THE DETERMINANTS OF FINANCIAL PERFORMANCE OF COMMERCIAL BANKS

By

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DECLARATION

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

Student's signature: SMO

Date: February 2022.

Approval

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Date …27/02/2022……

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DEDICATION

I dedicate this work to my late father John Onim, my mother Linda, my sister Trinity, and my brother John Paul for their undying support and encouragement to pursue my bachelor's degree.

DEFINITION OF TERMS

Financial performance: A subjective measure of a company's ability to earn revenue from its principal way of operation.

Commercial bank: A financial organization that accepts deposits, provides checking account services, makes various loans, and provides individuals and small businesses with basic financial products such as certificates of deposit and savings accounts

CAMEL factors: Capital adequacy, Asset quality, Management efficiency, Earnings ability, and Liquidity.

ROA: Return on Assets. A profitability ratio that shows how much profit a business can make from its assets.

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ABSTRACT

The main goal of every banking institution is to operate profitably to maintain stability and sustainable growth. External and internal economic environments are viewed as critical drivers for bank performance. The main purpose of this study was analyzing the determinants of financial performance of commercial banks in Kenya for a period of 5 years, starting from the year 2016 to 2020. The dependent variable under investigation was return on assets (ROA). The independent variables were Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability and Liquidity. The specific objectives of this research were to assess the relationship between capital adequacy and the financial performance of commercial banks in Kenya, to evaluate the relationship between asset quality and financial performance of commercial banks in Kenya, to establish the relationship between management efficiency and financial performance of commercial banks in Kenya, to examine the relationship between earnings ability and financial performance of commercial banks in Kenya and to evaluate the relationship between liquidity and financial performance of commercial banks in Kenya. The choice of this five-year period was based on the explosive growth of the banking sector in the country and the availability of complete data for that period. The study concentrated on the bank specific factors that affect the banks' financial performance. In this research, the scope was all the eleven banks listed in the Nairobi securities exchange. This study adopted a descriptive research design to meet its research objectives by using panel data to fulfill the objectives. The researcher collected data on published financial statements of the eleven commercial banks listed in the Nairobi securities exchange for five years from 2016 to 2020. Data was analyzed using multiple linear regression models to show the effect of bank specific factors on financial performance of commercial banks over that period under study. The findings were presented in tables and narratives. The results showed that there was positive/negative and significant association between ROA and all the independent factors. There was a finding that earnings ability affects profitability and the financial performance of banks. The study concludes that earnings ability of the bank has the highest influence on ROA of banks. The study recommends that bank capitalization should be encouraged in all commercial banks and other financial institutions so that performance can be enhanced.

CHAPTER 1

INTRODUCTION

1.1 Background

Banks play a very important role in the economic development of countries as they largely wield control over the supply of money in circulation and are the main stimuli of economic progress (Memmel & Raupach, 2010). Bank performance can be defined as the reflection of how a bank's resources are used in such a way that it is able to fulfill its goals. Furthermore, bank performance also refers to the use of a collection of indicators that reflect the bank's current state and its ability to meet its objectives (Memmel & Raupach, 2010).

Financial performance is a subjective measure of a company's ability to earn revenue from its principal way of operation. It's also a general indicator of a company's overall financial health over time that can be used to compare similar companies in the same industry or to aggregate industries or sectors (Kenton & Scott, 2021).

A commercial bank is a financial institution that provides services to both individuals and businesses. It is a financial organization that accepts deposits, provides checking account services, makes various loans, and provides individuals and small businesses with basic financial products such as certificates of deposit and savings accounts (Anderson & Kagan, 2021).

We examine bank performance for a variety of purposes, including to ascertain their operational outcomes and overall financial condition, as well as to assess asset quality, management efficiency, liquidity, earnings ability, capital adequacy, and goal attainment (Gichura, 2011).

The CAMEL analysis – Capital adequacy, Asset quality, Management efficiency, Earnings ability, and Liquidity – is used by bank regulators to evaluate the overall performance of banks and determine their strengths and weaknesses (Barnett, 2020). The first is capital adequacy, which refers to the minimum statutory reserve that banks must maintain. Ratios like the debt-to-equity ratio can be used to assess it. Capital adequacy is the amount of capital necessary for a commercial bank to withstand risks such as credit, market, and operational hazards, as well as absorb potential losses and protect the organization's debtors (Kamande, 2017).

The second is asset quality, which is concerned with the asset quality on corporate balance sheets since non-performing assets have a negative impact on their profitability. The ratio of non-

performing assets to total assets, as well as the ratio of secured assets to total assets, are reliable indicators of a bank's asset quality. As a result, asset quality considers the likelihood of a loan default as well as its marketability (Barnett, 2020).

The third is Management efficiency. This is the board of directors' and management's ability to identify, measure, and control the risks associated with a banking institution's activities, as well as ensure that they are carried out in accordance with applicable laws and regulations (Kamande, 2017). Because it is the job of management to implement the strategy for achieving the requisite growth and profitability, the efficiency with which a bank is managed will determine its growth and profitability (Barnett, 2020).

The fourth factor is earnings ability, which measures how well a bank's earnings reflect its current success and predicts its future performance. It also signifies the possibility for a bank to make profits that will allow it to expand, remain competitive, and increase its capital (Kamande, 2017).

Finally, liquidity refers to a bank's ability to meet short-term financial obligations by converting assets to cash (Barnett, 2020). It refers to the bank's ability to fulfill its obligations, particularly those owed to depositors. The profitability of a bank is directly proportional to its liquidity levels (Kamande, 2017).

1.2 Problem Statement

Several research on factors influencing bank performance or drivers of bank performance have been done. Given the importance of commercial banks in Kenya's economy, their financial performance is a hot topic. With the number of banks expanding over time and competition for consumers increasing, understanding what factors influence financial performance of banks is critical since it may help them identify them and, as a result, know where they need to improve to perform better.

Most of the studies on bank financial performance have covered developed economies, whereas much less studies cover developing countries such as Kenya’s economy. Some of these studies include Abata (2014) in Nigeria, Clair (2004) in Singapore and Wong, Fong & Choi (2007) in China. Moreover, results of these studies have been either inconclusive or conflicting; this presents a research gap.

Studies that are close to determinants of banks’ financial performance in Kenya include Njihia (2005), Mwania (2009), Kamande (2017) and Nalianya and Miroga (2020). These studies were

however designed to focus on each factor of financial performance in exclusion of other factors such as a study by Nzoka (2015) which only focuses on asset quality while some only focused on the FinTech banks in Kenya like a study done by Kachumbo (2020). There is no study that has been done on a substantial sample of commercial banks featuring all factors of financial performance hence a gap that needs to be filled. Given the passage of time and limitations of previous studies, there is need for the present study to be conducted posing the following research question: What are the determinants of financial performance of commercial banks in Kenya?

1.3 Research Objectives

The general objective of the study is to assess the bank specific factors that determine the financial performance of commercial banks in Kenya. The specific objectives of the study are:

1. To assess the relationship between capital adequacy and the financial performance of commercial banks in Kenya.
2. To evaluate the relationship between asset quality and financial performance of commercial banks in Kenya.
3. To establish the relationship between management efficiency and financial performance of commercial banks in Kenya.
4. To examine the relationship between earnings ability and financial performance of commercial banks in Kenya.
5. To evaluate the relationship between liquidity and financial performance of commercial banks in Kenya.

1.4 Research Questions

1. What is the effect of capital adequacy on the financial performance of commercial banks in Kenya?
2. How does asset quality affect the financial performance of commercial banks in Kenya?
3. What impact does management efficiency have on the financial performance of commercial banks in Kenya?
4. How does earnings ability affect financial performance of commercial banks in Kenya?
5. What is the effect of liquidity on the financial performance of commercial banks in Kenya?

1.5 Significance of the study

The overall purpose of this research is to determine the factors that affect financial performance of commercial banks in Kenya. This is in accordance with the research's overall goal, which is to provide detailed information on some of the key factors of bank financial performance. The following are some of the advantages that will result from the research:

1.5.1 The Central Bank of Kenya

The results of the study will be useful to the Central Bank of Kenya since they will shed light on how bank-specific issues influence the financial performance of banks. As a result, the Central Bank will be able to offer commercial banks with policy instructions on the minimum requirements for these factors.

1.5.2 Board and Management of Commercial Banks

The study will help the board and management of commercial banks understand more about the effects of bank-specific factors on financial performance and take actions to enhance their financial performance on a continuous basis.

1.5.3 Managers and Shareholders

The study will be able to offer a framework for managers and shareholders to assess the financial performance of the banks in terms of profitability with respect to these determinants.

1.5.4 Useful Information on Individual Determinants of Financial Performance

The research will provide information on the individual determinants of financial performance namely capital adequacy, asset quality, management efficiency, earnings ability, and liquidity.

1.6 Scope of the study

The scope explains the extent to which the research area will be explored. As of 2021, there are forty-two licensed commercial banks in Kenya. Out of the forty-two banks, twenty-eight of them are domestic and fourteen are foreign commercial banks. In this study, the scope will be twelve out of the forty-two commercial banks that have been listed in the Nairobi Securities Exchange. Data will be collected from their financial statements that have been published.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

This chapter focuses on the literature review on the determinants of financial performance of commercial banks. First, it will review three theories, then it will summarize the empirical studies from various researchers who have carried out similar research on different determinants of bank performance. The existing research gap and the conceptual framework have also been presented at the end of the chapter.

2.2 Theoretical review

This section presents the theoretical review. This study is underpinned by three theories. These theories are: Modern Portfolio Theory, Arbitrage Pricing Theory and Efficient Structure theory

2.2.1 Modern Portfolio Theory.

Harry Markowitz formulated this hypothesis in 1952. When the author saw that no thought was paid to the risk of a particular investment, he chose to explore this theory. The author wrote in the Portfolio section, which was initially published in 1952 (Chen, 2021). The theory explains how investors utilize diversification to optimize portfolios and how an asset should be valued based on its risk compared to the market. The efficient frontier, the Capital Asset Pricing Model, and the Beta coefficient, as well as the capital market line and the securities market line, are all used in the theory (Chen, 2021).

The return of a random variable – an asset – is modelled by Modern Portfolio Theory, and a portfolio is modelled as a Weighted combination of assets. A portfolio's return is also a random variable, with an expected value and a variance (Chen, 2021). This is a theory that describes how risk-averse investors can construct portfolios to optimize expected return given a certain level of market risk. It contends that the risk and return characteristics of an investment should be assessed in terms of how the investment affects the overall risk and return of the portfolio. For example, an investor can construct a portfolio of several assets that maximizes returns for a given

amount of risk or a portfolio that has the lowest risk feasible given a certain level of expected return (Markowitz, 1968).

The performance of a single investment is less relevant than how it affects the overall portfolio, according to statistical measurements like variance and correlation. The theory assumes that investors are risk averse, meaning that for a given amount of return, they prefer a less risky portfolio over a riskier one (Chen, 2021).

This theory can be used to understand portfolios with high risk and reward, create balanced portfolios, and identify high-performing portfolios. Commercial banks' portfolio diversification and targeted portfolio composition are the outcome of decisions made by the bank's management. Furthermore, the ability to maximize earnings is contingent on the management's determination of a realistic set of assets and liabilities, as well as the bank's unit costs for creating each component of assets (Nzongang & Atemnkeng, 2006).

2.2.2 Arbitrage Pricing Theory

This theory is an alternative to American economist Stephen Ross's Capital Asset Pricing Model, which he developed in 1976. Because its assumptions are very basic, the theory has gained appeal; nonetheless, it is more difficult to apply in practice (Hayes, 2020).

The theory explains the relationship between the expected return and risk of a financial asset. It is a general asset pricing theory that states that a financial asset's expected return may be treated as a linear function of multiple macroeconomic factors, with each factor's sensitivity represented by a Beta coefficient (Hayes, 2020).

Arbitrage pricing theory is one of the asset pricing theories that aims to identify many macroeconomic elements that would influence the returns of a given asset. It does not assume a single-period investment horizon, risk-free borrowing, or risk-free lending. It also suggests that risk-adjusted portfolios will earn the same return. A linear function of a set of components or indexes can be used to explain the stochastic process of generating asset returns (Huberman, 2005).

The returns are explained not only by the risk-return relationship, but also by factors such as inflation, GDP growth, severe political upheavals, and interest rate fluctuations. The Beta is a term that refers to a firm’s ability to respond to unanticipated changes (Roll & Ross, 1980).

This theory may be used to explain how banks price their assets to maximize their profit and financial performance potential. They can also forecast the risk and return of a certain asset in their industry.

2.2.3 Efficient Structure Theory

Harold Demsetz proposed this theory in 1973, and it was further expanded upon by Sam Peltzman and others in 1977. The persistence of profits in an organization, according to this view, is a sign of their relative efficiency based on the possession of talents and factors of production (Smirlock, Gilligan & Marshall, 1986). As proposed by Demsetz (1973), it predicts that under the pressure of market competition, efficient firms will outperform their competitors, resulting in increased growth, market share, and profits.

In terms of timing, higher earnings come first, followed by increased concentration, according to the theory. To put it differently, better management and procedures lead to larger profitability, which leads to increased market share and concentration over time (Miller & Jeon, 2005).

The efficient-structure theory also includes two hypotheses – the X-efficiency and scale efficiency hypotheses. According to the X-efficiency hypothesis, banks with better management practices can reduce costs and increase profits. According to the scale-efficiency theory, certain banks achieve a higher scale of operation and, as a result, lower expenses. For scale-efficient banks, lower costs result in larger profits and faster growth (Miller & Jeon, 2005). Larger organizations can achieve lower unit costs and higher profitability attributable to economies of scale. This helps them to gain market share, resulting in increasing concentration and, eventually, profitability.

This theory is relevant because it suggests that banks are more efficient than other businesses and hence create bigger profits. It also includes the variable of bank performance, but from a narrower perspective, because managing bank profitability is a result of several factors beyond the internal market environment's control (Nalianya & Miroga, 2020). It also implies that a commercial bank's portfolio composition, profit, and return to shareholders are the consequence of management decisions and the bank's overall policy decisions. As a result, the theory adds to the conclusion that both internal and external factors influence bank financial performance (Kamande, 2017).

2.3 Empirical review

This section reviews studies that have been previously done by various researchers and are related to and relevant to the research study.

2.3.1 The Relationship between capital adequacy and financial performance of commercial banks

Capital has a direct impact on bank profit margins because it is one of the most important bank-specific elements. The difference between the value of a bank's assets and liabilities is known as bank capital. It represents the bank's net worth or equity value to investors. Cash, government securities, and interest-earning loans like mortgages make up the asset component of a bank's capital. The liabilities component of a bank's capital includes loan-loss reserves and any debt due by the bank. The margin to which creditors are covered if a bank liquidates its assets can alternatively be conceived of as core capital (Barus, Muturi, Kibati & Koima, 2017).

Capital adequacy refers to a bank's ability to manage operations successfully and efficiently while also responding properly to competitive forces (Koch & MacDonald, 2014). Capital is critical in limiting the number of bank failures and depositor losses since highly leveraged firms are more inclined to take on excessive risk to maximize shareholder value at the expense of lenders. This is the primary reason why bank capital structures are highly regulated (Kamau, 2009).

The likelihood of financial trouble within the bank is reduced when capital levels are adequate. The Central Bank of Kenya mandates that banks maintain specified minimum capital levels and offer loans and advances as a percentage of their total capital (CBK, 2016). As a result, bank owners must be able to calculate the optimal capital requirements based on the rate of return on assets and market conditions (Eakins & Mishkin, 2012).

In a study done by Ndegwa (2018), the focus was on microfinance banks in Kenya and the methodology used was the use of descriptive statistics which include diagnostic tests such as Panel Data Normality Test, Panel Multicollinearity Test, and Hausman Test. There was also regression analysis. It was found that the relationship between ROA and capital adequacy was positive which implies that a rise in capital adequacy will ultimately lead to rise in financial performance.

Another study was done by Ogboi and Unuafe (2013) which focused on commercial banks in Nigeria using Panel Data estimation technique which gives more informative data, more variability, and less collinearity among variables. There is also minimal bias that can result if banks are aggregated. Data was collected from six banks randomly sampled from twenty-one operating banks. The result of the study was that capital adequacy is a good promoter of bank performance as there was a positive and significant relationship between them.

2.3.2 The Relationship between asset quality and financial performance of commercial banks

Another bank-specific aspect that influences financial performance is asset quality. It combines a measure of the likelihood of default on a loan with a measure of its marketability to determine the price at which a bank would sell a loan to a third party as defined by the borrower (Kamande, 2017).

Loans are a substantial asset in Kenya's commercial banks, and they account for a significant amount of their earnings. The loans, however, expose the banks to latent losses resulting from defaulted loans (Dang, 2011). Since commercial banks are required by law and prudential guidelines to include provisions in their profit calculations, increased nonperforming loans impede the financial performance of banks with such exposures (Eakins & Mishkin, 2012). As a result, banks should maintain their nonperforming loan levels low, as these loans have an impact on the banks' profitability and eventual financial performance (Sangmi & Nazir, 2010).

Prudent lending procedures and internal controls are thus essential for achieving good asset quality, as are proactive and fast recovery measures. According to Olweny and Shipho (2011), commercial banks can increase profits by increasing asset quality and lowering non-performing loan rates. Commercial banks in Kenya have long been blamed for poor asset quality, which has resulted in poor performance and even failure (CBK, 2016).

In a study done by Nzoka (2015), evaluation on the effects of asset quality was done with analysis of forty-three commercial banks using multiple linear regression. It was concluded that the asset quality is a significant factor influencing financial performance. The analysis showed that asset quality had a level of statistical significance on financial performance.

Another study done by Ndegwa (2018) focused on microfinance banks in Kenya. Using ratios such as Return on Assets (ROA), the study concluded that asset quality did not possess a

significant impact on the financial performance of these banks, which indicates that profitability does not depend on the asset quality. Good asset quality will not cause a microfinance bank to have superior profits over one with poor asset quality.

A study was also done in Nigeria by Abata (2014) on asset quality. The study exploited the use of ratios such as Return on Assets (ROA) as a measure of bank performance and asset quality, and regression analysis. This was done based on the use of secondary data obtained from annual reports and accounts of six of the largest banks listed in the Nigeria Stock Exchange. In conclusion, it was found that there is a strong positive relationship between good asset quality and profitability.

2.3.3 The Relationship between management efficiency and financial performance of commercial banks

Management efficiency also affects the overall profitability and financial performance by commercial banks. It is the board of directors' and management's ability to identify, measure, and control the risks that a banking institution's activities represent, as well as to ensure that the institution's operations are safe and effective while complying with all applicable laws and regulations. To evaluate a bank's management efficiency, many financial criteria are employed, such as total asset growth, loan growth rate, and earnings growth rate (Kamande, 2017).

In Kenya the average commercial banking industry cost to income ratio has been slightly above fifty percent on average (CBK, 2016). Financial ratios can be used to assess a commercial bank's management's ability to efficiently deploy resources, maximize revenue, and reduce operating expenses. The amount of operational expenses is determined by the quality of management displayed by commercial bank finance departments, which has an impact on profitability and financial performance (Athanasoglou et al., 2008).

A study done by Ongore and Kusa (2013) in the period of 2001 to 2010 on commercial banks in Kenya showed that the relationship between bank performance and management efficiency was found to be positive: concluding that enhanced managerial efficiency leads to higher performance. Also, from the findings of the study conducted by Olweny and Shipho (2011) in Kenya, it can be noted that banks that improve their capital base, reduce operational costs, and employ revenue diversification strategies are likely to be more profitable. The specific items highlighted in the study are an expression of efficiency in management.

Management efficiency demonstrates how wasteful or prudent a bank's management is in its day-to-day operations, and bank managements want and seek a low ratio. The amount of operational expenses is determined by the quality of management displayed by commercial bank finance departments, which has an impact on profitability and financial performance (Mueni, 2016).

In a study done by Ndegwa (2018), the focus was on microfinance banks in Kenya and the methodology used was the use of descriptive statistics which include diagnostic tests such as Panel Data Normality Test, Panel Multicollinearity Test, and Hausman Test. There was also regression analysis. It was found that management efficiency has a negative but significant relationship with ROA. This indicates that as management efficiency ratio increases the profitability reduces. This result is in contradiction to a study done by Musyoka (2017) who found a negative but insignificant relationship between management efficiency and ROA. This difference was brought about by the scope as one study focused on microfinance banks while the latter focused on all forty-two listed commercial banks in Kenya.

Another local study by Ongore and Kusa (2013) was done on thirty-seven commercial banks in the country. Secondary data was obtained from financial statements and a multiple linear regression model and t-statistic were used to determine the importance of each variable. The major performance indicators used were Return on Asset (ROA), Return on Equity (ROE) and Net Interest Margin (NIM). Management efficiency was represented by operating profit to total income ratio that was high which showed that it significantly affects performance of commercial banks. Other ratios showed a 99% confidence level that proves management efficiency positively impacts bank performance.

Another study done was by Jha and Hui (2012) in Nepal where eighteen commercial banks for the period of 2005-2010 were financially analyzed using correlation analysis and the multivariate regression analysis model which formulates two regression models. Management efficiency was found to have varying impacts on bank performance; the ratio results were lower in public sector banks than joint venture banks. This is because management of public sector banks was least efficient whereas management of joint venture banks was most efficient.

2.3.4 The Relationship between earnings ability and financial performance of commercial banks

Earnings ability refers to a bank's ability to generate profits that allow it to expand, stay competitive, and raise capital. The aim of earnings ability at a bank is to absorb losses and increase capital, hence it may be measured using return on assets and return on equity (Ongore & Kusa, 2013).

Ongore and Kusa (2013) conducted research on the factors that determines financial performance of commercial banks in Kenya. The study took place during the period 2001 to 2010. The findings indicated that earnings ability as one of the bank specific factors has a significant impact on the performance of commercial banks in the country.

In accordance with Grier (2007)'s opinion, a constant profit not only enhances trust of the public in the bank, but it also absorbs loan losses and provides adequate reserves. It is also essential for a well-balanced financial structure and aids in the distribution of dividends to shareholders. As a result, stable earnings are critical to the long-term viability of financial institutions.

In a study done by Kamande, Zablon and Ariemba (2016), the focus was on eleven commercial banks in Kenya for a period of five years from 2011 to 2015. Secondary data was collected from financial statements of these banks and were analyzed using a multiple regression model and the financial ratio used was Return on Assets. It was found that a unit increase in earnings ability while holding the other factors constant would lead to an increase in ROA of banks. There was a correlation of the study that found a weak positive correlation between ROA of commercial banks and earnings ability. This means that ROA variation in banks can be explained by earnings ability. The study concluded that there is a relationship between earnings ability and bank performance.

According to a study done in Malaysia by Muhmad and Hashim (2015), they set out to prove that there is a relationship between earnings ability and financial performance. Secondary data was obtained from Malaysian banks' annual reports (both foreign and domestic banks) and the study used regression analysis and financial ratios such as Return on Asset and Return on Equity. The results of the ratios used agreed with their hypotheses that good earnings ability positively affects bank performance.

2.3.5 The Relationship between liquidity and financial performance of commercial banks

Liquidity management is also another factor that affects performance of banks in Kenya. Liquidity refers to a bank's ability to meet both long and short-term obligations, particularly those of depositors. The profitability of a bank is directly proportional to the amount of cash it has on hand. As an alternative to assessing liquidity, management should use the ratio of liquid assets available for sale securities and government securities to total assets (Ongore & Kusa, 2013). Commercial banks with insufficient liquid assets risk being unable to fund their day-to-day operations. The customer deposit-to-total-assets ratio, the total loan-to-customer-deposit ratio, and the cash-to-deposit ratio are all used to determine a bank's liquidity. Liquidity is a statistic that can be used to analyze the financial health of businesses and individual investment portfolios (Nalianya & Miroga, 2020).

Banks support financial transactions in the financial system as essential stakeholders in the economy. Financial transactions are the exchange of funds from one side of the economy to the other, based on the underlying needs. Banks also deal with a wide range of transactions in terms of volume, nature, and number; as a result, different commercial banks must maintain optimal liquidity levels at various times to complete these transactions with the least amount of expense. Unnecessary and needless costs may be incurred because of poor liquidity management (Eakins & Mishkin, 2012).

A study done by Marozva (2015) was focused on proving there was a relationship between liquidity and bank performance in South Africa. He cited a few studies such as Molyneux and Thornton (1992) who recognized that there is an inverse relationship between bank profitability and liquidity and Shen, Chen, Kao and Yeh (2010) who found a mixed results of both negative and positive relationships. Since results in that country were ambiguous and needed further research, he used three major banks and obtained secondary data from 1998-2014 to perform a regression analysis. The financial ratio used was the Net Interest Margin (NIM), and it was concluded that the relationship between NIM and liquidity was negative, which was inconsistent to findings of a study by Saunders and Schumacher (2000) who found a positive relationship.

In a study done by Kamande, Zablon and Ariemba (2016), the focus was on eleven commercial banks in Kenya for a period of five years from 2011 to 2015. Secondary data was collected from financial statements of these banks and were analyzed using a multiple regression model and the financial ratio used was Return on Assets. It was found that a unit increase in liquidity while

holding other factors constant would lead to an increase of ROA of the banks. There was a correlation of the study that found a weak positive correlation between ROA of commercial banks and liquidity. This means that ROA variation in banks can be explained by earnings ability. The study concluded that there is a relationship between liquidity and bank performance. This agrees with a study done by Kamande (2017) who used the same variables and scope and found that liquidity has a positive significant association with financial performance of commercial banks.

2.4 Research gap

Few local studies have been dedicated to this area of bank performance, and the ones that have been attempted tended to study one or two factors of financial performance to the exclusion of other factors that have equal contribution. Studies done in other countries outline the effect of bank specific factors of financial performance in those countries and there aren't any studies that look at all five factors as determinants of financial performance in commercial banks in Kenya. There is no study that has been done on a substantial sample of commercial banks featuring all factors of financial performance hence a gap that needs to be filled.

Most of the studies on bank financial performance have covered developed economies, whereas much less studies cover developing countries such as Kenya's economy. Some of these studies include Abata (2014) in Nigeria, Clair (2004) in Singapore and Wong, Fong & Choi (2007) in China. Moreover, results of these studies have been either inconclusive or conflicting; this presents a research gap.

Financial performance of a commercial bank can be measured by profitability. According to Codjia (2010), financial performance will look at the statement of an accounting summary that details a business organization's revenues, expenses, and net income. The bank-specific factors within direct control of managers can best be explained by the CAMEL framework. The CAMEL framework stands for Capital adequacy, Asset Quality, Management Efficiency, Earnings ability and lastly Liquidity.

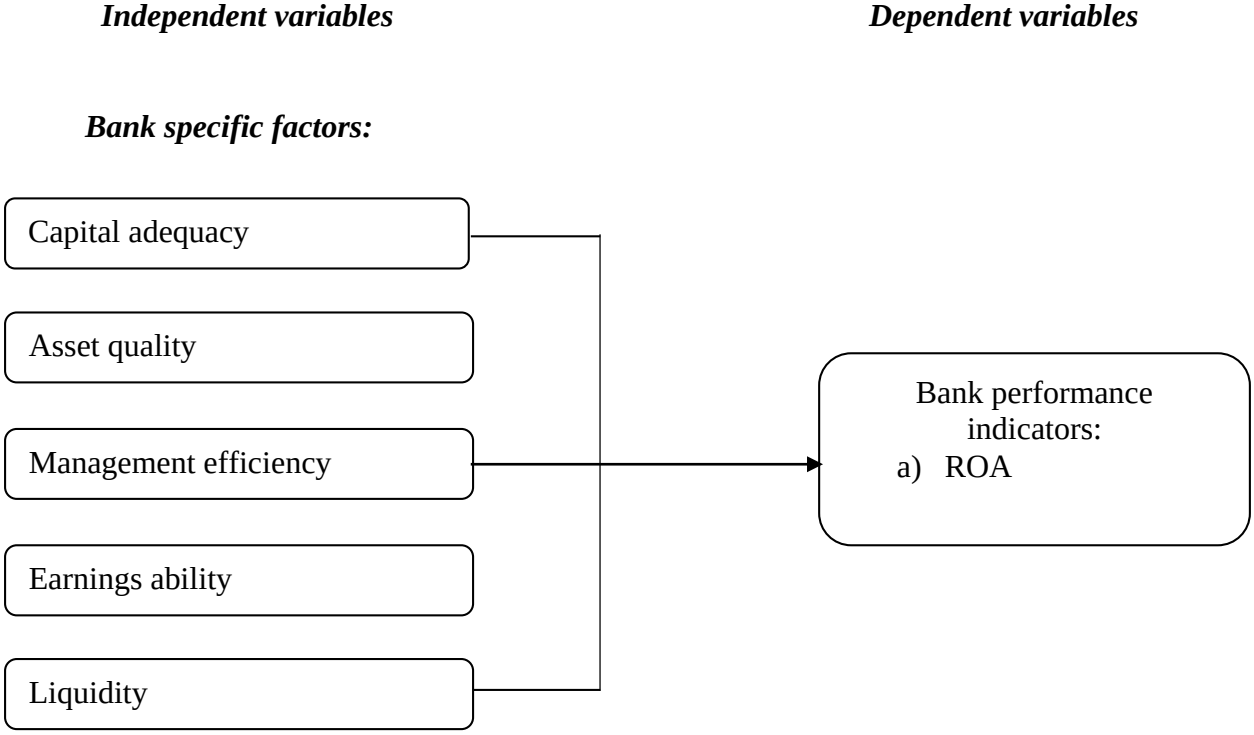
2.5 Conceptual framework

This section depicts a model of presentation in which a researcher diagrammatically expresses the relationships between the variables. The independent variable is the one that a researcher manipulates or modifies, and it is supposed to have a direct impact on the dependent variable.

The independent variables of the study are the bank specific factors that affect financial performance according to the CAMEL model which are: Capital adequacy, Asset quality, Management efficiency, Earnings ability, and Liquidity.

A dependent variable is the variable being tested and measured. The dependent variable used in the study is one of the financial ratios used to measure bank performance which is Return on Assets (ROA). The ROA is a measure of a company's profitability in relation to its total assets. The visual representation of the conceptual framework is as shown:

Figure 2. 1: Conceptual Framework



Source: Author (2022)

CHAPTER 3

RESEARCH METHODOLOGY

3.1 Introduction

This chapter details the general methodology that was used to conduct the study. The chapter comprises of the research design, target population, data collection, and data analysis.

3.2 The Research Design

A research design is a strategy, plan, and structure devised to answer research questions and control variables (Rotich, 2014). This study adopted a descriptive research design to meet its research objectives. Descriptive design gives accurate information of persons, events, or situations (Groves, 2004). The establishment of objectives, data collection methodologies, design, data processing, analysis, and reporting of findings are all included in the descriptive research survey (Mugenda, 2003). This method helped this study to collect data that is already existing and associating the researcher's variables well.

A panel data set is one that follows a given sample of individuals over time and provides multiple observations of everyone in the sample. The reasons for using empirical research methods are that they help in integrating research and practice, and educational process needs to progress (Mugenda, 2003). Panel data has two key advantages: first, it allows the researcher to account for unobserved heterogeneity, and second, because it has both cross sectional and time series dimensions, it provides the researcher with enough data points to lower the chance of parameter estimator bias (Kamande, 2017).

3.3 Population and Sampling

Population refers to the total collection of elements about which one wishes to make some inference and an element represents each member of the population (Cooper & Schindler, 2003). In Kenya, there are forty-two commercial banks. Out of the forty-two banks, twenty-eight of them are domestic and fourteen are foreign commercial banks. The target population of this

study is the eleven out of the forty-two commercial banks in Kenya that have been listed in the Nairobi Securities Exchange.

In analysis, sampling is the process of picking individual units to measure from a larger population (Courage, 2020). In this study, the researcher used census sampling where all the eleven banks listed in the Nairobi Securities Exchange were used.

3.4 Data Collection

The data collection technique used in this study is secondary data. The secondary data constitutes the income statements and balance sheets sourced from the banks audited annual reports and financial statements available from the individual banks' websites. Data for each of the bank specific factors namely capital adequacy, asset quality, management efficiency, earnings ability and liquidity were collected.

3.5 Data Analysis

To analyze this data that was collected, descriptive statistics was used such as mean, standard deviation, median, maximum, and minimum values. To test for the effect of bank specific factors on the financial performance of commercial banks, a multiple linear regression model was used.

The Return on Assets (ROA) will be measured as indicated below:

ROA=PBT/Total assets…… 1

Hence, we estimate the following regression model.

$ROA = \alpha + \beta_1 C_{it} + \beta_2 AQ_{it} + \beta_3 Mgt_{it} + \beta_4 Ea_{it} + \beta_5 Liq_{it} + \varepsilon_i$…… 2

Where:

ROA = performance of bank i at time t

α = Constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Regression Coefficients

C_{it} = Total capital / Total risk weighted assets of bank i at time t (Capital adequacy)

AQ_{it} = Loan impairment charges/Total assets of bank i at time t (Asset quality)

Mgt_{it} = Total operating revenue/total profit of bank i at time t (Management efficiency)

Ea_{it} = Net profits /Total assets of bank i at time t (Earnings ability)

Liq_{it} = Net liquid assets/Total deposits of bank i at time t (Liquidity)

ε_i = Error term

Coefficients β_1, β_2, β_3, β_4 and β_5 were used to measure the sensitivity of the dependent variable (ROA_{it}) to unit changes in the five explanatory variables. F-statistic and t-statistic were used to carry out tests of significance for the overall fit of the model (R^2) and the independent variables respectively. To test for multicollinearity, Pearson and spearman correlation coefficients were used.

3.6 Validity Testing

Validity is defined as the accuracy and significance of conclusions drawn from study data (Mugenda, 2003). How a method measures something as accurately as possible. Validity is significant since it can help the researcher decide what types of tests to use, as well as ensuring that researchers are utilizing solutions that are not only honest and cost-effective, but also tactics that truly examine the topic (Ndemi, 2018). To ensure the validity of the research, a suitable sampling method is chosen for selecting companies from the target population.

3.7 Ethical Consideration

These are the most important parts of research. Some ethical considerations suggested by Bryman and Bell (2007) that were maintained in this study include:

1. Validity - The study's research questions and conclusions were consistent. The methods utilized were directly related to the study issues.
2. Full consent – the study obtained its data from publicly available annual reports of the various banks.
3. The study incorporated adequate level of confidentiality of the research data by using publicly available information.
4. The study was conducted with honesty and integrity by the author.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results of the study on the effect of bank specific factors that determine the financial performance of commercial banks in Kenya. The data was collected on the eleven commercial banks listed in the Nairobi Securities Exchange as at the end of 2021 for the period ranging from 2016 to 2020. The Financial Performance of Commercial Banks in Kenya over time is measured by Return on Assets.

4.2 Descriptive Statistics

4.2.1 Commercial Banks' ROA

The researcher sought to investigate trends in ROA (Profit before tax/total assets) in commercial banks of Kenya from 2016 to 2020. From the findings, it can be noted that the year 2016 recorded the highest value for the ROA as shown by a mean of value of 2.5567 while the year 2020 recorded the lowest value for the ROA as shown by a mean value of 1.2562. In addition, the values for standard deviation depict variability in the ROA during the five-year period with the highest deviation of 2.0518 in the year 2018 and the lowest 1.2549 in the year 2020. The findings revealed that there has been a significant increase in ROA between 2017 and 2019 and a significant decrease in ROA from 2019 to 2020. The results are displayed on table 4.1 below.

Table 4. 1: Banks' ROA from 2016-2020

	2016	2017	2018	2019	2020
Mean	2.5567	2.0903	2.1359	2.0278	1.2562
Median	2.8176	2.1714	2.3756	2.2869	0.9438
Standard deviation	1.9825	1.6358	1.9307	2.0518	1.2549
Range	4.9743	4.1897	4.8140	6.1286	4.0014
Minimum	0.0632	0.3125	-0.0739	-0.7995	-0.4116
Maximum	5.0375	4.5022	4.7401	5.3291	3.5898

Source: Author (2022)

4.2.2 Commercial Banks' Capital Adequacy

The researcher sought to investigate trends in capital adequacy in commercial banks of Kenya from 2016 to 2020. From the findings, it can be noted that the year 2016 recorded the highest value for capital adequacy as shown by a mean of value of 0.1857 while the year 2018 recorded the lowest value for capital adequacy as shown by a mean value of 0.1716. In addition, the values for standard deviation depict variability in the capital adequacy during the five-year period with the highest deviation of 0.0488 in the year 2018 and the lowest 0.0324 in the year 2019. The findings revealed that there has been a significant balance in capital adequacy during the five-year period. The results are displayed on table 4.2 below.

Table 4. 2: Banks' Capital Adequacy from 2016-2020

	2016	2017	2018	2019	2020
Mean	0.1857	0.1855	0.1716	0.1806	0.1810
Median	0.1892	0.1858	0.1792	0.1834	0.1900
Standard deviation	0.0422	0.0444	0.0488	0.0324	0.0459
Range	0.1582	0.1567	0.1871	0.1006	0.1386
Minimum	0.0722	0.0759	0.0363	0.1150	0.0908
Maximum	0.2304	0.2326	0.2234	0.2156	0.2293

Source: Author (2022)

4.2.3 Commercial Banks' Asset Quality

The researcher sought to investigate trends in asset quality in commercial banks of Kenya from 2016 to 2020. From the findings, it can be noted that the year 2020 recorded the highest value for asset quality as shown by a mean of value of 1.5521 while the year 2019 recorded the lowest value for asset quality as shown by a mean value of 0.5384. In addition, the values for standard deviation depict variability in the asset quality during the five-year period with the highest deviation of 1.3458 in the year 2020 and the lowest 0.4494 in the year 2019. The findings

revealed that there has been a decrease in asset quality from 2017 to 2019, this was followed by an increase in 2020. The results are displayed on table 4.3 below.

Table 4. 3: Banks' Asset Quality from 2016-2020

	2016	2017	2018	2019	2020
Mean	0.9621	0.9857	0.7241	0.5384	1.5521
Median	0.8161	0.9309	0.7103	0.5296	1.4839
Standard deviation	0.7918	0.7951	0.6554	0.4494	1.3458
Range	2.5030	2.7101	2.0062	1.2651	4.1014
Minimum	-0.2904	-0.1592	-0.1410	-0.1260	-0.2947
Maximum	2.2126	2.5509	1.8653	1.1391	3.8067

Source: Author (2022)

4.2.4 Commercial Banks' Management Efficiency

The researcher sought to investigate trends in management efficiency in commercial banks of Kenya from 2016 to 2020. From the findings, it can be noted that the year 2020 recorded the highest value for management efficiency as shown by a mean of value of 3.8164 while the year 2017 recorded the lowest value for management efficiency as shown by a mean value of 0.8076. In addition, the values for standard deviation depict variability in the management efficiency during the five-year period with the highest deviation of 4.1143 in the year 2020 and the lowest 2.4440 in the year 2019. The findings revealed that there was a significant decrease in management efficiency from 2018 to 2019 and an increase from 2019 to 2020. The results are displayed on table 4.4 below.

Table 4. 4: Banks' Management Efficiency from 2016-2020

	2016	2017	2018	2019	2020
Mean	2.3631	0.8076	3.7325	2.3469	3.8164
Median	2.2983	1.1567	2.9356	2.1256	2.1390

Standard deviation	4.0054	4.0950	4.2403	2.4440	4.1143
Range	16.2761	14.7156	12.2718	8.2912	11.9234
Minimum	-5.3806	-10.7208	0.0438	-0.2782	-0.8304
Maximum	10.8955	3.9948	12.3156	8.0130	11.0931

Source: Author (2022)

4.2.5 Commercial Banks' Earnings Ability

The researcher sought to investigate trends in earnings ability in commercial banks of Kenya from 2016 to 2020. From the findings, it can be noted that the year 2016 recorded the highest value for earnings' ability as shown by a mean of value of 1.6923 while the year 2020 recorded the lowest value for earnings' ability as shown by a mean value of 0.7809. In addition, the values for standard deviation depict variability in the earnings' ability during the five-year period with the highest deviation of 1.5451 in the year 2016 and the lowest 1.2300 in the year 2017. The findings revealed that there has been a significant decrease in earnings' ability from 2016 to 2017 and an increase from 2018 to 2020. The results are displayed on table 4.5 below.

Table 4. 5: Banks' Earnings Ability from 2016-2020

	2016	**2017**	**2018**	**2019**	**2020**
Mean	1.6923	1.4274	1.5306	1.4283	0.7809
Median	2.0584	1.7323	1.7703	1.5674	0.7640
Standard deviation	1.5451	1.2300	1.2331	1.3113	1.3617
Range	3.7895	3.2221	3.2907	3.4488	4.8472
Minimum	-0.0382	-0.1542	0.0685	-0.1543	-1.8680
Maximum	3.7513	3.0679	3.3592	3.2945	2.9792

Source: Author (2022)

4.2.6 Commercial Banks' Liquidity

The researcher sought to investigate trends in liquidity in commercial banks of Kenya from 2016 to 2020. From the findings, it can be noted that the year 2018 recorded the highest value for liquidity as shown by a mean of value of 0.3159 while the year 2019 recorded the lowest value for liquidity as shown by a mean value of 0.2160. In addition, the values for standard deviation depict variability in the liquidity during the five-year period with the highest deviation of 0.5995 in the year 2018 and the lowest 0.2892 in the year 2019. The findings revealed that there has been a significant decrease in liquidity from 2016 to 2017 and 2018 to 2020. The results are displayed on table 4.6 below.

Table 4. 6: Banks' Liquidity from 2016-2020

	2016	2017	2018	2019	2020
Mean	0.2807	0.2697	0.3159	0.2160	0.2313
Median	0.1154	0.0939	0.1061	0.0983	0.0831
Standard deviation	0.5320	0.4811	0.5995	0.2892	0.3515
Range	1.8156	1.6306	2.0317	0.9845	1.1803
Minimum	0.0591	0.0516	0.0619	0.0670	0.0490
Maximum	1.8746	1.6822	2.0936	1.0515	1.2293

Source: Author (2022)

4.3 Inferential statistics

The inferential statistics involved the use of correlation and multiple linear regression analysis. Correlation analysis shows the relationships between the different variables considered in the study. Pearson and spearman correlation coefficients were used to test for multi collinearity. The regression analysis was done using Ordinary Least Squares (OLS) method. F-statistic and t-statistic was used to carry out tests of significance for the overall fit of the model (R2) and the independent variables respectively.

4.3.1 Correlation analysis

In this study, the Pearson correlation coefficient was used to test the presence of association between the variables. Values between 0 and 0.3 (0 and -0.3) indicate a very weak to no correlation (variables may not be associated), 0.3 and 0.5 (-0.3 and -0.5) a weak positive (negative) linear association, Values between 0.5 and 0.7 (-0.5 and -0.7) indicate a moderate positive (negative) linear association and Values between 0.7 and 1.0 (- 0.7 and -1.0) indicate a strong positive (negative) linear association. The significance of the relationship is tested at 95% level with a 2-tailed test where a statistically significant 33 correlation is indicated by a probability value of less than 0.025. This means that the probability of obtaining such a correlation coefficient by chance is less than 2.5 times out of 100, so the result indicates the presence of an association. The correlation analysis results are presented in Table 4.7 below.

Table 4. 7: Correlation Results

		Capital adequacy	**Asset quality**	**Management efficiency**	**Earnings ability**	**Liquidity**	**ROA**
Capital adequacy	Pearson correlation	1					
	Sig. (2 tailed)	*					
Asset Quality	Pearson correlation	-0.3505*	1				
	Sig. (2 tailed)	0.2906	*				
Management efficiency	Pearson correlation	0.5858*	0.0248*	1			
	Sig. (2 tailed)	0.0620	0.9421	*			
Earnings ability	Pearson correlation	0.2661*	0.2558*	0.0686*	1		
	Sig. (2 tailed)	0.4269	0.4458	0.8406	*		
Liquidity	Pearson correlation	0.3458*	-0.5881*	0.3016*	-0.3443*	1	
	Sig. (2 tailed)	0.2975	0.0607	0.3649	0.2997	*	
ROA	Pearson correlation	0.4072*	0.1175*	-0.1864*	0.8352*	-0.3643*	1
	Sig. (2 tailed)	0.2138	0.7301	0.5817	0.0039	0.2707	*

Source: Author (2022)

From the findings in the table above, the study found a weak positive association between the capital adequacy of commercial banks and ROA as shown by correlation coefficient of 0.4072 which was found to be significant at 0.2138 level. The study also found a strong positive association between ROA of commercial banks and earnings ability as shown by correlation coefficient of 0.8352 at 0.0039 level of confidence. The study also found a weak negative association between ROA of commercial banks and liquidity as shown by correlation coefficient of -0.3643 at 0.2707 level of confidence. The study found that there was a weak negative association between asset quality of commercial banks and capital adequacy as shown by correlation factor of -0.3505, this weak association at a significant value of 0.2906 which is less than 0.5. The study also found moderate positive association between management efficiency of commercial banks and capital adequacy as shown by correlation coefficient of 0.5858 at 0.0620 level of confidence.

The study also found a weak positive association between liquidity of commercial banks and capital adequacy as shown by correlation coefficient of 0.3458 at 0.2975 level of confidence. The study also found moderate negative association between liquidity of commercial banks and asset quality as shown by correlation coefficient of -0.5881, this was also found to be significant at 0.0607 level. The study also found a weak positive association between liquidity of commercial banks and management efficiency as shown by correlation coefficient of 0.3016 at 0.3649 level of confidence. The study also found a weak negative association between liquidity of commercial banks and earnings ability as shown by correlation coefficient of -0.3443 at 0.2997 level of confidence which is less than 0.5. There were other correlations between the independent variables, but they were not significant to the study since their confidence levels were above the 0.5 set limit.

4.3.2 Regression analysis

The objective of this study was to determine the effect of bank specific factors on the financial performance of commercial banks in Kenya. To accomplish this, the study conducted a regression analysis which gives the relationship between the independent variables used in the study including the capital adequacy, asset quality, management efficiency, earnings' ability, liquidity, and the dependent variable performance (measured by the ROA). The data used was

collected for 5 years thus giving a five-year period data which facilitated linear regression analysis. The regression results are presented in tables below.

4.3.3 Model summary

Table 4.7 gives the regression model summary results. It presents the R value which is the measure of association between the dependent and the independent variables, the R Square which is the coefficient of determination measuring the extent at which the independent variables influence the dependent variable as well as the Adjusted R Square which measures the reliability of the regression results.

Table 4. 8: Model Summary

Model	R	R Square	Adjusted R Square	Standard Error
1	0.9761	0.9527	0.7545	0.51076

a. Predictors: (Constant), x1, x2, x3, x4, x5

Source: Author (2022)

The findings show that R, which is the multiple correlation coefficient that shows quality of the prediction of the dependent variable by the independent variable, is 0.9761. This is a good indication since it points to a strong correlation. The R-Square which is the coefficient of determination shows that the five independent variables in the model explain 95.27% of performance of commercial banks. Subsequently from the Adjusted R Squared it is evident that after adjusting the model for inefficiencies the independent variables can explain 75.45% of performance of commercial banks.

4.3.4 Regression coefficients

To answer the proposed model for the relationship between performance and the independent variables, the regression coefficients were calculated and presented in table 4.9 below. These with their significance values (also given in the table) measures the effect of each independent variable on performance (dependent variable) and the effect that would occur to performance on changing (increasing/decreasing) these variables.

Table 4. 9: Regression Coefficients

Model		Standardized Coefficients	T	Sig
1	(Constant)	1.9881		
	Capital adequacy	0.1878	5.3536	0.0031
	Asset quality	0.1311	1.1825	0.2902
	Management efficiency	0.1816	5.1436	0.0036
	Earnings ability	0.5652	6.1131	0.0017
	Liquidity	0.4576	1.1036	0.3200

Source: Author (2022)

Dependent variable: ROA

As per the generated output as presented in table above, the coefficients were used to answer the following regression model which relates the predictor variables (independent variables) and the dependent variables.

$ROA = \alpha + \beta_1 C_{it} + \beta_2 AQ_{it} + \beta_3 Mgt_{it} + \beta_4 Ea_{it} + \beta_5 Liq_{it} + \varepsilon_i$…… 2

Where:

ROA = performance of bank i at time t

α = Constant

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Regression Coefficients

C_{it} = Total capital / Total risk weighted assets of bank i at time t (Capital adequacy)

AQ_{it} = Loan impairment charges/Total assets of bank i at time t (Asset quality)

Mgt_{it} = Total operating revenue/total profit of bank i at time t (Management efficiency)

Ea_{it} = Net profits /Total assets of bank i at time t (Earnings ability)

Liq_{it} = Net liquid assets/Total deposits of bank i at time t (Liquidity)

ε_i = Error term

Based on these coefficients, the regression model therefore becomes:

$ROA = 1.9881 + 0.1878C_{it} + 0.1311AQ_{it} + 0.1816Mgt_{it} + 0.5652Ea_{it} + 0.4576Liq_{it}$

From the regression model obtained above, Constant = 1.9881, shows that if all the independent variables (capital adequacy, asset quality, management efficiency, earnings' ability, liquidity) all rated as zero, ROA would rate 1.9881. While holding the other factors constant a unit increase in capital adequacy of the bank led to 0.1878 increase in ROA. A unit increase in asset quality while holding the other factors constant would lead to an increase in ROA of banks by a factor of 0.1311, a unit change in management efficiency while holding the other factors constant would lead to an increase of 0.1816 in ROA of the banks.

A unit increase in earnings ability while holding the other factors constant would lead to an increase in ROA of banks by a factor of 0.5652, a unit change in liquidity while holding the other factors constant would lead to an increase of 0.4576 in ROA of the banks. This implied that earnings ability had the highest influence on ROA of banks (p - value .0017). The analysis was undertaken at 5% significance level. The criteria for comparing whether the predictor variables were significant in the model was through comparing the obtained probability value and $\alpha = 1$. If the probability value was less than α, then the predictor variable was significant otherwise it wasn't. All the predictor variables were significant in the model as their probability values were less than $\alpha = 1$.

4.3.5 Significance level

Analysis of the variance (ANOVA) was used to make simultaneous comparisons between means; thus, testing whether a significant relation exists between dependent and independent variables. ANOVA indicates a significant F statistic implying that the model was fit for the estimation.

The results presented in table 4.10 gives the ANOVA results which shows the reliability of the model developed in explaining the relationship between the study variables. The significance of the model was tested at 5% level with a 2-tailed test.

Table 4. 10: Significance Level

Model		df	SS	MS	F	Significance F
1	Regression	5	31.5416	6.3083	24.1814	0.0016
	Residual	6	1.5652	0.2609		
	Total	11	33.1069			

Source: Author (2022)

a. Predictors: (Constant), Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability, Liquidity

b. Dependent Variable: ROA

From the table 4.10, the F statistic is 24.1814 with a distribution F (5,6), and the probability of observing a value greater than or equal to 24.1814 is less than 0.001 as given by the significance value of 0.016 which is less than the critical value at 5% level in a 2-tailed test. This therefore reveals that the regression model developed is statistically significant and the variation in the results is insignificant that cannot result to a much difference in case of a change in the study units (population) and therefore the model can be relied upon to explain the effect of the specific factors on performance of commercial banks in Kenya.

4.4 Summary of Results

On descriptive statistics the findings established that the year 2016 recorded the highest value for the ROA as shown by a mean of value of 2.5567 while the year 2020 recorded the lowest value for the ROA as shown by a mean value of 1.2562. It was established that the year 2016 recorded the highest value for capital adequacy as shown by a mean of value of 0.1857 while the year 2018 recorded the lowest value for capital adequacy as shown by a mean value of 0.1716. From the findings, the year 2020 recorded the highest value for asset quality as shown by a mean of value of 1.5521 while the year 2019 recorded the lowest value for asset quality as shown by a mean value of 0.5384. It was established that the year 2020 recorded the highest value for management efficiency as shown by a mean of value of 3.8164 while the year 2017 recorded the lowest value for management efficiency as shown by a mean value of 0.8076. From the findings, it can be noted that the year 2016 recorded the highest value for earnings' ability as shown by a mean of value of 1.6923 while the year 2020 recorded the lowest value for earnings' ability as shown by a mean value of 0.7809. From the findings the year 2018 recorded the highest value for liquidity as shown by a mean of value of 0.3159 while the year 2019 recorded the lowest value for liquidity as shown by a mean value of 0.2160.

On the correlation of the study variable, the researcher conducted a Pearson moment correlation. From the findings in the table above, the study found a weak positive association between the

capital adequacy of commercial banks and ROA as shown by correlation coefficient of 0.4072 which was found to be significant at 0.2138 level. The study also found a strong positive association between ROA of commercial banks and earnings ability as shown by correlation coefficient of 0.8352 at 0.0039 level of confidence. The study also found a weak negative association between ROA of commercial banks and liquidity as shown by correlation coefficient of -0.3643 at 0.2707 level of confidence. The study found that there was a weak negative association between asset quality of commercial banks and capital adequacy as shown by correlation factor of -0.3505, this weak association was found to be statistically significant as the significant value was 0.2906 which is less than 0.5. The study also found a moderate positive association between management efficiency of commercial banks and capital adequacy as shown by correlation coefficient of 0.5858 at 0.0620 level of confidence.

The study also found a weak positive association between liquidity of commercial banks and capital adequacy as shown by correlation coefficient of 0.3458 at 0.2975 level of confidence. The study also found a moderate negative association between liquidity of commercial banks and asset quality as shown by correlation coefficient of -0.5881, this was also found to be significant at 0.0607 level. The study also found a weak positive association between liquidity of commercial banks and management efficiency as shown by correlation coefficient of 0.3016 at 0.3649 level of confidence. The study also found a weak negative association between liquidity of commercial banks and earnings ability as shown by correlation coefficient of -0.3443 at 0.2997 level of confidence which is less than 0.5.

From ANOVA statistics, the F statistic is 24.1814 with a distribution F (5,6), and the probability of observing a value greater than or equal to 24.1814 is less than 0.001 as given by the significance value of 0.016 which is less than the critical value at 5% level in a 2-tailed test. This therefore reveals that the regression model developed is statistically significant and the variation in the results is insignificant that cannot result in much difference in case of a change in the study units and therefore the model can be relied upon to explain the effect of the specific factors on performance of commercial banks in Kenya.

CHAPTER FIVE

DISCUSSION, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents the discussion of the results in chapter four on the study of the determinants of financial performance of commercial banks in Kenya, the conclusions, and the recommendations of the study.

5.2 Summary of Findings

5.2.1 Summary of the relationship between Capital Adequacy and the financial performance of commercial banks in Kenya

The researcher sought to investigate trends in capital adequacy in commercial banks of Kenya from 2016 to 2020 and how they affect ROA of the banks. From the findings, it can be noted that the year 2016 recorded the highest value for capital adequacy as shown by a mean of value of 0.1857 while the year 2018 recorded the lowest value for capital adequacy as shown by a mean value of 0.1716. In addition, the values for standard deviation depict variability in the capital adequacy during the five-year period with the highest deviation of 0.0488 in the year 2018 and the lowest 0.0324 in the year 2019. The findings revealed that there has been a significant balance in capital adequacy during the five-year period.

On the correlation of the study variable, the researcher conducted a Pearson moment correlation. The study found a weak positive association between the capital adequacy of commercial banks and ROA as shown by correlation coefficient of 0.4072 which was found to be significant at 0.2138 level. From the regression model obtained, a unit increase in capital adequacy while holding the other factors constant would lead to an increase in ROA of banks by a factor of 0.1878.

These findings are in line with those of Kamande (2017), who found that bank capital creates liquidity for the bank because deposits are most fragile and prone to bank runs. Capital is the amount of own funds available to support the bank's business and act as a buffer in case of adverse situations. Moreover, greater bank capital reduces the chance of distress (Diamond, 2000).

According to Dang (2011), the adequacy of capital is judged based on capital adequacy ratio. Capital adequacy ratio shows the internal strength of the bank to withstand losses during a crisis. Capital adequacy ratio is directly proportional to the resilience of the bank to crisis situations.

5.2.2 Summary of the relationship between Asset Quality and the financial performance of commercial banks in Kenya

The researcher sought to investigate trends in asset quality in commercial banks of Kenya and how they affect ROA of the banks. From the findings, it can be noted that the year 2020 recorded the highest value for asset quality as shown by a mean of value of 1.5521 while the year 2019 recorded the lowest value for asset quality as shown by a mean value of 0.5384. In addition, the values for standard deviation depict variability in the asset quality during the five-year period with the highest deviation of 1.3458 in the year 2020 and the lowest 0.4494 in the year 2019. The findings revealed that there has been a decrease in asset quality from 2017 to 2019, this was followed by an increase in 2020.

On the correlation of the study variable, the researcher conducted a Pearson moment correlation. The study found a very weak positive association between ROA of commercial banks and asset quality as shown by correlation coefficient of 0.1175 which was found to be significant at 0.7301 level but was above the set limit of 0.5. The study also found moderate negative association between liquidity of commercial banks and asset quality as shown by correlation coefficient of -0.5881, this was also found to be significant at 0.0607 level. From the regression model obtained, a unit increase in asset quality while holding the other factors constant would lead to an increase in ROA of banks by a factor of 0.1311.

The findings are in line with Kamande (2017) who found that asset quality affects profitability and the financial performance of banks. These assets include the current and fixed assets, credit portfolio and other investments. Loans are a major asset in Kenya's commercial banks that generate a large portion of a banks' income. However, the loans also expose the banks to latent losses derived from delinquent loans.

5.2.3 Summary of the relationship between Management Efficiency and the financial performance of commercial banks in Kenya

The researcher sought to investigate trends in management efficiency in commercial banks of Kenya and how they affect ROA of the banks. From the findings, it can be noted that the year

2020 recorded the highest value for management efficiency as shown by a mean of value of 3.8164 while the year 2017 recorded the lowest value for management efficiency as shown by a mean value of 0.8076. In addition, the values for standard deviation depict variability in the management efficiency during the five-year period with the highest deviation of 4.1143 in the year 2020 and the lowest 2.4440 in the year 2019. The findings revealed that there was a significant decrease in management efficiency from 2018 to 2019 and an increase from 2019 to 2020.

On the correlation of the study variable, the researcher conducted a Pearson moment correlation. The study also found moderate positive association between management efficiency of commercial banks and capital adequacy as shown by correlation coefficient of 0.5858 at 0.0620 level of confidence. The study also found no correlation between management efficiency of commercial banks and ROA as shown by correlation coefficient of -0.1864 at 0.5817 level of confidence which was above the set limit of 0.5. From the regression model obtained, a unit increase in management efficiency while holding the other factors constant would lead to an increase in ROA of banks by a factor of 0.1816.

The findings are in line with Athanasoglou et al, (2008) who identify management efficiency as a factor that affects the financial performance and the profitability of commercial banks in Kenya. The management efficiency is represented by various financial ratios such as total asset growth, earning growth rate and so on. Management efficiency can also be measured by how banks manage operating expenses, that is, the ability of the management of commercial banks to deploy its resources efficiently, income maximization, and reducing operating costs can be determined using financial ratios. The quality of management exhibited by the finance departments of commercial banks determines the levels of operating expenses and in turn affects profitability and financial performance (Kamande, 2017).

5.2.4 Summary of the relationship between Earnings Ability and the financial performance of commercial banks in Kenya

The researcher sought to investigate trends in earnings ability in commercial banks of Kenya and how they affect ROA of the banks. From the findings, it can be noted that the year 2016 recorded the highest value for earnings' ability as shown by a mean of value of 1.6923 while the year 2020 recorded the lowest value for earnings' ability as shown by a mean value of 0.7809. In

addition, the values for standard deviation depict variability in the earnings' ability during the five-year period with the highest deviation of 1.5451 in the year 2016 and the lowest 1.2300 in the year 2017. The findings revealed that there has been a significant decrease in earnings' ability from 2016 to 2017 and an increase from 2018 to 2020.

On the correlation of the study variable, the researcher conducted a Pearson moment correlation. The study also found strong positive association between ROA of commercial banks and earnings ability as shown by correlation coefficient of 0.8352 at 0.0039 level of confidence. From the regression model a unit increase in earnings ability while holding the other factors constant will lead to increase in ROA by a factor of 0.5652.

The current findings are in line with Kamande (2017) findings that earnings ability is a factor that determines the level of bank performance. Earnings ability refers to a bank's ability to generate profits that allow it to expand, stay competitive, and raise capital. The aim of earnings ability at a bank is to absorb losses and increase capital, hence it may be measured using return on assets and return on equity (Ongore & Kusa, 2013).

5.2.5 Summary of the relationship between Liquidity and the financial performance of commercial banks in Kenya

The researcher sought to investigate trends in liquidity in commercial banks of Kenya from 2016 to 2020. From the findings, it can be noted that the year 2018 recorded the highest value for liquidity as shown by a mean of value of 0.3159 while the year 2019 recorded the lowest value for liquidity as shown by a mean value of 0.2160. In addition, the values for standard deviation depict variability in the liquidity during the five-year period with the highest deviation of 0.5995 in the year 2018 and the lowest 0.2892 in the year 2019. The findings revealed that there has been a significant decrease in liquidity from 2016 to 2017 and 2018 to 2020.

On the correlation of the study variable, the researcher conducted a Pearson moment correlation. The study also found a weak negative association between ROA of commercial banks and liquidity as shown by correlation coefficient of -0.3643 at 0.2707 level of confidence. From the regression model a unit increase in liquidity while holding other factors constant will lead to increase in ROA by a factor of 0.4576.

The current findings are in line with Dang (2011) findings that liquidity is a factor that determines the level of bank performance. Liquidity refers to the ability of the bank to fulfill its

obligations, mainly of depositors. According to Dang (2011) adequate level of liquidity is positively related with bank profitability.

5.3 Conclusions

The study concludes that capital adequacy affects the financial performance of commercial banks. The study concludes that there exists a positive and significant association between capital adequacy and financial performance. Further an increase in capital adequacy would lead to a positive and significant increase in financial performance of the commercial banks. This shows that capital adequacy influences financial performance.

The study concludes that asset quality has a positive and significant association with the financial performance of commercial banks in Kenya. Increase in asset quality would lead to a significant increase in financial performance of the commercial banks.

The study concludes that management efficiency has no association with ROA but has a positive and significant association with capital adequacy of commercial banks. Increase in management efficiency would lead to a significant increase in financial performance of commercial banks in Kenya.

The study concludes that earnings ability has a positive and significant association with financial performance of commercial banks. The study found that earnings ability had the highest influence in financial performance of commercial banks compared to the other independent variables. Increase in earnings ability would lead to a significant increase in financial performance of commercial banks in Kenya.

The study concludes that liquidity has a negative and significant association with financial performance of commercial banks. Increase in liquidity would gradually lead to a significant increase in financial performance of commercial banks in Kenya.

From the regression model obtained, all the independent variables (capital adequacy, asset quality, management efficiency, earnings ability, liquidity) all rated as zero, ROA would rate at 1.9881. Based on the findings it can be concluded that the Earnings ability of the bank had the highest influence on ROA of banks followed by Liquidity.

5.4 Recommendations

From the findings and conclusions, an increase in capital adequacy leads to a significant increase in bank’s financial performance therefore the study recommends that bank capitalization should

be encouraged in all commercial banks and other financial institutions so that performance can be enhanced. Institutions should strive to retain earnings to boost up capital rather than paying inflated bonuses. Well capitalized institutions have lower financial risk and thus are more likely to survive financial crisis thus, a well-capitalized banking system will ensure financial stability and make the industry more resilient against external shocks and risk.

From the findings, an increase in asset quality causes a significant increase in bank performance. The study therefore recommends that banks keep their amount of nonperforming loans to low levels since such loans affect the profitability of the banks and in turn affect financial performance of the banks.

From the findings, an increase in management efficiency causes a gradual but significant increase on financial performance of commercial banks. The study therefore recommends that efficient and effective management should be adopted by bank managers to ensure that banks do not become insolvent.

From the findings, an increase in earnings ability has a positive and significant increase in bank performance. The study recommends that the banks should also strive to remain competitive to increase their earnings ability. This can be achieved by continuous product innovation and leveraging on technology

From the findings, an increase in liquidity causes a significant increase in bank performance. The study therefore recommends that banks continue to keep the recommended liquidity levels to be able to meet customer demand for their deposits to avoid bank runs and panic in the market. Since banks are less profitable when less liquid, bank managers should be encouraged to invest in more liquid assets. This will not only improve bank profitability, but it will also enable banks to meet their short-term obligations as they fall due. It is possible that liquid bank assets are more profitable due to some market inefficiency. Further empirical study will be required to establish this.

5.5 Suggestions for further research

From the findings, the variation in banks performance can be explained by the independent variables in the study therefore the study recommends that further studies be conducted to determine the effect of economic factors that affect bank performance.

The study therefore suggests a similar study should be carried out in micro finance institutions and Saccos in Kenya. Further studies should also be done and focus on the factors independently

to cover more grounds, for example, effect of asset quality on financial performance of commercial banks in Kenya. In future research work also, it might be useful to understand the factors that impact on the effectiveness of monetary policy of the Central Bank since money supply significantly and negatively relates to bank profitability. This is because the Central bank can have the right policy objectives but certain prevailing factors in the industry can be an impediment to the realization of these objectives.

5.6 Limitations of the research

The study focuses on commercial banks. The results are therefore applicable only to commercial banks and any attempt to generalize findings to other firms outside this scope should be approached with care and significant knowledge.

Secondly, the study focuses on the determinants of financial performance of banks as a concept. The interpretation of these results should therefore be limited to the concept and by extension to the model used in the study.

Lastly, the study is country specific to Kenya. The study therefore suffers from the limitation of country specific studies. The results are therefore applicable only to Kenya and any attempt to generalize findings to other countries should be approached with care and significant knowledge.

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APPENDICES

Appendix 1: List of Commercial Banks in Kenya

List of commercial banks listed in the Nairobi Securities Exchange as of 31st December 2021:

1. Barclays Bank of Kenya.
2. CFC Stanbic Holdings.
3. Diamond Trust Bank Group.
4. Equity Group Holdings Ltd.
5. Housing Finance Company of Kenya.
6. I&M Holdings Ltd.
7. Kenya Commercial Bank Group.
8. National Bank of Kenya.
9. NCBA Bank Kenya.
10. Standard Chartered Bank of Kenya.
11. Cooperative Bank of Kenya.

Appendix 2: Data Collection Sheet

I. ROA

YEAR		**2016**	**2017**	**2018**	**2019**	**2020**
SNO	NAME					
1	Barclays Bank					
2	CFC Stanbic					
3	Diamond Trust Bank					
4	Equity Bank					
5	Housing Finance					
6	I&M					
7	KCB Bank					
8	National Bank					
9	NCBA Bank					
10	Standard Chartered					
11	Co-operative Bank					

Source: (Author, 2022)

II. Independent Variables for Each bank

YEAR		**2016**	**2017**	**2018**	**2019**	**2020**
SNO	VARIABLES					
1	Capital Adequacy					
2	Asset Quality					
3	Management Efficiency					
4	Earnings Ability					
5	Liquidity					

Source: (Author, 2022)