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The Influence of bank stability on the financial performance of listed commercial banks in Kenya

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THE INFLUENCE OF BANK STABILITY ON THE FINANCIAL PERFORMANCE OF LISTED COMMERCIAL BANKS IN KENYA

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DECLARATION

Student's Approval:

This dissertation is my original work and has not been submitted for examination in any other institution.

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Supervisor's Approval:

This research project has been submitted for examination with my approval as the university supervisor

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ABSTRACT

The commercial banking industry is a critical nerve centre to the economic growth and development of a country. However, since the financial crisis of 2008 many Kenyan commercial banks have been reeling from the aftershock. This has largely affected their financial stability leading to continuous financial losses and falling of some lenders. However, despite this there has been limited empirical examination of the effect of bank stability on the financial performance of commercial banks in Kenya. The study measured financial stability using capital adequacy, asset quality, management efficiency and liquidity level. The study was grounded on the information sharing theory, the shareholder value maximization theory and the shiftability theory of liquidity. The study adopted a descriptive research design. The population for the study was the 11 listed commercial banks in operation with the 2 commercial banks under receivership being excluded in the sampling procedures. The study further adopted a stratified sampling of the 11-listed commercial banks. The study relied on secondary data that was collected for the period 2008-2017. The collected data was analyzed using descriptive analysis, correlation analysis and regression analysis. The study further employed the collinearity, normality and autocorrelation tests to examine the linear regression assumptions. The results of the study were presented using figures, tables and other infographics. The study was able to obtain 98% of the observations from the 11-listed commercial banks. The regression results indicated that the capital adequacy had a weak positive effect on the financial performance while asset quality had a strong positive effect. The results of the study further indicated that management efficiency had strong positive effect on financial performance liquidity had a weak positive effect. The study concludes that listed commercial banks should foster their core capital, enhance their loan portfolio, lower their net interest expenses and hold sufficient liquid assets. The findings of the study are expected to enhance policy formulation as well as banking practice within the Kenyan industry. The results will further supplement the knowledge gap on the issues of bank stability and financial performance within the country.

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DEDICATIONS

I dedicate this research project to my family and friends for their moral and academic insights respectively.

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ABBREVIATIONS AND ACRONYMS

BCBS	Basel Committee on Banking Supervision
CAMEL	Capital adequacy, asset quality, management efficiency, earnings and liquidity
CAR	Capital Adequacy Ratio
CBK	Central Bank of Kenya
EU	European Union
GLS	Generalized Least Square
MENA	Middle East and North Africa
NACOSTI	National Commission for Science, Technology and Innovation
NIM	Net Interest Margin
NSE	Nairobi Securities Exchange
PPMC	Pearson Product Moment Correlation
ROA	Return on Assets
ROI	Return on Investment
ROE	Return on Equity
VIF	Variance Inflation Factor
US	United States

OPERATIONAL DEFINITION OF TERMS

Bank Stability	This refers to the distance of an individual bank from the risk of insolvency or actual failure. This commonly measured using the CAMEL model.
Commercial banks	These are financial institutions that are involved in the business of accepting deposits, giving out loans to borrowers, funds transfers among other services
CBR rate	Rate published by the Central Bank of Kenya that reflect the monetary policy stance pursued by the Bank. The rate reflects interest rates Commercial Banks charge on loans and interest paid on deposits.
Financial Performance	Financial performance is a measure on the use of assets by an organization to generate revenues
Interest rates	Interest rate is a key monetary policy used by Central banks around the world to achieve macroeconomic stability in the economy. They represent the economic cost of lending money within commercial banks
Return on Assets	Return on assets is an accounting ratio that shows the average return on total assets employed.
Return on Equity	The return on equity is an accounting ratio that shows the average return on total investments of the shareholders in the form of equity

CHAPTER ONE

INTRODUCTION TO THE STUDY

1.1 Background Information

The commercial banking sector plays a key intermediation role in the financial sector of any country. Over the last two decades the commercial banking sector in the world has undergone tremendous structural changes in terms of operations, structures and the general performance of the industry (Ongore & Kusa, 2013). The aim of commercial banks is to register better performance through sustained profitability and growth (Pearce & Robinson, 2011). However, attempts to realize such successes, are often affected by multiple operating market conditions such as the level of competition, stakeholder's management, political landscape, business legal regime, the cost of doing business, new innovative products, internal organizational structure, emerging technologies, and effects of globalization (Kotler & Armstrong, 2013).

Banking is a critical sector in an economy and its performance should be monitored closely to safeguard the interest of a country's economy (Al Mamun, 2013). Banks are catalysts of economic growth through provision of financial services. Profitable performance of banks translates to economic growth and stability of an economy through financial sector stability (Beck, Hesse, Kick, & Westernhagen, 2009). Good performance of commercial banks is a key factor for a robust financial system which can withstand volatility and shocks in the economy; however, poor performance can contribute to financial crisis especially within emerging economies (Nimalathasan, 2008).

Commercial banks globally have registered remarkable development in the past five years. This is because of the relatively stable market factors and favourable global political dispensations (Maaka, 2013). According to World Bank (2013), there were over 10,000 operational commercial banks spread across the globe by December 2012. Out of these, 60% were in developing countries which account for 80% of the total world population. Africa accounted for about 12% of this total, Asian country having 70%, and Latin America accounted for 17%.

Tefsay (2016) notes that deploying better financial management practices within commercial banks fosters their efficiency which is a key determinant of positive financial soundness. Kamukama, Kyomuhangi, Akisimire and Orobia (2017) in their research in Uganda concluded that enhanced managerial competence, decision making, diversification strategies and regulatory compliance are key to fostering competitiveness within the commercial banking sector. Towo and Mbuya, (2015) in their research in Tanzania indicated that employing better loan policies and meeting prudential requirements is essential in promoting better banking industry performance. The study was premised on information sharing theory and the CAMEL model.

1.1.1 Bank Stability

Bank stability refers to the distance of an individual bank from the risk of insolvency or actual failure (Jahn & Kick, 2012). Bank stability can be measured by use of standalone indicators or by use of composite indicators. One measure of bank soundness according to the Basel Committee on Banking Supervision (BCBS) is by using the Capital adequacy, asset quality, Management efficiency, Earnings and Liquidity (CAMEL) (Klaas & Vagizova, 2014). Another measure of bank stability is the use of a banking stability index as developed by Ghosh (2010) which was based on several important aspects of banking operations and thereafter examining which sets of factors are influential in impacting the index.

Commercial banks need to proactively study the operating environment and develop relevant strategies that would reduce the severity of their exposure to situations that are likely to affect their financial stability (Dang, 2011). The bank stability, financial stability or soundness describes the condition where the financial intermediation process functions smoothly thereby building confidence among users (Corbo, 2010). It refers to the smooth operation of the system of financial intermediation processes between households, firms and the government through a range of financial institutions supported by a myriad of financial infrastructure (Ferguson, 2010).

In her study on the determinants of financial stability among commercial banks in Kenya; Githinji (2016) indicates that the stability of the financial system is not only good for the health of the institution, but it supports sound economic development. The researcher further concluded that internal factors such as operating costs, the size of the bank, board size, capital size, sound interest rate policy and productive employees have significant influence on the stability of commercial banks in the country. Hilscher and Raviv (2014) hold that bank stability is a catalyst for the development of a countrys' financial system. They further indicate that internal bank-specific factors can be utilized in assessing the stability of the bank such as; capital adequacy, asset quality, liquidity, management efficiency.

The current research measured bank stability using the components of the CAMEL model; capital adequacy, liqudity level and asset quality of commercial banks. Capital adequacy refers to a measurement of commercial bank`s ability or strength in financial terms (Caporale, Lodh, & Nandy, 2017). It shows the bank's preparedness and ability to withstand irregular and operational losses (Githinji, 2016). Asset quality on the other hand focuses on the non-performing loans within commercial banks. It measures the efficiency of commercial banks in generating revenue from its asset holding (Tsuma & Gichinga, 2016). Management efficiency refers to the level of performance that describes the least amount of input to achieve the highest level of returns (Bodla & Verma, 2008). Liquidity is defined as the bank's ability in meet its obligations, mainly those of depositors of funds to the bank (Klaas & Vagizova, 2014).

1.1.2 Financial Performance

Financial performance is the measure of how well the company uses its scarce resources in generating revenue (Gakure & Ngumi, 2013). In this capacity financial performance may be seen as the end to a certain process. According to Kimingi (2010) financial performance is the measure of how a firm uses its resources in its common line of operations in the generation of income. Thus, financial performance is the evaluation of the chance that a company will make profits with the existing assets.

Lin (2008) defines financial performance as the measure of outcomes in meeting of an organisation goals. Mansury and Love (2008) measures of how an organisation uses it resources to generate income. To this end, financial performance is the expression of the revenues with respect to the resources. Total sales revenue, profits and return on assets are some financial measures. Performance may be measured in terms of financial and non-financial terms (Korir, 2014). Kariuki (2013), Kang and Kiganda (2014) argued that financial performance is used to track and review a firm's progress against its strategic plan and goals. Their studies noted that financial performance can also be used to compare similar firms across the same industry or to compare industries or sectors in aggregation. Steven and Gray (2015) noted that financial performance is a strong indicator that influenced perception of satisfaction and value. Financial performance and measures of financial performance have been defined by various studies in the world.

According to European Central Bank (2004), a bank's performance is the capacity to generate sustainable profitability which is essential for banks to maintain on going activity and for its investors to obtain fair returns, as it guarantees more resilient solvency ratios, even in the context of riskier business environment. In this sense, thus financial performance of commercial bank must be a continuous parameter over time. Nader (2011) cites that the financial performance of banks should be considered as a return no risk ratio. In this perspective, financial performance should consider the risks and returns of investments.

Combs et al (2005) identifies different measures of performance with respect to banks. There are profitability measures, such as operating income to sales ration, solvency ratios such as current ratio and valuation ratios. Noyer (2007) argues that a higher ROA is an indication that the company is utilising its resources more efficiently. ROA measures the rate at which the organisation is successfully committing its assets to make profits. The commercial banks usually have capital in terms of share capital. The banks invest in assets and thus expect returns on the same. There are various ways to ensure the profitability of a bank but according to Quach, (2005), the profitability of a bank is measured using three ratios; the ROA, ROE, and NIM. The return on equity ratio (ROE), which is the amount that the banks earn relative to the total amount of invested shareholders equity. A high ROE is favourable for a banks as it shows its ability to generate cash internally. According to Khrawish (2011), it shows how efficiently and effectively a bank is utilizing shareholders' funds. The NIM- net interest margin ratio measures the amount of interest lenders are paid and interest income created by banks. Higher bank profitability is associated with a higher net interest margin (Maaka, 2013). For the current study the financial performance of the commercial banks was measured by the ROA and ROE.

1.1.3 Commercial Banks in Kenya

According to the Central Bank of Kenya website, The Central Bank of Kenya is a public institution established under Article 231 of the Constitution of Kenya, 2010. The Bank is charged with the responsibility of monetary policy formulation to bring about and keep price stability and issuing currency. Pursuant to the CBK Act, the Central Bank promotes financial stability through regulation, supervision and licensing of all financial institutions under its mandate. As of December 2017, there were 43 licensed commercial banks in the Kenyan market. Of these, 15 banks are foreign owned (foreign shareholding of more than 50%), 3 are publicly owned and 25 are locally privately owned. Of these two-privately owned commercial banks are under receivership. Further only 11 of the 43 commercial banks are listed at the NSE representing 25% of the commercial banks (Central Bank, 2017). The study examined the financial performance of these publicly listed commercial banks. The public listed firms were selected for the study since they represent better performing and better managed institutions in the banking industry hence the findings of the study would be a representation of the industry stability. With their vast control of the banking industry the study deemed it appropriate to examine them as a representative of the other institutions. The study further anticipated that the financial reporting of the listed banks is of high standard thus research data was easily accessed as per compliance requirements and regulations.

1.2 Statement of the Problem

According to Hilscher and Raviv (2014) bank stability fosters market discipline within the economy of a country which is key in enhancing investor confidence level which is essential in enhancing investments and spur economic growth. In another review of transition economies Fang, Hasan, and Marton (2014) indicate that the stability of banks has spurred institutional development which is integral to economic growth. The need for adequate capital, assets quality, efficient management and liquidity to a bank cannot be over-emphasized. With this a bank can absorb operating losses as the bank continue with its operations.

According to the CBK (2016) financial sector stability report; commercial banks have faced elevated credit risk, liquidity risk and deteriorating profitability which has eroded the stability of the sector. CBK (2018) indicates that there was a drop-in asset quality to 34.5% from 37.6% from the preceding year; liquidity rose to 43.7%, capital adequacy stood at 18.8% which was slightly above the minimum required rate of 14.5%. Overall these factors compounded with other external factors contributed to a decrease of 9.6% drop in the overall banking sector pre-tax profits. Ongore and Kusa (2013) indicated that the financial performance of commercial banks in Kenya was influenced by the management efficiency, liquidity and the capital adequacy. The research findings also indicated that asset quality negatively influence the performance of commercial banks. The research took into consideration all the commercial banks in Kenya whereas the current research examined only listed commercial banks thus presenting a methodological gap. Kombo and Njuguna, (2017) conducted a study to examine the importance of capital adequacy requirements in BASEL III framework for commercial banks in Kenya. The study results indicated that the capital adequacy was an important aspect in determining the financial stability of commercial banks in the country. The study however did not examine the link between bank stability and financial performance thus presenting a knowledge gap that the current study examined.

Nevertheless, very few studies have sought to examine the effect of the bank stability indicators on the banking sector financial performance. Furthermore, there is scarcity of knowledge on whether the controls introduced could explain the recent drops in the overall banking industry stability as measured by the core capital, liquidity levels, earnings and loan disbursement. As a result, there is scarcity of documented evidence on how banks in other jurisdictions can cope with changes in the regulatory framework hence this study is key to enhancing the empirical evidence as well as recommend policy and practice actions that banks can leverage on to enhance their operational performance.

1.3 General Objective

To examine the effect of bank stability on the financial performance of listed commercial banks in Kenya.

1.3.1 Specific Objective

i. To establish the relationship between capital adequacy and the financial performance of listed commercial banks in Kenya.
ii. To determine the relationship between asset quality and the financial performance of listed commercial banks in Kenya.
iii. To determine the relationship between management efficiency and the financial performance of listed commercial banks in Kenya.
iv. To establish the relationship between liquidity and the financial performance of listed commercial banks in Kenya.

1.4 Research Questions

i. How does capital adequacy influence the financial performance of listed commercial banks in Kenya?
ii. What is the relationship between asset quality and the financial performance of listed commercial banks in Kenya?
iii. What is the relationship between management efficiency and the financial performance of listed commercial banks in Kenya?
iv. What is the relationship between liquidity and the financial performance of listed commercial banks in Kenya?

1.5 Significance of the Study

The study is expected to be of significant policy, practice and literate importance. The findings of the study are expected to enhance the practice capacity among commercial bank managers on the key bank stability components and how they can be leveraged to foster the financial performance of commercial banks. The findings of the research are also expected to foster the policy formulation within the commercial banks in Kenya with regard to designing regulatory requirements that can support better financial performance within listed commercial banks and enhance the soundness of the banking industry. The findings of the study have further fostered the available empirical evidence on bank stability and financial performance which can improve the reference material and knowledge gaps.

1.6 Scope of the Study

The study scope was contextually limited to an examination of the bank stability metrics, and the financial performance. The stability of the commercial banks was contextualized using capital adequacy, asset quality, management efficiency and liquidity while the financial performance was measured using both ROA and ROE. The study unit of analysis was the commercial banks listed at the Nairobi Securities Exchange. There are 11 commercial banks that are currently listed at the Nairobi Securities Exchange. The theoretical scope of the study was focused on the information sharing theory and the CAMEL model. The study scope was constrained to a descriptive research design with quantitative data being collected from the audited financial statements of listed commercial banks. The study scope was limited to financial data collected for a 10-year period 2008-2017.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

The second chapter of the study presents the literature review. The chapter was specifically examining the theoretical review which contained the theories anchoring the research. The chapter further reviewed related empirical literature in line with the research objectives. The chapter further presented an overview of the research gaps from the examined literature. Finally, the chapter presented a conceptual framework which is a representation of the interaction between the study variables.

2.2 Theoretical Review

The theoretical framework shows the understanding of theories and models by the researcher for concepts relevant to research topic and the whole area of field which the research relates (Kiaritha, 2015). The theories provided a generalized explanation to occurrence of issues affecting research as a whole hence the researcher should be conversant with those theories applicable to his area of research (Kombo & Tromp, 2009). The research was grounded on the information sharing theory and the CAMEL model.

2.2.1 Information Sharing Theory

Asymmetry information theory was introduced by Akerlof in 1970 in his paper entitled "Lemon", Quality Uncertainty and the Market Mechanism. The author argued that information asymmetry gives the seller an incentive to sell goods of less than average market quality. Due to the information asymmetry, lenders neither know the past behaviour and the characteristics nor the intention of credit applicant (Jagongo & Kerage, 2015). Factual information on the borrowers' score needs to be available to lenders to minimize credit risk and write-offs.

Information sharing reduces banks screening intensity and it softens competition between banks because they no longer fear to get a negative selection of applicants since their competitor has already picked all cherries (Boyd & Hakenes, 2013). Studies on information sharing are relatively recent and growing thus the effect of information sharing in a market with asymmetric information is either moral hazard or adverse selection (Gehrig & Stenbacka, 2007). The existence of asymmetric information between lenders and borrowers creates uncertainty on credit lending for the players. Availability of credit information is essential to both lenders and borrowers so as to make informed decisions on how much and to whom a loan should be issued (Jagongo & Kerage, 2015).

Lenders need to have adequate positive and negative information about the customers score while borrowers need to know their capacities to avoid financial stress in loan repayment. Positive and negative information sharing creates three types of borrowers. Firstly, exposed borrowers are those who are screened from multiple loan contracting and as a result are inferior to their perfect-information contract. Secondly, defaulting borrowers who have defaulted on previous loan and thirdly, clean borrowers who have clean credit records (McIntosh & Wydick, 2007). However, in most cases the information data needed by lenders to screen credit applications and to monitor borrowers' character are not readily available leading to 'adverse selection' and 'moral hazard'. The theory of information sharing is key to commercial banks since revenue from lending activities is one of the key incomes generating activities. Without adequate information the banks will suffer from increasing non-performing loans which will ultimately affect their overall asset quality. The theory was relevant in this study in the examination of the asset quality of listed commercial banks.

2.2.2 CAMEL Model

The CAMEL model was developed by US Federal regulators to help structure the bank examination process in the year 1979. CAMEL is, basically, a ratio-based model commonly used for the evaluation of performance and ranking (Bodla & Verma, 2008). In the 1980s, the US supervisory authorities, through the use of the CAMEL rating system, were the first to introduce ratings for on-site examinations of banking institutions (Ebrahimi, Bahraminasab, & Fard, 2017). The concept introduced a uniform system of rating a banking institution in the United States. CAMEL is an acronym for the five components of bank safety and soundness such as capital adequacy, asset quality, management efficiency, earning quality, and liquidity.

The CAMEL model is the most widely used model by researchers and the bank managers as well as the central banks have been implementing the CAMEL framework for evaluating the financial performance of banks (Dang, 2011). Among many techniques available today for evaluating the financial performance of banks, compared to traditional tools, the CAMELS rating model of financial analysis is considered more efficient in laying down clear risk assessment systems (Ahamed, 2017)), developing and monitoring quality performance, identification of problems, and the correction of deficiencies (Githinji, 2016). The model is advantageous due to its ability in early signalling of potential danger, further the CAMEL has the ability to improve their overall performance of banks by creating a sense of competition among each other (Corbo, 2010). The model was utilized in the study to anchor the predictor variable bank stability that was measured using the CAMEL framework.

2.3 Empirical Review

This section presents the previous studies that have examined the bank stability (CAMEL) and the financial performance of commercial banks. The research studies utilized varied in geographical and contextual scopes.

2.3.1 Capital Adequacy and Financial Performance

According to Dang (2011), the adequacy of capital is judged on the basis of Capital Adequacy Ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis. Capital adequacy ratio is directly proportional to the resilience of the bank to crisis situations. It has also a direct effect on the profitability of banks by determine its expansion to risky but profitable ventures or areas (Sangmi & Nazir, 2010). Nasserinia, Ariff and Fan-Fah (2014) studied how internal factors affect the performance of commercial banks in Japan. Findings from the study indicated that there was a negative relationship between capital adequacy, credit risk and performance of banks while management efficiency, liquidity and asset quality had a positive influence on the performance of commercial banks. The study was however conducted across Japanese commercial banks whereas the current study examined listed commercial banks in Kenya.

Ebrahimi, Bahraminasab, and Fard (2017) conducted an examination of the performance assessment of banks listed on Tehran Stock Exchange based on CAMEL Indicators. The study adopted a descriptive research design and focussed on the 14 commercial banks listed in Tehran. The study adopted a multivariate regression using panel data. The findings of the study indicated that capital adequacy had a positive influence on the financial performance of listed commercial banks. The study was however conducted within banks listed in Tehran stock exchange while the current study examined banks listed in the NSE.

Ryan (2017) examined if the effects of accounting requirements on banks' regulatory capital adequacy undermine financial stability. The study focussed on commercial banks in the United States within the financial crisis period 2007-2009. The study adopted a desk top review of literature. The findings of the study indicated that accounting requirements have small effect on the capital adequacy of commercial banks which ultimately affected the stability of commercial banks. The researcher indicated that holding more than the required core capital positively influences the financial stability of banks. The study utilized desk top review whereas the current study adopted a quantitative research backed by secondary data.

Rashid and Jabeen, (2016) analyzed the performance determinants: Conventional versus Islamic banks in Pakistan. The study utilized unbalanced panel data covering the period 2006-2012. The general least square regression was utilized in examining the influence of CAMEL indicators on the performance of commercial banks. The findings of the study indicated that in conventional banks the capital adequacy, level of deposits and market concentration had a positive effect on the performance. The results also indicated that the CAMEL components all had a significant influence on the financial performance of Islamic commercial banks. The study conducted a comparative analysis of performance whereas the current study examined the financial performance of commercial banks irrespective of the ownership concentration.

Mendoza and Rivera (2017) studied the effect of credit risk and capital adequacy on the profitability of rural banks in the Philippines. The study adopted a descriptive research design and targeted 567 rural banks in the Philippines. The study employed a descriptive and inferential statistics. The findings of the correlation analysis indicated that capital adequacy had no significant impact on the profitability of rural banks in the Philippines. The study focussed on rural banks in Philippines whereas the current study targeted the listed commercial banks in Kenya.

Umoru and Osemwegie (2016) examined the effect of capital adequacy and financial performance of Banks in Nigeria: Empirical Evidence Based on the Fgls Estimator. The research was based on feasible generalized least estimator technique for panel data collected for the period 2007-2015. The results of the study indicated that the estimated capital adequacy within Nigeria is below 30%. The overall results of the study indicated that the capital adequacy of commercial banks influenced the financial performance of commercial banks in Nigeria. The study relied on GLS estimator technique whereas the current utilized a mix of descriptive and inferential statistics.

Tsuma and Gichinga (2016) conducted a study on the factors influencing financial performance of commercial banks in Kenya-a case study of National Bank of Kenya Coast Region. The study employed a descriptive research design with both primary and secondary data being utilized. The study adopted both descriptive and inferential statistics in the analysis of the collected data. The results of the research indicated that meeting the core capital requirements has a positive effect on the financial performance of commercial banks. The results further indicated that maintaining adequate capital levels will enhance the banks capacity to invest and cushion against macroeconomic volatility. The study relied on both primary and secondary data whereas the current study utilized only secondary data.

Arising from the above examination the first hypothesis of the study was to examine if there is no statistically significant effect of capital adequacy on the financial performance of commercial banks in Kenya.

2.3.2 Asset Quality and Financial Performance

According to Ahmad and Ariff (2007) an increase in non-performing loans could affect banks negatively since they pose a potential credit risk hence hampering banks' from achieving their objectives. Said (2018) examined the effect of the asset quality on the bank profitability: A Study of US Commercial Small Banks. The study examined the causality between return on assets, Total Non-current Loans, and Leases, Loans and leases 90 days or more past plus loans in nonaccrual status by using the Pearson Product Moment Correlation (PPMC). The stduy focussed on commercial banks with asset size of between \$100 million -\$ 300 million for the period 2010-2017. The findings of the research indicated that all the components of asset quality had a negative association with both ROA and ROE. The study indicated that the control of interest rates could explain the negative correlation between the variabes. The study was conducted across the US with comparatively a more evolved financial systems than the Kenyan system hence the findings may not be representative of the current study scope.

Ahamed (2017) studied asset quality, non-interest income, and bank profitability: Evidence from Indian banks. The study focussed on foreign-owned and domestic owned commercial banks within India. The research relied on secondary data that was collected from published industry reports. The research adopted a dynamic panel data analysis. The results of the estimation indicated that income diversification resulted in lower asset quality which fostered the profitability of the commercial banks. The researcher however notes that banks with high asset quality should desist from income diversification as this will have a negave effect on the profitability of banks. The study however was conducted in India and utilized a dynamic panel data modelling whereas the current study focused listed commercial banks in Kenya.

Daly and Frikha (2017) conducted a study examining the Determinants of bank Performance: Comparative Study between Conventional and Islamic Banking in Bahrain. The study adopted Data Envelopment Analysis (DEA) is used to examine the determinants of banking performance in Bahrain between 2005 and 2009 across six conventional and six Islamic banks. The study utilized the following bank performance metrics; return on assets (ROA), Return On

Equity (ROE), and efficiency (EFF). The findings of the research indicated that the quality of the loan portfolio had a positive bearing on the profitability of the commercial banks. The above study utilized three key performance metrics however the current study only utilized ROA and ROE as the measures of the financial performance of listed commercial banks in Kenya.

Caporale, Lodh and Nandy (2017) examined the performance of banks in the MENA region during the global financial crisis. The study focused on both the profitability of foreign and domestic banks within the region. The research utilized panel data for the period 2008-2016. The findings of the research net interest revenues within commercial banks have a positive influence on the profitability of both domestic and foreign commercial banks. The study however did not incorporate other bank stability metrics such as capital adequacy and the management efficiency.

Anjili (2014) conducted a study on the effects of asset and liability management on the financial performance of commercial banks in Kenya. The research adopted a descriptive research design. The study targeted all the 43 commercial banks in Kenya. Secondary data for the study was collected from CBK annual supervision reports. The study employed correlation tests, regression tests and ANOVA tests. The results of the study indicated that asset quality had a positive significant effect on the financial performance of commercial banks in Kenya. The study indicated that diversification of revenue and minimizing credit risk would exponentially increase the financial performance of commercial banks. The research focussed on all the commercial banks in Kenya whereas the current study only studied the listed commercial banks in Kenya.

Arising from the above examination the second hypothesis of the study was to examine if there is no statistically significant effect of asset quality on the financial performance of commercial banks in Kenya.

2.3.3 Management Efficiency and Financial Performance

Petria, Capraru, and Ihnatov (2015) examined the determinants of banks' profitability: evidence from EU 27 banking systems. The study conducted a panel data of EU banks for the period 2004-2011. The proxy for the determinants were the bank specific, industry specific and macroeconomic while profitability was measured by ROA and ROE. The findings of the study indicated that the management efficiency of commercial banks had a positive effect on both measures of profitability that is ROA and ROE. The study however focused on EU banks whereas the current study will examine Kenyan banks which are not as structurally developed as their counterparts in the EU. Furthermore, the current study examined how the changing regulatory regimes in the Kenyan banking sector have affected the stability of the listed commercial banks.

Sarker, Sultana, and Prodhan (2017) examined the financial performance analysis of Islamic bank in Bangladesh: A Case Study on Al-Arafah Islamic Bank Limited. The study utilized financial data for the period 2010 to 2014 to examine the financial performance determinants of the commercial bank. Findings from the trend analysis indicated that the management efficiency of the bank has been gradually increasing and was positively related to financial performance. However, in the long term the operational efficiency of Islamic banks was limited by the compliance to Sharia-structure. The study focussed on an Islamic bank but the current study focused on both Islamic and conventional commercial banks in Kenya.

Tamiru and Worede (2016) conducted a comparative study on financial performance of commercial banks in Ethiopia: Problems and Prospects. The research adopted both the trend and comparative financial performance analysis approaches. Five years audited financial reports from 2005 to 2009 of the commercial banks were taken for comparison purpose. The study further conducted unstructured interviews with the management of the commercial banks that were included in the study. The findings of the study indicated that for the commercial banks to improve their financial performance they should increase their management efficiency by recuing administrative costs, efficiently controlling costs and utilizing adequately the customer deposits. The study utilized a mixed research approach whereas the current study only relied on quantitative approach.

Kamau (2009) investigated efficiency and productivity in the banking sector in Kenya using both Data Envelopment Analysis and Stochastic Frontier Analysis and found out that though the banks were not fully efficient in all aspects they performed fairly well in the period under review, hence need to explore more ways of making the banks more efficient. He identified some of the causes of inefficiency in the banking sector as productive inefficiency. Morekwa and Temesgen, (2013) studied the effect of governance on performance of commercial banks in Kenya: a panel study. The research pooled 37 commercial banks that were operating for the period 2005-2009 in Kenya. The study utilized ROA, ROE as the performance measurements with corporate governance being measured by CEO duality, CEO competency and size of the board of directors. The findings of the study indicated that efficiency of the independent directors helped to enhance the performance of the commercial banks. The current study however focused only on the listed commercial banks in Kenya and not the entire industry.

Arising from the above examination the third hypothesis of the study was to examine if there is no statistically significant effect of management efficiency on the financial performance of commercial banks in Kenya.

2.3.4 Liquidity and Financial Performance

Manoj, Thomas, and Abraham, (2018) conducted a performance evaluation of Public Sector Banks based on Camel Methodology. Performance Evaluation. The study focussed on five large public-owned commercial banks in India. The study utilized descriptive statistical analysis to examine the performance evaluation of the commercial banks. The findings of the research indicated that the liquidity levels of commercial banks as measured by liquid assets to total assets were a key performance metric. The research failed to examine if any the causality link between liquidity levels and the financial measures of commercial banks. The current sought to fill this gap.

Edem (2017) studied the liquidity management and performance of deposit money banks in Nigeria (1986–2011). The research targeted 24 banks which constitute the entire deposit money banking industry in Nigeria between 1986 and 2011. Secondary data were collected and analysed using SPSS. The study utilized descriptive, correlational and inferential analysis. The findings of the study showed a significant relationship between liquidity management and the performance banks. The correlation results reveal positive impacts between return on equity and liquidity management variables: liquidity and cash reserve ratios, whereas loan to deposit ratio shows negative impact. The study only utilized ROE to measure performance whereas the current study used both ROA and ROE.

Ebenezer, Omar, and Kamil (2017) examined bank specific and macroeconomic determinants of commercial bank profitability: Empirical evidence from Nigeria. The study analyzed audited financial reports of selected sixteen (16) commercial banks over the period of 2010 to 2015 making up to 96 observations. The bank profitability is measured by return on assets and return on equity. The findings of the balanced panel data analysis indicated that liquidity had a positive effect on the profitability of commercial banks. The findings indicated that improving liquidity will result in higher financial performance of commercial banks in Nigeria. The study incorporated macroeconomic factors which are not included in the current study scope.

Hammond (2017) studied the effect of corporate liquidity on firm performance: evidence from listed financial institutions on the Ghana Stock Exchange. This study followed the longitudinal study design hence, panel data and specifically OLS was used for the study data analysis. The study targeted 33 commercial banks in Ghana. The results of the analysis indicated that there was statistically significant effect of the liquid asset ratio and short-term investments on the ROA of the listed commercial banks. The study utilized ordinally least squares whereas the current study utilized a multivariate regression analysis.

Teshome, Debela, and Sultan (2018) examined the determinant of financial performance of commercial banks in Ethiopia: Special emphasis on private commercial banks. The study focussed on 16 private commercial banks with data for this study being obtained from annual reports of the banks, minutes and the national bank report for the period 2007-2016. The results of the study indicated that Leverage Ratio and operational cost efficiency had a negative and statistically significant effect on the financial performance of the banks. The researchers indicated that commercial banks should fix their leverage levels to the maximum level in order to enhance their profitability. The study scope consisted of all the private commercial banks whereas the current study sampled only listed commercial banks in Kenya.

Mwangi (2014) examined the effect of liquidity risk management on financial performance of commercial banks in Kenya. The study adopted a descriptive research design with the population of the study being all the 43 commercial banks. The study analyzed data for the period 2010-2013. The results of the study show that a unit increase in liquid assets to total assets ratio would lead to a decrease in return on assets by 1%. A unit increase in liquid assets to total deposits ratio decreases return on assets by 2.2%. The results indicate that liquidity management within commercial banks had a negative significant effect on the financial performance of commercial banks. The study shows that holding more liquid assets will tend to lead to lower returns to the commercial banks.

From the above review of literature, the fourth hypothesis of the study sought to test if there is no statistically significant relationship between liquidity and the financial performance of commercial banks in Kenya.

2.4 Summary of Literature and Research Gaps

The table below presents the knowledge, empirical and methodological gaps that the current study sought to fill.

Table 2.1 Summary of Research Gaps

Author	Aim	Findings	Research Gap
Ahamed, (2017)	Asset quality, non-interest income, and bank profitability: Evidence from Indian banks.	The results of the estimation indicated that income diversification resulted in lower asset quality which fostered the profitability of the commercial banks.	The study however was conducted in India and utilized a dynamic panel data modelling whereas the current study focuses on listed commercial banks in Kenya
Ebrahimi, Bahraminasab, and Fard, (2017)	Performance assessment of banks listed on Tehran Stock Exchange based on CAMEL Indicators.	The findings of the study indicated that capital adequacy had a positive influence on the financial performance of listed commercial banks.	The study was however conducted within banks listed in Tehran stock exchange while the current study examines banks listed in the NSE.
Edem (2017)	The liquidity management and performance of deposit money banks in Nigeria (1986–2011)	The findings of the study showed a significant relationship between liquidity management and the performance banks.	The study only utilized ROE to measure performance whereas the current study will use both ROA and ROE.
Mendoza and Rivera (2017)	Effect of credit risk and capital adequacy on the profitability of	The findings of the correlation analysis indicated that capital adequacy had no significant impact on the	The study focussed on rural banks in Philippines whereas the current study will target the large size

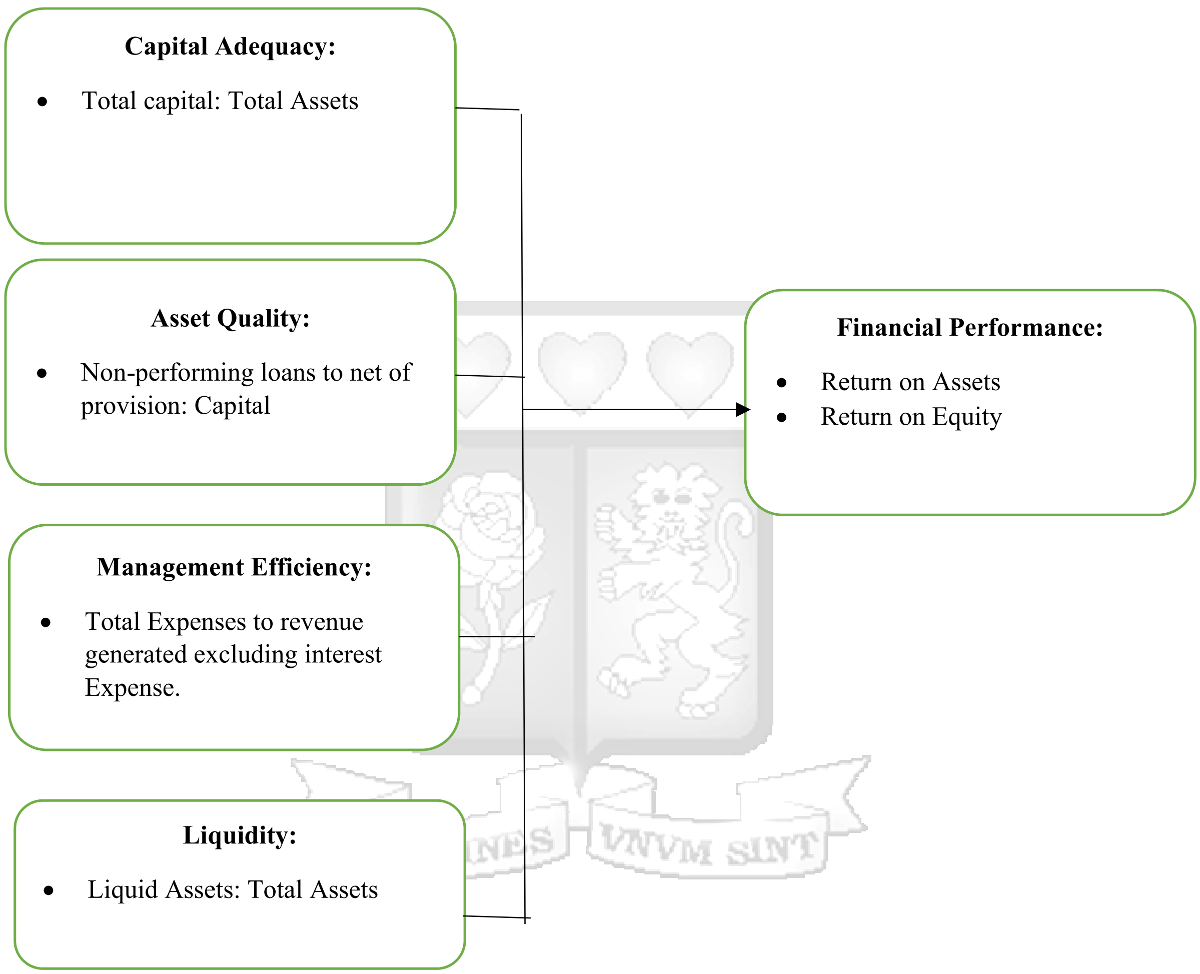
	rural banks in the Philippines	profitability of rural banks in the Philippines.	commercial banks in Kenya.
Sarker, Sultana, and Prodhan (2017)	Financial performance analysis of Islamic bank in Bangladesh: A Case Study on Al-Arafah Islamic Bank Limited.	Findings from the trend analysis indicated that the management efficiency of the bank has been gradually increasing and was positively related to financial performance.	The study focussed on an Islamic bank, but the current study will focus on both Islamic and conventional commercial banks in Kenya
Teshome, Debela, and Sultan, (2018)	Determinant of financial performance of commercial banks in Ethiopia: Special emphasis on private commercial banks	The results of the study indicated that Leverage Ratio and operational cost efficiency had a negative and statistically significant effect on the financial performance of the banks.	The study scope consisted of all the private commercial banks whereas the current study will sample listed commercial banks in Kenya.

Source: Researcher (2019)

2.5 Conceptual Framework

Smith (2004), viewed a conceptual framework as a hypothesized model under study and the relationship between the dependent and independent variables.

Independent Variables **Dependent Variable**



Source: Researcher (2019)

Figure 2.1 Conceptual Framework

The conceptual framework above is a representation of the hypothesized interaction between the bank stability and financial performance. The bank stability was measured using capital adequacy, asset quality, management efficiency and the liquidity which are among the key components of financial soundness of commercial bank. The financial performance of commercial banks will be assessed using Return on Assets (ROA) and Return on Equity (ROE) as shown on figure 2.1 above.

The study further sought to operationalize the study variables by indicating their measurements, the data that was to be collected and the analysis of the techniques that were to be utilized.

Table 2.2 Operationalization of Variables

Variable	Measurement	Data Collection Tool	Data Analysis
Capital Adequacy • Total capital to its Total Assets.	Quantitative data	Data extraction form	Descriptive Correlation tests Regression tests
Asset Quality • Non-performing loans to net of provision: Capital	Quantitative data	Data extraction form	Descriptive Correlation tests Regression tests
Management Efficiency • Total expenses to revenue generated excluding interest expense	Quantitative data	Data extraction form	Descriptive Correlation tests Regression tests
Liquidity • Liquid Assets to Total Assets	Quantitative data	Data extraction form	Descriptive Correlation tests Regression tests
Financial Performance • Return on Assets • Return on Equity	Quantitative data	Data extraction form	Descriptive Correlation tests Regression tests

Source: Researcher (2019)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The third chapter of the study is concerned with a review of the methodology that guided the solving of the research problem. The chapter specifically presented the research design, the target population of the study, the sampling procedures, the sample size and the data collection methods. The chapter further reviewed the data collection procedures, the data analysis and presentation as well as ethical issues that were observed.

3.2 Research Design

According to Laurel (2011) and Kothari (2008) a research design is the actual configuration and structure the research process is based on. The Research design provides direction on what methodology, type of data collection and type of analysis is required to unambiguously answer the research question. Njeru (2013) pointed out that the function of research design is to ensure that the evidence obtained enables the study to answer the research questions as unambiguously as possible. This study adopted a descriptive research design, the design is deemed appropriate in testing the relationship between the different components of independent variables (bank stability) and dependent variable (financial performance of listed commercial banks) of this study. This research designs has been useful in previous related studies (Abdul, 2014; Kariuki, 2013; Mbua, 2017; Wambari & Mwangi, , 2017).

3.3 Population and Sampling

3.3.1 Target Population

Smith (2004) defined population as the larger collection of all subjects from where a sample is drawn. The population frame for the study was drawn from the 11 commercial banks in Kenya listed at the Nairobi Securities Exchange. The population for the study is deemed appropriate for the research since it considers the highest performing commercial banks which are actively trading in the Nairobi Securities Exchange. In selecting the banks, the researcher anticipates that the information obtained can be of effect to the other non-listed commercial banks to shore their soundness levels and the performance levels.

3.3.2 Sample Size

Cooper and Schindler (2008) define sampling as selecting a given number of subjects from a defined population as representative of that population. Sampling is a deliberate choice of a number of people who will provide the data from which conclusions will be drawn on larger group which these people represent. The research conducted a census of all the 11-listed commercial banks.

3.4 Data Collection Methods

The study relied on quantitative data in the process of solving the research problem. The quantitative information was collected from secondary data. The sources of the secondary data were the audited and published financial statements of the commercial banks since 2008. The study considered the time period 2008-2017 since it represents a period after the global financial crisis in addition to regional financial crisis within the East Africa region. This allowed the study to examine how Kenyan commercial banks have responded over the period. The study further utilized the Central Bank of Kenya financial soundness reports (annual supervisory reports) to enhance the quality of the data collected from individual banks and to obtain the annual average interest rates.

3.5 Data Collection Procedures

Leavy (2015) defines data collection as precise, systematic gathering of information relevant to the research sub-problems. According to Laurel (2011) it is preferably to apply secondary data analysis while conducting quantitative research to primary data source of analysis. The author noted that secondary analysis of the existing research has become an increasing popular method unlike primary analysis due to its enhanced overall efficiency. The study relied on secondary data that was collected from audited statements. The current research utilized data extraction form (see appendix ii) to obtain financial data from the published reports of individual commercial banks and the CBK. The data collected was for a10-year period (2008-2017).

3.6 Data Analysis

Burns and Grove (2010) define data analysis as a mechanism for reducing and organizing data to produce findings that require interpretation. After collection of the quantitative data; the collected data was processed through editing and cleaning before coding into SPSS 24. The study relied on descriptive, correlation tests and regression testing in the analysis. The descriptive statistics included means, standard deviation, maximum, minimum and aggregates. The correlation analysis was conducted using Pearson Correlation. The regression analysis was conducted to estimate the magnitude of effect between the independent variables, moderating variable and the dependent variable of the study.

The study utilized a multivariate regression model to assess the effect of bank stability and the financial performance of listed commercial banks in Kenya. The regression model used is shown below;

$$\mathbf{Y = \alpha + \beta 1X_1 + \beta 2X_2 + \beta 3X_3 + \beta 4X_4 + \varepsilon}$$

Where: Y = Dependent Variable (financial performance of listed commercial banks)

Independent variables, which include:

X_1 is Capital Adequacy

X_2 is Asset Quality

X_3 is Management Efficiency

X_4 is Liquidity

α = the constant

β1- 4 = the regression coefficient or change included in Y by each X

ϵ = error term

The study further undertook statistical tests such as ANOVA to examine the statistical significance of the above regression models.

3.6.1 Diagnostic Tests

3.6.1.1 Multicollinearity

Multicollinearity is usually a situation in which there is a high degree of association between independent variables and dependent variable. Multicollinearity will be used to determine whether the predictors in the regression model are moderately or highly correlated to an extent of limiting the research conclusion (Saunders & Thornhill, 2012). Multicollinearity was tested using variance inflation factor (VIF) according to Farrar and Glauber (1967) where VIF $\geq$ 10 this indicates presence of Multicollinearity.

3.6.1.2 Normality Tests

Normality tests are used to establish if data (set) is well modelled by normal distribution and calculate how probable it is for a random variable governing the data set to be normally distributed **(**Saunders *et al.*, 2015). Normality test was conducted to deduce the shape of the sample distribution and mirror the shape of the normal curve. If the data is normally distributed, the population would be normally shaped, and one would assume normality in the research data. The research adopted the Shapiro-Wilk and Kolmogorov-Smirnov tests.

3.6.1.3 Autocorrelation Test

Check that the residuals of the models were not auto correlated (Checks for independence of error terms, which implies that observations are independent. The research adopted the Durbin Watson (DW) test. The study utilized the criteria where Scores between 1.5 and 2.5 indicate independent observations.

3.7 Ethical Issues

Prior to embarking on the data collection, the research ensured all ethical considerations are observed in the course of the study. The research ensured that ethical approval is sought from the Ethics Review Board of Strathmore Business School. The study also ensured that research licence is sought from the National Commission for Science Technology and Innovation (NACOSTI). The study ensured that all the managing directors of the listed commercial banks are notified of the intention to conduct the research within their commercial banks. Further all the collected research data was treated with utmost confidentiality and the anonymity of the individual banks was maintained within the course of the study.

CHAPTER FOUR

PRESENTATION OF RESEARCH FINDINGS

4.1 Introduction

The main purpose of the study was to examine the effect of bank stability on the financial performance of the listed commercial banks in Kenya. The chapter presents the research findings of the study. The chapter specifically outlined the response rate, the descriptive statistics, diagnostic tests, inferential analysis as well the hypothesis testing.

4.2 Response Rate

The study focused on the 11 listed commercial banks. The study period was 2008-2017 representing a 10-year period. The research thus anticipated to collect 660 (11 banks by 10 years by 6 metrics) observations within the period. The study was however able to obtain 654 observations since I&M bank was not publicly traded in 2008. This represented a 98% accessibility of the required financial data for analysis.

4.3 Descriptive for Financial Performance

The research utilized descriptive statistics such as means, standard deviation, maximum and minimum to represent the findings of the research. The main aim of this research was to examine the effect of bank stability on the financial performance of listed commercial banks in Kenya. To this end a regression analysis was required in order to measure the nature and magnitude of the effect of predictor variables on the dependent variable. Cooper and Schindler (2014) indicate that regression modelling is a statistical technique of determining the relationship between or more variables. The current study employed ordinary least squares regression analysis.

4.3.1 Financial Performance of Commercial Banks

The fifth variable of the study was the financial performance of the listed commercial banks in Kenya for the period 2008-2017. The results are presented in Table 4.4 below. In the current research the financial performance of the banks was measured in terms of Return on Assets (ROA) and Returns on Equity (ROE).

Table 4.1 Financial Performance Descriptive

ROA

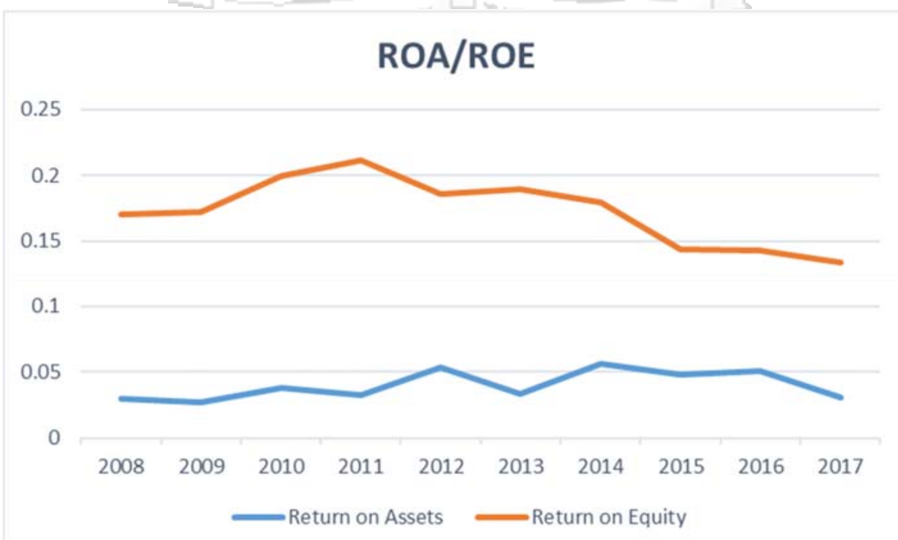
	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	**0.266873**	**0.26824**	**0.373285**	**0.31998**	**0.529596**	**0.332603**	**0.564364**	**0.480328**	**0.503615**	**0.30093**
Average	0.029653	0.026824	0.037328	0.031998	0.05296	0.03326	0.056436	0.048033	0.050361	0.030093
Std. Dev	0.16774	0.170707	0.237557	0.203634	0.337033	0.211667	0.359159	0.305679	0.320498	0.19151
Maximum	0.048655	0.047279	0.067337	0.055248	0.258149	0.053074	0.266321	0.1302	0.156169	0.102296
Minimum	0.0095	0.0069	0.012963	0.0083	0.0076	0.011784	0.006517	0.009444	0.001281	0.00272

Source: Researcher (2019)

ROE

	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	**1.532041**	**1.724916**	**1.995321**	**2.119248**	**1.857513**	**1.897616**	**1.795326**	**1.432049**	**1.428018**	**1.329923**
Average	0.170227	0.172492	0.199532	0.211925	0.185751	0.189762	0.179533	0.143205	0.142802	0.132992
Std. Dev	0.962948	1.09773	1.269815	1.348681	1.182114	1.207635	1.142538	0.91135	0.908785	0.846358
Maximum	0.282709	0.340056	0.308062	0.289079	0.2624	0.255837	0.270184	0.214611	0.276348	0.263916
Minimum	0.037	0.0072	0.017	0.0085	0.0078	0.0164	0.0601	0.066306	0.001833	0.018563

Source: Researcher (2019)



Source: Researcher (2019)

Figure 4.1 Return on Assets and Equity of Listed Commercial Banks

The results conform to Cytonn Investments (2018) which indicated that earnings across the listed commercial banks in Kenya had improved by 16.3%. This further conforms with CBK (2016) bank supervision report which indicated that the largest commercial banks in Kenya had an accumulated pre-tax profit of 73.99% of the entire banking sector. The dip in both ROA and ROE since 2016 is in line with the financial stability report by CBK (2018) which indicated that the overall banking industry profitability dropped by 0.6% (ROA) and 3.8% (ROE). This decrease can be attributed to the decline in lending to the private sector, unfavourable business climate during the electioneering period and the increase in cost of deposits.

4.4 Diagnostics Tests

The study further sought to conduct inferential analysis to examine the effect of the predictor variables on the financial performance. Prior to this the study conducted tests on the linear regression assumptions.

4.4.1 Multicollinearity Test

The study sought to determine the collinearity statistics of the research variables. The study employed both tolerance values and the VIF in the analysis.

Table 4.2 Collinearity Statistics

Item	Tolerance	VIF
Capital Adequacy	.557	1.796
Asset Quality	.176	5.678
Management Efficiency	.183	5.468
Liquidity	.546	1.832

Source: Researcher (2019)

The results of the study showed that VIF values which are all less than 10. With this, the study found no presence of Multicollinearity problem in the variables for testing the relationship between the dependent and independent variables. The Tolerance value checks on the degree of Collinearity where a tolerance value lower than 0.1 show that the variable could be considered as a linear combination of other independent variables. All the tolerance values for the study were above 0.1 hence no collinearity problems.

4.4.2 Normality Test

For the current research, the Shapiro-Wilk test was adopted.

Table 4.3 Normality Test

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Capital Adequacy	.296	4	.110	.856	4	.176
Asset Quality	.295	4	.111	.884	4	.289
Management efficiency	.258	4	.200*	.908	4	.426
Liquidity	.285	4	.140	.879	4	.264

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Source: Researcher (2019)

The test states that for a normally distributed data, the sig. value should be 0.05 or greater. From the results on Table 4.7 above the significance value for all the predictor variables was above 0.05 hence the research concludes that the data was normally distributed.

4.4.3 Autocorrelation Test

The study utilized the Durbin-Watson statistic to measure for autocorrelation.

Table 4.4 Autocorrelation Statistic

Std. Error of the Estimate	Durbin-Watson
.01718	2.216

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

b. Dependent Variable: Financial Performance

Source: Researcher (2019)

The results indicated no autocorrelation as shown on Table 4.26. As a rule of thumb Durbin-Watson Scores between 1.5 and 2.5 indicate independent observations.

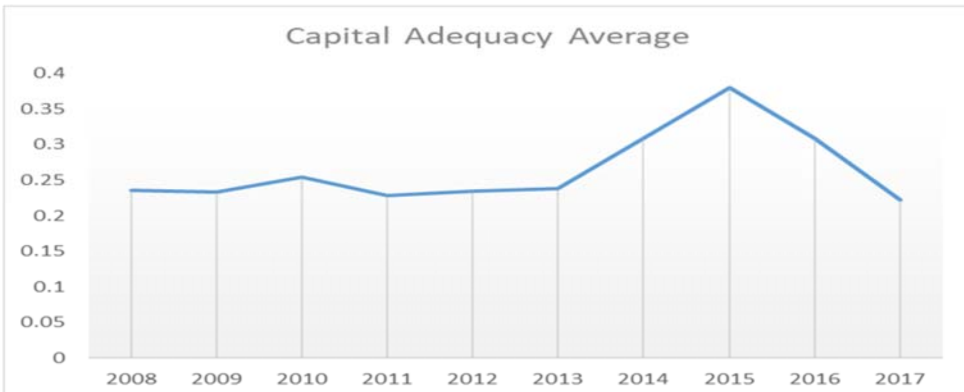
4.5 Objective 1: Capital Adequacy and Financial Performance

The first variable of the study was the capital adequacy of the listed commercial banks in Kenya for the period 2008-2017. The results are presented in Table 4.1 below. The capital adequacy was measured as a ratio of *Total capital: Total Assets*

Table 4.5 Capital Adequacy Descriptive

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	**2.352683**	**2.563108**	**2.803116**	**2.508396**	**2.575325**	**2.622277**	**3.392147**	**4.175585**	**3.391566**	**2.439156**
Average	0.235268	0.23301	0.254829	0.228036	0.23412	0.238389	0.308377	0.379599	0.308324	0.221741
Std. Dev	1.497238	1.647628	1.801911	1.612458	1.655482	1.685664	2.180555	2.684168	2.180181	1.567949
Maximum	0.9378	0.9639	0.9871	0.9777	0.9753	0.9896	0.9982	0.9973	0.988836	0.883124
Minimum	0.114807	0.112439	0.131199	0.121453	0.1265	0.1215	0.098595	0.087103	0.095523	0.064102

Source: Researcher (2019)



Source: Researcher (2019)

Figure 4.2 Capital Adequacy Listed Commercial Banks

The results represented in table 4.1 above represent an examination of the capital adequacy of the listed Kenyan banks. The results of the study show that the lowest capital adequacy was recording in 2017 at 0.221741 translating to at least 22.17%. This is in line with Central Bank of Kenya (2017) report that indicated that the heightened political environment had placed a considerable pressure on the financial stability within the country. Furthermore most commercial banks were reeling from the dip in their revenue stream as a result of the change in interest rate regimes.

The results presented above also indicated that the highest capital adeqaucy values were recorded between 2014-2015 at between 0.308377 and 0.379599 respectively. These findings are consistent with Githinji (2016) who indicated that there was a positive growth in the trajectory of financial indicators in the country as measured by the CAMEL components. The standard deviations results show that there was minimal variations in the average capital adeqaucy among the listed commercial banks which is an indication of the resilience of the top banks within the country.

4.5.1 Correlation between Capital Adequacy and Financial Performance

The first objective sought to examine the effect of capital adequacy on the financial performance constructs (ROA and ROE).

Table 4.6 Effect of Capital Adequacy and Financial Performance

		ROA	ROE
Capital adequacy	Pearson Correlation	.651*	-.428
	Sig. (2-tailed)	.041	.217
	N	10	10

Source: Researcher (2019)

The findings of the analysis showed that capital adequacy had a strong positive and significant association with return on assets (*P=.651, Sig = .041<.005*). The result also showed that capital adequacy had a negative nonsignificant association with return on equity (*P=.-.428, Sig = .217>.005*). These results are consistent with Nasserinia, Ariff and Fan-Fah (2014) who indicated that capital adequacy positively affects the financial performance of commercial banks.

4.5.2 Regression between Capital Adequacy and Financial Performance

The first research hypothesis indicated;

Ho_1 There is no statistically significant effect of capital adequacy on the financial performance of commercial banks in Kenya

Table 4.7 Model Summary for Capital Adequacy and Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.146[a]	.021	-.101	.02826

a. Predictors: (Constant), Capital Adequacy

Source: Researcher (2019)

The regression results represented above indicate that the capital adequacy explains 2.1% (R^2 = .021) variations in the financial performance of commercial banks. The remaining 97.9% variations is explained by other factors not considered in the model. The above findings are in line with Ebrahimi, Bahraminasab, and Fard (2017) who concluded that there is positive effect of capital adequacy on financial performance of banks. Rashid and Jabeen, (2016) also indicated that capital adequacy had a positive effect on the financial performance of commercial banks.

4.5.3 ANOVA Test for Capital Adequacy and Financial Performance

The study further sought to examine the statistical significance of the research model.

Table 4.8 ANOVA Summary for Capital Adequacy and Financial Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.000	1	.000	5.174	.000[b]
	Residual	.006	8	.001		
	Total	.007	9			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Capital Adequacy

Source: Researcher (2019)

The study utilized the F-statistic results as the basis of testing the null hypothesis of the study. The null hypothesis was there is no significant relationship between capital adequacy and the financial performance of listed commercial banks in Kenya. The ANOVA results showed an F value of 5.174 with a significance value of .000 which is less than .005 hence the null hypothesis of the study is rejected. Thus, the study concludes that there is a significant relationship between capital adequacy and the financial performance of listed commercial banks in Kenya.

4.5.4 Regression Coefficients for Capital Adequacy and Financial Performance

The research further sought to examine the significance of the relationship between capital adequacy and the financial performance of listed banks, the coefficients of the regression (β), the intercept of the model (α) and the significance of all the coefficients were subjected to further t-tests. In general, the null hypothesis holds that, beta (β) = 0; that is there is no statistically significant relationship between capital adequacy and financial performance of listed commercial banks.

Table 4.9 Regression Coefficients for Capital Adequacy and Financial Performance

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	.233	.049		4.728	.001
	Capital Adequacy	.076	.183	.146	.417	.000

a. Dependent Variable: Financial Performance

Source: Researcher (2019)

$$Y = .233 + .146X_1 + .049$$

The results above indicate a constant α = .233 is significantly different from 0 since the p-value .001<.005. The beta value is (β) = .146 and is significantly different from 0 since the p-value .000<.005. This indicates that there is a statistically significant positive effect of capital adequacy on the financial performance. A unit change in capital adequacy will result in a .146-unit change in the financial performance of listed commercial banks. The above findings are consistent with Tsuma and Gichinga (2016) who concluded that adequat capital levels foster the financial performance of commercial banks. Umoru and Osemwegie (2016) also indicated that the capital adequacy of commercial banks influenced the financial performance of commercial banks

4.6 Objective 2: Asset Quality and Financial Performance

The second variable of the study was the asset quality of the listed commercial banks in Kenya for the period 2008-2017. The results are presented in Table 4.10 below. In the current research the asset quality of the banks was measured as a ratio *Non-performing loans to net of provision: Capital.*

Table 4.10 Asset Quality Descriptive

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	**0.401437**	**0.438833**	**0.405585**	**0.365584**	**0.335829**	**0.325959**	**0.384252**	**0.793673**	**0.974781**	**1.960656**
Average	0.040144	0.039894	0.036871	0.033235	0.03053	0.029633	0.034932	0.072152	0.088616	0.178241
Std. Dev	0.255473	0.282093	0.26072	0.235007	0.215879	0.209535	0.247006	0.510192	0.626613	1.260357
Maximum	0.072452	0.087213	0.055848	0.06622	0.069438	0.049437	0.087829	0.340779	0.245351	0.961014
Minimum	0	0	0.016443	0.01186	0.00073	0.021733	0.012705	0.0186	0.03959	0.050325

Source: Researcher (2019)

Source: Researcher (2019)

Figure 4.3 Asset Quality Listed Commercial Banks

The results shown above examined the asset quality of the Kenyan listed commercial banks within the period 2008-2017. The findings presented above indicate that the asset quality of the banks was at its lowest levels between 2008 and 2010. This corresponds to the uncertainties that engulfed the local business environment during the post-election violence period which saw a number of local business close shop and affect their loan servicing. Further during the period, the international banking system was still reeling from the financial crisis of 2008/09 which led to a number of major global banks filing for bankruptcy.

The above corresponds to the Credit Survey Report by CBK (2018) which indicated that the total loan to total assets for the year 2018 decreased by 1.21% to stand at 58.42%. The report indicates that the changing interest rate regime has affected the disbursement of loans within the market. Further the report indicates that the credit profile of the individual and small business customers has deteriorated over the years. Sporta (2018) further indicated that non-performing loans were stabilizing within the Kenyan commercial banking sector. Cytonn (2016) further indicates that the asset quality within Kenyan commercial banks in Kenya have deteriorated over time especially with the changes in the banking industry regulations. Cytonn Investments (2018) indicated that the drop in asset quality between 2016/2017 period was a result fo delayed government payments and the deterioration of financial assets.

4.6.1 Correlation between Asset Quality and Financial Performance

The second objective sought to examine the effect of asset quality on the financial performance constructs (ROA and ROE).

Table 4.11 Effect of Asset Quality on Financial Performance

		ROA	ROE
Asset quality	Pearson Correlation	-.135	-.790**
	Sig. (2-tailed)	.710	.007
	N	10	10

Source: Researcher (2019)

The findings of the analysis showed that asset quality had a weak negative and insignificant association with return on assets (*P=-.135, Sig = .710>.005*). The result also showed that asset quality had a strong negative insignificant association with return on equity (*P=.-.79, Sig = .007>.005*). The above results are in line with the observations made by Said (2018) that all the components of asset quality had a negative association with both ROA and ROE.

4.6.2 Regression between Asset Quality and Financial Performance

The second research hypothesis indicated;

Ho_2 There is no statistically significant effect of asset quality on the financial performance of commercial banks in Kenya

Table 4.12 Model Summary for Asset Quality and Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.820a	.672	.631	.01637

a. Predictors: (Constant), Asset Quality

Source: Researcher (2019)

The regression results represented above indicate that the asset quality explains 67.2% (R^2 = .672) variations in the financial performance of commercial banks. The remaining 32.8% variations is explained by other factors not considered in the model. The above regression results are consistent with Daly and Frikha (2017) who indicated that the quality of the loan portfolio had a positive bearing on the profitability of the commercial banks. Caporale, Lodh and Nandy (2017) also concluded that net interest revenues within commercial banks have a positive influence on the profitability.

4.6.3 ANOVA for Asset Quality and Financial Performance

The study further sought to examine the statistical significance of the research model.

Table 4.13 ANOVA Summary for Asset Quality and Financial Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.004	1	.004	16.376	.004[b]
	Residual	.002	8	.000		
	Total	.007	9			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Asset Quality

Source: Researcher (2019)

The study utilized the F-statistic results as the basis of testing the null hypothesis of the study. The null hypothesis was there is no significant relationship between asset quality and the financial performance of listed commercial banks in Kenya. The ANOVA results showed an F value of 16.376 with a significance value of .004 which is less than .005 hence the null hypothesis of the study is rejected. Thus, the study concludes that there is a significant relationship between asset quality and the financial performance of listed commercial banks in Kenya.

4.6.4 Regression Coefficients for Asset Quality and Financial Performance

The research further sought to examine the significance of the relationship between asset quality and the financial performance of listed banks, the coefficients of the regression (β), the intercept of the model (α) and the significance of all the coefficients were subjected to further t-tests. In general, the null hypothesis holds that, beta (β) = 0; that is there is no statistically significant relationship between asset quality and financial performance of listed commercial banks.

Table 4.14 Regression Coefficients for Asset Quality and Financial Performance

		Unstandardized Coefficients		Standardized Coefficients		
	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	.240	.009		27.945	.000
	Asset Quality	.476	.118	.820	4.047	.004

a. Dependent Variable: Financial Performance

Source: Researcher (2019)

$$Y = .240 + .82X_2 + .009$$

The results above indicate a constant α = .240 is significantly different from 0 since the p-value .000<.005. The beta value is (β) = .820 and is significantly different from 0 since the p-value .004<.005. This indicates that there is a statistically significant positive effect of asset quality on the financial performance. A unit change in asset quality will result in a .820-unit change in the financial performance of listed commercial banks. The above research findings are consistent with Anjili (2014) who posited that asset quality had a positive significant effect on the financial performance of commercial banks in Kenya. Ahamed (2017) also noted that income diversification resulted in lower asset quality which fostered the profitability of the commercial banks.

4.7 Objective 3: Management Efficiency and Financial Performance

The third variable of the study was the management efficiency of the listed commercial banks in Kenya for the period 2008-2017. The results are presented in Table 4.15 below. In the current research the management efficiency of the banks was measured as a ratio *Total Expenses to revenue generated excluding interest Expense.*

Table 4.15 Management Efficiency Descriptive

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Total	**5.81164**	**5.846286**	**5.859724**	**5.820113**	**5.689466**	**5.597111**	**5.561409**	**6.100476**	**6.54297**	**7.142319**
Average	0.581164	0.531481	0.532702	0.529101	0.517224	0.508828	0.505583	0.554589	0.594815	0.649302
Std. Dev	3.698505	3.758135	3.766773	3.74131	3.657327	3.597959	3.575009	3.921534	4.205981	4.591256
Maximum	0.781334	0.906538	0.75889	0.727097	0.833376	0.781842	0.748409	1.29318	0.899925	1.012823
Minimum	0.312905	0.07202	0.303859	0.289885	0.252097	0.251428	0.211041	0.01276	0.251893	0.043293

Source: Researcher (2019)

Source: Researcher (2019)

Figure 4.4 Management of Listed Commercial Banks

The above Table presents the results of the examination of the management efficiency of listed commercial banks in Kenya. The management efficiency of commercial banks in Kenya was optimal within the time scope of the study averaging above 0.5. The highest management efficiency within commercial banks in Kenya was recorded within 2017 at 0.649302. The lowest management efficiency within commercial banks in Kenya was recorded in 0.505583 in the year 2014. This corresponds to (Cytonn Investments, 2018); who indicated that listed commercial banks had improved their operating efficiency amid the cost rationalization measures such as closure of branches, staff layoffs, voluntary retirement plans and digitization strategies within the banking industry which lowered the operational costs.

4.7.1 Correlation between Management Efficiency and Financial Performance

The third objective sought to examine the effect of management efficiency on the financial performance constructs (ROA and ROE).

Table 4.16 Effect of Management Efficiency on Financial Performance

		ROA	ROE
Management efficiency	Pearson Correlation	-.269	-.768**
	Sig. (2-tailed)	.452	.009
	N	10	10

Source: Researcher (2019)

The findings of the analysis showed that management efficiency had a weak negative and insignificant association with return on assets (*P=-.269, Sig = .452>.005*). The result also showed that management efficiency had a strong negative insignificant association with return on equity (*P=.-.768, Sig = .009>.005*). The above results are not in agreement with Petria, Capraru, and Ihnatov (2015) who concluded that management efficiency of commercial banks had a positive effect on both measures of profitability that is ROA and ROE. The previous study was however conducted in the EU hence differences may be attributed to geographical variances.

4.7.2 Regression between Management Efficiency and Financial Performance

The third research hypothesis indicated;

HO3 There is no statistically significant effect of management efficiency on the financial performance of commercial banks in Kenya

Table 4.17 Model Summary of Management Efficiency and Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.854[a]	.729	.696	.01486

a. Predictors: (Constant), Management Efficiency

Source: Researcher (2019)

The regression results represented above indicate that the management efficiency explains 72.9% ($R^2 = .729$) variations in the financial performance of commercial banks. The remaining 27.1% variations is explained by other factors not considered in the model. These results are consistent with Sarker, Sultana, and Prodhan (2017) who noted that the management efficiency of the commercial banks has been gradually increasing and was positively related to financial performance. Tamiru and Worede (2016) also indicate that management efficiency is a key predictor of the financial performance of commercial banks.

4.7.3 ANOVA for Management Efficiency and Financial Performance

The study further sought to examine the statistical significance of the research model.

Table 4.18 ANOVA Summary of Summary of Management Efficiency and Financial Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.005	1	.005	21.570	.002[b]
	Residual	.002	8	.000		
	Total	.007	9			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Management Efficiency

Source: Researcher (2019)

The study utilized the F-statistic results as the basis of testing the null hypothesis of the study. The null hypothesis was there is no significant relationship between management efficiency and the financial performance of listed commercial banks in Kenya. The ANOVA results showed an F value of 21.570 with a significance value of .002 which is less than .005 hence the null hypothesis of the study is rejected. Thus, the study concludes that there is a significant relationship between management efficiency and the financial performance of listed commercial banks in Kenya.

4.7.4 Regression Coefficients for Management Efficiency and Financial Performance

The research further sought to examine the significance of the relationship between management efficiency and the financial performance of listed banks, the coefficients of the regression (β), the intercept of the model (α) and the significance of all the coefficients were subjected to further t-tests. In general, the null hypothesis holds that, beta (β) = 0; that is there is no statistically significant relationship between management efficiency and financial performance of listed commercial banks.

Table 4.19 Regression Coefficients for Management Efficiency and Financial Performance

		Unstandardized Coefficients		Standardized Coefficients		
	Model	B	Std. Error	Beta	t	Sig.
1	(Constant)	.490	.060		8.170	.000
	Management Efficiency	.505	.109	.854	4.644	.002

a. Dependent Variable: Financial Performance

Source: Researcher (2019)

$$Y = .490 + 854X_3 + .060$$

The results above indicate a constant α = .490 is significantly different from 0 since the p-value .000<.005. The beta value is (β) = .854 and is significantly different from 0 since the p-value .002<.005. This indicates that there is a statistically significant positive effect of management efficiency on the financial performance. A unit change in management efficiency will result in a .854-unit change in the financial performance of listed commercial banks. The above results are consistent with Kamau (2009) who concluded that lack of efficiency in commercial banks limited their financial profitability. In their study Morekwa and Temesgen, (2013) concluded that efficiency of the independent directors helped to enhance the performance of the commercial banks.

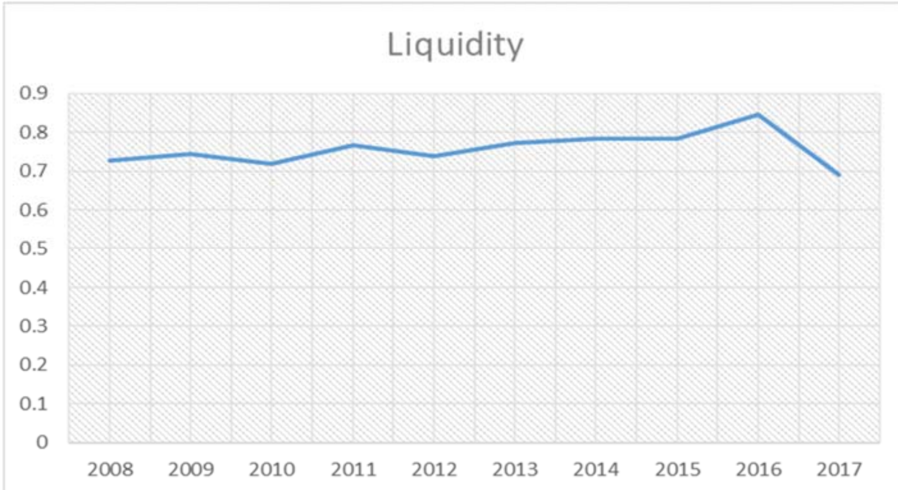
4.8 Objective 4: Liquidity and Financial Performance

The fourth variable of the study was the liquidity of the listed commercial banks in Kenya for the period 2008-2017. The results are presented in Table 4.20 below. In the current research the liquidity of the banks was measured as a ratio *Liquid Assets: Total Assets.*

Table 4.20 Liquidity Descriptive

Year	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Totals	**7.271464**	**8.172003**	**7.910957**	**8.416919**	**8.12157**	**8.476859**	**8.628645**	**8.620329**	**9.310995**	**7.602111**
Average	0.727146	0.742909	0.719178	0.765174	0.738325	0.770624	0.784422	0.783666	0.846454	0.691101
Std. Dev	4.627532	5.253162	5.085356	5.4106	5.220743	5.449131	5.546703	5.541358	5.985334	4.886822
Maximum	0.941958	0.938196	0.960949	0.965874	0.964591	0.965612	1	0.99998	0.999986	0.954295
Minimum	0.010298	0.009208	0.05229	0.012926	0.017177	0.005085	0.00312	0.005952	0.61483	0.109684

Source: Researcher (2019)



Source: Researcher (2019)

Figure 4.5 Liquidity of Listed Commercial Banks

The Table above presented the results of the analysis of the liquidity of the listed Kenyan banks for the period 2008-2017. The findings of the research indicated that the liquidity levels within the Kenyan banking industry has been positive over and above the central bank minimum levels throughout the study period. The highest liquidity level within listed commercial banks was at 0.846454 in the year 2016. The findings of the research showed that liquidity between 2010-2015; was erratic averaging at 0.719178 and 0.783666. The volatility in the liquidity levels within the listed commercial banks as per Cytonn Investments (2018) was as a result of commercial banks channeling funds towards government securities.

4.8.1 Correlation between Liquidity and Financial Performance

The fourth objective sought to examine the effect of liquidity on the financial performance constructs (ROA and ROE).

Table 4.21 Effect of Liquidity and Financial Performance

		ROA	ROE
Liquidity	Pearson Correlation	.564	-.126
	Sig. (2-tailed)	.089	.728
	N	10	10

Source: Researcher (2019)

The findings of the analysis showed that liquidity had a strong positive and insignificant association with return on assets (*P=.564, Sig = .089>.005*). The result also showed that liquidity had a negative insignificant association with return on equity (*P=.-.126, Sig = .728>.005*). The above results correspond with Manoj, Thomas, and Abraham, (2018) who indicated that liquidity levels of commercial banks was a key predictor of the financial performance. Edem (2017) also concluded that there is a significant relationship between liquidity management and the financial performance banks. Hammond (2017) also indicated that liquid asset ratio and short-term investments had a positive effect on the ROA of the listed commercial banks.

4.8.2 Regression between Liquidity and Financial Performance

The fourth research hypothesis indicated;

Ho_4 There is no statistically significant effect of liquidity on the financial performance of commercial banks in Kenya

Table 4.22 Model Summary of Liquidity on Financial Performance

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.110[a]	.012	-.111	.02840

a. Predictors: (Constant), Liquidity

Source: Researcher (2019)

The regression results represented above indicate that the liquidity explains 1.2% (R^2 = .0.12) variations in the financial performance of commercial banks. The remaining 98.8% variations is explained by other factors not considered in the model. The above results are in line with conclusions made by Ebenezer, Omar, and Kamil (2017) that improving liquidity will result in higher financial performance of commercial banks. Hammond (2017) also notes that there is statistically significant effect of the liquid asset ratio and short-term investments on the financial performance of the listed commercial banks.

4.8.3 ANOVA for Liquidity and Financial Performance

The study further sought to examine the statistical significance of the research model.

Table 4.23 ANOVA Summary of Liquidity on Financial Performance

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	.000	1	.000	5.098	.003[b]
	Residual	.006	8	.001		
	Total	.007	9			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Liquidity

Source: Researcher (2019)

The study utilized the F-statistic results as the basis of testing the null hypothesis of the study. The null hypothesis was there is no significant relationship between liquidity and the financial performance of listed commercial banks in Kenya. The ANOVA results showed an F value of 5.098 with a significance value of .003 which is less than .005 hence the null hypothesis of the study is rejected. Thus, the study concludes that there is a significant relationship between liquidity and the financial performance of listed commercial banks in Kenya.

4.8.4 Regression Coefficients for Liquidity and Financial Performance

The research further sought to examine the significance of the relationship between liquidity and the financial performance of listed banks, the coefficients of the regression (β), the intercept of the model (α) and the significance of all the coefficients were subjected to further t-tests. In general, the null hypothesis holds that, beta (β) = 0; that is there is no statistically significant relationship between liquidity and financial performance of listed commercial banks.

Table 4.24 Regression Coefficients of Liquidity on Financial Performance

		Unstandardized Coefficients		**Standardized Coefficients**		
	Model	B	Std. Error	Beta	**t**	**Sig.**
1	(Constant)	.161	.165		.972	.359
	Liquidity1	.068	.218	.110	.313	.003

a. Dependent Variable: Financial Performance

Source: Researcher (2019)

$$\mathbf{Y = .161 + .110X_4 + .165}$$

The results above indicate a constant α = .161 is not significantly different from 0 since the p-value .359>.005. The beta value is (β) = .110 and is significantly different from 0 since the p-value .003<.005. This indicates that there is a statistically significant positive effect of liquidity on the financial performance. A unit change in liquidity will result in a .110 unit change in the financial performance of listed commercial banks. The results are in line with Teshome, Debela, and Sultan (2018) who indicated that fixing leverage levels to the maximum level will result in better financial performance of commercial banks. The findings are not in agreement with an earlier study by Mwangi (2014) who concluded that liquidity management within commercial banks had a negative significant effect on the financial performance of commercial banks.

4.9 Overall Regression Analysis

The main research hypothesis indicated;

Ho_5 There is no statistically significant effect of bank stability on the financial performance of commercial banks in Kenya

Table 4.25 Summary Regression Model

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.685[a]	.469	.402	.02083

a. Predictors: (Constant), Bank Stability

Source: Researcher (2019)

The regression results represented above indicate that the bank stability explains 46.9% (R^2 = .469) variations in the financial performance of commercial banks. The remaining 53.1% variations is explained by other factors not considered in the model. These results are consistent with (Caporale, Lodh, & Nandy, 2017; Githinji, 2016; Ebrahimi, Bahraminasab, & Fard, 2017) who all utilized CAMEL components and concluded that there is a positive effect of stability metrics and the financial performance of commercial banks.

4.9.1 Summary ANOVA Results

The study further sought to examine the statistical significance of the research model.

Table 4.26 Summary ANOVA Model

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.003	1	.003	7.054	.029[b]
	Residual	.003	8	.000		
	Total	.007	9			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Bank Stability

Source: Researcher (2019)

The study utilized the F-statistic results as the basis of testing the null hypothesis of the study. The null hypothesis was there is no significant relationship between bank stability and the financial performance of listed commercial banks in Kenya. The ANOVA results showed an F value of 7.054 with a significance value of .029 which is less than .005 hence the null hypothesis of the study is rejected. Thus, the study concludes that there is a significant relationship between bank stability and the financial performance of listed commercial banks in Kenya. The findings are consistent with Ongore and Kusa (2013) who also found sufficient evidence that stability metrics (capital adequacy, management efficiency, asset quality and liquidity) have a significant effect on the financial performance of Kenyan commercial banks. Hilscher and Raviv (2014) also indicated that bank stability had a significant positive effect on financial performance of commercial banks.

4.10 Chapter Summary

The chapter specifically presented the response rate of the study. The chapter further examined the collected research data in line with the research objectives. The study applied a mix of descriptive, correlation and regression analysis in testing the research hypotheses. The results of the research were presented using charts, bar graphs and tables. The overall results of the study indicated that 46.9% ($R^2 = .469$) variations in the financial performance of commercial banks are explained by bank stability as measured by capital adequacy, asset quality, management efficiency and liquidity.

CHAPTER FIVE

DISCUSSION, SUMMARY, CONCLUSION AND RECOMMENDATIONS

5.1 Introduction

The fifth chapter of the study presented a summary, conclusion and recommendations for the research. The subsections were presented in line with the research variables.

5.2 Summary

The study sought to determine the effect of bank stability on the financial performance of commercial banks in Kenya. The bank stability was modelled on the capital adequacy, the asset quality, the management efficiency and liquidity. The financial performance of commercial banks was measured in terms of the return on assets and the return on equity. The study was grounded on three key theories that supported the measurement of the research variables; the information sharing theory, the shareholder value maximization theory and the shiftability theory of liquidity. The study focussed on the listed commercial banks in Kenya as the unit of analysis. The research data collected for the study was for the period 2008-2017. The data was extracted from annual audited financial statements of commercial banks, Central Bank of Kenya supervision reports and Cytonn Investments bulletin. The study was able to obtain 98% of the intended observations from the listed commercial banks.

The study employed a range of descriptive analysis techniques in tabulation of the extracted responses from the commercial banks. The study utilized means, standard deviation, maximum and minimum. The findings were represented by a mix of line graphs and tables. The study further conducted three main tests for linear regression assumptions; collinearity, normality and autocorrelation. The research employed correlation analysis in testing the causality between the variables while the regression model helped in assessing the magnitude of effect between the study variables. The ANOVA model and the regression coefficients aided in the testing of the research hypothesis.

5.3 Discussion

5.3.1 Capital Adequacy and Financial Performance

The beta value is (β) = .146 and is significantly different from 0 since the p-value .000<.005. This indicates that there is a statistically significant positive effect of capital adequacy on the financial performance. A unit change in capital adequacy will result in a .146-unit change in the financial performance of listed commercial banks. Horváth, Seidler, and Weill, (2014) indicated that there was a strict tradeoff between increasing core capital and positive financial stability within commercial banks. Samad (2015) study also indicated that holding large capital reserves are instrumental in supporting better banking institution performance.

5.3.2 Asset Quality and Financial Performance

The beta value is (β) = .820 and is significantly different from 0 since the p-value .004<.005. This indicates that there is a statistically significant positive effect of asset quality on the financial performance. A unit change in asset quality will result in a .820-unit change in the financial performance of listed commercial banks. The results are in line with observations made by Olson and Zoubi, (2017) who indicated that convergence in some assets classes was associated with minimal risk on the firm returns. Gamayuni, (2015) also notes that there is positive effect of asset holdings on the financial performance of an organization.

5.3.3 Management Efficiency and Financial Performance

The beta value is (β) = .854 and is significantly different from 0 since the p-value .002<.005. This indicates that there is a statistically significant positive effect of management efficiency on the financial performance. A unit change in management efficiency will result in a .854-unit change in the financial performance of listed commercial banks. These results concur with Hunjra and Bashir, (2014) who indicated that quality and superior management of commercial banks contributed to highly efficient financial institutions which attained higher profitability levels. Also, Kambua, (2015) indicated that enhanced management efficiency resulted in increased financial performance within Kenyan commercial banks.

5.3.4 Liquidity and Financial Performance

The beta value is (β) = .110 and is significantly different from 0 since the p-value .003<.005. This indicates that there is a statistically significant positive effect of liquidity on the financial performance. A unit change in liquidity will result in a .110-unit change in the financial performance of listed commercial banks. Saba, Kibriya, and Kouser, (2015) further note that the financial profitability of commercial banks is highly predicted by the liquidity and leverage level of the institutions. The findings were supported by Rahman and Banna (2016) indicated that effective liquidity management helped to reduce the default risk within the commercial banks which was key to minimizing financial resources.

5.4 Conclusions

The study sought to establish the effect of bank stability on the financial performance of listed commercial banks in Kenya. The study developed four specific research hypothesis that aided in testing the association between the study variables. The findings of the research indicated that all the null hypothesis was rejected showing that bank stability had a statistically significant effect on financial performance of commercial banks.

Based on the research results the study concludes that holding optimal capital reserves, meeting central bank core capital requirements will lead to positive financial performance of commercial banks in Kenya. From the above results the study concludes that holding an optimal loan portfolio will enhance the financial performance. Further the study concludes that commercial banks should hold low amounts of non-performing loans to better their profitability. The research further concludes that holding assets in a highly liquid form tend to increase the commercial income of the banks hence this should be encouraged.

The research concludes that the management should ensure that operational costs are reduced to the minimum, net-interest expenses are lowered and employee involvement should be encouraged in order to foster efficiency and productivity which are key to better financial profitability. Based on the findings the research concludes that the management should ensure the institution has sufficient highly liquid assets to support day to day operations of the firm. The study further concludes that the bank should limit its default risk within the market as this will signal better financial profitability.

The study in general concludes that commercial banks that maintain the minimum requirements of the financial soundness indicators achieve better financial performance. Having the requisite levels of bank stability indicators cushions the bank from volatility, expands its investment capacity, enhances its revenue diversification while also ensuring it is able to meet its' daily operation obligations.

5.5 Recommendations

5.5.1 Managerial Recommendations

To the management of the commercial banks the study recommends that the institutions should enhance their levels of capital reserves with central bank. This will help to cushion the bank from macroeconomic volatilities. Further the banks should expand their capital mix to cushion the banking firm from random changes in the operating market. The research further recommends that commercial bank should seek to diversify their revenue streams as this will limit their overdependence on lending as the main income generating business. Further banks should enhance their screening systems in order to reduce level of non-performing loans.

The study further recommends that commercial banks should implement a robust internal control system that will help in detection and elimination of fraud. Further leveraging on new core operating systems will foster the efficiency of the management in decision making and fostering operation efficiency of commercial banks. As banks liquidity positions improve, there is a need to invest more in safe and liquid assets to increase the banks earning capacity. Liquidity in a bank is highly sensitive and most crucial issue than other enterprises. Therefore, commercial banks should be in a position to meet their obligations when demand arises. This will require an effective liquidity management system to be in place. Developing and expanding the management of the bank stability will be essential in spurring the financial performance of the banking institutions. This can be sustained by ensuring that the bank has above the regulatory required levels of the five CAMEL model indicators as they are integral banking stability indicators.

5.5.2 Policy Recommendations

To the policy makers within the regulatory body the research recommends that new punitive measures should be put in place that will deter the management of commercial banks from risking the soundness of their institutions through engaging in fraudulent transactions. The study further recommends that new core capital measures should be put in place that will allow for small and medium banks to merge and create larger competitive institutions that can stimulate better stability within the banking industry. The study further recommends that the regulators should organize annual workshops to stimulate best operating practices among local commercial banks and instil knowledge on the changing global banking landscape.

5.5.3 To Researchers and Knowledge Base

The findings of the research are expected to enhance the available knowledge on the effectiveness of the CAMEL model as a key measure of bank stability. The results have strengthened the available knowledge on the influence of the CAMEL components on the financial performance of commercial banks. The findings are also expected to enhance the available empirical literature as well as foster the reference material on the financial performance of Kenyan commercial banks.

5.6 Areas for Further Research

The study would recommend further study to be taken on the effect of the macro environment on the financial performance of commercial banks in Kenya. Further research could center on the examination of the internal control mechanism within commercial banks and their effectiveness in fraud detection.

5.7 Limitations of the Study

The research was limited to the listed commercial banks at the Nairobi Securities Exchange. The population of the study was the 11 commercial banks. The study anticipated limitations in accessibility of research data; but this was mitigated by seeking assistance from the CBK and CMA in assessing vital research data. The study was also limited by the use of historical accounting data. Further with increasing changes in financial reporting standards the formulas for computing CAMEL components rapidly change hence this limited the researcher's efficiency due to banks utilizing different financial reporting techniques.

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APPENDICES

Appendix I: Introduction Letter

To the Managing Director

……………………………….. Branch

Dear Sir/Madam

Ref: **Request to Collect Research Data from your Organization**

Greetings, I am Robert Otieno a Master's in Business Administration Student at Strathmore Business School. As part of partial requirements for the award of my Degree, I am obliged to conduct a study that will fill enhance my professional practice within a specific sector in the country. I am currently undertaking a study on the '***the influence of bank stability on the financial performance of listed commercial banks in Kenya'***. I kindly request you to allow me to access relevant information that will help in solving the research problem from your institution.

The collected research data will be utilized only for academic purposes. If requested, the findings of the research will be made available to your reputable office.

With Regards,

Robert Otieno

Researcher

Appendix II: Data Extraction Form

Bank Stability	Source	MEASUREMENTS	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Capital Adequacy	Financial Reports	Total capital: Total Assets											
Asset Quality	Financial Reports	Non-performing loans to net of provision											
		Capital											
Management Efficiency	Financial Reports	Personal Expense											
		Non-interest expense											
Liquidity	Financial Reports	Liquid Asset											
		Total Asset											
Interest Rates	CBK Report	Annual average interest rate											

Financial Performance	Financial Reports	ROA= net income/av. asset											
		ROE = Net income/av. Capital											

Appendix III: Listed Commercial Banks in Kenya

1. Barclays Bank
2. Stanbic Bank (formerly trading as CfC Stanbic Bank)
3. Co-operative Bank
4. Diamond Trust Bank
5. Equity Bank
6. Housing Finance Bank
7. I&M Holdings Bank
8. Kenya Commercial Bank
9. National Bank of Kenya
10. NIC Bank
11. Standard Chartered Bank

Appendix IV: Strathmore University Ethics Review Committee Approval

Strathmore
UNIVERSITY

26th March 2019

OTIENO, ROBERT ODUOR
102376 – 00101
Nairobi.
oduorotieno80@gmail.com

Dear Robert,

REF **Protocol ID**: SU-IERC0337/19 **Student Number**: 99395

THE INFLUENCE OF BANK STABILITY ON THE FINANCIAL PERFORMANCE OF LISTED COMMERCIAL BANKS IN KENYA

We acknowledge receipt of your application documents to the Strathmore University Institutional Ethics Review Committee (SU-IERC) which includes:

1. Study Protocol submitted 11 March 2019
2. Cover letter listing all submitted documents 24 January 2019
3. Proposal declaration page signed by supervisors 15 January 2019

The committee has reviewed your application, and your study "THE INFLUENCE OF BANK STABILITY ON THE FINANCIAL PERFORMANCE OF LISTED COMMERCIAL BANKS IN KENYA." has been granted approval.

This approval is valid for one year beginning ***26 March 2019*** until ***26 March 2020***

In case the study extends beyond one year, you are required to seek an extension of the Ethics approval prior to its expiry. You are required to submit any proposed changes to this proposal to SU-IERC for review and approval prior to implementation of any change.

SU-IERC should be notified when your study is complete.

Thank you

Sincerely,

STRATHMORE UNIVERSITY INSTITUTIONAL
ETHICS REVIEW COMMITTEE
(SU-IERC)
26 MAR 2019
TEL: +254 (0)703 034 000
P. O. Box 59857 - 00200
NAIROBI - KENYA

Prof Florence Oloo
Secretary
Strathmore University Institutional Ethics Review Committee

Ole Sangale Rd, Madaraka Estate. PO Box 59857-00200, Nairobi, Kenya. Tel +254 (0)703 034000
Email admissions@strathmore.edu www.strathmore.edu

VT OMNES VNVM SINT

Appendix V: NACOSTI Research Permit

NATIONAL COMMISSION FOR SCIENCE, TECHNOLOGY AND INNOVATION

Telephone:+254-20-2213471,
2241349,3310571,2219420
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Email: dg@nacosti.go.ke
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When replying please quote

NACOSTI, Upper Kabete
Off Waiyaki Way
P.O. Box 30623-00100
NAIROBI-KENYA

Ref: No. **NACOSTI/P/19/46462/29190**

Date: **10th May, 2019**

Robert Oduor Otieno
Strathmore Business School
P.O. Box 59857 – 00200
NAIROBI.

RE: RESEARCH AUTHORIZATION

Following your application for authority to carry out research on ***"Influence of bank stability on financial performance of listed Commercial Banks in Kenya"*** I am pleased to inform you that you have been authorized to undertake research in **Nairobi County** for the period ending **10th May, 2020.**

You are advised to report to **the Chief Executive Officers of selected Commercial Banks, the County Commissioner and the County Director of Education, Nairobi County** before embarking on the research project.

Kindly note that, as an applicant who has been licensed under the Science, Technology and Innovation Act, 2013 to conduct research in Kenya, you shall deposit **a copy** of the final research report to the Commission within **one year** of completion. The soft copy of the same should be submitted through the Online Research Information System.

BONIFACE WANYAMA
FOR: DIRECTOR-GENERAL/CEO

Copy to:

The Chief Executive Officers
Selected Commercial Banks.

The County Commissioner
Nairobi County.