THE EFFECT OF SELECTED BANK SPECIFIC AND MACROECONOMIC FACTORS ON FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

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DECLARATION AND APPROVAL

Declaration

I declare this is my original work and has not been presented for an award in any other University.

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Approval

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

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DEDICATION

I dedicate this research proposal to my family members for their love, support, patience, encouragement and understanding. They gave me the will and determination to complete my course.

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I am grateful to the Almighty God for granting me good health and strength to go through this very demanding study. Much gratitude also goes to my family for their tireless effort in guidance, advice, support and constructive criticism throughout the project proposal writing. Special thanks also goes to my supervisor Dr. Kalui F.M and for his support, advice, guidance and continuous evaluation and supervision. I would also like to extend my gratitude to the Administration of Egerton University through the University's library and the library staff that enabled me to access the various materials used in compiling this work.

ABSTRACT

The main goal of many banks is to grow and sustain growth in its financial performance. Internal factors and macroeconomics factors are viewed as critical drivers for bank financial performance. The purpose of this study was to investigate the effect of selected bank specific factors and macroeconomics factors on financial performance of commercial banks in Kenya. There is lack of consensus on the effect of selected bank specific factors and macroeconomics factors on bank financial performance. The population of this study comprised of all the forty five (45) commercial banks in Kenya licensed by the Central Bank of Kenya (CBK) as at December 2007. The study used Panel data covering a period of eleven years from 2007 to 2017.The data was collected from CBK published financial annual supervisory reports for the 45 commercial banks listed by Central bank of Kenya and the Kenya National Bureau of Statistics periodic reports. The study used Correlation and multiple linear regression analysis to analyze the data. The researcher used SPSS software to assist in analyzing the data. Findings of the study shades light on the effect of selected bank specific factors and macroeconomic factors on financial performance of commercial banks in Kenya. In light of the different views that appear in some studies the results will be useful to investors, management, auditors, financial analyst and researchers. The study established that bank specific and macroeconomic factors accounted for 89.3% financial performance of commercial banks in Kenya ($R2 = 0.893$). This point out that selected bank specific and macroeconomic factors strongly predict financial performance of listed commercial banks in Kenya. Additionally, the study established that joint macroeconomic factors ($\beta = 5.522$, $p< 0.05$) was the strongest predictor of financial performance of listed commercial banks in Kenya compared to bank specific factors with coefficient of ($\beta = -1.482 p< 0.05$). Therefore, bank specific and macroeconomic factors have a statistical positive significant effect on financial performance of commercial banks in Kenya. The study recommends further research on other bank specific and macroeconomic factors not included in the study to determine whether they have a significant positive effect on financial performance of commercial banks in Kenya or not.

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LIST OF ACRONYMS

ANOVA	Analysis of Variance
CAMEL	Capital Adequacy, Asset Quality, Management Efficiency, and Earnings Ability and Liquidity.
CAR	Capital Adequacy Ratio
CDR	Credit to Deposit Ratio
CPI	Consumer price index
GDP	Gross Domestic Product
IRR	Internal rate of return
KNBS	Kenya National Bureau of Statistics
NIM	Net interest margin
PBT	Profit Before Tax
ROA	Return on asset
ROCE	Return on capital employed
ROE	Return on equity
ROI	Return on investment
UK	United Kingdom

CHAPTER ONE
INTRODUCTION

1.1 Background of the study

According to Omar and Makori (2018) financial institutions facilitate mobilization of savings, diversification and pooling of risks and allocation of resources in the economy worldwide. Banks, as financial institutions, play a vital role for bringing financial stability and economic growth through their expected contribution by mobilizing financial resources across the economy (Masood and Ashraf, 2012). The role is more important for the developing economies under developed capital market (Gregory & Sovacool, 2019). A sound and profitable banking system is better able to improve financial system stability and economic growth as it makes the economy more endurable to negative and external shocks (Bordo and Meissner (2016) on the other hand, insolvency of the system leads to economic crisis (Chaplinska, 2012; Fang *et al*., 2014; Fu *et al*., 2014).

Moreover, financial performance is considered as precondition for an innovative, productive and efficient banking system (Chen & Liao, 2011). Therefore, investigation of the determinants of profitability is vital for the growth and stability of the whole economy. Considering the importance of banking performance many studies have been conducted focusing both single country and cross countries., according to Hassan and Bashir (2003) 21 developing countries where Islamic banking has been practiced, Samad (2004) for Bahrain, Kosmidou *et al*. (2005) for UK, Athanasoglou *et al.* (2008) for Greece, AL-Omar and AL-Mutairi (2008) for Kuwait, Heffernan and Fu (2008) for China, Wasiuzzaman and Tarmizi (2010) for Malaysia, Qin and Dickson (2012) for Tanzania, Wasiuzzaman and Gunasegavan (2013) for Malaysia, Francis (2013) for Sub Sahara Africa, Masood and Ashraf (2012) for twelve Muslim countries, Perera *et al.* (2013) for four South Asian courtiers in order to investigate the determinants of banking performance.

For developing countries, improvements in the banking sector could have significant impact on the allocation of financial resources. Lending by commercial banks involves committing funds into diverse sectors of the economy with an expectation of returns inform of interest income. On the other hand, lending is the largest source of credit risk to commercial banks. That's why the banking sector has been singled out for special protection and it is clear why such great emphasis is placed on regulation and supervision of the banking sector (Barth, 2006).

The importance of financial sector in the development of the overall economy of country cannot be underestimated because the banking sector dominates the economic development of a country by mobilizing the savings of general people and channeling those saving towards investment and economic development and growth. Therefore, financial performance of the banking sector has direct impact on overall development and growth of economy. Financial performance is one of the important pointers of industry performance that has major insinuation on sector's activities in Kenya. Sound and profitable banking sector will be able to hold out negative shocks and act as a safeguard of financial stability (Aguirre, Brunnermeier & Saravia (2019).

1.1.1 Macroeconomic Factors

According to Aghionet (2011) Macroeconomics is the study of the economy as a whole; it focuses on the behavior of an entire economy's the "big picture" which can be regional, national or international. Macro-economic (from the Greek prefix Makro-meaning "large" and economics) is a branch of economics dealing with the performance, structure, behavior, and decision-making of an economy as a whole, rather than individual markets. This applies to national, regional, and global economies. Snowdon and Vane, (2005) developed a model that explain the relationship between macroeconomics factors.

These macro-economic factors include inflation, Gross Domestic Product (GDP), economic growth, level of education, employment level, unemployment levels, savings and investments, interest rates, legal regulatory, environment and risk. A study done in Kenya found that macro-economic factors had the greatest effect on financial performance within the country's commercial banks. The study recommended that in order for the commercial banks to be effective in operation and service delivery, they should recognize the contribution of macro-economics (Wainaina, 2013).

Sharma and Singh (2011) found out that many commercial banks, which normally carry out their investment over a long duration of time usually, have an expectation that macro-economic variables will remain stable and favorable to their operations over the entire duration of their investment. Snider (2019) observed that, a country's economy affects the performance of its organizations and by extension the most influential macro-economic variables are GDP, currency exchange rate, interest rates, inflation, bank lending rates and market risk. Many researchers have focused on different variables. This research objective is to establish the effect of selected bank specific factors and macroeconomic factors on the

financial performance of commercial banks in Kenya. The variables selected are perceived by the researcher and supported by previous empirical studies, to have the highest effect on financial performance of businesses, government and private equity firms, thus need to justify the same in commercial banks in Kenya as measured by Return on Asset.

1.1.2 Bank Specific Factors

Abdi (2018) identify bank internal factors as bank specific factors which can either be financial factors or non-financial factors. Financial variables relate to the decisions which directly involve items in the balance sheet and income statement, while non-financial statement variables are outside the financial statement. Financial statement indicators include bank size, capital ratio, deposits, operational efficiency, risk management, asset quality and liquidity. The non-financial variables include employees, number of branches, customers, ownership, ATM and ownership.

Generally, bank specific factors are internal factors which affect the day to day operation of the bank, and are within scope of management to manipulate. Dang (2011) explain that these factors are also within the scope of the bank to observe and control them and they differ from bank to bank. Dang (2011) also explain CAMEL framework is often used by scholars to proxy the bank specific factors. CAMEL stands for Capital Adequacy, Asset Quality, Management Efficiency, and Earnings ability and liquidity. Other factors include capital, size of deposit liabilities, credit portfolio, interest rate policy, labor productivity, and state of information technology, risk level, management quality, bank size and ownership among others (Dang, 2011).

1.1.3 Financial Performance of Commercial Banks

One way to measure bank financial performance is by determining the financial performance of the bank. Financial performance is the ability of a bank to make profits by earning more money that exceeds the yearly expenses and taxes every financial year. Financial performance can also be defined as an approach to determine the extent to which the financial goals such as increase in shareholder value, financial performance and cash flows are achieved in a particular period of time On the other hand; liabilities are main expense of the bank through interest paid on deposits and funds borrowed from other institution. Financial performance is an important channel for enterprises and stakeholder to get the performance information (Sun, 2011).The performance evaluation of a commercial bank is usually related to how well the bank can use its asset, shareholders' equities and liabilities, revenues and

expenses. The performance evaluation of banks is important for all parties including depositors, investors, bank managers and regulators.

If the earning per expense is positive, then the bank is profitable. Kamande (2012) the bank's assets that attract revenue to the institution include loans to individuals companies and securities the bank holds. The measure of firm's performance usually employs the financial ratio method because they provide simple description about the firm's financial performance in comparison with previous periods and helps to improve its performance of management (lin et al., 2005).Moreover, the ratio analysis assists in determining the financial position of the bank compared to other banks. Bank financial performance can be determined by the return of assets (ROA), return on equity (ROE), capital adequacy ratio (CAR), non-performing loan ratio (NPL), interest expense to total loans (IETTL), net interest margin (NIM), credit to deposit ratio (CDR) the assets such as the loans and securities are utilized by the banks to earn a large portion of the institution's income.

1.2 Statement of the Problem

Globally, banking is a rapidly growing industry in the process of economic development (Pilbeam, 2018). It's crucial to understand the influence of selected bank specific factors and macroeconomic variables on Bank financial performance in Kenya. There are many studies done on effect of bank specific and macroeconomic factors on financial performance but they lack consensus. A study by Ongore and Kusa (2013) established that macroeconomic variables insignificantly affect Bank financial performance. They used regression analysis and found that rise in inflation rates affected financial performance of commercial banks negatively. However, the relationship was not significant at 5% level. This study ignored bank specific factors.

There are other review studies done which concentrated on bank specific factors only. A study by Obamuyi (2013), the determinant of bank profitability in developing economies with a particular interest in Nigeria showed that bank specific factors such as management and increased interest income affect profitability; he also researched on macro factors such as favorable economic factor which showed increased profitability. This study ignored many bank specific and macroeconomics factors.

Although the studies explain meaningful analyses at certain levels, the area of both bank specific factors and macro-economic factors effect on financial performance of commercial banks in Kenya need to be further explored for better understanding of their effects for sector

planning. Available literature has not focused on effect of both bank specific factors and macroeconomics factors on the bank financial performance in a developing country like Kenya. Therefore, this study aimed to determine the effect of selected bank specific factors and macroeconomics factors on financial performance of commercial banks in Kenya.

1.3 Objectives

1.3.1 General Objective

The study aimed at determining the factors that affect financial performance of commercial banks in Kenya.

1.3.2 Specific Objectives

i. To determine the effect of selected bank specific factors on the financial performance of commercial banks in Kenya.
ii. To determine the effect of selected macroeconomics factors on financial performance of commercial banks in Kenya.
iii. To determine the joint effect of selected bank specific and macroeconomic factors on the financial performance of commercial banks in Kenya.

1.4 Research Hypotheses

Ho_1: There is no significant effect of selected bank specific factors on financial performance of commercial banks in Kenya.

Ho_2: There is no significant effect of selected macroeconomics factors on financial performance of commercial banks in Kenya.

Ho_3: There is no significant joint effect of the selected bank specific factors and macroeconomic factors on financial performance of commercial banks in Kenya to a certain extent.

1.5 Significance of the Study

This study shall be of value to a number of parties and persons. Other researchers and scholars shall find the study insightful, and the study findings there from could act as a reference area for future research studies. Other scholars might obtain importance to build on this study, say in another context or industry, or by eliminating any limitation(s) that this study encounters.

This study shall also add to the existing literature on how macroeconomic variables affect firm performance. Such contribution might be in the form of supporting existing theories proposition or negating the same. Bank managers and directors shall also find the study quite

invaluable. They may obtain useful input into their corporate decisions and strategies; macroeconomic variables influence the national and industry environment in many ways. An understanding of the effect of the said variables on firm performance is quite valuable during decision making processes.

Potential investors as well as the existing ones in the banking industry could also find this study useful in their investment undertakings. They shall be in a position to better appraise their investment targets and portfolios; and proceed to make appropriate decisions. Fund managers and financial analysts could also draw insights from the study for similar reasons as the investors as well as in making appropriate client advises or recommendations.

The government and her policy making arms could also draw insights from the study. The banking industry in Kenya plays a great role in the economy, more so as tax payers. Government and her agencies could thus draft good macroeconomic policies with the effect on banking industry performance and in effect, taxes paid by the banks in their minds.

1.6 Scope of the Study

The study focused on forty-five (45) listed commercial banks institutions in Kenya as at December 2017. The study considered data on trade analysis of selected bank specific factors and macroeconomic variables for eleven years between 2007 and 2017 from the Kenya National Bureau of Statistics. Published financial data of the commercial banks institutions regulated by the central Bank of Kenya was used to measure performance of the commercial banks institutions in Kenya.

1.7 Significance of the Study

Empirical evidence clearly shows that studies focusing on Kenya's bank financial performance are still scanty and limited. Even those which have been carried out, point to a need for further investigation of the factors that have effect on performance in the sub-region, notwithstanding the reforms. Most of the evidence in regard to commercial banks' performance largely focuses on the developed economies environments and the conclusions of many may not have been effective and conclusively for Kenya's financial sector planning. According to literature, the studies on commercial banks' financial performance would provide policy makers with more elaborate and current information that is important for financial sector and also scholarly literature.

1.8 Operational Definitions of Terms

A portfolio is a grouping of financial assets such as stocks, bonds and cash equivalents.

Bank financial performance: It is the subjective measure of how well a firm can use Assets from its primary mode of business and generate revenues

Bank Specific: Refers to bank internal factors which can either be financial factors or non-financial factors. In the context of this study it refers to internal factors (decisions) influenced by management

Commercial banks: These are financial institution which accept demand and deposits, makes loan and provide services.

Exchange Rate: Is determined by the demand and supply of the foreign currency (BOP), trade balance, current account balance and capital account balance (Schiller, 2008).

Gross Domestic Product: Is the total market value (the amount that a product would trade for in the open market) of all goods and services produced within a specific a location over a particular time period

Gross National Saving: Is gross disposable income less final consumption expenditure after taking

Inflation: Is sustained or persistent increase in the general prices of goods and services in the long run

Macroeconomics: is the study of the economy as a whole that is, it focuses on the behavior of an entire economy

Microfinance: involves the provision of financial services such as savings, loans and insurance to poor people living in both urban and rural settings who are unable to obtain such services from the formal financial sector

CHAPTER TWO
LITERATURE REVIEW

2.1 Introduction

This chapter contains a review of literature on the subject proposed for study and organized under the following sub-headings, theoretical studies review, empirical review, summary of gaps that need to be filled by the study and the conceptual framework. There are various studies that have attempted to develop theoretical and empirical works to understand the effects of macroeconomic factors on financial performance of commercial banks in Kenya.

2.2 Theoretical Framework

The study was guided by views on various theories of macroeconomic factors and financial performance.

2.2.1 Efficiency Structure Theory

The efficiency structure theory was proposed by Demsetz (1973) specified that states that aggressive behavior of efficient firms in the market results to an increase in those firms' size and market share. Conversely, the ES theory proposes that enhanced managerial scale efficiency leads to higher concentration and then to higher profitability. This is a clear indication of desirable financial performance of firms especially the commercial banks. Nzongang and Atemnkeng (2006) asserted that the balanced portfolio theory added a different dimension into the study of Bank financial performance. The theory suggests that the portfolio composition of a commercial bank, its profit and the return to shareholders is the result of the decisions made by the management and the overall bank's policy decisions. Therefore, the theories contribute to the conclusion that banks financial performance is influenced by both internal and external factors. According to this study, bank specific factors fall under the internal factors. The efficient-structure theory also includes two hypotheses: The X-efficiency and scale efficiency hypotheses. The X-efficiency hypothesis argues that banks with better management and practices control costs and raise profit, moving the bank closer to the best-practice, lower bound cost curve. The model assumes that there is a continuum of entities called banks distributed in the unit interval which have the technology necessary to supply banking services. However, although any bank could service the market in each equilibrium only a subset will be actually competing

The scale-efficiency hypothesis argues some banks achieve better scale of operation and, thus, lower costs. Lower costs lead to higher profit and faster growth for the scale efficient

2.2.2 CAMEL Model

This study used the CAMEL model of Bank financial performance measurement. The model involves the use of financial ratios in measuring Bank financial performance. Compared to the other models, the CAMEL model is the most popular framework used by regulators for Bank financial performance evaluation (Naceur, 2003; Heffernan & Fu, 2008; Sufian & Habibullah, 2010; Al-Tamimi, 2010; Khrawish, 2011; Kouser & Saba, 2012). Apart from being the most used method for evaluating Bank financial performance, the CAMEL is also a contemporary model of financial analysis and the most recent innovation in the financial performance evaluation of banks (Sangmi & Nazir, 2010). The model assesses Bank financial performance ased on bank specific factors. These are capital adequacy, asset quality, management efficiency and soundness, earnings and liquidity. The likelihood of bank failure is increased if any of these factors show signs of inadequacy. Financial ratios such as return on assets (ROA) return on equity (ROE), and net interest margin (NIM) form part of the financial ratios that the CAMEL model uses to evaluate performance. The CAMEL model derives its strength from its simplicity.

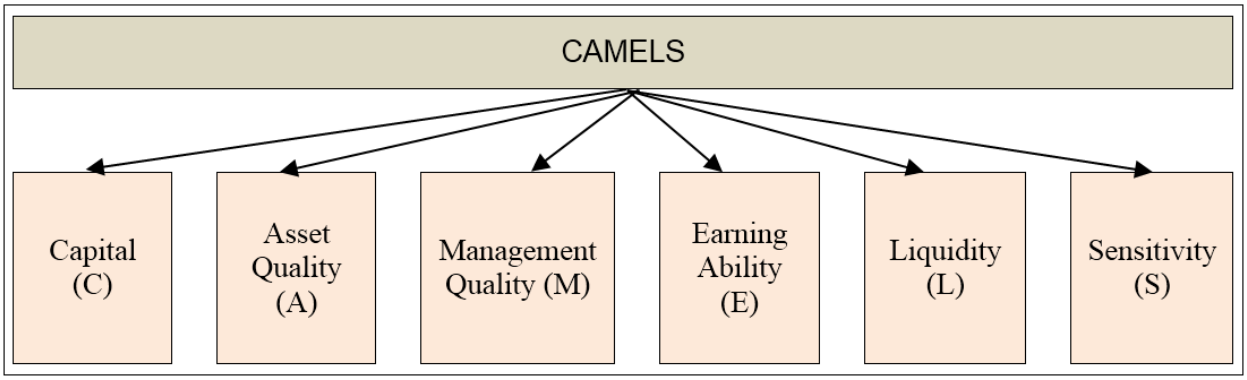

Figure 2.1: CAMEL Model

2.2.3 Deflation Theory

The theory was proposed by Fisher (1933) which suggested that fall on inflation rates leads to fall in the level of prices, which leads to greater fall in the net worth of business, reduced financial performance hence precipitating bankruptcies which leads the concerns running at a loss to make a reduction in output, in trade and in employment of labour. The cycles cause complicated disturbances in the rates of interest and a fall in the money value. The complicated disturbances described above can be summed as both external and internal forces (macro and micro factors) influencing state of over indebtedness existing between, debtors or creditors or both which can compound to loan defaults.

According to this theory, if inflationary pressures from the fiscal stance are being transmitted exclusively through the financing channel, then inflationary pressures could be reduced without fiscal adjustment if alternative (sustainable) sources of financing, such as external financing, are available. In practice, however, some fiscal adjustment is typically also necessary because either the amount of alternative finance is insufficient and/or the fiscal stance is also putting upward pressure on prices through the aggregate demand channel. Indeed, evidence shows that successful disinflation episodes have typically been accompanied by sizeable and sustained fiscal adjustment.

Therefore, countries that wish to target a significantly lower rate of inflation need to ensure that the corresponding fiscal adjustment is adequate (Nzuve, 2016). In relevance to the study, the theory posits that reduced inflation rates will lead to reduced commercial banks revenues reduced financial performance and can lead to a bank running to bankruptcy. This is contrary to the expectation that increased inflation reduces purchasing power of money, reduced real sales and increased operation costs and also interest rates in the economy. McGuire, Pauland Conroy (1998) opposed to this theory argue that inflation rate is the most important macroeconomic variable since it affects all the other variables. Increased inflation rates lead to currency depreciation (affects exchange rates) as explained by purchasing power parity. Due to loss of purchasing power of money and erosion of value of money, economic growth slows down and hence negatively affecting country's GDP growth (Kouki, Belhadjn & Chikhaoui, 2018).

2.2.4 Flow Oriented Model

This model was developed by Dornbusch and Fisher (1980). The model claims that changes in exchange rates alter the international competitiveness of a firm as the balance of trade position, and thus exchange rate changes affect real income and output in a country. Share prices of companies are influenced by exchange rate changes and future cash flows of firms. This implies that exchange rate changes lead to stock price returns, and that they are positively correlated. The flow oriented model maintains that a causal relationship, which runs from the exchange rate to the stock prices. This simply means that exchange rate changes affect the competitiveness of firms as a result of its effect on input and output prices.

It follows therefore that if exchange rate appreciates, exporters are likely to be affected negatively. In the same regard an appreciation of the currency is likely to cause goods and services to be dearer on the international market. These will therefore bring about a decline in

exports, as they will be seen as expensive by buyers on the international market. It means that such goods will lose their competitiveness internationally. Consequently, their profits will drop and if profits decrease the firms will lose competitiveness on the domestic stock market. Their attractiveness on the domestic stock market will decrease and this will result in their stock prices decreasing in value. This model is relevant to the study since it relates to macroeconomic variables being studied that is exchange rates on the impact of financial performance. This model claims that changes in exchange rates alter the international competitiveness of a firm. A microfinance institution that is competitively advantaged will report high profits than the other firms in the same industry. As such exchange rates will have an impact on the financial performance of commercial banks.

2.4 Bank Specific Factors and Financial Performance

The study focused on following bank specific factors: Capital adequacy, assets quality management efficiency, liquidity management and risk management.

2.4.1 Capital Adequacy and Financial Performance

Capital is one of the bank specific factors that influence the level of Bank financial performance. Capital is the amount of own fund available to support the bank's business and act as a buffer in case of adverse situation (King'ori, Kioko and Shikumo, 2017). Banks capital creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs. Moreover, greater bank capital reduces the chance of distress (Kimathi, 2018). However, it is not without drawbacks that it induces weak demand for liability, the cheapest sources of fund Capital adequacy is the level of capital required by the banks to enable them withstand the risks such as credit, market and operational risks they are exposed to in order to absorb the potential loses and protect the bank's debtors.

According to Otwani, Simiyu and Makokha, (2017) the adequacy of capital is judged on the basis of capital adequacy ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis. Capital adequacy ratio is directly proportional to the resilience of the bank to crisis situations. It has also a direct effect on the financial performance of banks by determining its expansion (Cheruiyot, 2016).

Ifeacho and Ngalawa (2014) carried out a research study on the impact of bank-specific variables and selected macroeconomic variables on the South African banking sector between 1994 and 2011. The researcher considered capital adequacy, asset quality, management, earnings ability and liquidity under the CAMEL model of Bank financial performance

evaluation in the study. The Ifeacho and Ngalawa's study employed data in annual frequency from South Africa's four accounts for over 70% of the South Africa's banking assets. The researcher investigated the banks using the return on assets (ROA) and return on equity (ROE) as measures of the Bank financial performance. In this study the following baseline model was used: Findings indicated that capital adequacy exhibited a significant negative relationship with ROA, while its relationship with ROE is significant and positive as expected.

Okoth and Gemechu (2013) conducted a research on the factor that determines financial performance of commercial banks in Kenya. The study took place during the period 2001 to 2010. The researchers utilized the linear multiple regression model and Generalized Least Square on panel data. The researchers used independent variables such as capital adequacy, asset quality, Management Efficiency, Liquidity Management, GDP growth rate and inflation. The dependent variables used to measure the performance included the return on investments (ROA), return on equity (ROE), and Net Interest Margin NIM The findings indicated that the considered bank-specific factors had a significant impact on the performance of commercial banks in the country.

Jha and Hui (2012) conducted a study that compared the financial performance of different ownership structured commercial banks in Nepal based on their financial characteristics. The study identified the determinants of performance exposed by financial rations that were based on CAMEL model. Jha and Hui analyzed 18 banks for the period of 2005 to 2010. The researcher utilized the econometric model, multivariate regression analysis, by formulating two regression models utilized in estimating the impact of capital adequacy ratio, non-performing loan ratio, interest expenses to total loan, net interest margin ratio and credit to deposit ratio on the financial profitability The researcher investigated the banks using the return on assets (ROA) return on equity (ROE) and net interest margins (NIM) as measures of the Bank financial performance. The research results revealed that return on assets was significantly influenced by capital adequacy ratio, interest expenses to total loan and net interest margin, while capital adequacy ratio substantial effect on return on equity.

2.4.2 Asset Quality and Financial Performance

The bank's asset is another bank specific variable that affects the financial performance of a bank. The bank asset includes among others current asset, credit portfolio, fixed asset, and other investments. Often a growing asset (size) related to the age of the bank (Wangai &

Mungai, 2019). More often than not the loan of a bank is the major asset that generates the major share of the banks income. The quality of loan portfolio determines the financial performance of banks. The highest risk facing a bank is the losses derived from delinquent loans (Dang, 2011). Thus, nonperforming loan ratios are the best proxies for asset quality. Different types of financial ratios used to study the performances of banks by different scholars. It is the major concern of all commercial banks to keep the amount of nonperforming loans to low level. This is so because high nonperforming loan affects the profitability of the bank. Thus, low nonperforming loans to total loans shows that the good health of the portfolio a bank. The lower the ratio the better the bank performing (Jimale & Ndede, 2017).

Baharuddin and Azmi, (2015) examined the determinants of financial industry profitability in Malaysia. The results of the study showed a direct relationship between financial performance and bank-specific factors. Similarly, the empirical results suggested that the bank specific factors including asset quality affects profitability and by extension the financial performance of the banks.

In Kenya, Olweny and Shipho (2011) conducted a study in Kenya's banking sector to investigate the effects on bank-specific factors on financial performance of commercial banks. The study employed an explanatory approach by using panel data research design. Annual financial statements of 38 Kenyan banks from 2002 to 2008 were obtained from the Central Bank of Kenya and banking survey 2009 for the analysis purpose. The researchers analyzed the data using multiple linear regression method. The study revealed that commercial banks can achieve profitability by improving asset quality this is by reducing the rate of non-performing loans.

Khediri, Charfeddine and Youssef, (2015) applied a linear regression model on Greece 23 commercial banks data for 1990 to 2002, using ROA and the ratio of loan loss reserve to gross loans to proxy profitability and asset quality respectively. The results showed a negative significant impact of asset quality to bank profitability.

Boadi and Lartey (2016) conducted a research whose main objective was to assess the contribution of bank-specific, macroeconomic, and financial structure factors to the profitability of banks in Ghana. The researchers utilized bank level data for the period of 1993-2007. Additionally, the researchers adopted the panel data regression to establish the

important factors in achieving high profitability by using internal variables, namely capital ratio, asset composition, asset quality, expense management, source of funds, and market share. The research also included external variables, such as the GDP growth rate, real interest rate and inflation. ROA was the main ratio used as a measure of profitability for the commercial banks. The findings of the research indicated that capital strength of a bank has a positive impact on profitability. Conversely, asset quality measured by the loan-loss provisions negatively affects the performance of the commercial banks

2.4.3 Management Efficiency and Financial Performance

Management Efficiency is one of the key internal factors that determine the bank profitability. It is represented by different financial ratios like total asset growth, loan growth rate and earnings growth rate. Yet, it is one of the complexes subject to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for management quality. The performance of management is often expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff, and others. Yet, some financial ratios of the financial statements act as a proxy for management efficiency. The capability of the management to deploy its resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. One of this ratios used to measure management quality is operating profit to income ratio (Rahman et al. in Ilhomovich, 2009; Sangmi and Nazir, 2010). The higher the operating profits to total income (revenue) the more the efficient management is in terms of operational efficiency and income generation. More recently, Masood and Ashraf (2012) also find that operational expense ratio is negatively associated to bank profitability. It implies that cost decisions of a bank management are instrumental in influencing its performance.

Okoth and Gemechu (2013) conducted a research on the factor that determines financial performance of commercial banks in Kenya. The study took place during the period 2001 to 2010. The researchers utilized the linear multiple regression model and Generalized Least Square on panel data. The researchers used independent variables such as capital adequacy, assetquality, Management Efficiency, Liquidity Management, GDP growth 15 rates and inflation. The dependent variables used to measure the performance included the return on investments (ROA), return on equity (ROE), and Net Interest Margin NIM. The findings indicated that the considered bank-specific factors had a significant impact on the performance of commercial banks in the country.

Sufian and Chong (2008) examined the determinants of financial performance under profitability during the period 1990-2005 in Philippines banks. The results of the study showed a direct relationship between financial performance and bank-specific factors. Similarly, the empirical results suggested that the bank specific factors such as capital adequacy, asset quality and management efficiency affects profitability and by extension the financial performance of the banks. According to Sufian and Chong poor expenses management is a main contributor to poor performance. Operational expense efficiency is one way of assessing managerial efficiency in banks. From the findings of the study conducted by Olweny and Shipho (2011) in Kenya it can be noted that banks that improve their capital base, reduce operational costs and employ revenue diversification strategies are likely to be more profitable. The specific items highlighted in the study are an expression of efficiency in management

2.4.4 Liquidity and Financial Performance

Liquidity is another factor that determines the level of Bank financial performanc . Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors. According to Dang (2011) adequate level of liquidity is positively related with bank profitability. Liquidity measures the banks' ability to cater for short term expenses and current liabilities. From the literature if found to be high it means that the bank has an opportunity cost from the excess funds which could be used for investment The most common financial ratios that reflect the liquidity position of a bank according to the above author are customer deposit to total asset and total loan to customer deposits. Other scholars use different financial ratio to measure liquidity. For instance, Yaacob, Rahman and Karim (2016) used cash to deposit ratio to measure the liquidity level of banks in Malaysia. However, the study conducted in China and Malaysia found that liquidity level of banks has no relationship with the performances of banks (Said & Tumin, 2011).

A study conducted between by Ifeacho and Ngalawa (2011) on the impact of bank-specific variables and selected macroeconomic variables on the South African banking sector found that asset quality has a positive effect on Bank financial performance. The study used the CAMEL model in evaluation of Bank financial performance and investigated the banks performance using the return on assets (ROA) and return on equity (ROE) as measures of the Bank financial performance. According to the findings, all bank-specific variables are statistically noteworthy determinants of Bank financial performance.

Weersainghe and Ravinda (2013) conducted a research to observe the effects of bank-specific factors such as liquidity risk, bank size, capital adequacy, operating cost, credit risk and macroeconomic determinants such as GDP growth rate and interest rate on the profitability of commercial banks in Sri Lanka. The researchers utilized quarterly data relating to the bank-specific and macroeconomic indicators. The research took place between 2001 and 2011. Multiple panel regression was used to analyze the data and determine the relationship between the dependent and the independent variables. Additionally, the researchers used the ROA and the ROE as profitability indicators of the banks under the study. The empirical results indicated that the larger the commercial banks the more the profits recorded. This is because of the economies of scale as compared to the banks with a higher regulatory capital ratio. Additional findings from the panel regression indicated that the liquidity was inversely proportional to the commercial banks performance in the country.

Abera (2012) conducted a study on the factors affecting profitability in Ethiopian banking industry. The empirical study concentrated on investigating bank-specific, industry-specific and macro-economic factors that had a direct impact on the profitability of commercial banks in Ethiopia. The study covered the 2000-2011 periods using mixed methods research approach. The approach combined documentary analysis and in-depth interviews to collect substantial data for the study. The target population for Abera's research included commercial banks registered by NBE where 8 banks were sampled and investigated. Even though the regression analysis indicated that liquidity had negligible effect on the profitability of the commercial banks, the in-depth interviews showed that liquidity in banks was a major factor that had significant effect on the profitability of Ethiopian commercial banks. However, the regression analysis and the interviews indicated that there existed a negative inverse relationship between liquidity and commercial banks profitability.

2.4.5 Risk and Financial Performance

This is another important determinant of bank profitability. Risk is involved in every banking operation due to its nature. A bank may be failed due to low liquidity and poor assets quality. Therefore, bank risk may be grouped in to credit risk, liquidity risk, Market risk and operational risk. Among others, Juma and Atheru (2018) find that credit risk affect profitability negatively and significantly. This may imply that the tendency of commercial bank to exposure high risk loan generates more unpaid loan resulting these loan loss produces low profit to the commercial banks. Moreover, Francis (2013) finds liquidity is significantly and negatively related to profitability as higher liquid assets reduce the ability of banks to

generate income. On the other hand, Masood and Ashraf (2012) shows that liquidity has no effect or less effect on profitability.

A study done by Athanasoglou *et al*, (2008) examined the impact of bank specific, industry-specific and macroeconomic factors on bank profitability using an empirical framework that incorporated the traditional Structure-Conduct-Performance (SCP) hypothesis. The research involved Greek banks that were conducted 1985-2001. The researchers used several independent variables, namely capital, credit risk, productivity, expense management, ownership, inflation and business cycles. The empirical results indicated that capital is significant in explaining bank profitability. The findings also indicated that capital increased the exposure to credit risk and lowers profits for commercial banks.

2.5 Macro Economics Factors and Financial Performance

The study focused on following macro-economic factors: Macroeconomic factors: inflation rate, interest rate, real GDP, exchange rate and national saving.

2.5.1 Inflation and Financial Performance

A major impact on both financial theory and the practice of financial decision making has been the economic instability, especially in interest rates and prices. Interest rates and prices respond to changes in inflation. Inflation in the past few years has been a major macroeconomic problem. The management of inflation must be of utmost importance to bank managers. Macro-economic instability has necessitated that expectations about the future rate of inflation be taken into consideration in making strategic decision(s) relating to the level of bank deposits and advances (Ahuja, 2010). In general, "we believe that we are able to adjust prices to counteract the effects of increasing costs and generate sufficient cash flow to maintain our productive capacity" (Pearce and Robinson, 1994). Inflation, as measured by the Consumer Price Index (CPI), provides a baseline for both business leaders and policymakers at the Central Bank and Treasury. The CPI simply measures the rate of increase in the prices of a fixed basket of goods. Rising inflation tends to lower the real value of money and thereby prompts the Central Bank to raise rates to slow the economy to slow inflation pressures.

The possibility of inflation in our future is increasingly commanding the attention of investors and financial professionals alike, especially from a risk management standpoint. As measured by the Consumer Price Index (CPI), inflation could accelerate in the coming years as the government deficit expands and the shilling is subjected to increasing supply and

diminishing demand, putting pressure on its purchasing power (Ahuja, 2010). Analyzing potential inflation scenarios and determining solutions are two keys to successful bank and specifically investment management. Not surprisingly banks in developed countries have come up with strategic inflation opportunities fund designed for inflation protection. Banks require a unique strategy that actively seeks investment opportunities as inflation pressures increase.

Inflation isn't just an exercise in risk management. It can also create tactical and strategic opportunities for knowledgeable investors, such as commercial banks, in "real" or "hard" asset classes including precious metals and other commodities and their related securities as well as in inflation-indexed bonds, international bonds and currency trades (Ahuja, 2010). All these are of interest to commercial banks.

Khrawish (2011) determined the factors that might affect the Jordanian commercial banks performance during the period the period from 2000 through 2010. The study analyzed data using multiple Linear Regression model and result demonstrated negative impact of GDP and inflation with ROA and ROE. Also this study found that there are significant and positive relationship between ROE and bank size, Net Interest Margin, exchange rates and loans.

Alper and Anbar (2011) conducted a study to examine the bank specific and macroeconomic determinants of the bank's profitability in Turkey over the time period from 2002 to 2010. The bank profitability was measured by (ROA) and ROE as function of bank specific and macroeconomics determinants. Using a balanced panel data set, the results shows that, asset size and non–interest income have a positive and significant impact on bank profitability only the real interest rate affects the performance of banks positively these result suggest that banks can improve their profitability through increasing bank size and non-interest income, decreasing credit/asset ratio. In addition, higher real interest rate can lead to higher bank profitability.

Mwangi (2013) undertook a research in non-financial sector where the study was on the relationship that exists between macroeconomic variables and financial performance of aviation industry in Kenya. The study concluded that the macroeconomic variables influenced the financial performance of companies in the aviation industry in Kenya at 20%, level of significance (5%) The study also concluded that ROA has a weak positive insignificant correlation with GDP. It further concludes that there is a weak negative

insignificant correlation between ROA and real exchange rate, annual average lending rate and annual inflation rate.

2.5.2 Interest Rates and Financial Performance

Monetary policy sets the pace for short-term rates. These rates reflect the Central Bank's twin goals of full employment and price stability. In the short-term, the Central Bank sets the funds rate as the benchmark rate to achieve its growth and employment goals. Longer-term, however, we suspect the Central Bank remains cautious on the inflation outlook and moves the funds rate to achieve its longer-run inflation target (Gavin and Hausmann,1996). Longer-term interest rates reflect the influence of growth and inflation expectations as well as the balance of credit demand, especially to finance federal deficits, and the needed credit supply coming from abroad. Easy monetary policy in the form of low rates is used to increase demand for money and stimulate the economy (Gavin and Hausmann,1996). Although it is difficult to prove the direction of the relationship between interest rates and profitability, studies confirm that interest rates instability affects commercial banks financial performance with studies giving contradicting findings (Gilchris, 2013)

Rachael and Moses (2017) carried out a study to investigate the effect of macroeconomic variables on financial profitability of listed commercial banks in the Nairobi Securities Exchange (NSE) for years 2001 to 2012. Panel data analysis using Fixed Effects model was applied on the data to examine the effects of three major macroeconomic variables which included: Gross Domestic Product (GDP), Exchange rates, and interest rates on profitability of the listed commercial banks. The study findings indicated that real GDP growth rate had positive but insignificant effect to profitability of commercial banks as measured through Return on Assets (ROA). Further, real interest rates had a significant negative influence on profitability of listed commercial banks in Kenya. While the exchange rate had a positive significant effect on the profitability of listed commercial banks on Nairobi Securities Exchange.

Kavwele, Ariemba and Evusa (2018) did a study on the relationship between interest rates and financial performance of commercial banks in Kenya..To achieve the objective of the study he used regression model. In the model ROE was defined as the profitability indicator and found that there is a positive relationship between interest rates and financial performances of commercial banks. Thus companies should therefore prudently manage their interest rates to improve their financial performance

Mangeli(2012)using descriptive research design his study of relationship between interest rates spread and financial performance of commercial banks points out that, interest rates spread affect the performance of commercial banks, as it increase the loans charged on borrower. The data analysis technique applied in this study was the multiple regression analysis. The results showed that discount rates, inflation rates and exchange rates had positive influence on performance of commercial banks while reserve requirement ratio had negative influence. The study concluded that higher levels of discount rates, inflation rates and exchange rates lead to higher performance in commercial banks in Kenya, higher levels of reserve requirement ratio result in lower Bank financial performance in Kenya.

2.5.3 Gross Domestic Product and Financial Performance.

Gross Domestic Product is the money value of all final goods and services produced by a normal resident as well as non-residents in the domestic territory of a country, whereas Gross National Product is the total market value of all final goods and services produced in a year in a country. Also Personal income is the sum of all incomes actually received by all individuals during a GDP per capita: According to Maende, Mutana and Munga (2018) GDP growth has a positive effect on banks profitability, possibly due to increases in lending rates. Since economic activity affects the supply and demand of loans and deposits, the growth of GDP might be a determinant of bank profitability. In this study, GDP per capita, which refers to the gross domestic product per person, is adopted in a given year (Ahuja, 2010).

Discerning where we are in the economic cycle and when trends begin to change is a core task of any strategic vision. The state of the economy drives top line revenue of the entire country. The overall pace of economic growth is most-often benchmarked as the year-over-year growth rate of real gross domestic product (GDP). On a monthly basis, the pace of employment growth provides clues to the pace of GDP growth. Employment serves as the primary input to estimates of personal income. A second monthly gauge of GDP is industrial production, which serves as the primary gauge of the nation’s output (Githaiga, 2019).

Recent economic weakness reflects the abrupt decline in consumer outlays and declining trade. Consumer spending is being hurt by income and labor market fundamentals. Household net worth has declined due to losses in equity markets and declining home values. Slower job and income growth will also curb consumers’ willingness to spend during the recovery in late 2009and early 2010. The outlook is for several more quarters of negative growth and a slow, shallow recovery.

Munyoki, Rotich and Anyango (2015) carried out a study to establish the effect of macroeconomic factors affecting commercial banks financial performance in Kenya. The author identified interest rates, GDP growth rate, currency exchange rate, money supply and inflation as the main macroeconomic factors affecting commercial banks financial performance. A total of 10 commercial banks were sampled in the study for a 10-year period from 2002 to 2012. Regression analysis was used with the factors taken as the independent variables and Return on Assets (ROA) taken to be the dependent variable. Commercial banks financial performance was found to be positively correlated with money supply, interest rates and GDP growth. On the other hand, a negative relationship was established between inflation and depreciation of the local currency. Though this study was carried out among 24 commercial banks, macro-economic variables remain the same and they affect every economic activity albeit with varying degree of proportions.

Grilli, Mrkajic and Latifi (2018) carried out a study in Europe to examine the determinants of Private entities (PE) investments across 21 European countries between 10 year periods of 1997 to 2006. The study's empirical model included many of the macroeconomic determinants already tested in previous studies. However, first time variables were included to capture the institutional environment. Using a panel data technique of estimation, it was established that GDP growth, market capitalization, research and development expenditures and unemployment are the most influential macroeconomic determinants of European PE investments. The study also showed that early stage investments and funds raised are differently affected by institutional quality. Thus, while the index of economic freedom had a significant and a positive effect on funds raised by PE firms, it appeared a significant determinant of early stage PE investments. This review confirms that there exists a relationship between GDP growth rate and PE firms' financial performance as earlier hypothesized in this study.

2.5.4 Exchange Rate and Financial Performance

A crucial factor in the economic performance of the country is the volatility of foreign exchange rates. The value of the Kenyan Shilling relative to other major world currencies was seen as affecting decisions on many business transactions. The daily deterioration of the value provides less financial incentives for individuals and companies to purchase from foreign sources (Ahuja, 2010). Exchange rates are one of the most complex prices in economics since the exchange rate is a relative price of one currency in terms of another. Therefore, the path of any exchange rate overtime reflects the relative changes in interest rates and economic growth expectations between the two countries. For the bank's customers,

changes in the shilling's value have a significant impact on the cost of imports and the competitiveness of exports abroad (Ahuja, 2010).

Desaro (2012) through his study focusing on the effect of macroeconomic variables on financial performance of commercial banks in Kenya and found out that the ROA was negatively correlated with the exchange rate and positively correlated with the GDP growth and inflation. Maigua and Mouni (2016) sought to investigate the influence of interest rate determinants on the performance of commercial banks in Kenya. The target population of the study was all 43 commercial banks operating in Kenya. The sample size was 26 commercial banks obtained from the population. The data analysis technique applied in this study was the multiple regression analysis. The study found that to great extent exchange rates influences the performance of commercial banks. The exchange rates strongly affect the performance of the commercial banks in Kenya. There is a negative relationship between the exchange rates and the performance of commercial banks in Kenya. Higher levels of exchange rates lead to lower performance in commercial banks.

Mwangi (2013) undertook a research in non-financial sector a study to confirm whether there was any relationship that exists between macroeconomic variables and financial performance of aviation industry in Kenya. The study concluded that it influenced the financial performance of companies in the aviation industry in Kenya at 20% significance level, (5%) of the study also concluded that ROA has a feeble positive irrelevant correlation with GDP. It further concludes that there is a negative weak correlation among ROA and rate of exchange, annual average lending rate and annual inflation rate.

2.5.5 National Savings and Financial Performance

National savings is the total income in the economy that remains after paying for consumption and government purchases (Thompson, 2019). Bankole and Fatai (2013) examined the cause and effect relationship between domestic savings and economic performance in Nigeria during the period 1980-2010. The researchers employed the Granger-causality and Engle-Granger co-integration techniques to analyze the relationship between savings and economic growth. In addition, the granger causality test revealed that causality moves from savings to economic growth in Nigeria. Thus, the researchers accept the Solow's hypothesis that savings precedes economic growth but reject the Keynesian theory that, it is economic growth that leads to higher savings. The researchers recommended that government

and policy makers should employ policies that would accelerate domestic savings so as to increase economic growth.

Tang and Tan (2016) analyzes the causal relationship between the rate of saving and economic growth for Malaysian economy and examined the impulse response of a shock in savings and the effects of such a shock on GDP and investment. The results do not find causality between GDS and GDP, GDP per capita is found to Granger cause private savings. On the other hand, there appeared to be a double causality between GDS and investment. An increase in savings will cause an increase in investment and vice versa. Four variables were found to have a significant long run effect on private saving. These are; GDP growth rate, import share, export share and population growth rate. One striking variable is population growth rate which instead of having a negative impact on private saving had a significant positive impact. It would then appear that the notion of a smaller population as a mobilization tool for private savings is incorrect in the case of Kenya.

2.6 Research Gap

After reviewing the effect of bank specific factors and macroeconomic factors literature on financial performance, it is clear that different researchers have studied different bank specific factors and macroeconomic factors with respect to the financial performance of the commercial banks. These bank specific factors include capital adequacy, asset quality, management efficiency, liquidity and risk management. Macroeconomic variables include lending rates, GDP, exchange rates, Treasury bill, money supply inflation, employment and unemployment. The results for these researches have been different. The empirical results indicated that bank specific factors and macroeconomic factors relationship with financial performance can either be positive, negative or none at all.

For example, the findings of the study done by Desaro (2012) among others showed that financial performance was negatively correlated with exchange rate and positively correlated with GDP and inflation while study done by Wambua and Ochieng (2019) revealed there is no correlation found between the selected macroeconomics variables and financial performance. since the reviewed studies give different results depending on the variables included in the study as well as the state of industrialization of the country of study and the method of analysis employed, it’s advisable therefore that more studies need to be done for harmonized results. As a result of these contradicting results this study will carry out research

on the effect of selected bank specific factors and macroeconomics factors on financial performance of commercial banks in Kenya.

2.7 Conceptual Framework

Mugenda and Mugenda (2003) said a conceptual framework is a graphical or diagrammatic representation of the relationship between variables in a study it helps the researchers see the proposed relationship easily and quickly. In this study it showed the relationship between the independent variables explanatory (bank specific factors and macroeconomic variables) and dependent (Return on Asset). The bank specific factors as independent variables of the study include: Capital adequacy, assets quality management efficiency, liquidity management and risk management. The macro economic factors as independent variables of the study include: Macroeconomic factors: Inflation rate, interest rate, real GDP, exchange rate and national saving. The study assumed a linear relationship between the independent and dependent variables. In this study the moderating variables were assumed constant.

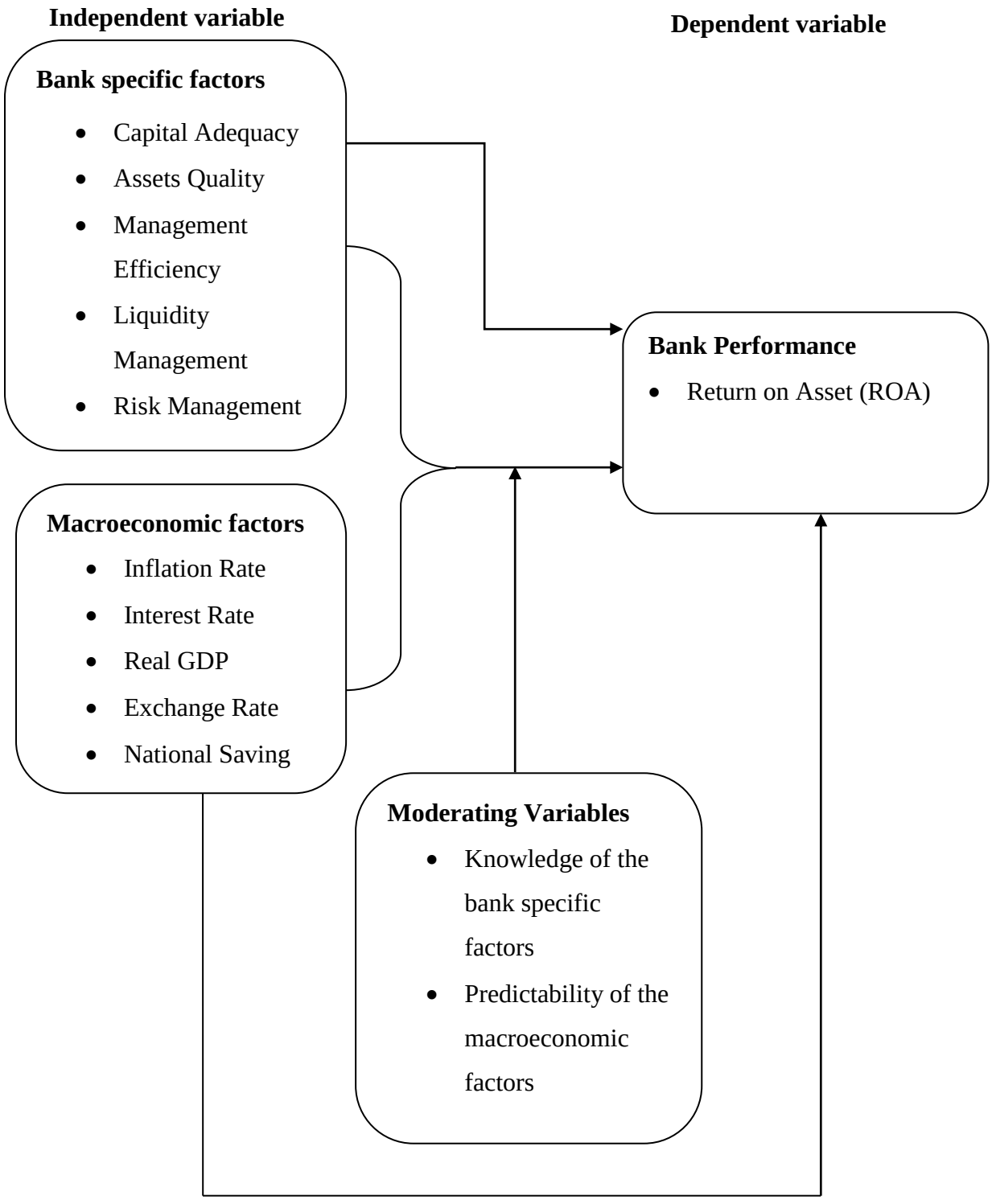

Figure 2.2: Conceptual framework

CHAPTER THREE
RESEARCH METHODOLOGY

3.1 Introduction

This Chapter covered the research design and methodology that the researcher used in gathering data, processing the data and translating the collected data into meaningful information. The process of research for the study was primarily looked at as it sought to find out if the Macroeconomic factors had influence on commercial banks performance. The research design was discussed in the following aspects, like the size of sample in relation to the target population, the variables under the study, the approaches to the research, and the methods employed in data collection (Tu & Li, 2013; Luthra & Mahajan, 2014).

3.2 Research Design

According to Cooper and Schindler (2003) design refers to the activities and time based plan which is grounded on the research questions, led by selection of sources and types of information, a framework for specifying the association among the research study variables and outlines the procedure for every research activity. The study employed the descriptive research design. Descriptive research involved gathering data that described events and then organizes, tabulates, depicts, and described the data collection (Nardi, 2018). Descriptive research design was used since the data obtained on the elements and the variables was for a given time period.

3.3 Target Population

Ary, Jacobs, Irvine and Walker (2018) defines target population as the entire group of people, events or things that the researcher intends to study. The target population in the study involved all the 45 listed commercial banks in Central Bank of Kenya (2015). The researcher chose the commercial banks because first, they have the widest geographical coverage in Kenya, through their branch network band; secondly they offer both saving and credit services. The research employed census design.

3.4 Data Collection

Panel data was collected from published audited supervisory annual reports of the central bank of Kenya for the eleven years in the study between 2007 and 2017. This period was chosen because it offered sufficient observation for data analysis. Data for variables was collected as follows. Average inflation data was collected from the Kenya National Bureau of Statistics (KNBS) periodicals. Data on exchange rate was obtained from the Central Bank of

Kenya for the various years and it was a comparison of the Kenyan shilling against the USA dollar. The USA dollar was used due to its stability against the Kenya shilling and the easiest to convert into Kenyan money via banks or local Forex bureaus compared to other foreign currencies like Euro and Pound. GDP data was collected from National Bureau of Statistics periodicals. National savings data was collected from the Kenya National Bureau of Statistics Publications. Data which was used to measure financial performance was obtained for the same period of study. The secondary data was sourced using a data collection form (see appendix I).

3.5 Data Analysis and Presentation

According to Mugenda and Mugenda (2003) data must be cleaned, coded and properly analyzed in order to obtain meaningful information. The study used correlation and multiple regression analysis to measure the variables, this model of analysis examined the simultaneous effects of the independent variables on the dependent variable. Domestic GDP growth, exchange rates (ER) inflation (INF) national saving rate (NR) Capital adequacy (CAR), Asset Quality (AQ) Management Efficiency (ME), Liquidity Management (LM) and was used as independent variable.

The major dependent variable was operationalized as ROA. The CAMEL ratios are the popular bank specific factors often used in representing bank specific factors in relation to performance. The CBK also uses CAMEL ratio to evaluate the performances of commercial banks (Kamande, 2017).

The macroeconomic variables used as independent variables were GDP growth rate, average annual Inflation Rate, interest rate, exchange rate and national saving rate for each year. In this study the data was analyzed using correlation and multiple regression analysis models to test the association between the independent and dependent variables. Multiple regression analysis models was used to measure the effect of changes in the selected bank specific and macroeconomic variables on the financial performance of commercial banks with dependent variable ROA

ROA = PBT/Total assets

The researcher used ANOVA to test the research hypothesis at significant level of 0.05. The following multiple linear regression models were specified for this study:

Multiple Regression Model for selected bank specific factors

$Y = a + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + \beta_4X_4 + \beta_5X_5 + \varepsilon$……...…3.1

Where Y = Financial Performance (ROA)

a = Constant

β_1- β_5 = Régression coefficients

X_1 = Capital adequacy

X_2 = Asset quality

X_3 = Management efficiency

X_4 = Liquidity management

X_5 = Risk management

ε = error term

Multiple Regression Model for selected macroeconomic factors

$Y=a+\beta1X_1+\beta2X_2+\beta3X_3+\beta4X_4+\beta5X_5 + \varepsilon$….....3.2

Where: Y is the dependent variables of ROA measured as Net Income/Average Total Assets

a is a constant, intercept of the equation.

β_1-β_5 is the regression coefficient of the independent variables

X_1= Average inflation rate

X_2= Average interest rate

X_3=Average GDP growth rate

X_4=Average exchange rate of Kenyan shilling against the USA dollar rate

X_5= Average National saving rate

ε is the error term normally distributed about a mean of zero. For computation purposes it is assumed to be 0Multiple Regression Model for joint of selected bank specific factors and macroeconomic factors.

$Y=a+\beta1X_1+\beta2X_2+ \varepsilon$……..……..3.3

$\beta1X_1$= Bank specific factors

$\beta2X_2$=Macroeconomics factors

3.6 Measurement of Variables

This section presents the measurements that will be used to operationalize the study variable

Table 3.1: Measurement of Variables

Variables	Measures		Source
Dependent Variable			
Bank Financial Performance	ROA	ROA=Net(Y)/Average total assets	CBK
Independent Variables			
Bank Specific Factors			
Capital adequacy	Equity total asset	Bank capital/Risk weighted assets	CBK
Management efficiency	Ratio of operating expenses to total asset	= Ratio total asset or loan growth rate	CBK
Liquidity	Ratio of deposits to total asset	= Customer deposits /total assets	CBK
Risk management	Ratio of risk management	= Credit risk liquidity risk + mkt risk +operational risk	CBK
Asset quality	Ratio of asset quality	= Fixed assets +current assets	CBK
Macroeconomic Factors			
Average real GDP	Annual GDP growth rate	=C+G+I+(X-M)	KNBS
Average inflation	Consumer price index	=(Current CPI-Initial CPI)/Current CPI	KNBS
Average interest rate	Annual real interest rate	A=P(1+r/n)nt	CBK
Average exchange rate	Annual exchange rate	=Domestic price/foreign price	CBK
Average national saving	Annual national saving rate	= Total income-consumption-investment-government purchase	CBK

CHAPTER FOUR
RESULTS AND DISCUSSION

4.1 Introduction

This chapter presents the results of the analyzed data and the discussions of the findings. The chapter highlights the response rate, the descriptive statistics, correlation and regression statistical analysis and finally the findings interpretations.

4.2 Diagnostic Tests

The researcher conducted diagnostic tests on secondary data of bank specific factors, macroeconomic factors and Bank financial performance (ROA) data and their results are shown below:

4.2.1 Normality Test

The researcher used Q-Q Plots to test the normality of data.

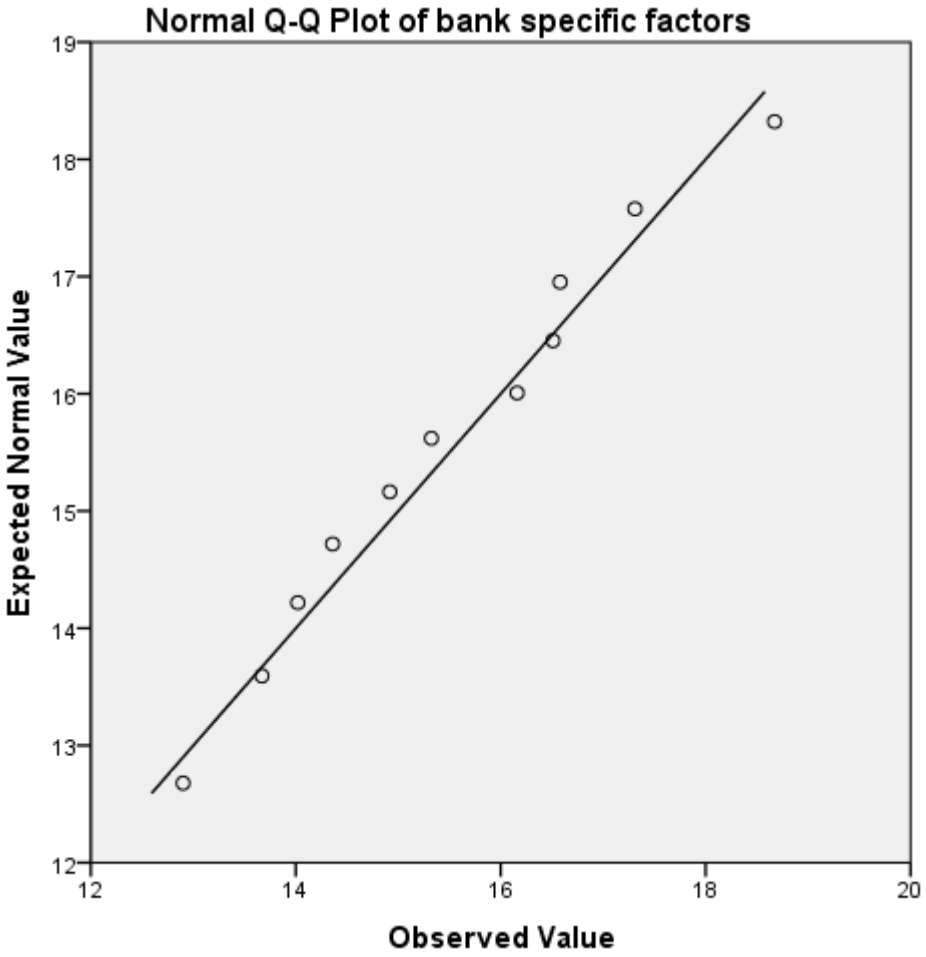

Figure 4.1: Normal Q-Q plot of Bank Specific Factors

Based on figure 4.1 the output of a normal Q-Q Plot indicates that the data of bank specific factors are normally distributed, since the data points are close to the diagonal line.

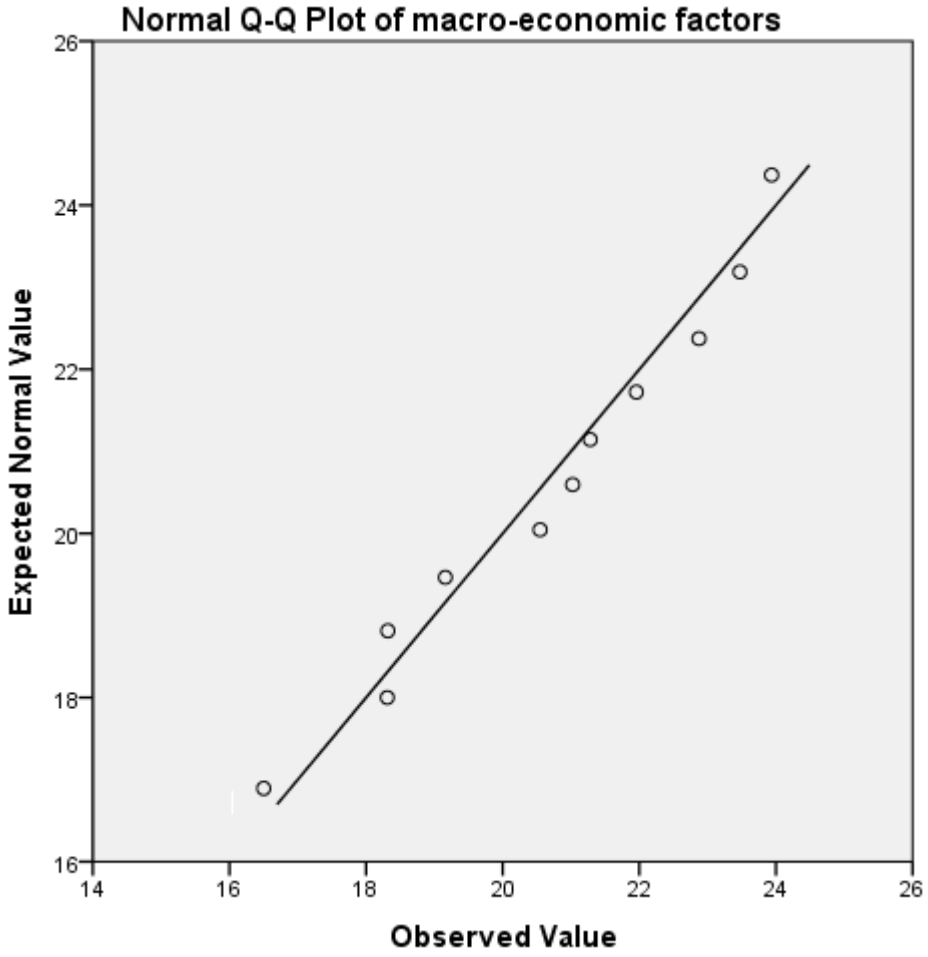

Figure 4.2: Normal Q-Q plot of Macro-economic factors

Based on figure 4.1 the output of a normal Q-Q Plot indicates that the macro-economic data was normally distributed, since the data points are close to the diagonal line.

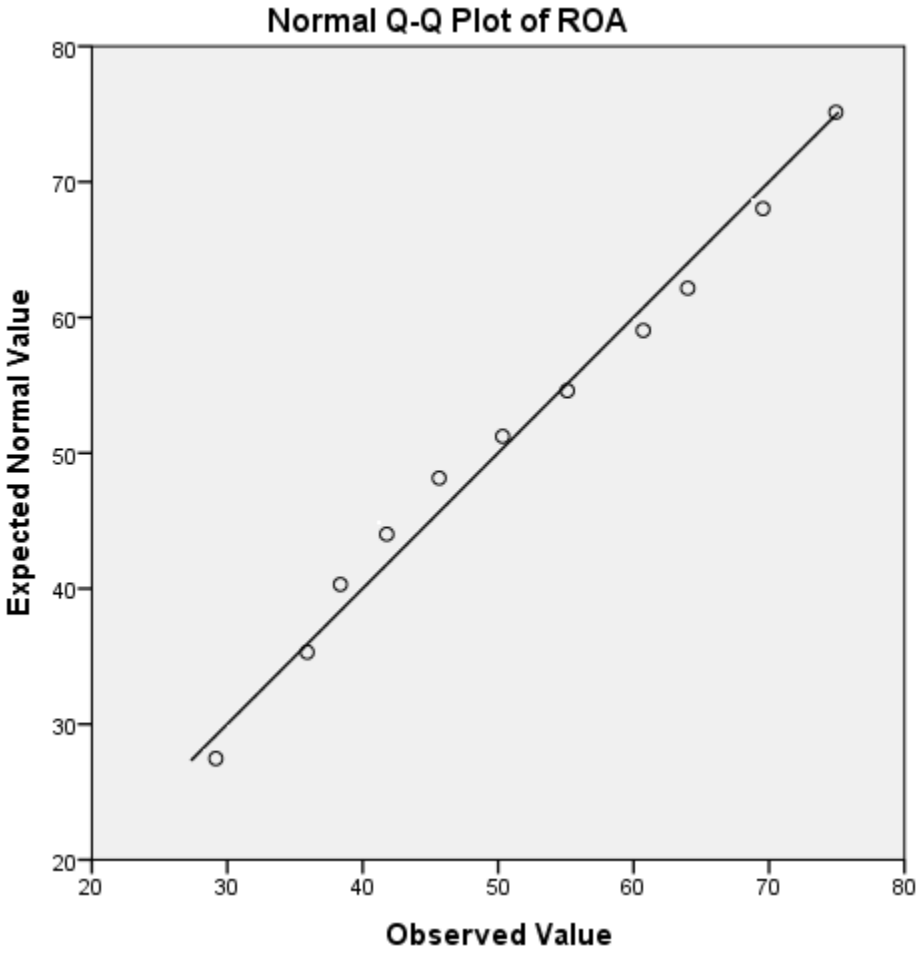

Figure 4.3: Normal Q-Q plot of Bank financial performance (ROA)

Based on figure 4.3 the output of a normal Q-Q Plot indicates that the Bank financial performance (ROA) was normally distributed, since the data points are close to the diagonal line.

4.2.2 Autocorrelation Tests

The tests for autocorrelation were conducted using the Durbin Watson tests.

Table 4.1: Autocorrelation Test

Independent Variables	Dependent Variable	Durbin-Watson
Risk management, Liquidity, management efficiency, capital adequacy and Asset quality,	ROA	2.302
GDP, Inflation rate, Exchange rate, National savings and Interest rate	ROA	1.742
Joint specific factors and macroeconomic factors	ROA	1.514

Based on the results of the study in table 4.1, the Durbin-Watson statistic is 2.302, 1.742 and 1.514 respectively which is between 1.5 and 2.5 and therefore the data used in the study was not auto correlated (Pourhosein, Kol, Vishkaiib & Jourshari, 2017). Investigate the Relationship between Institutional Ownership in Tehran Stock Exchange. International Journal of Economics and Financial Issues, 7(3), 276-285.). The results of the study in table 4.1 was in agreement with the observations of Chithra, Kumar, Chinnaraju &Ashmita, (2016).

4.2.3 Multi-collinearity Test

The researcher used tolerance (T>0.2) and Variance Inflation Factor to test for Multi-collinearity.

Table 4.2: Multi-collinearity Test

		Collinearity Statistics	
Variables		**Tolerance**	**VIF**
Bank specific factors	Capital adequacy	0.733	1.364
	Asset quality	0.714	1.401
	Management efficiency	0.635	1.575
	Liquidity management	0.847	1.180
	Risk management	0.658	1.519
Macro-economic factors	Inflation rate	0.884	1.131
	Interest rate	0.380	2.630
	Exchange rate	0.750	1.333
	National savings	0.495	2.019
	GDP	0.515	1.942
Joint Macro-economic	Macro-economic factors	0.995	1.005
and Bank specific	Bank specific factors	0.982	1.004
factors factors			

Dependent Variable: ROA

The results of the study in table 4.2 indicates that there was no multi-collinearity as shown by tolerance (T>0.2) and Variance Inflation Factor (VIF<10) agreeing with the rules discussed by research methodology experts (Aguguom, Dada & Nwaobia, 2019).

4.3 Descriptive Statistics

This study targeted the 45 commercial banks in Kenya as at 31st December 2017. Complete data from 45 commercial banks based on the selected variables was obtained thus accounting for 100% of the target population, which was appropriate to carry out the study.

4.3.1 Bank Specific Factors

The following specific factors were used in the study: Capital adequacy, asset quality, management efficiency, liquidity management and risk management. Table 4.1 shows the overall descriptive statistics of the all bank specific factors over 11 years of study.

Table 4.3: Bank Specific Factors Overall Results

						Measure of Dispersion		
						Skewness		Kurtosis	
	N	Min	Max	Mean	Std. D	Statistic	Std. E	Statistic	Std. E
Capital adequacy	11	0.19	0.23	0.205	.01269	0.815	0.687	0.254	1.334
Asset quality	11	0.35	0.56	0.426	.06620	0.886	0.687	0.475	1.334
Management efficiency	11	0.42	0.65	0.575	.06587	-1.400	0.687	3.046	1.334
Liquidity management	11	0.37	0.44	0.402	.02821	0.303	0.687	-1.761	1.334
Risk management	11	1.08	2.74	1.670	.54793	1.405	0.687	0.869	1.334

The descriptive results on table 4.3 that the average capital adequacy is 0.205 with minimum and maximum capital adequacy being 0.19 and 0.23 correspondingly. This point out that the average capital adequacy for the listed commercial banks is 20.5% which is directly above the regulatory value of 14.5%. The average value of assets quality is 0.426 with minimum and maximum capital adequacy being 0.35 and 0.56 correspondingly. The average Management efficiency was 0.575 with minimum and maximum Management efficiency being 0.42 and 0.65 correspondingly. The average value of Liquidity management is 0.402 with minimum and maximum Liquidity management being 0.37 and 0.44 correspondingly which suggest that the average value of liquidity of the commercial banks listed by central bank of Kenya is 40.2%. The average Management efficiency was 0.575 with minimum and maximum management efficiency being 0.42 and 0.65 correspondingly. This points out that the average value of management efficiency of the commercial banks listed by central bank of Kenya is 57.5%. The average Risk management is 1.670 with minimum and maximum

management efficiency being 1.08 and 2.74 congruently. Moreover, the results of the study summaries that the all skewness and kurtosis values were less than 2 which indicates that the data was normally distributed.

Table 4.4: Bank Specific Factors Year by Year Mean

YEAR\VARIABLE	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Capital adequacy	0.19	0.20	0.21	0.22	0.20	0.23	0.21	0.20	0.19	0.20	0.19
Asset quality	0.43	0.42	0.45	0.50	0.56	0.45	0.40	0.39	0.35	0.35	0.39
Management efficiency	0.62	0.64	0.65	0.58	0.57	0.56	0.55	0.55	0.42	0.60	0.63
Liquidity management	0.46	0.37	0.40	0.44	0.37	0.43	0.39	0.38	0.38	0.42	0.44
Risk management	3.1	2.74	2.58	1.53	1.71	1.44	1.53	1.37	1.41	1.08	1.31

Source: CBK annual supervisory reports, 2007-2017

The results in table 4.4 indicate the average mean per year for selected bank specific factors (Capital adequacy, Asset quality, Management efficiency, Liquidity management, Risk management) from the year 2007 to 2017.

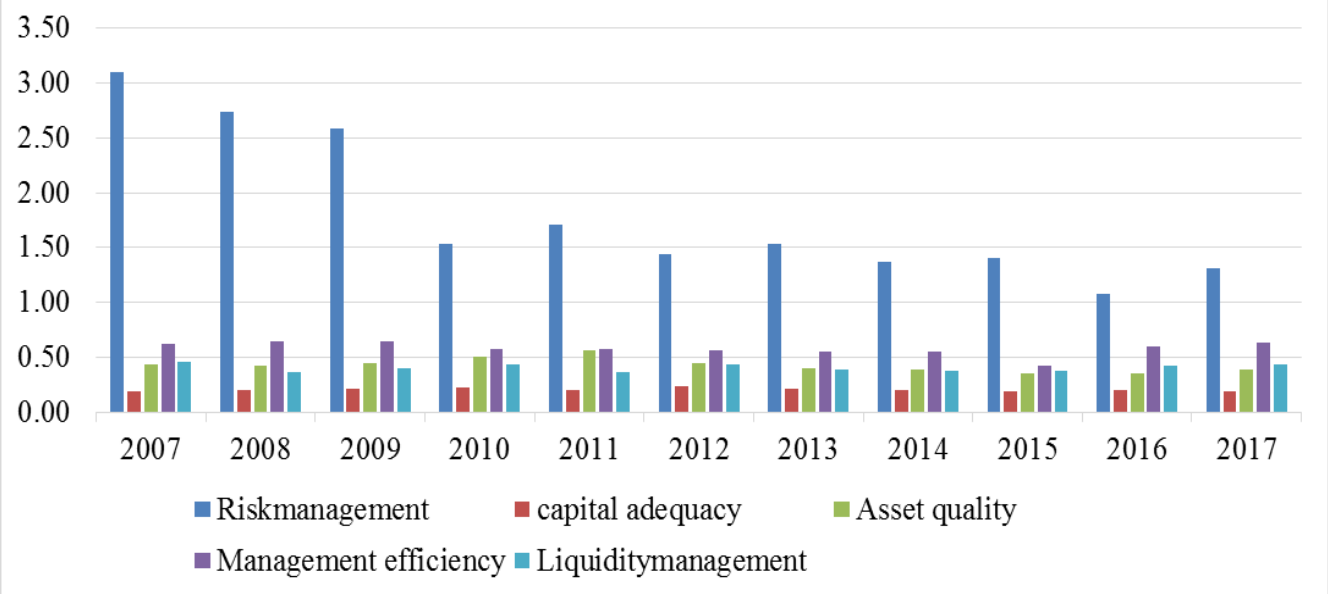

Figure 4.4: Bank specific factors

Based on the results of the study in figure 4.4 there was a gradual decline in Risk management from the year 2007 to 2017 compared to capital adequacy which remained

almost constant from the year 2007 to 2017. The results of the study revealed gradual increase of management efficiency from the year 2007 to 2014 then a decline a decline in 2015 followed by an increase in 2016 and 2017 respectively. The listed commercial banks portrayed slow improvement in asset quality and liquidity management.

4.3.2 Macro-economic Factors

The following macro-economic factors were used in the study: Inflation rate, interest rate, GDP, national savings and exchange rate. Table 4.3 shows the descriptive statistics of the respective macro-economic factors.

Table 4.5: Mean and Standard Deviation for Measure of Macro-economic Factors

						Measure of Dispersion		
					Skewness		Kurtosis	
	N	Min	Max	Mean	Std. D	Statistic	Std. E	Statistic	Std. E
Inflation rate	11	4.300	15.100	8.690	3.581	0.848	0.687	-0.344	1.334
Interest rate	11	13.670	19.650	15.811	1.816	0.944	0.687	0.876	1.334
GDP	11	35.900	74.940	53.157	14.312	0.223	0.687	-1.506	1.334
National savings	11	0.11	0.17	0.138	0.0178	-0.188	0.661	0.145	1.279
Exchange rate	11	69.000	103.250	87.617	10.991	-0.048	0.687	-0.669	1.334

Based on the descriptive results of the study on table 4.5 the average Inflation rate of the listed commercial banks is 8.6900 with minimum and maximum Inflation rate being 4.30 and 15.10 respectively. The average interest rate is 15.811 with minimum and maximum interest rate being 13.6 and 19.65 respectively. The average value of GDP is 53.157 with minimum and maximum GDP being 35.90 and 74.94 respectively. The average value of exchange rate is 87.617 with minimum and maximum exchange rate being 69.00 and 103.25 respectively. Furthermore, the average value of national savings is 0.138 with minimum and maximum national savings being 0.11 and 0.15 correspondingly. This points out that the average value of national savings is 13.5%. All the skewness and kurtosis values are less than 2 which indicates that the data was normally distributed.

Table 4.6: Macroeconomics Factors Year by Year Mean

Year\Variable	2007	2008	2009	2010	2011	2012	2013	2014	2015	2016	2017
Inflation rate	4.30	15.10	10.6	4.30	14.0	9.40	5.70	6.90	6.60	6.30	8.00
Interest rate	13.33	14.02	14.80	14.36	15.05	19.65	17.31	16.51	16.1	16.58	13.67
GDP	31.96	35.90	37.02	40	41.95	50.33	55.1	61.45	64	70.88	74.94
Exchange rate	67.47	69.00	77.34	79.26	88.87	84.52	86.13	87.92	98.6	101.2	103.25
National savings	0.17	0.14	0.15	0.15	0.13	0.13	0.11	0.11	0.14	0.14	0.15

Source: CBK annual supervisory reports, 2007-2017

The results in table 4.6 indicate the average mean per year for selected macroeconomic factors (Inflation rate, Interest rate, GDP, Exchange rate, National savings) from the year 2007 to 2017.

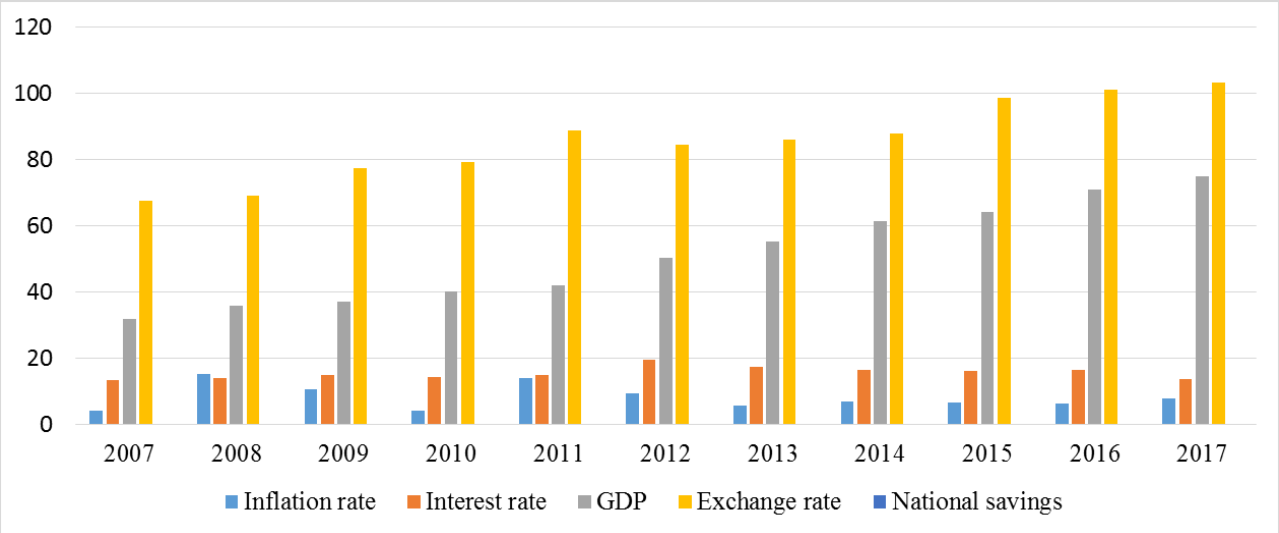

Figure 4.5: Macroeconomic factors

Based on the results of the study in figure 4.5 exchange rate showed an increasing trend from the year 2007 to 2017. There was a general rise in exchange rates suggesting that the shillings grew weaker over the period of analysis. This could be due to shake up of our politics before election in 2017. In 2007 to 2011 inflation showed an increase and a decrease from 2012 to 2017.The GDP in figure 4.5 showed gradual increases from year 2007 to 2017.The national saving was too minimal indicating, there was more precede growing dependence on capital

from foreign. It also indicates households are consuming more than their after tax income allow thus no saving.

4.3.3 Bank financial performance

The study used Return on Assets ratio to measure the financial performance of commercial banks in Kenya. Table 4.5 shows the descriptive statistics of Bank financial performance.

Table 4.7: Return on Assets

						Measure of Dispersion			
						Skewness		Kurtosis	
	N	Min	Max	Mean	Std. D	Statistic	Std. E	Statistic	Std. E
ROA	11	0.030	0.050	0.036	0.008	1.001	0.687	-0.665	1.334

The descriptive results on table 4.7 indicates that the average ROA of the commercial banks is 0.036 with minimum and maximum ROA being 0.03 and 0.5 respectively. This suggest that the average performance in financial terms of listed commercial banks is 3.6%.

Table 4.8: ROA Year by Year Mean

YEAR\VARIABLE	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
ROA	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.03	0.03	0.03	0.03

Source: CBK annual supervisory reports, 2007-2017

The results in table 4.8 indicate the average mean of ROA per year from the 2007 to 2017

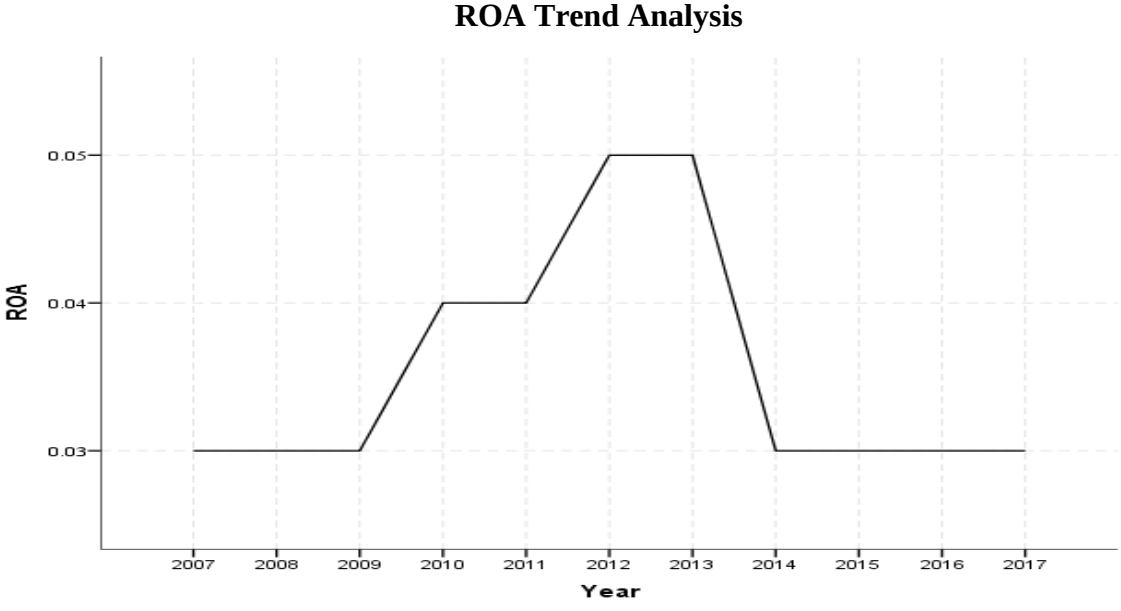

Figure 4.6: ROA Trend Analysis

Based on the results of the study in figure 4.6 ROA of listed commercial banks in Kenya portrayed an increasing trend from the year 2007 to 2012 this may be due to the significant reduction of non –performing loans from 5% to 3.4% according to CBK supervision report. There is a declining trend from year 2013 to 2014. This could be attributed to, by venturing new business, market slow down, relaxing of financial controls, increase of market competition, interest capping by central bank poor management of banks and non-effective bank policies. Nevertheless on average the performance of commercial bank is increasing Compared to the financial performance of banks in developing countries the overall financial performance of commercial banks in the country is good (Flamini *et al.*,2009.This can attract foreign investors.

4.4 Inferential Statistics

The study used inferential statistics (Pearson correlation and multiple linear regression) to analyses the research objectives.

4.4.1 Correlation Matrix

The main objective of the study was to determine the effect of selected bank specific factors and macroeconomic factors on financial performance of commercial banks in Kenya. The study used Pearson Correlation analysis to establish the kind of relationship that exist between the variables (bank specific factors, macro-economic factors and Bank financial performance). Table 4.7 shows the Pearson correlation analysis of the relationship between bank specific factors, macro-economic factors and Bank financial performance. Correlation matrix in appendix III shows the detailed correlation among the bank specific factors, macro-economic factors and bank financial performance.

Table 4.9: Pearson Correlation Analysis of the Relationship between Bank Specific Factors, Macro-Economic Factors and Bank financial performance

		Bank specific factors	Macro-economic factors	Bank financial performance (ROA)
Bank specific factors	Pearson Correlation	1		
	Sig. (2-tailed)			
Macro-economic factors	Pearson Correlation	0.836**	1	
	Sig. (2-tailed)	0.001		
Bank financial performance	Pearson Correlation	0.847**	0.874**	1
	Sig. (2-tailed)	0.001	0.000	

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

Based on the results in table 4.9 the study revealed that there was a strong statistically significant relationship of (r = 0.847, $p < 0.05$) between bank specific factors and financial performance of commercial banks. The study further revealed the existence of a strong statistically significant relationship of (r = -0.874, $p < 0.05$) between macro-economic factors and financial performance of commercial banks in Kenya. Therefore, this confirms the effect of bank specific factors and macro-economic factors on financial performance of commercial banks in Kenya. This echoes the study done by Murerwa, (2015) where found out that macroeconomic and micro economic factors influence banks' financial performance in developing economies.

4.4.2 Multiple Regression Analysis

The study used multiple linear regression analysis to determine the effect of bank specific factors and macroeconomic factors on financial performance of commercial banks in Kenya.

4.4.2.1 Effect of Selected Bank Specific Factors on the Financial Performance of Commercial Banks in Kenya

The first objective of the study was to determine the effect of selected bank specific factors on the financial performance of listed commercial banks in Kenya. The bank specific factors include used in the study include: Capital adequacy, assets quality, management efficiency, liquidity management and risk management. The study used multiple linear regression to determine the effect of bank specific factors on financial performance of listed commercial banks in Kenya.

Table 4.10: Multiple Regression Results for Effect of Selected Bank Specific Factors on Financial Performance of Commercial Banks in Kenya

Model Summary

Model				Std. Error of the Estimate	Change Statistics				
	R	R Square	Adjusted R Square		R Square Change	F Change	df1	df2	Sig. F Change
1	0.984[a]	0.968	0.937	3.76864	0.968	30.714	5	5	0.001

a. Predictors: (Constant), Risk management, Liquidity management, capital adequacy, Asset quality, Management efficiency

b. Dependent Variable: ROA

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2181.079	5	436.216	30.714	0.001[b]
	Residual	71.013	5	14.203		
	Total	2252.092	10			

a. Dependent Variable: ROA

b. Predictors: (Constant), Risk management, Liquidity management, capital adequacy, Asset quality, Management efficiency

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	16.425	23.775		6.909	0.001
	Capital adequacy	33.412	108.224	0.286	3.087	0.027
	Asset quality	91.219	22.458	0.382	4.062	0.010
	Management efficiency	42.610	23.392	0.182	1.822	0.128
	Liquidity management	9.424	40.506	0.020	0.233	0.825
	Risk management	19.223	2.175	0.865	8.838	0.000

a. Dependent Variable: ROA

Based on the results of the study in table 4.10, capital adequacy, asset quality, management efficiency, liquidity management and risk management) accounted for 96.8% financial performance of commercial banks in Kenya (R^2 = 0.968). Based on ANOVA results in table 4.8, the level of significance was 0.001 with an F value of 30.714 which indicates a statistical significant relationship between bank specific factors and financial performance of listed commercial banks in Kenya because the P value which is 0.001 is less than 0.05 (P<0.05). Hence, the null hypothesis (Ho1) which states that there is no significant effect of selected bank specific factors on financial performance of commercial banks in Kenya was rejected and alternative hypothesis which states that there is significant effect of selected bank specific factors on financial performance of commercial banks in Kenya is accepted because the results from table 4.8 shows that the level of significance was 0.001 with an F value of 30.714 which is less than 0.05 (0.001< 0.05) the significant level of the study. This confirms the effect of bank specific factors on financial of listed commercial banks. The results of the study conforms to the study done by Riaz and Mehar, (2013) on the impact of bank Specific and macroeconomic Indicators on the Profitability of Commercial banks where they found out that bank specific and macroeconomic indicators had a significant impact on Profitability of Commercial Banks.

The un-standardized beta coefficients in table 4.10 indicate that capital adequacy (β = 33.412, p< 0.05), asset quality (β = 91.219, p< 0.05) and Risk management (β = 19.223, p< 0.05) were the robust predictors of financial performance of commercial banks in Kenya as compared to management efficiency (β = 42.610, p> 0.05) and Liquidity management (β =

9.424, $p > 0.05$) which were the least predictors of financial performance of commercial banks in Kenya. Therefore, the multiple regression results above generally indicate that capital adequacy, asset quality and risk management has a statistical positive significant effect on financial performance of commercial banks in Kenya.

Multiple Regression Model

Guided by equation 3.1 the following multiple regression model was specified

$$Y = 16.425 + 33.412\ X_1 + 91.219X_2 + 42.610X_3 + 9.424X_4 + 19.223X_5 + \varepsilon$$

when there is a unit increase in capital adequacy, financial performance of commercial banks in Kenya will increase by 33.412 units, when there is a unit increase in asset quality, financial performance of commercial banks in Kenya will increase by 91.219 units, when there is a unit increase in management efficiency, financial performance of commercial banks in Kenya will increase by 42.610 units, when there is a unit increase in liquidity management, financial performance of commercial banks in Kenya will increase by 9.424 units and when there is a unit increase in risk management, financial performance of commercial banks in Kenya will increase by 19.223.

4.4.2.2 Effect of Selected Macroeconomics Factors on Financial Performance of Commercial Banks in Kenya

The second objective of was to determine the effect of selected macroeconomics factors on financial performance of commercial banks in Kenya. The selected macroeconomics factors used in the study include: Inflation Rate, interest Rate, real GDP and exchange Rate. The study used multiple linear regressions to determine the effect of macro-economic factors on financial performance of listed commercial banks in Kenya.

Table 4.11: Multiple Regression Results Effect of Selected Macroeconomics Factors on Financial Performance of Commercial Banks in Kenya

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.958[a]	0.919	0.837	6.05238	0.919	11.296	5	5	0.009

a. Predictors: (Constant), GDP, Inflation rate, Exchange rate, National savings, Interest rate
b. Dependent Variable: ROA

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2006.553	4	501.638	12.258	0.009
	Residual	245.539	6	40.923		
	Total	2252.092	10			

a. Dependent Variable: ROA
b. Predictors: (Constant), National savings, Inflation rate, Exchange rate, Interest rate, GDP)

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	5.028	44.361		-0.113	0.914
	Inflation rate	-0.721	0.558	-0.175	-1.292	0.253
	Interest rate	0.805	1.652	0.101	0.487	0.647
	Exchange rate	0.998	0.183	0.803	5.453	0.003
	National savings	-151.281	152.889	-0.179	-0.989	0.368
	GDP	-424.394	325.210	-0.232	-1.305	0.249

a. Dependent Variable: ROA

Based on the results of the study, the selected bank macroeconomic factors (Inflation rate, interest rate, exchange rate, national savings and GDP) accounted for 91.9% financial performance of commercial banks in Kenya ($R^2 = 0.919$).

Based on the ANOVA results of the study in table 4.11, the significance value was 0.009 with an F value of 12.258 which shows a statistical significant relationship between selected

macro-economic factors and financial performance of listed commercial banks in Kenya because the significance value of 0.009 is less than 0.05. Hence, the null hypothesis (Ho2) which states that there is no significant effect of selected macro-economic factors on financial performance of commercial banks in Kenya was rejected and alternative hypothesis which states that there is significant effect of selected macro-economic factors on financial performance of commercial banks in Kenya is accepted because the results from table 4.11 shows that the level of significance was 0.005 with an F value of 12.258 which is less than 0.05 (0.005 <0.05) the significant level of the study. This confirms the effect of selected macro-economic factors on financial performance of listed commercial banks. The results of the study conforms to the study done by Okech and Mugambi, (2016) where they found out that macroeconomic variables significantly affect stock returns of listed commercial banks in Kenya.

Based on the regression coefficients results of the study in table 4.11, the un-standardized beta coefficients indicate that exchange rate ($\beta = 0.998$, $p< 0.05$) was the robust macro-economic predictor of financial performance of commercial banks in Kenya as compared to inflation rate($\beta = -0.721$, $p> 0.05$), interest rate ($\beta = 0.805$, $p> 0.05$), national savings ($\beta = -151.281$, $p> 0.05$) and GDP ($\beta = -424.394$, $p> 0.05$) which were the least predictors of financial performance of listed commercial banks in Kenya. Therefore, the multiple regression results above indicate that exchange rate has a statistical positive significant effect on financial performance of commercial banks in Kenya.

Multiple Regression Model

Guided by equation 3.2 the following multiple regression model was specified

$$Y = -5.028- 0.721X_1 - 0.805X_2 + 0.998X_3 - 151.281X_4 - 424.394X_5+ \varepsilon$$

When there is a unit increase in inflation rate, financial performance of commercial banks in Kenya will decrease by 0.721 units, when there is a unit increase in interest rate, financial performance of commercial banks in Kenya will decrease by 0.805 units, when there is a unit increase in exchange rate, financial performance of commercial banks in Kenya will increase by 0.998 units. When there is a unit increase in national savings, financial performance of commercial banks in Kenya will decrease by 151.281units and when there is a unit increase in GDP, financial performance of commercial banks in Kenya will decrease by 424.394units.

4.4.2.3 Joint Effect of Selected Bank Specific and Macroeconomic Factors on the Financial Performance of Commercial Banks in Kenya.

The third objective of was to determine the joint effect of selected bank specific and macroeconomic factors on the financial performance of commercial banks in Kenya. The study used multiple linear regressions to determine the joint effect of selected bank specific and macroeconomic factors on the financial performance of commercial banks in Kenya.

Table 4.12: Multiple regression results on Joint Effect of Selected Bank Specific and Macroeconomic Factors on the Financial Performance of Commercial Banks in Kenya

Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Change Statistics				
					R Square Change	F Change	df1	df2	Sig. F Change
1	0.945[a]	0.893	0.866	5.49911	0.893	33.237	2	8	0.000

a. Predictors: (Constant), banks specific factors, macro-economic factors

b. Dependent Variable: ROA

ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	2010.171	2	1005.085	33.237	0.000[b]
	Residual	241.921	8	30.240		
	Total	2252.092	10			

a. Dependent Variable: ROA

b. Predictors: (Constant), bank specific factors, macroeconomic factors

Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	-50.210	15.020		-3.343	0.010
	Macro-economic factors	5.522	0.713	.900	7.746	0.000
	Bank specific factors	-1.482	0.478	-.360	-3.099	0.015

a. Dependent Variable: ROA

Based on the results of the study, the joint joint bank specific factors and macroeconomic factors accounted for 89.3% financial performance of commercial banks in Kenya (R^2 = 0.893).

Based on the ANOVA results of the study in table 4.12, the level of significance was 0.000 with an F value of 33.237 which shows a statistical significant relationship between selected bank specific and macro-economic factors and financial performance of listed commercial banks in Kenya because the P value which is 0.000 which is less than 0.05. Hence, the null hypothesis which states that there is no significant effect of joint selected bank specific factors and macro-economic factors on financial performance of commercial banks in Kenya was rejected and alternative hypothesis which states that there is significant effect of joint selected bank specific factors and macro-economic on financial performance of commercial banks in Kenya is accepted because the results from table 4.12 shows that the level of significance was 0.000 with an F value of 33.237 which is less than 0.05 (0.000 <0.05) the significant level of the study. This indicates the joint effect of bank specific and macro-economic factors on financial performance of listed commercial banks in Kenya. The results of the study conforms to the study done by Murerwa, (2015) where they found out that determinants of financial performance which include bank specific and macro-economic indicators significantly influenced the financial performance of commercial banks in Kenya.

Based on the regression coefficients results of the study in table 4.12, the un-standardized beta coefficients indicate that joint macroeconomic factors ($\beta = 5.522$, $p < 0.05$) was the strongest predictor of financial performance of listed commercial banks in Kenya compared to bank specific factors with coefficient of ($\beta = -1.482 p < 0.05$). Therefore, the multiple regression results indicate that joint bank specific and macroeconomic factors have a statistical positive significant joint effect on financial performance of commercial banks in Kenya.

Multiple Regression Model

Guided by equation 3.3 the following multiple regression model was specified

$Y = -50.210 + 5.522\ X_1 - 1.482X_1 + \varepsilon$

When there is a unit increase in joint macroeconomic factors, financial performance of listed commercial banks in Kenya will increase by 5.522 units which shows that the selected joint macroeconomic factors have strong influence on financial performance of listed commercial banks in Kenya. When there is a unit increase in joint bank specific factors, financial performance of listed commercial banks in Kenya will decrease by 1.4825 units. The multiple

regression results indicates that joint bank specific and macroeconomic factors, significantly affect the financial performance of listed commercial banks in Kenya.

Table 4.13: Summary of Hypothesis Testing

Number	Hypothesis	Verdict
H_{01}	There is no significant effect of selected bank specific factors on financial performance of commercial banks in Kenya.	Not supported
H_{02}	There is no significant effect of selected macroeconomics factors on financial performance of commercial banks in Kenya.	Not supported
H_{03}	There is no significant joint effect of the selected bank specific factors and macroeconomic factors on financial performance of commercial banks in Kenya to a certain extent.	Not supported

CHAPTER FIVE

SUMMARY, CONCLUSIONS AND RECOMMENDATIONS

5.1 Summary of the Findings

The main objective of this study was to determine the effect of selected bank specific factors and macroeconomic factors on financial performance of commercial banks in Kenya. The study came up with a number of key findings on selected bank specific factors and macroeconomic factors on financial performance of commercial banks in Kenya. The findings are summarized as per the research objectives.

The first objective of the study was to determine the effect of selected bank specific factors on the financial performance of commercial banks in Kenya. Based on the results, it was established that selected bank specific factors have a negative effect on financial performance of commercial banks in Kenya. Moreover, discretely capital adequacy, management efficiency and liquidity management variables did not significantly affect financial performance of listed commercial banks. Comparatively while asset quality and risk management significantly affect the financial performance of listed commercial banks in Kenya.

The second objective was to determine the effect of selected macroeconomics factors on financial performance of commercial banks in Kenya. The results of the study revealed that selected macroeconomics factors combined significantly affect financial performance of listed commercial banks in Kenya, while discretely inflation rate, interest rate and national savings variables did not significantly affect financial performance of listed commercial banks. However, based on the results of the study exchange rate discretely significantly affect the financial performance of listed commercial banks in Kenya.

The third objective of the study was to determine the joint effect of selected bank specific and macroeconomic factors on the financial performance of commercial banks in Kenya. The results of the study revealed that there was a strong statistically significant positive relationship between joint selected bank specific and macroeconomic factors and financial performance of commercial banks. Additionally, the study revealed that joint macroeconomic factors have strong significant effect on financial performance of listed commercial banks in Kenya compared to joint selected bank specific factors. Hence this confirms the positive effect of joint selected bank specific and macroeconomic factors on financial performance of listed commercial banks in Kenya.

5.2 Conclusion

The first objective of the study was to determine the effect of selected bank specific factors on the financial performance of commercial banks in Kenya. Based on the findings of the study, the selected bank specific factors have a negative effect on financial performance of listed commercial banks in Kenya.

The second objective was to determine the effect of selected macroeconomics factors on financial performance of commercial banks in Kenya. The findings of the study revealed that selected macroeconomics factors combined significantly effect financial performance of listed commercial banks in Kenya.

The third objective of the study was to determine the joint effect of selected bank specific and macroeconomic factors on the financial performance of commercial banks in Kenya. The findings of the study revealed that selected bank specific and macroeconomic factors have a joint significant effect on the financial performance of listed commercial banks in Kenya. Comparatively, joint macroeconomic factors have strong significant effect on financial performance of listed commercial banks in Kenya compared to joint selected bank specific factors.

5.3 Recommendations

5.3.1 Recommendations on Policy

As indicated from the findings of the study that specific and macroeconomic factors affect the financial performance of commercial banks in Kenya it is therefore necessary that government with aid of CBK and public financial institutions should come up with policies that protect the commercial banks from the negative effect of bank macroeconomic factors in order to improve their financial performance.

Based on the findings of the study the researcher concluded that micro economic factors like capital adequacy and asset quality significantly influence the financial performance of commercial banks in Kenya. This hints to the recommendation that the bank managers in financial institutions like listed commercial banks in Kenya have the main responsibility to hold enough capital and assets as they are the enhancers of financial performance. It is also important that commercial banks should be responsive to the negative effect of bank specific factors and constantly changing requirements of financial sector in order to improve and their financial performance.

5.3.2 Recommendations for Further Research

This research was based on the effect of selected bank specific factors and macroeconomic factors on financial performance of commercial banks in Kenya. Basically there are other bank specific and macroeconomic factors that contribute more to financial performance of commercial banks in Kenya. Therefore, there is need for more research to capture these factors to determine whether they have a significant positive effect on financial performance of commercial banks in Kenya or not.

The study focused on financial performance of listed commercial banks in Kenya only. This limits the generalization of results. Similar studies need to be conducted in other none listed commercial banks in Kenya. This research selectively captured listed commercial banks in Kenya only. A further research can be done to capture other financial institutions to establish whether the findings will be the same based on macro-economic factors

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APPENDICES

Appendix I: Data Collection Form

Name of the bank…….

Table 1: Selected Bank Specific Factors

YEAR\VARIABLE IN DECIMALS	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
	Mean	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**
X1-capital adequacy											
X2-Asset quality											
X3-Management efficiency											
X4-Liquidity management											
X5-Risk management											

Table 2: Selected Macroeconomic Factors

YEAR\VARIABLE IN DECIMALS	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
	Mean	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**
X6-Inflation rate											
X7-Interest rate											
X8-GDP (Decimals)											
X9-Exchange rate											
X10-National savings											

Table 3: ROA

YEAR\VARIABLE	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
	Mean	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**
ROA											

Appendix II: Filled Data Collection Form

Table 1: Selected Bank Specific Factors

YEAR\VARIABLE IN DECIMALS	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
	Mean	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**
X1-capital adequacy	0.19	0.20	0.21	0.22	0.20	0.23	0.21	0.20	0.19	0.20	0.19
X2-Asset quality	0.43	0.42	0.45	0.50	0.56	0.45	0.40	0.39	0.35	0.35	0.39
X3-Management efficiency	0.62	0.64	0.65	0.58	0.57	0.56	0.55	0.55	0.42	0.60	0.63
X4-Liquidity management	0.46	0.37	0.40	0.44	0.37	0.43	0.39	0.38	0.38	0.42	0.44
X5-Risk management	3.1	2.74	2.58	1.53	1.71	1.44	1.53	1.37	1.41	1.08	1.31

Source: Central Bank of Kenya (2017)

Table 2: Selected Macroeconomic Factors

YEAR\VARIABLE IN DECIMALS	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
	Mean	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**
X6-Inflation rate	4.3	15.1	10.6	4.3	14.0	9.4	5.7	6.9	6.6	6.3	8.0
X7-Interest rate	13.33	14.02	14.80	14.36	15.05	19.65	17.31	16.51	16.16	16.58	13.67

X8-GDP	31.96	35.90	37.02	40	41.95	50.33	55.1	61.45	64	70.88	74.94
X9-Exchange rate	67.47	69.00	77.34	79.26	88.87	84.52	86.13	87.92	98.60	101.28	103.25
X10-National savings	0.17	0.14	0.15	0.15	0.13	0.13	0.11	0.11	0.14	0.14	0.15

Source: Central Bank of Kenya (2017)

Table 3: ROA

YEAR\VARIABLE IN DECIMALS	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**2017**
	Mean	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**	**Mean**
ROA	0.03	0.03	0.03	0.04	0.04	0.05	0.05	0.03	0.03	0.03	0.03

Source: Central Bank of Kenya (2017)

Appendix III: Correlation Matrix

	ROA	Capital adequacy	Asset quality	Management efficiency	Liquidity management	Risk management	Inflation rate	Interest rate	Exchange rate	National savings	GDP
ROA	1.00										
Capital adequacy	0.27	1.00									
Asset quality	0.66	0.40	1.00								
Management efficiency	0.36	0.07	0.26	1.00							
Liquidity management	0.01	0.12	-0.02	0.34	1.00						
Risk management	0.81	-0.18	0.24	0.50	0.07	1.00					
Inflation rate	-0.29	0.02	0.39	0.29	-0.61	0.27	1.00				
Interest rate	0.32	0.59	-0.18	-0.47	-0.17	-0.55	-0.08	1.00			
Exchange rate	0.93	-0.24	-0.41	-0.42	-0.07	-0.86	-0.18	0.30	1.00		
National savings	-0.34	-0.27	0.09	0.39	0.64	0.54	-0.14	-0.66	-0.29	1.00	
GDP	-0.12	0.74	0.39	-0.20	0.02	-0.29	-0.04	0.64	-0.05	-0.47	1.00

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

Appendix IV: List of all Commercial Banks in Kenya.

1.African banking Corporation Limited	23. Guaranty Trust Bank (GTB)Formerly Fina Bank limited
2. Bank of Africa Kenya Ltd	24. First Community Bank
3. Bank of Baroda (K) Ltd.	25. Giro Bank limited
4. Bank of India	26. Gurdian Bank Ltd
5. Barclays Bank of Kenya	27. GULF Bank
6. CFC Stanbic bank	28. Habib Bank AG Zurich
7. Chase Bank	29. Habib Bank limited
8. Citibank N.A. Kenya	30. Housing Finance
9. City Finance Bank Ltd	31. I&M Bank
10. Jamii Bora Bank	32. Imperial Bank (K) Ltd
11. Cooperative Bank of Kenya	33. Kenya Commercial Bank
12. Charterhouse Bank Ltd	34 Sidian Bank
13. Commercial Bank of Africa	35. Middle East bank
14. Consolidated bank.	36. National Bank of Kenya
15. Credit bank limited	37. NIC Bank
16. Development Bank	38. Oriental Bank
17. Diamond trust bank	39. Paramount Bank
18. Dubai Bank	40. Prime Bank Limited
19. Eco Bank	41. Standard Chartered Bank
20. Equatorial Bank	42. Transitional bank
21. Family Bank	43. UAB
22. Fidelity Bank ltd	44. Victoria Bank
	45. Equity Bank

Source: Central Bank of Kenya (2017)