

**EFFECT OF BANK SPECIFIC CHARACTERISTICS ON
FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN
KENYA**

ALFRED GILISHO SANKALE

**A RESEARCH PROJECT SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD
OF THE DEGREE OF MASTER OF SCIENCE IN FINANCE,
SCHOOL OF BUSINESS, UNIVERSITY OF NAIROBI**

2019

DECLARATION

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

Signed: _____ Date: _____

ALFRED GILISHO SANKALE

D63/88373/2016

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

Signed: _____ Date: _____

DR. DUNCAN ELLY OCHIENG' (PhD, CIFA)

Lecturer, Department of Finance and Accounting

School of Business, University of Nairobi

ACKNOWLEDGEMENTS

To God, who made all this possible. All glory unto him.

I would like to thank Dr. Duncan Elly Ochieng' (PhD, CIFA) first and foremost, for agreeing to be my supervisor. I am grateful for his systematic guidance constructive criticism, open door policy and above all for his time and effort as he supervised me throughout the project process.

I would like to acknowledge my Employer for the Facilitation and also for according me flexible working hours that enable me travel from Narok to Nairobi to-and-fro to attend classes; special appreciation to my boss Shedd Simotwo and my colleagues Saitoti Naisuaku and Danson Nkurruna. I also acknowledge my classmates Walter C., Rhodah J., Oscar N., Mercy G., Paul M., K. Tunai, Lemein and C. Gatugi among many others who encouraged me to finish what we started together. Last but not least I thank my family, friends and well-wishers who gave me moral support through this academic journey.

Thank you all.

DEDICATION

This project paper is dedicated to family and well-wishers who have always encouraged and supported me throughout my life. They have been, and still are, the pillar of strength in my life. I thank you.

TABLE OF CONTENTS

DECLARATION.....	ii
ACKNOWLEDGEMENTS	iii
DEDICATION.....	iv
LIST OF TABLES	viii
ABBREVIATIONS	ix
ABSTRACT	x
CHAPTER ONE: INTRODUCTION	1
1.1 Background of the Study.....	1
1.1.1 Bank Specific Characteristics	2
1.1.2 Financial Performance	3
1.1.3 Bank Specific Characteristics and Financial Performance.....	4
1.1.4 Commercial Banks in Kenya	5
1.2 Research Problem	7
1.3 Research Objectives	9
1.4 Value of the Study.....	10
CHAPTER TWO: LITERATURE REVIEW.....	11
2.1 Introduction	11
2.2 Theoretical Framework	11
2.2.1 Stakeholder Theory.....	11
2.2.2 Liquidity Preference Theory	12
2.2.3 Adverse Selection Theory.....	13
2.3 Determinants of Financial Performance	14
2.3.1 Asset Quality.....	14
2.3.2 Bank Size	15
2.3.3 Bank Liquidity	15
2.3.4 Capital Adequacy.....	16

2.3.5 Bank Age	17
2.4 Empirical Review	17
2.4.1 Global Studies.....	17
2.4.2 Regional Studies	18
2.4.3 Local Studies	19
2.5 Conceptual Framework	20
2.6 Summary of the Literature Review and Knowledge Gaps	22
CHAPTER THREE: RESEARCH METHODOLOGY	23
3.1 Introduction	23
3.2 Research Design.....	23
3.3 Population	23
3.4 Data Collection	23
3.5 Diagnostic Tests	24
3.6 Data Analysis	25
3.6.1 Analytical Model	25
3.6.2 Tests of Significance.....	26
CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION	27
4.1 Introduction	27
4.2 Descriptive Analysis	27
4.3 Diagnostic Tests	28
4.3.1 Heteroskedasticity Test.....	28
4.3.2 Normality Test	29
4.3.3 Autocorrelation Test.....	29
4.3.4 Multicollinearity Test.....	30
4.4 Correlation Analysis	31
4.5 Regression Analysis	32
4.6 Discussion of Research Findings	35

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS.....	38
5.1 Introduction	38
5.2 Summary	38
5.3 Conclusions	40
5.4 Recommendations of the Study	41
5.5 Limitations of the Study	42
5.6 Suggestions for Further Research	43
REFERENCES.....	44
APPENDICES	48
Appendix I: List of Commercial Banks in Kenya as at 31 st December 2018	48
Appendix II: Research Data Collection	50

LIST OF TABLES

Table 4.1: Descriptive Statistics	27
Table 4.2: Heteroskedasticity Test.....	28
Table 4.3: Normality Test.....	29
Table 4.4: Autocorrelation Test	30
Table 4.5: Multicollinearity Test	30
Table 4.6: Correlation Analysis	31
Table 4.7: Model Summary	32
Table 4.8: ANOVA.....	33
Table 4.9: Model Coefficients	34

ABBREVIATIONS

ANOVA	Analysis of Variance
CBK	Central Bank of Kenya
DT	Deposit Taking
GDP	Gross Domestic Product
KDIC	Kenya Deposit Insurance Corporation
KSE	Karachi Stock Exchange
NIM	Net Interest Margin
NPL	Non-Performing Loans
NSE	Nairobi Securities Exchange
ROA	Return on Assets
VIF	Variance Inflation Factors

ABSTRACT

Central in finance field is financial performance. The need to explain how two firms operating within the same environment perform differently is a concern and several research works in finance have been devoted towards understanding this mystery. This led to studies which focus on various internal factors and external issues thought to be the cause of differing financial performance. The intent of this inquiry was the determination of how bank specific characteristics influence FP of Kenyan banks. 42 banks in operation as at 31st December 2018 were the population of the study. Data from 38 banks was availed for the study which was 90.48% response rate. The predictor variables were asset quality, capital adequacy, liquidity, bank size and bank age. FP was given by ROA and it was the response variable. Secondary data was acquired for 5 years (January 2014 to December 2018) on an annual basis. Research design was descriptive cross-sectional design whereas association between variables was determined by multiple linear regression model. SPSS version 22 was used in data analysis. An R-square value of 0.339 that can be translated to mean 33.9% of the variations in financial performance of Kenyan banks can be related to the five chosen predictor variables whereas 66.1% in the changes of financial performance of banks was linked to other variables that did not form part of this study. From the study it was further revealed that the predictor variables strongly correlated with FP ($R=0.583$). ANOVA analysis revealed the F statistic was substantial at 5% level with a $p=0.000$. Henceforth, the model was appropriate in providing an explanation of the relationship between the variables. Additionally, results demonstrated that capital adequacy together with bank size were positively and statistically substantial values in this study while asset quality is negatively and statistically substantial alteration on performance. The study discovered that liquidity and age have a statistically unsubstantial influence on FP of banks. The recommendation is that measures should be set up to increase capital adequacy and bank size while simultaneously reducing credit risk as these three has a significant impact on FP. The study further recommends that future researchers should focus on other factors that explain 66.1% of changes in financial performance of banks in Kenya.

CHAPTER ONE: INTRODUCTION

1.1 Background of the Study

Financial performance is a domain of management which has remained and will continue to be the focus of management executives and scholars for a long time to come because of its centrality in the life of an organization. Because of the importance attached to financial performance, great attempts have been made to understand it over time in terms of factors that contributes to its realization or none realization (Abata, 2014). It is beneficial to grasp how firm characteristics affect financial performance (Kolapo, Ayeni & Oke, 2012). Much as the managers of these corporations attempt to influence performance at their functional levels be it either in marketing, finance or operations; there still remains a gap in understanding the combined effects of these firm–level characteristics in a more holistic view (Jensen & Meckling, 1976).

This study drew support from a number of theories for example the stakeholder theory, liquidity preference theory and the adverse selection theory. Stakeholder theory by Freeman (1984) states that the credit markets or loans markets are highly shaped by banks (who are lenders) strategies for the assessment of potential borrowers. Accordingly, lenders usually hike the pricing of credit to a level that they expect to maximize returns. This often excludes borrowers which are small, costly and risky. The theory of adverse selection by Pagano and Jappelli (1993) describes the scenario of a bank which is unable to isolate the risky borrowers from safe borrowers. Liquidity preference theory determines the combination of assets and liabilities that an entity can hold. Therefore, a bank’s decision problem will therefore be on how to balance returns and liquidity, consequently growing its returns (Dafermos, 2009).

The study focused on Kenyan commercial banks, and this choice arises from the fact that the commercial banking sector has been one of the most demanding on managers in terms of performance improvement. In addition, the economy of the country IS dependent on the success of financial institutions (Waithanji, 2016). It is, therefore, thought that since it is necessary for this industry to remain successful, a study has to be conducted to assist the managers in this industry to manage the sector. Consequently, the study will contribute immensely to the improvement of financial performance of this important sector.

1.1.1 Bank Specific Characteristics

These are those characteristic that are unique to banks. This is to mean that they are common to all banks (Yin & Yang, 2013). According to Almajali (2012) bank specific factors are also known as micro factors because they are not generally experienced by the entire population of banks in a given country. In this respect, bank specific factors are those factors that banks have control over. They are mostly resource based and owe their existence to management decisions. It should be noted that the management of firms is responsible for making decisions aimed at achieving the organizational goals. Kusa and Ongore (2013) views that bank specific factors are: asset quality, liquidity, capital adequacy, size of the bank, and age of the bank.

Asset quality is a measure of the total risk tied to assets owned by an individual or a corporate body (Adeyemo & Bamire, 2005). This terminology is common in the banking industry to determine the value at of assets at risk and is the measure of the quotient of non-performing loans and the total gross loans advanced. Liquidity is defined as the degree in which an entity is able to honor the unpaid debts in the next twelve months through cash or cash equivalents for example assets that are short term

can be quickly changed to cash and it is normally measured by quotient of current assets and current liabilities (Adam & Buckle, 2003). Capital adequacy is the owner's contribution which supports the bank's activities and acts as a buffer against negative occurrence and it is usually given by the quotient of core capital and risk weighted assets (Nyanga, 2012).

Bank size determines the extent to which a firm is affected by legal and financial factors. The size of the bank is also closely linked with the capital adequacy because large banks raise less expensive capital and thus generate huge profits (Amato & Burson, 2007). Bank size is usually measured by the book value of total assets held by a bank. Age of the bank is another bank specific characteristic and it is often given by the number of years the bank has been in existence (Liargovas & Skandalis, 2008).

1.1.2 Financial Performance

Almajali, Alamro and Al-Soub (2012) state that it refers to a firm's ability to achieve the range of set financial goals such as profitability. It is a degree of the extent to which a firm's financial benchmarks has been achieved or surpassed. It shows the extent at which financial objectives are being accomplished. As outlined by Baba and Nasieku (2016) it show how a firm puts assets into use in the generation of revenues and thus it gives direction to the stakeholder in their decision making. Nzuve (2016) asserts that the condition of the banking industry largely depends on their financial performance which is used to indicate the strengths and weaknesses of individual banks. Moreover, the government and regulatory agencies are interested on how banks perform for the regulation purposes.

The focus of financial performance is majorly on elements that have a direct alteration to the statements of finance or the firm's reports (Omondi & Muturi, 2013). The

firm's performance is the main external parties' tool of appraisal (Bonn, 2000). Hence this explains why firm's performance is used as the gauge. The attainment level of the objectives of the firm describes its performance. The results obtained from achieving objectives of a firm both internal and external, is the financial performance (Lin, 2008). Several names are given to performance, including growth, competitiveness and survival (Nyamita, 2014).

Measurement of financial performance can be done using a number of ratios, for instance, Net Interest Margin (NIM) and ROA. This shows the capability of the bank to utilize assets to make profits (Milinović, 2014). ROA is calculated by dividing operating profit by total asset ratio which is used for calculating earnings from all company's financial resources. On the other hand, NIM measures the spread of the paid out interest to the lenders of banks, for instance, liability accounts, and the interest income that the banks generates in relation to the value of their assets. Dividing the net interest income by total earnings assets expresses the NIM variable (Crook, 2008).

1.1.3 Bank Specific Characteristics and Financial Performance

The causative associations between firm characteristics and profitability have been studied widely but have yielded varied results. According to Oigo (2015), high financial performance is correlated with level of credit risk management, diversity of revenue channels and control of operational expenses. The study further concluded that capital and liquidity directly influences financially based performance. Profitability of banking institutions is determined by the quality of their loan book. Liquidity has a direct causality on the FP of banks. Delinquency of loans contributes

to the highest risks and consequential losses to the financial institutions (Ongore & Kusa, 2013).

Larger companies are performing better than smaller companies. This is because larger firms enjoy control of the market thus making them access to financial opportunities at a lower cost than the small firms (Pandey, 2015). This as a result means that firm size will experience impact on the results influenced by the firm's size (Nyabwaga, Lumumba, Odondo & Simeyo, 2013). Findings by; Nunes et al., (2008); Dogan (2013), financial performance is negatively impacted by leverage. By learning curve effect, large firms are able to lower their average total fixed costs per unit and also they are positioned at the upper part of the life cycle curve having positive cash flows as well as profits (Liargovas & Skandalis, 2010).

Dang (2011) tested the effectiveness of firm specific factors had on financial performance and it was revealed that financial leverage and bank size had a positive link to ROA, capital adequacy demonstrated the bank's internal strength which enabled it to sustain losses during financial crisis. Sangmi and Tabassum (2011) found that financial institutions that had stable capital were stable and thus recorded better performances. Ayanda et al., (2013) tested factors that affected performance Nigerian banks and the findings were that solvency margin recorded an insignificant relationship with profitability. This view coincides with the observation of Haron (2014) who found an inverse link between solvency margin and ROA.

1.1.4 Commercial Banks in Kenya

The CBK defines a bank as a business which runs, or intends to conduct banking activities in Kenya. Commercial banking business involves accepting deposits, giving credit, money remittances and any other financial services. The industry performs one

of the very important role in the financial sector with a lot of emphasis on mobilizing of savings and credit provision in the economy. According to the Bank Supervision yearly Report (2018), the banking industry comprises of the CBK as the legislative authority. The industry also has 1 mortgage finance, 42 commercial banks and 13 microfinance banks. Among the 42 banks in the country, 30 have local ownership while 12 have foreign ownership. 11 of the 42 are listed at the NSE.

Many changes have been made in the banking sector to improve their way of operation and work on efficiency. These events include an increase in competition for financial services, banking consolidation and technological innovation. The banks therefore are forced to focus more attention on areas enhancing financial performance such as providing services and products more efficiently and controlling costs in banking. The urge to minimize both administrative, operational costs and competition has led to the adoption of mobile banking by banks (Mutua, 2010). Commercial banks enhanced financial performance will make sure that the shareholders get a reward for investing which triggers more investment thus increased economic growth. Poor financial performance alternatively will lead to failure of financial market which may cause a financial crisis that hinders economic growth. Although there is a general register of good performance among Kenyan commercial banks, several are not doing well financially (CBK, 2018).

A report on listed Kenyan commercial banks published by the research team at Cytonn Investments (2018) argue that Kenya is overbanked with a comparatively high proportion of banks to total populace, with 42 commercial banks offering services to a population of 44 million people, compared to 22 banks in Nigeria with a 180 million customer base and 19 South African banks with a 55 million customer base. Over the

last few years, there have been cases of banks collapsing such as the case of Chase bank, poor performance such as National bank and increased mergers as banks strive to survive in the industry. Dubai Banks and Imperial Bank have also been subjected to liquidation with the Kenya Deposit Insurance Corporation (KDIC). This is a clear indication for the necessity of investigation on firm specific factors that might be influencing financial performance and make policy recommendations that would safeguard banks' financial risk and the stakeholders' funds.

1.2 Research Problem

Central in the field of finance is financial performance. The need to explain how two firms operating within the same environment perform differently is a concern and several research works in finance have been devoted towards understanding this mystery. This led to studies which focus on various internal and external issues thought to be the cause of differing financial performance. Some of the firm's characteristics that affect financial performance are firm size, age, leverage, size of the board and liquidity. Firm size is all about vertical integration, already incurred costs and firm profitability in general (Leibenstein, 1976). Age leads to efficiency in operations. Over time, firms discover their competitive strength and learn how to do things better. This brings about specialization which has got positive results on financial performance (Arrow, 1962). Current asset ratios provide insight into a firm's health, the ability for the firm to pay its current liabilities. Firms with high liquid ratios are in a better position of meeting short-term obligations (Dang, 2011).

After the review of CBK regulation on commercial banks in the year 2013, we have witnessed three large commercial banks which are; Dubai, Chase and Imperial banks being placed in liquidation (Dubai Bank) and under receivership (imperial and Chase

Bank) by CBK In 2015 and 2016 because of capital deficiencies, fraud and unsafe financial condition respectively. In the same period, a Sh.1.2 billion loss was recorded by National Bank of Kenya at the close of the 2015 fiscal year which almost equaled their profit of Sh.1.3 billion at the close of the 2014 fiscal year (National Bank, 2016). This depicted clearly that, some Kenya's banks continue to experience problem in financial performance notwithstanding CBK's regulation review in 2013 meant to address the performance improvement issue and commercial banks' financial stability in Kenya (CBK, 2013). However, Other Commercial banks such as; KCB, Equity and Co-operative Banks have shown positive performance since review of regulation by CBK (CBK, annual report, 2015). Thus, in order to deepen understanding why some banks are showing positive performance while other negative, the motive here is to explore the bank specific elements that influence FP among Kenyan commercial banks.

Several global studies have been done in this area on the international context but most focused on individual determinants of FP and not the joint effect. Anjum and Malik (2013) concluded that leverage is directly associated to FP of firms in Pakistan's stock exchange. This study was conducted in a different context and focused on leverage leaving a gap on other firm specific factors. Adams and Buckle (2013) sought to establish the determinants of performance of Bermudian Insurance Companies industry. They revealed that liquidity, underwriting risk and capital structure affected operational performance of the firms.

Regionally, Abdirashid (2017) established that quality of management affect FP of banks in Tunisia. This was centered on only one variable leaving a gap on other causes of banks financial performance. Agbeja et al., (2015) who studied capital

adequacy and profitability of commercial banks in Nigeria found a positive association between bank profitability and capital adequacy. Findings showed that higher levels of equity increased the chances of the banks to report better performance. Other firm specific factors that can influence performance were not evaluated in the study.

Locally, Atsango (2018) conducted an investigation of how firm characteristics affect the profitability of DT-SACCOs in Kenya. Findings showed firm size, asset quality and operational efficiency had a statistically notable effect on profitability while leverage and capital adequacy did not show a notable impact on profitability of DT Sacco's. Nduati (2018) intended to determine how firm specific characteristics influence FP of insurance companies in Kenya and concluded that liquidity was positively but unsubstantially related to financial performance; firm size showed a negative and unsubstantial effect on firm size while leverage had a negative but notable impact on FP. The lack of consensus among previous researchers is reason enough to conduct further study. Additionally, studies done before in Kenya on firm specific characteristics have focused on other industries which is the gap the current study leveraged on by providing a response to the research question; what is the effect of bank specific characteristics on financial performance of commercial banks in Kenya?

1.3 Research Objectives

This study's intent was to determine the predisposition of bank specific characteristics on the FP of commercial banks in Kenya. The specified objectives are:

- i. To determine how asset quality affects FP of banks in Kenya
- ii. To estimate how capital adequacy affects FP of banks in Kenya

- iii. To estimate how liquidity affects FP of banks in Kenya
- iv. To estimate how bank size affects FP of banks in Kenya
- v. To estimate how bank age affects FP of banks in Kenya

1.4 Value of the Study

The results of the research are of great importance to the future researchers, since it can be a point of reference. The findings might also be significant to scholars and researchers, in identifying the research gaps on the related topics of the study as well as reviewing of the empirical literature to institute further areas of research.

The stakeholders of the banking industry will find this research very useful as this study will generate vital information in management of the industry. These stakeholders include researchers, managers in the sector and the legislative authorities in the sector. The management of banks will derive the most out of this since it illuminates ways in which they can utilize bank specific factors as a channel to improve efficiency in their banks.

To the government and other policy makers, this study's inference will help them to guide and formulate policies and criterion that would assist commercial banks and other banks in the sector adopt specific factors that will enhance their financial performance and therefore contribute to the sector performance.

CHAPTER TWO: LITERATURE REVIEW

2.1 Introduction

A review of theories which form the foundation of this study will be presented in this section. In addition, previous research carried before on this research topic and related areas are also discussed. The other sections of this chapter include determinants of financial performance, conceptual framework elaborating the relationship between study variables and a literature summary.

2.2 Theoretical Framework

This is a review of theories explaining how bank specific characteristics and financial performance. The theoretical reviews covered are stakeholder theory, liquidity preference theory and the adverse selection theory.

2.2.1 Stakeholder Theory

Stakeholders' theory developed by Freeman (1984) was to be used as a management tool. It has however since evolved to become a theory of the firm that has high illustrative prospects. The stakeholder theory emulates a conceptual framework that covers business ethics and management that seeks to address the moral and ethical values in managing a business. Stakeholder theory majorly focuses on equilibrium of the interests of the stakeholders as the core consideration of corporate policy. The theory has a large contribution to risk management coming up as an addition to implicit contracts theory as well as other forms of undertakings, including financing and sales (Cornell & Shapiro, 1987).

In various industries, consumer trust and specifically high-tech services, and the specifically involved companies having the ability to maintain the offering of such services onwards, can significantly increase the value of a company. The importance of these implied assertions is however highly reactive to probable costs of financial distress and/or bankruptcy. This is because management practices on corporate risks can front the lowering of these anticipated charges, raising the company's worth (Klimczak, 2005). The stakeholder theory therefore gives a diversified insight into feasible criteria for risks management such as bad debt. The theory has however not been put under trial. A hypothesis investigating financial distress only provides indirect evidence (Judge, 2006). The appropriateness of this theory to the study is that it highlights such effects as insider lending and directors' fraudulent and absurd acquisition of loans. For example, the case of Chase bank Kenya 2016, where one director of the bank borrowed Ksh7.9 billion without security.

2.2.2 Liquidity Preference Theory

Liquidity management is viewed as crucial to the continuity of any institution. This is congruous to the liquidity preference theory, as stated by Modigliani (1944), which suggests that investors preferred short term investments to long term, as these are easily convertible to cash with minimal risk of losing the principal. Contrarily, borrowers prefer long term debt as it eliminates the danger of having to repay under restrictive conditions. As the repayments are spread in the long run, proper financing planning can be put in place in order avoid interrupting normal operations, thus ensuring an entity's survival during adverse conditions.

Bibow (2005) suggests that liquidity preference establishes the balance of assets and liabilities that an entity can hold. Therefore, a bank's decision problem will therefore

be on how to balance returns and liquidity, consequently growing profitability (Dafermos, 2009). The importance of this theory is that it will enable the bank to balance holding short term bonds and long term bonds and hold more of short term securities that are more liquid. Since short term investments are more liquid, a bank can easily convert them into cash, which can then be used to cushion the bank against operational risk that can arise.

2.2.3 Adverse Selection Theory

According to Pagano and Jappelli (1993), it is important for banks to share information as it minimizes adverse selection and improves the banks loans applicant's data. The theory explains asymmetric information concept, showing how it is not easy to differentiate between borrowers who are creditworthy and those who are not (Richard, 2011), which can lead to adverse selection and moral hazard issues. According to the theory, in a market setting, the person who has that possesses extra information on actual thing to be transacted; herein the lender has a bigger hand for optimal negotiation for favorable terms in the transaction compared to the one with lesser information herein, the borrower (Auronen, 2003).

Therefore, one with less information concerning the e same actual item in lieu of transaction is most likely to make either correct or incorrect decisions pertaining to the transaction. Adverse selection has caused a sharp increase in non-performing loans (Bester, 1994; Bofondi & Gobbi, 2003). The theory is crucial to the study since it relates to how highly a firm can charge interest rates that are non-favorable to borrowers concealed as lending risk. This contributes to NPLs because of the burden of payment by clients.

2.3 Determinants of Financial Performance

The determination of a firm's FP can be ascertained by a several factors either intrinsic or extrinsic to the organization. Intrinsic factors differ from one bank to the next and are within a bank's scope of manipulation. These consist of labor productivity, capital size, quality of management, efficiency of management, deposit liabilities, credit portfolio, interest rate, ownership and bank size. Extrinsic factors affecting the a bank's performance are mainly gross domestic product, Inflation, stability of macroeconomic policy, Political instability and the rate of Interest (Athanasoglou, Brissimis & Delis, 2005).

2.3.1 Asset Quality

This shows a bank's asset risk situation and financial strength. Asset quality forecasts the degree of credit risk and among the dynamics which affects the health status of a bank. The value of assets controlled by a specific bank relies on the amount of credit risk, and the assets quality controlled through the bank also relies on liability to particular risks, tendencies on NPLs, and the cost-effectiveness of the debtors to the bank (Athanasoglou et al., 2009). Preferably, this ratio ought to be at a minimum. If the lending books are vulnerable to risk in a smoothly operated bank, this would be reflected by advanced interest margins. On the other hand, if the ratio decreases it entails that the risk is not being appropriately recompensed by margins.

The asset of a bank asset comprises loans portfolio, current and fixed assets, and other investments. Asset quality in most cases gets better with age and size of a bank (Athanasoglou et al., 2005). The main revenue generating assets of banks are loans. The quality of a loan portfolio therefore highly determines the value of a bank. Good quality Assets lowers the losses relating to NPLs, considering the fact that, the

greatest risks that banks face is the losses arising from unmanageable loans (Dang, 2011).

2.3.2 Bank Size

This determines the extent to which a firm is affected by legal and financial factors. The size of the bank is also closely linked with the capital adequacy because large banks raise less expensive capital and thus generate huge profits. Bank size has a positive correlation with ROA indicating that large banks can achieve economies of scales that reduce operational cost and hence help banks to improve their financial performance (Amato & Burson, 2007). Magweva and Marime (2016) link bank size to capital ratios claiming that they are positively related to each other suggesting that as the size increases profitability rises.

According to Amato and Burson (2007), the size of an organization is primarily determined by amount of assets held. An argument can be made that the larger the assets a firm owns, the more its ability to undertake a large number of projects with greater returns in comparison with small firms with a smaller amount of assets. Additionally, the bigger the firm, the larger the amount of collateral that can be pledged in a move to access credit facilities in comparison to their smaller competitors (Njoroge, 2014). Lee (2009) concluded that the amount of assets in control of a firm has a predisposition on the level of profitability of the said firm from one year to the next.

2.3.3 Bank Liquidity

Liquidity is defined as the degree in which an entity is able to honor debt obligations falling due in the next twelve months through cash or cash equivalents for example assets that are short term can be quickly converted into cash. Liquidity results from

the managers' ability to fulfill their commitments that fall due to creditors without having to liquidate financial assets (Adam & Buckle, 2003).

According to Liargovas and Skandalis (2008), liquid assets can be used by firms for purposes of financing their activities and investments in instances where the external finance is not forthcoming. Firms with higher liquidity are able to handle unexpected or unforeseen contingencies as well as cope with its obligations that fall. Almajali et al., (2012) noted that firm's liquidity may have high impact on efficiency of firms; therefore firms should aim at increasing their current assets while decreasing their current liabilities as per his recommendation. However, Jovanovic (1982) noted that an abundance of liquidity may at times result to more harm.

2.3.4 Capital Adequacy

Athanasoglou et al., (2005) defined capital as a significant variable in determining bank financial performance. Capital is the owner's contribution which supports the bank's activities and acts as a buffer against negative occurrence. In capital markets that are not perfect, well-capitalized banks must reduce borrowing so as to support a certain index of assets, and as a result of lower prospective bankruptcy costs they tend to face lower funding costs.

A well-capitalized bank has a signaling effect to the market that a performance above average is to be expected. Athanasoglou et al. (2005) realized that capital contributions positively affected bank profitability, which reflects a good financial standing of banks in Greece. Also, Berger et al. (1987) noted positive causality in all directions between capital contributions and profitability in companies.

2.3.5 Bank Age

According to Sorensen and Stuart (2000), company's age may have an effect on firms' value. They further noted that mature firms may have organizational inactivity which tends to make them inflexible which may result to their inability to appreciate the changes that occur in changing environment. However, Liargovas and Skandalis (2008), noted that mature firms may have more skills because they have been in operation longer thus have more experience having enjoyed the benefits that come from learning and aren't easily prone to the liabilities that result from newness, therefore they tend to have performance that is superior as compared to newer firms.

According to Loderer and Waelchli (2009), the relationship that exists between the company's age and profitability is positive. However, it has also been observed that a firm's performance may at times decline as companies grow older due to the fact that aging may result in abilities, knowledge and skills being outdated thereby resulting to decay in organizations. According to Agarwal and Gort (2002), this may explain why some older companies are usually taken over.

2.4 Empirical Review

Local, regional and international studies support the relationship between firm specific factors and FP, but these studies have produced mixed results.

2.4.1 Global Studies

Anjum and Malik (2013) analysed factors affecting profitability, the determinants profitability included firm size, liquidity, cash conversion cycle, net working capital and sales growth. The empirical investigation assessed the financial related challenges of firms in Pakistani that had floated their stock on Karachi Stock Exchange (KSE). The non-finance firms from period beginning 2003 to year 2010 were utilized as the

sample and the examination adopted Z-score model of firm riskiness level. The results presumed that the leverage is directly associated with financial related performance in Pakistan's stock trade market and it proposes that the utilization of abnormal level of leverage adds to the insolvency of firms.

Adams and Buckle (2013) sought to establish the determinants of performance of Bermudian insurance companies industry. The study adopted a panel data analysis where a total of 47 insurance companies were considered. The study revealed that liquidity, underwriting risk and capital structure affected operational performance of the firms. Further, it was revealed that leverage and low liquidity ratio had a positive predisposition on performance while underwriting risk had a positive effect. Furthermore, the study revealed that the size of the company and market development did not have significant effects on performance of firms.

Akben-Selcuk (2016) did a study spanning amid 2005 to 2014, the study sought to explore factors that influenced the competitiveness of a firm in Borsa Istanbul, panel data was utilized. A longitudinal design was employed and panel data and the findings disclosed that ROA was positively associated with the size, growth, gross sales, and liquidity. Similarly, ROA was adversely associated with R&D outflows and leverage. Additionally, there was higher Tobin's Q ration when debt and liquidity levels were high. The study's limitation is that it was conducted in a developed economy, broadness, and firm competitiveness being considered as the dependent variable.

2.4.2 Regional Studies

Ben-Caleb (2013) conducted a research on liquidity management and profitability of Nigerian manufacturing firms. Representative of 30 manufacturing firms in the Nigeria Stock Exchange listing were employed. The study was for a 5 year period

(2006-2010). Quantitative study was applied. Correlation analysis showed that liquidity ratios (current ratio and quick ratio) are linked in a positive manner to profitability, whereas cash conversion cycle had a negative association. The finding was that liquidity has a small predisposition on profitability of Nigerian manufacturing firms.

Attah-Botchwey (2014) did an examination on the impacts of dividend payment on the shares prices of several Listed Companies on the Ghanaian Stock Exchange. Out of 36 companies, Cal Bank, Eco bank and AngloGold Ashanti along with sixty of their respondents were selected by chance for the study. The use of questionnaires was applied as the primary source of data whereas information pertaining dividend policy was extracted from available fonts. The findings revealed that share price rise as the company's dividends increased.

Agbeja et al., (2015) studied how capital adequacy and profitability of banks in Nigeria relate. The study used a descriptive design and a multiple regression model was used in analysis. A positive association was revealed between bank profitability and capital adequacy. The results showed that a larger equity increased the chances of the banks to report better performance. Other firm specific factors that can influence performance were not evaluated in the study.

2.4.3 Local Studies

Barus, Muturi and Kibati (2017) did an empirical investigation to examine the link between quality of bank assets and FP of Kenyan Saccos. The results showed that the effect that bank asset quality had on FP of Kenyan Saccos was statistically significant. This was clarified by the regressed results that signified that the impact was direct and demonstrated the magnitude by which quality of asset affected the FP of Kenyan

Saccos. The results of regression demonstrated that quality of assets affected the FP of Kenyan Saccos.

Nduati (2018) conducted an investigation of the effect of firm specific characteristics on FP of insurance companies in Kenya. The study period was five years (2013-2017). Descriptive statistics was employed for analysis while inferential statistics were used to evaluate the causal relation between the response and predictor variables. The study established a strong positive and statistically notable correlation between financial performance and solvency margin. The study also showed that liquidity management and FP was positively related but not statistically substantially. There was a negative and insignificant association between (premium retention, firm size) and FP. However, the relation between firm age, financial leverage and FP was negative and significant.

Atsango (2018) did an examination on how firm characteristics affect profitability of DT-SACCOs in Kenya. A descriptive survey design was utilized. The study targeted 135 DT-SACCOs that are fully licensed by SASRA before the study period and have financial data for the five year period of the study from 2013-2017. The data was analyzed with aid of stata where descriptive and inferential statistics were generated. The study concludes that Firm size, asset quality and operational efficiency had statistically significant effect on profitability while leverage and capital adequacy did not show substantial effect on profitability of DT saccos.

2.5 Conceptual Framework

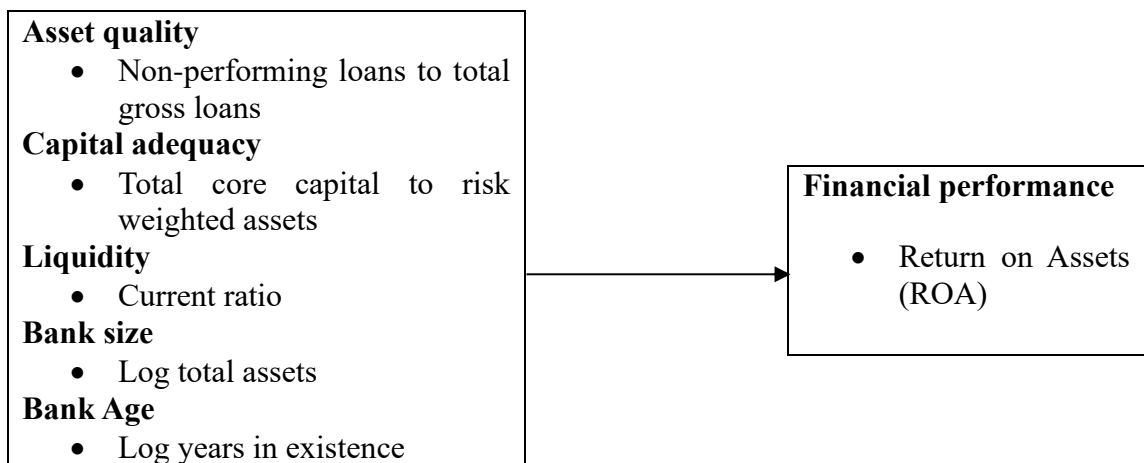
The illustration developed below portrays the expected association existing between the variables. The predictor variables were asset quality as given by the ratio of non-performing loans to total gross loans, capital adequacy as given by the ratio of core

capital to risk weighted assets, liquidity given by liquid assets divided by customer deposits, bank age given by the natural log of the years the bank has operated and bank size given as the natural log of total assets. FP was the response variable that was the study's main focus and it was given by return on assets.

Figure 2.1: The Conceptual Model

Predictor variables

Response variable



Source: Researcher (2019)

2.6 Summary of the Literature Review and Knowledge Gaps

Table 2.1: Summary of Gaps

Author	Focus of Study	Methodology	Findings	Research/Knowledge Gaps
Atsango (2018)	Firm characteristics and profitability DT-SACCOs in Kenya	Descriptive research design with the study population consisting of 135 DT-SACCOs.	Study concludes that Firm size, asset quality and operational efficiency had statistically significant effect on profitability.	A different context was used in the study and therefore findings cannot be generalized to the current context. Some variables such as capital adequacy were not considered.
Nduati (2018)	Firm specific characteristics and FP of Kenyan insurance companies	Descriptive cross-sectional research design was employed and the association between the study variables established using multiple linear regression model	A strong positive and statistically notable correlation between financial performance and solvency margin. Premium retention, firm size were insignificant to financial performance.	The variables considered in this study are different from the one in the current study. In addition, characteristics of insurance companies and banks tend to differ.
Barus et al. (2017)	Quality of bank assets and FP Kenyan saccos.	Descriptive cross-sectional research design was employed and the association between the study variables established using multiple linear regression model.	Results showed that the relation between bank asset quality and FP of Sacco in Kenya was statistically substantial.	The focus was on only one firm specific factor leaving a gap on how other variables influence financial performance

CHAPTER THREE: RESEARCH METHODOLOGY

3.1 Introduction

To ascertain how the financial performance of banks in Kenya is affected by bank specific characteristics, a research methodology was necessary to outline how the research was carried out. This chapter has four sections namely; research design, data collection, diagnostic tests and data analysis.

3.2 Research Design

The research utilized a descriptive cross-sectional research design in the determination of the relation between bank specific characteristics and FP of banks. Descriptive design was utilized as the researcher is more keen on finding out the state of affairs as they exist (Khan, 2008). This design is more appropriate since the researcher is familiar with the phenomenon under study but is keen in finding out the nature of relationships between the study variables. In addition, a descriptive research aims at providing a valid and accurate representation of the study variables and this helps in responding to the research question (Cooper & Schindler, 2008).

3.3 Population

This is the totality of observations of interest from a collection such as persons or events as specified by a research investigator (Burns & Burns, 2008). This study's population comprised of the 42 commercial banks that operated in Kenya as at 31st December 2018. Since the population is finite, a census of the 42 banks was undertaken for the study (see appendix I).

3.4 Data Collection

The source of the secondary data was the published annual financial reports published

by banks operating in Kenya between January 2014 and December 2018 and captured in a data collection sheet. The reports were obtained from the CBK web page and banks annual reports. The end result was annual information concerning the predictor variables and the response variable for the 42 commercial banks in Kenya.

3.5 Diagnostic Tests

Heteroskedasticity is considered to be a presumption of Classical Linear Regression Model (CLRM) which necessitates examination and accounting for in data, where it occurs. If a regression model is run without considering heteroskedasticity, impartial parameter approximations will be realized, but with false standard errors. The heteroskedasticity test was run ascertain if the error terms have a correlation across observation in the time series data. To ensure that the residuals meet these criteria, the Breusch-Pagan test was employed for heteroskedasticity whereby the null hypothesis is that residuals are homoskedastic. Normality tests the presumption that the residual of the response variable have a normal distribution around the mean. The test for normality was done by the Shapiro-wilk test or Kolmogorov-Smirnov test. Autocorrelation measures how similar a certain time series is in comparison to a lagged value of the same time series in between successive intervals of time. This was measured by the Durbin-Watson statistic (Khan, 2008).

Multicollinearity occurs when an exact or near exact relation that is linear is observed between two or several predictor variables. The determinant of correlation matrices were used as a test for multicollinearity which ranges from zero to one. Orthogonal predictor variable indicates that for a complete linear dependence to be ascertained between the variables, the determinant should remain one while it is at zero and multicollinearity increases as it moves closer to zero. Variance Inflation Factors (VIF)

and the levels of tolerance were determined to show how strong multicollinearity is (Burns & Burns, 2008).

3.6 Data Analysis

The SPSS software version 21 was used in the analysis of the data. The researcher quantitatively presented the findings using graphs and tables. Descriptive statistics were employed for summarizing and explaining the study that were observed in banks. The results were presented by use of percentages, frequencies, measures of central tendencies and dispersion displayed in tables. Inferential statistics included Pearson correlation, multiple regressions, ANOVA and coefficient of determination.

3.6.1 Analytical Model

The model below was used:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \varepsilon$$

Where: Y = FP given by return on assets on an annual basis

β_0 = y intercept of equation.

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

X_1 = Asset quality as measured by the ratio of performing loans to total gross loans

X_2 = Capital adequacy as measured by the ratio of total core capital to risk weighted assets

X_3 = Liquidity as measured by total loans to total customer deposits ratio on an annual basis

X_4 = Bank size as given by the natural log of the total assets

X_5 = Age of company as measured by years of existence of the bank

ε = error term

3.6.2 Tests of Significance

Parametric tests were conducted by the researcher to establish the statistical significance of both the overall model and individual parameters. The F-test was used in the determination of the significance of the overall model and it was obtained from Analysis of Variance (ANOVA) while a t-test established statistical significance of individual variables.

CHAPTER FOUR: DATA ANALYSIS, RESULTS AND DISCUSSION

4.1 Introduction

This section details the analysis, findings and elucidation of the secondary data obtained from the CBK and individual banks websites. The aim of the study was determining the effect of bank specific factors on the FP of banks in Kenya. The predictor variables for the study were asset quality, capital adequacy, liquidity, bank size and bank age while the response variable was the FP given by ROA. Regression analysis was adopted to determine the effect between the variables of study in relation to the study's objectives. In ascertaining the suitability of the analytical model, ANOVA was applied. The findings were illustrated by tables and figures.

4.2 Descriptive Analysis

The statistics produces a representation of the mean, minimum and maximum values of variables presented including the standard deviations, skewness and kurtosis. Table 4.1 below displays the qualities of each variable. An output of each variable was extracted using SPSS software for a five-year time frame (2014 to 2018) on an annual basis.

Table 4.1: Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis		
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error	Statistic	Std. Error
ROA	190	-.2440	.0500	.008437	.0355208	-4.370	.176	25.976	.351
Asset quality	190	.0000	.7196	.109688	.1096035	2.170	.176	6.592	.351
Capital adequacy	190	-.2201	1.9617	.241068	.2043338	6.029	.176	47.511	.351
Liquidity	190	.0450	1.7430	.824701	.2488595	.730	.176	2.204	.351

Bank size	190	14.7750	20.3870	17.682179	1.3550603	.165	.176	-1.103	.351
Bank age	190	1.6094	4.6728	3.430888	.6045951	-.666	.176	.290	.351
Valid N (listwise)	190								

Source: Research Findings (2019)

4.3 Diagnostic Tests

The data collected was subjected to diagnostic tests. The study presumed a significance level of 5% or 95% confidence interval so as to make variable deductions on the data adopted. Diagnostic tests were useful for ascertaining the falsity or truth of the data. Therefore, the nearer to 100% the confidence interval, the more accurate the data used is presumed to be. In this case, the tests conducted were Heteroskedasticity tests, normality test Multicollinearity test and autocorrelation test.

4.3.1 Heteroskedasticity Test

The study checked for this using the Likelihood Ratio (LR) as indicated in the Table 4.2. This test used the null hypothesis which stated that the error variance was homoscedastic. A chi-square value of 32.36 was produced by the likelihood-ratio test with a 0.0000 p-value. The chi-square esteem was statistically substantial at 1% level and in this manner the invalid speculation of consistent fluctuation was rejected meaning the nearness of heteroskedasticity in the examination information as suggested by Poi and Wiggins (2001). To deal with this issue the examination utilized the FGLS estimation method.

Table 4.2: Heteroskedasticity Test

Breusch-Pagan / Cook-Weisberg test for heteroskedasticity

Ho: Constant variance

Variables: fitted values of ROA

chi2(1) = 32.36

Prob > chi2 = 0.0000

Source: Research Findings (2019)

4.3.2 Normality Test

Shapiro-wilk test and Kolmogorov-Smirnov test was utilized for normality testing. level of significance in the study was 5%. The outputs of the test are depicted in Table 4.3. The null hypothesis is that data is distributed normally. If the Shapiro-wilk test and Kolmogorov-Smirnov tests contradict, the later test is picked over the former because it is more statistically sound. Since the p value in both tests of all the variables is greater than the α (0.05), then the null hypothesis is not rejected. Hence the data series of all the variables is normally distributed.

Table 4.3: Normality Test

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	Df	Sig.	Statistic	Df	Sig.
ROA						
Asset quality	.173	190	.264	.918	190	.822
Capital Adequacy	.180	190	.264	.894	190	.790
Liquidity	.176	190	.264	.892	190	.784
Bank size	.181	190	.264	.896	190	.792
Bank age	.188	190	.264	.892	190	.788

a. Lilliefors Significance Correction

Source: Research Findings (2019)

4.3.3 Autocorrelation Test

To test for autocorrelation, Durbin-Watson statistic was applied which gave an output of 2.113 as displayed in Table 4.4. The Durbin-Watson statistic ranges from point 0 and point 4. If there exist no correlation between variables a value of 2 is shown. If the values fall under point 0 up to a point less than 2, this is an indication of an autocorrelation and on the contrast a negative autocorrelation exist if the value falls under point more than 2 up to 4. As a common rule in statistics, value falling under the range 1.5 to 2.5 are considered relatively normal whereas values that fall out of the range raise a concern. Field (2009) however, opines that values above 3 and less

than 1 are a sure reason for concern. Therefore, the data used in this panel is not serially autocorrelated since it meets this threshold.

Table 4.4: Autocorrelation Test

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.583 ^a	.339	.321	.0292593	2.113

a. Predictors: (Constant), Bank age, Liquidity, Asset quality, Capital adequacy, Bank size
b. Dependent Variable: ROA

Source: Research Findings (2019)

4.3.4 Multicollinearity Test

This can be defined as a statistical state where more than one predictors are highly correlated in a multiple regression model. It is an unwanted situation for independent variables to have a strong correlation. A combination of variables is said to exhibit high Multicollinearity in case there is one or more exact linear correlation among the study variables. VIF value and Tolerance of the variable were utilized where the values below 10 for VIF and values more than 0.2 for Tolerance imply no Multicollinearity. From the results, all the variables had VIF values <10 and tolerance values >0.2 as illustrated in table 4.5 suggesting no Multicollinearity.

Table 4.5: Multicollinearity Test

Variable	Collinearity Statistics	
	Tolerance	VIF
Asset quality	0.392	2.551
Capital Adequacy	0.398	2.513
Liquidity	0.388	2.577
Bank size	0.376	2.659
Bank age	0.372	2.688

Source: Research Findings (2019)

4.4 Correlation Analysis

This analysis establishes whether there exists an association among two variables. The association falls between a perfect positive and a strong negative correlation. This study utilized Pearson correlation to estimate the level of association between ROA and asset quality. The study employed a confidence interval of 95%, as it is the most utilized in social sciences. A two tailed test was utilized. Table 4.6 shows the correlation analysis outcome.

Existence of a negative and statistically substantial correlation ($r = -.379$, $p = .000$) between asset quality and FP was revealed. Further results discovered a positive and significant correlation between bank size and commercial banks' performance as demonstrated by ($r = .511$, $p = .000$) existed. Bank age was also noted to have a positive and significant association with performance as evidenced by ($r = .215$, $p = .003$). Liquidity and capital adequacy exhibited a positive relationship with FP but the association was not statistically substantial as evidenced by p values above 0.05. The study further found that although there was an association between the independent variables, it was not strong enough to result to Multicollinearity. Existence of an exact or a perfect among the predictor variables makes it challenging to derive dependable estimations of individual coefficients. Thus, it leads to improper conclusions of the relationships among the predictor and the response variables.

Table 4.6: Correlation Analysis

		ROA	Asset quality	Capital adequacy	Liquidity	Bank size	Bank age
ROA	Pearson Correlation Sig. (2-tailed)	1					
Asset quality	Pearson Correlation Sig. (2-tailed)	-.379**	1				
		.000					

Capital adequacy	Pearson Correlation	.089	-.157*	1			
	Sig. (2-tailed)	.222	.030				
Liquidity	Pearson Correlation	.036	-.059	-.210**	1		
	Sig. (2-tailed)	.618	.422	.004			
Bank size	Pearson Correlation	.511**	-.289**	-.122	-.080	1	
	Sig. (2-tailed)	.000	.000	.093	.272		
Bank age	Pearson Correlation	.215**	-.113	-.078	.045	.495**	1
	Sig. (2-tailed)	.003	.122	.284	.534	.000	

** . Correlation is significant at the 0.01 level (2-tailed).
* . Correlation is significant at the 0.05 level (2-tailed).
c. Listwise N=190

Source: Research Findings (2019)

4.5 Regression Analysis

At significance level of 5%, a regression analysis was accomplished between FP and the five predictor variables selected for this study. The F critical value was compared against the F calculated.

Table 4.7: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.583 ^a	.339	.321	.0292593	2.113

a. Predictors: (Constant), Bank age, Liquidity, Asset quality, Capital adequacy, Bank size
b. Dependent Variable: ROA

Source: Research Findings (2019)

From table 4.7, the R-square value was 0.339, implying that 33.9 % of the deviations in FP of commercial banks is caused by changes in asset quality, capital adequacy, liquidity, bank size and bank age. Other factors not incorporated in the model are attributed to 66.1% of the changes in FP. The correlation coefficient (R) value of 0.583 shows that there exists a strong relationship between the independent variables included in the study and financial performance.

Table 4.8 provides the outcomes of the ANOVA; the essence of F-test was to establish how significant model. The formulae for calculating the critical value for the F test is;

$$F = (SSE_1 - SSE_2 / m) / SSE_2 / n-k$$

Where;

SSE = Residual sum of squares,

m = No. of restrictions

k = No. of independent variables.

A critical value of 2.46 was obtained from the F-Test tables. The F statistic indicated in the study findings is more than the critical value, thus the whole model is significant to predict FP.

Table 4.8: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
1 Regression	.081	5	.016	18.910	.000 ^b
Residual	.158	184	.001		
Total	.238	189			

a. Dependent Variable: ROA

b. Predictors: (Constant), Bank age, Liquidity, Asset quality, Capital adequacy, Bank size

Source: Research Findings (2019)

So as to ascertain the significance of each variable individually in this research as a predictor of the performance of banks, it was important for t-test to be employed. P-value was utilized to indicate how significant the relationship between the response and the predictor variables was. Confidence level at 95% and value of p below 0.05 was understood as an index of statistical significance of the concepts. Therefore, a p-

value of more than 0.05 depicts an insignificant relationship between the variables.

The outcomes are demonstrated in table 4.9.

Table 4.9: Model Coefficients

Model	Unstandardized Coefficients		Standardized Coefficients	t	Sig.
	B	Std. Error	Beta		
(Constant)	-.221	.034		-6.562	.000
Asset quality	-.070	.021	-.215	-3.326	.001
Capital adequacy	.023	.011	.132	2.071	.040
Liquidity	.013	.009	.093	1.493	.137
Bank size	.013	.002	.496	6.742	.000
Bank age	-.003	.004	-.049	-.703	.483

a. Dependent Variable: ROA

Source: Research Findings (2019)

The coefficients are used as an indicator of the magnitude and direction of the relation between the predictors and the response variable. The T values were applied to establish the significance of the relationship of the predictor variable to the response variable. The values obtained are contrasted to the critical values. A confidence interval of 95% and a two tailed T test critical value of ± 2.04523 was obtained from the T test tables. A T test value that lies out of this range is significant.

The results revealed that capital adequacy and bank size have positive and significant influence on FP. Implication of this is that a unit increment in either capital adequacy or bank size will result to an increment in FP by 0.023 and 0.013 respectively. The findings further revealed that asset quality was significantly and negatively related to FP of banks in Kenya. This implies that increasing asset quality by a unit will decrease FP by -0.070. The findings further revealed that liquidity and bank age has an insignificant influence on financial performance. The constant coefficient -0.221 implies that when the five selected independent variable have a zero value, financial performance would be equal to the figure.

The regression equation below was thus estimated:

$$Y_i = -0.221 - 0.070X_1 + 0.023X_2 + 0.013X_3$$

Where;

Y_i = Return on Assets

X_1 = Asset quality

X_2 = Capital adequacy

X_3 = Bank size

4.6 Discussion of Research Findings

The researcher was seeking to assess how bank specific factors affect commercial banks' FP. Asset quality, capital adequacy, liquidity, bank size and bank age were the predictor variables in this study while FP of commercial banks given by ROA was the response variable. The adequacy of the overall model in predicting FP was examined. The influence of each predictor variable on the response variable was also examined with respect to strength and direction.

From the correlation, a negative and statistically notable correlation between asset quality and financial performance exists. Further, a positive and significant correlation between bank size and commercial banks' performance existed. Bank age was also noted to have a positive and substantial association with performance. Only capital adequacy and liquidity were found to have a positive but insignificant link with FP.

The independent variables from the model summary revealed that: Asset quality, capital adequacy, liquidity, bank size and bank age explains 33.9% of variations in the response variable as shown by R square which derives an implication that other factors not considered in the model explain the 66.1% of variations in performance.

The model was fit at 95% confidence level because the F-value is 18.910. This signifies that the model adopted is appropriate for predicting and explaining how the independent variables affect commercial banks' FP. This implies that asset quality, capital adequacy, liquidity, bank size and bank age are good predictors of financial performance.

This study agrees with Agbeja et al., (2015) who studied capital adequacy and profitability of commercial banks in Nigeria. The study used a descriptive design and a multiple regression model was used in data analysis. The study revealed a positive association between bank profitability and capital adequacy. The results showed that higher equity increased the chances of the banks to report better performance. Other firm specific factors that can influence performance were not evaluated.

The study agrees with one done by Barus, Muturi and Kibati (2017) who did an empirical investigation to examine the link between quality of bank assets and financial performance of Kenyan Saccos. The results showed that the relationship between bank asset quality and financial performance of Sacco in Kenya was statistically significant. This was clarified by the results of regression analysis that demonstrated that the impact was direct and demonstrated the magnitude by which quality of asset affected the FP of Kenyan Saccos. The results of regression analysis demonstrated that quality of assets affected the FP of Saccos in Kenya.

The study findings partly differ with that conducted by Atsango (2018) who did an examination on how firm characteristics affect profitability of DT-SACCOs in Kenya. A descriptive survey design was used in the study. The study targeted 135 DT-SACCOs that are fully licensed by SASRA before the study period and have financial data for the five year period of the study from 2013-2017. The data was analyzed with

aid of stata where descriptive and inferential statistics were generated. The study concludes that Firm size, asset quality and operational efficiency had a statistically substantial effect on profitability while leverage and capital adequacy did not show substantial effect on profitability of DT saccos.

CHAPTER FIVE: SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

The main goal of the study was determining how bank specific factors influence performance of Kenyan banks. This chapter shows the results from the previous chapter, conclusion, and limitations encountered during the study. Moreover, it recommends policies that policy makers can use. Additionally, the chapter gives recommendations for future researchers.

5.2 Summary

The aim of the research was to ascertain how bank specific factors influence FP of banks in Kenya. To conduct the study, the chosen bank specific factors were asset quality given by the ratio of NPL to total loans, capital adequacy as given by the ratio of core capital to risk weighted assets, liquidity as measured by liquid assets divided by customer deposits, bank size given as the natural log of total assets and age of the firm measured by years in existence of the firm. FP was the response variable that formed the scope of the study and it was given by return on assets. The researcher reviewed available theoretical foundations and empirical reviews to get an understanding of the generally accepted relationships among the selected response and predictor variables. From this review, a conceptual framework was developed that hypothesized the expected association between the study variables.

Descriptive research design was employed. All the 42 commercial banks as at December 2018-year end comprised the population of this study and from this study, data was obtained from 38 banks giving a response rate of 90.48%. Secondary data in nature was acquired from CBK and individual banks financial reports for a time frame

of 5 years spanning 2014 to 2018 was used. The researcher carried out descriptive, correlation analysis as well as regression analysis. So as to confirm that the data is fit for analysis the researcher transformed the data using natural logarithms and conducted diagnostic tests to make sure that the data has the required characteristics before conducting inferential statistics. Regression analysis was applied in testing the strength of the association between the study variables and to test both the significance of the overall model and individual parameters. SPSS software version 22 was used to carry out the analysis.

Pearson correlation showed that asset quality had a substantial negative predisposition on FP. Further a positive and significant correlation between bank size and commercial banks' performance existed. Bank age was also noted to have a positive and significant association with performance. Liquidity and capital adequacy were found to have a positive but insignificant link with performance.

The coefficient of determination shows the disparities in the response variable triggered by variations from the predictor variable. From the results, R square was found to be 0.339, a revelation that 33.9% of the changes in performance stems from variations in asset quality, capital adequacy, liquidity, bank size and bank age. Alternative factors beyond those in the model justify for 66.1% of these changes in financial performance. The findings showed a strong correlation between the chosen variables and the FP of banks ($R=0.583$). Results from the ANOVA test showed that the F statistic was at significance level of 5% and a $p=0.000$ rendering the model appropriate for providing an explanation of the relation between the variables studied.

The study further found that an increment in a unit in capital adequacy or bank size will result to an increment in FP by 0.023 and 0.013 respectively. The findings further

revealed that asset quality has a significant negative influence on FP of banks in Kenya. This implies that a unit increase in asset quality will result in a decrease in FP by -0.070. The findings further revealed that liquidity and bank age has no notable influence on FP. The constant coefficient -0.221 implies that when the five selected independent variable have a zero value, financial performance would be equal to the figure.

5.3 Conclusions

The findings of this study show that the FP of Kenyan banks is notably impacted by asset quality, capital adequacy and bank size. This research shows that an increment in a unit in capital adequacy or bank size significantly increases the FP of commercial banks while an asset quality increment by a unit will significantly lower the FP of banks in Kenya. It also showed that liquidity and bank age were not statistically significant in determining performance and hence the study deduced that the said factors do not have a profound effect on performance.

The conclusion of this study is that the independent variables selected for this study to a larger extent have a notable predisposition to bank performance in Kenya. The conclusion that these variables have a notable impact on the performance of banks given the p value in anova summary is hence correct. The finding that 33.9% of the variations in the response variable are from the five factors listed implies that 66.1% variations result from other factors outside the model.

The study agrees with one done by Barus, Muturi and Kibati (2017) who did an empirical investigation to examine the link between quality of bank assets and FP of Saccos in Kenya. Findings revealed that the relationship between bank asset quality and financial performance Kenyan Saccos was statistically significant. This was

clarified by the results of regression analysis that demonstrated that the impact was direct and demonstrated the magnitude by which quality of asset affected the FP of Saccos in Kenya. The results of regression analysis demonstrated that quality of assets affected the FP of Saccos in Kenya.

The study findings partly differ with that conducted by Atsango (2018) who did an examination on how firm characteristics affect profitability of DT-SACCOs in Kenya. The research adopted a descriptive survey design. The study targeted 135 DT-SACCOs that are fully licensed by SASRA before the study period and have financial data for the five year period of the study from 2013-2017. The data was analyzed with aid of stata where descriptive and inferential statistics were generated. The study concludes that Firm size, asset quality and operational efficiency had statistically significant effect on profitability while leverage and capital adequacy showed an insignificant effect on profitability of DT saccos.

5.4 Recommendations of the Study

Leveraging on the study findings, below recommendations have been drawn. The study recognized that there exists a negative and significant influence of asset quality on FP of banks. Thus, the study findings were that an increase in a bank's NPL's relative to total loans will significantly influence financial performance and in a negative way. It is recommended that policy makers should prioritize asset quality when crafting policies to enhance ROA. It can also be recommended to financial institutions, and their boards that credit risk should be considered when carrying out strategic management practices to boost profitability. Thus, it is necessary to adopt sufficient measures by managers of these banks to raise their FP by reducing the level of NPLs in their books. Commercial banks in Kenya should work on increasing their

asset quality by undertaking measures such as stringent vetting of customers and other controls.

The study showed that FP showed a positive impact with the size of the bank. A recommendation is that banks' management and directors should focus on increasing their asset base by formulating measures and policies centered on enlarging the banks' assets since this has a direct impact on how they perform financially. The results of the study show that the larger the bank (in terms of asset base), the higher the expectation of superior performance in comparison to smaller banks and hence more focus should be on growing their asset base.

A positive relationship between FP and capital adequacy position was found to exist in this study. Some of the recommendations of this study that will enable policy change include: a heavy investment by banks in capital adequacy since it will enable an improvement in the FP of the banks. It is the task of the Government through the Central bank to formulate policies that will create an enabling environment for commercial banks to operate and increase their capital adequacy as this will favor growth of the economy.

5.5 Limitations of the Study

The study was confronted with limitations including; the data used was secondary in nature and the researcher is not aware of its authenticity and reliability based on its collection and storage and alterations that might have been done on it.

The study adopted the analytical approach which is highly scientific. The research also disregarded qualitative information which could explain other factors that influence the association between asset quality and banks' performance. The study

should have rather considered utilizing focus group discussions, open ended questionnaires or interviews so as to come up with more concrete results.

The research concentrated on 5 years (2014 to 2018). It is not certain whether the findings would hold for a longer time frame. It is also unclear as to whether similar outcomes would be obtained beyond 2019. The study should have been executed over a longer time frame in order to incorporate major forces such as booms and recession.

5.6 Suggestions for Further Research

A suggestion is given that more research ought to include a qualitative analysis on how bank specific factors and FP of Kenyan banks relate. That study would deal with interviewing of vital respondents in the banks and this would reveal concealed insights into the fine detailed relationship between bank specific factors and FP of banks.

The study didn't exhaust all the independent variables influencing performance of Kenyan banks and a recommendation is given that more studies be carried out to constitute other variables for instance ownership structures, industry practices, growth opportunities, political stability and management efficiency. Determining the impact of each variable on FP shall enable the policy makers to understand the tools that can be used to control performance.

The research only focused on the financial institutions. The study's recommendations are that further studies be carried out on other sectors in Kenya. Finally, as a result of regression models' limitations, other models including the VECM model may be applied in explanation of the various relationships among variables.

REFERENCES

- Abata, M. A., (2014). Assets quality and bank performance: A study of commercial banks in Nigeria, *Research Journal of Finance and Accounting*, 5 (18), 39 – 44
- Abdirashid, Y. A. (2017). *Factors Causing Corporate Financial Distress in Commercial Banking Sector in Kenya: A Case of Chase Bank* (Doctoral dissertation, United States International University-Africa).
- Adams, M. & Buckle, M. (2013). The determinants of corporate financial Performance in the Bermuda Insurance Market. *Applied Financial Economics*, 13(2), 133-143
- Agbeja, O., Adelokun, O. J., & Olufemi, F. I. (2015). Capital Adequacy Ratio and Bank Profitability in Nigeria: A Linear Approach. *International Journal of Novel Research in Marketing Management and Economics*, 2(3), 91-99.
- Akben-Selcuk, E. (2016). Factors affecting firm competitiveness: Evidence from an Emerging Market, *International Journal of Financial Studies*, 1, 4, 19-27

- Almajali, Y.A., Alamro, S.H., & Al-Soub, Y.Z (2012). Factors affecting financial performance of Jordanian insurance companies listed at Amman stock exchange. *Journal of Management Research*, 4(2), 91-101
- Amato, L. &Burson, T. (2007). The Effects of Firm Size on Profit Rates in the Financial Service, *Journal of Economic and Economic Research*, 8(1), 61- 81
- Anjum, S., & Malik, Q. A. (2013). Determinants of corporate liquidity-An analysis of cash holdings. *Journal of Business and Management*,7(2), 94-100
- Arrow, J. (1962). *The potentials and limits of the market in resource allocation in* Feiwel, G.R. (ed.), *Issues in contemporary microeconomics and welfare*, London, The Macmillan Press, 107-124
- Athanasoglou, P.,Brissimis, S., & Delis, M. (2005). Bank-Specific, Industry-Specific and Macroeconomics Determents of Bank Profitability, *Bank of Greece*, No. 25
- Athanasoglou, P., Sophocles, B., &Matthaois, D. (2009). Bank-specific, industry-specific and macroeconomic determinants of Bank profitability. *Journal of International Financial Markets, Institutions and Money*. [Online] 121-136. Available from: <http://ssrn.com/abstract:1106825>
- Atsango, A. (2018). *Effect of firm characteristics on profitability of deposit taking Savings and Credit Cooperative Societies in Kenya*. Unpublished MSc project, University of Nairobi
- Baba, F., & Nasieku, A.M. (2001). What do financial intermediaries do? *Journal of Banking & Finance*, 25(3), 271–294.
- Barus, J. J., Muturi, W., Kibati, P., & Koima, J. (2017). Effect of Management Efficiency on Financial Performance of Savings and Credit Societies in Kenya. *Journal of Strategic Management*, 2(1), 92-104
- Burns, N. & Burns, S. (2008). *The Practice of Nursing Research: Conduct, Critique and Utilization: 5th Edition*: St Louis, Elsevier Saunders
- Central Bank of Kenya (2013).*Annual Reports*, Central Bank of Kenya, Nairobi.
- Central Bank of Kenya (2018).*Bank supervision annual reports*.CBK. Nairobi.
- Cooper, R., & Schindler, S. (2008). *Business research methods*. New York: Mc Grawhill
- Crook, H. (2008). *Open Services Innovation*. London: John Wiley & Sons
- Dang, U. (2011). The CAMEL rating system in banking supervision. A case Study. *Academy of Management Journal*, 5,6, 111-123
- Flannery, M., &Protopapadakis, W. (2002).Macroeconomic Factors that Influence Aggregate Stock Returns.*The Review of Financial Studies*, 7(4)751-782.
- Freeman, E. R. (1984). *Stakeholder Theory*. Cambridge: Cambridge University Press.

- Haron, S. (2014). Determinants of Islamic Bank Profitability, *Global Journal of Finance and Economics*, 1, 23,122-127
- Jensen, M. C., & Meckling, W. H. (1976). Theory of the firm: Managerial behavior, agency costs and ownership structure. *Journal of Financial Economics*, 3(4), 305-360
- Jovanovic, B. (1982). Selection and the evolution of industry. *Econometrics*, 50,649-670
- Judge, W. Q. (2006). Institutional predictors of corporate governance legitimacy. *Journal of Management*, 3(1), 412-425.
- Kajirwa, H. I. (2015). Effects of Debt on Firm Performance: A Survey of Commercial Banks Listed on Nairobi Securities Exchange. *Global Journal of Advanced Research*, 2(6), 1025-1029
- Khan, J. A. (2008). *Research Methodology*. New Delhi. APH Publishing Corporation
- Kwon, A. & Song, I. (2011). Capital Structure and Firm Performance: Evidence from Iranian Companies. *International Research Journal of Finance and Economics*, 70, 20-29
- Lee, J. (2009). Does The Size Matter in Firm Performance? Evidence from US Public Firms, *Internal Journal of the Economic of Business*, 16(2), 199- 203
- Leibenstein, H. (1976). *Beyond Economic Man*. Cambridge, MA: Harvard University Press
- Liargovas, P.& Skandalis K. (2008). *Factors affecting firm's financial performance*. The case of Greece, Athens. University of Peloponnese Press.
- Magweva, R., &Marime, N. (2016). Bank specific factors and bank performance in the multi-currency era in Zimbabwe. *African Journal of Business Management*, 10(15), 373-392
- Mazlan, N. F., Ahmad, N., & Jaafar, N. (2016). Bank Fragility and Its Determinants: Evidence from Malaysian Commercial Banks. In *Proceedings of the 1stAAGBS International Conference on Business Management 2014 (AiCoBM2014)* (pp. 547-555). Springer, Singapore.
- Milinic C. (2014). Business performance and strategic new product development activities: An empirical investigation. *Journal of Product Innovation Management*, 12(2), 214-23.
- Mutua R. W. (2013). *Effects of mobile banking on the financial Performance of commercial banks in Kenya*, Unpublished MBA Thesis, University of Nairobi.
- Mwangi, M. &Murigu, J. (2015).The Determinants of Financial Performance in General Insurance Companies in Kenya. *European Scientific Journal*, 11(1), 288 – 297

- Nduati, M. (2018). *Effect of firm specific characteristics on financial performance of insurance companies in Kenya*. Unpublished MSc project, University of Nairobi
- Njoroge, A. (2014). *Relationship between capital structure and financial performance*. An unpublished masters project from the University of Nairobi
- Nyamita, M. O. (2014). *Factors Influencing Debt Financing and Its Effects on Financial Performance of State Corporations in Kenya*. Doctorate Thesis. Durban University of Technology.
- Nyanga, O. (2012). *Determinants of financial performance of commercial Banks in Kenya*. Unpublished MBA Project, University of Nairobi.
- Nzuve, I. (2016). *Financial performance measurement of manufacturing small and medium enterprises in Pretoria: A multiple exploratory case study*. Unpublished Project. University Of South Africa
- Odira, J. (2018). *Effect of firm specific characteristics on financial performance of firms, evidence from general insurance companies in Kenya*. Unpublished MSc project, University of Nairobi
- Omondi, O. M. & Muturi, W. (2013). Factors Affecting the Financial Performance of Listed Companies at the Nairobi Securities Exchange in Kenya. *Research Journal of Finance and Accounting*, 4 (15), 99 – 104.
- Ongore V.O and Kusa G.B (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues*, 3(1), 237-252.
- Pandey, I. M. (2010). *Financial Management* (10 ed.). New Delhi: VIKAS Publishing House PVT Ltd
- Rao, K. R. M., & Lakew, T. B. (2012). Determinants of Profitability of Commercial Banks in a Developing Country: Evidence from Ethiopia, *International Journal of Accounting and Financial Management Research*, 2(3), 1-20
- Sun H. & Zhang P. (2006). The role of moderating factors in user technology acceptance, *Journal of Human-Computer Studies*, 64(1), 53-78
- Umoru, D., & Osemwegie, J. O. (2016). Capital Adequacy and Financial Performance of Banks in Nigeria: Empirical Evidence Based on the Fgls Estimator. *European Scientific Journal*, 12(25), 11-19
- Waithanji, M.N. (2016). *Effect of agent banking as a financial deepening initiative in Kenya*. MBA Project, University of Nairobi.
- Wambari, P. A. M (2009). *Mobile banking in developing countries. A case study on Kenya*. Unpublished Master's Thesis, University of Capetown
- Wernerfelt B. (1984). Alternative Methods of Learning and Process Improvement in Manufacturing, *Journal of Operations Management*, 16, 1-20.

Yin, H. & Yang, J. (2013). Bank characteristics and stock reactions to federal funds rate target changes. *Applied Financial Economics*, 23(23), 1755-1764.

APPENDICES

Appendix I: List of Commercial Banks in Kenya as at 31st December 2018

1. ABC Bank (Kenya)
2. Bank of Africa
3. Bank of Baroda
4. Bank of India
5. Barclays Bank of Kenya
6. Chase Bank Kenya (In Receivership)
7. Citibank

8. Commercial Bank of Africa
9. Consolidated Bank of Kenya
10. Cooperative Bank of Kenya
11. Credit Bank
12. Development Bank of Kenya
13. Diamond Trust Bank
14. Dubai Islamic Bank
15. Ecobank Kenya
16. Equity Bank
17. Family Bank
18. First Community Bank
19. Guaranty Trust Bank Kenya
20. Guardian Bank
21. Gulf African Bank
22. Habib Bank AG Zurich
23. Housing Finance Company of Kenya
24. I&M Bank
25. Imperial Bank Kenya (In receivership)
26. Jamii Bora Bank
27. Kenya Commercial Bank
28. Mayfair Bank
29. Middle East Bank Kenya
30. National Bank of Kenya
31. NIC Bank
32. Oriental Commercial Bank
33. Paramount Universal Bank
34. Prime Bank (Kenya)
35. SBM Bank Kenya Limited
36. Sidian Bank
37. Spire Bank
38. Stanbic Bank Kenya
39. Standard Chartered Kenya
40. Trans National Bank Kenya

41. United Bank for Africa

42. Victoria Commercial Bank

Source: CBK (2019)

Appendix II: Research Data Collection

Bank	Year	ROA	Asset quality	Capital adequacy	Liquidity	Bank size	Bank age
ABC Bank	2014	0.0070	0.0507	0.1723	0.8514	16.9100	3.4965
	2015	0.0080	0.1426	0.1645	0.9676	16.9340	3.5264
	2016	0.0030	0.1566	0.1528	0.8750	16.9450	3.5553
	2017	0.0060	0.1829	0.1560	0.7638	17.0580	3.5835
	2018	0.0000	0.1989	0.1844	0.7855	17.1450	3.6109
Bank of Africa	2014	0.0020	0.0475	0.1592	0.8776	18.1600	2.3026
	2015	-	0.2325	0.1639	0.7960	18.0540	2.3979
	2016	0.0000	0.2606	0.1616	0.9152	17.8410	2.4849

Bank	Year	ROA	Asset quality	Capital adequacy	Liquidity	Bank size	Bank age
	2017	0.0010	0.2816	0.1578	0.8675	17.8080	2.5649
	2018	0.0040	0.3383	0.1602	0.7034	17.7090	2.6391
Bank of Baroda	2014	0.0360	0.0440	1.8796	0.4417	17.9420	3.0910
	2015	0.0300	0.0754	1.9617	0.5362	18.0380	3.1355
	2016	0.0360	0.0846	0.3053	1.0000	18.2330	3.2581
	2017	0.0410	0.0586	0.3229	1.0000	18.3810	3.2189
	2018	0.0320	0.0987	0.3466	0.8940	18.6280	3.2581
Barclays Bank	2014	0.0370	0.0363	0.1596	0.7624	19.2350	4.1109
	2015	0.0350	0.0054	0.1840	0.8834	19.3000	4.1271
	2016	0.0280	0.0095	0.1786	0.9457	19.3750	4.1431
	2017	0.0260	0.0114	0.1803	0.9055	19.4200	4.1589
	2018	0.0230	0.0184	0.1638	0.8551	19.6000	4.1744
Bank of India	2014	0.0300	0.0056	0.3941	0.5017	17.3530	4.0943
	2015	0.0260	0.0202	0.4230	0.7255	17.5570	4.1109
	2016	0.0340	0.0139	0.4574	0.7201	17.6830	4.1271
	2017	0.0370	0.0207	0.5397	0.6598	17.8520	4.1431
	2018	0.0310	0.7196	0.4392	0.0450	17.9540	4.1589
Citibank	2014	0.0310	0.0238	0.2730	0.4694	18.1900	3.6889
	2015	0.0390	0.0580	0.2832	0.4293	18.2950	3.7136
	2016	0.0330	0.0192	0.2637	0.4391	18.4530	3.7377
	2017	0.0400	0.0368	0.2555	0.5777	18.4030	3.7612
	2018	0.0370	0.0162	0.2764	0.4825	18.2660	3.7842
Commercial Bank of Africa	2014	0.0170	0.0708	0.1791	0.6449	19.1010	3.8501
	2015	0.0170	0.1059	0.1792	0.6294	19.1890	3.8712
	2016	0.0290	0.0745	0.1845	0.6305	19.2510	3.8918
	2017	0.0230	0.0831	0.1732	0.5865	19.3200	3.9120
	2018	0.0230	0.0797	0.1573	0.6183	19.3170	3.9318
Consolidated bank	2014	-	0.1195	0.1099	0.8657	16.5290	3.2189
	2015	0.0030	0.0553	0.0939	0.9225	16.4640	3.2189
	2016	-	0.1176	0.0790	0.9652	16.4490	3.2958
	2017	-	0.1527	0.0509	0.9740	16.4150	3.3322
	2018	-	0.1533	0.0280	0.9815	16.3720	3.3673
Credit bank	2014	-	0.0824	0.1883	0.7663	15.9980	3.3322
	2015	0.0060	0.0638	0.1551	0.9753	16.1460	3.3673
	2016	0.0090	0.0722	0.2285	0.8647	16.3200	3.4012

Bank	Year	ROA	Asset quality	Capital adequacy	Liquidity	Bank size	Bank age
	2017	0.0090	0.0754	0.1477	0.8865	16.4900	3.4340
	2018	0.0140	0.0724	0.1451	0.9934	16.7010	3.4657
Co-operative bank of Kenya	2014	0.0280	0.0188	0.2165	0.8245	19.4690	3.8918
	2015	0.0340	0.0158	0.2126	0.7859	19.6520	3.9120
	2016	0.0360	0.0224	0.2277	1.0026	19.6790	3.9318
	2017	0.0290	0.0346	0.0227	1.0063	19.7740	3.9512
	2018	0.0310	0.0414	0.1618	0.8017	19.8410	3.9703
Development Bank of Kenya	2014	0.0029	0.2699	0.2345	1.3340	16.2450	3.9318
	2015	0.0036	0.2632	0.2442	1.4480	16.1850	3.9512
	2016	0.0040	0.2601	0.2508	1.5140	16.6130	3.9703
	2017	0.0020	0.2098	0.2355	1.4772	16.6070	3.9890
	2018	0.0036	0.2079	0.2456	1.7430	16.8050	4.0073
Diamond Trust Bank	2014	0.0270	0.0116	0.2291	0.8552	19.1700	4.2341
	2015	0.0240	0.0241	0.1463	0.9149	19.4200	4.2485
	2016	0.0240	0.0325	0.1850	0.7824	19.6090	4.2627
	2017	0.0190	0.0666	0.1901	0.7363	19.7110	4.2767
	2018	0.0190	0.0629	0.2111	0.6826	19.7500	4.2905
Dubai bank	2014	0.0260	0.0033	0.4230	0.7255	17.5570	3.4657
	2015	0.0340	0.0077	0.4574	0.7201	17.6830	3.4965
	2016	0.0370	0.0046	0.5397	0.6598	17.8520	3.5264
	2017	-	0.0000	0.7005	0.2460	14.7750	3.5553
	2018	-	0.0037	0.2990	0.6666	15.4740	3.5835
Ecobank	2014	0.0070	0.0871	0.3184	0.7090	17.6430	2.1972
	2015	0.0020	0.0622	0.2496	0.8591	17.7750	2.3026
	2016	-	0.1628	0.1944	0.7590	17.6680	2.3979
	2017	-	0.3770	0.1599	0.3747	17.7940	2.4849
	2018	0.0010	0.1735	0.1659	0.2910	17.8130	2.5649
Equity Bank	2014	0.0500	0.0343	0.2120	0.8728	19.6580	3.4012
	2015	0.0400	0.0272	0.2017	0.8932	19.8750	3.4340
	2016	0.0350	0.0628	0.1966	0.7891	19.9760	3.4657
	2017	0.0360	0.0553	0.2041	0.7479	20.0780	3.4965
	2018	0.0350	0.0487	0.2041	0.7031	20.1670	3.5264
Family bank	2014	0.0290	0.0195	0.2691	1.1849	17.9400	3.4012
	2015	0.0240	0.0367	0.1441	0.6048	18.2130	3.4340
	2016	0.0050	0.1197	0.2078	1.2118	18.0570	3.4657

Bank	Year	ROA	Asset quality	Capital adequacy	Liquidity	Bank size	Bank age
	2017	0.0140	0.1923	0.1986	0.9179	18.0520	3.4965
	2018	0.0040	0.1618	0.1952	0.9099	18.0200	3.5264
First Community Bank	2014	0.0030	0.1506	0.1125	0.7321	16.5420	1.9459
	2015	0.0010	0.2346	0.1145	0.8858	16.4940	2.0794
	2016	0.0040	0.3195	0.1399	0.8644	16.5210	2.1972
	2017	0.0090	0.4078	0.1534	0.6584	16.6700	2.3026
	2018	0.0120	0.4882	0.0911	0.6175	16.6990	2.3979
Guaranty Trust Bank	2014	0.0100	0.1296	0.2335	0.6570	17.6340	3.3322
	2015	0.0090	0.0916	0.2649	0.7435	17.5280	3.3673
	2016	0.0130	0.1108	0.2547	0.7150	17.2860	3.4012
	2017	0.0070	0.1088	0.2387	0.7444	17.2770	3.4340
	2018	0.0020	0.1467	0.2597	0.6861	17.4520	3.4657
Guardian Bank	2014	0.0180	0.0126	0.1712	0.7463	16.4950	3.0910
	2015	0.0160	0.0304	0.1763	0.7398	16.4970	3.1355
	2016	0.0160	0.0169	0.1904	0.7289	16.5040	3.1781
	2017	0.0100	0.0453	0.2022	0.7331	16.5760	3.2189
	2018	0.0140	0.0494	0.2275	0.6771	16.6000	3.2581
Gulf African Bank	2014	0.0200	0.0650	0.1351	0.8734	16.7990	2.1972
	2015	0.0290	0.0842	0.1577	0.8113	17.0230	2.3026
	2016	0.0180	0.0923	0.1872	0.7443	17.1170	2.3979
	2017	0.0050	0.0929	0.1620	0.7434	17.2600	2.4849
	2018	0.0040	0.0000	0.1866	0.8470	17.3220	2.5649
Habib Bank Ltd	2014	0.0100	0.0753	0.2022	0.7331	16.5760	3.5835
	2015	0.0290	0.0792	0.3213	0.5751	16.1410	3.6109
	2016	0.0240	0.1871	0.3911	0.4641	16.3420	3.6376
	2017	0.0020	0.1799	0.1700	1.3509	18.0280	3.6636
	2018	0.0100	0.1783	0.1534	1.2511	17.9190	3.6889
Housing finance Company ltd	2014	0.0160	0.0613	0.3909	1.2531	17.9260	3.8918
	2015	0.0170	0.0437	0.1813	1.2726	18.0870	3.9120
	2016	0.0130	0.0692	0.1769	1.4072	18.0910	3.9318
	2017	0.0020	0.1081	0.1700	1.3509	18.0280	3.9512

Bank	Year	ROA	Asset quality	Capital adequacy	Liquidity	Bank size	Bank age
	2018	0.0100	0.2494	0.1534	1.2511	17.9190	3.9703
I&M Bank	2014	0.0320	0.0099	0.1885	0.9850	18.9890	3.6889
	2015	0.0370	0.0248	0.2020	0.9612	19.0720	3.7136
	2016	0.0370	0.0289	0.1815	0.9192	19.1650	3.7377
	2017	0.0300	0.0870	0.1858	0.9039	19.2970	3.7612
	2018	0.0290	0.0773	0.1793	0.7823	19.4800	3.7842
Jamii Bora Bank Ltd	2014	0.0020	0.0829	0.2610	0.7295	16.3890	2.7081
	2015	0.0010	0.0517	0.1625	0.9278	16.6360	2.7726
	2016	0.0110	0.1720	0.2008	1.1594	16.5740	2.8332
	2017	0.0370	0.1331	0.1933	1.5554	16.3710	2.8904
	2018	0.0325	0.1339	0.1915	1.5539	16.2580	2.9444
KCB Bank	2014	0.0340	0.0313	0.2101	0.7521	20.0110	3.3322
	2015	0.0350	0.0446	0.1536	0.8152	20.1400	3.3673
	2016	0.0330	0.0705	0.1801	0.8607	20.2040	3.4012
	2017	0.0300	0.0766	0.1663	0.8461	20.2870	3.4340
	2018	0.0340	0.0627	0.1955	0.8482	20.3870	3.4657
Middle East Bank (K) Ltd	2014	0.0129	0.1579	0.1945	0.7856	15.3560	3.5264
	2015	0.0125	0.1550	0.4270	0.8798	15.2870	3.5553
	2016	0.0130	0.1590	0.3933	0.9050	15.4710	3.5835
	2017	0.0050	0.1807	0.5708	0.7086	15.4490	3.6109
	2018	0.0000	0.3825	0.4494	0.6175	15.4950	3.6376
M-Oriental bank ltd	2014	0.0045	0.0876	0.4576	0.4578	16.1280	2.4849
	2015	0.0034	0.0824	0.3498	0.9569	17.2340	2.5649
	2016	0.0030	0.0821	0.3869	0.9569	16.1100	2.6391
	2017	0.0090	0.0718	0.3316	0.9745	16.1740	2.7081
	2018	0.0080	0.0940	0.3093	1.0131	16.1680	2.7726
National Bank of Kenya	2014	0.0070	0.1190	0.1393	0.6267	18.6280	3.8286
	2015	0.0090	0.1116	0.1399	0.6129	18.6470	3.8501
	2016	0.0010	0.1749	0.0715	0.5861	18.5350	3.8712
	2017	0.0070	0.3001	0.0542	0.5554	18.5150	3.8918
	2018	0.0010	0.3913	0.0370	0.4833	18.5590	3.9120

Bank	Year	ROA	Asset quality	Capital adequacy	Liquidity	Bank size	Bank age
NIC Plc bank	2014	0.0280	0.0134	0.2104	1.0014	18.7980	4.0073
	2015	0.0270	0.0912	0.2059	1.0204	18.9260	4.0254
	2016	0.0260	0.1126	0.2304	1.0236	18.9480	4.0431
	2017	0.0200	0.1089	0.2227	0.8621	19.1440	4.0604
	2018	0.0200	0.1224	0.1869	0.8087	19.1550	4.0775
Paramount Bank Ltd	2014	0.0140	0.0661	0.2545	0.5526	16.1580	3.0445
	2015	0.0150	0.0519	0.2412	0.7279	16.1690	3.0910
	2016	0.0110	0.0828	0.2741	0.7565	16.0590	3.1355
	2017	0.0120	0.1056	0.2946	0.7639	16.0710	3.1781
	2018	0.0240	0.1318	0.2853	0.6948	16.1070	3.2189
Prime Bank	2014	0.0320	0.0134	0.1676	0.7673	17.8210	3.0910
	2015	0.0310	0.0170	0.1729	0.8077	17.9900	3.1355
	2016	0.0290	0.0362	0.2216	0.7981	17.9950	3.1781
	2017	0.0290	0.0486	0.2248	0.6802	18.1720	3.2189
	2018	0.0230	0.0606	0.3729	0.5174	18.4220	3.2581
Sidian Bank	2014	0.0330	0.0743	0.2056	0.8664	16.5760	3.4012
	2015	0.0190	0.1284	0.2468	0.9357	16.7660	3.4340
	2016	0.0010	0.2383	0.2325	0.9817	16.8540	3.4657
	2017	-	0.2780	0.1646	0.8941	16.7760	3.4965
	2018	-	0.2035	0.1440	0.7753	17.0470	3.5264
Stanbic Bank Kenya Ltd	2014	0.0210	0.0379	0.1723	0.7652	19.4870	4.0254
	2015	0.0240	0.0232	0.1870	0.9881	19.1550	4.0431
	2016	0.0210	0.0271	0.1812	0.9687	19.1850	4.0604
	2017	0.0170	0.0212	0.1684	0.8440	19.3320	4.0775
	2018	0.0210	0.0141	0.1723	0.7652	19.4870	4.0943
Standard Chartered Bank	2014	0.0470	0.0724	0.1982	0.7967	19.2200	4.6347
	2015	0.0270	0.1015	0.2116	0.6692	19.2710	4.6444
	2016	0.0360	0.0829	0.2091	0.6576	19.3390	4.6540
	2017	0.0240	0.0896	0.1852	0.5920	19.4710	4.6634
	2018	0.0280	0.1169	0.1947	0.5290	19.4690	4.6728
Spire Bank Ltd	2014	-	0.2508	0.1071	0.7038	16.6240	3.4340
	2015	-	0.3332	0.1745	0.8019	16.4880	3.4657
	2016	-	0.1677	0.1627	0.8702	16.4400	3.4965
	2017	-	0.4271	0.1265	0.7686	16.2270	3.5264

Bank	Year	ROA	Asset quality	Capital adequacy	Liquidity	Bank size	Bank age
		0.1010					
	2018	- 0.2440	0.5598	-0.2201	0.6667	16.0370	3.5553
Transnational Bank	2014	0.0120	0.0881	0.2773	0.7846	16.1420	3.4012
	2015	0.0160	0.1103	0.2164	0.8769	16.1620	3.4340
	2016	0.0110	0.1156	0.2230	0.7959	16.1550	3.4657
	2017	0.0040	0.2416	0.2908	0.8361	16.1420	3.4965
	2018	- 0.0070	0.2696	0.2111	0.8263	16.1410	3.5264
UBA Kenya Bank Ltd	2014	- 0.0590	0.0630	0.5862	0.2053	15.3750	1.6094
	2015	- 0.0340	0.0180	0.2379	0.6607	15.8670	1.7918
	2016	0.0040	0.0186	0.3868	1.5704	15.5390	1.9459
	2017	0.0030	0.0436	0.3878	1.0925	15.6880	2.0794
	2018	0.0030	0.1276	0.3316	0.5709	16.5450	2.1972
Victoria Commercial Bank	2014	0.0040	0.0003	0.2908	0.8361	16.1420	3.2958
	2015	0.0210	0.0279	0.1723	0.7652	19.4870	3.3322
	2016	0.0260	0.0000	0.2545	0.9743	16.9250	3.3673
	2017	0.0240	0.0008	0.2274	1.0103	17.0730	3.4012
	2018	0.0140	0.0308	0.2109	0.9504	17.2920	3.4340