of 135 deposit taking Saccos, representing an 82.32% successfulness. Both descriptive and inferential statistics were used to analyse the data. The findings show that liquidity risk has a negative and considerable impact on financial performance.

Research on the impact of liquidity risk variables on the financial performance of commercial banks listed at the Nairobi Securities Exchange was conducted by Musembi (2018). A descriptive survey research design was employed in the study. The 11 commercial banks listed on the NSE were the target market. The assets and liabilities management committee's sampling included 42 members. The annual reports of banks were used to gather secondary data. According to the study, the return on assets was

favorably impacted by liquidity level, however the effect was not very large. Multiple regression and correlation analysis were used to analyse the data. According to the survey, capital adequacy considerably improved return on assets. Return on assets was significantly influenced favourably by asset quality.

2.5 Conceptual Framework

Liquidity served as the independent variable in this study while commercial banks' financial performance served as the dependent variable. Firm size, capital adequacy, and asset quality all had an impact on how the two were related. The conceptual framework depicted in figure 2.1 demonstrated how the variables interacted with one another.

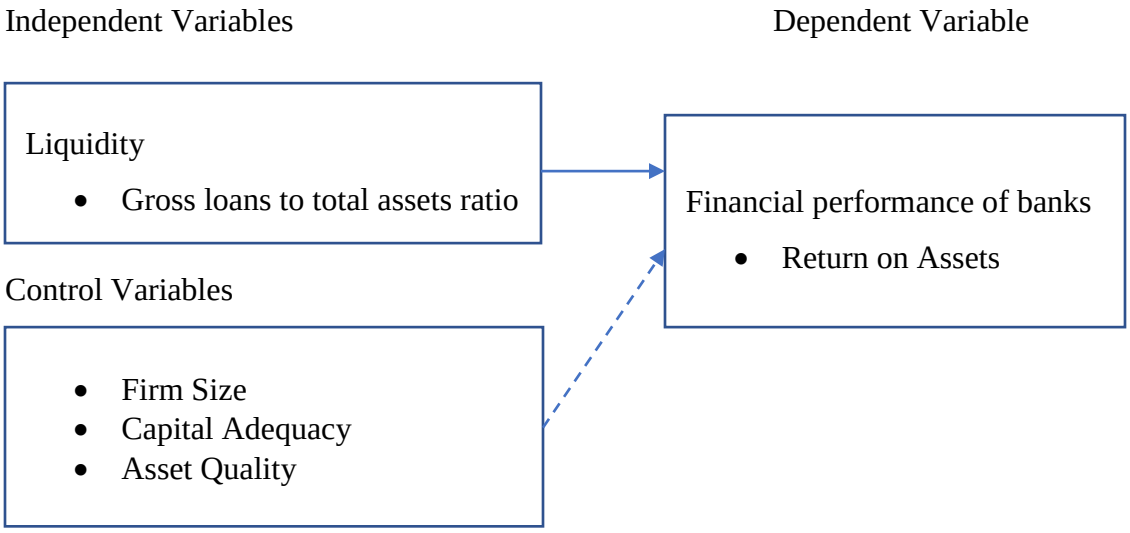

Figure 2.1: Conceptual Framework

2.6 Summary of Literature Review

This research focused on the relationship between liquidity and financial performance of Commercial banks. The theoretical literature was based on various theoretical concepts. The determinants of financial performance included liquidity, firm size, capital adequacy

and tangibility of assets. The empirical studies reviewed in the literature produced mixed results. The reviewed Kenyan studies have created various gaps. First the studies were based their analysis on different concepts. The studies also based their research on different areas which creates a contextual gap. The local studies also used different methodologies. This warranted the need to undertake research on the relationship between firm liquidity and financial performance of commercial banks in Kenya.

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

This chapter gave the research methods that were utilized in this research. The research methods related to research design, population, data collection, and data analysis. Under data analysis, the researcher looked at the diagnostic tests, analytical model, significance tests and measurement of variables.

3.2 Research Design

This study utilized on descriptive and correlational research designs. According to Foster, Roche, Giandinoto and Furness (2020), a descriptive-correlational design aims to describe variables in relation to associations. The variable relationships amongst variables are described through descriptive correlational design (Seeram, 2019). This approach was chosen because it allowed the investigator to show the links between commercial banks' liquidity and financial performance.

3.3 Population

This population of the study was commercial banks in Kenya. According to CBK (2021) there were 42 commercial banks as at December 2021. This research targeted the commercial banks in Kenya between 2017 and 2021. The period of study was targeted as the period showed increased liquidity and financial performance challenges for commercial banks. The period also provided the most recent data on liquidity and financial performance of commercial banks. This would increase the credibility of the data and findings from this research. This period (2017-2021) saw 39 commercial banks

being registered with the Central bank of Kenya. This study involved all the 39 banks in the analysis. This gave a total of 195 data points sufficient for social research.

3.4 Data Collection

The data sources used in this study were secondary in nature. The information was gathered using a data collecting sheet (Appendix II). The data was gathered from financial statements of commercial banks. Data was acquired from Kenyan commercial banks over 2017 and 2021. The annual reports were sourced from CBK where all commercial banks publish their annual financial reports with. Financial ratios were calculated and used for analysis. Cross-sectional and time-series data was used for the study. This meant that panel data was adopted for analysis. This research used annual data relating to the commercial banks between 2017 and 2021.

3.6 Data Analysis

Prior to being coded and input into the analytic software, the gathered data was cleansed. Descriptive and inferential statistical techniques were used to analyse the stats. In descriptive analysis, the terms mean, standard deviation, minimum, and maximum were employed. Correlation and regression analysis-related statistics utilized to draw conclusion. STATA 14 was applied in generation of data analysis statistics.

3.6.1 Diagnostic Tests

The models and data in the investigation were subjected to diagnostic testing. The tests that were run dealt with heteroskedasticity, multicollinearity, normality, and specification testing.

3.6.1.1 Multicollinearity Test

When two or more independent or predictive variables are significantly correlated or linked, Kim (2019) claims that multicollinearity exists. The Variance Inflation Factor (VIF) was employed in the investigation to illustrate the level of multicollinearity in the parameters. There is no correlation between the predictor variables, which is the null hypothesis. Whenever the VIF is larger than 10 or the tolerance value is more than 2, the null hypothesis is rejected. The null hypothesis is not rejected when the VIF is less than 10 or the tolerance value less than 2. Here, the researcher assumes that multicollinearity is not a problem in the data.

3.6.1.2 Normality Test

Test for normality under the premise that the model's residual is normally distributed around the mean. The populace is assumed to have a normal distribution under the null hypothesis. The null hypothesis is disproved and there is proof that the tested data are not normally dispersed if a p-value is less than 0.05. The null hypothesis cannot be disproved when the p-value is greater than 0.05. The Shapiro-Wilk test was used in the study to assess normality.

3.6.1.3 Heteroskedasticity Test

While it's a common presumption in modelling that variations are homogenous and that model errors are uniformly distributed across observations, the test covers the scenario in which the variance of errors or the model is different for each observation. If the error term variance changes with time, it was tested. The error term being constant throughout

time is the null hypothesis. In order to check for heteroscedasticity, the Breusch Pagan test was used.

3.6.1.3 Specification Test

Specification test was used to establish the most appropriate model for research based on random and fixed panel models. The Hausman test was used to evaluate the predictor modeling approach. The Hausman test aided in selecting either the fixed or random effect model for analysis. The null hypothesis is that random effect is the most preferred model and is confirmed where the significance values are greater than 0.05. The hypothesis is rejected and the fixed effect model is assumed when the significant level is less than 0.05.

3.6.2 Analytical Model

$Y_{it} = \beta_0 + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \varepsilon$

Where:

Y is financial performance as measured by return on assets of firm i at time t;

β_0 is constant term;

β_1-β_4 is regression coefficients;

X_{1it} is liquidity as measured by gross loans to total assets ratio of firm i at time t;

X_{2it} is firm size as measured by the natural logarithm of total assets of firm i at time t;

X_{3it} is capital adequacy as measured by shareholder's capital to total liabilities ratio of firm i at time t;

X_{4it} is Asset quality as measured by non-performing loans ratio of firm i at time t;

ε is error term

t is years

i is Bank

3.6.3 Significance Tests

In order to examine the significance of the model the investigation adopted F-statistics negated using Analysis of Variance (ANOVA). The significance of the regression model was tested at 95% confidence interval or 5% level of significance.

CHAPTER FOUR: DATA ANALYSIS AND PRESENTATION OF FINDINGS

4.1 Introduction

This study sought to determine the relationship between firm liquidity and financial performance of commercial banks in Kenya. This study adopted annual panel data collected from the commercial banks in Kenya between 2017 and 2021. The findings were generated via STATA 17 for analysis. This chapter presents the data analysis and the discussion of findings based on the study's variables. For this study, Y is financial performance measured by measured by return on assets; X1 is liquidity as measured by gross loans to total assets ratio; X2 is firm size as measured by the natural logarithm of total assets; X3 is capital adequacy as measured by shareholder's capital to total liabilities ratio; while X4 is asset quality as measured by non-performing loans ratio.

4.2 Descriptive statistics

Variable	Obs	Mean	Std. Dev.	Min	Max
Y	185	.4387696	4.609024	-30.24643	7.402102
X1	185	74.17457	86.37254	2.463054	916.3835
X2	185	24.56299	1.378857	21.68262	27.50025
X3	185	30.51676	58.90279	-37.97204	558.0769
X4	185	49.78541	371.8114	.0818449	5064.255

The descriptive statistics showed that financial performance (Y) had a mean of 0.439% between 2017 and 2021. It showed a standard deviation of 4.609% which is greater than the mean. This shows that return on assets as measure of financial performance of commercial banks varies greatly across the firms and the period between 2017 and 2021. Within the period, the commercial banks had a minimum return on assets of -30.246%

with the highest return being 7.402%. This indicates that the banks had low levels of financial performance across the period with a high difference across the firms.

The findings show that firm liquidity (X1), measured by gross loans to total assets ratio, indicated a mean of 74.175% between 2017 and 2020. This is greater than the minimum liquidity level of 20% recommended by CBK. This suggests that the commercial banks in Kenya had a high liquidity level between 2017 and 2020. The findings also suggest that the commercial banks had extended gross loans covering 74% of the total assets. The liquidity showed a standard deviation of 86.372% with a minimum ratio of 2.463% and a maximum of 916.384%. This indicates that the banks had differing liquidity levels with some having very high levels with others having liquidity levels as low as 2.4% across the years 2017 and 2021.

Firm size (X2), as measured by the natural logarithm of total assets, showed an average log of 24.563. This shows that the commercial banks in Kenya are large with a natural log greater than 10. The firm size showed a standard deviation of 1.379, with a minimum log of 21.683 and a maximum of 27.5. This indicates that the firm size between 2017 and 2021 did not vary much from the mean.

Capital adequacy (X3), as measured by shareholder's capital to total liabilities ratio, showed a mean of 30.517% across the period between 2017 and 2021. This indicates that shareholders' capital was 30% of the total liabilities across the firms. The standard deviation was 58.903% with a maximum ratio of 558.087% and a minimum of -37.972%. This indicates a high variation in the capital adequacy among the commercial banks between 2017 and 2021.

Asset quality (X4), as measured by non-performing loans ratio, indicated a mean value of 49.785% between 2017 and 2021. This shows that NPLs were 50% of the gross loans of commercial banks within the period. Asset quality showed a standard deviation of 371.811%. It showed a minimum value of 0.082% with a maximum of 5064.255%. This indicates that the asset quality highly varied within the period and among the firms.

4.3 Diagnostic Tests

The researcher undertook tests to check on the data used for analysis. This was done via diagnostic tests.

Table 4.1: Multicollinearity Test

Variable	VIF	1/VIF
X2	1.13	0.887250
X1	1.10	0.912029
X3	1.02	0.976810
X4	1.02	0.979304
Mean VIF	1.07	

Multicollinearity was tested to check whether there was a linear relationship across predictors trough the VIF. The outcomes show that VIF values were less than 5. This is an indication that there was low inflation of the variance. Hence, we conclude that there existed no linear relationship among the predictor variables.

Table 4.2: Normality Test

Shapiro-Wilk W test for normal data

Variable	Obs	W	V	z	Prob>z
Y	185	0.69432	42.617	8.599	0.00000
X1	185	0.43951	78.141	9.989	0.00000
X2	185	0.96235	5.248	3.800	0.00007
X3	185	0.29831	97.826	10.504	0.00000
X4	185	0.07318	129.213	11.141	0.00000

W=Shapiro–Wilk

V=Shapiro–Francia test statistics

The study used Shapiro Wilk to check on normality of data adopted in the research. The test's null hypothesis is that data is normal. From the findings, the data for all the variables was not normal because p-were smaller than 0.05. Therefore, the study concludes that the data on financial performance, firm liquidity, firm size, capital adequacy and asset quality did not follow a normal distribution in the dataset.

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of Y

         chi2(1)      =     1.44
         Prob > chi2  =   0.2600
```

Figure 4.2: Heteroskedasticity Test

To test for heteroskedasticity, the study checked on whether error term was constant over time. This was done via Breusch Pagan test. The null hypothesis is that the error term is constant over time. The findings showed that the Pvalue for the statistics was greater than 0.05. This means that the null hypothesis should not be rejected. Hence, the study concludes that there was no heteroskedasticity for the study and the error term was constant over time.

Table 4.3: Model Specification

	Coefficients (b) random	(B) fixed	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
X1	.0040443	.0048374	-.0007932	.0018821
X2	2.126958	2.142349	-.0153914	.
X3	.0009585	.0091215	-.0081631	.0027642
X4	.00075	.0007882	-.0000382	.0004229

b = consistent under Ho and Ha; obtained from regress
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 8.83
Prob>chi2 = 0.0654
(V_b-V_B is not positive definite)

Model specification test was done to define the best model between random effect and fixed effect panels. This was based on Housman test which assumes that the random effect is preferred. The statistics showed a pvalue of 0.0654 which was greater than 0.05calling the researcher not to reject null hypothesis. Hence, random effect model was preferred and therefore adopted in this study.

4.4 Correlation Analysis

Table 4.4: Correlation Analysis

	Y	X1	X2	X3	X4
Y	1.0000				
	185				
X1	-0.1063	1.0000			
	0.1498				
	185	185			
X2	0.6068	-0.2811	1.0000		
	0.0000	0.0001			
	185	185	185		
X3	-0.0799	0.0523	-0.1517	1.0000	
	0.2795	0.4794	0.0393		
	185	185	185	185	
X4	-0.0112	-0.0642	-0.1052	0.0065	1.0000
	0.8793	0.3853	0.1540	0.9304	
	185	185	185	185	185

The researcher sought to establish the relationship between firm liquidity and financial performance of commercial banks in Kenya. From the findings, correlation analysis show that firm liquidity had a correlation coefficient of -0.1063. This indicates that firm liquidity had a weak negative relationship with financial performance. On the other hand, firm size showed a strong positive relationship with financial performance (Corr=0.6068). Capital Adequacy showed a weak negative relationship with financial performance (Corr=-0.0799) while asset quality showed a negative weak relationship shown by correlation coefficient of -0.0112. The correlation coefficient of firm size was significant while that of firm liquidity, capital adequacy and asset quality were insignificant. This indicates that firm size had a significant positive relationship while firm liquidity, capital adequacy and asset quality showed insignificant negative relationship with financial performance of commercial banks in Kenya.

4.5 Regression Analysis

Table 4.5: Regression Analysis

```
Random-effects GLS regression                   Number of obs     =       185
Group variable: CD                              Number of groups  =        37

R-sq:                                           Obs per group:
     within  = 0.1570                                         min =         5
     between = 0.4555                                         avg =       5.0
     overall = 0.3653                                         max =         5

                                                Wald chi2(4)      =     68.74
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.0000
```

Y	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
X1	.0048374	.0026971	1.79	0.073	-.0004489	.0101237
X2	2.142349	.2647152	8.09	0.000	1.623517	2.661181
X3	.0091215	.0037517	2.43	0.015	.0017683	.0164748
X4	.0007882	.000604	1.31	0.192	-.0003956	.001972
_cons	-52.86015	6.595932	-8.01	0.000	-65.78794	-39.93236

$Y_{it}= \beta o + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \epsilon$

was fitted in the equation

$Y_{it}= -52.8602+0.0048X_{1it} +2.1423X_{2it} +0.0091X_{3it} +0.0008X_{4it}$

The random effects (between) panel regression model was used. From the model, the Wald chi2 statistics (68.74) had a pvalue of 0.0000, less than 0.05. This shows that the model was significant. Findings had an R^2 of 0.4555 (between) indicating that firm liquidity, firm size, capital adequacy and asset quality contributed 45.55% to change in financial performance of commercial banks within the period between 2017 and 2021. Other variables caused the other change in financial performance.

From the regression model, a constant of -38.5826. This exhibits that financial performance of DTMFIs would stand at -52.8602 where the predicting parameters are held constant. The model shows that a percentage increase in firm liquidity would cause a 0.48 per cent increase in financial performance of commercial banks. However, the regression coefficient was not significant since the pvalue was greater than 0.05. This indicates that firm liquidity has an insignificant positive effect on financial performance of commercial banks. For firm size, the model shows a regression coefficient of 2.1423 which has a pvalue less than 0.05. This shows that a percentage increase in firm size would cause increased financial performance by 2.1423%. It also indicates that firm size has a positive significant effect on financial performance of commercial banks. Capital adequacy showed that a percentage increase would cause a 0.91 percent increase in financial performance of commercial banks. The regression coefficient was significant as the pvalue (0.015) was less than 0.05. This indicates that capital adequacy has a significantly positive effect on financial performance of commercial banks. For asset quality, a percentage increase would cause a 0.08 percent increase in financial performance of commercial banks. The regression coefficient showed a pvalue of less than 0.05 indicating an insignificant effect. This shows that asset quality had a negligible effect on financial performance of commercial banks.

4.6 Discussion of Findings

The researcher sought to establish the relationship between firm liquidity and financial performance of commercial banks in Kenya. Correlation analysis showed that firm liquidity had a weak negative insignificant regression coefficient. This shows that increased firm liquidity decreases financial performance of commercial banks

insignificantly. The findings show that firm liquidity had a positive insignificant relationship with financial performance. The findings are similar to those of Charmler, Musah, Akomeah and Gakpetor (2018) who found that firm liquidity had an insignificant negative relationship with financial performance. However, the findings differ with those of Chowdhury and Zaman (2018) who found a significant negative relation between bank performance and liquidity indicators. It also differs with those of Alim, Ali and Metla (2021) who found a positive relationship between firm liquidity and financial performance.

The correlation analysis showed that firm size had a strong positive correlation coefficient with financial performance. The coefficient was significant. This indicates that firm size has a strong positive relationship with financial performance. The findings were similar to Akinyi and Oima (2019), who found that firm size positively affected financial performance. However, they differed from those of Ayuba aet al (2019) who found a negative relationship between firm size and financial performance. Further, the findings differed from those Eyigege (2018) found no significant effect of firm size on financial performance.

Capital Adequacy showed a weak negative correlation with financial performance. The coefficient was insignificant. This indicates that capital adequacy had a weak negative relationship with financial performance. The findings are the same as Irawati, Maksum, Sadalia and Muda (2019) who found that capital adequacy and financial performance had no association. The findings differ with those of Antoun, Coskun and Georgiezski (2018) who showed a significant negative relationship between capital adequacy and financial

performance. The findings further differed with Opeyemi et al (2019) who established that capital adequacy had a positive relationship with financial performance.

The correlation analysis findings showed that asset quality had a negative weak relationship with financial performance. However, the relationship was insignificant. This indicates that asset quality had a weak negative insignificant relationship with financial performance. The findings are similar to Kassi et al (2019), who found no meaningful association between asset tangibility and financial performance. The findings differ with Akingunola, Olawale and Olaniyan (2018) who discovered an inverse association between asset quality and financial performance. They also disagreed with those of Ramzan, Amin and Abbas (2021) found that asset quality had a favourable link with the financial performance of the companies analyzed.

CHAPTER FIVE

SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

A summary of findings as well as conclusions and recommendations are given. Limitations and suggestions for future studies is also indicated.

5.2 Summary of Findings

The descriptive statistics showed that financial performance had a mean of 0.439% between 2017 and 2021. This indicates that commercial banks performed poorly as the return on assets was below 5%. Within the period, the commercial banks had a minimum return on assets of -30.246% with the highest return being 7.402%. This indicates that the banks had low levels of financial performance across the period with a high difference across the firms. The findings show that firm liquidity, measured by gross loans to total assets ratio, indicated a mean of 74.175% between 2017 and 2020. This is greater than the minimum liquidity level of 20% recommended by CBK indicating that commercial banks in Kenya have a high liquidity level. The findings also indicate that the commercial banks had gross loans covering 74% of their total assets.

As measured by the natural logarithm of total assets, firm size showed an average log of 24.563. This indicates that the commercial banks in Kenya are large in size with a natural log greater than 10. Capital adequacy, as measured by shareholder's capital to total liabilities ratio, showed a mean of 30.517% between 2017 and 2021. This indicates that shareholder's capital was 30% of the total liabilities across the firms. This shows that the commercial banks had low capital adequacy given that Capital represented less than 50%

of the total liabilities. Asset quality (non-performing loans ratio), had a mean value of 49.785% between 2017 and 2021. This shows that NPLs were 50% of the gross loans of commercial banks within the period showing low asset quality.

From the findings, correlation analysis showed that firm liquidity had a correlation coefficient of -0.1063 indicating that firm liquidity had a weak negative relationship with financial performance. On the other hand, firm size strongly connected with financial performance (Corr=0.6068). Capital Adequacy showed a weak negative relationship with financial performance (Corr=-0.0799) while asset quality showed a negative weak relationship shown by correlation coefficient of -0.0112. The correlation coefficient of firm size was significant while that of firm liquidity, capital adequacy and asset quality were insignificant.

The regression model had an R2 of 0.4555 (between) indicating that firm liquidity, firm size, capital adequacy and asset quality contributed 45.55% to change in financial performance of commercial banks. The regression model showed that an increase in firm liquidity would cause an insignificant increase in financial performance of commercial banks. This indicates that firm liquidity has an insignificant positive effect on financial performance of commercial banks. For firm size, the model shows a significant positive regression coefficient showing that increased firm size would cause increased financial performance. Increased capital adequacy would cause an increase in financial performance of commercial banks significantly. For asset quality, an increase would cause an increase in financial performance of commercial banks insignificantly.

5.3 Conclusions

The researcher sought to establish the relationship between firm liquidity and financial performance of commercial banks in Kenya. Correlation analysis showed that firm liquidity had a weak negative insignificant regression coefficient. This leads to the conclusion that firm liquidity has a negative insignificant relationship with financial performance of commercial banks in Kenya. This shows that if commercial banks in Kenya increase their liquidity levels, they would not experience substantial increase in their financial performance.

The findings showed that firm size had a positive significant correlation coefficient with financial performance. This indicates that firm size has a positive significant relationship with financial performance of commercial banks in Kenya. This means that when the commercial banks in Kenya increase their assets, their return on assets would increase indicating improved the financial performance.

Capital adequacy showed a weak negative correlation with financial performance. The coefficient was insignificant. This leads to the conclusion that capital adequacy has an insignificant negative relationship with financial performance of commercial banks in Kenya. It shows that if commercial banks in Kenya increased their capital adequacy they would experience reduction in their financial performance insignificantly.

The analysis showed that asset quality had a negative relationship with financial performance. However, the relationship was insignificant. This study concludes that asset quality has a negative insignificant relationship with financial performance of

commercial banks in Kenya. This means that if the commercial banks in Kenya increase their NPL ratio, they would experience insignificant reduction in their return on assets.

5.4 Policy Recommendations

The study concludes that firm liquidity has a negative insignificant relationship with financial performance of commercial banks in Kenya. The study recommends that commercial banks in Kenya reduce their liquidity to optimal levels. This can be done by increasing the assets levels, reducing the gross loans to total assets ratio. The commercial banks in Kenya also need to increase the performance of the gross loans which would reduce the gross loans hence improve return on assets.

The study concludes that firm size has a significant positive relationship with financial performance of commercial banks in Kenya. This study recommends that commercial banks in Kenya increase their assets which would increase their return on assets indicating improved the financial performance. The study also recommends that the commercial banks in Kenya reduce the unproductive assets. This can be done by disposal of fixed assets that are not giving any returns. This would increase the returns on assets. The commercial banks also need to increase their revenue streams and levels for them to experience increased return on assets.

The study concluded that capital adequacy has an insignificant negative relationship with financial performance of commercial banks in Kenya. Therefore, this study recommends that commercial banks7in Kenya reduce their total liabilities to increase their return on assets. The banks also need to issue more shareholder's capital to increase the

capitalization, which would increase returns on assets. The banks also need to get an optimal capital adequacy for them to experience increased return on assets.

The study concludes that asset quality as measured by NPL ratio has a negative insignificant relationship with financial performance of commercial banks in Kenya. This study recommends that commercial banks in Kenya sell their non-performing loans to collection agencies who collect as much of the money owed as possible. This would reduce the NPLs in the loan's portfolio of the banks which would reduce the NPLs. This would in turn increase the return on assets. The commercial banks should also optimally increase the gross loans extended to customers, which would reduce the NPL ratio, increasing the return on assets and improving financial performance.

5.5 Limitations of The Study

This research was limited to the relationship between firm liquidity and financial performance of commercial banks in Kenya between 2017 and 2021. This study was, therefore, limited to the variables and measures adopted in research. The measurement of financial performance through return on assets may give differing results if other measures like return on capital or return on equity was used.

The study was also limited to commercial banks in Kenya. This limited the generalizability of the findings to other sectors. The study was also limited to Kenya where other countries may give different results given the difference in economic conditions. The study was limited by the period of study. The study was done for a period of 5 years between 2017 and 2021. A different period like 10 years, 15 years or 20 years may give different results.

The study was also limited to the data and research methods adopted. The researcher adopted secondary sources of data. The data has a challenge in that its historical in nature. The researcher also adopted the use of annual data. This may increase the error in the data especially where monthly and quarterly data is available for the variables. This was overcome by using most recent data and making recommendations for further research.

5.6 Recommendations for Future Studies

The researcher recommends that other researchers do similar research on other factors other than firm liquidity influencing financial performance of commercial banks in Kenya. The researcher also recommends a similar study using different measures of firm liquidity and financial performance to compare the results.

Further research needs to be done in other sectors other than commercial banks in Kenya. The research recommends a similar study utilizing 5, 15 or 20 years. The study also recommends a similar study based on primary other than secondary data. A similar study is recommended based on quarterly, monthly or semi-annual data. This would enable comparison of results.

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APPENDICES

Appendix I: List of Commercial Banks in Kenya

1. UBA Kenya Bank Ltd
2. The Co-operative Bank
3. Suntra Investment Bank Ltd
4. Sterling Investment Bank
5. Standard Investment Bank
6. Standard Chartered
7. Prime Bank
8. Paramount Bank
9. Oriental Commercial Bank Ltd.
10. NIC Bank
11. ABC Bank
12. National Bank
13. K-Rep Bank
14. Kenya Post Office Savings Bank
15. KCB Bank
16. Investments & Mortgages Bank Limited – I&M Bank
17. Imperial Bank Limited
18. Housing Finance
19. Guardian Bank Ltd.
20. Giro Commercial Bank Ltd
21. Fina Bank

22. Fidelity Bank

23. Faida Investment Bank – FIB

24. Equity Bank

25. Equatorial Investment Bank

26. Equatorial Commercial Bank Limited

27. Dyer & Blair Investment Bank

28. Dubai Bank Kenya Ltd

29. Dry Associates Limited

30. Development Bank Of Kenya Ltd

31. Co-operative Bank

32. Consolidated Bank

33. Commercial Bank of Africa

34. Citibank N A

35. Chase Bank

36. CFC Stanbic Bank Limited

37. Central Bank of Kenya

38. Bank Of Baroda (Kenya) Ltd.

39. Bank of Africa Kenya Ltd

40. Afrika Investment Bank

41. African Development Bank Group

42. African Banking Corporation

Appendix II: Data Collection Sheet

	Profit after Tax	Total assets	Total Liabilities	Total Shareholders' funds	Total Loans	Non-performing loans
	Kshs. M	Kshs. M	Kshs. M	Kshs. M	Kshs. M	Kshs. M
2017						
2018						
2019						
2020						
2021						