EFFECT OF FIRM CHARACTERISTICS ON THE FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY

JOSEMARIO OKELLO NDACLA

A RESEARCH PROJECTSUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF THE DEGREE OF MASTER IN BUSINESS ADMINISTRATION, FACULTY OF BUSINESS AND MANAGEMENT SCIENCES, UNIVERSITY OF NAIROBI

September 2022

DECLARATION

This research project is my original work and has not been presented to any other institution for the award of a degree.

Signed…………… *Mario* ……………………… Date…… November 17, 2022 …………………………………...

Josemario Okello Ndacla

D61/10373/2018

This research project has been submitted for examination with my approval as University Supervisor

Signed……………………………………………… Date…… August 22, 2022 …………………………………...

Dr. Winnie Nyamute

Senior Lecturer,

Department of Finance and Accounting

University of Nairobi

ACKNOWLEGEMENT

I thank God for guiding me to this end. I also take this opportunity to thank everyone who made my academic journey a success. Thank you all.

DEDICATION

I dedicate this research paper to my parents.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF ABBREVIATIONS

CBK   Central Bank of Kenya

GDP   Gross Domestic Product

KDIC Kenya Deposit Insurance Corporation

NIM   Net interest margin

NSE   Nairobi Securities Exchange

ROA   Return on Assets

ROE   Return on Equity

SPSS Statistical Package for the Social Sciences

ABSTRACT

Commercial banks are always keen to record better financial performance at the end of every fiscal year. This has always been the case because financial performance is always regarded to be an important subject within the field of finance given the specific functions which commercial banks perform in the economy. As commercial banks compete for customers, the factors that play a crucial role in influencing how banks perform financially continue to attract the attention of the concerned stakeholders. The need to ensure commercial banks are able to post better or improved financial performance compels these stakeholders to study the determinants of financial performance that matter to banks and by extension concentrate on areas that need to be improved for the sake of bettering performance. Due to this concern, this study had to be designed in a way that would support the evaluation of the effect which firm characteristics have on banks' financial performance within the Kenyan financial market. Since the objectives of the study matter, a descriptive and diagnostic research design was adopted. Out of the 39 commercial banks that had obtained the official license to serve customers in the Kenyan market by the CBK as of the 30th of September 2021, only 36 commercial banks were taken as a sample for the study. Attention was directed to the period that falls between January 2017 and December 2021, and this confirms that secondary data from the 36 commercial banks is associated with a period of five years. Regression analysis, correlation analysis, and descriptive analysis were employed in performing data analysis. The level of significance was identified in the first place before it was tested at 5 percent. The study found that liquidity, bank size, and the age of the bank are positively correlated with ROA. However, capital adequacy and asset quality were found to have a negative influence on ROA. Independent variables (liquidity, the size of the bank, capital adequacy, asset quality, and the age of the bank) would account for 36.9 percent of the variance in ROA. Out of the five independent variables, liquidity and capital adequacy were found to be statistically significant with ROA at the five percent significance level. The study recommends that commercial banks are supposed to concentrate on the major internal firm characteristics even when attention is being directed to key advancements that matter in the field of bank technology, intense competition among rival industry players, and the consolidation of banks.

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

In every setup of a country's economy, commercial banks are regarded as an economic pillar. They facilitate the process of financial intermediation that promotes the provision of important financial services needed not only by businesses but also by customers. The firm characteristics that are specific to all commercial banks determine how every bank serves both businesses and customers. These firm-specific characteristics are known for shaping how Kenyan commercial banks should perform financially. Commercial banks that present strong firm characteristics usually operate as dominant players in the economy.

The research that is associated with this study is based on the fundamentals of the liquidity preference theory which John Maynard Keynes postulated in 1936. Through this theory, Keynes suggested that an investor is supposed to demand a higher premium. Based on this fact, banks are always concerned with growing their returns as attention is being directed to the demand as well as the supply of money in the economy. The loanable funds theory which Swedish economist Bertil Ohlin and British economist Dennis Robertson formulated in the 1930s is the other key theory. This theory extends the classical theory which was concerned with determining the interest rate specifically by investment as well as saving, because of the fact that it adds bank credit. The stakeholder theory expounds on capitalistic views that direct stress on the relationship between a business and other stakeholders like customers and investors. In the banking sector, this relationship forces commercial banks to prioritize their financial performance to the core.

Various factors play a crucial role in determining the way commercial banks will perform financially. These factors are categorized into two broad groups which include internal or external factors. According to Popkova and Sergi (2021), the internal factors that affect how commercial banks perform financially are always determined by the decisions formed internally by the management or board. However, external factors which influence the nature and level of financial performance are usually beyond what commercial banks will control. The research that is associated with this study will focus on determining the way firm characteristics impact how Kenyan commercial banks perform financially. The firm characteristics discussed could be within or beyond the control of commercial banks that are operating in Kenya. In order to operate optimally, commercial banks are supposed to identify the key determinants of financial performance that matter in the banking industry. The financial performance of commercial banks is also significant to all stakeholders such as the government and its agencies, employees, depositors, creditors, debtors, present and potential investors, and owners. Stakeholders are always keen to study commercial banks as well as their financial performance when there is a need to exercise decision-making within the banking sector.

1.1.1 Firm Characteristics

Firm characteristics refer to a firm's managerial and demographic variables that are responsible for defining the internal environment of a firm. Examples of common firm characteristics include turnover, asset growth, sales growth, liquidity, leverage, and firm size (Kogan & Tian, 2012).In the banking sector, firm characteristics are regarded as the features that matter to the operations which banks undertake. Kassem and Sakr (2018) pointed out that the characteristics which are specific to banks could be internal or external. Regardless of the country, firm characteristics are

similar across all banks. According to Kassem and Sakr (2018), the common bank characteristics include liquidity, bank size, capital adequacy, asset quality, and age of the bank.

Liquidity refers to the ease with which a bank is able to honor its financial obligations as and when they fall due. In the banking sector, financial obligations should be honored; this helps banks to settle their debt at specific times. In Kenya, banks are required to hold a liquidity ratio that is at least 20%. Chege et al. (2019) mention that the liquidity ratio helps banks to measure their liquidity. Bank size is defined as the total valuation of assets that is under the control of a bank. According to Kassem and Sakr (2018), most studies mention that bank size is determined by the total assets which a bank controls. As a crucial variable, bank size influences the profitability of banks.

Capital adequacy is equally vital. It refers to the adequate amount of the total capital which a bank is permitted to control as a fraction of its risk-weighted assets. The capital ratio is widely used to access a bank's capital adequacy since it reflects the overall soundness of a bank thus depicting how a bank is capitalized (Chege et al. 2019). Asset quality means the quality of earning assets as well as the loan portfolio which a bank controls. In the banking industry, the term asset quality is commonly used to determine the value of risky assets that are under the control of a bank (Chege et al., 2019). The age of the bank refers to the number of years that point out how long the bank has been in operation.

1.1.2 Financial Performance

In the broad field of finance, the term financial performance describes the general fiscal health of a company. A company that presents a strong financial performance is known for having a healthy amount of free cash flow, manageable debt, and growing revenue. However, the subjectivity of financial performance implies that a single metric could be used to gauge it. As discussed by Ongore and Kusa (2013), the way commercial banks post their respective financial performance over the years provides crucial information that supports decision-making.

Financial performance is important to stakeholders such as investors. Once the financial performance of commercial banks has been analyzed investors may use this information to decide whether they should buy or sell the stocks of a target commercial bank. Apart from investors, other stakeholders like managers study financial performance to determine how resources should be allocated in various functional areas within the bank. While financial performance data helps analysts to make a forecast about the growth as well as the future earnings of the bank, customers use this information to determine whether the bank will be operating in the foreseeable future.

The board and management responsible for overall decision-making rely on financial ratios. When attention is directed to financial ratios, the board and management will be able to study individual commercial banks as they evaluate their respective financial performance. Return on Assets, in short, ROA is one of the common financial ratios that may be used in measuring financial performance. According to Chowdhury and Somani (2020), ROA indicates whether management can obtain deposits at a sensible cost before they are invested in profitable investments. To calculate ROA, a financial analyst has to identify the net profit in the first place.

The identified value should be divided by the total assets in the process. Net interest margin (NIM) and Return on Equity (ROE) are the other ratios that measure financial performance. NIM measures the net return that is traced directly to the earning assets of a bank. Earning assets include leases, loans, and securities. NIM helps banks to review their efficiency as well as the cost of intermediation services (Ntuite, 2018). On the other hand, ROE is regarded as an important ratio which banks use to measure growth potential and profitability.

1.1.3 Firm Characteristics and Financial Performance

Staikouras and Wood (2011) mention that bank characteristics are responsible for determining the overall nature of profitability in banks that operate in Europe. In another study, Kassem and Sakr (2018) confirmed that the profits which are posted by commercial banks which operate in Egypt are highly dependent on characteristics that are specific to banks. According to Kassem and Sakr (2018), bank size is one of the common examples of bank-specific characteristics that support commercial banks to post their part of their overall financial performance. Other bank characteristics include asset quality, liquidity, capital adequacy, and the age of the bank. Ntuite (2018) also mention that the bank management team is responsible for determining the overall financial performance that are directly associated with commercial banks. Siddique et al. (2021) reveal that the age of banks plays a huge role in impacting the way commercial banks will post their financial performance.

1.1.4 Commercial Banks in Kenya

Every individual commercial bank that operates within the Kenyan banking industry is under the control of a primary regulator called the CBK. Through the CBK, commercial banks are

mandated to participate in business activities that are not limited to advancing credit, remitting money, or accepting deposits. Commercial banks are also known for providing their target customers with other financial services as stipulated by CAP 488 of the Banking Act. As of the 30th of September 2021, the CBK noted via its website that the Kenyan banking industry has thirty-nine licensed commercial banks.

Over the previous years, commercial banks strived to better financial performance. Studies reveal that a significant increase in financial performance would be reported. The events that led to an increase in financial performance in the banking sector include advancements in the field of technology, intense competition among rival industry players, and the consolidation of banks. A few banks, especially those that chose to patronize the lucrative effects of technology, have been posting better financial performance that lagged. Above all, the focus individual banks have directed to the bank-specific characteristics is regarded as the primary facilitator of better financial performance (Onjala, 2012). How firm characteristics determine the way commercial banks perform financially has been a key concern among scholars in various countries around the world.

1.2 Research Problem

In any economy, the financial performance of banks matters. Due to this reason, empirical studies have been conducted to find out why banks present different results through their financial performance. Most empirical studies have determined the factors that would influence banks to present variations in their financial performance. It has been established that some of the factors that affect overall financial performance within the world's banking sector include

liquidity, bank size, capital adequacy, asset quality, and the age of the bank. In the banking sector, liquidity is important because it determines the development and growth of banks. Banks whose liquid ratios are high have the ability to ensure their short-term obligations are met in time. Bank size is determined after the value of the total assets of a bank has been revealed. Capital adequacy measures the capital which a bank controls thus determining the stability and efficiency of the bank in the process. While asset quality defines the overall bank condition in terms of loans granted not only to households but also to businesses, age is known for enhancing efficiency in operations. Banks understand the importance of financial performance and that is why they strive to perform better with time.

The financial performance of commercial banks has always been regarded as an important subject. This is true since banks are known for playing a crucial role in the economy. Since concerns that revolve around the liquidation and receivership of banks have attracted the rise of interventions from CBK, banks have directed a keen interest in their financial performance. Major commercial banks such as Equity, KCB, and Cooperative Bank continue to present positive results in their financial performance since they normally prioritize financial stability. The desire to improve performance has forced commercial banks to concentrate on issues that are associated with financial performance. Imperial Bank Limited and Chase Bank Kenya were placed under receivership by the CBK due to concerns revolving around unsafe financial conditions, fraudulent financial operations, and capital deficiencies. National Bank of Kenya Limited was also acquired recently by KCB due to issues surrounding the previously stated concerns. Due to this reason, there is a need to understand why some banks are stable while

others are not. Thus, the major internal firm characteristics that determine how Kenyan commercial banks post their overall financial performance will be explored.

Several global studies were done to find out how bank characteristics influence commercial banks and their overall financial performance. Some of the global studies were done by Bolgorian & Mayeli (2019) in Iran, Kassem & Sakr in Egypt (2018), and Naiki & Ogane (2018) in Japan. The results of these studies revealed how individual determinants are crucial in influencing the financial performance of commercial banks. A research gap is, therefore, presented.

Locally, studies that provide crucial details on the topic were completed by Nyabaga and Matanda (2020) and Sankale (2019). Nyabaga and Matanda (2020) confirm that capital adequacy and bank size are responsible for enhancing positive effects on performance. Even when this would be the case, Nyabaga and Matanda (2020) added that the effect of leverage and asset quality on performance is associated with mixed findings. The study pointed out it would be appropriate if considerable capital adequacy is maintained by commercial banks. In another study, Sankale (2019) mentioned that commercial banks usually post financial performance that has been influenced not only by bank size but also by capital adequacy. Sankale (2019) added that the age of the bank and liquidity do not influence commercial banks and their substantial financial performance.

1.3 Research Objective

To examine the effect of firm characteristics on the financial performance of thirty-six commercial banks which operate in Kenya.

1.4 Value of the Study

The fact that this study is based on commercial banks means that every individual commercial bank that operates in the Kenyan financial market will find this study useful. The management board of commercial banks will be provided with an empirical basis that is crucial in determining the proper strategies needed in improving bank financial performance.

Policymakers who are responsible for guiding the banking sector, for instance, at the Treasury and CBK will use this study to induce profitability and growth in the banking sector. This means that policymakers will be able to understand what is needed by banks that are keen to grow.

Researchers will also be motivated to do more studies on this topic. The variables used for this study will act as motivating factors for researchers. Thus, future research can be coined around this study. The recommendations to be considered by researchers, especially in the future, will call for more studies in this area.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The literature review that expounds on the effect which firm characteristics have on the financial performance of commercial banks that operate in Kenya will be presented. Key theories that are crucial in forming the base that matters to this study are analyzed in this section. This chapter has another section which is identified as determinants of financial performance. Apart from providing details about the summary of the literature review, this chapter will introduce the conceptual framework.

2.2 Theoretical Review

In this section, attention will be directed to the theoretical review of the study. Only three theories will be reviewed here. The first theory to be reviewed will be Keynes's liquidity preference theory. In the review that will follow, the loanable funds theory will be considered. The stakeholder theory is the last theory that will be reviewed.

2.2.1 Keynes's Liquidity Preference Theory

John M. Keynes advanced this theory in 1936. Through this theory, Keynes demonstrated that individuals who are keen with their investments will prefer short-term investments. Keynes added that these individuals do not prefer investments that are long-term. The reason why short-term investments are preferred is that they can be converted to cash with ease. According to the theory, Keynes confirmed that the demand for liquidity guarantees speculative power, especially

for liquid investments which can be cashed in easily for full value. Since cash is regarded as the most liquid asset, it is commonly accepted.

Larsen (1950) reveals that the liquidity preference theory by Keynes should define liquidity preference among groups in detail. For instance, it would be appropriate if Keynes differentiated between the demands for liquidity among people, insurance companies, and banks. Above all, Larsen (1950) confirms that the liquidity preference theory focuses on providing a definition that is associated with the assets as well as with liabilities that should be held by an entity. Given this concern, banks are supposed to honor monetary principles which Keynes advanced through his theory (Tily, 2006). The relevance of Keynes's liquidity preference theory to this study is that it will allow banks to create a proper balance between investments that are short-term and long-term. Keynes used his theory to confirm that short-term investments are always known for being liquid and they can be converted to cash by banks very quickly.

2.2.2 Loanable Funds Theory

Bertil Ohlin, a Swedish economist, and Dennis Robertson, a British economist, developed this theory in the 1930s. The phrase loanable funds encompass various forms of credit such as savings deposits, bonds, and loans. According to the proponents of this theory, loanable funds could be classified as inputs that are channeled through commercial banks which play the role of financial intermediation. The theory points out that the quality of service is affected by risk. This theory is regarded as a theory of market interest rate because the demand for as well as the supply of loanable funds determines the interest rate.

Bibow (2001) points out that the loanable funds theory has been criticized for changing immediately and directly due to time preferences as well as technology thus affecting interest rates. Thus, the loanable funds theory deserves to be abandoned because it is flawed (Bibow, 2021). The importance of the loanable funds theory is that it can be regarded not only as a dynamic but also as an optimizing theory of operations. It assists organizations to incorporate financial intermediaries, production models as well as other portfolio theories. Financial performance affects the funds which banks will provide or dispose of to customers as loans.

2.2.3 Stakeholder Theory

This theory was advanced in 1984 by an American philosopher named Edward Freeman. According to the information which Freeman provided when he sought to define the stakeholder theory, it was revealed that the firm is required to focus on creating value not just for shareholders alone but for all stakeholders. Apart from emphasizing capitalistic principles, the stakeholder theory stresses the buildup of strong relationships between a firm and its communities, investors, employees, suppliers, customers, and other stakeholders who have a stake in the organization. The stakeholder theory allows banks to improve their financial performance as it puts a priority on the interests of stakeholders (Amina et al., 2019).

Hinson et al., (2010) mention that the stakeholder theory instills responsive behavior in companies. The theory has to be built on what stakeholders demand and it should cater to the environment, community, customers, and employees. Even though the stakeholder theory allows companies to manage risks properly, it has not been subjected to intense application within the business environment (Rissy, 2021). The significance of the stakeholder theory as far as this

study is concerned is that it allows banks to build a social contract with society. For instance, banks can expose the effects of adverse banking practices like fraudulent operations.

2.3 Determinants of Financial Performance

Cognitive factors of the financial performance of a firm are classified into two groups which include internal and external factors. For commercial banks, internal determinants of financial performance include elements that are not within the scope of control of commercial banks' administrators. These internal elements are known for their role in impacting the profitability and efficiency of commercial banks. The internal elements that matter to commercial banks and their financial performance include the size of the bank, the age of the bank, liquidity, efficiency of management, capital adequacy, management quality, asset quality, and ownership. External determinants, on the other hand, refer to the variables that are beyond the control of commercial banks' administrators. The determinants that are regarded to be external to financial performance are unique. They mainly include interest rates, inflation, political instability, and capital adequacy (Jaber & Al-khawaldeh, 2014).

2.3.1 Liquidity

Liquidity refers to the ease with which a bank is able to honor its financial obligations as and when they fall due. In the banking sector, financial obligations should be honored accordingly (Chege et al., 2019). Bank's liquidity is regarded as the most important factor. It allows banks to minimize the effects that may result from the decrease in deposits as banks perform their lending function. According to Bolgorian and Mayeli (2019), banks have a high tendency of taking more

risks when their level of liquidity is high. Even when this is the case, the efficiency of banks depends on the nature of banks' liquidity.

2.3.2 Bank Size

Bank size is the other important determinant of financial performance. It is defined as the total valuation of assets that is under the control of a bank. Kassem and Sakr (2018) assert that bank size has always been regarded as one of the most critical variables in the determination of the level of profitability among banks. Thus, whether bank size plays a significant role in determining banks' profitability is an important question in finance literature. Large banks that operate in a highly-concentrated banking sector benefit from various size-related advantages as well as economies of scale (Kassem & Sakr, 2018). However, there is no certainty that a bank's profitability level will be amplified when economies of scale are prioritized.

2.3.3 Capital Adequacy

Capital adequacy is defined as the adequate amount of total capital which a bank is permitted to control/hold as a fraction of its risk-weighted assets. According to Kassem and Sakr (2018), banks use the capital ratio to access capital adequacy since it captures the overall nature of banks' soundness by revealing the level of capitalization. Thus, the capital ratio allows banks to determine their capital strength. Bank's capital is commonly used in evaluating the status of financial power among banks. Menicucci and Paolucci (2016) mention that financial institutions are supposed to have a solid capital structure as it empowers them in overcoming the effects of a financial crisis.

2.3.4 Asset Quality

Asset quality means the quality of earning assets as well as the loan portfolio which a bank controls. Abata (2014) reveals that, since asset quality is regarded as an aspect that matters to bank management, it allows banks to analyze their assets which are crucial in measuring the level and size of credit related to banks' operations. The management of asset quality matters to a great extent to banks that are keen to secure their future. Challenges related to asset quality could be regarded as a future time bomb if banks fail to handle their asset quality needs properly. According to Abata (2014), the financial performance of a bank will be affected if bank asset quality deteriorates. Challenges associated with bank asset quality are known to arise from ignorance of loan quality. Banks with frail banking systems need to put a lot of focus on managing asset quality. This will enable banks to benefit from sound development.

2.3.5 Bank Age

The age of the bank refers to the number of years that point out how long the bank has been in operation. According to Sulub (2014), the growth in the age of a firm is responsible for the generation of profits, negotiating power, and purchasing influence. Age provides firms with an experience curve whose benefits include experienced performance and economies of scale. Older firms are expected to be more profitable and efficient due to market capture. However, some studies reveal that a negative relationship could be spotted between bank age and profitability. Majumdar (1997) found out that older firms that operated in India are less profitable but more productive on the other hand. Other studies that provide a profound explanation of this topic concluded that age and profitability share a non-significant relationship (Stierwald, 2009).

2.4 Empirical Studies

Many studies done in the past have provided results that would define the way firm characteristics determine how commercial banks post their financial performance. A review of some of these studies has been considered in this section alongside their methodology and findings.

2.4.1 Global Studies

Stierwald (2009) undertook a study that evaluated the determinants of firm profitability. The study targeted 961 large Australian firms and data was captured for the period that lasted between 1995 and 2005. Random and fixed effect regression was applied by the paper. The analysis presented by the paper confirms that firm-level variables which include size, productivity level and lagged profit have a positive and large impact on the nature of profitability of a firm.

Majumdar (1997) did a study that focused on determining how firm-level performance could be impacted by size and age. To complete his study, Majumdar (1997) drew evidence from selected firms that operate in the Indian financial market. The study involved the use of contemporary data where 1,020 Indian firms provided extensive sample data. The study pointed out that, in the Indian financial market, older firms would be identified for posting less profit and more production levels. However, larger firms would be associated with more profit and less production levels. These performance differences are influenced by the market-restricting industrial policies that have been taking shape in India for at least the past three decades.

In their study, Menicucci and Paolucci (2016) directed considerable attention to the European banking sector. Menicucci and Paolucci (2016) demonstrated that they could analyze the association that exists between profitability and characteristics that are specific to banks. The study focused on finding out how internal factors support the achievement of high profitability in the banking sector. A regression analysis was conducted on the top 35 European banks between 2009 and 2013. Regression findings pointed out that size and capital ratio are supposed to be identified as determinants that will promote profitability in the banking sector. Also, Menicucci and Paolucci (2016) mentioned that lower profitability levels could be caused by higher loan loss provisions. Findings also pointed out that banks whose loan ratio and deposits are high are known for being more profitable. However, in some cases, the effects on profitability would be statistically insignificant.

2.4.2 Regional Studies

Sulub (2014) conducted a study that analyzed whether bank size, age, and leverage are crucial in determining the profitability of banks in Sudan. Annual reports of 8 banks that operate in Sudan were evaluated using multiple regression analysis. The period when the study was done was between 2009 and 2012. Findings by Sulub (2014) pointed out that size and profitability shared a positive relationship while age and profitability shared a negative relationship. The study also revealed that an insignificant positive relationship could be noted between leverage and debt. Sulub (2014) revealed that it would be appropriate if further research on the topic is conducted alongside macroeconomic factors and other firm-specific profitability determinants.

Abata (2014) studied the way asset quality relates to bank performance in Nigeria. Annual reports and accounts retrieved from the 6 largest Nigerian banks provided secondary data from 1999 to 2013. The study relied on ratios which supported the measurement of asset quality and the performance which banks post. Abata (2014) analyzed his data using the Pearson correlation and regression tool. The findings of the study revealed that asset quality influenced bank performance significantly. The study recommends that banks should embrace policies that encourage credit risk minimization and revenue diversification. Minimization of banks' liquidity holdings was also prioritized. Abata (2014) commented that conducting further research to determine the factors that are responsible for influencing the liquidity of commercial banks that operate in Nigeria could contribute more value to academic literature as well as the profitability of banks.

Kassem and Sakr (2018) investigated how bank-specific characteristics played a crucial role in influencing the profitability of Egyptian commercial banks. In their study, Kassem and Sakr (2018) focused on identifying the main internal characteristics whose effects result in the achievement of higher profitability. In this study, 19 Egyptian banks were targeted and data was gathered between 2007 and 2016. The relationship that exists between profitability and characteristics that are specific to Egyptian commercial banks was examined using OLS regression analysis. The findings pointed out that the size of the bank and the loan loss provision ratio of Egyptian commercial banks is the key determinants of profitability.

2.4.3 Local Studies

Sankale (2019) did a study that entailed finding out how Kenyan commercial banks would post financial performance that is primarily affected by characteristics that are specific to banks. The study analyzed the internal factors that influence banks to differ in their financial performance. External factors were also analyzed. Secondary data was collected from 38 banks for analysis using the descriptive research design. The study revealed that age and liquidity do not have a substantial influence on commercial banks and their financial performance. The study recommended the increase of bank size and capital adequacy for the sake of minimizing bank credit risk.

Nyabaga and Matanda (2020) performed a study that sought to find out whether Kenyan commercial banks listed in NSE usually post financial performance that is affected by characteristics that apply specifically to firms. The data for this study were collected between 2010 and 2018. For this study, the firm characteristics that were subjected to analysis include bank size, asset quality, leverage, and capital adequacy. The analysis of data was achieved through regression, correlation, and descriptive analysis. The study confirmed that banks' financial performance share a positive relationship with bank size and capital adequacy. However, asset quality and leverage presented a mixed effect on performance. The study points out that listed commercial banks are supposed to absorb losses caused by economic shocks through the maintenance of reasonable capital adequacy.

Onjala (2012) examined how Kenyan commercial banks would post financial performance that would be influenced by specific determinants like inflation, GDP, risk, size, operating cost efficiency, liquidity, exchange rates, and capital adequacy. The study was treated as an

explanatory study for the 43 commercial banks that were analyzed. The period of this study was between 2001 and 2010. The study concluded that exchange rates and capital adequacy were negatively correlated with ROE. However, inflation, GDP, risk, size, operating cost efficiency, and liquidity were positively correlated with ROE. Results from the study also pointed out that exchange rate and ROA shared a negative correlation. It was discovered that ROA shared a positive relationship with inflation, GDP, risk, size, operating cost efficiency, liquidity, and capital adequacy. The study recommended that commercial banks should use their ROAs and ROEs to improve their performance levels.

2.5 Summary of the Literature Review

Various studies have evaluated how firm characteristics or determinants of bank performance influence the financial performance that is always posted by all commercial banks. While a few of these studies focused on examining the way the determinants of performance affect banks' financial performance, emphasis would be directed to individual or specific firm characteristics. Researchers should note how appropriate it would be if all the major firm characteristics are considered when the goal is to determine how firm characteristics affect financial performance. Other studies sought to reveal how firm characteristics influence profitability.

The empirical review reveals that every individual bank characteristic is crucial in determining the overall financial performance of commercial banks. Most studies that expound on this subject were conducted in different regions around the world. Only a few studies have been done in Kenya specifically on firm characteristics. There is a gap in the literature on studies that

concentrate on pointing out how banks' financial performance is influenced by firm characteristics.

2.6 Conceptual Framework

A conceptual framework refers to a visual representation of the association that will be identified between a dependent variable and a set of independent variables. For this study, the independent variables include liquidity, the size of banks, capital adequacy, the age of banks, and asset quality. Financial performance is the main area of concern for this study and, in this case, it is regarded as the dependent variable.

Independent Variable   **Dependent Variable**

(i). Liquidity Liquidity ratio **(ii). Bank Size** Natural logarithm of total assets **(iii). Capital Adequacy** Total core capital to risk-weighted assets **(iv). Asset Quality** Non-performing loans to advances **(v). Bank Age** Natural logarithm of years in existence

Financial Performance Return on Assets
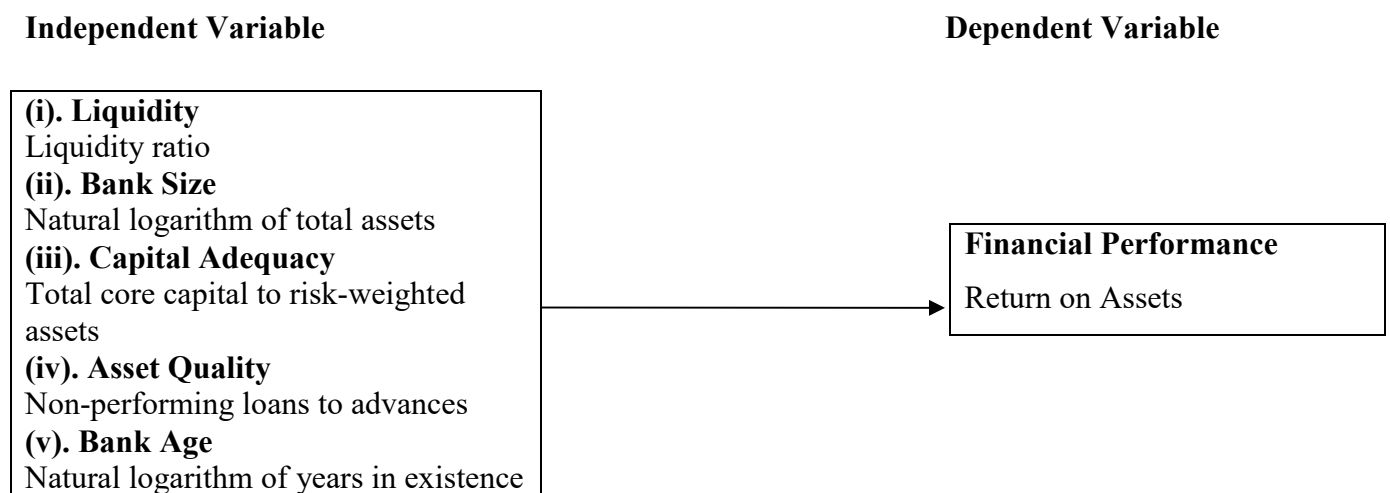
Figure 2.1: Conceptual Model

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

In this chapter, attention will be directed to the four key areas of research methodology. The first key area is the research design while the second one is population. The other key areas of concern include sample and data collection as well as data analysis.

3.2 Research Design

A descriptive and diagnostic research design will be employed in this study so that the relationship that exists between the variables under study can be explained. A descriptive study, according to Devi (2017), is undertaken by a researcher who is focusing on defining the characteristics of the variables that are believed to be of interest.

3.3 Population

The population that has been considered for this study is comprised of 39 commercial banks that had the license to operate in the Kenyan banking industry by the CBK as of 30th September 2021. A census that captures the population of Kenyan commercial banks was noted as presented in Appendix I.

3.4 Sample

A sample refers to definite items, objects, or people that a researcher would pick from a larger population (Singh & Mangat, 1996). Sampling, however, can be defined as the procedure a researcher would use to select a representative population from a larger population. In this study, 36licensed commercial banks will be regarded as the study sample.

3.5 Data Collection

This study is primarily associated with the secondary data collected not only from audited financial statements but also from annual financial reports of the banks operating in the Kenyan banking sector between January 2017 and December 2021. Much of the data will be quantitative in nature and this is shown by the information provided in a data collection sheet. The data used will determine how firm characteristics are responsible for determining Kenyan banks' financial performance.

3.6 Data Analysis

Data analysis is defined as the process that entails the packaging, evaluation, and structuring of the main components of information so that the findings that have been retrieved from that information can be communicated effectively and also easily (Blaikie, 2003). To ascertain if the data to be used in this study is complete, clear, and consistent, as required by the considered research objectives, the data to be analyzed will be edited, coded, and tabulated in the first place.

This data will be interpreted in the process. SPSS will be used to facilitate the analysis of the quantitative data that was collected and stored in a data collection sheet.

3.6.1 Analytical Model

The relative significance of every variable identified in the study will be determined by an empirical model. The model is presented below;

$$Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where:

$\beta 0$ = Represents the y intercept that is associated with the equation

$\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ = Represents the slope of the regression

Y = Financial performance as measured by the banks' return on assets

X_1 = Liquidity as measured by the ratio of total loans to total customer deposits

X_2 = Bank Size as presented by the natural logarithm of total assets recorded by banks

X_3 = Capital Adequacy as measured by the ratio of bank's capital to risk-weighted assets

X_4 = Asset Quality as given by the ratio of non-performing loans to advances

X_5 = Age of the Bank as measured by the natural logarithm of a bank's years of existence

ε = The error in the model

3.7 Test of Significance

For this study, parametric tests will be conducted. This will result in the establishment of statistical significance of individual parameters as well as the overall model. The significance of the overall model will be prioritized and in the process, it will be established using the F-test. One important concern is that the F-test will be derived from Analysis of Variance (ANOVA). For individual variables, the statistical significance will be determined by the t-test.

CHAPTER FOUR

DATA ANALYSIS, RESULTS, AND DISCUSSION

4.1 Introduction

In this chapter, the specific details that provide important information on data analysis will be provided. Other key areas of concern in this chapter are presented not only in the results section but also in the section that has details that expound on the discussion that matters to the study. The secondary data that was collected for this study is associated with a five-year period (2017 to 2021). The descriptive analysis results, results for diagnostic tests, results linked to correlation analysis, the result for regression analysis, and an interpretation of the findings are presented in good order within their individual sections.

4.2 Descriptive Analysis

The information found in table 4.1 presents the variables that matter to the study together with their corresponding descriptive statistics results. The results are presented with reference to the standard deviation, the mean, the maximum, and the minimum. Every individual variable has an output whose value was produced by the SPSS software.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
ROA	180	-.2298	.0703	.005154	.0355413
Liquidity	180	.0003	1.5554	.709492	.2629393
Bank size	180	14.7749	20.5924	17.762058	1.4150381
Capital adequacy	180	-.0190	.9448	.223301	.1156130
Asset quality	180	.0000	1.3506	.172131	.1868000
Bank age	180	.0000	4.7004	3.331463	.8550166
Valid N (listwise)	180				

Source: Research Data (2022)

4.3 Diagnostic Tests

Diagnostic tests had to be done for the sake of drawing useful conclusions from the collected data. The confidence interval that was set at 95 percent was used to establish variable deductions that mattered to the study variables. Key diagnostic tests are best defined by the normality test in section 4.3.1, the autocorrelation test in section 4.3.2, and the multicollinearity test in section 4.3.3.

4.3.1 Normality Test

For the sake of subjecting the collected data to subsequent analysis, the normality test had to be prioritized. The normality test is achieved through two tests; the first test was the Kolmogorov-Smirnov test while the second test was the Shapiro-Wilk test. If the overall size of the sample in question falls between the limit of 7 respondents and 2,000 respondents, it would be appropriate if the researcher uses the Shapiro-Wilk test to test for normality due to the existence of a small sample size (Allen et al., 2019). On the other hand, the Kolmogorov-Smirnov test can only be useful when a researcher is keen to analyze large samples that have at least 2,000 respondents to about 5,000 respondents.

To find out whether the collected data is subject to normality, the Shapiro-Wilk test was employed. The confidence interval for the mean was set at 95% and the results for the test of normality were retrieved for evaluation as shown in table 4.3. According to the test results, the p-

value is less than alpha (0.05) thus confirming that the null hypothesis deserves to be rejected. This means a normal distribution was not observed in the data.

Table 4.2: Test of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ROA	.248	180	.000	.671	180	.000
Liquidity	.114	180	.000	.950	180	.000
Bank size	.104	180	.000	.949	180	.000
Capital adequacy	.158	180	.000	.810	180	.000
Asset quality	.215	180	.000	.663	180	.000
Bank age	.164	180	.000	.914	180	.000

a. Lilliefors Significance Correction
Source: Research Data (2022)

4.3.2 Autocorrelation Test

In this study, the Durbin-Watson (DW) statistic was employed to test for autocorrelation. The result was recorded at 1.311 as shown in table 4.4. The most important concept about the Durbin-Watson statistic is that it is defined by a value that falls between 0 and 4. When the Durbin-Watson statistic indicates 2.0 as the final value, it means the sample in question lacks autocorrelation. Values that range between 0 and less than 2 are always used to expose a positive autocorrelation. However, the values that range between 2 and 4 indicate the existence of negative autocorrelation. In statistics, values that fall between 1.5 and 2.5 are normally regarded to be relatively normal. However, the values that do not meet this threshold are known to attract attention. According to the stated explanation, the data used in the study in question presents positive autocorrelation.

Table 4.3: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.607[a]	.369	.351	.0286383	1.311

a. Predictors: (Constant), Age of Bank, Liquidity, Size of Bank, Asset Quality, Capital Adequacy

b. Dependent Variable: ROA

Source: Research Data (2022)

4.3.3 Multicollinearity Test

All the variables have VIF values that are below 10. Besides, the Tolerance value of every

variable is more than 0.2. Values that are not more than 10 for VIF imply no multicollinearity.

The same is true when tolerance values are greater than 0.2.

Table 4.4 Multicollinearity Test

Model		Collinearity Statistics	
		Tolerance	VIF
1	Liquidity	.819	1.221
	Bank size	.677	1.477
	Capital adequacy	.700	1.428
	Asset quality	.831	1.204
	Bank age	.814	1.229

a. Dependent Variable: ROA

Source: Research Data (2022)

4.4 Correlation Analysis

Table 4.5 uses the Pearson Correlation to show how the variables that were subjected to analysis

are correlated. Thus, the correlation that exists between every independent variable and ROA

which happens to be the dependent variable can be estimated. The independent variables that

matter to the study include liquidity, the size of banks, capital adequacy, the age of banks, and asset quality. The correlation analysis results confirm that a correlation which is very high and significant exists between liquidity and ROA (r = 0.030, p = 0.688), bank size and ROA (r = 0.542, p = 0.000), capital adequacy and ROA (r = - 0.089, p = .235), asset quality and ROA (r = - 0.253, p = 0.001), and bank age and ROA (r = 0.417, p = 0.000). Correlation analysis results confirm that the relationship that can be noted between the five independent variables cannot support multicollinearity.

Table 4.5: Correlation Analysis Results

		ROA	Liquidity	Bank size	Capital adequacy	Asset quality	Bank age
ROA	Pearson Correlation	1	.030	.542**	-.089	-.253**	.417**
	Sig. (2-tailed)		.688	.000	.235	.001	.000
Liquidity	Pearson Correlation	.030	1	-.137	-.339**	.088	.062
	Sig. (2-tailed)	.688		.067	.000	.238	.408
Bank size	Pearson Correlation	.542**	-.137	1	-.248**	-.235**	.411**
	Sig. (2-tailed)	.000	.067		.001	.002	.000
Capital adequacy	Pearson Correlation	-.089	-.339**	-.248**	1	-.260**	-.195**
	Sig. (2-tailed)	.235	.000	.001		.000	.009
Asset quality	Pearson Correlation	-.253**	.088	-.235**	-.260**	1	-.068
	Sig. (2-tailed)	.001	.238	.002	.000		.363
Bank Age	Pearson Correlation	.417**	.062	.411**	-.195**	-.068	1
	Sig. (2-tailed)	.000	.408	.000	.009	.363	

**. Correlation is significant at the 0.01 level (2-tailed).

b. Listwise N=180

Source: Research Data (2022)

4.5 Regression Analysis

In order to examine how firm characteristics usually affect Kenyan banks' financial performance, a multiple linear regression model had to be employed. The model that was used in the study used is presented below:

$$Y = \beta 0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

4.5.1 Regression Summary Model

In table 4.6, information that presents important details about the model summary is presented. The summary model helps to explain changes that are linked to the dependent variable. This simplifies the output in the regression.

Table 4.6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.607[a]	.369	.351	.0286383

a. Predictors: (Constant), Age of Bank, Liquidity, Size of Bank, Asset Quality, Capital Adequacy

b. Dependent Variable: ROA

Source: Research Data (2022)

Information captured in the model summary presents the R square which points out that 36.9% of the deviations that influence banks' overall financial performance of commercial banks are determined by the independent variables. At the same time, the remaining 63.1% can only be explained by a set of factors that have not been included in this model.

4.5.2 One-way ANOVA Table

The F-test statistic will be used in determining the significance of the model. This will be achieved by relying on the calculations provided by one-way ANOVA.

Table 4.7: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.083	5	.017	20.338	.000[b]

Residual	.143	174	.001			
Total	.226	179				

a. Dependent Variable: ROA

b. Predictors: (Constant), Age of Bank, Liquidity, Size of Bank, Asset Quality, Capital Adequacy

Source: Research Data (2022)

One-way ANOVA has outcomes that are presented in table 4.7. The importance of the F test is to point out whether the model is significant. One-way ANOVA shows that the F calculated is 20.338. Since 3.10 was found as the critical value as presented by the F-Test table, there is a need to note that the model in question could be used in predicting the dependent variable.

4.5.3 Regression Coefficients

Table 4.8: Table of Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	-.241	.036		-6.690	.000
	X_1 = Liquidity	.015	.009	.114	1.716	.088
	X_2 = Bank size	.011	.002	.453	6.183	.000
	X_3 = Capital adequacy	.023	.022	.075	1.046	.297
	X_4 = Asset quality	-.023	.013	-.122	-1.846	.067
	X_5 = Bank Age	.010	.003	.230	3.451	.001

a. Dependent Variable: ROA

Source: Research Data (2022)

Table 4.7 presented above denotes the regression coefficients of the model. The results shown reveal that liquidity, bank size, capital adequacy, and the age of the bank are responsible for resulting in the appreciation of banks' financial performance by 0.015, 0.011, 0.023, and 0.010

32

respectively. This means that liquidity, bank size, capital adequacy, and the age of the bank have not only a positive but also a significant effect on the financial performance that is posted by commercial banks. However, asset quality depicted a negative relationship under similar conditions. Above all, the T values played a crucial role in creating the significance useful in establishing the relationship that is evident between the variables.

Given the coefficients which are usually important in revealing the relationship that exists between the dependent and independent variables, the predicting equation will assume the format presented below:

$$Y = -0.2410 + 0.015X_1 + 0.011X_2 + 0.023X_3 - 0.023X_4 + 0.010X_5 + 0.036$$

4.6 Interpretation of the Findings

The study focused on finding out how firm characteristics are responsible for influencing banks' financial performance; the study targeted Kenyan banks. Attention was directed specifically to the major internal characteristics of a firm which include liquidity, bank size, capital adequacy, asset quality, and the age of the bank. The statistics results for the study reveal that the model used is crucial in defining the relationship that could be observed between firm characteristics and the financial performance which is recorded by commercial banks.

Correlation analysis results point out that liquidity, bank size, and the age of the banks portrayed a positive correlation when they are related individually to banks' financial performance. However, a negative correlation exists between asset quality and commercial banks' financial

performance; the same case was noted when capital adequacy was factored in. Out of the five independent variables, bank size and capital adequacy would exhibit an association that is not statistically significant when they are related to the dependent variable.

The model summary presents the R square which points out that 36.9% of the deviations that influence the overall financial performance posted by Kenyan commercial banks are determined by the effect of the major internal characteristics of a firm which include bank age, capital adequacy, the size of banks, liquidity, and asset quality. The remaining 63.1% can only be explained by a set of factors that have not been included in this model. A strong relationship that exists between banks' financial performance and every independent variable is shown by the correlation coefficient (R) whose value stands at 0.607. Thus, the model qualifies to be used for defining the relationship that is observed between the study's dependent variable and independent variables.

The analytical model employed in the study took the form; ($Y = -0.2410 + 0.015X_1 + 0.011X_2 + 0.023X_3 - 0.023X_4 + .010X_5 + 0.036$), where X_1 is liquidity, X_2 is bank size, X_3 is capital adequacy, X_4 is asset quality, and X_5 is the bank age. Meanwhile, there is a need to consider the fact that liquidity has not only a positive but also a significant effect on banks' financial performance. This type of relationship means that when liquidity, bank size, capital adequacy, and bank age appreciate by only one unit, financial performance will increase by 0.015, 0.011, 0.023, and 0.010 respectively. Increasing asset quality by a unit will, however, result in a decrease in commercial banks' financial performance by -0.023. The findings also point out that

the influence of capital adequacy and the size of banks on banks' financial performance is insignificant. The findings of the research for this study portray a sharp contrast when they are compared to the findings of a study which Olweny and Sipho did in 2011. In their study, Olweny and Sipho reveal that the facts that are specific to banks such as liquidity, asset quality, operational cost efficiency, capital adequacy, and income diversification influence the profitability of commercial banks significantly.

CHAPTER FIVE

SUMMARY, CONCLUSION, AND RECOMMENDATIONS

5.1 Introduction

In this chapter, attention will be directed to specific sections. The first three sections of concern include the summary of the study, the conclusion section, and the recommendations section. The other two sections will provide information on the limitations of the study as well as on the suggestions that should be considered for further research.

5.2 Summary

This study was conducted for the sake of examining how firm characteristics affect banks' financial performance within the Kenyan financial market. Since the results of the study matter, a descriptive and diagnostic research design was employed so that the association that is found between the variables under study could be explained. The CBK confirmed that 39 commercial banks operated in Kenya as of 30th September 2021; out of the 39 commercial banks, only 36 commercial banks were regarded as the study sample. A five-year secondary data from January 2017 and December 2021 was collected from annual financial reports which the banks under study published on their websites. To perform data analysis, descriptive analysis, diagnostic tests, correlation analysis, and regression analysis were used. The significance level was tested at five percent.

The study revealed that the major internal features of a firm are responsible for influencing the overall financial performance that is posted by Kenyan commercial banks. Correlation analysis results point out that liquidity, bank size, and bank age are positively correlated with ROA while

capital adequacy and asset quality had a negative influence on ROA. Even when this was the case, the five independent variables that mattered to the study would account for 36.9% of the variance in ROA.

5.3 Conclusion

The study confirms that the determinants of financial performance that were subjected to tests in order to draw valid and useful conclusions had both a significant and insignificant effect on the financial performance that would be posted by commercial banks that operate in the Kenyan financial market. The determinants of financial performance that were evaluated in this study include liquidity, the size of bank, capital adequacy, age of bank, and asset quality. As the study found out, liquidity, the size of banks, and the age of the bank had a positive influence on the financial performance that would be posted by commercial banks as measured by ROA. While capital adequacy and liquidity were found to be statistically significant, bank size, asset quality, and the age of the bank were found to be statistically insignificant as it has always been the case with p values that are above 0.05. Thus, improper conclusions could be noted while analyzing the relationship that exists between the independent variables and the dependent variable.

5.4 Recommendations

The study recommends that commercial banks are supposed to concentrate on the major internal firm characteristics which include liquidity, bank size, capital adequacy, asset quality, and bank age. This is crucial in assisting individual banks that post bad financial performance from being acquired by dominant players that operate in the banking industry. Also, once attention is directed to the major internal firm characteristics, cases, where bank regulators place specific

banks under receivership due to concerns that revolve around unsafe financial conditions, fraud, and capital deficiencies, will be minimized.

As much as the events that are responsible for resulting in an increase in financial performance in the banking sector include advancements in the field of technology, intense competition among rival industry players, and the consolidation of banks, Onjala (2012) points out that the focus which individual banks have directed to the bank-specific characteristics are usually regarded as the primary facilitator of better financial performance. Thus, it would still be deemed right if concerned researchers direct a lot of effort into studying how the major internal firm characteristics can be approached for the sake of increasing banks' financial performance. Based on the stated recommendations, there is a need to note that while attention is being directed to newer technologies and other core advantages that can improve banks' financial performance, the major internal firm characteristics that are significant in determining the overall financial performance that is posted by commercial banks should be handled properly.

5.5 Limitations of the study

This study is specific to commercial banks. Thus, this means the results of the study can only be associated with commercial banks and not any other organization or firm. Suppose a researcher puts focus on generalizing the findings of the study so that other organizations or firms that fall outside the scope of this study can be impacted, it would be appropriate if the findings that are associated with the study deserve to be approached with a lot of care.

Secondly, the study sought to examine the way firm characteristics affect the overall financial performance that is posted by commercial banks that operate in Kenya. Based on this fact, the results that are associated with the study are limited not only to the concept but also to the model that matters to the study.

Lastly, this study targets only a sample of 36 licensed commercial banks. This means the study fails to consider other commercial banks that operate outside Kenya. Thus, the study does not dwell on how firm characteristics affect the overall financial performance that is posted by commercial banks that operate in other countries around the world.

5.6 Suggestions for Further Research

This study focused on examining how firm characteristics affect the financial performance that is associated with commercial banks that operate in Kenya. The study reveals that the major internal firm characteristics which include liquidity, bank size, capital adequacy, asset quality, and bank age are crucial in influencing the overall financial performance of commercial banks. Even when this is the case, there is a need to understand how the major internal characteristics that apply to banks can be managed to ensure all commercial banks operate optimally. This will help prevent concerns that revolve around the liquidation and receivership of banks hence reducing the rise of interventions not only from the CBK but also from KDIC. A proper response to this concern will have proved efficient for Imperial Bank Limited and Chase Bank Kenya which were placed under receivership by the CBK due to concerns revolving around unsafe financial conditions, fraud, and capital deficiencies among other concerns. The recent case where the National Bank of Kenya was acquired successfully by KCB due to issues that revolved

around financial performance concerns would be prevented as well if and only if its managers had a proper understanding of how the bank's major internal firm characteristics should be controlled.

REFERENCES

Abata, M. A. (2014). Asset quality and bank performance: A study of commercial banks in Nigeria. *Research Journal of Finance and Accounting*, *5*(18), 39-44.

Allen, P., Bennett, K., & Heritage, B. (2019). *SPSS statistics: A practical guide*

Amina, S. E., Khairudin, N., & Damayanti, T. (2019). Financial performance and market share in Indonesia Islamic banking: Stakeholder theory perspective. *International Journal of Scientific & Technology Research*, *8*(1), 14-18.

Bibow, J. (2001). The loanable funds fallacy: Exercises in the analysis of disequilibrium. *Cambridge Journal of Economics*, *25*(5), 591-616.

Blaikie, N. (2003). *Analyzing quantitative data: From description to explanation*. SAGE.

Bolgorian, M., &Mayeli, A. (2019). Banks' characteristics, state ownership and vulnerability to sanctions: Evidences from Iran. *Borsa Istanbul Review*, *19*(3), 264-272.

Chege, L. K., Omagwa, J., & Abdul, F. (2019). Bank Specific Characteristics, Prudential Regulations and Non-Performing Loans of Commercial Banks Listed At Nairobi Securities Exchange, Kenya.

Chowdhury, T. A., &Somani, S. (2020). Performance evaluation and impact of Grameen bank on social development and women empowerment in Bangladesh. *International Journal of Social and Administrative Sciences*, *5*(1), 54-73.

Devi, P. S. (2017). *Research methodology: A handbook for beginners*. Notion Press.

Hinson, R., Boateng, R., &Madichie, N. (2010). Corporate social responsibility activity reportage on bank websites in Ghana. *International Journal of Bank Marketing*.

Jaber, J. J., & Al-khawaldeh, A. A. (2014). The impact of internal and external factors on commercial bank profitability in Jordan. *International Journal of Business and Management*, *9*(4).

Kassem, N. M., &Sakr, A. (2018). The impact of bank-specific characteristics on the profitability of commercial banks in Egypt. *JOURNAL OF FINANCE AND BANK MANAGEMENT*, *6*(2).

Kogan, L., & Tian, M. H. (2012). Firm characteristics and empirical factor models: A data-mining experiment. *FRB International Finance discussion paper*, (1070).

Larsen, H. S. (1950). The liquidity preference of banks. *The Review of Economic Studies*, *18*(2), 123.

Majumdar, S. K. (1997). The impact of size and age on firm-level performance: some evidence from India. *Review of industrial organization*, *12*(2), 231-241.

Menicucci, E., &Paolucci, G. (2016). The determinants of bank profitability: Empirical evidence from European banking sector. *Journal of Financial Reporting and Accounting*, *14*(1), 86-115.

Naiki, E., &Ogane, Y. (2018). Bank characteristics and bank lending to new firms. *SSRN Electronic Journal*.

Ntuite, S. R. (2018). *Analysis of financial performance of commercial banks in Rwanda: A case study of BPR and I&M bank (BCR). Period of study 2008 to 2013*. GRIN Verlag.

Nyabaga, R. M., &Matanda, J. W. (2020). Effect of firm characteristics on financial performance of listed commercial banks in Kenya. *International Journal of Economics and Financial Issues*, *10*(3), 255-262.

Olweny, T., & Shipho, T. M. (2011). Effects of banking sectoral factors on the profitability of commercial banks in Kenya. *Economics and Finance Review*, *1*(5), 1-30.

Ongore, V. O., & Kusa, G. B. (2013). Determinants of financial performance of commercial banks in Kenya. *International journal of economics and financial issues*, *3*(1), 237-252.

Onjala, V. N. (2012). *Determinants of financial performance of commercial Banks in Kenya* (Doctoral dissertation).

Popkova, E. G., &Sergi, B. S. (2021). *Modern global economic system: Evolutional development vs. revolutionary LEAP*. Springer Nature.

Rissy, Y. Y. (2021). The stakeholder model: Its relevance, concept, and application in the Indonesian banking sector. *Journal of Banking Regulation*, *22*(3), 219-231.

Sankale, A. G. (2019). *Effect of Bank Specific Characteristics on Financial Performance of Commercial Banks in Kenya* (Doctoral dissertation, University of Nairobi).

Siddique, A., Khan, M. A., & Khan, Z. (2021). The effect of credit risk management and bank-specific factors on the financial performance of the South Asian commercial banks. *Asian Journal of Accounting Research*.

Singh, R., & Mangat, N. S. (1996). *Elements of survey sampling*. Springer Science & Business Media.

Staikouras, C. K., & Wood, G. E. (2011). The determinants of European bank profitability. *International Business & Economics Research Journal (IBER)*, *3*(6).

Stierwald, A. (2009). Determinants of firm profitability-the effect of productivity and its persistence. *Melbourne Institute of Applied Economic and Social Research*, *25*.

Sulub, S. A. (2014). Do the bank size, age and leverage are important factors to determine its profitability? *SSRN Electronic Journal*.

Tily, G. (2006). Keynes's theory of liquidity preference and his debt management and monetary policies. *Cambridge Journal of Economics*, *30*(5), 657-670.

Yunanda, R. A. (2011). *The influence of bank and board characteristics: The case of Indonesian commercial banks*.

APPENDICES

Appendix 1: Licensed Commercial Banks operating in Kenya as at 30th September 2021

1. ABSA Bank Kenya Plc

2. Access Bank (Kenya) Plc

3. African Banking Corporation Limited

4. Bank of Africa Kenya Limited

5. Bank of Baroda (Kenya) Limited

6. Bank of India, Kenya

7. Citibank N.A Kenya

8. Consolidated Bank of Kenya Limited

9. Co-operative Bank of Kenya Limited

10. Credit Bank Limited

11. Development Bank of Kenya Limited

12. Diamond Trust Bank Kenya Limited

13. Dubai Islamic Bank Kenya Limited

14. Ecobank Kenya Limited

15. Equity Bank Kenya Limited

16. Family Bank Limited

17. First Community Bank Limited

18. Guaranty Trust Bank (K) Limited

19. Guardian Bank Limited

20. Gulf African Bank Limited

21. Habib Bank AG Zurich

22. I&M Bank Limited

23. Imperial Bank Limited (In receivership)

24. Kingdom Bank Limited

25. Kenya Commercial Bank Kenya Limited

26. Mayfair CIB Bank Limited

27. Middle East Bank (K) Limited

28. M-Oriental Bank Limited

29. National Bank of Kenya Limited

30. NCBA Bank Kenya PLC

31. Paramount Bank Limited

32. Prime Bank Limited

33. SBM Bank Kenya Limited

34. Sidian Bank Limited

35. Spire Bank Limited

36. Stanbic Bank Kenya Limited

37. Standard Chartered Bank Kenya Limited

38. UBA Kenya Bank Limited

39. Victoria Commercial Bank Limited

Source: Central Bank of Kenya official website (2021)

Appendix 2: Data Collected

Bank	Year	ROA	Liquidity	Bank size	Capital adequacy	Asset quality	Bank age
(1). ABSA Bank Kenya Plc	2017	0.0261	0.9041	19.4200	0.1802	0.0556	4.6151
	2018	0.0228	0.8538	19.6000	0.1638	0.0610	4.6249
	2019	0.0185	0.8187	19.7400	0.1666	0.0560	4.6347
	2020	0.0120	0.8234	19.7502	0.1745	0.0702	4.6444
	2021	0.0224	0.8651	19.8763	0.1714	0.0739	4.6539
(2). Access Bank (Kenya) Plc	2017	0.0035	0.8429	16.1419	0.3016	0.2066	3.4965
	2018	-0.0070	0.8263	16.1414	0.1964	0.2211	3.5264
	2019	-0.0090	0.8625	16.0475	0.2015	0.2857	3.5553
	2020	-0.2008	0.4066	16.1327	0.2109	0.0450	3.5835
	2021	0.0103	0.3181	16.3966	0.2398	0.0600	3.6109
(3). African Banking Corporation Limited	2017	0.0066	0.7808	17.0265	0.1511	0.1887	3.5835
	2018	0.0032	0.8017	17.1191	0.1583	0.2042	3.6109
	2019	0.0046	0.8267	17.1717	0.1537	0.1506	3.6376
	2020	0.0039	0.7684	17.3011	0.1520	0.1277	3.6636
	2021	0.0028	0.7296	17.4084	0.1620	0.1748	3.6889
(4). Bank of Africa Kenya Limited	2017	0.0009	0.8674	17.8080	0.1577	0.2816	2.5649
	2018	-0.0036	0.7033	17.6952	0.1573	0.3383	2.6391
	2019	-0.0408	0.4795	17.5996	0.1082	0.4138	2.7081
	2020	-0.0084	0.5364	17.6203	0.1633	0.3987	2.7726
	2021	0.0047	0.5849	17.5848	0.1754	0.3485	2.8332
(5). Bank of Baroda (Kenya) Limited	2017	0.0434	0.5781	18.3812	0.3229	0.0586	3.2189
	2018	0.0337	0.4077	18.6278	0.3466	0.0882	3.2581
	2019	0.0279	0.4006	18.7805	0.3274	0.0828	3.2958
	2020	0.0331	0.3529	18.9294	0.3071	0.1260	3.3322
	2021	0.0229	0.3657	19.0106	0.2998	0.1051	3.3673
(6). Bank of India, Kenya	2017	0.0369	0.6598	17.8521	0.5397	0.0207	4.1589
	2018	0.0309	0.0450	17.9540	0.4392	0.0713	4.1744
	2019	0.0374	0.0003	17.9514	0.4842	0.0936	4.1897
	2020	0.0309	0.2911	18.1347	0.4853	0.0694	4.2047
	2021	0.0329	0.2949	18.2799	0.5220	0.0402	4.2195
(7). Citibank N.A Kenya	2017	0.0404	0.5777	18.4028	0.2555	0.0368	3.7612
	2018	0.0389	0.4825	18.2656	0.2764	0.0162	3.7842
	2019	0.0289	0.4167	18.3858	0.2715	0.0257	3.8067
	2020	0.0291	0.4685	18.4832	0.2251	0.0227	3.8286
	2021	0.0266	0.5324	18.6903	0.1879	0.0139	3.8501
(8). Consolidated Bank of Kenya Limited	2017	-0.0249	0.9739	16.4149	0.0508	0.2042	3.3322

Bank	Year	ROA	Liquidity	Bank size	Capital adequacy	Asset quality	Bank age
	2018	-0.0419	0.9815	16.3717	0.0104	0.2171	3.3673
	2019	-0.0446	0.8400	16.2892	0.1352	0.2568	3.4012
	2020	-0.0126	0.9181	16.3719	0.0916	0.1894	3.4339
	2021	-0.0213	0.7586	16.4746	0.0530	0.2112	3.4657
(9). Co-operative Bank of Kenya Limited	2017	0.0316	0.8834	19.7736	0.2196	0.0702	3.9512
	2018	0.0312	0.8017	19.8399	0.1635	0.1027	3.9703
	2019	0.0326	0.8055	19.9239	0.1577	0.0985	3.9889
	2020	0.0215	0.7593	20.0237	0.1698	0.1650	4.0073
	2021	0.0275	0.7639	20.1078	0.1711	0.1271	4.0254
(10). Credit Bank Limited	2017	0.0092	0.8865	16.4904	0.1585	0.0754	3.4339
	2018	0.0144	0.9934	16.6665	0.1451	0.0724	3.4657
	2019	0.0092	0.9060	16.8855	0.1496	0.0870	3.4965
	2020	-0.0027	0.8862	16.9573	0.1453	0.0957	3.5264
	2021	0.0041	0.7590	17.0695	0.1582	0.2735	3.5553
(11). Development Bank of Kenya Limited	2017	0.0016	1.4721	16.6079	0.2355	0.2098	3.9889
	2018	0.0089	1.4579	16.5449	0.2322	0.2981	4.0073
	2019	0.0703	1.5542	16.5472	0.3146	0.3694	4.0254
	2020	-0.0074	1.3886	16.6619	0.2224	0.3440	4.0431
	2021	0.0000	1.2156	16.6656	0.1952	0.2891	4.0604
(12). Diamond Trust Bank Kenya Limited	2017	0.0203	0.7363	19.4142	0.1901	0.0666	4.2767
	2018	0.0206	0.7123	19.4556	0.2111	0.0661	4.2905
	2019	0.0187	0.7494	19.4759	0.2019	0.0719	4.3041
	2020	0.0108	0.7452	19.5591	0.2248	0.1636	4.3175
	2021	0.0089	0.7050	19.6035	0.2115	0.1244	4.3307
(13). Dubai Islamic Bank Kenya Limited	2017	-0.2298	0.2459	14.7749	0.7005	0.0000	1.0986
	2018	-0.1192	0.6666	15.4739	0.2990	0.0037	1.3863
	2019	-0.0636	0.8288	16.0114	0.1486	0.0095	1.6094
	2020	-0.0378	0.8145	16.4005	0.1616	0.0137	1.7918
	2021	-0.0318	0.8618	16.5578	0.1576	0.1527	1.9459
(14). Ecobank Kenya Limited	2017	-0.0163	0.3747	17.7944	0.1599	0.3769	2.4849
	2018	0.0036	0.2910	17.8130	0.1659	0.1735	2.5649
	2019	0.0021	0.3688	18.1380	0.1621	0.1448	2.6391
	2020	0.0053	0.3026	18.3633	0.1587	0.1186	2.7081
	2021	-0.0062	0.2676	18.4540	0.1724	0.1167	2.7726
(15). Equity Bank Kenya Limited	2017	0.0432	0.7180	19.8229	0.1654	0.0584	3.4965
	2018	0.0368	0.7030	19.8988	0.1395	0.0656	3.5264
	2019	0.0420	0.7590	20.0450	0.1739	0.0815	3.5553
	2020	0.0251	0.6450	20.3192	0.1624	0.1171	3.5835
	2021	0.0304	0.6129	20.5924	0.1880	0.0756	3.6109

Bank	Year	ROA	Liquidity	Bank size	Capital adequacy	Asset quality	Bank age
(16). Family Bank Limited	2017	-0.0146	0.9166	18.0503	0.1986	0.1923	3.4965
	2018	0.0035	0.9084	18.0188	0.1952	0.1617	3.5264
	2019	0.0124	0.8681	18.1831	0.1868	0.1408	3.5553
	2020	0.0117	0.8068	18.3218	0.1785	0.1428	3.5835
	2021	0.0179	0.8116	18.5311	0.2088	0.1420	3.6109
(17). First Community Bank Limited	2017	0.0087	0.6584	16.6697	0.1533	0.4078	2.3026
	2018	-0.0119	0.6175	16.6992	0.0911	0.4881	2.3979
	2019	0.0101	0.6145	16.7528	0.0809	0.4145	2.4849
	2020	0.0085	0.6705	16.9014	0.0928	0.3428	2.5649
	2021	0.0169	0.8014	17.0224	0.0888	0.2598	2.6391
(18). Guaranty Trust Bank (K) Limited	2017	0.0074	0.8721	17.1343	0.2687	0.0865	3.4339
	2018	0.0105	0.7895	17.0472	0.2697	0.1646	3.4657
	2019	0.0122	0.7758	17.1856	0.2626	0.1525	3.4965
	2020	0.0122	0.6138	17.2581	0.2728	0.1836	3.5263
	2021	0.0163	0.7461	17.3507	0.2539	0.1044	3.5553
(19). Guardian Bank Limited	2017	0.0101	0.7330	16.5757	0.2022	0.0896	3.2189
	2018	0.0139	0.6769	16.5997	0.2275	0.0757	3.2581
	2019	0.0112	0.6960	16.6119	0.2220	0.0689	3.2958
	2020	0.0055	0.5963	16.6403	0.2356	0.1084	3.3322
	2021	0.0087	0.4846	16.6911	0.2639	0.1301	3.3673
(20). Gulf African Bank Limited	2017	0.0049	0.7434	17.2596	0.1620	0.0929	2.1972
	2018	0.0039	0.8470	17.3218	0.1866	0.1064	2.3026
	2019	0.0048	0.8150	17.3744	0.1711	0.1534	2.3979
	2020	0.0105	0.6906	17.4439	0.1898	0.1871	2.4849
	2021	0.0118	0.7097	17.4446	0.1909	0.1634	2.5649
(21). Habib Bank AG Zurich	2017	0.0020	1.3509	16.2778	0.1700	0.1799	3.6636
	2018	0.0105	0.4028	16.8845	0.2463	0.0745	3.6889
	2019	0.0097	0.3421	17.0273	0.2729	0.0922	3.7136
	2020	0.0148	0.2930	17.1673	0.2661	0.1029	3.7377
	2021	0.0113	0.2466	17.1192	0.3448	0.0967	3.7612
(22). I&M Bank Limited	2017	0.0309	0.9086	19.0302	0.1858	0.1109	3.7612
	2018	0.0285	0.7486	19.2499	0.1792	0.1103	3.7842
	2019	0.0341	0.7244	19.3538	0.2156	0.1084	3.8067
	2020	0.0306	0.6861	19.4629	0.2203	0.1074	3.8286
	2021	0.0207	0.7111	19.5449	0.2138	0.0975	3.8501
(23). Kingdom Bank Limited	2017	-0.0357	1.5554	16.3709	0.1993	0.1331	2.8904
	2018	-0.0707	1.5539	16.0918	0.2251	0.7895	2.9444
	2019	-0.1088	1.2115	16.0398	-0.0190	0.8022	2.9957
	2020	0.0023	1.1235	17.2527	0.1319	0.9888	3.0445

Bank	Year	ROA	Liquidity	Bank size	Capital adequacy	Asset quality	Bank age
	2021	0.0131	0.7052	17.2752	0.2467	0.9744	3.0910
(24). Kenya Commercial Bank Kenya Limited	2017	0.0367	0.8814	20.1356	0.1612	0.0758	0.6931
	2018	0.0389	0.8776	20.2480	0.1778	0.0628	1.0986
	2019	0.0280	0.8467	20.3291	0.1750	0.0687	1.3863
	2020	0.0246	0.8367	20.5325	0.1935	0.1210	1.6094
	2021	0.0334	0.8475	20.4466	0.2019	0.1596	1.7918
(25). Mayfair CIB Bank Limited	2017	-0.0838	0.1132	15.0819	0.9448	0.0000	0.0000
	2018	-0.0389	0.5682	15.7407	0.2368	0.0000	0.6931
	2019	-0.0419	0.6331	15.9734	0.1775	0.0142	1.0986
	2020	-0.0246	0.5927	16.3594	0.5314	0.0041	1.3863
	2021	0.0024	0.6442	16.4153	0.4031	0.0354	1.6094
(26). Middle East Bank (K) Limited	2017	-0.0049	0.7086	15.4489	0.5708	0.4250	3.5835
	2018	0.0005	0.6175	15.4946	0.4494	0.3825	3.6109
	2019	0.0004	0.8723	15.9516	0.3119	0.1374	3.6376
	2020	0.0112	0.7644	16.2154	0.2794	0.1008	3.6636
	2021	0.0110	0.5889	16.2302	0.2601	0.0833	3.6889
(27). M-Oriental Bank Limited	2017	0.0090	0.9745	16.1740	0.3316	0.0718	2.7081
	2018	0.0078	1.0131	16.1680	0.3093	0.0939	2.7726
	2019	-0.0018	0.7414	16.3327	0.3442	0.1931	2.8332
	2020	0.0021	0.7261	16.3792	0.3047	0.2429	2.8904
	2021	0.0034	0.6353	16.4298	0.2969	0.2829	2.9444
(28). National Bank of Kenya Limited	2017	0.0027	0.5538	18.5154	0.0542	0.4560	3.8918
	2018	0.0066	0.4815	18.5616	0.0369	0.5649	3.9120
	2019	-0.0018	0.5267	18.5343	0.1149	0.4501	3.9318
	2020	0.0018	0.5597	18.6584	0.1030	0.3988	3.9512
	2021	0.0066	0.5627	18.8028	0.1427	0.3304	3.9703
(29). NCBA Bank Kenya PLC	2017	0.0230	0.5865	19.3200	0.1732	0.0831	4.0604
	2018	0.0230	0.6183	19.3170	0.1573	0.0797	4.0775
	2019	0.0124	0.6444	19.9573	0.1858	0.2195	4.0943
	2020	0.0115	0.5762	20.0132	0.1792	0.1329	4.1109
	2021	0.0188	0.5102	20.1195	0.1838	0.1498	4.1271
(30). Paramount Bank Limited	2017	0.0123	0.7639	16.0711	0.2946	0.1056	3.1781
	2018	0.0238	0.6948	16.1067	0.2853	0.1318	3.2189
	2019	0.0087	0.7622	16.1615	0.2450	0.1211	3.2581
	2020	0.0117	0.7369	16.2472	0.2473	0.1129	3.2958
	2021	0.0118	0.6438	16.3371	0.2794	0.1079	3.3322
(31). Prime Bank Limited	2017	0.0474	0.6802	18.1720	0.2248	0.0486	3.2189
	2018	0.0312	0.5174	18.4220	0.3729	0.0606	3.2581

Bank	Year	ROA	Liquidity	Bank size	Capital adequacy	Asset quality	Bank age
	2019	0.0174	0.4569	18.5221	0.4136	0.1018	3.2958
	2020	0.0098	0.4086	18.5883	0.3926	0.1096	3.3322
	2021	0.0339	0.3912	18.6556	0.4157	0.1144	3.3673
(32). Sidian Bank Limited	2017	-0.0219	0.8941	16.7760	0.1646	0.2061	3.4965
	2018	-0.0156	0.7753	17.0470	0.1440	0.2035	3.5264
	2019	0.0032	0.8412	17.0908	0.1793	0.1968	3.5553
	2020	0.0019	0.8344	17.3270	0.1650	0.1074	3.5835
	2021	0.0117	0.8744	17.5390	0.1861	0.1109	3.6109
(33). Stanbic Bank Kenya Limited	2017	0.0170	0.8440	19.3320	0.1684	0.0666	4.0775
	2018	0.0210	0.7652	19.4870	0.1723	0.0945	4.0943
	2019	0.0210	0.7897	19.4947	0.1834	0.0998	4.1109
	2020	0.0157	0.7296	19.5807	0.1811	0.1246	4.1271
	2021	0.0212	0.7726	19.5813	0.1729	0.0984	4.1431
(34). Standard Bank Chartered Kenya Limited	2017	0.0252	0.5919	19.4684	0.1852	0.0896	4.6634
	2018	0.0291	0.5290	19.4669	0.1947	0.1169	4.6728
	2019	0.0284	0.5633	19.5269	0.1773	0.0953	4.6821
	2020	0.0176	0.4745	19.6020	0.1847	0.1087	4.6913
	2021	0.0249	0.4738	19.6299	0.1776	0.1091	4.7004
(35). UBA Kenya Bank Limited	2017	0.0029	1.0925	15.6880	0.3878	0.0436	2.0794
	2018	0.0034	0.5709	16.5450	0.3316	0.1276	2.1972
	2019	0.0027	0.5235	16.5936	0.2537	0.2432	2.3026
	2020	0.0021	0.2504	15.8559	0.2302	0.9113	2.3979
	2021	-0.1235	0.1560	15.9604	0.1257	1.3506	2.4849
(36). Victoria Commercial Bank Limited	2017	0.0240	1.0103	17.0730	0.2274	0.0008	3.4012
	2018	0.0140	0.9504	17.2920	0.2109	0.0286	3.4339
	2019	0.0146	0.9013	17.4010	0.1496	0.0870	3.4657
	2020	0.0135	0.8419	17.4502	0.1879	0.0649	3.4965
	2021	0.0107	0.8839	17.5876	0.1659	0.1435	3.5264