THE DETERMINANTS INFLUENCING FINANCIAL PERFORMANCE OF COMMERCIAL BANKS LISTED IN NAIROBI SECURITIES EXCHANGE

YATICH JAMES ROTICH

(B.A ECONOMICS) UNIVERSITY OF NAIROBI

A RESEARCH PROJECT SUBMITTED TO THE SCHOOL OF BUSINESS AND ECONOMICS IN PARTIAL FULLFILLMENT OF THE REQUIREMENTS FOR THE CONFERMENT OF THE DEGREE OF MASTERS OF BUSINESS ADMINISTRATION (FINANCE OPTION) KISII UNIVERSITY

AUGUST, 2019

DECLARATION AND RECOMMENDATIONS

DECLARATION BY THE STUDENT

This is to declare that this project is my original work and has not been presented for a degree in any other university

SIGNATURE----------DATE----------
JAMES ROTICH YATICH
REGISTRATION NO: CBM12/10247/15

RECOMMENDATION BY THE SUPERVISORS

We the undersigned do declare that this project has been submitted for examination with our approval as University Supervisors.

SIGNATURE ----------DATE----------

Dr. Andrew Nyang'au

Lecturer, Department of Accounting and Finance

Kisii University

SIGNATURE ----------DATE----------

Dr. Chesoli Wafula

Senior Lecturer, Department of Accounting and Finance

Kisii University

DEDICATION

This work is dedicated to my family made up of my dear wife Joan Kimutai, my lovely Daughters Ashley Jebet, Nevaeh Jepkorir and my great young man Bryce Kebut for being there for me all the time. Your smiles rejuvenated life in me and made me feel comfortable being around you great people all the time. Lastly special thanks go to the almighty God for seeing me through the entire journey. Amen

ACKNOWLEDGEMENTS

I sincerely wish to thank the almighty God for his guidance and protection which enabled me complete my project this year after many years of false starts. I also want also to immensely appreciate the role played by my supervisor Dr. Andrew Nyag'au for taking his time to assist me to complete my project. God bless you for your understanding, patience and endurance. I equally want to appreciate my other supervisor Dr. Chesoli Wafula, for encouraging me to push harder even when things seemed impossible.

God's blessing be unto you.

ABSTRACT

The intermediation role of commercial banks is bound by the extent to which its key business performance drivers are manipulated to improve on financial performance and thus the study examined the determinants influencing financial performance of commercial banks listed in NSE. The study was supported by the following specific objectives: to establish the influence of volume of deposits on financial performance of commercial banks listed in Nairobi securities exchange, to determine the influence of capital adequacy on financial performance of commercial banks listed in NSE, to examine the influence of levels of liquidity of on financial performance of commercial banks listed in NSE and to investigate the effect of the volume of loans of on financial performance of commercial banks listed in NSE. The target population for the study was all the eleven commercial banks listed in NSE covering a period of twelve years from 2005 to 2017 and thus a survey design of the eleven commercial banks listed NSE was undertaken. Secondary data obtained from published financial statements from commercial banks and annual banking supervision reports from CBK was used in the study. The study used descriptive research design to investigate the relationships between variables by use of mean, standard deviation, maximum and minimum values. Also the study used correlation analysis to evaluate the association between the independent variables and the dependent variables. Furthermore, the study used multiple regression model to examine the strength of the relationship between the dependent and the independent variables. The finding of the study illustrated that the relationship between Deposits and ROA was positive and significant. Also the relationship between deposits and ROE was established to be positive and significant. The study found out that the relationship between capital adequacy and both ROA and ROE was insignificant. Also, the study findings revealed that the relationship between liquidity and both ROA and ROE was statistically insignificant. The findings of the study indicated that, the relationship between loans and ROA was positive and significant at 0.01 levels while the relationship between loans and ROE was also found to be positive and significant at 0.05 levels. The study concluded that management of commercial banks should institute sound policies aimed at attracting and retaining deposits besides growing of quality loan book so as to improve on financial performance. Furthermore the study concluded that commercial banks should strive to attain minimum statutory capital adequacy and liquidity requirements.

TABLE OF CONTENTS

DECLARATION AND RECOMMENDATIONS i

COPY RIGHT ii

DEDICATION iii

ACKNOWLEDGEMENTS iv

ABSTRACT v

TABLE OF CONTENTS vi

LIST OF TABLES x

LIST OF FIGURES xi

LIST OF APPENDICES xii

LIST OF ABBREVIATIONS AND ACRONYMS xiii

CHAPTER ONE

INTRODUCTION 1

1.1 Background of the Study 1

1.2 Statement of the Problem 8

1.3 Objectives of the study 8

1.3.1 Main Objective 8

1.3.2 Specific objectives 9

1.4 Research Hypotheses 9

1.5 Significance of the Study 9

1.6 Scope and Justifications of the Study 10

1.7 Limitations of the Study 11

1.7.1 Delimitations of the Study 11

1.8 Assumptions of the Study 11

1.9 Operational Definition of Key Terms 11

CHAPTER TWO

LITERATURE REVIEW 13

2.1 Theoretical Literature Review 13

2.1.1 Financial Intermediation Theory 13

2.1.2 Money Creation Theory in Modern Economics 15

2.2 Empirical Literature review 17

2.2.1 Deposits and Financial performance 17

2.2.2 Capital Adequacy and Financial Performance 20

2.2.3 Liquidity and Financial Performance 23

2.2.4 Loans and Financial Performance 28

2.3 Summary of Research Gaps 32

2.4 Conceptual Framework 35

CHAPTER THREE

RESEARCH METHODOLOGY 37

3.1 Research Design 37

3.2 Study Area 37

3.3 Target Population 38

3.4 Data Collection 38

3.4.1 Instrumentation 39

3.4.2 Data Collection Procedures 39

3.5 Data Analysis 39

3.5.1 Descriptive Statistics 40

3.5.2 Inferential Statistics 40

3.5.3 Diagnostic Tests/Assumptions of Regression Model 41

3.6 Ethical Consideration 41

CHAPTER FOUR

DATA ANALYSIS AND DISCUSSIONS OF FINDINGS 42

4.1 Descriptive Statistics 42

4.1.1 Deposits 42

4.1.2 Capital Adequacy 44

4.1.3 Liquidity 50

4.1.4 Loans…….. 52

4.1.5 Financial Performance 55

4.2 Inferential Statistics 60

4.2.1 Correlation Analysis 60

4.3 Diagnostic Tests 62

4.3.1 Tests for Homoscedasticity 62

4.3.2 Test for Normality 63

4.3.3 Multi-collinearity Test 64

4.4 Regression Analysis 65

4.5 Testing Hypotheses 67

4.5.1 Hypotheses One 67

4.5.2 Hypotheses Two 68

4.5.3 Hypotheses Three 69

4.5.4 Hypotheses Four 69

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS 70

5.1 Summary of Research Findings 70

5.2 Conclusions 71

5.3 Recommendations 73

5.4 Areas of Further Research 74

REFERENCES 75

APPENDICES 82

LIST OF TABLES

Table 3.1: Target population 38

Table 4.1: Deposits 43

Table 4.2: Core Capital to Total Risk Weighted Assets 46

Table 4.3: Total Capital to Total Deposits 47

Table 4.4: Total Capital to Total Risk Weighted Assets 48

Table 4.5: Liquidity Ratio to Statutory Liquidity Ratio 50

Table 4.6: Loans and Advances to Customers 53

Table 4.7: Return on Assets (ROA) 56

Table 4.8: Return on Equity (ROE) 57

Table 4.9: Total Financial performance 59

Table 4.10: Pearson's Correlation Summary 61

Table 4.11: Results of Homoscedasticity 62

Table 4.12: Shapiro-Wilk for Normality Test 63

Table 4.13: Multi-Collinearity test results 64

Table 4.14: Model Summary of Financial performance 65

Table 4.15: Analysis of Variance for Financial Performance 66

Table 4.16: Coefficientsa for Financial Performance 66

LIST OF FIGURES

Figure 2.1: Conceptual Framework 36

LIST OF APPENDICES

APPENDIX I: DATA COLLECTION INSTRUMENT 82

APPENDIX II: DEPOSITS 83

APPENDIX III: CORE CAPITAL TO TOTAL RISK WEIGHTED ASSETS 84

APPENDIX IV: TOTAL CAPITAL TO TOTAL DEPOSITS 85

APENDIX V: TOTAL CAPITAL TO TOTAL RISK WEIGHTED ASSETS 86

APPENDIX VI: LIQUIDITY 87

APPENDIX VII: LOANS 88

APPENDIX VIII: ROA 89

APPENDIX IX: ROE 90

APPENDIX X: FINANCIAL PERFORMANCE 91

APPENDIX XI: RESEARCH PERMIT FROM NACOSTI 91

LIST OF ABBREVIATIONS AND ACRONYMS

CBK	-	Central Bank of Kenya
ROA	-	Return on Assets
ROE	-	Return on Equity
GDP	-	Gross Domestic Product
SACCO	-	Savings and Credit Cooperative Society
SME	-	Small and Medium Enterprise
NIM	-	Net Interest Margin
MFC	-	Mortgage Finance Company
CBS	-	Central Bureau of Statistics
DTMFI	-	Deposit Taking Micro Finance Institution
MFI	-	Micro Finance Institution
PBT	-	Profit before Tax
NPM	-	Net Profit Margin
CASA	-	Current Accounts and Savings Accounts
NSE	-	Nairobi Securities Exchange
SASRA	-	SACCO Societies Regulatory Agency
CMA	-	Capital Markets authority
FP	-	Financial Performance
SD	-	Standard Deviation

CHAPTER ONE
INTRODUCTION

1.1 Background of the Study

Commercial banks play a critical role in the economic development of various countries through resource allocation function. Financial institutions generally channel funds from depositors with excess liquidity to those with deficits through a process commonly referred to as the financial intermediation. The financial intermediation process will only be successful if the commercial banks are profitable. Financial performance or profitability of commercial banks as measured by return on assets, return on equity, net interest margin etc. is influenced by a number of environmental factors which are either internal or external (Mutua, 2013)

The determinants influencing financial performance of commercial banks may emanate from inside triggers under the purview and control of management and strategic decisions of shareholders or external forces beyond the control of management. The internal factors can be manipulated by management and shareholders of commercial banks to yield the desired outcome in terms of the financial performance. The external forces can only be overcome by adapting to it (CBK, 2017)

Hirindu and Kushani (2017) studied the factors effecting on bank profitability in Sri Lankan domestic economy and found that among others, a high significant relationship between deposits and profitability of commercial banks. The study concludes that deposit mobilization which is under the control of bank management can be harnessed to improve on bank performance. Trujillo (2013), in his study of what determines the profitability of banks from Spain found that a higher proportion of deposits in the balance sheet of Spanish banks contributes significantly to higher profits and was cited as the major factors which can be exploited by management to improve on

performance. Thus deposit mobilization was highlighted as having significant positive influence on financial performance.

Javaid (2016) examined bank specific macroeconomic determinants of bank profitability in Pakistan found out that volume of deposits had a negative significant relationship with banks profitability which may be explained by the cost of holding huge liquidity instead of lending out the same to borrowers. The study concludes that banks management should balance the levels of assets and liabilities to improve on performance.

Capital is an internal environmental factor which enables commercial banks built internal resilience against unanticipated negative systemic shocks in the operating environment is also an important factor influencing financial performance of commercial banks (Cyton, 2018).

Stovrag (2017) examined capital requirements and bank profitability, a comparison between large Swedish banks and niche banks and the findings suggested that niche banks improved on their financial performance with increased capital adequacy while the same had an insignificant influence on the profitability of large Swedish banks. The author attributes this to the need for commercial bank management to manipulate other internal factors to improve on performance when the optimal level of capital requirements has been exhausted.

Rodriquez (2014) in his study of the determinants of commercial bank profitability in Mexico, found that among others, capital adequacy provokes a significant positive influence on commercial banks profitability.

Aymen (2013) studied the impact of capital on financial performance of banks in Tunisia and the findings suggested that relationship between capital adequacy and the financial performance

of the selected commercial banks is positive, however the correlation between capital adequacy and return on assets appear to be statistically significant.

Amahalu, Okoye, Chike, Nweze, Chinyere, Obi,…Okika (2017) investigated the effect of capital adequacy on financial performance of quoted money banks in Nigeria and the study revealed that capital adequacy has a statistical significant influence on financial performance at 5% level of significance. The study seems to suggest that banks should minimize debt in their capital structure to cushion itself against financial risk and bankruptcy.

Mbekomize and Mapharing (2017) studied the analysis of determinants of profitability of commercial banks in Botswana and specifically investigated the relationship between profitability internal and external factors of commercial banks. The study found out that among other factors, capital adequacy had a statistical significant influence on commercial banks performance and like other studies suggested that management should gradually reduce debt in the capital structure as way of building internal resilience against economic shocks.

Barus (2017) examined the effect of capital adequacy on the financial performance of savings and credit societies in Kenya using explanatory research design targeting 83 SACCOs in operation as at end of 2015. The study found that 86 per cent variations in financial performance of SACCOs were explained by capital adequacy and the influence was found to be positive. This amplifies the importance of capital concentration as a buffer for negative economic shocks which might lead to insolvency.

The influence of liquidity on financial performance of commercial banks is important in that it enables financial institutions balance demand for loans and supply of deposits and thus cushion

itself against liquidity risks which might trigger run on deposits culminating in sudden death of the affected financial institution (Cyton, 2018).

Srinivasan and Britto (2017) studied analysis of financial performance of selected commercial banks in India and found that liquidity ratio and solvency as a strong positive predictor of profitability.

Demirgunes (2016) examined the effect of liquidity on the financial performance from Turkish retail industry by focusing on Borsa Istanbul (BIST) listed merchandising enterprises. The study found a strong positive relationship between liquidity and financial performance and further concluded that firms with high levels of liquidity are able to meet their short team obligations by taking advantage of investment opportunities in the short term i.e. short term fixed deposits.

Botoe (2011) studied the impact of liquidity on profitability of commercial banks in Liberia and found a positive correlation between liquidity and profitability. The study concludes that liquidity management by commercial banks ensures that working capital is not necessarily tied up in idle assets thereby releasing funds for investment in productive activities.

Edem (2017) investigated liquidity management of deposit money banks in Nigeria (1986-2011). The study specifically sought to examine the impact of liquidity management on the performance of deposit money bank in Nigerian and found a strong positive correlation between liquidity management and return on equity. The study concludes that bank management should operate on optimal liquidity levels for efficiency and effectiveness which key drivers of improved performance.

Chamler, Musah, Akomeah and Gakpetor, (2018) studied the impact of liquidity management of commercial banks in Ghana and found a strong positive association between liquidity and

commercial bank performance. The correction was stronger between liquidity levels and return on assets in comparison to levels of liquidity and return on equity. The conclusion drawn from these study findings were that commercial banks that hold reasonable levels of liquidity are able to withstand unforeseen short term shocks or liquidity risks and financial risks thereby improving on overall profitability. The study further concludes that there is a level beyond which levels of liquidity becomes counterproductive and thus might lead to overall decline in bank performance as was found out by Abdullah and Jahan, (2014).

Vaita (2017) studied the effect of liquidity on financial performance of tier one listed commercial banks in Kenya and found a strong positive correction between levels of liquidity and return on assets but a weaker relationship between levels of liquidity and return on equity. This finding are consistent to those of Chamler, Musah, Akomeah and Gakpetor, (2018) which seem to suggest levels of liquidity influences to a large extent the efficiency in utilization of assets as compared to wealth creation of the firm which is captured by return on equity.

Loans influence financial performance of commercial banks because it is the major driver of interest income which is the major source of revenue for commercial banks in Kenya. The trick for commercial banks is to lend more so as to realize a higher interest income and thus the volume of the outstanding loan asset has a significant on its financial performance. As posited by (Kirimi, 2015) lending interest rates has a great influence on the financial performance of commercial banks because as they argued, it is the greatest contributor of revenue combined with managerial efficiencies.

Dinc (2017) investigated the effect of retail loans on bank profitability; a comparative empirical analysis of Turkish banks by paying close attention to mortgage and consumer loans which are

the biggest contributors to credit risk management of banks. The study found out that volume of retail loans has a strong negative effect on profitability as measured by net interest margin. This according to the study is explained by the element of provisions which erodes interest margins of Turkish retail banks.

Dietrich and Wanzeried, (2009) studied the determinants of profitability of commercial banks by focusing on new evidence from Switzerland. The study examined bank specific, industry specific and macroeconomic factors influence on bank profitability underscoring the fact that Switzerland has a fully developed modern financial system in the world. The study found out that the impact of volume of loans growing faster than the market has the highest influence on bank profitability. It concludes by highlighting the important of integrating bank specific characteristics about management and shareholders i.e. level of education, skills, experience and independence all of which have an influence on profitability.

Kana (2017) did an empirical study on the determinants of profitability of South African banks and specifically examined the effect of bank specific variables i.e. equity capital, saving deposits, volume of loans, fixed term deposits and credit risk on profitability of south African banks. The study found out that bank specific variables which are under control of management had a significance influence on profitability as measured by return on assets. The study concludes by highlighting the importance of bank mangers in paying special attention to factors within their control to improve on bank profitability.

Yigermal (2017) studied the determinants of profitability of private selected private banks in Ethiopia and specifically investigated the impact of bank size, loan to deposit ratio, loan concentration index, credit risk and bank branches on the determination of return on assets and return on equity as a measure of performance. The study found out that loan concentration index

was significant in explaining the variations in return on equity and the magnitude was found to be positive while the same was found to be insignificant in explaining the variations inn return on assets. The study concludes that Ethiopian government should foster conducive operating environment for private banks to improve on performance since both bank specific and external variables were found to have a significant influence on profitability.

Thiongo, Matata and simiyu, (2016) examined Loan portfolio growth and financial performance of commercial banks in Kenya and specifically assessed the effect of loan portfolio growth on financial performance of commercial banks in Kenya. The study found out that loan portfolio growth has a positive influence on financial performance of commercial banks in formative years but in subsequent years it was found to have a negative influence on financial performance possibly due to growth in non-performing asset portfolio

In Kenya, commercial banks are clustered in three peer groups comprising internal environmental factors i.e. loans, customer deposits, Liquidity, Number of deposits accounts, capital adequacy and number of loan accounts. The influence of each internal environmental factor above on financial performance of commercial banks is varied and distinct.

This study therefore attempted to investigate the determinant influencing financial performance of commercial banks listed in Nairobi Securities Exchange.

1.2 Statement of the Problem

The government of Kenya is mandated to foster a stable market-based financial system that supports improvement and growth of performance of financial institutions in the country CBK, (2017).The government achieves this role by setting up conducive operating environment to enable commercial banks grow deposits, maintain adequate liquidity levels, attain minimum core capital requirements and grow the loan book among others (Cyton, 2018).

However, the growth in deposits, liquidity, capital and loans of commercial banks has not let to commensurate improvement in the financial performance. Profit before tax of commercial banks has continued to decline from a positive growth rate of 9 per cent in 2005 to a negative growth rate of -10 per cent in 2017 (CBK, 2017). Declining financial performance is threat to stability and overall economic prosperity (Desta, 2017).

Kiiru (2008) examined the effects of funding structure on the financial performance of DTMFIs in Kenya and found out that deposits and loan assets positively influence the financial performance. This study though relevant; left out the influence of liquidity and capital adequacy on financial performance. There was need therefore, to investigate the determinants influencing financial performance of commercial banks listed in Nairobi securities exchange.

1.3 Objectives of the study

1.3.1 Main Objective

The general objective of the study was to examine the determinants influencing financial performance of commercial banks listed in Nairobi Securities Exchange.

1.3.2 Specific objectives

The specific objectives of the study were:

i. To establish the influence of deposits on financial performance of commercial banks listed in Nairobi securities exchange.
ii. To determine the influence of capital adequacy on financial performance of commercial banks listed in Nairobi securities exchange.
iii. To examine the influence of liquidity of on financial performance of commercial banks listed in Nairobi securities exchange.
iv. To investigate the influence of loans of on financial performance of commercial banks listed in Nairobi securities exchange.

1.4 Research Hypotheses

For purposes of analyzing the data, the following null hypotheses were tested:

Ho_1: Deposits has no significant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange

Ho_2: Capital adequacy has no significant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange.

Ho_3: Liquidity has no significant influence on the financial Performance of commercial banks listed in Nairobi Securities Exchange.

Ho_4: Loans has no significant influence on the financial Performance of commercial banks listed in Nairobi Securities Exchange.

1.5 Significance of the Study

The findings of the study will assist stakeholders in the banking industry ascertain the determinants influencing financial performance of commercial banks listed in Nairobi Securities

exchange under the control and purview of management and shareholders. As Sanderatne (2011) argued, larger inflows of foreign direct investments (FDIs) is needed for the country to achieve a sustainable high trajectory of economic growth through employment creation and general improvement of infrastructural projects and commercial banks plays a crucial role being the recipients of FDIs.

Bank Regulatory Agencies screen banks by evaluating banks' liquidity, solvency and overall financial performance to enable them intervene when there is need and to gauge the early warning signs of potential financial problems. This is achieved through close supervision which requires commercial banks to submit daily, weekly, monthly, quarterly and yearly reports on various parameters i.e. deposits mobilized, capital adequacy, liquidity, volume of loans, assets quality, number of customers, profits and loss statements etc. It should be understood that the bulk of commercial bank deposits are public funds and thus its preservation is the primary role of the government (Casu, Girardone & Malyneux, 2016).

Other researchers and academicians who will be pursuing disciplines related to the study will use the research finding as a framework for their research. This will add value to the existing pool of knowledge.

1.6 Scope and Justifications of the Study

The scope of the study was confined to eleven Commercial Banks listed in Nairobi Securities Exchange for a period of twelve years from 2005 to 2017.

1.7 Limitations of the Study

Secondary data took too long to be obtained. It took more than three months for CBK to update its website to reflect the 2017 annual bank supervision report. To date the 2018 publication has not been posted.

1.7.1 Delimitations of the Study

The problem was solved by obtaining current financial statements from commercial banks listed in NSE. Also quarterly statistical bulletins were sourced from CBK website.

1.8 Assumptions of the Study

The study was undertaken with the assumption that the foreign exchange rate was stable throughout the study period. It was also assumed that regulatory capital adequacy requirements for banks were met on demand by all commercial banks. Further it was assumed that demand for loans was uniform across all the Banks listed in NSE and also strategies to attract deposits was assumed to be uniform across all the banks listed in NSE. It was also assumed that the published financial statements from commercial banks were available on demand.

1.9 Operational Definition of Key Terms

Deposits: The These are funds placed in banking institutions by customers for safe keeping and are intended to be used by those customers in future transactions. They assume the form of term deposits, savings or current account balances. The same funds are used by financial institutions for onward lending to borrowers at a negotiated price (Interest rates)

Capital Adequacy: It refers to the reasonableness of capital available to support commercial banks business objectives and act as a buffer in cases of adverse economic

downtimes. It is measured by capital adequacy ratio and represents the internal resilience of the bank to withstand economic shocks

Liquidity: This refers to the ability of the bank to meet and sustain its short term obligations as and when they fall due. The bulk of liquidity of commercial banks are public deposits on call and call be accessed on short notice by depositors.

Loans: This refers to a term facility or a financial accommodation extended to customers from various financial institutions and are to be paid back are companies that have been admitted to trade their shares publicly in the official stock exchange market and must subscribe to the rules of trade the shares of listed companies are available for the public to buy or sell at any time thorough the stock exchange.

Listed firms: These are companies that have been admitted to trade their shares publicly in the official stock exchange market and must subscribe to the rules of the trade. The shares of listed companies are available for the public to buy or sell at any time through the stock exchange.

Nairobi Securities Exchange This is an organized Kenyan market where shares and stocks are issued, bought and sold through the services of stockbrokers or dealers. The firm issuing the shares has to plan in advance and ensure that there is availability of their shares to be traded. The NSE is located at Nairobi securities exchange house is located at 55 West lands Road in Nairobi.

CHAPTER TWO

LITERATURE REVIEW

2.1 Theoretical Literature Review

2.1.1 Financial Intermediation Theory

The theory of financial intermediation was started in early 1960s being the work of Gurley and Shaw. The theory is based on information asymmetry and agency theories where financial intermediaries mediate between the providers of financial capital and the consumers of financial capital. Financial intermediaries exist due to market imperfections because in the real market, there is a conspicuous information vacuum between borrowers and lenders. In financial markets, information asymmetries are particularly pronounced because borrowers are knowledgeable about the collaterals they have and integrity with regard to their repayments abilities but lenders seldom have this information. Lenders would benefit from knowing the true characteristics of borrowers but moral hazard and mistrust hampers the direct transfer of information between the two parties (Mutua, 2013).

Deposits are funds placed by customers in financial institutions for safe keeping and for future withdrawals. In such cases, the depositor transfers the risk and cost of holding the deposit to the financial institution. On the other hand the financial institution generate loan contracts to borrowers through the intermediation process and include a price to cover their operations costs and interest expense with sufficient surplus to be given back to the providers of funds. Financial intermediaries facilitate risk transfer between market players and act as an agent in the complex financial systems characterized by uncertainties in the current financial markets (Bollen, 2016).

The intermediation process will only exist if the end result yields the necessary income to cover the opportunity costs, operational costs, and interest cost of funds with a retainer of surplus being a reward for the investors (Allen, Carletti, Krahnen, Pieter and Tyrell, 2011).

The financial intermediation theory is assumed to apply to an oligopoly type market where there are few dominant players in the market. It is also assumed that financial intermediary's major objective is market share expansion as opposed to profit maximization and the product offering is similar for all the financial intermediaries (Andries, 2009).

Some authors have criticized the theory by arguing that the microeconomic tools used for analysis should be uniform but divergence was noted in some approaches. Olokoyo, Adetiloye and Ikpefan (2016) for example described financial intermediaries as using loans as inputs to produce money while other scholars describe financial intermediaries as using deposits as inputs to avail money. The theory also fails to bring out clearly the motivation for financial intermediaries as profit maximization, market share growth or utility satisfaction. The theory also contributes to increased cost of funds to borrowers and reduced return for lending form savers because of the middleman role played by financial intermediation (Andries, 2009).

The financial intermediation theory is relevant to the study of the determinants influencing financial performance of commercial banks listed in Nairobi securities exchange by bringing out the important role of financial institutions in mobilizing deposits and funding net borrowers. Deposit mobilization influences the volume of deposits and levels of liquidity while funding of net borrower's influences the volume of loans, liquidity and capital adequacy.

2.1.2 Money Creation Theory in Modern Economics

The theory originated from debates of two University professors from Hungary i.e. Istvan Hagelmayer and Milkos Riesz in the 1960's .While Hagelmayer was of the view that money was created simultaneously with credit rather than building up of liabilities and lending, Milkos insisted on rational approaches to lending where commercial banks generate assets form liabilities. The theory highlights that money or deposits is created using loans and that commercial banks are using liquidity to create loans which are pushed to the borrowers. Here the capability of banks is to create money by converting some liquid securities into money, borrowing from central bank or borrowing from other commercial banks and quickly creating loans (Botos, 2016)

Financial institutions create money in the form of bank deposits by making new loans to customers. When a bank creates a loan contract to a to a borrower, it does not typically do so by giving them liquid cash over the counter, but instead, the financial institution credits the borrower's bank account with the equivalent of loan amount. This process generates new deposit available to the borrower and thus the bank gains from this newly created liability if the borrower chooses not to withdraw the entire deposit at once. The bank ultimately gains on the creation of an asset which earns them interest income. Sovereign states' ability to spend is limited to taxes mobilized from the citizens and the extent of borrowing in the financial market. The printing of money for spending according to this theory is less appealing since it distorts the financial market discipline by propagating the oversupply of currency leading to an erosion of value. These findings points out the importance of financial institutions in the creation of credit and mobilization of deposits in the economy (Randall, 2014)

The theory assumes that only financial institutions have the power to crate money while non-financial institutions play the role of distribution of the money. These are institutions that shadow

the financial function of banks and includes insurance companies, investment companies etc. It is also assumed Money creation by commercial banks cannot be unlimited and depends on how the commercial bank can access from the central bank. This has a constraint on the volume of loans to be created. The theory also assumes that the performances of all the commercial banks are uniform so that the only driving force is creation of loans from deposits. It is also assumed that commercial banks have the power to determine the quantity of money to be created in the economy but no central banks (Botos, 2016).

Critics of the theory point out the inability of central bank being the banking regulator to limit creation of money since the theory propagates that the commercial banks determine the extent of money creation in the economy. The theory also highlights that lending is motivated only by money creation to the exclusion of other factors i.e. profits, levels of liquidity, cost of capital (McLeay, 2014)

This theory is relevant to the study of determinants influencing financial performance of commercial banks listed in the NSE, by bringing out the important role of financial institutions using money in their everyday activities of mobilizing deposits and funding net borrowers. The financial institutions also create money when applying new loans to borrower's accounts which form the basis of new deposit which is available for onward lending to other borrowers if the loanee chooses not to withdraw everything at once.

2.2 Empirical Literature review

2.2.1 Deposits and Financial performance

Dilrangi, Udayarathna, Pathiraja, Madhubhashini and Bandara (2018) examined the effect of level of deposits of financial performance of listed commercial banks in Sri Lanka and specifically investigated the relationship between demand deposits, savings deposits and term deposits and financial performance of commercial banks. The study used quantitative research approach targeting all the twelve commercial banks listed in Colombo Stock exchange as at 31st December, 2017. Data was gathered from published sources for five years between 2013 and 2017. The study revealed a positive and statistical significant relationship between customer deposits, and ROA and ROE. The study concludes that savings and current deposits have the highest influence on financial performance of commercial banks as compared with fixed deposits which might be explained by the interest expense incurred in attracting fixed deposits. The study recommends bank management to develop sound strategies aimed at attracting cheap deposits mainly from current account holders for onward lending to borrowers so as to optimize on interest income as opposed to pursuing very expensive fixed deposits.

Rengasamy (2014) examined the impact of loan deposit ratio on the profitability of Malaysian commercial banks for the period of 2009-2013. The study focused on all the eight locally owned commercial banks in Malaysia and adopted a descriptive research design, correlation and regression analysis to test the associative power of the loan deposit ratio and return on assets. The finding of the study was that there is a positive non-significant relationship between loan deposit ratio and profitability of commercial banks. The study concludes that mobilization of customer deposits and subsequent conversion of the same into loans will generally lead to improved profitability of commercial banks as long as there is a balance between interest paid to depositors

and interest charged on loans. The study further recommends bank management to optimize the balance between deposits and loans to generate more revenue and monitor the quality of the loans created to avoid non-performing loans which might erode interest income earned.

Okun (2012) in his study of the effect of level of deposits on financial performance of commercial banks in Kenya used a survey research design of 44 commercial banks in operation as at 31st June 2012. His study analyzed data using cross sectional regression model. The study found that the relationship between ROE and deposits was positive and significant. The study concluded that customer deposits have a positive and significant effect on return to equity. Further the study recommended that bank managers should invest in strategies aimed at attracting and retaining customer deposits which play a pivotal role in the lending process.

Tuyishime (2015) investigated the effects of deposit mobilization on financial performance of commercial banks in Rwanda; A case of equity bank Rwanda Limited. The study aimed at determining the effect of marketing strategies on financial performance of commercial banks in Rwanda, to establish the effect of interest rate changes on deposit of the commercial banks in Rwanda and to examine the effect of banking technology introduced in the financial performance of commercial banks in Rwanda. The study used both descriptive and quantitative research design and a sample of 27 staff working form Equity bank Rwanda, data was analyzed using statistical correlation model. The study found that an increase in customer deposits led to more loans being disbursed hence and increase in interest income and overall improvement in financial performance. Also marketing strategies was found to increase customer numbers hence volume of deposits and thus influenced financial performance. The study also found that the introduction of technology enabled equity bank Rwanda to reach out to low cost deposits in rural areas and thus influenced on financial performance as the Equity bank minimized over reliance on

expensive term deposits. The study therefore concluded that deposit mobilization affect financial performance and thus Equity Rwanda should invigorate their marketing strategies, adopt banking technologies and effect a positive change in interest rates to attract deposits. The study further recommend management of equity Rwanda should design innovative strategies aimed at mobilizing low cost deposits from unbanked population through use of agency banking to facilitate collection of deposits from rural areas. It also recommends banks to offer completive interest on term deposits to grow deposits.

Akuma, Doku and Awer (2017) examined the relationship between credit risk, deposit mobilization and profitability of Ghanaian banks from 2002 to 2011 .The study used secondary data by sourcing for financial statements of 17 Ghanaian banks in operation during the study period. Data was analyzed using multiple regression equation and found out there was a positive significant relationship between credit risk, deposit mobilization, growth in interest income, capital adequacy and profitability of Ghanaian .The study concluded that profitable banks in Ghana depend more on deposits in their financing activities and further the study recommends that commercial banks should put in place strategies to mobilize deposits from the formal and informal sectors of the economy besides investing heavily in credit risk policies preserve the quality of the asset.

Eyigege (2018) in his study of the influence of financial leverage, customer deposits and capital adequacy on the financial sustainability of some selected Nigerian micro finance banks found out that among others increase in customer deposits contributes to a positive influence on profitability and thus operational sustainability. It concludes that Nigerian microfinance banks should be cognizant of the cost of mobilizing those deposits.

Njeri (2010) studied the impact of deposit taking on financial performance of microfinance institutions in Kenya. The study aimed to examine whether deposit taking has an influence on financial performance of microfinance institutions in Kenya using descriptive research design targeting 4 microfinance institutions operating in Kenya. Data analysis was done using the paired t-test model and found that there was a general decline in ROA for all the DTMs for the period under study inferring that deposit taking has not had a positive influence on financial performance. The study concluded that deposit taking has negatively influenced financial performance of DTM's and recommends that DTMs who intend to take deposits must first have sufficient resources to cushion them against transformation expenses which weigh down earnings. Also policy makers should approve DTMs who are compliant with the regulation and are able to withstand transformation costs by demonstrating their capability of sufficient resources to withstand change over.

2.2.2 Capital Adequacy and Financial Performance

Mahmud and Datta (2018) investigated the impact of capital adequacy on profitability of listed commercial banks in Bangladesh under Basel II accord. The study examined a panel data of 232 observations of 29 listed commercial banks in Bangladesh for a period of eight years from 2007 to 2014. Determinants of banks profitability was captured as ROA and ROE. The study adopted descriptive research design where the standard deviations of capital adequacy were analyzed against Basel II accord requirements. The study further did ordinary least squares method of ROA and ROE against regulatory requirements. The study found out that capital adequacy has a positive significant relationship with financial performance of commercial banks and concludes that adequately capitalized banks are able to incur higher levels expenses in terms of salaries and wages. The study points out that this might help them expand their operations.

Almasari and Alamiri (2017) did a comparative study on the effect of capital adequacy on profitability between Samba and Saab banks of Saudi Arabia by use of secondary data and employment of descriptive research design to test the hypothesis. The study found out that there is a strong positive correlation between capital adequacy and both ROA and ROE of both banks indicating the importance of capital as a safety valve to cushion depositors funds against insolvency.

Amahalu, Okoye, Chinyere and Okika (2017) examined the effect of capital adequacy on financial performance of quoted deposit money banks in Nigeria. The study aimed to investigate the influence of capital adequacy on the financial performance of commercial banks bank in Nigeria for the period 2010 to 2015. Data was analyzed using the Pearson correlation model and multiple regression and found that there is a positive significant relationship between capital adequacy and financial performance. The study concluded that increase in capital reduces external borrowing which improves on financial performance and also strengthens financial institutions position to absorb negative shocks. Further the study concludes that reduction in financial costs of distress improves on the NIM and thus financial performance. The study recommends that management and shareholders reduce the proportion of debt in the capital to minimize financial risk and withstand systemic shocks which might occasion bankruptcy.

Umoru and Osemwegie (2016) examined the influence of capital adequacy and financial performance of banks in Nigeria using empirical evidence based on the feasible general least squares estimator (FGLS). The study aimed to evaluate the role of capital adequacy on the performance of Nigerian banks using quantitative research design targeting a sample of 8 Nigerian banks that have withstood recent economic meltdown. The study period covered 2007-2015. Regression model analysis was used in the study and it was found that 16% increase in

capital adequacy enhances ROA of Nigerian banks by 2.176% which is statistically significant and thus concluded that the banking system in Nigeria is yet to stabilize and be able to withstand liability shocks, credit risk, operational and market risks. Further the study recommends that the regulatory agency of the Nigerian banks (CBN) should regularly review the least capital adequacy of banks in order to enhance their financial performance. The study also recommends that the government should promote macroeconomic policies aimed at stabilizing the financial sector.

Nzioki (2009) examined the impact of capital adequacy on the financial performance of commercial banks quoted at the Nairobi stock exchange. The study aimed to assess the effect of capital adequacy ratio on the financial performance of commercial banks, investigate the implication of asset base on the financial performance of commercial banks, determine the effect of bank's size on the financial performance of commercial banks and to evaluate the effect of asset quality on the financial performance of commercial banks using a descriptive research design of commercial banks in Kenya and sample 9 of listed commercial banks in Nairobi securities exchange. The study used regression analysis of the variables under examination and found that p values for all the 9 banks were positive and above 0.05 meaning the relationship between capital adequacy and financial performance was positive and significant. The study concludes that capital adequacy represents the soundness of a financial institution to navigate cyclic downtimes and must be managed at optimal levels to assure depositors of the safely of their funds placed in financial institutions. Further the study recommends that regulatory agencies closely monitor capital adequacy ratios to protect depositors and promote financial stability and efficiency in the economy.

Barus (2017) examined the effect of capital adequacy on the financial performance of savings and credit societies in Kenya. The study aimed to establish the effect of capital adequacy on the

financial performance of savings and credit cooperative societies in Kenya using an explanatory research design targeting all the 83 registered SACCOs in Kenya which have been in operation for 5 years from 2011-2015.Multiple regression equation was used to analyze the data and it was found that capital adequacy explains 86% variations of financial performance of SACCOs in Kenya. The study concluded that capital adequacy strongly influences the financial performance of SACCOs in Kenya and the influence was found to be positive. Further the study recommends that capital adequacy requirements or SACCOs should be closely monitored and regulated by SASRA to ensure stability of SACCO to withstand insolvency challenges in the operating environment. It also recommends that SACCOs should shift their strategies from concentration of capital requirement to credit risk to preserve the asset.

2.2.3 Liquidity and Financial Performance

Ali and Khan (2016) investigated the impact of liquidity and profitability of commercial banks in Pakistan. The study used regression and correlation methods of data analysis to identify the strength and nature of relationship between liquidity and financial performance of banking sector in Pakistan. The study used secondary data sourced from Habib bank limited for five years from 2008 to 2014.The study found out that liquidity and profitability of commercial banks was positive and significant and concludes that with growing liquidity, financial performance as captured by gross profit margin and net profit margin continues to improve up to a certain limit. This may be explained by costs emanating from growing enterprises manifested through inefficiencies which weigh down on profitability. The study recommends that commercial should keep considerable levels of liquid assets to maintain a higher growth trajectory in financial performance.

Kalanidis (2016) studied the impact of liquidity on the profitability of fifty large European banks. Profitability was measured in terms of return on average assets, net interest margin, return on average equity and profit before tax. The study was specifically carried out after the financial crisis to determine the role played liquidity in the overall financial meltdown. A sample of 350 observation was carried out in the study and a regression model was used to test the relationship between the variables. The study found out that liquidity has a negative relationship with return on average assets, net interest margin and return on average equity. The study concludes that the opportunity costs of holding low yielding assets instead of investing the liquid assets in high yielding risk ventures far outweighs its benefits.

Marozva (2015) examined the relationship between liquidity and bank performance of South African banks between 1998 and 2014 using the ordinary least squares method and autoregressive distributed lag. The study used regression equation model to highlight the strength of relationship between market risk, funding liquidity and credit risk against net interest income which a proxy for financial performance. The study observes that there is a significant negative relationship between funding liquidity and financial performance. These findings are consistent with those of Kalanidis (2016). The study concludes that holding of liquid assets with a low premium imposes commercial banks with an opportunity cost of investing the same in high yielding assets and thus negatively affecting profitability. The study recommends that liquidity management should be the focal point of bank management in order to achieve an optimal trade- off between liquidity and profitability.

Vianney (2011) studied the relationship between regulation and financial performance of Rwandan commercial banks and specifically examined the effects of liquidity ratio and capital requirements ratio on financial performance of commercial banks in Rwanda. The study found

out that government moderating policies on both liquidity and capital ratio requirements was insignificant in explaining variations of profitability of commercial banks in Rwanda. This study contradicts an earlier study by Mashamba. Gakera and Osano (2018) investigated effects of government regulation on profitability of commercial banks in Kenya. The study found that there exist a positive relationship between liquidity regulation and profitability of commercial banks in Kenya. Similarly the study found that there is exists a positive relationship between capital adequacy and profitability of commercial banks in Kenya and concludes that bank management should adopt the new interest rate cap laws to attract more borrowers so that they can generate more revenue. This study contradicted an earlier study

Olagunju, Adeyanju and Olabode (2011) studied liquidity management and commercial banks profitability in Nigeria and specifically examined empirical evidence on the degree of influence of banks profitability brought about by effective liquidity management. The study also investigated how commercial banks can optimize their liquidity and profitability positions. Both primary and secondary data was used in the study while descriptive research method by use of the Pearson correlation analysis was used to test the association between the variables. The study found out that there is a significant relationship between liquidity and profitability of commercial banks and that liquidity management significantly influences on the profitability of commercial banks. The study further concludes that commercial banks should continuously strive to achieve optimal levels of liquidity so as not to erode profitability. The study recommends the regulatory agencies to develop flexible monetary policies so as to cushion commercial banks in meeting unexpected huge withdrawals as opposed to keeping idle cash which is an opportunity cost.

Mashamba (2018) examined the effects of Basel III liquidity regulations on banks profitability in emerging markets over the period 2011 to 2016. The study found that liquidity regulations by the

government lead to a decline in profits of banks. It concludes high liquidity levels although good for meeting short term obligations earns no interest rates since the same assumes the form of idle cash.

Njeri (2013) examined the effects of levels of liquidity on financial performance of DTM's in Kenya. The study aimed to investigate the effect of liquidity on financial performance of deposit taking micro finance institutions using a descriptive research design of all the 9 microfinance institutions operating in Kenya for a five year period from 2009 to 2013. Data was analyzed using the multiple regression model and correlation and found that liquidity and financial performance of DTMFI's had a correlation coefficient of 0.941 which is strong and positive. It was also found from the regression analysis that 91% of the variability of financial performance of DTMF's was explained by liquidity among other variables. The study concluded that the financial performance of DTMF's is highly dependent on the levels of liquidity and thus recommends that DTMF's should put in place strategies directed at increasing liquidity levels to foster financial performance.

Nyabeta (2013) studied the effect of liquidity on the financial performance of financial institutions listed in the Nairobi securities exchange using a descriptive research design targeting a sample of 11 financial institutions listed at the Nairobi Securities exchange for the period 2010-2014. The study analyzed data using multiple regression and correlation analysis and found that the correlation of liquidity and ROA vary significantly and but the levels of liquidity have a negative significant influence on ROA. The study concluded that a decrease in the levels of liquidity of financial institution listed at the Nairobi securities exchange leads to a decline in financial performance as captured by ROA. The study further recommends that management of financial

institutions listed at the NSE should explore other strategies other than liquidity to improve on their financial performance.

Song'e (2015) analyzed the effect of liquidity management on the financial performance of deposit taking SACCOs in Nairobi County using a descriptive research design and a sample of 27 SACCOs out of a population of 41 SACCOs operating in Nairobi as at December 2014.Data was analyzed using the multiple regression model top bring out the strength of the relationships between the variables and also correlation analysis was sued to examine the association between the variables. The study found that a significant relationship between levels of liquidity and financial performance of SACCOS in Nairobi County as measured by ROA. It also established that there is a strong relationship between and levels of liquidity and financial performance. The study concluded that levels of liquidity influences the financial performance of SACCOs in Nairobi and further recommends that SACCO's in Nairobi should embrace sound liquidity management policies to lower exposure of credit risks and ensure long term sustainability of member's savings.

Majakusi (2012) examined the effect of liquidity management on the financial performance of commercial banks in Kenya using descriptive research design targeting all the 43 commercial banks operating in Kenya as at December 2016. The study period covered 5 years from 2010-2016. Data was analyzed using the multiple regression model and it was found that there is strong positive relationship between liquidity and financial performance of commercial banks in Kenya as measured by ROA. The study concluded that an increase in liquidity management leads to an overall improvement in financial management as measured by ROA and further recommends commercial bank managers should proactively relook into the liquidity management to improve on performance.

2.2.4 Loans and Financial Performance

Tabak and Cajueiro (2011) studied the effects of loan portfolio concentration on Brazilian banks returns and risks by analyzing whether diversification of credit portfolio of commercial banks improves on performance and lowers risk. The study adopted multiple regression model and correlation analysis to measure the relationship and strength of association of variables and focused on both foreign owned and domestic banks in Brazil. The study found out that loan portfolio concentration leads to improved financial performance occasioned by reduction in loan delinquencies and thus lower provisions.

Cronje and Atahau (2015) studied size and loan portfolio structure and performance of local owned commercial banks in Indonesia. The study was carried out specifically to determine the impact of portfolio size on performance of large and small banks domestic banks in Indonesia. The study used a sample of 69 large bank observations and 346 small bank observations and employed descriptive statistics, univariate statistics and panel data regression equation to gauge the relationship between the variables. The study found out that the influence of loan portfolio structure on performance for small and large banks differ significantly. The study concludes that small banks portfolio's influence on returns is less significant than that of large banks indicating the importance of size of portfolio in determining banks' performance.

Belguith and Bellouma (2017) investigated the impact of loan portfolio diversification on Tunisian banks profitability. The study aimed to examine the impact of loan portfolio diversification on banks profitability and to assess the effect of loan portfolio diversification on private and foreign banks in Tunisia. The study sued descriptive research design of a sample of 10 large banks in Tunisia holding an asset base of over 85% of the banking industry over a period of 15 years from 2000-2015. Data was analyzed using the regression and correlation model and

found that loan portfolio diversification negatively impacts banks profitability. The study concluded that focusing the credit portfolio to few sectors of Tunisian economy is profitable than diversifying the loan portfolio to many sectors in the economy. The study further recommends that bank decision makers should concentrate the loan portfolio to few sectors of the economy to improve on efficiencies and effectiveness of banks supervision and thus improve on profitability. Concentration of loan portfolio to many sectors of the Tunisian economy attracts intense competition leading to a decline in profits.

Adzobu, Agbloyor and Aboagye (2017) examined the effect of loan portfolio diversification on risks and returns from banks in emerging markets. The study specifically attempted to test whether loan portfolio diversification across economic sectors in Ghana leads to improved financial performance and reduced credit risks. The study used ordinary least squares method and generalized methods of moments on the yearly data of 30 commercial banks operating in Ghana between 2007 and 2014 to determine the effect of loan portfolio diversification on financial performance of commercial banks. The findings from the study are that loan portfolio diversification does not improve bank financial performance and does not also reduce credit risks. The study concludes that commercial banks should focus on lending policies that are sectorial based but with adequate monitoring to reduce default which impacts negatively on profitability. It recommends further that credit screening should be deployed effectively to avert delinquency.

Njeru, Njeru and Tirimba (2015) investigated the effect of loan repayment on financial performance of deposit taking SACCOs in Mount Kenya region. The study aimed to investigate the effect of gross loan portfolio, loan delinquency, loan products and credit facility management on financial performance of SACCOs in Mount Kenya region using descriptive research survey targeting a sample of 92 respondents. The study also used secondary data from audited accounts

from SASRA. Data was analyzed using both correlation and descriptive methods and found that gross loans portfolio was varying at high levels as captured by a standard deviation of 0.879 implying that the SACCO's was pursuing its key mandate of giving loans to its members which has an influence on its financial performance. The volume of loans of the SACCOs was also found to be very high with a mean of 3.04 indicating the SACCO's main objective of funding its members. The study concluded that there is a strong relationship between loan repayments and financial performance of SACCOs in Mount Kenya region and recommended that there is need to introduce credit risk policy to manage the loan book of the SACCO's which was found have a strong effect on financial performance.

Okungu, Mule, Nyongesa, Aila, Ogut, Onchonga,…Muchoki (2014) analyzed the effect of commercial bank loans on financial performance of savings and credit co-operative society in Kisumu. The study aimed to examine the effect of loans offered by commercial banks on the savings and lending volumes of the SACCO in Kisumu City, to investigate the advantages which individual SACCO members have realized from the competition between commercial banks and SACCOs in Kisumu City and to identify the factors that cause the SACCO members to borrow money from other financial institutions in Kisumu City using a case study research design targeting a sample of 370 respondents from 1 Sacco in Kisumu which was purposively selected. Data was analyzed using both descriptive and quantitative statistical methods and found that financial performance of the Sacco in Kisumu was not affected by commercial bank loans but commercial bank loans positively influenced lending volumes of the SACCO. The study thus concluded that commercial bank loans have not been significantly affected the SACCO lending volumes and thus financial performance and recommends that the government through the relevant ministry and regulatory bodies should devise strategies to protect SACCOs from stiff

competition by giving equal opportunities to SACCOs to acquire funds to disburse to their members. It also recommends that loan repayment period should be regularly reviewed by Sacco management so as not to lose members to commercial banks and also come up with policies of not ceiling upper limit of borrowing on shares held.

Thiongo, Matata and Simiyu (2016) examined the effect of loan portfolio growth on financial performance of commercial banks in Kenya. The study aimed to determine the effect of growth in commercial bank's loan portfolio on financial performance of commercial banks in Kenya, to investigate the influence of asset quality on financial performance of commercial banks in Kenya, to examine the effect of liquidity management on financial performance of commercial banks in Kenya and to examine the effect of capital adequacy on financial performance of commercial banks in Kenya. The study used correlation research design targeting all the 44 commercial banks operating in the period 2011-2015. A sample of 62 senior loan officers' from 31 commercial banks was selected for the study and multiple Regression analysis model was used found that growth in loan portfolio asset leads to a negative growth in financial performance in subsequent years and also leads to an increase in non-performing assets portfolio. Also diversification of portfolio failed to affect financial performance positively according to the study but it was found to increase the volume of bad loans. The study concluded that loan portfolio growth positively influences financial performance in the first year but in subsequent years it negatively affects financial performance. The study recommends that banks should strategically execute growth in loan portfolio to minimize on bad loans increasing in subsequent years and that banks should always exercise caution in lending in all years to manage the non-performing loans.

2.3 Summary of Research Gaps

The study by Tuyishime (2015) on the effects of deposits mobilization on financial performance of commercial banks in Rwanda; A case of equity bank Rwanda Limited aimed at determining the effect of marketing strategies on financial performance of commercial banks in Rwanda, establishing the effect of interest rate changes on deposit of the commercial banks in Rwanda and examining the effect of banking technology introduced in the financial performance of commercial banks in Rwanda. The study used statistical correlation model to analyze data and a sample of 27 staff working form Equity bank Rwanda. This research used correlation analysis which highlights the association between variables and failed to use multiple regression which is brings out the associative strength between variables which is being addressed by the current study

Njeri (2010) assessed the impact of deposit taking on financial performance of microfinance institutions in Kenya. The study aimed to examine whether deposit taking has an influence on financial performance of microfinance institutions in Kenya using descriptive research design targeting 4 microfinance institutions operating in Kenya. Data analysis was done using the paired t-test model and found that there was a general decline in ROA for all the DTMs for the period under study inferring that deposit taking has not had a positive influence on financial performance. The study failed to use a larger sample size which might have revealed a different scenario. Also the study used paired t-test research method and failed to use multiple regression analysis which brings out the associative power between the dependent and independent variables.

Nzioki (2009) studied the impact of capital adequacy on the financial performance of commercial banks quoted at the Nairobi stock exchange. The study aimed to investigate the effect of capital

adequacy ratio on the financial performance of commercial banks, examine the implication of asset base on the financial performance of commercial banks, determine the effect of bank's size on the financial performance of commercial banks and to evaluate the effect of asset quality on the financial performance of commercial banks using a descriptive research design of commercial banks in Kenya and sample 9 of listed commercial banks in Nairobi securities exchange. The study used regression analysis of the variables under examination and found that p values for all the 9 banks were positive and above 0.05 meaning the relationship between capital adequacy and financial performance was positive and significant. This study failed to use a larger sample size which might have brought out a different outcome.

Umoru and Osemwegie (2016) investigated influence of capital adequacy on financial performance of commercial banks in Nigeria using empirical evidence based on the Fgls estimator. The study aimed to evaluate the role of capital adequacy on the performance of Nigerian banks using quantitative research design targeting a sample of 8 Nigerian banks that have withstood recent economic meltdown. The study period covered 2007-2015.This study failed to use a larger sample size which could have revealed a true picture of capital adequacy and financial performance of banks in Nigeria.

Njeri (2013) studied the effects of liquidity on financial performance of deposit taking micro finance institutions in Kenya using descriptive research design targeting 9 microfinance institutions operating in Kenya for a five year period from 2009 to 2013. Data was analyzed using the multiple regression model and the findings of 9 DTM's was inferred to represent the financial performance of the entire microfinance industry. This study also failed to use a larger sample size which is being used in the current study.

Nyabeta (2013) examined the effect of liquidity on the financial performance of financial institutions listed in the Nairobi securities exchange using a descriptive research design targeting a sample of 11 financial institutions listed at the Nairobi Securities exchange for the period 2010-2014. The study analyzed data using multiple regression and correlation analysis and found that the correlation of liquidity and ROA vary significantly and but the levels of liquidity have a negative significant influence on ROA. The study nonetheless focused only on ROA as measure of financial performance and left out ROE which captures the shareholders' value in the investment.

Okungu et al., (2014) analyzed the effect of commercial bank loans on financial performance of savings and credit co-operative society in Kisumu. The study aimed to examine the effect of loans offered by commercial banks on the savings and lending volumes of the SACCO in Kisumu City, to investigate the advantages accrued to individual members owing to competition between commercial banks and SACCOs in Kisumu City and to identify the factors that cause the SACCO members to borrow money from other financial institutions in Kisumu City using a case study research design targeting a sample of 370 respondents from 1 Sacco in Kisumu which was purposively selected. The study used descriptive research methods of frequency distribution tables, percentages, mean and standard deviation. Further the study used correlation analysis method to examine the association between variables and failed to use multiple regression equation which is being used in the current study.

Belguith and Bellouma (2017) investigated the impact of loan portfolio diversification on Tunisian banks profitability. The study aimed to examine the impact of loan portfolio diversification on banks profitability and to assess the effect of loan portfolio diversification on private and foreign banks in Tunisia. The study sued descriptive research design of a sample of

10 large banks in Tunisia holding an asset base of over 85% of the banking industry over a period of 15 years from 2000-2015. Data was analyzed using the regression and correlation model and found that loan portfolio diversification negatively impacts banks profitability. This study failed to use a larger sample size which might have yielded different outcomes.

2.4 Conceptual Framework

A conceptual framework is the diagrammatic expression highlighting the relationship between the dependent variables and the independent variables. In this study, the independent variables were; deposits, Capital adequacy, liquidity and loans while the dependent variable was the financial performance as captured by ROA and ROE of commercial banks listed in NSE. The relationship between the independent variables and dependent variable was presented schematically in the conceptual framework next page;

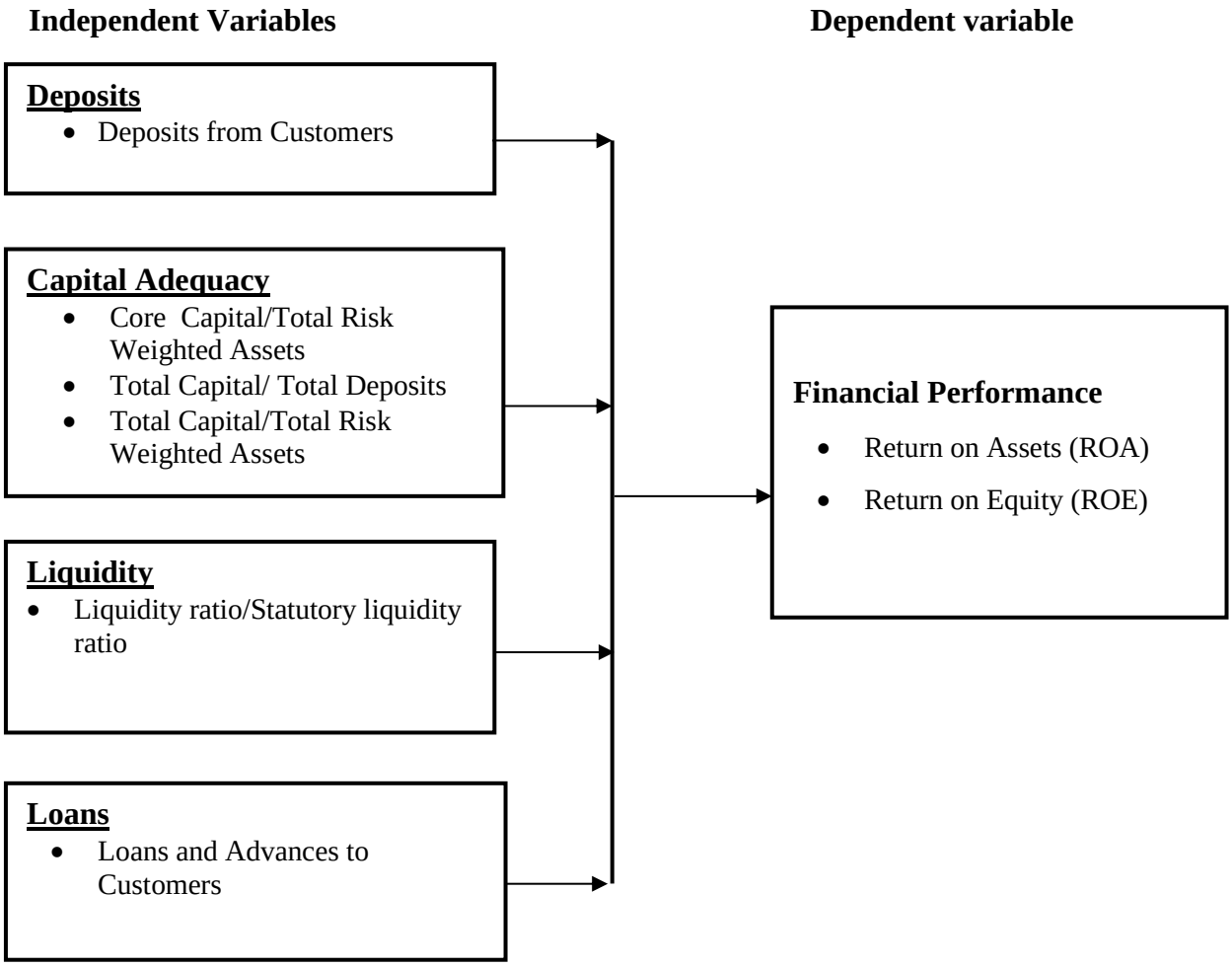

Figure 2.1: Conceptual Framework

Source: Researcher (2019)

Deposits consist mainly of funds placed in banking institutions for safe keeping by various account holders i.e. CASA, term deposit account holders among others. The volume of deposits influences the ability of a financial institution to give out loans which has a bearing on interest income and ultimately financial performance. Despite the desirability of commercial banks to hold excess of deposits over loans, it might eventually lead to escalation of interest expense and opportunity costs and thus it is always prudent for commercial banks to match their volume of deposits with volume of loans.

Capital adequacy enables financial institutions absorb losses during economic downtimes and thus has a positive influence on financial performance. It enables the financial institution built internal resilience against unanticipated negative shocks in the operating environment. It cushions depositors and other lenders against reasonable amount of losses before they become insolvent and thus erode depositor's funds. The rule of the thump is that commercial banks should progressively convert their earnings into capital reserves to cover any liabilities or contingent costs that may occur in the future and which may impair negatively on financial performance.

Liquidity influences financial performances of commercial banks by enabling financial institutions withstand risks arising from a decrease in deposits not matched with a decrease in assets. In such a situation the financial institution may suffer liquidity risks like a run on deposits which may lead to its collapse. Commercial banks also invest their excess liquidity in government securities to boost earnings and minimize the opportunity cost of holding excess liquidity. Levels of Liquidity enable the financial institution to be agile and respond to changes in environment swiftly to improve on financial performance.

Loans influence financial performance of commercial banks because it is the source of interest income which is the major source of revenue for commercial banks in Kenya. Commercial banks strive to lend more so as to earn a higher interest income and thus the volume of loans created has huge significant on its financial performance. As posited by Kirimi, (2015), lending interest rates has a great influence on the financial performance of commercial banks because as they argued, it is the greatest contributor of revenue combined with managerial efficiencies.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Research Design

The study adopted a descriptive research design where an empirical examination of the effect of the independent variables on the dependent variables was carried out. In descriptive research design, numerical data was collected and mathematically analyzed to approve or disapprove the null hypotheses (Klazema, 2014). A descriptive research design was found to be more appropriate because the study sought to collect numerical information about the correlation or relationship of all the variables under study and applying statistical methods to measure the influence of the independent variables on the dependent variables. Descriptive research design also enables an investigation of the correlation between variables over a given time period.

3.2 Study Area

The study area for the research was central bank of Kenya library and its website where annual banking supervision report was accessed. Also the websites of various commercial banks listed in NSE was visited to access the published annual financial statements.

3.3 Target Population

Ngari (2014) defines population under study as the total collection of elements about which the researcher wishes to make some inferences or households that are being investigated. The target population for the study was all eleven commercial banks listed in NSE. Census research method was applied where all the eleven commercial banks listed in NSE was taken as the sample size. A cross-sectional, time series data of all the eleven listed commercial banks was used. The period of study was taken from 2005 to 2017.

Table 3.1: Target population

S/N	Name of Bank	
1.	Barclays Bank Ltd	**BBK**
2.	KCB Bank Ltd	**KCB**
3.	Equity Bank (K) Ltd	**EQB**
4.	Cooperative Bank of Kenya Ltd	**COOp**
5.	Diamond Trust Bank Ltd	**DTB**
6.	I&M Holdings Ltd	**I&M**
7.	Stan Chart Bank Ltd	**SCB**
8.	NIC Bank Ltd	**NIC**
9.	Housing Finance Group	**HF**
10.	National Bank of Kenya Ltd	**NBK**
11.	CFC Stanbic Holdings Ltd	**SBK**

Source: CBK (2017)

3.4 Data Collection

As pointed out by Saunders, Lewis and Thornhill (2012), secondary research data involves the use of information from studies of other researchers relevant to the subject matter. The study

obtained secondary data on Deposits, Capital Adequacy, Liquidity and Loans from published financial statements of commercial banks listed in NSE. Also annual banking supervision reports were sourced from CBK website. Time series secondary data was collected for all the eleven commercial banks listed in NSE for the period of twelve years from 2005 to 2017.

3.4.1 Instrumentation

This is the process of deploying data collection tools or instruments in order obtain data from the sample under study (Dinc, 2017). Data collection tool capturing deposits, capital adequacy, liquidity and loans of all the eleven commercial banks listed in NSE was utilized as highlighted in appendix I. The study used secondary data which was obtained from annual published financial statements of commercial banks listed in NSE and also CBK website.

3.4.2 Data Collection Procedures

This outlines the overall research design and operationalization of the variables under study. It involves specifying the instruments which will be used to collect the data and the process of deploying the necessary tools in order to collect the required data (Mugenda, 2013). This study was carried out by use of secondary data. The data collection instrument is shown in appendix I.

3.5 Data Analysis

Data analysis is the process of cleaning and organization the collected data so that useful information can be derived therein (Mutua, 2013). The study used Statistical Package for Social Sciences (SPSS) software to analyze the data. In the study, the dependent variable was financial performance of commercial banks listed in NSE. The financial performance was measured by ROA and ROE while the independent variables were given as deposits, Capital adequacy, liquidity and loans.

3.5.1 Descriptive Statistics

The study used descriptive statistics to examine the association between variables by use mean, standard deviation, maximum and minimum values. A panel data analysis of deposits, capital adequacy, liquidity, loans, ROA and ROE of commercial banks listed in Nairobi securities exchange was undertaken. The observations covered twelve years from 2005 to 2017

3.5.2 Inferential Statistics

Multiple regression equation, correlation analysis and multi-variate regression analysis was used in this study since it allows for simultaneous investigation of the effect of two or more variables. In regression terminology, the variable that is predicted is called dependent variable while the variable used to predict the value of dependent variable is called independent variable (Mugenda, 2003).To test the significance of the model an Analysis of Variance (ANOVA) was used to check the statistical significance of the results. The study was tested at 0.01 and 0.05 confidence levels. If the Significance 'F' or 'p' value was be found to be less than 0.05, then the conclusion was that, the model was statistically significant in explaining the relationship between the variables. The regression model was highlighted follows:

$$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + e$$

Where Y=Financial performance (ROA and ROE)

X_1= Deposits β_0 = Constant

X_2=Capital adequacy β_1= Coefficient of X_1

X_3= Liquidity β_2= Coefficient of X_2

X_4=Loans β_3= Coefficient of X_3

e=Error term β_4= Coefficient of X_4

3.5.3 Diagnostic Tests/Assumptions of Regression Model

Homoscedastic test was undertaken to validate the assumption that the error term generated in the relationship between the dependent and independent variable was identical and the same for all values of the predictor variables and the predicted variable. The test was necessary to confirm homoscedasticy of the relationship between the dependent and the independent variables.

Normality test was further undertaken to test that relationship between the predicted and the predictor variables follow a normal distribution curve and that, the variance around the regression line was taken to be the same for all the predictor variables and data.

Multi-collinearity test was also undertaken to validate that the variables being examined were devoid of auto correlation of and that the predictor variables were not influenced by the other independent variables to a certain degree of accuracy. This test was important in eliminating biases brought about by the interrelationship among the predictor variables that might influence the outcome of the relationship between predicted and predictor variables.

3.6 Ethical Consideration

To preserve and maintain ethical norms in research, the study sought permission from Kisii University before collection commenced. Also permission was sought from the National Commission for Science, Technology and Innovation before data collection commenced.

Besides ensuring that citations were duly referenced, plagiarism levels were managed below 20 per cent.

CHAPTER FOUR
DATA ANALYSIS AND DISCUSSIONS OF FINDINGS

4.1 Descriptive Statistics

4.1.1 Deposits

Deposits are important component in commercial banks operations and are largely funds placed by customers who operate various bank accounts for safekeeping. These bank accounts could be current accounts, savings accounts, term deposit accounts etc. Deposits generally influence the ability of commercial banks to give loans and thus have significant influence on interest income and ultimately financial performance (Cytonn, 2017). The null hypotheses of the study stated that deposits have no significant influence on the financial performance of commercial banks listed in Nairobi securities exchange. The study undertook descriptive statistics analysis to establish the influence of deposits on the financial performance of commercial banks listed in NSE. Table 4.1 below highlights the descriptive statistics for deposits of the eleven commercial banks listed in NSE.

KCB bank reported the highest maximum deposit value of kes 445, 398.00 billion while those for EQB, Coop and DTB the maximum values of deposits were given as kes 298, 703.00 billion, kes 285, 990.00 billion and kes 209, 254.00 billion respectively. Stanchat bank, Diamond trust bank and Barclays bank had maximum deposit values of kes 226, 051.00 billion, kes 209, 254.00 billion and kes 189, 305.00 billion respectively. Housing finance group had the lowest maximum deposit value of kes 41, 888.00 billion.

Table 4.1: Deposits

	Maximum	Minimum	SD	Mean
BBK	189,305.00	81,800.00	32,008.64	136,491.83
KCB	445,398.00	64,216.00	119,743.14	217,667.46
EQB	298,703.00	9,047.00	98,134.54	133,297.90
COOp	285,990.00	43,354.00	86,474.65	149,364.75
DTB	209,254.00	13,846.00	58,206.39	81,008.84
I&M	134,247.00	11,835.00	38,625.52	62,128.82
SCB	226,051.00	59,683.00	52,491.98	124,530.56
NIC	142,006.00	16,575.00	38,711.64	66,057.71
HF	41,888.00	7,619.00	12,777.57	21,893.84
NBK	110,622.00	25,252.00	31,323.07	62,696.04
SBK	178,696.00	14,794.00	45,809.28	76,847.33
Grand Mean	**205,650.91**	**31,638.00**	**55,846.01**	**102,907.73**

Source CBK (2007-2017)

Barclays bank had the highest minimum value of deposits of kes 81, 800 billion while KCB bank, Stanchart bank and Cooperative bank had the minimum deposit values of kes 64, 216.00 billion, kes 59, 683.00 billion and kes 43, 254.00 billion respectively. National bank, NIC bank, Stanbic bank and Diamond trust banks had minimum deposit values of kes 25, 252.00 billion, kes 16, 575.00 billion, kes 14, 474.00 billion and kes 13, 846.00 billion respectively. Equity bank had a deposit minimum value of kes 9, 047.00 billion while Housing finance group had the lowest minimum value of deposits at kes 7, 619.00 billion.

The study findings indicate that, generally KCB had the highest Standard deviation of deposits of kes 119, 743.14 billion while Equity bank, Cooperative bank, Diamond trust bank and Stanchart bank had a SD value of deposits of kes 98, 134.24 billion, kes 86, 474.65 billion, kes 58, 206.39 billion and kes 52, 491.98 billion respectively. Stanbic bank, NIC bank and I&M bank had

standard deviation values of deposits of kes 45, 809.28 billion, kes 38, 711.64 billion and kes 38, 625.5 billion respectively. Housing finance group had the lowest standard deviation value of kes 12, 777.57 billion.

The findings of the study also reveal that KCB bank posted the highest mean value of deposits of kes 217, 667.46 billion. Coop bank, BBK, and equity banks posted mean values of deposits of kes 149, 364.75 billion, kes136, 491.83 billion and kes 133, 297.90 billion respectively while Stanchart, DTB and Stanbic bank reported mean values of deposits of kes 124, 530.56 billion, kes 81, 008.84 billion and kes 76, 847.33 billion respectively. NIC bank, national bank and I&M bank had deposit mean values of kes 66, 057.71 billion, kes 2, 696.04 billion and kes 62, 128.82 billion respectively. Housing Finance had the lowest mean value of deposits of kes 21, 893.94 billion

4.1.2 Capital Adequacy

Capital adequacy enables financial institutions withstand losses in times of negative economic cycles. It contributes to growth of internal resilience of commercial banks and enables it to cushion itself against unanticipated negative shocks in the operating environment. Capital adequacy is very crucial to depositors and financial investors since it cushions them against reasonable amount of losses before commercial banks become insolvent and thus not being able to give them back their deposits. It is always advisable for commercial banks to progressively convert their earnings into capital reserves to cover any liabilities or contingent costs that may occur in the future and which may impair negatively on financial performance (Eyigege, 2018).The banks total capital consists of tier one capital and tier two capital. Generally tier one capital consists of shareholders equity and retained earnings and is mainly the primary source of funding for commercial banks. Tier two capital consists of undisclosed funds that do not appear

in the bank's financial statements and includes revaluation reserves, subordinated debts, and general loan loses etc. Basel III accord recommended capital adequacy of commercial banks to be 10.5 per cent (CBK, 2017)

The null hypotheses of the study indicated that Capital adequacy has no significant influence on the financial performance of commercial banks listed in NSE. The study measured capital adequacy using the ratios; Core Capital to Total Risk weighted assets, Total Capital to Total Risk Weighted Assets and Core Capital to Total Deposits to uphold or reject the null hypotheses

4.1.2.1 Core Capital to Total Risk Weighted Assets

The core capital to the total risk weighted assets (TRWA) is a common ratio that affects the level of capital in which commercial banks have to retain in order to meet the regulatory threshold of capital adequacy (CBK, 2017). The activity of commercial banks is lending and thus the quality of its assets is paramount. The major risk components in TRWA computations are market risks, credit risks and operational risks. Table 4.2 below highlights descriptive statistics of core capital to risk weighted assets of the eleven commercial listed in NSE.

Equity bank had the highest maximum value of capital adequacy of 45.68 while National banks and housing finance had maximum vales of capital adequacy of 40.85 and 40.52 respectively. Barclays bank, KCB bank and Coop bank had maximum values of capital adequacy 26.58, 23.12 and 22.01 respectively. NIC bank had the lowest maximum value of capital adequacy of 17.22.

The study findings also reveal that Equity bank had the highest minimum values of capital adequacy of 13.86 while KCB bank had a minimum value of capital adequacy of 13.61. NIC bank, Stanchat and Barclays banks had the lowest minimum values of capital adequacy of 13.30, 12.31 and 12.12 respectively. National bank posted the lowest minimum value of capital adequacy of 3.98

Table 4.2: Core Capital to Total Risk Weighted Assets

	Maximum	Minimum	SD	Mean
BBK	26.58	12.12	4.46	17.57
KCB	23.12	13.61	2.86	17.16
EQB	45.68	13.86	8.76	20.57
COOp	22.01	11.37	3.02	16.25
DTB	19.10	11.12	2.01	16.05
I&M	18.90	10.95	2.37	15.65
SCB	18.32	12.31	1.73	15.80
NIC	17.22	13.30	1.07	15.01
HF	40.52	10.47	8.71	18.82
NBK	40.85	3.98	12.82	22.49
SBK	20.50	10.26	3.14	15.13
Grand Mean	**26.62**	**11.21**	**4.63**	**17.32**

Source CBK (2007-2017)

The bank with the highest standard deviation of capital adequacy was National bank with a value of 12.82 while Equity bank, Housing finance and Barclays banks had capital adequacy standard deviations values of 8.76, 8.71 and 4.46 respectively. Coop bank and I&M banks has capital adequacy standard deviations values of 3.02 and 2.37 respectively while the bank with the least Standard deviation was NIC banks with an SD of 1.07.

National banks had the highest mean value of 22.49 while Equity bank, Housing Finance, Barclay's banks and KCB had capital adequacy mean values of 20.57, 18.82, 17.57 and 17.16 respectively. Cooperative bank, diamond trust and CFC Stanbic banks had mean values of 16.25, 16.05 and 15.80 respectively. The bank with the lowest capital adequacy mean value was NIC bank with 15.01.

4.1.2.2 Total Capital to Total Deposits

Capital adequacy was also measured by the ratio of total capital to total deposits. This ratio reflects that resilience of the financial against market risks i.e. a run in on deposits. It tests the resilience of the commercial bank against sudden surge in demand for deposits.

Table 4.3: Total Capital to Total Deposits

	Maximum	Minimum	SD	Mean
BBK	25.41	12.88	3.729	19.661
KCB	21.46	13.86	2.808	17.388
EQB	40.14	13.47	9.764	24.554
COOP	20.26	9.38	3.775	16.172
DTB	21.90	11.93	3.108	16.568
I&M	24.33	13.44	3.597	19.166
SCB	20.23	15.61	1.816	16.882
NIC	24.37	13.81	2.731	17.956
HF	36.29	15.02	7.095	21.676
NBK	20.77	3.501	4.889	13.838
SBK	34.68	18.23	4.858	27.176
Grand Mean	**26.35**	**12.83**	**4.379**	**19.185**

Source CBK (2007-2017)

Table 4.3 above highlights the mean values of total capital to total deposits total risk weighted assets of the eleven commercial listed in NSE. From the study findings it is evident that Equity bank had the highest maximum value of capital adequacy. Housing Finance group, Stanbic bank and Barclays banks had maximum values of capital adequacy of 36.29, 34.68 and 25.41 respectively. Stanchart bank had the lowest value of capital adequacy of 20.23.

The findings also indicated that Stanbic bank had the highest minimum value of capital adequacy of 18.23 while Housing finance, KCB bank and NIC bank had minimum values of capital

adequacy of 15.02, 13.86 and 13.81 respectively. Equity bank and I&M bank had minimum capital adequacy value of 13.47 and 13.44 respectively. Cooperative bank had minimum capital adequacy value of 9.38 while the bank with the lowest value of capital adequacy was National Bank with a value of 3.50.

Stanbic bank had Equity highest mean value capital adequacy of 27.176 with an SD value of 4.858w while equity bank had 24.554 and an SD 9.764. Housing Finance, Barclay's banks and I&M bank had capital adequacy mean values of 21.676, 19.661 and 19.166respectively. The SD values for those mean values were 7.095, 3.729 and 3.597 respectively. KCB bank, Cooperative bank and Diamond had capital adequacy mean values of 17.554, 16.172 and 16.568 respectively. The bank with the lowest mean value of capital adequacy was NBK with value of 13.838.

4.1.2.3 Total Capital to Total Risk Weighted Assets

Capital adequacy was also measured by the ratio of total capital to total risk weighted assets. Total capital was arrived by adding up of tier one capital and tier two capital and dividing the overall figure by the total risk weighted assets of commercial banks listed in NSE. Total risk weighed assets is a classification of assets according to their risk levels and thus some assets i.e. loans and advances are assigned higher risks than cash or treasury bills and bonds (Almasiri & Alamiri, 2017). Table 4.4 below highlights descriptive statistics of total capital to risk weighted assets of the eleven commercial listed in NSE.

Table 4.4: Total Capital to Total Risk Weighted Assets

	Maximum	Minimum	SD	Mean
BBK	31.15	13.99	3.729	21.06
KCB	23.16	13.61	2.808	18.66
EQB	58.92	15.50	9.764	27.30
COOp	23.48	14.51	3.775	20.45

DTB	21.00	16.79	3.108	19.00
I&M	19.92	12.62	3.597	17.82
SCB	21.20	14.30	1.816	17.70
NIC	21.60	14.80	2.731	17.53
HF	48.73	15.10	7.095	26.60
NBK	42.56	5.40	4.889	25.90
SBK	25.50	16.65	4.858	18.92
Grand Mean	**30.66**	**13.93**	**3.37**	**20.99**

Source CBK (2007-2017)

From the table 4.4 above the study revealed that Equity bank had the highest maximum value of capital adequacy of 58.92 while Housing Finance group and Stanbic bank had maximum vales of capital adequacy of 48.73 and 25.50 respectively. Barclays bank, NIC banks and I&M bank maximum values of capital adequacy 31.15, 21.60 and 19.92 respectively. Diamond Trust banks, KCB bank, National banks and Cooperative bank maximum value of capital adequacy of 21.00, 23.16, 42.56 and 23.48 respectively. The bank with the lowest maximum value of capital adequacy was I&M bank with a value of 19.92

The study findings also disclosed that reveal that Diamond trust bank had the highest minimum values of capital adequacy of 16.79 while Stanchart bank had a minimum value of capital adequacy of 14.30. KCB bank, NIC bank and Equity bank had minimum values of capital adequacy of 13.61, 14.80 and 15.50 respectively. I&M bank and Housing Finance group had minimum value of capital adequacy of 12.62 and 15.10 respectively. Barclays banks and Diamond Trust bank had minimum value of capital adequacy of 13.99 and 16.79 respectively. The bank with the lowest minimum value of capital adequacy was National bank with a value of 3.50.

The study findings reveal that equity bank had the highest mean value of 27.30 with an SD of 9.764 while Housing finance group and Barclays bank had capital adequacy mean values of 26.60

and 21.06 respectively. Their respective SD values were 9.764, 7.095 and 3.729 respectively. I&M bank, NIC bank, KCB bank and Stanchart bank had mean values of capital adequacy of 19.166, 17.956, 17.388 and 16.882 respectively. The SD values for I&M bank, NIC bank, KCB bank and Stanchart bank were 3.597, 2.731, 2.808 and 1.816 respectively. The bank with the lowest capital adequacy mean value was NIC bank with a value of 17.53 and a SD of 2.731

4.1.3 Liquidity

Liquidity influences the financial performance of commercial banks by determining a trade of between short term investment decisions and demand of deposits by account holders. Commercial banks usually invest their excess liquidity in high earning asset yields i.e. government securities to improve on their financial performance. Liquidity management also enable financial institutions minimize the opportunity cost of holding excess liquidity and become agile balancing between liabilities and assets. Commercial banks must maintain liquid or near liquid assets that can finds the cash cycle for a month (Cytonn, 2018).The null hypotheses stated that the liquidity has no significant influence on the financial performance of commercial banks listed in NSE. Descriptive statistics of liquidity ratio to minimum statutory ratio was undertaken to uphold or reject the null hypotheses.

4.1.3.1 Liquidity Ratio to Statutory Liquidity Ratio

The liquidity ratio of commercial banks listed in NSE was measured against the statutory minimum liquidity ratio of 20 per cent. The liquidity ratio to minimum statutory ratio statistics is presented in the table below (CBK, 2017).

Table 4.5: Liquidity Ratio to Statutory Liquidity Ratio

	Maximum	Minimum	SD	Mean
BBK	46.1600	32.0300	4.2173	38.5192

KCB	48.5300	28.1200	6.4015	36.4008
EQB	47.3200	25.7100	6.7099	37.3023
COOp	41.4000	23.0500	4.2019	34.6731
DTB	45.2900	29.5800	5.0528	35.2623
I&M	41.6000	22.1800	4.7340	34.7331
SCB	52.4400	34.2200	5.9562	41.9592
NIC	43.3700	28.5300	4.8352	33.8646
HF	37.5400	15.0700	7.4075	26.8223
NBK	55.8900	34.5700	5.3810	43.8377
SBK	53.3200	35.2700	4.8814	41.9554
Grand Mean	**46.6200**	**28.0300**	**5.4400**	**36.8500**

Source CBK (2007-2017)

Table 4.5 above highlights the liquidity ratio to statutory liquidity ratio statistics of the eleven commercial banks listed in NSE. The study findings showed that National bank of Kenya had the highest maximum liquidity value of 55.8900 while Stanbic bank and Stanchart banks had maximum liquidity values of 53.3200 and 52.4400 respectively, thus NBK, SBK and SCB had maximum liquidity values of over 50.0000. The banks with maximum liquidity values of over 45.0000 are KCB bank, Equity bank, Barclays bank and Diamond Trust banks with maximum liquidity values of 48.5300, 47.3200, 46.1600 and 45.2900 respectively. Housing finance group reported the lowest maximum liquidity values of 37.5400.

The findings of the study from the table above also indicated that, Stanbic bank posted the highest minimum liquidity value of 35.2700 while national bank had a minimum liquidity value of 34.5700. A total of four banks had minimum liquidity values of over 30.0000 with Stanchart and Barclays banks reporting liquidity values of 34.2200 and 32.0300 respectively. Diamond trust bank, NIC bank, KCB bank, Equity bank and Cooperative bank had minimum liquidity values of

29.5800, 28.5300, 28.1200, 25.7100 and 23.0500 respectively. Housing finance had the lowest minimum liquidity value of 15.0700.

Housing finance group reported the highest liquidity standard deviation value of 7.4075. Equity bank and KCB reported liquidity standard deviation values of 6.7099 and 6.4015 respectively. Stanchart bank, National bank and Diamond trust bank each recorded liquidity standard deviation vales of 5.9562, 5.3810 and 5, 0528 respectively. NIC bank, I&M bank and Barclays bank indicated a liquidity standard deviation values of 4, 8352, 4.7340 and 4.2173 respectively. Cooperative bank showed the lowest liquidity standard deviation value of 4.2109.

The study findings also showed that, National bank had the highest mean value of liquidity of 43.8377 while Stanbic bank and Stanchart banks reported mean liquidity values of 41.9554 and 41.9592 respectively. Barclays bank, Equity bank and KCB banks each reported mean liquidity values of 38.5192, 37.3023 and 36.4008 respectively. Diamond trust bank and Cooperative bank mean liquidity values were 35.2623 and 34.6731 respectively. The bank with the lowest mean liquidity value was housing finance with a value of 26.8223. Generally all the banks reported a mean liquidity value of over 30.000 except Housing Finance.

4.1.4 Loans

Loans are an important component of commercial banks performance because it determines the interest income yield for the respective bank. Commercial banks strive to lend more in order to earn a higher interest income and thus loans and advances to customers has a huge significance on its financial performance. Kirimi (2015) posited that lending interest rates has a great influence on the financial performance of commercial banks because as they argued, it is the greatest contributor of revenue. The null hypotheses stated that loans have no significant influence on the

financial performance of commercial banks listed in NSE. Descriptive statistics of loans and advances to customers was analyzed to uphold or reject the null hypotheses

4.1.4.1. Loans and advances to Customers

Loans and advances to customers is the net sum of term loans and overdraft facilities created by commercial banks and extended to borrowers. The figure for loan and advances will be varying from time to time depending on repayments or reflows by the borrowers. It excludes contingent liabilities which are non-funded facilities also extended to customers (Cytron, 2017).

Table 4.6 below illustrate that KCB bank reported the highest maximum value of loans and advances to customers at kes 411, 66.00 billion while cooperative bank and equity bank had maximum loans and advances to customers values of kshs 262,362.00 billion and kes 229,394.00 billion respectively. Barclays bank, diamond trust bank and Stanchart bank had maximum loans and advances to customer values of kes 177, 224.00 billion, kes 156, 843.00 billion and kes 139, 406.00 billion respectively. Stanbic bank, I&M bank and National bank had maximum loans and advances to customer's values of kes 135, 443.00 billion, kes 26, 983.00 billion and kes 72, 842.00 billion respectively. Housing finance group reported the lowest maximum loan and advances to customer's value of kes 56, 785.56 billion.

Table 4.6: Loans and Advances to Customers

	Maximum	Minimum	SD	Mean
BBK	177,224.00	70,220.00	34,227.24	115,001.12
KCB	411,666.00	36,311.00	126,573.05	185,727.64
EQB	229,394.00	5,524.00	84,158.41	112,149.60
COOp	262,362.00	44,655.00	77,355.65	125,712.29
DTB	156,843.00	10,318.00	48,528.88	68,674.10
I&M	126,983.00	8,198.00	39,872.51	58,020.40

SCB	139,406.00	35,402.00	42,049.33	88,139.26
NIC	118,459.00	14,259.00	39,070.96	62,165.77
HF	56,785.56	6,345.00	19,526.80	28,152.35
NBK	72,842.00	11,606.00	23,730.49	37,074.13
SBK	135,443.00	11,662.00	39,188.23	64,592.24
Grand Mean	**171,582.51**	**23,136.36**	**52,182.87**	**85,946.26**

Source CBK (2007-2017)

The study findings from table 4.6 above also indicated that, Barclays had the highest minimum value of loans and advances to customers of kes 70.220.00 billion. Cooperative bank, KCB bank, and Stanchart bank had minimum values of loans and advances to customers of kes 44, 655.00 billion, kes 36, 311.00 billion and kes 35, 402.00 billion respectively. NIC bank, Stanbic bank and National bank had minimum values of loans and advances to customers of kes 14, 259.00 billion, kes 11, 662.00 billion and kes 11,606.00 billion respectively. Housing finance group had a minimum value of loans and advances to customers of kes 6, 345.00 billion while Equity bank indicated the lowest value of loans and advances to customers of kes 5, 524.00 billion.

The study findings showed that KCB bank had the highest standard deviation value of loans and advances to customers of kes 126, 573.05 billion. Equity bank, Cooperative bank and Diamond trust banks had standard deviation values of loans and advances to customers of kes 84, 158.41 billion, kes 77, 355.65 billion and kes48, 528.88 billion respectively. The standard deviation values of loans and advances to customers for Stanchart bank, I&M bank, Stanbic and NIC bank each were kes 42, 049.33 billion, kes 39, 872.51 billion, kes 39, 188.23 billion and kes 39, 070.96 billion respectively. Barclays bank had a standard deviation value of loans and advances to customers of kes 34, 227.24 billion while the bank with the lowest standard deviation value of loans and advances to customers was housing finance group with a figure of kes 19, 256.80 billion.

The study findings also found out that KCB bank had the highest mean value of loans and advances to customers. Cooperative bank, Barclays bank and equity bank each had mean values of loans and advances to customers of kes 125, 712.29 billion, kes 115, 001.12 billion and kes 112, 149.60 billion respectively. They are among the commercial banks that posted mean values of loans and advances to customers of over kes 100, 000.00 billion. The mean values of loans and advances to customers of Stanchart bank, Diamond trust bank, stanbic bank, and NIC bank each were kes 88, 139.26 billion, kes 68, 674.10 billion, kes 64, 592.24 billion and kes 62, 165.77 billion respectively. I&M bank and national bank each had a mean value of loans and advances to customers of kes 58, 020.40 billion and kes 37, 074.13 billion. Housing finance group reported the lowest mean value of loans and advances of kes 28, 152.35 billion.

4.1.5 Financial Performance

Financial performance evaluates how a firm's policies are actualized in the utilization of assets to generate revenue. The primary objective of a firm is to generate revenue over and above its operating costs and thus periodic evaluation of its financial statements is paramount to ascertain whether the firm is making profits or loses. Financial performance can be measured through various financial measures i.e. return on assets, return on equity, net interest margin, earnings per share and return on investment (Njeri, 2013). The study used return on assets and return on equity as a measure of financial performance.

4.1.5.1 Return on Assets (ROA)

Return on assets illustrates how efficient a firm is utilizing the assets at its disposal to generate revenue. It is usually calculated as the ratio of net income over period of time to total assets at a given point in time (Desta, 2016).

Table 4.7: Return on Assets (ROA)

	Maximum	Minimum	SD	Mean
BBK	7.1800	3.6800	1.1160	5.1785
KCB	5.9300	1.8300	1.3297	4.3500
EQB	7.7000	4.0600	1.1624	6.1331
COOp	5.1500	0.9900	1.2188	3.6362
DTB	4.9000	1.9400	0.9621	3.6638
I&M	5.8000	2.0000	1.1264	4.5954
SCB	6.0000	3.3000	0.9840	4.7738
NIC	4.6000	1.7300	0.8995	3.6023
HF	3.1000	0.6300	0.7226	1.9154
NBK	4.5000	-1.3400	1.6433	2.1677
SBK	4.7100	1.3500	1.0163	2.8046
Grand Mean	**5.4200**	**1.8300**	**1.1100**	**3.8900**

Source CBK (2007-2017)

Table 4.7 above highlights the descriptive statistics of ROA for the eleven commercial banks listed in NSE. The findings of the study showed that Equity bank had the highest maximum value of ROA of 7.1800 while Barclays bank, Stanchart bank, KCB bank and I&M bank each indicated a maximum value of ROA of 7.1800, 6.0000, 5.9300 and 5.8000 respectively. Cooperative bank, Diamond trust bank and Stanbic bank each showed a maximum value of ROA of 5.1500, 4.9000 and 4.7100 respectively. NIC bank had a maximum value of ROA of 4.6000 while Housing finance group indicated the lowest maximum value of ROA of 3.1000.

The results of the study findings also indicated that equity bank had the highest minimum value of ROA of 4.0600 while Barclays bank and Stanchart bank each had the minimum values of ROA of 3.6800 and 3.3000 respectively. I&M bank, KCB bank, NIC bank and Stanbic bank each had

the minimum ROA values of ROA of 2.0000, 1.8300, 1.7300 and 1.3500 respectively. National bank reported the lowest minimum value of ROA of -1.3400.

The findings of the study showed that KCB bank had the highest standard deviation value of ROA of 1.3297 while cooperative bank, national bank, and equity bank each had SD values of ROA of 1.2188, 1.6433 and 1.1624 respectively. I&M bank, Barclays bank and stanchart bank each had standard deviation values of ROA of 1.1264, 1.1160, and 0.9840 respectively. Diamond trust bank and NIC bank each had standard deviation values of ROA of 0.9621 and 0.8995 respectively. The bank will indicate the lowest value of standard deviation of ROA was Housing finance with a figure of 0.7226.

Equity bank had the highest mean value of ROA of 6.1331. Barclays bank, Stanchat bank, I&M bank, and KCB bank each indicated mean values of ROA of 5.1785, 4.7738, 4.5954 and 4.350 respectively. Diamond trust bank, Cooperative bank and NIC bank each mean values of ROA of 3.6638, 3.6362, and 3.6023 respectively. Housing finance group had the least mean value of ROA of 1.9194.

4.1.5.2 Return on Equity (ROE)

The return on equity is profitability measure that evaluates the shareholders net worth in the firm. Return on equity sums up the capacity of the firm to generate profit from the investors' funds in the firm. It demonstrates how much profit each dollar worth of ordinary stock is able to be generated from the firm (Mwangangi, 2013). Table 4.8 below shows the descriptive statistics of ROE of eleven commercial banks listed in NSE.

Table 4.8: Return on Equity (ROE)

	Maximum	Minimum	SD	Mean
BBK	44.5700	23.0000	7.4586	35.1477

KCB	35.2000	19.3200	3.6293	28.8638
EQB	50.1100	15.9100	10.3333	35.7338
COOp	34.5300	17.3900	5.4405	27.3762
DTB	35.6400	18.6100	5.3760	25.8477
I&M	35.5000	21.5000	4.8204	28.7369
SCB	45.2700	21.3000	7.1289	35.4277
NIC	33.9500	14.8100	5.3572	24.7338
HF	27.8200	3.9000	7.2675	14.6054
NBK	32.4100	-15.4000	12.4906	18.8831
Grand Mean	36.9400	14.0900	6.7700	27.1800

Source CBK (2007-2017)

Equity bank had the highest value of maximum ROE of 50.1100 while Stanchart bank and Barclays bank each had maximum values of ROE of 45.2700 and 44.5700 respectively. Diamond trust bank, I&M bank and cooperative bank each had maximum values of ROE of 35.6400, 35.5000 and 34.5300 respectively. NIC bank and National bank each had maximum values of ROE of 33.9500 and 32.4100. Housing finance reported the lowest maximum value of ROE of 27.8200.

The findings showed that Barclays bank had the highest minimum value of ROE of 23.0000. The other commercial banks with minimum ROE values above 20 were I&M bank and Stanchart bank each with minimum ROE values of 21.5000 and 21.3000 respectively. KCB bank, DTB bank, cooperative bank and equity bank each had minimum values of ROE of 19.3200, 18.6100, 17.3900 and 15.9100 respectively. National bank reported the lowest minimum value of ROE of -15.4000.

The research findings showed that only two banks had Standard deviation values of ROE of more than 10.0. National bank had the highest standard deviation of 12.4906 while equity bank had an SD value of ROE of 10.3333. Barclays bank, Housing finance group and Stanchart bank each had

standard deviation values of ROE of 7.4586, 7.2675 and 7.1289 respectively. Diamond Trust bank, NIC bank and cooperative bank each had standard deviation values of ROE of 5.3760, 5.3572 and 5.4405 respectively. I&M bank reported a standard deviation value of ROE of 4.8204 while KCB bank had the lowest overall standard deviation value of ROE of 3.6293.

The research findings also indicated that equity bank had the highest mean value of ROE of 35.7338 followed by Stanchart bank and Barclays bank with mean value of ROE of 35.4277 and 35.1477 respectively. KCB bank, I&M bank, Cooperative bank and Diamond trust bank each had mean values of ROE of 28.8638, 28.7369, 27.3762 and 25.8477 respectively. The study findings showed that Housing finance had the lowest mean value of ROE of 14.6054.

4.1.5.3 Total Financial Performance

The total financial performance was arrived at by averaging the mean values of ROA and ROE. This was done in order to come up with one predicted variable which was subsequently evaluated by the predictors; deposits, capital adequacy, liquidity and loans. Table 4.9 below indicates the descriptive statistics of total financial performance of eleven commercial banks listed in NSE.

Table 4.9: Total Financial Performance

	Maximum	Minimum	SD	Mean
BBK	46.77	24.84	4.54	37.74
KCB	38.02	20.24	6.42	31.04
EQB	52.56	18.06	5.91	38.80
COOp	36.37	17.89	4.37	29.19
DTB	38.09	20.01	3.82	27.68
I&M	38.32	23.55	2.41	31.03
SCB	47.92	22.97	4.18	37.82
NIC	36.23	15.68	4.97	26.54
HF	29.07	4.22	8.33	15.56

NBK	33.96	-16.07	5.27	19.97
SBK	33.35	15.38	5.21	25.00
Grand Mean	**39.15**	**15.16**	**5.04**	**29.12**

Source CBK (2007-2017)

The findings of the study above showed that Equity bank had the highest maximum value of FP of 52.56 while Stanchart bank and Barclays bank had maximum values of FP of 47.92 and 46.77 respectively. I&M bank, Diamond trust bank, KCB bank and NIC bank had maximum values of FP of 38.32, 38.09, 38.02 and 36.23 respectively. The study findings also indicated that National bank and Stanbic bank had maximum values of FP of 33.96 and 33.35 respectively. Housing finance had the lowest maximum value of FP of 29.07.

The results of the study findings also indicated that Barclays bank had the highest minimum value of FP of 24.84 while I&M bank and Stanchart bank each had the minimum values of FP of 23.55 and 22.97 respectively. DTB bank, Equity bank and Cooperative bank had minimum values of FP of 20.01, 18.06 and 17.89 respectively. NIC bank and Stanbic bank had minimum values of FP of 15.68 and 15.38 respectively. National bank reported the lowest minimum value of ROA of -16.07.

Equity bank had the highest mean value of FP of 38.80.Stanchat bank, Barclays bank, KCB bank and I&M bank each indicated mean values of FP of 38.82, 37.74, 31.04 and 31.03 respectively. Cooperative bank, Diamond trust bank and Stanbic bank each had mean values of FP of 29.19, 27.68 and 25.00 respectively. Housing finance group had the least mean value of FP of 15.56.

4.2 Inferential Statistics

4.2.1 Correlation Analysis

Correlation analysis of the predictor and the predicted variables was evaluated to ascertain their association with each other. The data collected was subsequently analyzed to ascertain the

Pearson correlation coefficient which establishes the existence of association between the independent and the dependent variables. A Pearson's correlation analysis of the variables was analyzed at 5% level of significance. The magnitude of the association between the dependent and the independent variables was measured based on Pearson's correlation scale, where the correlation coefficient of less than 0.3 signified a weak correlation, a correlation coefficient between the intervals 0.3 and 0.5 indicated a moderate correlation and a correlation coefficient greater than 0.5 illustrated strong correlation. The results are presented in table 4.10.

From the table 4.10 below, the study findings indicated that the correlation between study variables deposits and financial performance was (r=0.312, p=0.008) which indicated a moderate positive correlation between deposit and financial performance. The relationship was also indicated as significant at 0.05 levels. The study findings also established the correlation between capital adequacy and financial performance as (r=0.200, p=0.556) which illustrated a weak positive insignificant correlation at 0.05 level.

Table 4.10: Pearson's Correlation Summary

		FP	Deposits	Capital Adeq	Liquidity	Loans
FP	Pearson Correlation	1	0.312*	0.200	0.255	0.371*
	Sig. (2-tailed)		0.008	0.556	0.284	0.007
Deposits	Pearson Correlation	0.312*	1	0.142	0.492	0.759*
	Sig. (2-tailed)	0.008		0.676	0.124	0.000
Capital Adeq	Pearson Correlation	0.200	0.142	1	0.166	0.289
	Sig. (2-tailed)	0.556	0.676		0.626	0.389

Liquidity	Pearson Correlation	0.255	0.492	0.166	1	0.263
	Sig. (2-tailed)	0.284	0.124	0.626		0.434
Loans	Pearson Correlation	0.371*	0.759*	0.289	0.263	1
	Sig. (2-tailed)	0.007	0.000	0.389	0.434	

*Correlation is significant at the 0.05 level (2-tailed).

Source: (Researcher, 2019)

The results further indicated that liquidity and financial performance had a correlation (r = 0.255, p=0.284) implying that there was a moderate positive but statistically insignificant association between the two variables. It is also evident that the correlation between loans and financial performance was (r=0.371, p=0.007) indicating a statistically significant moderate relationship between the two variables.

4.3 Diagnostic Tests

4.3.1 Tests for Homoscedasticity

The findings of the study was subjected to homoscedastic test to evaluate the assumption of homoscedasticity where it was deducted that the error term generated in the relationship between the dependent and independent variable was homoscedastic and that it was the same or identical for all values of the predictor variables. Table 4.11 shows the results obtained.

Table 4.11: Results of Homoscedasticity

Variable	Test	Sig.
Deposits	1.102	0.001
Capital adequacy	2.123	0.000

Liquidity	0.812	0.015
Loans	1.224	0.001

Source: (Researcher, 2019)

The diagnostic tests results from table 4.12 above illustrated that the 'p' values of Deposits, capital adequacy, liquidity and Loans were 0.001, 0.000, 0.015 and 0.001 respectively. This indicated that the test was statistically significant and therefore the assumption that data was homoscedastic was confirmed. The study thus, concluded that the panel data was homoscedastic.

4.3.2 Test for Normality

Assessment of the normality of the dependent variable is an important condition in multiple regression analysis The findings of the study was tested to ascertain its normality condition where it was assumed that the relationship between the predicted and the predictor variables follow a normal distribution curve and that, the variance around the regression line was taken to be the same for all the predictor variables.

It was necessary to carry out the normality test since the statistical procedures used in the study including regression were based on the assumption that the data follows a normal distribution. The assumption here is that the population from which the sample was drawn was normally distributed (Ghasemi & Zahediasi, 2012). It was therefore statistically prudent to fit the multiple linear regressions since data on the factors determining financial performance of commercial banks listed in NSE were normally distributed. In this study normal distribution of data was tested by use of Shapiro-Wilk Test as shown in table 4.12.

Table 4.12: Shapiro-Wilk for Normality Test

Variables	**Statistic**	**Sig.**

Financial Performance	0.873	0.201
Deposits	0.948	0.132
Capital Adequacy	0.840	0.287
Liquidity	0.987	0.400
Loans	0.991	0.234

Source: (Researcher, 2019)

From the findings as indicated in table 4.13 above, the data for all the variables was normally distributed. The findings show that financial performance (p-value=0.201), deposits (p-value=0.132), Capital adequacy (p-value=0.287), liquidity (p-value=0.400) and loans (p-value=0.234) were normally distributed.

4.3.3 Multi-collinearity Test

The findings of the study was also evaluated to ascertain that the variables being examined lacks multi-collinearity and that the predictor variables were not influenced by the other independent variables to a certain degree of accuracy. This test was important in eliminating biases brought about by the interrelationship among the predictor variables which might influence the outcome of the relationship between predicted and predictor variables.

The primary concern was the tolerance level which is an indication of the percent of variance in the predictor that cannot be accounted for by other predictors. The VIF is (1/tolerance) and as a rule of thumb, a variable whose VIF value is greater than 10 may merit further investigation. The results are presented in table 4.13.

Table 4.13: Multi-Collinearity test results

Variables	Tolerance	VIF
Deposits	0.409	2.371

Capital Adequacy	0.531	3.863
Liquidity	0.507	2.001
Loans	0.592	1.388

Source: (Researcher, 2019)

From the findings, the variable deposits had a tolerance of 0.409 and a VIF of 2.371, capital adequacy had a tolerance of 0.531 and a VIF of 3.863, liquidity had a tolerance of 0.507 and a VIF of 2.001 while loans range had a tolerance of 0.592 and a VIF of 1.388. Since the tolerance for all the variables was more than 0.1 and the VIF was not more than 10, there was no need of further investigations.

4.4 Regression Analysis

The study findings derived a regression model to evaluate the relationship between independent variables and the dependent variables. The results were presented in table 4.14 below.

Table 4.14: Model Summary

Model	R	R^2	Adjusted R^2	Std. Error of the estimate	Sig.
1	0.735[a]	0.5425	0.2375	3.30789365	0.0285

a. Predictors: (Constant), Deposits, Capital adequacy, Liquidity, Loans

b. Dependent Variable: Financial Performance

Source: (Researcher, 2019)

The model summary above indicated that, the correlation between the dependent and independent variables was positive and significant as shown by (R=0.735).The model summary also revealed the value of R squared was (R^2 = 0.5425) which indicated that approximately 54.25 per cent of variance in financial performance was explained by the independent variables. This implied that the other 45.75 per cent of the variance in the financial performance was explained by other

factors that were not considered by the study. It was thus observed that the independent variables and the dependent variable were statistically related. The analysis of variance for the dependent variable is presented in table 4.15 below.

Table 4.15: ANOVA

Model		Sum of Squares	df	Mean Square	F	Sig.
1	**Regression**	144.837	4	36.209	2.357	0.041[b]
	Residual	92.165	5	15.361		
	Total	237.002	9			

a. Dependent Variable: Financial Performance

b. Predictors: (Constant), Deposits, Capital adequacy, Liquidity, Loans

Source: (Researcher, 2019)

The study established that statistics F ratio (F (4, 5) = 2.357, p=0.041) and indicated that the model fitness test was favorable and that the data fitted the regression model equation. The study thus concluded that the variation in the financial performance of commercial banks listed in NSE was explained by the variations in the independent variables namely; deposits, capital adequacy, liquidity and loans. The results are presented in table 4.16 below.

Table 4.16: Coefficients[a]

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	**(Constant)**	-4.333	8.348		1.149	0.089
	Deposits	0.281	3.294	0.6900	2.925	0.007
	Capital adequacy	0.165	0.568	0.1295	0.347	0.544
	Liquidity	0.215	0.507	0.3155	0.514	0.232

Loans	0.311	3.602	0.7125	3.065	0.006

a. Dependent Variable: Financial performance

Source: (Researcher, 2019)

From the coefficient model above, the following equation was developed Y = -4.33+0.281 (Deposits) +0.165 (Capital adequacy) +0.215 (liquidity) +0.311 (Loans). From the derived regression equation, holding all other independent variables constant at zero the financial performance of commercial banks listed in NSE was -4.33. However, holding all other variables constant, a unit change in deposits resulted to 0.281 units change in financial performance of commercial banks listed in NSE. A unit change in capital adequacy holding all other variables constant at zero lead to 0.215 units change in the financial performance of commercial banks listed in NSE while a unit change in liquidity holding all other variables constant at zero resulted to 0.215 units change in the financial performance of commercial banks listed in NSE. Further, the study findings revealed that a unit change in loans holding other variables constant at zero resulted to a 0.311 units change in financial performance of commercial banks listed in NSE. These findings are consistent with those of (Umoru & Osemwegie, 2016) who found out that the impact capital adequacy on the financial performance of banks in Nigeria was below 30 per cent but significant and thus depositors funds in Nigerian banks has not been sufficiently assured. The study by (Vaita, 2017) also established that liquidity had significant effect on financial performance of tier one listed commercial banks in Kenya.

4.5 Testing Hypotheses

The research hypothesis was evaluated using the regression model developed above where financial performance was indicated as the average of the mean values of ROA and ROE

4.5.1 Hypotheses One

This hypothesis sought to establish the influence of deposits on financial performance of

commercial banks listed in Nairobi securities exchange. The null hypothesis was stated as follows:

H_{O1}: Deposits has no significant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange.

The developed regression model indicated that, the coefficients of deposits was β1=0281. It was also established that the regression coefficient of the model was (p=0.007, p<0.05). This implies that the regression model was statistically significant at 0.05 confidence levels, therefore, the study rejected the null hypothesis that deposits had no significant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange The conclusion from the hypothesis testing showed that deposits had a positive significant effect on the financial performance of commercial banks listed in NSE.

4.5.2 Hypotheses Two

The second null hypothesis sought to establish the influence of capital adequacy on the financial performance of commercial banks listed in NSE and which was highlighted as follows:

H_{O2}: Capital adequacy has no significant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange

The regression model showed that regression coefficients of capital adequacy was $\beta_2 = 0.105$, with 'p' values of (p=0.544, p>0.05), implying that the model was statistically insignificant at 0.05 levels. The study thus failed to reject the null hypothesis that; capital adequacy has no significant influence of the financial performance of commercial banks listed in NSE. The study thus upheld the alternative hypotheses. The conclusion from this hypotheses testing was that Capital adequacy has no influence on the financial performance of commercial banks listed in Nairobi Securities Exchange.

4.5.3 Hypotheses Three

The third hypotheses of the study sought to investigate the influence of liquidity on the financial performance of commercial banks listed in Nairobi securities exchange. The third hypotheses highlighted as follows:

H_{O3}: liquidity has no significant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange

The regression model indicated that the coefficients of liquidity was $\beta 3= 0.590$ while the 'p' values was ($p=0.232$, $p> 0.05$).The study found out that the model was statistically insignificant at 0.05 levels and thus failed to reject the null hypothesis. The study thus concluded that liquidity has statistically insignificant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange.

4.5.4 Hypotheses Four

The fourth hypothesis of the study attempted to examine the influence of loans on the financial performance of commercial banks listed in Nairobi securities exchange. The fourth hypothesis is highlighted as follows:

H_{O3}: loans has no significant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange

The developed regression model indicated that, the coefficients of loans was $\beta_4= 3.439$ with 'p' values of ($p=0.006$, $p<0.05$). The study thus established that the model was statistically significant at 0.05 confidence levels and thus rejected the null hypothesis that loans had no significant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange The conclusion from the hypothesis testing showed that loans had a positive significant effect on the financial performance of commercial banks listed in NSE.

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of Research Findings

The objective of the study was to ascertain the determinants influencing financial performance of commercial banks listed in Nairobi securities exchange. The research was carried out by use of secondary data of all the publicly listed commercial banks operating in Kenya from 2005 to 2017. The period was considered long enough to bring out the influence of the predictor variables on the predicted variables. The secondary data was obtained from annual bank supervision reports from CBK website and annual published financial statements from publicly listed commercial banks in Nairobi securities exchange.

The study findings revealed that the deposits for the eleven commercial banks listed banks in NSE had a mean of kes 102, 907.73 billion. KCB bank had the highest mean value of deposits of kes217, 667.46 billion while Housing finance had the lowest mean value of deposits of kes 21,893.84 billion. The study findings further established that the correlation coefficient between deposits and financial performance was 0.312 which was positive and significant at 0.05 levels. The regression model established that a unit change in deposits holdings other variables constant resulted in 0.281 units change in financial performance.

The research findings revealed that the capital adequacy of the eleven commercial banks listed in NSE had a mean value of 17.32. National bank had the highest mean value of 22.49 while NIC bank had the lowest capital adequacy mean value of 15.01.From the Pearsons correlation matrix, the study findings indicated that correlation between capital adequacy and financial performance was statistically insignificant.The regression model developed showed that, the regression coefficients of capital adequacy was ($\beta_2 = 0.165$, $p>0.05$). These findings signified that the model

was statistically insignificant and that the variation in the values of FP cannot be explained by variations in capital adequacy.

From descriptive statistics, the study found out that the mean liquidity value of the eleven commercial banks listed in NSE was 36.85. National bank had the highest mean value of liquidity of 43.8377 while Housing finance group had the lowest mean value of liquidity of 26.8223.The findings of the study indicated that the correlation between liquidity and FP was insignificant at 0.05 confidence levels.The regression model developed showed that, the regression coefficients of liquidity was (β_3 = 0.215, p>0.05). These findings signified that the model was statistically insignificant and that the variation in the values liquidity cannot explain the variations in financial performance of commercial banks listed in NSE.

The descriptive statistics for loans indicated that the mean value of loan of the eleven commercial banks listed in NSE was kes 85, 946.26 billion with KCB bank having the highest mean value of loans of kes 185, 727.64 billion. The study findings showed that Housing group the lowest mean value of loans of kes28, 152.35 billion. From the correlation matrix, study found out that, loans was positively correlated with FP as indicated by the correlation coefficient of 0.666. Further the study established that the relationship between loans and FP was significant at 0.01 confidence level. The regression equation established, holding all the other the independent variables constant at zero, a unit change in loans resulted in a 0.311 units change in financial performance of commercial banks listed in NSE.

5.2 Conclusions

i. The first objective sought to establish the influence of deposits on financial performance of commercial banks listed in Nairobi securities exchange. The study from descriptive

statistics indicated that KCB bank had the highest mean value of deposits. From the hypotheses testing, the null hypothesis was rejected and the alternative hypothesis was accepted. The study concluded that deposits has a significant influence the financial performances of commercial banks since KCB bank appear to invest more in deposit mobilization than Housing finance group. The conclusion from the study was that, there was a reward for deposit mobilization as reflected by the variations in the mean values of deposits across the various commercial. There was also a sustained effort by commercial banks to mobilize as much deposits as possible.

ii. The second objective sought to investigate the influence of capital adequacy on the financial performance of commercial banks listed in NSE. National bank had the highest mean value of capital adequacy. From the hypotheses testing, the study failed to reject the null hypotheses. The minimum statutory requirement for capital adequacy for commercial banks in Kenya was 10.5 per cent. The study indicated that capital adequacy requirement was made by all the commercial banks listed in NSE and concluded that capital adequacy has no significant influence on the financial performance of commercial banks listed in NSE.

iii. The third objective sought to examine the influence of liquidity on the financial performance of commercial banks listed in Nairobi securities exchange. The study indicated that National bank had the highest mean value of liquidity while the hypotheses testing revealed that liquidity had no significant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange. The minimum statutory liquidity requirement for commercial banks in Kenya was 20 per cent. The study findings illustrated that the minimum statutory liquidity requirements was met by all commercial banks listed

in NSE and thus concluded liquidity has no significant influence on the financial performance of commercial banks listed in Nairobi Securities Exchange.

iv. The fourth objective sought to determine the influence of loans on the financial performance of commercial banks listed in Nairobi Securities Exchange. The study indicated that KCB bank had highest mean value of loans. From the hypotheses testing, the study rejected the null hypotheses and concluded that commercial banks strive to create more loans so as to generate more revenue. This was illustrated by the varying mean level of loans across various banks. The study concluded that loans influences the financial performance of commercial banks listed in Nairobi Securities Exchange.

5.3 Recommendations

5.3.1 Recommendations for Actions/Practice

i. The study further recommended that Management of commercial banks should focus on deposit growth since it is crucial for improvement and sustainability of financial performance.

ii. The study recommended that commercial banks should also strive to attain and exceed optimal capital adequacy requirements so as to protect itself against emerging unanticipated negative economic effects presented by the external operating environment.

iii. The study recommended that, management of commercial banks should strive to attain the minimum statutory liquidity requirements so as not to attract sanctions from the regulatory agencies. These sanctions may be costly and thus might impair on the overall performance.

iv. The study recommended that, management of commercial banks should institute policies aimed at growing a quality loan book.

5.4 Areas of Further Research

The study sought to investigate the determinants influencing the financial performance of commercial banks listed in NSE. However the variables used in the study was not exhaustible and thus further studies should bring into focus other drivers of financial performance of commercial banks i.e. Asset quality, management efficiencies, bank size, market concentration, number of customers and regulatory compliance ratings.

Further research should also be extended to include the determinants of financial performance of all the commercial banks in Kenya.

Further studies on the determinants of financial performances of SACCO's and DTMFI's should also be carried out.

REFERENCES

Abdullah, M.N., & Jahan, N. (2014). The impact of liquidity on profitability of Bangladesh: A case study of Chittagong stock exchange. *International journal of economics and business review*. (2) 10:17-22

Adzobu, L. D., Agbloyor, E.K., & Abuagye, A. (2017). The effect of loan portfolio diversification on banks risks and return. Evidence from emerging markets. *Managerial finance*. (5) 43

Akuma,J.,Doku,I.,&Awer,N.(2017). Credit Risk, Deposit and profitability of Ghanian banks. *International Journal of Economic & Finance issues*. 7(5), 394-399.

Allen,F., Carletti,E.,Krahnen,Pieter,J., &Tyrell,M.(2011). *Liquidity and crises.* Oxford University Press. New York.

Almasiri,A.A.,&Alamiri,A.M.(2017). The effect of capital adequacy on profitability: A comparative study between Samba and Saab banks of Saudi Arabia. *International journal for economics, commerce and management*. (5) 11:86-102

Amahalu,N.,Okoye,E.I.,Nweze,C.,Chinere,O.,&Okika,C.(2017).Effect of capital adequacy on Financial Performance of Quoted Deposit Money Banks in Nigeria. *International Conference on African Entrepreneurship and innovation for sustainable development.* Chapter 57:841-862.

Andries,A.M.(2009). Theories regarding financial intermediation and financial intermediaries: A Survey. *Fascicle of The faculty of Economics and Public Administration*. (9) 2:254-261

Atavachi, B. (2013).Effect of Electronic Banking on Financial Performance of Deposit Taking Microfinance institutions in Kenya. *University of Nairobi Publication* http://chss.uonbi.ac.ke.

Aymen,M. & Moussa,B.(2013). Impact of capital on financial performance of banks- The case of Tunisia. *Bank and bank systems*. (8) 4:53-53

Badun,M.(2009).Financial Intermediation by banks and economic growth. A Review of empirical evidence. *Institute of public finance, Zagreb*. (33) 2:121-152.

Barus. J. (2017).Effect of capital adequacy on the financial performance of savings and credit Cooperative societies in Kenya. *American Journal of Finance*. (1) 4:2-12.

Bategeka, L.,&Okumu,L.J.(2010). Banking sector liberalization in Uganda process, results and Policy options. *Economic policy research Centre, Uganda*.

Belguith,H., & Bellouma,M.(2017).The impact of loan portfolio diversification on Tunisian Banks profitably. *International journal of emerging research in management and Technology*. (6) 6:35-45.

Blancard, G.C.(2010). Incidence of bank levy and bank market power. *University of Paris 1 Panthéon-Sorbonne*

Bollen, N.P.B (2006) "Mutual Fund Attributes and Investor Behaviour", forthcoming. *Journal of Financial and Quantitative Analysis*. (2) 2:01-09.

Botoe,W.(2011). The impact of liquidity of commercial banks in Liberia. *University of Nairobi*.

Botos,K.(2016). Money creation in the modern economy. *Public finance quarterly journals*. (1) 4:442-457.

Britto,J. & Srinivasan,P.(2017). Analysis of financial performance of selected commercial banks in India. *Theoretical economics letters*. Banglore. India.

Camarate,J.,&Brickmann,S.(2017) A market place without boundaries. The future of Banking.A South African perspective. *Pricewaterhousecoopers publication. Johannesburg*.

Casu, B., Girardone, C., & Malyneux, P. (2016) *Introduction to Banking*, 2nd Ed. Pearso Education Publishers. England.

Central Bank of Kenya, (2014). *Bank Supervision report*: Kenyan banking Sector for the period ended December 2013.

Central Bank of Kenya, (2015). *Bank Supervision report*: Kenyan banking Sector for the period ended December 2014.

Central Bank of Kenya, (2016). *Bank Supervision report*: Kenyan banking Sector for the period ended December 2015.

Central Bank of Kenya, (2017). *Bank Supervision report*: Kenyan banking Sector for the period ended December 2016.

Cronje, & Atahau, A.D.R. (2015). Does size affect loan portfolio structure and performance of domestic-owned banks in Indonesia? *Corporate ownership and control journal*. (1) 13:389-400

Cytonn Investments Journal (2017). *Kenya Listed commercial banks analysis. Consolidation and Prudence in a challenging operating environment.* Nairobi.

Demiquenes, K. (2016). The effect of liquidity on financial performance. Evidence from Turkish retail industry. *International journal of economics and finance*. (8)4

Desta,T.S.(2016). Financial performance of the best African banks; Comparative analysisthrough CAMEL Rating.*Journal of Accounting and Management*.(6) 1:1-20.

Dilrangi.A., Udayarathna.R.,Pathiraja. M.,Madhubhashini.P.,& Bandara.D.(2018). The effect of level of deposits on financial performance-A study on listed commercial banks in Sri Lanka. *University of Sri Jayewardenepura*. Sri Lanka.

Dinc,Y. (2017). The effect of retail loans on bank profitability. A comparative empirical analysis. *Istanbul Sabahaltin Zain University*.

Edem,D.B.(2017). Liquidity management and performance of deposit money banks in Nigeria. *International journal of economics and finance management sciences*. (5) 3:146-161

Emanue,O. & Amahalu,N.(2017). Effect of capital adequacy on financial performance of quoted money banks in Nigeria. (1) 1.

Eyigege, A.I. (2018). The influence of financial leverage, customer deposits and capital adequacy on the financial sustainability of some selected Nigerian Micro finance banks. *Global journals*.

Gakpetor,E.D, Akomeaoh,E.,Musah,A., & Chamler,R. (2018). The impact of liquidity on performance of commercial banks in Ghana. *Academic journal of economic studies*. (4) 4:78-90

Gekara,M., &Osano,K.L(2018). Effect of government regulation on profitability of commercial banks in Kenya. *The strategic journal of business and change management*. (5) 1:916-945

Gorn,J.A.(2008). German banks in the global economy. Global pressures and public sector banking. *Pitzer college publication Journal.* (1) 9:1-104.

Gubbins,P.(2015). An overview of development and trends in Kenya's retail financial landscape. *Fsd, Kenya*. http://fsdkenya.org/an-overview-of-developmens-and-trends-in-kenyas-

Hayes, A.F. (2013) *Introduction to Mediation, Moderation, and Conditional Process Analysis: A Regression-Based Approach*. Guilford Press. New York

Javarid,M.E. (2016). Bank specific macroeconomic determinants of bank profitability. *Journal of management information*. (3) 2.

Kalanidis, D. (2016). The impact of liquidity on bank profitability: Post crisis evidence from European banks. *International Hellenic University*. Thessaloniki-Greece.

Kana,K.M.(2017). Determinants of bank profitability. An empirical study of South African banks. *University of South Africa.*

Karnik,M.(2016). *India's banking sector in 5 charts*. World Economic Forum. 1st ed. Quartz publication. India.

Kawshla, H.& Panditharathna, K. (2017). The factors affecting on bank profitability in Sri-lankan domestic commercial banks. (7) 2.

Kemboi, J. K. & Tarus, D. K. (2012). Macroeconomic Determinants of Stock MarketDevelopment in Emerging Markets: Evidence from Kenya. Research *Journal of Financeand Accounting*. (3) 5:57-68.

Kiiru,M.J. (2008). The effects of funding structure on the Financial Performance of Deposit Taking Micro Finance institutions in Kenya. *University of Nairobi Publication*.

Kirimi, E. (2015). The effect of lending interest rates on financial Performance of commercial banks in Kenya. *University of Nairobi Publication*.

Klazema, A. (2014). *Introductory statistics course*. Udemys Inc

Mahmud, A., & Datta, C.K. (2018). Impact of capital adequacy on profitability under Basel II accord: Evidence from commercial banks in Bangladesh. *European journal of business and management*. (10)8:48-58

Majakusi. J. (2012). Effect of liquidity management on the financial performance of commercial banks in Kenya. *University of Nairobi*.

Marozwa, G. (2015). Liquidity and bank performance. *International business and economics research journal*. (14) 3:452-462

Mashamba, T. (2018). The effect of Basel III liquidity regulation on banks profitability. Journal of governance and regulation. (7) 2:45-46.

McLeay,M.,Radia,A.,&Thomas,R.(2014). Money creation in the modern economy. *Bank of England Quarterly Bulletin.*

Mohajan, H.K. (2017). Two criteria for good measurement in research. Validity and Reliability. *Annals of Spiru Haret University*. (17) 3:58-82

Mugenda,A.,&Mugenda,M.(2003). *Research Methods: Quantitative and Qualitative Approaches*, ACTS Publishers, Nairobi.

Muiruri,J.K.&Macharia,N.J.(2016). Determinants of profitability of commercial banks in Kenya.*University of Nairobi Publication*.

Murerwa,C.B.(2015). Determinants of banks financial performance in developing economies: Evidence from Kenya Commercial banks. *United States International University journal*.

Mutua,R. (2013).Effects of mobile banking on the financial performance of commercial banks in Kenya,University of Nairobi Publication.

Mwangangi,K.A.(2013). Economic Performance Indicators and stock returns at the Nairobi Securities Exchange, University of Nairobi Press.

Nairobi Securities Exchange bulletin 2017. Board Diversity and inclusion.

Ngari,J. M. (2014*)*. Effects of financial Innovations on the financial performance of commercialBanks in Kenya. *University of Nairobi press*.

Njeri,M.N. (2013).The effects of liquidity on the financial performance of deposit taking micro finance institutions in Kenya. *University of Nairobi press.*

Njeri,M.R.(2010). Impact of deposit taking on financial performance of microfinance institutionsin Kenya. *University of Nairobi journal*.

Njeru,M.D., Njeru,A.,Member,F.,&Tirimba,O.I.(2015). Effect of loan repayment of financialPerformance of deposit taking SACCOs in Mount Kenya region. *International journalof innovation and applied studies*. (10) 4:1238-1244.

Nzioki,S.(2009). The impact of capital adequacy on the financial performance of commercial banks quoted at the Nairobi stock exchange. *University of Nairobi Press.*

Okun,D.M. (2012). The effect of level of Deposits of Financial Performance of CommercialBanks in Kenya.*University of Nairobi Publication.*

Okungu,A.E.O.,Mule,R.K.,Nyongesa,D.,Aila.F.O.,Ogut.,A.S,Onchonga,D.M.,…Muchoki,M.M (2014).Effect of commercial banks loans on financial performance of savings and creditCo-operative societies in Kisumu, Kenya. *Greener Journal of Economics and Accountancy*.(3) 1:009-019.

Olagunju,A., Adeyanju,O.D, & Olabode,O.S.(2011). Liquidity management and commercial banks profitability in Nigeria. *Research Journal of Finance and Accounting*. (2) 7/8:24-38.

Olokoyo, F.O., Adetiloye, K.A,.& Ikpefan, O.A (2016). Banks intermediation role and industrialoutput in developing countries. *Medwell journals*. (11) 24:5838-5844.

Ongore,V.O.,& Kusa,G.B.(2013). Determinants of financial performance of commercial banksin Kenya. *International Journal of Economics and Finance issues*. (3)1:237-252.

Randall,W.L (2014).From the state theory of money to modern money theory: An alternative toeconomic orthodoxy. *Levy Economics Institute of Bard College*. Working Paper no.792.

Regngasamy.D. (2014). Impact of loan deposit ratio (LDR) on profitability. Panel evidence from commercial banks in Malaysia. *Third International conference on global business and social sciences.G14 Mumbai conference*.1 (1):19-21

Rodriquez, R.C. (2014).Determinants of commercial banks profitability in Mexico. *Econo quantum journal*. (12) 1:120-121

Saunders, M., Lewis, P. & Thornhill, A. (2012) "*Research Methods for Business Students*" 6th edition, Pearson Education Limited.

Song'e, H.K.(2015). The effect of liquidity management on the financial performance of DepositTaking Savings and Credit Cooperative Societies in Nairobi County. *University ofNairobihttp://erepository.uonbi.ac.ke*.

Stefancic,M.(2017). Troubles of the Italian banking system and the smothered hopes of Europe.*European research institute on cooperatives and social enterprise*. (3) 2:99-116.

Stovrag, A. (2017). Capital requirements and bank profitability. A comparison between the large Swedish banks and niche banks. *International business school.* 64:65

Sune, K. (2014). The accuracy of the Hausman Test in Panel Data: A Monte Carlo Study. *Orebro University.*

Tabak, B. M., & Cajueiro, D. O. (2011).The effects of loan portfolio concentration on Brazilian banks return and risks. *Journal of banking and Finance*. (11) 35:3065-3076.

Thiongo, P.K., Matata, K.,&Simiyu,A.(2016). Effect of Loan Portfolio Growth on Financial Performance of Commercial Banks in Kenya. *Imperial Journal of Interdisciplinary Research* (2)11:2113-2141.

Trujillo-Ponce, A. (2013). What determines the profitability of banks? Evidence from Spain.

Tuyishime,R., Memba,F., & Mbera,Z.(2015). The effects of deposit mobilization on FinancialPerformance of Commercial Banks in Rwanda; a case of equity bank Rwanda limited.*International journal for small business and entrepreneurship*. (3) 6:44-71.

Umoru. D., &Osemwegie.J. (2016). Capital adequacy and financial performance of banks inNigeria; Empirical evidence based on Fgls estimator. *European Scientific Journal.* (12)25:295-305.

Vaita,B.N.(2017). Effect of liquidity on financial performance of tier one listed commercial banks in Kenya. *University of Nairobi.*

Vianney, K.J.M. (2011). The relationship between regulation and financial performance of Rwandan Commercial banks. *University of Nairobi*.

Wanzenried, G., & Dietrich, A. (2009). What determines the profitability of commercial banks? New evidence from Switzerland.

Weber, A. (2017). Bank consolidation, Efficiency and Profitability in Italy. *IMF WorkingPaper*. (17) 175:1-23.

Yigermal,M.E.(2017). The determinants of private commercial banks profitability: In the case of selected Ethiopian private banks. International and organization. *Journal of economics behavior*. (1) 5:25-35.

APPENDICES

APPENDIX I: DATA COLLECTION INSTRUMENT

Year	Deposits -Deposits from customers	Capital Adequacy -Core Capital to Total Risk Weighted Assets -Total capital to Total deposits -Total capital to Total Risk weighted Assets	Liquidity -liquidity ratio to statutory liquidity ratio	Loans -loans and advances to customers	Return on Assets PBT/Total assets	Return on Equity PBT/Equity
2007						
2008						
2009						
2010						
2011						
2012						
2013						
2014						
2015						
2016						
2017						
Totals						

APPENDIX II: DEPOSITS

Bank Name												STATISTICS	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean	SD
BBK	109,097	126,562	125,869	123,826	124,207	137,915	151,122	164,779	165,359	178,448	189,305	136,491.83	32,008.64
KCB	92,686	150,645	143,602	173,995	210,174	223,493	237,213	276,750	347,702	386,611	445,398	217,667.46	119,743.14
EQB	31,536	48,977	65,825	125,492	121,774	140,286	158,527	202,485	236,610	277,275	298,703	133,297.90	98,134.24
COOp	56,198	67,159	92,529	129,226	142,705	162,267	174,776	216,174	263,709	259,472	285,990	149,364.75	86,474.65
DTB	29,347	45,853	54,886	68,605	59,772	72,505	84,672	101,594	126,229	169,600	209,254	81,008.84	58,206.39
I&M	18,360	23,786	44,759	68,208	56,944	65,640	74,494	86,621	103,741	103,741	134,247	62,128.82	38,625.52
SCB	73,841	76,896	86,774	100,504	122,323	140,525	154,720	154,067	172,036	186,598	226,051	124,530.56	52,491.98
NIC	24,806	35,239	39,514	48,492	66,293	77,466	84,236	92,791	105,194	104,160	142,006	66,057.71	38,711.64
HF	8,777	10,064	12,219	15,943	18,672	22,968	26,589	36,310	41,888	38,156	36,981	21,893.84	12,777.57
NBK	34,721	34,278	41,995	47,805	56,728	55,191	77,993	104,734	110,622	96,967	100,165	62,696.04	31,323.07
SBK	20,098	61,975	61,474	71,425	74,335	75,633	95,708	96,830	108,130	121,989	178,696	76,847.33	45,809.28
Average	45,406.09	61,948.55	69,949.64	88,501.91	95,811.55	106,717.18	120,004.55	139,375.91	161,929.09	174,819.62	204,254.18		
SD	33,044.55	42,833.76	39,160.54	46,204.77	53,926.92	58,578.20	60,063.23	70,446.43	88,531.19	100,135.84	110,778.69		

APPENDIX III: CORE CAPITAL TO TOTAL RISK WEIGHTED ASSETS

Bank Name												STATISTICS	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean	SD
BBK	13.03	15.02	19.15	26.58	24.10	22.70	16.59	18.45	15.80	15.72	15.91	17.574	4.461
KCB	13.61	15.45	14.82	23.12	19.10	21.30	18.68	17.06	14.11	16.85	14.87	17.162	2.856
EQB	45.68	29.23	23.63	21.95	15.36	19.90	18.55	15.17	14.64	14.39	15.82	20.566	8.758
COOp	14.22	22.01	20.33	16.16	16.04	20.30	15.66	14.60	14.52	16.25	16.47	16.248	3.015
DTB	19.10	15.62	15.38	15.35	14.21	17.70	17.66	16.82	14.84	16.22	17.32	16.048	2.014
I&M	14.44	10.95	16.99	18.90	18.12	17.00	15.07	15.77	17.05	16.63	17.17	15.648	2.367
SCB	16.29	15.74	14.12	13.91	12.31	16.30	17.49	15.81	17.53	17.51	15.62	15.801	1.733
NIC	15.84	14.21	14.59	14.64	14.98	15.60	14.82	14.37	14.52	17.22	16.69	15.012	1.069
HF	13.10	40.52	31.08	24.37	21.42	19.10	13.80	11.12	15.37	15.73	15.49	18.821	8.713
NBK	37.22	38.58	40.85	35.49	27.93	27.30	22.75	12.86	13.00	11.36	3.98	22.492	12.817
SBK	15.56	11.41	10.26	10.41	12.59	20.50	18.20	18.44	15.95	16.07	15.80	15.13	3.143
Average	19.826	20.795	20.109	20.08	17.833	19.791	17.206	15.497	15.212	15.814	15.013		
SD	10.994	10.586	8.873	7.15	4.943	3.321	2.462	2.237	1.311	1.7	3.733		

APPENDIX IV: TOTAL CAPITAL TO TOTAL DEPOSITS

Bank Name	STATISTICS												
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean	SD
BBK	16.76	16.19	19.23	25.41	23.53	20.54	21.04	23.05	21.42	21.08	20.48	19.661	3.729
KCB	13.86	13.31	15.60	21.37	18.87	18.85	21.46	20.89	16.14	18.78	16.16	17.388	2.808
EQB	47.30	40.14	33.20	20.20	25.74	21.05	21.93	20.12	20.14	18.48	19.82	24.554	9.764
COOp	11.50	20.26	17.61	15.94	14.68	18.13	18.38	17.33	16.41	20.01	20.58	16.172	3.775
DTB	17.12	12.88	12.75	13.03	19.40	16.59	18.32	21.90	20.14	17.52	16.89	16.568	3.108
I&M	15.22	16.26	16.67	19.03	24.33	18.07	19.73	22.08	22.71	23.79	22.19	19.166	3.597
SCB	14.78	14.95	16.04	20.23	16.92	15.39	16.70	18.79	19.33	18.90	15.76	16.882	1.816
NIC	19.10	15.80	17.19	17.23	15.87	16.23	16.75	20.29	20.47	24.37	19.47	17.956	2.731
HF	16.47	36.29	33.33	26.70	25.26	18.19	15.02	13.33	19.33	22.33	22.44	21.676	7.095
NBK	14.31	18.11	18.83	20.77	18.43	17.43	13.22	9.88	8.84	10.35	3.50	13.838	4.889
SBK	29.92	31.06	33.09	34.68	26.00	22.52	22.75	26.42	23.94	23.68	18.23	27.176	4.858
Average	19.667	21.386	21.231	21.326	20.821	18.454	18.664	19.462	18.988	19.935	17.775		
SD	10.329	9.71	7.88	5.887	4.235	2.167	3.043	4.601	4.088	3.973	5.243		

APENDIX V: TOTAL CAPITAL TO TOTAL RISK WEIGHTED ASSETS

Bank Name	YEARS											STATISTICS	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean	SD
BBK	13.99	18.75	23.83	31.15	27.81	25.80	17.30	18.70	18.40	17.90	18.00	19.78	5.751
KCB	13.61	15.45	14.82	23.16	20.69	22.70	22.50	21.00	15.40	19.90	16.10	18.42	3.391
EQB	58.92	40.77	31.49	27.88	21.67	30.10	23.60	17.70	16.20	15.50	16.50	25.64	12.697
COOp	14.51	23.48	21.01	16.54	16.42	23.80	21.10	21.60	21.30	22.80	22.70	20.28	2.999
DTB	19.14	19.77	18.97	18.43	16.79	19.80	21.00	19.90	17.70	18.50	19.00	18.76	1.776
I&M	14.40	12.62	18.71	19.92	19.28	17.30	19.00	18.90	19.20	18.11	18.60	17.03	2.828
SCB	16.24	16.20	14.46	14.32	14.30	18.00	20.80	19.80	21.20	20.90	18.50	17.56	2.673
NIC	16.73	15.13	15.48	15.51	15.89	16.40	14.80	20.90	20.50	21.60	19.90	17.04	2.672
HF	16.19	40.52	34.09	48.73	34.03	29.50	21.60	15.10	18.10	17.70	17.00	24.97	11.188
NBK	38.67	39.91	42.56	36.92	29.18	28.40	24.10	13.90	14.00	11.90	5.40	23.61	13.102
SBK	19.13	14.65	16.04	16.20	19.04	25.50	21.00	22.00	18.70	18.30	17.60	18.67	2.883
Average	21.957	23.386	22.86	24.433	21.373	23.391	20.618	19.045	18.245	18.465	17.209		
SD	14.144	11.307	9.282	10.832	6.313	4.962	2.712	2.604	2.343	2.993	4.315		

APPENDIX VI: LIQUIDITY

Bank Name	YEARS											STATISTICS	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean	SD
BBK	39.91	46.16	40.55	39.46	34.70	34.21	37.71	44.13	33.01	32.03	37.77	38.52	4.22
KCB	38.68	45.20	48.53	36.53	34.41	36.07	33.11	31.75	30.65	29.08	28.12	36.4	6.4
EQB	43.31	38.79	36.21	40.83	35.28	37.85	28.80	25.71	27.01	40.63	44.99	37.3	6.71
COOp	35.93	37.51	33.49	34.10	37.57	23.05	32.60	35.00	37.10	33.70	33.80	34.67	4.21
DTB	33.45	37.36	36.90	30.51	29.58	30.35	31.00	32.84	33.45	44.45	45.29	35.26	5.05
I&M	33.11	41.60	38.96	36.00	35.05	39.43	22.18	35.02	32.11	36.10	34.11	34.73	4.73
SCB	41.20	38.97	48.55	42.16	34.22	39.12	37.57	43.03	46.87	50.12	52.44	41.96	5.96
NIC	31.37	35.56	33.43	30.87	33.66	31.38	28.53	30.23	28.98	32.27	43.37	33.86	4.84
HF	34.46	37.54	26.12	33.92	31.21	27.14	21.63	21.89	20.29	15.64	15.07	26.82	7.41
NBK	42.71	47.71	49.07	45.57	44.04	41.68	55.89	44.32	41.49	42.10	44.38	43.84	5.38
SBK	35.27	38.14	46.41	42.21	38.45	40.35	36.44	53.32	45.90	39.23	44.45	41.96	4.88
Average	37.22	40.41	39.84	37.47	35.29	34.6	33.22	36.11	34.26	35.94	38.53		
SD	4.13	4.12	7.57	4.94	3.82	5.98	9.31	9.24	8.06	9.15	10.37		

APPENDIX VII: LOANS

Bank Name												STATISTICS	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean	SD
BBK	105,346	108,086	93,543	87,147	99,072	104,204	118,362	128,204	148,846	176,349	177,224	115,001.10	34,227.20
KCB	56,477	79,343	98,749	137,344	179,843	187,022	227,721	257,399	324,284	373,031	411,666	185,727.60	126,573.10
EQB	21,836	40,857	59,868	72,902	106,486	122,410	152,029	192,973	229,394	221,039	221,698	112,149.60	84,158.40
COOp	45,412	60,418	66,620	90,965	114,101	123,824	145,735	181,370	212,711	241,395	262,362	125,712.30	77,355.60
DTB	23,182	34,063	41,519	51,260	61,298	59,930	75,292	95,258	128,266	141,702	156,843	68,674.10	48,528.90
I&M	14,703	19,215	35,019	56,342	51,029	56,867	75,055	91,163	104,302	104,302	126,983	58,020.40	39,872.50
SCB	41,025	44,858	58,016	61,599	97,417	114,535	131,966	128,768	122,905	132,497	139,406	88,139.30	42,049.30
NIC	22,209	29,955	32,511	40,755	56,625	71,540	83,493	97,984	111,286	112,509	118,459	62,165.80	39,071.00
HF	7,746	10,415	14,495	19,503	25,223	30,294	35,216	46,260	54,624	56,786	52,630	28,152.40	19,256.80
NBK	11,606	11,967	13,156	20,845	28,068	28,347	39,567	68,093	72,842	68,616	68,153	37,074.10	23,730.50
SBK	16,702	44,661	45,840	58,984	64,256	66,150	69,133	89,797	103,535	118,483	135,443	64,592.20	39,188.20
Average	33,294.90	43,985.30	50,848.70	63,422.40	80,310.70	87,738.50	104,869.90	125,206.30	146,635.90	158,791.70	170,078.80		
SD	28,347.80	29,497.60	28,178.00	33,693.30	44,922.00	47,573.80	57,023.30	62,280.40	79,050.80	91,192.80	100,307.90		

APPENDIX VIII: ROA

Bank Name	YEARS											STATISTICS	
	2007	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**	**Mean**	**SD**
BBK	4.20	4.70	5.30	6.24	7.18	7.00	5.80	5.44	5.00	4.20	3.68	5.178	1.116
KCB	3.10	3.09	3.57	5.17	4.98	5.20	5.50	5.93	5.00	5.64	4.94	4.35	1.33
EQB	4.30	6.21	5.83	6.95	6.84	7.40	7.70	7.26	6.60	6.00	5.68	6.133	1.162
COOp	3.00	3.70	3.20	3.61	3.68	4.80	4.70	4.43	4.10	5.15	4.31	3.636	1.219
DTB	2.80	3.10	3.44	4.90	4.19	4.90	4.90	4.47	3.70	3.64	3.05	3.664	0.962
I&M	4.30	4.40	3.94	4.80	5.80	5.20	5.50	5.64	5.70	5.27	4.09	4.595	1.126
SCB	5.30	4.70	5.44	5.37	5.03	5.90	6.00	5.42	3.80	5.10	3.34	4.774	0.984
NIC	3.20	3.48	3.30	4.42	4.56	4.20	4.60	4.44	4.00	3.66	2.94	3.602	0.9
HF	1.10	1.30	1.83	1.91	3.10	2.20	2.60	2.12	2.52	2.10	0.63	1.915	0.723
NBK	3.10	4.00	4.13	4.50	3.56	1.70	1.90	1.94	(1.34)	1.40	0.67	2.168	1.643
SBK	3.10	1.50	1.35	1.96	2.33	3.50	4.10	4.71	3.60	3.37	2.34	2.805	1.016
Average	3.409	3.653	3.757	4.53	4.659	4.727	4.845	4.709	3.88	4.139	3.243		
SD	1.095	1.423	1.409	1.563	1.513	1.775	1.6	1.565	2.061	1.472	1.59		

APPENDIX IX: ROE

Bank name												STATISTICS	
	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean	SD
BBK	40.30	39.20	25.20	34.25	41.11	44.00	36.80	32.30	30.40	24.80	23.13	35.148	7.459
KCB	30.07	26.89	28.81	28.22	31.18	29.80	28.40	31.00	29.00	35.20	30.91	28.864	3.629
EQB	15.91	24.37	24.11	32.90	34.54	37.60	36.00	49.40	47.40	43.50	37.30	35.734	10.33
COOp	33.61	23.90	18.42	27.52	34.53	34.18	31.00	29.50	28.50	30.00	24.21	27.376	5.44
DTB	18.61	24.50	19.40	35.64	31.34	33.10	30.17	24.50	23.50	24.40	19.10	25.848	5.376
I&M	33.47	31.20	21.70	23.15	32.17	28.50	29.50	35.50	32.00	27.60	21.50	28.737	4.822
SCB	45.27	41.30	39.12	37.94	40.11	37.60	37.25	35.40	21.90	29.10	21.30	35.428	7.129
NIC	22.16	26.67	22.48	31.23	33.95	28.65	29.68	26.92	23.74	19.60	19.60	24.734	5.357
HF	8.95	5.33	8.62	13.12	20.69	17.50	21.40	20.50	19.10	14.80	3.90	14.605	7.268
NBK	32.41	28.94	27.31	27.17	23.37	11.23	15.45	19.20	(15.40)	15.00	10.50	18.883	12.491
SBK	27.59	18.40	14.70	20.96	30.82	26.13	31.30	27.70	25.10	22.90	16.90	23.593	5.127
Avrage	28.032	26.425	22.666	28.373	32.165	29.71	29.545	30.17	24.109	26.082	20.745		
SD	10.799	9.689	7.93	7.243	6.083	9.313	6.577	8.331	15.1	8.485	8.959		

APPENDIX X: FINANCIAL PERFORMANCE

Bank Name	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017	Mean
BBK	42.4	41.55	27.85	37.37	44.7	47.5	39.7	35.02	32.9	26.9	24.84	37.74
KCB	31.62	28.44	30.6	30.81	33.67	32.4	31.15	33.97	31.5	38.02	33.37	31.04
EQB	18.06	27.48	27.03	36.38	37.96	41.3	39.85	53.03	50.7	46.5	40.14	38.80
COOp	35.11	25.75	19.6	29.33	36.37	35.5	32.35	31.72	30.55	32.58	26.36	29.19
DTB	20.01	26.05	21.12	38.09	33.44	35.55	32.45	26.74	25.35	26.22	20.63	27.68
I&M	35.62	33.4	23.67	25.55	35.07	31.1	32.25	38.32	34.85	30.24	23.55	31.03
SCB	47.92	43.65	41.72	40.63	42.63	40.55	40.00	38.11	23.8	31.65	22.97	37.82
NIC	23.76	28.41	24.13	33.44	36.23	30.7	31.90	29.12	25.7	21.43	21.07	26.54
HF	9.50	5.95	9.54	14.08	22.24	18.6	22.70	21.56	20.36	15.85	4.22	15.56
NBK	33.96	30.94	29.38	29.42	25.15	11.85	15.95	20.17	-16.07	15.7	10.84	19.97
SBK	29.14	19.15	15.38	21.94	31.99	27.75	33.35	30.06	26.9	24.59	18.07	25.00
Average	29.74	28.25	24.54	30.64	34.49	32.07	31.97	32.53	26.05	28.15	22.37	29.12

APPENDIX XI: RESEARCH PERMIT FROM NACOSTI

THIS IS TO CERTIFY THAT: **Permit No : NACOSTI/P/19/73849/31948**

MR. JAMES R YATICH **Date Of Issue : 25th July,2019**

of KISII UNIVERSITY, 0-30400 **Fee Recieved :Ksh.1000**

Kabarnet,has been permitted to

conduct research in *Nairobi County*

on the topic: *THE DETERMINANTS OF INFLUENCING FINANCIAL PERFORMANCE OF COMMERCIAL BANKS LISTED IN NAIROBI SECURITIES EXCHANGE*

for the period ending: *23rd July,2020*

Applicant's Signature

Director General

National Commission for Science, Technology & Innovation

Scanned by CamScanner