THE MODERATING EFFECT OF BANK OWNERSHIP ON THE DETERMINANTS OF FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA

BY

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DECLARATION

Declaration by Candidate

This research project is my original work and has not been presented for a degree in any other University. No part of this thesis may be reproduced without the prior written permission of the author and/or Moi University.

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DEDICATION

My project report is dedicated to my family for their support, restraint and perseverance, may God bless them abundantly.

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ABSTRACT

The sustainability of a commercial bank is largely determined by its level of performance.The banks must generate the necessary income in order to be able to cover their costs of operations which are incurred as they go about their work. Over the time banking industry has faced a lot of uncertainties which are mostly due to technological innovations and the unstoppable forces of globalization; these changes have continued to create expansion opportunities as well as challenges to bank's managers to ensure their bank remain profitable and competitive.This study investigated the moderating effects of bank ownership on determinants of financial performance of commercial banks in Kenya. The objectives of the study were; To examine the effect of capital invested on the financial performance of commercial banks in Kenya, to determine the effect of credit risk on the financial performance of commercial banks in Kenya, to establish the effect of interest fluctuation rates on the financial performance of commercial banks in Kenya, to assess the effect of inflation rate on the financial performance of commercial banks in Kenya and to assess the moderating effect of bank ownership on determinants of financial performance of commercial banks in Kenya. The study adopted explanatory research design. The scope of the study was restricted to the assessment of the internal and external determinants affecting bank profitability of the 44 commercial banks registered by (CBK, 2014), with at least four years data for the years 2014, 2015 ,2016 and 2017. Secondary data obtained from the commercial banks audit report was used as the primary source of data. The completed data was then analyzed using descriptive and inferential statistics in order to establish the relationship between the various variables. Data analysis was done using STATA. Descriptive measures of mean, standard deviation were applied to explain the data. Panel Regression analysis was used to make statistical inferences and to test the study hypotheses. All the five hypotheses of the study were rejected, the results obtained were as follows; Capital Invested has a significant effect on the financial performance of commercial banks in Kenya $P= 0.000<0.05$. Credit risk has a significant effect on the financial performance of commercial banks in Kenya $P= 0.030<0.05$. Interest rates have a significant effect on the financial performance of commercial banks in Kenya, $P= 0.016<0.05$. Inflation rate has significant effect on financial performance of commercial banks in Kenya $P= 0.009<0.05$. The outcome of the moderated regression model showed that when the moderating variable, bank ownership, was taken into account, only Interest Rates was statistically significant $P= 0.016<0.05$ ($p=0.016$).The other variables that is; Credit Risk, Inflation Rate and Capital Invested were found to be not statistically significant. Various recommendations is making the main ones being Regulatory authorities should develop effective policies on credit risk and inflation rate management to ensure that banks are in a position where they can enhance their financial performance as well as to handle negative shocks. The study also recommended that poor performing banks increase their capital to ensure that their banks are efficient and to maximize profits in the long run and growth of the banks. Therefore, in pursuit for high financial performance and hence better financial performance of banks, the study recommended that management work towards getting more loans customers. Through this study, interest rates stood out as a key determinant of the financial performance of commercial banks in Kenya. It is under this observation that the study recommends further research on the optimum interest rate that will yield maximum financial performance of commercial banks in Kenya.

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DEFINITION OF TERMS

Bank Ownership: Bank ownership refers to the control over any bank, providing the power to dictate the operations and functions (Ongore (2011).

Capital Invested: Money invested in a business venture with an expectation of income, and recovery through earnings generated by the business over several years. (Business dictionary).

Credit Risk: Credit risk, or default risk, is the risk that a financial loss will be incurred if counterparty to a transaction does not fulfill its financial obligations in a timely manner (Jílek, 2000).

Financial Performance: Financial performance is the level of performance of a firm over a specific period of time and expressed in terms of the overall profits or losses incurred over the specific period under evaluation (Bodie, Kane and Marcus, 2005).

Inflation rates: Using a percentage, the inflation rate measures how much a product or service has increased in price over a certain period of time.(David, 2019)

Interest Rate Fluctuation: Borrowers pay an interest rate for the use of money they don't own, which they must repay to the lender for delaying their consumption by lending to the borrower in exchange for interest. A year's worth of interest may be calculated by dividing the total amount borrowed by the total amount of money lent.

ABBREVIATIONS AND ACRONYMS

CBK	-	Central Bank of Kenya
CE	-	Cost Efficiency
CI	-	Capital Invested
EPS	-	Earnings Per Share
EY	-	Earning Yield
GDP	-	Gross Domestic Product
KBA	-	Kenya Bankers Association
LAR	-	Loan to total assets ration
NIM	-	Net Interest Margin
NPL	-	Non Performing Loan
ROA	-	Return on Assets
ROE	-	Return On Equity

CHAPTER ONE

INTRODUCTION

1.0 Chapter Overview

This chapter gives a background of the study, highlights the problem statement and discusses the objectives of the study as well as the hypothesis to be tested. It also explains the significance of the study and gives the scope of the study.

1.1 Background of the Study

Banks, like every other for-profit company, seek to make as much money as possible. A bank's actions are therefore designed to maximize the return on investment. It's important to remember that financial performance isn't the exclusive objective of commercial banks. Commercial banks also take into account social and economic objectives when making decisions. The banking industry is considered a significant sector of the financial system in most countries (San & Heng, 2013). The banks serve to promote the growth of the economy through mobilization of savings and using these monies in financing the productive sectors of the economy (Alkhazaleh & Almsafir, 2014). Furthermore, commercial banks play a very crucial role in the allocation of the economic resource of countries. According to Ongore and Kusa (2013), banks are the channels used to transfer funds between depositors and investors. Handley-Schachler, Juleff, and Paton (2007) also note that "these commercial banks offer the all-important services of providing deposit and credit facilities for personal and corporate customers, making credit and liquidity available in adverse market conditions, and providing access to the nation's payments systems". It is also noted that commercial banks are also the channels used to transmit effective monetary policy of the central bank of the economy thus it is considered that they also share the responsibility of stabilizing the economy of their country (Siddiqui and

Shoaib, 2011). The soundness of the banking sector in a country is very critical to the health of the country's economy (Sufian and Chong, 2008). Further agreeing with this statement, Katrodia (2012) argues that the banking sector and the economy of a country are closely related. On the other hand, it is important to note that the soundness of the commercial banks is largely dependent on their financial performance which is normally used to indicate the strengths and the weaknesses of such a commercial bank (Makkar and Singh, 2013).

Swarnapali (2014) records that the concept of financial performance is very important both for the non-financial institutions, as well as financial institutions and commercial banks, are considered to be the major constituents of the financial institutions. The growth and success of commercial banks is driven by a competitive marketing strategy that their marketing department adopts to help them compete with others in the market.

Research shows that over the last decade, the study on the financial performance of commercial banks has been of interest to management experts, investors, and economic analysts across the entire world whereby researchers have focused on the factors that influence the performance (Sufian and Chong, 2008). This interest is attributed to the significant impact of the financial performance of commercial banks on the potential growth of the economy of the country. This has resulted in a lot of changes in the banking environment in terms of operations in order to improve their financial performance (Hussain and Bhatti, 2010).

Researchers conclude that the financial performance of a commercial bank is largely determined by its level of financial performance. The banks must generate the necessary income in order to be able to cover their costs of operations which are

incurred as they go about their work (Ongore and Kusa, 2013). The profits made from the bank also is shared out to shareholders as dividends thus motivating them to invest more in the institutions and ensuring a steady flow of investment funds for the bank and thus securing the future in terms of sustainability of operations (Ongore and Kusa, 2013).

Ongore and Kusa (2013) assert that "hyper financial performance is the ultimate goal of commercial banks, thus all the strategies designed and activities performed are meant to realize this grand objective". In addition to making profits, commercial banks are also guided by additional goals and objectives such as social benefits as well as economic benefits.

According to Ayanda (2013) financial performance is defined as the “the ability of the business organization to maintain its profit year after year”. Podder (2012) states that financial performance of a commercial bank “is the efficiency of a bank at generating earnings”. Researchers also allude to the fact that financial performance of any commercial organization normally contributes to the economic development of a country through the fact that the profits can be reinvested back into the business and thus offer additional employment to the citizens of the country and thus increased revenue for the country through taxation (income tax and corporate tax) (Ayanda et al. 2013).

Furthermore, the financial performance of any commercial organization leads to an increased wealth of the investors through the higher dividends that are paid which in turn leads to improved quality and standards of living of the people of the country. Thus, financial performance of the commercial banks is very critical as a poor financial performance of the banking industry of a country can result in serious

negative impacts on the growth and development of a country as well as the wellbeing of the citizens of that country (Ongore and Kusa, 2013).

Several researchers in the banking sector as well as in the academic have given much attention to the issue of performance of commercial banks due to the fact that the banking industry is a major player in the economic development of a country (Ayele, 2012). These studies depict that performance of commercial banks can be expressed or measured in various terms and these include competition, productivity, financial performance, efficiency as well as concentration (Macit, 2011). Commercial banks that have better financial performance are considered to have better ability to resist any negative shocks from the external environment and thus be able to contribute to the stability of a country's financial system (Athanasoglou, 2008).

Factors that influence commercial bank's financial performance are divided into internal and external. Internal factors are those factors which bank's managers can control whereas external factors are those outside or beyond bank's management control. External factors that influence financial performance of commercial banks are related to legal and economic environment and comprises of factors like interest rates, inflation, recession, boom, regulations, market growth and market structure (Staikouras & Wood, 2011). The internal factors reflect the management policies of the banks and decisions made about the sources of funds, expenses and liquidity management (Onuonga, 2014).

Ownership status of the bank is another firm specific factor that has in the recent past drawn a lot of attention from researchers in financial management who are interested in the evaluating the determinants of the financial performance of commercial banks (Bonin, Hasan and Wachtel, 2004). The literature on this has mainly focused on the

influence of foreign ownership on financial performance as compared to the influence of domestic ownership on the financial performance of commercial banks (Amare, 2012). In developing countries like Kenya, literature shows that foreign ownership brings in several advantages to the performance of commercial banks such as improved technology, risk management expertise, improved knowledge on corporate governance as well as increased competitiveness. All these advantages lead to the improved performance of the commercial banks in terms of improved efficiency in cost management which results in improved financial performance (Athanasoglou, Brissimis and Delis, 2008). It is therefore clear that foreign ownership leads to better financial performance of commercial banks in developing countries.

Researchers have also evaluated the influence of government or private ownership on the financial performance of commercial banks and the results from the various studies have been contradictory. Some of the empirical studies show that there is no significant negative effect of either government or private ownership on the financial performance of commercial banks (Bonin, Hasan and Wachtel, 2005). Some studies on the other hand show that privately owned commercial banks post better financial results than government owned banks due to the improved efficiency associated with the private sector (Dietrich and Wanzenried, 2008). This means that the ownership of a commercial bank particularly in the developing countries like Kenya influences their financial performance in one way or another.

Studies have further attempted to establish the main theoretical explanation that can be used to explain the relationship between the ownership structure of commercial banks and their financial performance. In Kenya, the performance of commercial banks has been influenced by various factors such as the prevailing economic

conditions and the ownership structure. These determinants have influenced the performance in negative as well as positive ways depending on the management skills of the executives of the commercial banks (Ongore and Kusa, 2013).

1.1.1 Commercial Banks in Kenya

The CBK's directory recognizes forty-four commercial banks in the country some of which are internationally based. These banks have their headquarters located in Nairobi County serving both retail and corporate customers. The banks are mandated to perform the following functions: the creation of money, community savings, ensure smooth support of payment mechanisms, ensure smooth flow of international transactions, storage of valuable goods and provision of credit services. The Central Banks of Kenya falls under Treasury docket and is accountable for the formulation and execution of monetary policy and foster of liquidity and proper operations of Kenyan commercial banks. This policy formulation and implementation also include commercial banks financial risk management and financial performance (Central bank of Kenya, 2015).

1.2 Statement of the Problem

The banking industry has experienced massive changes in terms of operations in the recent times (Sehrish, Irshad & Khalid, 2010). This is especially so in the developing countries (Al-Jarrah, Ziadat & El-Rimawi, 2010). Scott & Arias (2011) observes that the changes experienced by the banking industry are mostly due to technological innovations and the unstoppable forces of globalization; these changes have continued to create expansion opportunities as well as challenges to bank's managers to ensure their bank remain profitable and competitive. As such, banks face a higher degree of

risks compared to other business. Such risks are capable of adversely affecting the bank's financial performance (Adeusi, Kolapo & Aluko, 2014).

The Kenyan Financial sector is highly dominated by banks compared to other players like SACCOs and micro finances. Ongore & Kusa (2014) observes that despite good overall performance in financial perspective of most commercial banks, there are some banks recording losses. For instance, the National Bank of Kenya reported a loss for the financial year 2014/2015 while the Cooperative Bank of Kenya had reported a drop in their profits in 2014 resulting in restructuring. Studies show that despite strong regulatory and legal framework enforced by the Central Bank, the Kenyan banking system has experienced banking problems since 1986, which has led to the collapse of more than 40 commercial banks with the recent ones in 2015 and 2016 being Imperial and Chase banks respectively. Further, based on the annual CBK Supervision Reports, the pace of growth of commercial banks in Kenya has been on a decline and as such, the growth in financial performance has been on the declined (CBK, 2016).

Most studies conducted in relation to bank performance focused on sector specific factors which affected the entire banking sector performance. For instance, Comparative Studies of Foreign and local banks in Thailand by Chantapong (2005) and the financial performance of European banks: a cross- sectional and dynamic panel analysis by Goddard et al. (2004). Also, Ongore and Kusa (2013) studied the effects of various factors in banking sector performance in Kenya. The results of the study showed that board and management decisions influence the performance of commercial banks in Kenya and also that macro-economic factors have insignificant

influence on their performance. This study however omitted the effects of industry specific factors on the performance of commercial banks.

There are also a couple of researchers who have studied the effects of bank ownership on performance, evidence across many countries indicates that foreign banks are on average less efficient than domestic banks. A more recent cross border empirical analysis of France, Germany, Spain, the UK and the U.S. found that domestic banks have both higher cost efficiency and profit efficiency than foreign banks (Berger *et al*., 2000). Claessens *et al.* (2000) reported that in many developing countries (for example Egypt, Indonesia, Argentina and Venezuela); foreign banks in fact report significantly higher net interest margins than domestic banks.

Researchers however could not come to a conclusive agreement as to whether this variable affects the performance of the bank or not. It is even more difficult to say with certainity which category of ownership, that is; Foreign, Domestic or State is considered to have a significantly postive effect on bank financial performance .Little information is available on the influence of bank ownership on the financial performance of commercial banks in the Kenyan Market.

This study therefore attempted to fill the knowledge gap on the moderating effects of bank ownership on determinants of financial performance of commercial banks in Kenya. It explored the three categories on ownership, that is; foreign, Local Public ownership and Local Private Ownership.

1.3 Objectives of the Study

1.3.1 General Objective

The purpose of this study was investigating the moderating effect of bank ownership on determinants of financial performance of commercial banks in Kenya.

1.3.2 Specific Objectives of the Study

i. To examine the effect of capital invested on the financial performance of commercial banks in Kenya.
ii. To determine the effect of credit risk on the financial performance of commercial banks in Kenya.
iii. To establish the effect of interest fluctuation rates on the financial performance of commercial banks in Kenya.
iv. To assess the effect of inflation rate on the financial performance of commercial banks in Kenya.
v. To analyze the moderating effect of bank ownership on determinants of financial performance of commercial banks in Kenya

1.4 Research Hypothesis

H_{O1}: Capital invested has no significant effect on the financial performance of commercial banks in Kenya.

H_{O2}: Credit risk has no significant effect on the financial performance of commercial banks in Kenya.

H_{O3}: Interest rates have no significant effect on the financial performance of commercial banks in Kenya.

H_{O4}: Inflation rate has no significant effect on financial performance of commercial banks in Kenya.

H_{O5}: Moderating effect of bank ownership has no significant effect on financial performance of commercial banks in Kenya.

H_{O5a} bank ownership has no moderating effect on the relationship between Capital invested and financial performance of commercial banks in Kenya

H_{O5b} bank ownership has no moderating effect on the relationship between credit risk and financial performance of commercial banks in Kenya

H_{O5c} bank ownership has no moderating effect on the relationship between interest rates and financial performance of commercial banks in Kenya

H_{O5d} bank ownership has no moderating effect on the relationship between inflation rate and financial performance of commercial banks in Kenya

1.5 Significance of the Study

The purpose of this study was investigating the moderating effect of bank ownership on determinants of financial performance of commercial banks in Kenya This study will be beneficial to the management of Commercial Banks in Kenya; it will shed light on determinants which affect financial performance. Thus, the knowledge obtained from the study will be used to form goals and objectives geared towards improving the financial performance of these institutions. This study will also guide policymakers in the banking sector especially the Central Bank of Kenya and the Treasury in coming up with policies which will ensure favorable macroeconomic indicators to spur growth and profitability in this sector. Researchers and academicians in the field of finance, economics, and banking will find this study a useful guide for carrying out further studies in the area.

1.6 Scope of the Study

This study was restricted to the assessment of the internal and external determinants of bank performance of the 44 commercial banks registered by (CBK, 2014), with at

least four years data for the years 2014, 2015, 2016 and 2017. The study focused on banks financial performance before interest capping and post interest capping period.

CHAPTER TWO

LITERATURE REVIEW

2.0 Introduction

This chapter presents a review of the related literature on the subject under study presented by various researchers, scholars' analysts, and authors. It provides concept definitions, concept perspectives; current practices, past studies/findings, critical review, summary, and gaps to be filled by the study and conceptual framework.

2.1 Performance

Performance is the ability of an organization to gain and manage its resources in several different ways to develop competitive advantage (Chen and Wong, 2004). There are two kinds of performance, financial performance and non-financial performance. Financial performance emphasizes on variables related directly to financial report. Company's performance is evaluated in three dimensions. The first dimension is company's productivity, or processing inputs into outputs efficiently. The second is financial performance dimension, or the level of which company's earnings are bigger than its costs. The third dimension is market premium, or the level of which company's market value is exceeding its book value (Walker, 2001).

Profit maximization is the most important goal for most organizations. Financial performance refers to money that a firm can produce with the resources it has. (Niresh & Velnampy, 2014). Financial performance involves the capacity to make benefits from all the business operations of an organization, firm or company (Muya & Gathogo, 2016). Profit is not only an entrepreneur's reward for his/her investment but also the main motivator of an entrepreneur for doing business. Ogbadu (2009), states that profit is used as an index for performance measuring of a business. Profit is the difference between revenue received from sales and total costs which includes

material costs, labor and so on (Stierwald, 2010). Besides, financial performance can be expressed either as accounting profits or economic profits and it is the main goal of a business venture (Anene, 2014). Financial performance also portrays the efficiency of the management in converting the firm's resources to profits (Muya & Gathogo, 2016).

Financial performance according to accounting theory shows the surplus of profit over expense for a specified duration that represents earning of commercial banks from the various activities they perform in a growing economy (Tariq et al., 2014). The financial performance of a banking institution can thus be defined as net profit of the bank (San & Heng, 2013). A commercial bank is profitable if it has accrued more gains in financial perspective from invested capital. Thus, the bank's success is determined by the profits it has made in a given financial year (Adeusi, Kolapo & Aluko, 2014). Financial performance also shows the association between the absolute amount of income that indicates the capability of the bank to advance loans to its customers and enhance its financial performance. In today's competitive environment, financial performance is a key factor for the smooth running of the business and has a significant effect on the performance of the bank and economic development as well (Tariq et al., 2014). Financial performance is also crucial for a banking institution to maintain its ongoing activities and for shareholders to generate fair returns (Ponce, 2011).

Financial performance is one of the main aspects of financial reporting for many firms (Farah & Nina, 2016). Financial performance is vital to the firm's manager as well as the owners and other stakeholders that are involved or associated with the firm since financial performance gives a clear indication of business performance. Financial

performance ratios are normally used to measure earnings generated by a firm for a certain period of time-based on the firm's sales level, capital employed, assets and earnings per share (EPS). Financial performance ratios are also used to measure the firm's earning capacity and considered as a firm's growth and success indicator (Majed, Said & Firas, 2012).

Financial performance is generally measured using accounting ratios with the commonly used ratios being ROA. ROA determines the amount of the profit earned per shilling of assets. This reflects the efficiency with which the bank's managers use bank's investment resources or assets in the generation of income (Sehrish, Irshad & Khalid, 2010). ROA simply connotes the management efficiency and depicts how effective and efficiently the bank management operate as they employ the organization's assets into the earnings. A high ROA ratio is a clear indicator a good performance or financial performance of a banking entity (Bentum, 2012).

2.2 Determinants of Performance in the Banking Sector

Determinants affecting banking sector financial performance are categorized into two main determinants; internal and external, whereas internal determinants are those affected by bank management decision and the methodology of running the business, external factors include industry and macroeconomic related factors and legal environment where these banks operate in. This study includes both of the two classifications.

2.2.1 Bank Specific Variables

Internal determinants of bank financial performance are those factors that are influenced by the bank’s management policy objectives and decisions. Management effects are the results of differences in bank management policies, decisions,

objectives, and actions reflected in differences in bank operating results, including financial performance. These are the bank-specific variables that influence the financial performance of the bank, determinants that are within the scope of the bank and they differ from bank to another (Ongore and Kusa, 2013) they include the following.

2.2.1.1 Capital invested

Berger, Herring and Szego (1995) define the capital requirement as the capital ratio that maximizes the value of the bank in the absence of regulatory capital requirement and all the regulatory mechanisms that are used to enforce them, but in the presence of the rest of regulatory structure that protects the safety and soundness of banks.

Capital and financial performance are two important parameters in the banking sector. They not only show the ability of banks to achieve sustainable benefits but also address systemic shocks. Banks with good capital structure are able to reduce the likelihood of failures and have the ability to attract more customers and make better investment opportunities. On the other hand, financial performance demonstrates the efficient use of resources and the ability to make a profit. It is an important point of view for stakeholders (depositors, creditors, shareholders, state, and managers). For depositors, it shows them the financial performance generated for their deposited funds. For creditors, it shows them the ability of the bank to meet the commitments to them. For the state, financial performance indicates the ability of the bank to pay the tax. For shareholders, the financial performance indicates the return on their invested funds. For managers, financial performance indicates the benefit of their effort and human capital invested.

Moreover, Abumin (2009) stated that the importance of bank financial performance can be assessed at the micro economic level and macroeconomic level. At the micro economic level, the result is essential for the competition and it is the source of funds. At the macroeconomic level, a solid and profitable banking sector can withstand adverse shocks and contributes to the strength of the banking and financial system. The profits of the bank is an important source of capital in particular if they are reinvested in the business. This should lead to healthy banks, high profits could promote financial stability (Flamini, 2009).

The capital adequacy was considered as the primary measure of security and strength. Jeff (2000) found that the return on assets is a key measure of a well-managed bank. Bensaid (2003) considered the exigency of capital in the context of both adverse selection and moral hazard. Adverse selection is as asset quality of the bank is private information for shareholders of bank, moral hazard arises as a result of the bank depends on the influence of unobservable efforts chosen by the manager.

2.2.1.2 Credit Risk

Credit risk is defined as the loan-loss provisions to loans ratio. Therefore, banks can improve their performance by reducing the credit exposure. Credit risk indicator can be represented by different measurements including loans loss provision to total loans ratio as well as growth in bank deposits. Higher provisions for loan losses could signal a possibility of future loss on loans, and could also be a sign of a timely recognition of bad loan by cautious banks (Munyambonera, 2011). A higher ratio of NPLs to total loans and an absolute deterioration of credit portfolio quality negatively affect commercial bank's financial performance (Roman and Tomuleasa, 2013). In addition, raise in credit risk increases the marginal cost of loans, obligations, and

equity leading to the enlargement of the cost of finance for the bank (Tariq et al., 2014). Existing theory on the bank exposure suggests that increased credit risk is associated with a decrease in bank financial performance. Credit risk is negatively related to Return on Assets (ROA) and Return on Equity (ROE).

According to Podder (2012), this can be achieved by improving on screening and monitoring of credit risk policies and adopting current strategies to forecast future levels of risk. In most countries, the central banks and other regulatory authorities that regulate the banking and financial institutions set us specific standards to address the level of loan loss provisions in order to enhance the good performance of banking institutions and safeguard the economy. In line with these provisions, most banking institutions adjust their provisions held for loan losses to a predetermined level set at the end of each period. Therefore, credit risk is a predetermined determinant of bank performance that is depended on risk attitude and philosophy of management as well as on other decisions taken by the management.

2.2.2 Macroeconomic Variables

External determinants of bank financial performance are concerned with those factors which are not influenced by specific bank's decisions and policies, but by events outside the influence of the bank. These are other macroeconomic variables that affect the performances of banks (Ongore and Kusa, 2013).

Macroeconomic factors influence the performance of the business entities in an economy in a significant manner since they determine the kind of operating environment available. Commercial banks do not operate in a vacuum and this, therefore, means they are influenced by the conditions of the external environment. An economy with favorable macroeconomic conditions will give room for business to

thrive and this also means that commercial banks will benefit from the increased business activities and thus improved profitability (Bodie, et al., 2005).

They include the following;

2.2.2.1 Interest Rates

It is also believed that an increase in interest rates should lead to an increase in the financial performance of commercial banks since this leads to an increase in the spread between the interest rates for savings and the interest rates for borrowing. Podder (2012) evaluated this relationship and found that "this relationship is particularly apparent for smaller banks in the USA". They further noted that a reduction in the interest rates during a recession period results in a slower growth in bank loans while at the same time increasing the amount of non-performing loans and thus increased loan losses. This, therefore, means that commercial banks, particularly the smaller ones may have a lot of difficulties in maintaining their financial performance when the market rates are on a decreasing trend. More studies have been carried out to evaluate this relationship and results have clearly shown that there is a positive relationship between interest rates and the financial performance of commercial banks (Podder, 2012).

Interest rates affect both the commercial banks and their customers in two major ways. When the interest rates rise, customers are unable to service their existing loans which leads to losses to the commercial banks since if the situation continues that way, they are forced to write off their debts. This eats into the profits of the company since it means that the commercial bank is not able to recover both the principal amounts loaned as well as the expected interest from the customers (Makkar and Singh, 2013). When the interest rates are too low, the interest earned from the loaned

out amounts is negligible and thus contributes little to the financial performance of the commercial bank. There is, therefore, need for a balance in the interest rates in order to ensure the bank's benefit (Lipunga, 2014). Customers, on the other hand, avoid the consumption of bank loans when the interest rates are too high since they can either not afford to take up loans or the interest rates are too high that they just prefer to seek other cheaper alternatives such as microfinance institutions and other cheaper lending institutions. This affects negatively the ability of the commercial banks to earn interest from their customer deposits since they cannot loan them out to borrowers. This, therefore, leads to poor performance of the commercial bank as well as its profitability (Macit, 2011).

2.2.2.2 Inflation rates

The inflation rate in a country is also another macroeconomic factor that has been associated with the performance of commercial banks and has been of interest to many researchers to establish this relationship. It is noted that generally, high inflation rates lead to high-interest rates on loans and thus lead to higher income to commercial banks. Swarnapali (2014), however, asserts that "the effect of inflation on banking performance depends on whether inflation is anticipated or unanticipated". In an event where an increase in the inflation rates is fully anticipated and an adjustment is made to the interest rates accordingly, then this leads to a positive influence on the financial performance of commercial banks. On the other hand, when an increase in the inflation rates is not anticipated, it results in a situation where the local borrowers are faced with cash flow difficulties and this can result in the termination of bank loan agreements in a premature fashion thus causing loan losses for the issuing commercial bank. The general observation is that when commercial banks take a lot of time to adjust their interest rates after changes in the inflation rates, it leads to a situation

where the bank's operating costs may rise faster than the revenues of the bank. Siddiqui and Shoaib (2011) conclude that "high and variable inflation may cause difficulties in planning and in the negotiation of loans".

High inflation rates also lead to a situation where consumers find themselves in a position of low purchasing power and they, therefore, tend to use most of their money for consumption. This means that the money that would have been used for investments or savings in commercial banks is redirected to consumption. Such a situation, therefore, reduces the amount of money being deposited in commercial banks as savings by the consumers and this, in turn, reduces their cash reserves as well as their ability to issue loans to borrowers (Rasiah, 2010). Consumers will also tend to withdraw their savings from commercial banks at such times since there is not enough money to spend due to the low purchasing power. Banks, therefore, find themselves in a situation where they have fewer funds available to them to offer as loans to borrowers. The fact that most of the profits of commercial banks are derived from interest earned on loans means that a bank that cannot offer loans to its customers makes less money. This will then affect its financial performance in a negative manner. It is therefore clear that inflation rates, as well as other macroeconomic indicators, influence the financial performance of commercial banks (Sufian and Chong, 2008).

2.3 Theoretical Review

The section discusses the theories on bank financial performance which guide the research study. This part reviews the efficiency theory, signaling theory and agency theory as the underlying theories to explain the financial performance concept.

2.3.1 Efficiency Theory

The efficiency theory was formulated by Demsetz (1973) as an alternative to the market power theory. The efficiency theory presupposes that better management and scale efficiency results in higher concentration thus greater and higher profits. Accordingly, the theory posits that management efficiency not only increases financial performance but also results in larger market share gains and improved market concentration (Athanasoglou, Brissimis & Delis, 2005). The efficiency theory also states that a positive concentration– financial performance relation may be a sign of a positive connection relating to efficiency and size. The theory postulates that positive association between the concentration and profit arise from a lower cost which is mainly achieved through production efficient practices and increased managerial process (Birhanu, 2012).

The efficiency theory supports that the most favorable production can be attained through economies of scale. Thus, maximum operational efficiency in the short run is achieved at a level of output where all economies of scale available are being employed in an efficient manner (Odunga et al., 2013). Additionally, the efficiency theory explains that attaining higher profit margins arises from efficiency which allows banks to obtain both good financial performance and market shares (Mirzaei, 2012). According to Fisseha (2015), the efficiency theory presupposes that financial performance and high concentration results from efficient cost reduction practices and better management strategies across the organization. Thus, efficient firms in the market lead to an increase in their market share and the size of their firm because of aggressive production and management techniques (Birhanu, 2012).

In the banking industry, the efficient theory advocates that large commercial banks which have better and experienced management and up to date production technologies are able to reduce their operational costs, therefore, earned higher returns on investment in comparison to smaller banks (Soana, 2011). Basically, the theory is based on the premise that banks attain profits if they operate efficiently than their competitors which lower operating costs leading to good profits (Onuonga, 2014). The efficiency theory also assumes that internal efficiencies influence the financial performance of commercial banks (Obumuyi, 2013). Further, the theory explains that banks which operate efficiently in comparison to their competitors increase their profits due from low operating costs. The efficiency hypothesis prevails when a positive significant correlation between financial performance and the market share is signaled (Mensi & Zouari, 2010).

2.3.2 Signaling Theory

The signaling theory emanated from Arrow (1972) and Spence (1973). Signaling theory presupposes that best performing or profitable firms supply the market with positive and better information (Bini, Dainelli & Giunta, 2011). In addition, the signaling theory is one of the theories, which have a clarification for the association between financial performance and capital structure (Alkhazaleh & Almsafir, 2014).This theory presupposes that a superior capital structure is an optimistic signal to market worth of the organization (Adeusi, Kolapo & Aluko, 2014). The signaling theory further postulates that majority of the high financial performing firms signal their competitive power through communicating new and important information to the market. Thus, information is disclosed by means of specific indicators or ratios which, very often, measure specific conditions on which to enter into or renew the agency contract (Bini, Dainelli & Giunta, 2011). According to the signaling theory, the

management of bank signals good future expectation by increasing of capital. This indicates that less debt ratio necessarily means those banks perform better than their identical (Alkhazaleh & Almsafir, 2014). In addition, the theory argues that managers who strongly believe that their bank can outperform other banks in the industry will want to relay such information to various stakeholders in order to attract additional investments. Thus, the signaling theory affirms that when a bank's performance is excellent, directors will signal the bank's performance to its stakeholders and market by making various disclosures which poor performing firms cannot make. By enhancing more disclosure most managers will wish to receive high benefits and a good reputation which may increase the value of the firm and financial performance (Muzahem, 2011).

2.3.3 Agency theory

Principal-agent connections are central to this paradigm. An agency relationship is described by Jensen and Meckling (1976) as a situation where the principal appoints an agent to represent him.

It illustrates the relationship between bank executives (agents) and shareholders (principles), and how the latter outsource responsibilities to the former. The theory aims to overcome the conflict of interest between shareholders and management by doing this.

Conflict between shareholders and management of the firm and the connection between creditors and stockholders are two of the most common causes of conflict.

Conflicts like this have the potential to have significant effects on company governance and business ethics. Debt financing can assist a corporation solve problems about its cash flow. People who borrow money or take out loans are more

informed than the banks about their financial situation, which causes problems with cash flow 10. Conflicts of interest exist between shareholders and managers when there are divisions in ownership and control. Having a share in the company makes management more motivated to assure a positive return on investment. There is a clear link between magical membership and agency charges, say Jensen and Meckling (1976).

It's also possible to cut agency expenses by increasing ownership concentration. When shareholders keep a careful eye on management's activities, this occurs. According to Gilson Lang (1990), the greater the concentration of ownership, the more the desire to keep an eye on and safeguard this investment. Other studies have revealed that shareholders must actively watch the operations of management in order for management to completely participate in profit maximizing inclinations.

Because if they don't, firm management won't properly stick to profit maximization rules (Agrawal and Knober 1996). As a result, financial performance is likely to improve as a result of more concentrated ownership of the organization.

2.4 Empirical Literature Review

Various authors have studied the relationship between the variables of the research under study; the empirical review is as highlighted in this section.

2.4.1 Inflation rates and financial performance

Findings on the relationship between inflation and financial performance show that, profits specify a negative relationship. As profits increase, inflation decrease. There is a weak relationship since no clear pattern is indicated. Banks profits have a clear pattern in relation to inflation demonstrating that financial performance increase as inflation decreases. This means that inflation, has a significant association with the

dependent variable, financial performance. Chinoda (2014) explored the internal factors that influence bank financial performance in Zimbabwe. The study sampled five commercial banks, which were randomly selected and used secondary data from the bank's financial reports. Using the general linear regression model the study found that size of the bank; liquidity, gross domestic product and inflation had a positive correlation with financial performance (ROA) while operating expenses had a negative association with the profitability of commercial banks in Zimbabwe. The study recommended that inflation control policies should be given priority to foster financial intermediation.

2.4.2 Capital invested and financial performance.

Kyalo (2013) examined the factors influencing the profitability of banks in Kenya for a 3 years period from 2010 – 2012. Secondary data collected from the 44 banks in Kenya was used in the study. Using the regression model the study established that capital invested has a significant influence on ROE while operational efficiency, GDP, and inflation have an insignificant effect on ROE. The study recommended that commercial banks in Kenya should put more focus on both the bank-specific factors and the external environment together to come up with effective strategies to enhance their financial performance.

Investment decisions are one of the most important decisions in a company since by influencing profitability and risk, they are hypothesized to influence its value. Past findings have shown an insignificant negative relationship between investment in government securities, investment in properties and return on asset. A positive and insignificant relation between corporate bonds and return on assets of the commercial banks is also revealed. A significant relationship between investment in stocks,

liquidity, bank size, capital adequacy and return on assets of the commercial banks is also shown in the findings. Abdikadir, Ahmed (2017) It was also found that the relationship between credit risk and return on asset is negative and insignificant. Lipunga (2014) evaluated the determinants of profitability of listed banks in Malawi for a period of 5 years from 2009 and 2012 using external (market) and internal measures of financial performance . The study employed multivariate regression and correlation analysis where Earning Yield (EY) and return on assets (ROA) were used to determine the internal and external determinants of financial performance . The research established that earnings yield significantly influences by the size of the banks, management efficiency and capital adequacy while liquidity had an insignificant impact on earnings yield. Regression analysis results established that size of the bank, management efficiency, and liquidity had a statistically significant effect on return on assets whereas capital adequacy had an insignificant impact.

Kosmidou and Pasiouras (2008) examined the effect of macroeconomic conditions, bank-specific features and market structure in financial perspective on banks' profits in the United Kingdom from the year 1995 to 2002. The research findings established that banks capital strength had a positive and dominant effect on their financial performance . The study established that efficiency in expenses management and bank size significantly affected the financial performance of commercial banks.

2.4.3 Interest fluctuation rates and financial performance

Rono, Wachilonga, and Simiyu, (2014) assessed the relationship of the interest rate spread on the performance of Kenyan quoted banks. The study employed a descriptive design and secondary from published annual reports from the year 2007 to 2012. Using the Pearson product moment correlation the study found that commercial

banks adopt different interest rate spreads to cover their costs and earn a profit. The research findings also found that there was a significant correlation between interest rate spread and ROA, interest spread and ROE, while the study found an insignificant correlation between interest rate spread and non-performing loan expense.

Sawe (2011) assessed external and internal determinants of commercial bank financial performance in Kenya. The research used a panel data approach. The research revealed that the coefficients of capital, bank size, liquidity, expense management, inflation, market share, and loan loss provisions were the significant factors that influenced banks financial performance . The research also established that coefficients for exchange rates interest rate, GDP per capita and market concentration had the least influence on banks' financial performance . The findings show that the effect of interest rates on profitability is insignificant in the short term for all the banks. Other factors which influence profitability needs to be enhanced to improve the financial performance of commercial banks in Kenya.

2.4.4 Credit risk and financial performance

Proper management of credit risk by commercial banks is crucial to enhancing their financial performance. The research was done on all the commercial banks in Kenya over a five-year period. Return on assets was determined as the ratio of Earnings before Interest and Tax to book values of assets. The study commends that commercial banks in Kenya should be encouraged to share information on their borrowers in order to improve the quality of the loan book. Banks should however have better credit risk management practices so as to enhance their financial performance. Oretha, Sonia Z (2012). Studies conducted in Thailand, Middle East and North Africa region recorded that foreign bank. Performance is better than domestic

counterparts (Azam and Siddiqui, 2012; Chantapong, 2005; Faraziet al. 2011). The study conducted in Pakistan by Azam and Siddiqui (2012) concluded that "...foreign banks are more profitable than all domestic banks regardless of their ownership structure by applying regression analysis." They further suggest that "...it is better for a multinational bank to establish a subsidiary/branch rather than acquiring an “existing player” in the host country."

The study conducted in Turkey by Tufan et al. (2008) also found that domestic banks perform better than their foreign counterparts. There are also other scholars who argue that the performance of domestic and foreign banks varies from region to region.

2.4.5 Bank ownership and financial performance

A German research indicated that German commercial private banks outperformed their public counterparts in terms of profitability and efficiency (Altnubas et al 2001). Public banks, on the other hand, are less lucrative in developing nations than private banks. Between 1994 and 2004, researchers evaluated the financial performance of 181 banks in 15 countries and found that state banks fared far worse than private ones (Iannotta et al 2007).

It has been demonstrated in a number of studies that public banks are less lucrative than private ones due to rising running costs and lower asset quality (Berger et al 2004, 2005).

Public banks' dominance leads to poor financial growth, according to Laparta et al. (2002) and Barthetal (2004). Additionally, a research conducted in India between 1990 and 2006 demonstrates that state-controlled banks are less lucrative than privately held institutions (Gosh, 2010). In the same study, it is shown that banking

industry profitability, efficiency, and therefore stability are all improved with privatization.

In Kenya, Kiruri (2013) studied the link between bank financial performance and ownership structure. The Central Bank of Kenya collected data from all 43 of its registered banks using a descriptive research approach. Annual reports from the banks and the Central Bank of Kenya were used in the study. From 2007 through 2011, researchers gathered data for their investigation. A correlation between ownership concentration and bank financial performance was found, showing that more ownership concentration results in poorer financial performance for a particular bank.

2.5 Conceptual Framework

The conceptual framework is developed from the review of literature discussed above and presented in the following diagram (figure 2.1). It shows the relationship between the dependent (ROA) and explanatory (bank specific and macroeconomic) variables. It also demonstrates the moderating role of ownership identity.

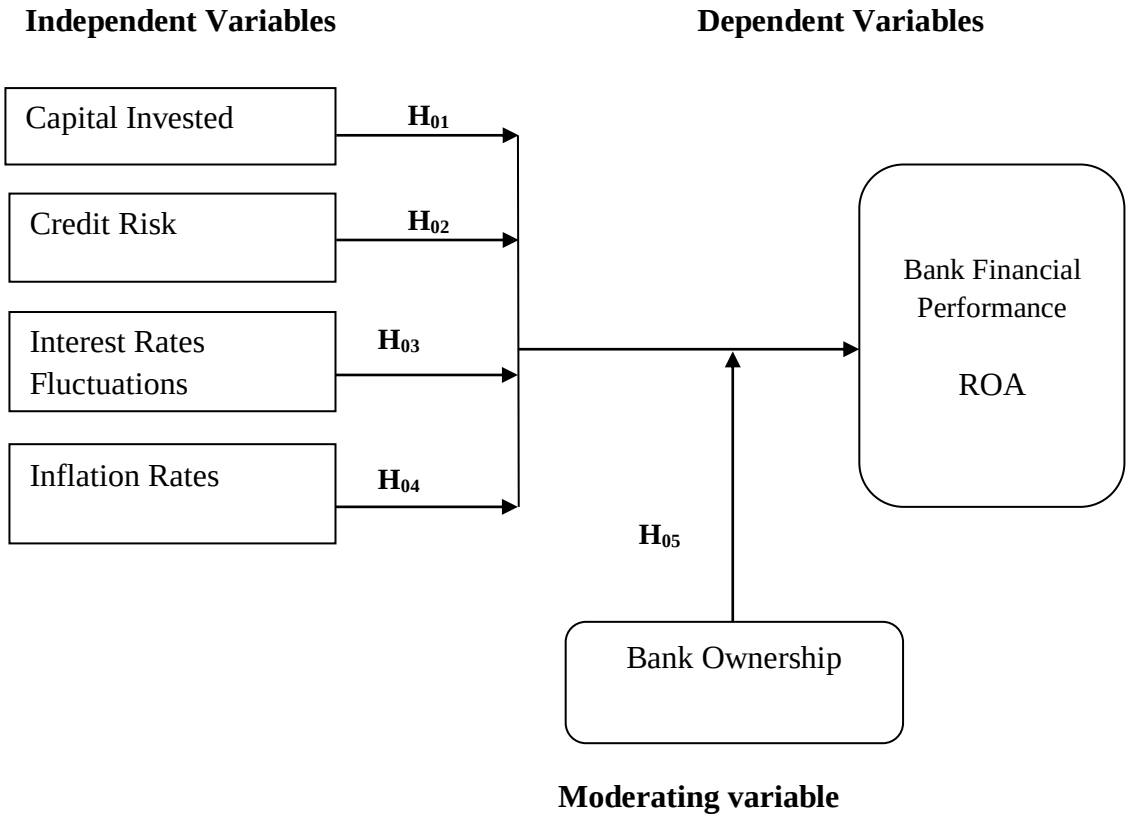

Figure 2.1: Conceptual Framework
Source: Researcher (2020)

2.6 Summary of Literature and Research Gaps

From the reviewed empirical literature majority of the findings by different researchers confirms that variables such as size of banks; capital adequacy, gross domestic product, inflation, interest rates have a positive and statistically significant relationship with the performance of banks. On the other hand the researchers findings reveals that liquidity risk, operating expenses, funding cost and banking sector development have a negative and statistically significant relationship with the performance of banks.

There are also a couple of researchers who have studied the effects of bank ownership on performance. Researchers however could not come to a conclusive agreement as to whether this variable affects the performance of the bank or not.It is

even more difficult to say with certainity which category of ownership, that is; Foreign, Domestic or State is considered to have a significantly postive effect on bank financial performance .Additionally no study have been carried out in Kenya on the moderating effects of bank ownership on determinants of financial performance of commercial banks.Based on this gap, therefore a research is necesary to fill this knowledge gap and add to more knowldege on the field of study.

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter outlines the methodology used in carrying out the study. It includes research design, population, and sample size, sampling techniques, data collection instruments, data analysis techniques, data presentation and research ethics.

3.2 Research Design

Burns and Grove (2003:195) define a research design as "a blueprint for conducting a study with maximum control over factors that may interfere with the validity of the findings". The researcher will apply explanatory research design on this study. Causal research, also known as explanatory research is conducted in order to identify the extent and nature of cause-and-effect relationships. Causal research can be conducted in order to assess impacts of specific changes on existing norms, various processes etc.

3.3 Target Population

According to Kothari (2006), the population of a study is simply the entire set of individuals or items that are described in the study as being the area of study and which the researcher is trying to observe their characteristics or behavior. The population constitutes of all the items that fit the study area and it should be noted that this is the area the researcher selects an appropriate sample to subject to the study. The target population of this study was all the 44 commercial banks in Kenya as 30th June 2014 as included in Appendix 1. (CBK, 2014). The banking sector was selected as the target of this study due to its Importance as a key driver of the economy. Furthermore, it is easy to access the financial reports of the banks as they are required

by CBK to disclose their performance. The study shall use secondary data of financial reports of the period 2014 to 2017. Sampling is not necessary for this study since the population is small (N=44). The study therefore is a census of all the 44 commercial banks. According to Mugenda and Mugenda (2003). Sampling is not necessary when the population is small. Sampling in a small population increases the risk of sampling errors which can distort the reliability of the sample in relation to its representativeness to the population.

3.4 Data Collection Methods

Secondary data from annual published financial statements of all banks as at 31/12/2017 was used in the study. The data is for a period of 4 years from the year 2014 to 2017. This data was also sourced from statistics maintained by the central bank of Kenya which is the regulatory body which supervises the banking industry in Kenya. Financial measures of financial performance such as return on assets, revenue, return on investment, profitability growth, banking sector growth are some of the key data which were sourced from CBK and analyzed in order to examine how they affect the profitability of the commercial banks in Kenya over the period of study.

3.5 Research Procedures

This study used secondary data. The secondary data was collected from the CBK, which is the body which monitors and supervises the commercial banks in Kenya. Secondary data is defined by researchers as data that is not original in terms of the fact that it had already been collected by another individual or researcher for use in another study or for any other purpose other than the one the current researcher intends to use it for (Greener, 2008). The data on the financial performance of the banks, the size of the banks in terms of assets, the liquidity level of bank s and their

capital adequacy is available from CBK website. Data on the banking industry concentration shall also be collected from the website of the Central Bank of Kenya. These sources provided the researcher with enough and reliable and credible secondary data. Prior to reviewing of data, a letter from NACOSTI requesting for authorization to carry out research was obtained.

3.6 Measurement of variables

The study involved research on the moderating effect of bank ownership on determinants of financial performance of commercial banks in Kenya. The independent variables were; Capital Invested, Credit Risk, Interest Rates, Inflation Rates and Bank ownership as the moderating Variable.

Table 3.1: Measurement of Variables

Concept(Variables)	Operationalization of Variables	Hypotheses	Source of Measure	Measure
Financial Performance				
Profitability: Return on Assets	Profit before tax (PBT) and total Assets	H1, H2, H3, H4	Dziobek & Pazarbasioglu (1998), Rose (1994)	Ratio of (PBT) to total assets
Financial Occurred if: There was bank long-term debt	Total long term debt and total assets	H1, H2, H3, H4	Dziobek & Pazarbasioglu (1998), Rose (1994)	Long term debt/total assets
Capital Occurred if: There bank equity	Total equity and total assets	H1, H2, H3, H4	Dziobek & Pazarbasioglu (1998), Rose (1994)	Equity/total assets
Capital Invested				
Deposits	Total deposits and total assets	H2, H4	Cooperman, Gardener & Mills (2000), Rose (1994), Dubel & Berlin (2013)	Total deposits/total assets
Customer loans	Total loans and total Assets	H2, H4	Cooperman, Gardener & Mills (2000), Rose (1994), Dubel & Berlin (2013)	Total loans/total assets
Credit Risk				
Capital	Total capital and total asset	H1, H2, H3	Vlachý, 2006, Kašparovská, 2006, Jílek, 2000	Total capital and total asset
Loan's Conditions	Total capital and total asset	H1, H2, H3, H4	Vlachý, 2006, Kašparovská, 2006, Jílek, 2000	Total capital and total asset
Ownership				
State ownership	Local investment	H1, H4	Jensen and Meckling (1976), Lang and So, 2002	Local investment capital
Foreign Ownership	International investment	H1, H2, H3, H4	Clarke,et al 2001, DeYoung & Nolle,1996	International investment capital

3.7 Data Analysis and Presentation

After the collection of the necessary data from the various secondary sources, the researcher edited it and ensured its fit for analysis. The complete data was then analyzed using descriptive and inferential statistics in order to help the researcher to establish the relationship between the various independent variables (determinants of

financial performance of commercial banks) and financial performance of commercial banks in Kenya. Panel data analysis was adopted for this study to deal with the two-dimensional (cross sectional/time series) data. Panel data analysis avoided problems in time series data e.g. multicollinearity and could identify individual and time effects which cannot be identified by pure cross sectional or time series data (John Wiley, 2014). Panel data provided more informative data, more variability, less collinearity among variables, more degrees of freedom and efficiency (Gujarati and porter, 2009).

Descriptive measures such as mean, standard deviation and the inferential technique were applied to explain the data. The analyzed data was presented in terms of charts and tables for quick references.

3.8 Diagnostic Tests

The following diagnostic tests were carried out to ensure that the time series data used fits the basic assumptions of the models used in linear regression.

3.8.1 Normality

Multiple regressions assume that variables have normal distributions Hair et al., (2006), meaning that errors are normally distributed, the assumptions are based on the shape of normal distribution and gives researcher knowledge about what values to expect. Once the sampling distribution of the mean is known it is possible to make predictions for a new sample (Creswell, 2007. Non-normally distributed variables can distort relationships and significance tests. The researcher can test this assumption through several pieces of information; several inspections of data plots, skew and kurtosis. Skewness and Kurtosis can be checked in the static tables, and values that are close to zero indicate normal distribution. Gujarati and Sangeetha (2013) propose that regression analysis assumes that data is normally distributed.

3.8.2 Multicollinearity

Multicollinearity generally occurs when there are high correlations between two or more predictor variables (Hair et al., 2006). In other words, one predictor variable can be used to predict the other. An easy way to detect multicollinearity is to calculate correlation coefficients for all pairs of predictor variables. To determine a possible multicollinearity problem, a correlation matrix among the independent attributes will be used to detect the presence of high correlation among the attributes (Gujarati & Sangeetha, 2013).

3.8.3 Homoscedasticity

The assumption of homoscedasticity in multiple linear regressions where a scatter plot of residual versus predicted values is checked correctly, there should be no clear pattern in the distribution (Keith, 2006). Based on the scatter plots between the independent variables and the dependent variables, the bivariate distributions are checked if are evenly spread about the line of best fit, they can also be checked via normality of residual (Keith, 2006).

3.8.4 Stationarity

Stationarity is a situation where the mean, variance and autocorrelation of data structure do not change over time (Gujarati, 2003). Stationarity test is necessary to ensure that regression results are not spurious such that there is a high coefficient of determination between variables (due to non-stationarity) even if there is no cause and effect relationship (Wooldridge, 2012). Further ADF test was used to test for stationarity of variables as non-stationarity leads to spurious regression. On-stationarity also distorts t-ratios to yield invalid significance tests.

3.8.5 Hausman Test

To cater for the unobserved variables in the model and which may or may not have effect on the predictors included in the model, Hausman specification test at 5% level of significance was conducted to determine the suitability of application of random or fixed effect model (Green, 2008). The null hypothesis for this Chi square test was that the random effect model is preferred to fixed effect model and was to be rejected if the p-value is less than 5% to imply that fixed model is preferred. The argument under fixed model is that if the unobserved variable does not change over time, then any change in the response variable must be due to influences other than these fixed characteristics (Stock& Watson, 2003). It is therefore possible to remove or hold constant the effect of those time-invariant characteristics and assess the effect of the predictors on the response variable. To the contrary, in random effects model the variation across entities is assumed to be random and uncorrelated with the predictor variables in the model enabling time-invariant characteristics to be included in the model as predictors.

3.9 Analytical Model

To establish the relationship between study variables comprising of independent variables including the Capital Invested, credit risk, interest rates and inflation rate and the dependent variable (Return on Assets) regression model was applied. The regression model was as follows;

$$\mathbf{Y= \beta_0+\beta_1X_1+ \beta_2X_2+ \beta_3X_3 + \beta_4X_4+ \beta_5X_5+ \varepsilon}$$

Where:

Y= Financial Performance

X_1= Capital Invested

X_2= Credit Risk

X_3= Interest Fluctuation Rates

X_4= Inflation Rate

X_5= Bank Ownership

ε = Error Term

The following is an extended model to estimate the moderating effect of Bank Ownership

$$\mathbf{Y= \beta_0+\beta_1(X_1*M)+\beta_2(X_2*M)+ \beta_3(X_3*M) + \beta_4(X_4*M)+ \beta_5(X_5*M)+ \varepsilon}$$

Where:

Y= Financial Performance

X_1= Capital Invested

X_2= Credit Risk

X_3= Interest Fluctuation Rates

X_4= Inflation Rate

X_5= Bank Ownership

ε = Error Term

M= Bank ownership

3.10 Ethical Considerations

Research ethics outlines procedures for the responsible conduct of a research. Ethical considerations entail adhering to norms and standards regarding research. All researchers are guided by particular ethical principles and professional standards. The goal and objectives of a research study is only enhanced through thorough adherence to the ethical standards. The study was guided by the ethical standards and guidelines

applicable to Moi University and Kenya as a whole. In approaching this study, the researcher obtained a research permit from NACOSTI.

CHAPTER FOUR

DATA ANALYSIS, PRESENTATION AND INTERPRETATION OF FINDINGS

4.1 Introduction to Data Analysis

This chapter discusses data analysis, presentations and interpretations of the research findings. It delves into details the techniques and procedures applied to analyze and present data reviewed from secondary data on various parameters of determinants of financial performance of commercial banks in Kenya.

4.2 Descriptive Results

This section summarizes the characteristics of the variables using descriptive statistics to summarize data in terms of mean, standard deviation, maximum values and minimum values. Table 4.1 shows the result.

Table 4.1: Summary of Descriptive

Variable	N	Min	Max	Mean	Std. Dev
ROA	172	-.321	.073	.01511	.040185
Credit Risk	172	.000	.588	.10538	.104158
Inflation Rate	172	6.5	7.7	6.899	.4592
Capital Invested	172	595	85691	14706.05	19134.135
Annual interest (base) Rate	172	13.7	16.6	15.728	1.2039

Source: Research Data, 2020

The value of the mean reports the arithmetical average of the variables which are included in the study. The minimum and maximum values indicate the lower and the highest value of the variable. The standard deviation exhibits how much variation or dispersion exists from the mean. A low standard deviation indicates that the data points are inclined to be extremely close to the mean; while high values of standard deviation indicate that the data set is broadened out over a large range of values. The

results summarized in Table 4.1 show that average profitability demonstrated by ROA ratio of the commercial banks in Kenya is 0.01511with minimum and maximum ROA being -0.321and 0.073and standard deviation 0.040185 respectively. The findings indicate that the average Cost Efficiency (CF) of commercial banks is 14706.05 million, with minimum and maximum values of 595and 85691 respectively and a standard deviation of. 19134.135. The average credit risk (CR) ratio for the commercial banks is 0.10538 with minimum and maximum ratio of 0. .000 And 0.588 and standard deviation of 0. 104158. The Minimum value of 0.000 indicates that some commercial banks completely write off the value of their non-performing loans. Results indicate that the average Annual Interest (base) Rate for the banks is 15.7% with minimum value of 13.7 % and maximum value of 16.6%, standard deviation of 1.20394. Finally, the average Inflation rate is 6.9% with minimum and maximum values of 6.5% and 7.7% respectively and a standard deviation of 0.4592.

4.2.1 Trend Analysis

4.2.1.1 ROA

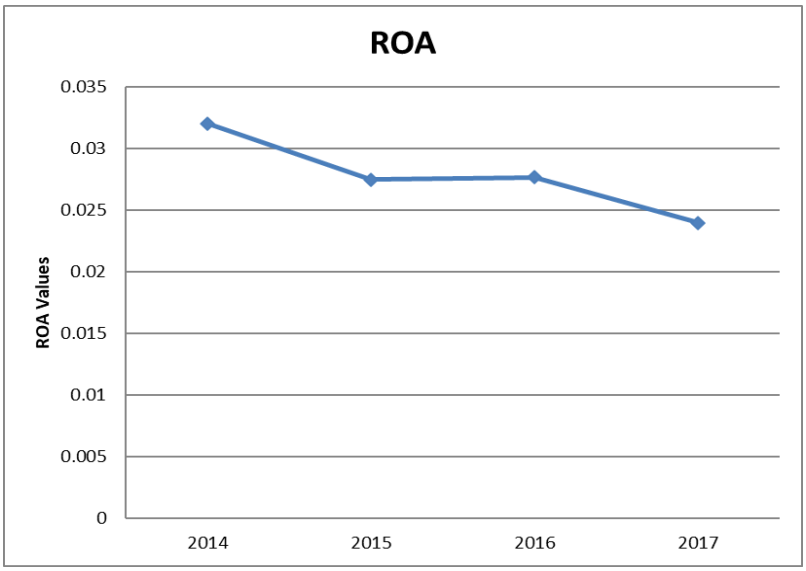

Figure 4.1: ROA Trend
Source: Research Findings

Figure 4.1 shows the ROA trend. The figure shows that the average financial performance of commercial banks in Kenya from 2014 to 2015 had been falling though in 2016 the financial performance had increased but dropped again in 2017.

4.2.1.2 Credit Risk

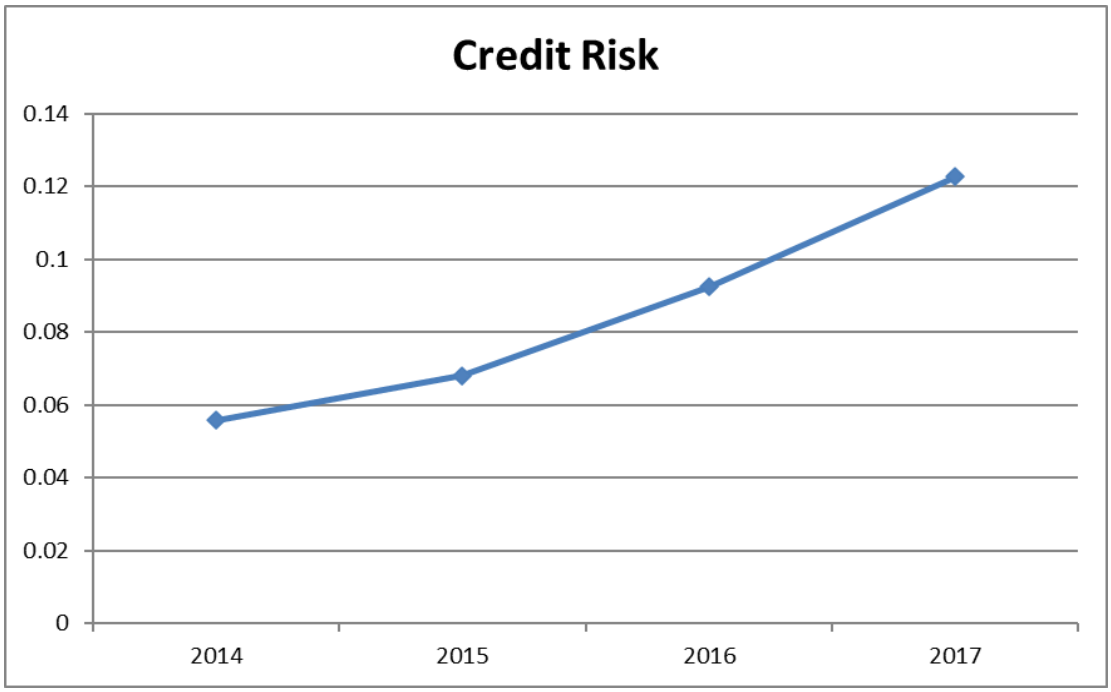

Figure 4.2: Credit Risk Trend
Source: Research Findings

Figure 4.2 indicates the average credit risk level for the commercial banks. The figure indicates that credit risk has been increasing over the period at a fast pace. The levels remain high over the period.

4.2.1.3 Credit Invested

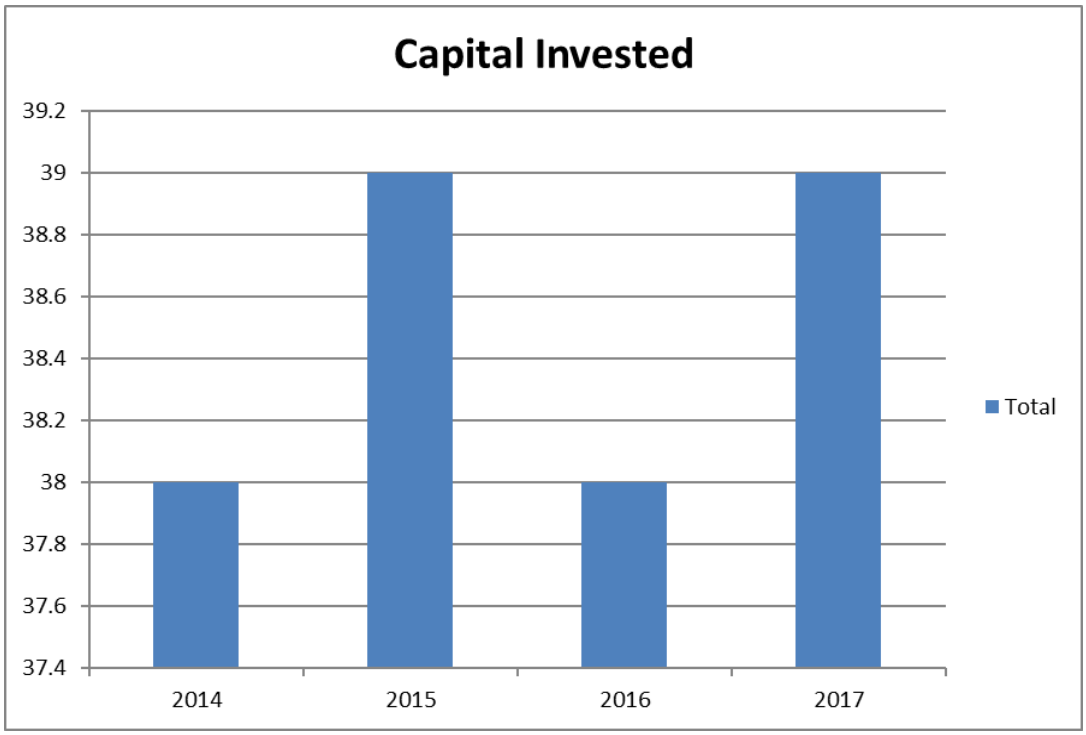

Figure 4.3: Capital Invested
Source: Research findings

Figure 4.3 illustrates the average capital invested by all the Kenyan commercial banks through 2014 to 2017. 2014 and 2016 had the lowest capital invested, while 2015 and 2017 had the highest capital investment.

4.2.1.4 Interest Rates

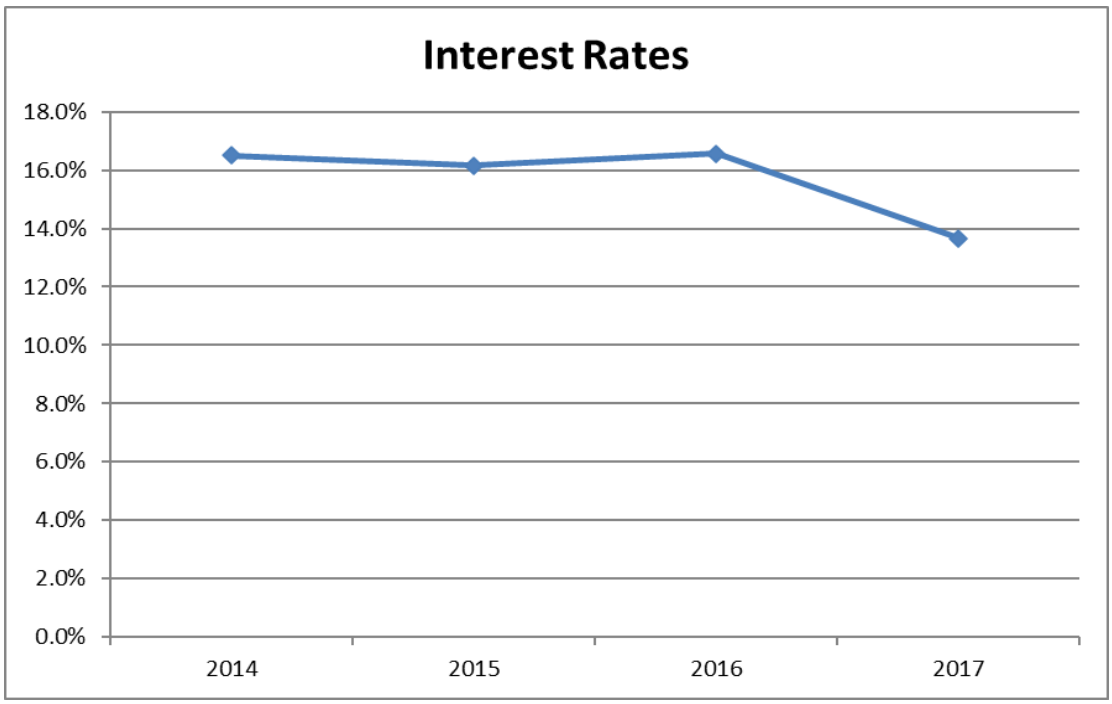

Figure 4.4: Interest Rates Trend
Source: Research findings

Figure 4.4 shows the Interest rates trend. The figure shows that the average lending rates were constant but declined in 2017.

4.2.1.5 Inflation Rate

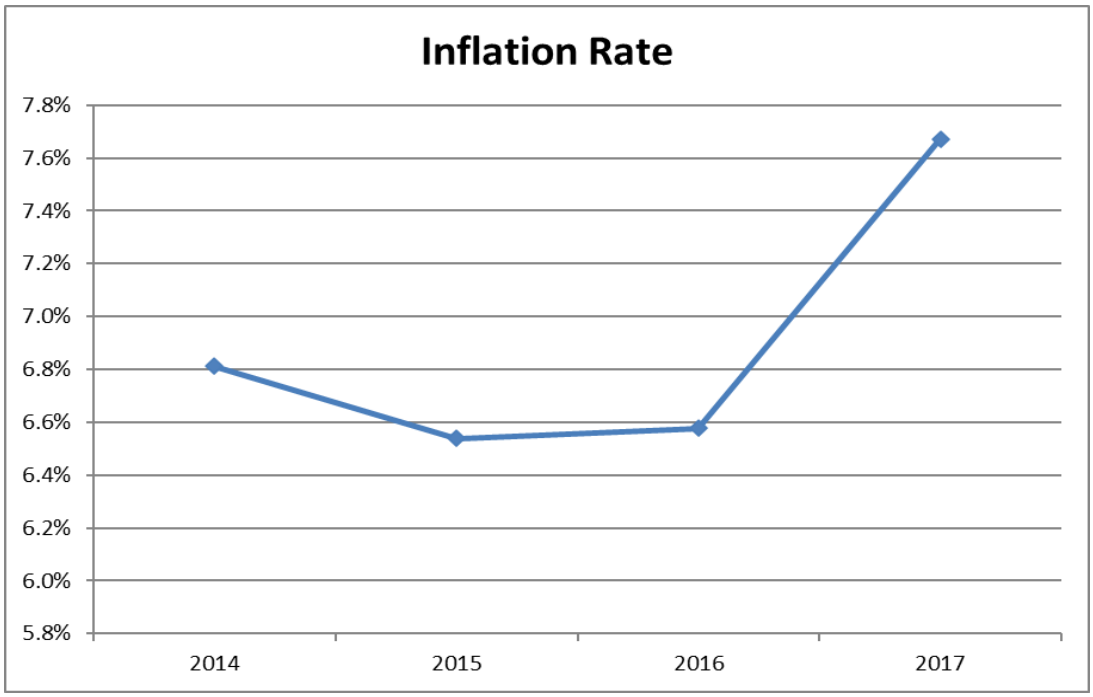

Figure 4.5: Inflation Rate Trend
Source: Research findings

Figure 4.5 shows the Inflation rate trend. The figure shows that the inflation rate was fluctuating over the period of study and was at the highest in 2017.

4.2.1.6 Bank Ownership structure

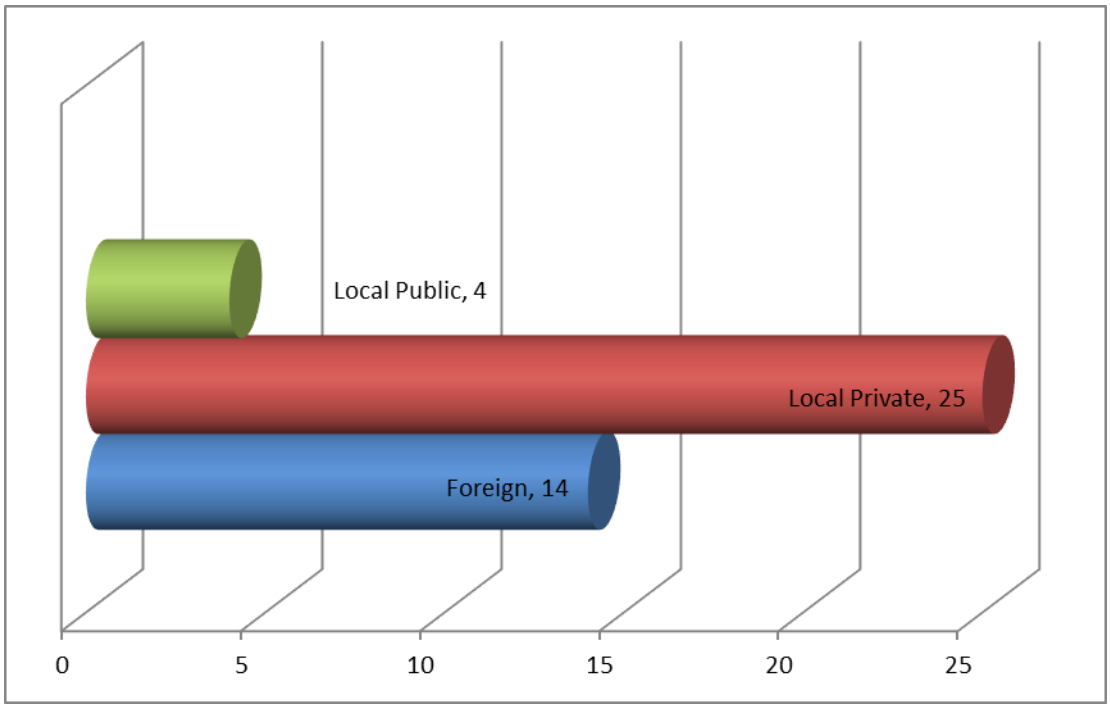

Figure 4.6: Bank Ownership Trend
Source: Research findings

Commercial bank ownership was used in the study as a moderating factor. The findings on ownership structure are as shown in figure 4.6. Majority of the commercial banks in Kenya are locally owned (25), 14 are foreign owned while 4 are publicly owned.

4.2.2 Diagnostic Test of Assumptions of Regression

Diagnostic tests include normality tests, multicollinearity and auto correlation tests. This was important so as to confirm that the assumptions of linear regression had not been violated.

4.2.3 Normality Test

The normality test was conducted in order to establish whether the observed values follow a normal distribution. The study used one-sample Kolmogorov-Smirnov (K-S) and the Shapiro-Wilk Tests to determine if the data used was normally distributed.

Under the K-S test, the hypotheses were as follows:

*H*0: Data came from a normal distribution

*H*1: Data did not come from a normal distribution

If the K-S test statistic is significant, then reject the null hypothesis; otherwise accept the alternative hypothesis that the data is non normal. The outcome of the tests is as shown in Table 4.2.

Table 4.2: Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
ROA	.200	172	.330	.723	172	.433
Credit Risk	.157	172	.330	.841	172	.433
Annual Lending (base) Rate	.389	172	.330	.630	172	.433
Inflation Rate	.326	172	.330	.686	172	.433
Capital Invested	.242	154	.330	.727	154	.433

a. Lilliefors Significance Correction

It was observed that in both tests statistic was not significant when tested at 5% level, therefore the null hypothesis was accepted and it was affirmed that the data was normally distributed.

4.2.4 Stationarity Test

The non-stationary of variables is often associated with wrong or misleading statistical inferences which ultimately leads to wrong conclusions. The study used ADF to check for variable stationarity. Null hypothesis for this test is that, unit root is present in the series. For the series to be termed stationary, the absolute test statistic in the three models must be greater than absolute critical value at 99% and 95% confidence intervals. The stationary test results were as illustrated in Table 4.4.

Table 4.3: Stationarity Test Results

Variable	Test statistic Intercept Only	Critical Values at (1% and 5%)	Test Statistic Intercept& trend	Critical Values (1% 5%)	Test statistic Suppressed intercept & trend	Critical Values (1% and 5%)	Remarks
X1	(2.315)	(3.750) (3.000) (2.63)	(2.921)	(4.380) (3.600) (3.240)	0.770	(2.660) (1.950) (1.600)	Unit root
X2	(6.725)	(3.702) (2.980) (2.622)	(15.461)	(4.316) (3.572) (3.223)	(2.776)	(2.649) (1.950) (1.603)	Not unit Root
X3	(-2.516)	(3.702) (2.980) (2.622)	(1.655)	(4.316) (3.572) (3.223)	(2.334)	(2.649) (1.950) (1.603)	Unit root
X4	(4.245)	(3.702) (2.980) (2.622)	4.720	(4.316) (3.572) (3.223)	0.980	(2.649) (1.950) (1.603)	Unit root

Source: Study Data (2020)

Table 4.4 shows the summary results for Stationarity test. The results from table 5 confirms only foreign income has no unit root. All the other variables were confirmed to have unit root. This is because, their test statistic is not greater than the critical values at 1% and 5% levels of confidence. To correct for the unit root, the study differenced all these variables and then conducted another ADF test whose results are shown in Table 4.4.

Table 4.4 Unit Root Test Results First Difference

Variable	Test statistic Intercept Only	Critical Values (1% and 5%)	Test statistic Intercept& trend	Critical Values (1% 5%)	Test statistic Suppressed intercept &Trend	Critical Values (1% and 5%)	Remarks
X_1	3.674	(3.550) (3.000) (2.630	(4.471)	(4.380) (3.600) (3.240)	(3.585)	(2.660) (1.950) (1.600)	No unit root
X_2	(6.725)	(3.702) (2.980) (2.622)	(15.461)	(4.316) (3.572) (3.223)	(2.776)	(2.649) (1.950) (1.603)	No unit Root
X_3	(4.635)	(3.709) (2.983) (2.623)	(5.178)	(4.325) (3.576) (3.226)	(3.943)	(2.650) (1.950) (1.602)	No unit root
X_4	7.313	(3.709) (2.983) (2.623)	(7.217)	(4.325) (3.576) (3.226)	7.440	(2.650) (1.950) (1.602)	No unit root

After conducting another ADF test at the first difference, all the other variables were confirmed to be stationary. This means they were stationary as their test statistic was greater than the critical values at 1% and 5% significance levels. After confirming stationarity of variables, the study conducted a cointegration test to examine whether the relationship between variables is long term or short term.

4.2.5 Multicollinearity Test

The study tested for multicollinearity using the VIF (Variance Inflation Factor) which quantifies the severity of multicollinearity in an ordinary least square. It provides an index that measures how much the variance (the square of the estimate's standard deviation) of an estimated regression coefficient is increased because of collinearity. According to Myers (1990), a VIF greater than 10 is a cause of concern. If the VIF

value lies between 1-10, then there is no multicollinearity. If the VIF < 1 or > 10, then there is multicollinearity. The Table 4.5 below gives the outcome of the test.

Table 4.5: Multicollinearity Test

	Collinearity Statistics	
Variable	**Tolerance**	**VIF**
Credit Risk	0.933	1.071
Interest Rates	0.097	9.260
Inflation Rate	0.098	8.203
Capital Invested	0.973	1.028

Multicollinearity exists when Tolerance is below 0.1 and VIF (Variance inflation factor) is greater than 10 (Wooldridge, 2011). VIFs for the independent variables were less than 10 and tolerance for all the variables more than 0.1 hence no multicollinearity was observed.

4.2.6 Hausman Test

In determining whether to use a fixed effect or random effect model, the Hausman test was performed. The null hypothesis (fixed effect is not best fit) is rejected if the p-value is less than 0.05. The test results are in Table 4.6.

Table 4.6: Hausman Test

	Coefficients (b) fixed	(B) random	(b-B) Difference	sqrt(diag(V_b-V_B)) S.E.
CreditRisk	-.0053911	-.0146486	.0092575	.0073284
AnnualLend~e	.008428	.0087483	-.0003202	.0010558
InflationR~e	.0032474	.0041892	-.0009419	.0018749
CapitalInv~d	4.71e-07	9.90e-07	-5.19e-07	9.16e-07

b = consistent under Ho and Ha; obtained from xtreg
B = inconsistent under Ha, efficient under Ho; obtained from xtreg

Test: Ho: difference in coefficients not systematic

chi2(3) = (b-B)'[(V_b-V_B)^(-1)](b-B)
= 1.87
Prob>chi2 = 0.5992

Source: Study Data (2020)

From the test results (Table 4.6), the chi-square for the Hausman test was 1.87 with a Prob>chi2=0.5992 which was more than 0.05. The null hypothesis that fixed model is not best fit was therefore accepted, thus the random effect model was adopted.

4.3 Correlation Test

The study carried out a correlation analysis among the variables used in the study. Correlation test is used to determine the level of the relationship between the study variables. Pearson Correlation was applied as it's suitable for research data in the form of ratios; it produces a correlation coefficient that shows the relationship, the degree of relationship, and the direction of the relationship (positive or negative).

If the Sig. < 0.05 0r < 0.01, it means that there is a significant relationship between the variables of the study. If the value of Sig. > 0.05, it implies that there is no significant relationship between the variables of the study. The degree of relationship between variables can be based on the value of Pearson Correlation and interpreted as follows: If the value of Pearson Correlation ranges from 0.00 to 0.20, it means that there is almost no correlation. If the value of Pearson Correlation 0.21 to 0.40, it implies that there is a low correlation. If the value of Pearson Correlation is in the

rage of 0.41 to 0.60, it signifies that there is moderate correlation being. If the value of Pearson Correlation is from 0.61 to 0.80, it means that there is high correlation. If the value of value Pearson Correlation ranges from 0.81 to 1.00, it signifies perfect correlation. Table 4.8 gives the outcome of the correlation analysis.

Table 4.1: Correlations

		ROA	Credit Risk	Inflation Rate	Capital Invested	Annual Lending (base) Rate
ROA	Pearson Correlation	1				
Credit Risk	Pearson Correlation	-.245**	1			
Inflation Rate	Pearson Correlation	-.201**	.204**	1		
Capital Invested	Pearson Correlation	.430**	-.161*	.030	1	

**. Correlation is significant at the 0.01 level (2-tailed).
*. Correlation is significant at the 0.05 level (2-tailed).

Based on output of Table 4.8, correlations obtained sig. (2-tailed) of 0. 001<0.01 between Credit Risk and ROA, it can be concluded that there is a significant relationship between Credit Risk and ROA. In addition, Pearson correlation values obtained -0.245, so it can be concluded that the Credit Risk was negatively correlated with ROA although the correlation is weak.

Inflation rate is negatively correlated with ROA sig. (2-tailed) of 0 .008<0.01 Pearson value of -0.201 and low positive correlation with Credit Risk sig. (2-tailed) of 0.007< 0.01 Pearson value of 0.204.

Capital invested has a positive moderate correlation to ROA at sig. (2-tailed) of 0.000<0.01 with Pearson correlation values of 0.430. Capital invested is negatively correlated to credit risk at sig. (1-tailed) of 0 .046<0.05 although Pearson correlation values obtained are -0.161 signifying an almost no correlation.

Lastly lending rate has a positive correlation ROA sig. (2-tailed) of 0 .005<0.01 Pearson value of 0.215. It is negatively correlated with credit risk, Inflation and Capital invested.

From the foregoing analysis, it can be concluded that Lending Rate is the factor that is mostly correlated with other factors.

The findings generally showed a positive correlation between financial performance Average Lending Rate and Capital Invested while a negative correlation existed between Credit Risk, Inflation Rate and financial performance.

4.4 Regression Analysis

The study estimated regression models based on the pooled data from 44 commercial banks in Kenya. The general objective of the study was to investigate the moderating effect of bank ownership on determinants of financial performance of commercial banks in Kenya. Independent variables of the study were credit risk, capital invested, interest rate and inflation rate while the dependent variable of the study was financial performance. A panel multiple regression analysis was conducted and results were as presented in Table 4.9.

4.4.1 Random Effect Panel regression results

Table 4.9: R-squared and F- statistics for ROA as the Dependent Variable

```
Random-effects GLS regression                   Number of obs     =       172
Group variable: bankcoded                       Number of groups  =        43

R-sq:                                           Obs per group:
     within  = 0.1029                                         min =         4
     between = 0.3870                                         avg =       4.0
     overall = 0.2610                                         max =         4

                                                Wald chi2(4)      =     40.43
corr(u_i, X)   = 0 (assumed)                    Prob > chi2       =    0.0000
```

Source: Study Data (2020)

R-squared (R^2) was 0.2610 according to the results of the study (Table 4.9), an indication that credit risk, interest rate, inflation rate and capital invested jointly explained 26.10% of the changes in ROA. The Prob>chi2 0.0000 was not greater than 0.05 which implied that the model was significant and best suited for the regression analysis.

Table 4.2: Regression Coefficients for Independent Variables and ROA

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.
	B	Std. Error	Beta		
1 (Constant)	0.108	.0843		1.281	.783
Capital Invested	0.0005670	.00012534	.107	4.523	0.00
Credit Risk	-0.0146486	.0093123	.021	-1.573	.848
Interest Fluctuation Rates	0.0087483	.0053832	.307	1.625	.013
Inflation Rate	-0.0041892	0.001267	.079	-3.30	.003

The results in the Table 4.10 revealed that capital invested, credit risk, interest fluctuation rates and inflation rate invested to a constant zero, ROA would be -0.1627145**.** These results lead to the following general model that explains the effect of the independent variables on financial performance of commercial banks in Kenya.

Y= Y=β1X1+ β2X2+ β3X3 + β4X4+ ε

$Y = -0.1627145 + 0.0005670 X_1 - 0.0146486 X_2 + 0.0087483 X_3 - 0.0041892 X_4 + \varepsilon$

4.5 Hypothesis Testing

This section presents the results of the hypothesis testing at 5% significance level, which were based on the p-values as shown in Table 4.8 above.

4.5.1 Effect of Capital Invested on the Performance of Commercial Banks in Kenya

H_{O1}: Capital invested has no significant effect on the financial performance of commercial banks in Kenya. The study found that Capital Invested had a beta coefficient of 0.0005670 (p= 0.000) meaning that this variable had a significant positive relationship to bank performance. In this regard, an increase in the Capital Invested by 1 unit resulted in an increase of financial performance of banks in Kenya, as measured by the return on assets (ROA), by 0.0005670. The findings also indicate that Capital Invested is significant variable at the 5% level. This indicates that the more capital invested by commercial banks in Kenya the more the profit earned by the banks.

Therefore, the null hypothesis (H0) that Capital Invested has no effect on the financial performance of banks is rejected and we accept the alternative hypothesis that Capital Invested has a statistically significant effect on bank performance in the Kenyan banking sector.

This outcome is in line with several studies, for instance according Gering (2000), the growth of total assets is not possible without sufficient capital. The capital adequacy therefore is an important indicator of bank soundness. The capital increase allows the

bank to invest more aggressively because of the convergence of capital that may possibly lead to a higher return on assets (Maro and Minza, 2008).

In addition, some authors argue that well capitalized banks normally reduced need for external financing which may lead to improved financial performance (Pasiouras, 2006).

4.5.2 Effect of Credit Risk on the financial performance of commercial banks in Kenya

H_{O2}: Credit risk has no significant effect on the financial performance of commercial banks in Kenya. From the study results, Credit Risk had a beta coefficient of -0.0146486 (p=0.030) which indicated a significant negative effect financial performance of banks in Kenya. Further analysis means that, an increase in the Credit Risk ratio by 1 unit resulted in a decline of financial performance of banks in Kenya by 0.0146486. The findings also indicate that Credit Risk Cost is significant variable at the 5% level. Therefore, the null hypothesis (H0) that Credit Risk has no effect on the financial performance of banks is rejected and we accept the alternative hypothesis that Credit Risk has an effect on bank performance in the Kenyan banking sector.

The findings concur with studies by other authors, for instance banks (Munyambonera, 2011) and (Roman and Tomuleasa, 2013). Higher provisions for loan losses could signal a possibility of future loss on loans, and could also be a sign of a timely recognition of bad loan by cautious A higher ratio of NPLs to total loans and an absolute deterioration of credit portfolio quality negatively affect commercial bank's financial performance In addition, raise in credit risk increases the marginal cost of loans, obligations, and equity leading to the enlargement of the cost of finance

for the bank (Tariq et al., 2014).Existing theory on the bank exposure suggests that increased credit risk is associated with a decrease in bank financial performance . Credit risk is negatively related to Return on Assets (ROA) and Return on Equity (ROE).

4.5.3 Effect of Lending Interest Rate on the financial performance of commercial banks in Kenya

H_{O3}: Interest rates have no significant effect on the financial performance of commercial banks in Kenya. The Lending Interest Rate had a beta coefficient of 0.0087483 (p=0.016) meaning that there was a significant positive relationship between this explanatory variable and ROA. It implies that a unit increase in the Lending Interest Rate would result to an increase in the financial return of commercial banks in Kenya by a factor of 0.0087483 The outcome also indicated that the variable was statistically significant at the 5% level. This result means that when lending interest rate rises, it enhances the profit margin which the banks realize by way of increased net interest income. This then feeds into the positive overall financial performance of the banks. Therefore, the null hypothesis (H0) that Lending Interest Rate has no effect on the financial performance of banks is rejected and we accept the alternative hypothesis that Lending Interest Rate has an effect on bank performance in the Kenyan banking sector. This finding is consistent to the study of (Podder, 2012) who stated that there is a positive relationship between interest rates and the financial performance of commercial banks.

4.5.4 Effect of Inflation Rate on the financial performance of commercial banks in Kenya

H_{O4}: Inflation rate has no significant effect on financial performance of commercial banks in Kenya. Inflation Rate had a beta coefficient of -0.0041892 (p=0.009) meaning that there was a significant negative relationship between this explanatory variable and ROA. An increase in the Rate by I unit resulted in decrease in the financial return of commercial banks in Kenya 0.0041892. Therefore, the null hypothesis (H0) that Inflation Rate has no effect on the financial performance of banks is rejected and we accept the alternative hypothesis that Inflation Rate has an effect on bank performance in the Kenyan banking sector.

An explanation for the effect of inflation rate on bank's financial performance was capture by Swarnapali (2014), as follows; it is noted that generally, high inflation rates lead to high-interest rates on loans and thus lead to higher income to commercial banks. However, asserts that "the effect of inflation on banking performance depends on whether inflation is anticipated or unanticipated". In an event where an increase in the inflation rates is fully anticipated and an adjustment is made to the interest rates accordingly, then this leads to a positive influence on the financial performance of commercial banks. On the other hand, when an increase in the inflation rates is not anticipated, it results in a situation where the local borrowers are faced with cash flow difficulties and this can result in the termination of bank loan agreements in a premature fashion thus causing loan losses for the issuing commercial bank.

4.5.5 The moderating effects of bank ownership on determinants of financial performance of commercial banks in Kenya.

H_{5a} Bank ownership has no moderating effects on effect of Capital invested on financial performance of commercial banks in Kenya. The study found that when bank ownership was incorporated into capital invested a beta coefficient of 2.7421007 (p=0.064) was obtained. Meaning that bank ownership has no moderating effect on the relationship between this explanatory variable and ROA. Therefore, the null hypothesis (H0) that Bank ownership has no moderating effects on effect of Capital invested on financial performance of commercial banks in Kenya is accepted and we reject the alternative hypothesis that Bank ownership has moderating effects on effect of Capital invested on financial performance of commercial banks in Kenya.

H_{5b} Bank ownership has no moderating effects on effect of Credit risk on financial performance of commercial banks in Kenya. The study found that when bank ownership was incorporated into credit risk a beta coefficient of -0.002306 (p=0.514) was obtained. Meaning that bank ownership has no moderating effect on the relationship between credit risk and ROA. Therefore, the null hypothesis (H0) that Bank ownership has no moderating effects on effect of credit risk on financial performance of commercial banks in Kenya is accepted and we reject the alternative hypothesis that Bank ownership has moderating effects on effect of credit risk on financial performance of commercial banks in Kenya.

H_{5c} Bank ownership has no moderating effects on effect of Interest rates on financial performance of commercial banks in Kenya. The study found that when bank ownership was incorporated into Interest Rates a beta coefficient of 0.0011823 (p=0.016) was obtained. Meaning that bank ownership has a moderating effect on the

relationship between Interest Rates and ROA. Therefore, the null hypothesis (H0) that Bank ownership has no moderating effects on effect of interest rates on financial performance of commercial banks in Kenya is rejected and we accept the alternative hypothesis that Bank ownership has moderating effects on effect of credit risk on financial performance of commercial banks in Kenya

H_{5d} Bank ownership has no moderating effects on effect of Inflation rate on financial performance of commercial banks in Kenya. The study found that when bank ownership was incorporated into inflation rate a beta coefficient of -0.0024091 (p=0.054) was obtained. Meaning that bank ownership has no moderating effect on the relationship between inflation rate and ROA. Therefore, the null hypothesis (H0) that Bank ownership has no moderating effects on effect of inflation rate on financial performance of commercial banks in Kenya is accepted and we reject the alternative hypothesis that Bank ownership has moderating effects on effect of inflation rate on financial performance of commercial banks in Kenya

4.6 Moderating effect of Bank Ownership on Determinants of Financial Performance of Commercial Banks in Kenya

4.6.1 Moderated Regression Analysis

The study carried out a Moderated Regression Analysis to test for the moderating effect in line using the methodology which is outlined in Chapter 3. The regression model which was estimated is one whereby each of the independent variables is multiplied by the moderator variable.

The model was as follows:

$Y= -0.1627145 + 0.0005670\ X_1 -0.0146486\ X_2 + 0\ .0087483\ X_3 – 0.0041892\ X_4(2.7421007\ X_{1*}\ X_5)$

$Y= -0.1627145 + 0.0005670 X_1 -0.0146486 X_2 + 0 .0087483 X_3 – 0.0041892 X_4(-.002306 X_{2*} X_5)$ $Y= -0.1627145 + 0.0005670 X_1 -0.0146486 X_2 + 0 .0087483 X_3 – 0.0041892 X_4(.0011823 X_{3*} X_5)$

$Y= -0.1627145 + 0.0005670 X_1 -0.0146486 X_2 + 0 .0087483 X_3 – 0.0041892 X_4(-.0024091 X_{4*} X_5)$

Provided in Table 4.10 is the analysis and interpretation of the equation.

The results of the moderated regression model shown in Table 4.9 indicate that the overall coefficient of determination R2 was 0.156 which means that the independent variables explained 15.6% of the variations in the dependent variable. This indicates a weak relationship between the dependent variable, bank performance as measured by Return on Assets, and independent variables in the Kenya commercial banking sector. The results further show that F=17.36 and P-value = 0.0016 which is less than 5%. This indicates that the moderated model is statistically significant.

Table 4.3: Moderated Regression Model Results

R2 within	R2 between	R2 Overall	F	p-value
0.1036	0.1454	0.1563	17.36	0.0016

a. Dependent Variable: Return on Assets (ROA)
b. Predictors: (Constant), BOWCR, BOWIN, BOWCIF, BOWCI

Table 4.4: Coefficients of the Moderated Regression Model

ROA	Coef.	Std. Err.	z	P>|z|	[95% Conf.	Interval]
BOWCR	-.002306	.0035363	-0.65	0.514	-.009237	.004625
BOWIN	.0091823	.0004919	2.40	0.016	.0002183	.0021464
BOWCIF	-.0024091	.0012511	-1.93	0.054	-.0048612	.000043
BOWCI	2.7421007	1.481607	1.85	0.064	-1.602408	5.6301
_cons	-.0005534	.0238796	-0.02	0.982	-.0473565	.0462496

a. Dependent Variable: Return on Assets (ROA).
Key
BOWCR=Bank ownership and credit risk
BOWIN= Bank ownership and inflation
BOWCIF= Bank ownership and credit interest fluctuation
BOWCI= Bank ownership and capital invested
b. Predictors: (Constant), BOWCR, BOWIN, BOWCIF, BOWCI.

The Table 4.12 provides a summary of the regression results on the effect of all the independent variables on the dependent variable.

4.6.2 Interpretation of the Moderated Regression Results

This section provides an interpretation of the results from the moderated regression model. The first part provides the outcome of the fifth objective of the study which was to investigate whether bank ownership, as a moderating variable, does have an influence on the determinants of financial performance of commercial banks in Kenya. The second part of the section discusses the results of each variable under the moderated regression equation.

The study fails to rejects the H_{O5a} Bank ownership has no moderating effect on the relationship between Capital invested and financial performance of commercial banks in Kenya as at the significance level of 0.05 there is no statistical significance. Thus bank ownership has no moderating effect on the relationship between capital invested and financial performance of commercial banks in Kenya.

The study rejects the H_{O5b} bank ownership has no moderating effect on the relationship between credit risk and financial performance of commercial banks in Kenya as at the significance level of 0.05 there is a statistical significance. Thus bank ownership has moderating effect on the relationship between credit risk and financial performance of commercial banks in Kenya

The study fails to reject the H_{O5c} bank ownership has no moderating effect on the relationship between interest rates and financial performance of commercial banks in Kenya as at the significance level of 0.05 there is no statistical significance . Thus bank ownership has no moderating effect on the relationship between interest rates and financial performance of commercial banks in Kenya

The study fails to reject the H_{O5d} bank ownership has no moderating effect on the relationship between inflation rate and financial performance of commercial banks in Kenya as at the significance level of 0.05 there is no statistical significance. Thus bank ownership has no moderating effect on the relationship between inflation rate and financial performance of commercial banks in Kenya

4.6.3 Influence of Bank Ownership, as a Moderating Variable, on determinants of financial performance of commercial banks in Kenya

Table 4.5: Comparison of Unmoderated and Moderated Models

Statistic	Unmoderated model	Moderated model
Overall R2	0. 2610	0.1563
F-statistic	40.43	17.36
P-value	0.000	0.0016

The results from the Table 4.11 indicate that the overall R^2 for the unmoderated regression had a bigger value (0.261) than the moderated regression model (0.156). Additionally, the F-statistic for the unmoderated regression model posted a higher value, 40.43, than that of the unmoderated model which posted a value of 17.36. It was therefore concluded that although both models were statistically significant, the unmoderated model posted a higher explanatory power and better fit than the moderated regression model. This indicates that the moderating variable, bank ownership, does not have a significant effect on the determinants of financial performance of commercial banks in Kenya.

4.6.4 Discussion of the Results from Moderated Regression Model

BOWCI had a beta coefficient of 2.7421007 (compared to coefficient of 0.0005670 for unmoderated model) meaning that BOWCI had positive relation to ROA such that

an increase in the moderated BOWCI by 1% was associated with an increase in the financial performance of banks in Kenya, as measured by the return on assets (ROA), by 2.74 times. The BOWCI variable was, however, non-significant implying that this variable did not have an effect on the performance of banks in Kenya. This meant that when bank ownership is taken into account, the effect of capital invested on the financial performance of banks in Kenya is rendered non-significant. BOWCR had a beta coefficient of -0.002306 (compared to coefficient of -0.0146486 for unmoderated model) meaning there was a negative relationship with bank performance. Therefore, an increase in the moderated Credit Risk ratio by 1%, resulted in a decline of financial performance of banks in Kenya, as measured by the return on assets (ROA), by 0.23 %. The results also indicate that credit risk is not statistically significant, meaning that this variable had no significant effect on bank performance.

BOWIN had a beta coefficient of 0.0091823 (compared to coefficient of 0.0087483 for unmoderated model). This demonstrates that BOWIN had a positive effect on bank performance. This implied that an increase in the BOWIN by 1% resulted in an increase in the financial performance of commercial banks in Kenya by 0.91%. This variable is also highly significant at the 5% level implying that it had a significant effect on bank performance.

Based on the result, it is noted that under both the unmoderated and moderated models, Interest Rate variable has a positive and significant effect on bank performance. The results further indicate that when bank ownership is considered, the effect of Interest Rate on bank performance is much higher than under unmoderated scenario this result concurs with findings of Flannery (1980), Haron (2004) and

Okoye and Onyekachi, (2013) who all found that lending interest rates was among the key drivers of bank performance.

BOWIF was found to have a beta coefficient of -0.0024091 (compared to coefficient of -0.0041892 for unmoderated model) implying that there is a negative relationship with ROA. This means that an increase in the moderated BOWIF by 1% was associated with a decline in the financial return of commercial banks in Malawi by 0.24%. This variable, however, was not statistically significant and therefore did not have an effect on bank performance. The foregoing result indicates that when bank ownership is taken into account, the negative effect of inflation rate on the performance of banks in Kenya becomes non-significant.

The outcome of the moderated regression model showed that when the moderating variable, Bank Ownership, was taken into account, only Interest Rates was statistically significant. The other variables that is; Credit Risk, Inflation Rate and Capital Invested were found to be not statistically significant.

CHAPTER FIVE

SUMMARY OF FINDINGS, CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This Chapter summarizes the findings of the study done with specific reference to the objectives and research hypotheses of the study. Data was interpreted and the results of the findings were correlated with both empirical and theoretical literature available. The conclusion relates directly to the specific research hypotheses. The recommendations were deduced from conclusion and discussion of the findings.

5.2 Summary of the Findings

The purpose of this study was to investigate the moderating effects of bank ownership on determinants of financial performance of commercial banks in Kenya. The specific objectives were: To examine the effect of Capital Invested on the financial performance of commercial banks in Kenya, To establish the effect of interest rates on the financial performance of commercial banks in Kenya, To assess the effect of inflation rate on the financial performance of commercial banks in Kenya and to assess the moderating effects of bank ownership on determinants of financial performance of commercial banks in Kenya. The study was based on two theories namely; Efficiency Theory and Signaling Theory. The study applied explanatory research design and was based on a census of 44 commercial banks in Kenya which were in operation from2014-2017. The analysis was based on multiple regressions carried out using STATA software.

The findings indicate that Capital Invested had a positive relationship with bank financial performance. Therefore, the null hypothesis that Capital Invested has no effect on the financial performance of banks is rejected at 5% significance and we fail

to reject the alternative hypothesis that Capital Invested has an effect on bank performance in the Kenyan banking sector. Further results indicate that Credit Risk was negatively related to financial performance; an increase in the Credit Risk ratio resulted in a decline of financial performance of banks in Kenya. Therefore, the null hypothesis that Credit Risk has no effect on the financial performance of banks is rejected at 5% significance and we accept the alternative hypothesis that Credit Risk has an effect on bank performance in the Kenyan banking sector.

The Lending Interest Rate had a positive relationship with the financial return of commercial banks in Kenya. The outcome also indicated that the variable was statistically significant at the 5% level. This result means that when lending interest rate rises, it enhances the profit margin which the banks realize by way of increased net interest income. Therefore, the null hypothesis that Lending Interest Rate has no effect on the financial performance of banks is rejected and we accept the alternative hypothesis that Lending Interest Rate has an effect on bank performance in the Kenyan banking sector.

Inflation Rate was found to have a negative relationship with ROA. An increase in the Rate by 1unit resulted in decrease in the financial return of commercial banks in Kenya by 0.0041892. Therefore, the null hypothesis that Inflation Rate has no effect on the financial performance of banks is rejected at 5% significance level and we accept the alternative hypothesis that Inflation Rate has an effect on bank performance in the Kenyan banking sector.

Finally, in assessing the moderating effects of bank ownership on determinants of financial performance of commercial banks in Kenya, the outcome of the study indicated that only Interest Rates was statistically significant. The other variables that

is; Credit Risk, Inflation Rate and Capital Invested were found to be not statistically significant.

5.3 Conclusions

The study sought to investigate the moderating effects of bank ownership on determinants of financial performance of commercial banks in Kenya.

i. To determine the effect of credit risk on the financial performance of commercial banks in Kenya.

The study concluded that Credit Risk had a statistically significant negative effect on financial performance. Thus, is inversely related to bank financial performance whereby an increase (deteriorating) of the variable leads to a drop in banks financial performance.

ii. To assess the effect of inflation rate on the financial performance of commercial banks in Kenya

The study concluded that Inflation Rate had a statistically significant negative effect on financial performance. Thus, is inversely related to bank financial performance whereby an increase of the variable leads to a drop in banks financial performance.

iii. To establish the effect of interest fluctuation rates on the financial performance of commercial banks in Kenya.

The study also concluded that Lending Interest Rates had a statistically significant positive relationship with bank performance, a rise in the lending rates leads to an increase in bank financial performance.

iv. To examine the effect of capital invested on the financial performance of commercial banks in Kenya

The study also concluded that Capital Invested had a statistically significant positive relationship with bank performance, an increase in Capital Invested leads to an increase in bank financial performance.

v. To analyze the moderating effect of bank ownership on determinants of financial performance of commercial banks in Kenya

Finally based on the research findings, the study concluded that, in assessing the moderating effects of bank ownership on determinants of financial performance of commercial banks in Kenya, only Interest Rates was statistically significant. The other variables that is; Credit Risk, Inflation Rate and Capital Invested were found to be not statistically significant.

5.4 Recommendations

The study concluded that Credit Risk and Inflation Rate had a statistically significant negative effect on financial performance. Therefore, the study recommends that regulatory authorities like the central bank of Kenya should develop effective policies on credit risk and inflation rate management to ensure that banks are in a position where they can enhance their financial performance as well as to handle negative shocks.

The study also concluded that Capital Invested positively affected banks financial performance. Therefore, the study recommends that poor performing banks should consider increasing their capital to ensure that their banks are efficient and to maximize profits in the long run and growth of the banks.

The study concluded that interest rates have a positive and significant effect on financial performance of commercial banks in Kenya. Therefore, in pursuit for high financial performance and hence better performance of banks, management should work towards getting more loans customers.

Lastly, the study concluded that in assessing the moderating effects of bank ownership on determinants of financial performance of commercial banks in Kenya, only Interest Rates was statistically significant. Interest Rates is therefore a very key component in determining financial performance of commercial banks and the study recommends more focus to be given to the overall management of the interest rates by all the stakeholders that are involved in the commercial banks policy development.

5.5 Suggestions for Further Research

The research study investigated the moderating effects of bank ownership on determinants of financial performance of commercial banks in Kenya for the period 2014-2017. The study concluded that ownership only had a statistically significant effect on interest rates as a determinant of financial performance of commercial banks in Kenya.

Through this study, interest rates stood out as a key determinant of the financial performance of commercial banks in Kenya. It is under this observation that the study recommends further research on the optimum interest rate that will yield maximum financial performance of commercial banks in Kenya.

REFERENCES

Abebe, T. (2014). Determinants of Financial Performance: An Empirical Study on Ethiopian Commercial Banks. *Unpublished MBA Project.* Jimma University, Ethiopia.

Adeusi, S. O., Kolapo, F. T. & Aluko, A. O. (2014). Determinants of Commercial Banks' Profitability Panel Evidence from Nigeria. *International Journal of Economics, Commerce and Management,* 2(12), 1-18.

Alemu, S. (2015). Determinants of Commercial Banks Profitability: The Case of Ethiopian Commercial Banks. *Unpublished MBA Thesis.* Addis Ababa University.

Alfadhl, M. M. & Alabdullah, T. Y. (2013). Determinants of the Managerial Behavior of Agency Cost and Its Influential Extent on Performance: A Study in Iraq. *International Journal of Humanities and Social Science,* 3(6), 238 – 252.

Al-Jarrah, I. M., Ziadat, K. N. & El-Rimawi, S. Y. (2010). The Determinants of the Jordanian's Banks Profitability: A Cointegration Approach. *Jordan Journal of Business Administration,* 6 (2), 247 – 261.

Alkhazaleh, A. M. & Almsafir, M. (2014). Bank Specific Determinants of Profitability in Jordan. *Journal of Advanced Social Research,* 4(10), 01-20.

Ally, Z. (2014). Determinants of Banks' Profitability in a Developing Economy: Empirical Evidence from Tanzania. *European Journal of Business and Management,* 6 (31), 363 – 375 44.

Alper, D. & Anbar, A. (2011). Bank Specific and Macroeconomic Determinants of Commercial Bank Profitability: Empirical Evidence from Turkey. *Business and Economics Research Journal,* 2(2), 139-152.

Anwar, M. (2014). Factors Influencing Profitability of Islamic Banking in Kenya: Case of Gulf African Bank. *Unpublished MBA Project.* Kabarak University.

Arasa, R. & Ottichilo, L. (2015). Determinants of Know Your Customer (KYC) Compliance Among Commercial Banks in Kenya. *Journal of Economics and Behavioral Studies*, 7(2), 162-175.

Athanasoglou, P. P., Brissimis, S. N. & Delis, M. D. (2005). Bank-Specific, Industry-Specific And Macroeconomic Determinants of Bank Profitability. *Working Paper No. 25.* Economic Research Department, Bank of Greece.

Ayanda, A. M., Ekpo, I. C. & Mustapha, A. M. (2013). Determinants of Banks' Profitability in a Developing Economy: Evidence from Nigerian Banking Industry. *Interdisciplinary Journal of Contemporary Research in Business,* 4(9), 155 – 181.

Bentum, W. (2012). The Determinants of Profitability of the Commercial Banks in Ghana during The Recent Years of Global Financial Crisis. *Master Thesis,* Aarhus University.

Bini, L., Dainelli, F. & Giunta, F. (2011). Signaling Theory and Voluntary Disclosure to the Financial Market: Evidence from the Profitability Indicators Published in the Annual Report. Paper presented at the 34th EAA Annual Congress, Rome, and 20-22 April 2011.

Birhanu, T. A. (2012). Determinants of Commercial Banks Profitability: Empirical Evidence From the Commercial Banks of Ethiopia. *Unpublished MBA Project.* Addis Ababa University.

Buchichi, A. N. (2013). Customer Service Improvement Strategies at CFC Stanbic Bank Kenya Limited. *International Journal of Social Sciences and Project Planning Management,* 1 (1), 19-40.

Chinoda, T. (2014). The Determinants of Commercial Banks Profitability in Zimbabwe (2009-2014). *IOSR Journal of Economics and Finance*, 5(6), 69-80.

Cooper, R. & Schindler, P. (2007). *Business Research Methods*. New York: McGraw-Hill Publishers.

Cull, R. Demirgüç-Kunt, A. & Morduch, J. (2009). Does Regulatory Supervision Curtail Microfinance Profitability and Outreach? *Policy Research Working Paper 4748*.The World Bank.

Cytonn Investments. (2015). *Kenya Listed Commercial Banks. Cyton Q1 Banking Sector Report –Abridged Version 29th June 2015.* Cytonn Investments.

Dang, U. (2011). The CAMEL Rating System in Banking Supervision: a Case Study. *Unpublished MBA Thesis.* Arcada University of Applied Sciences. 46

Fisseha, F. L. (2015). Meta-Analysis on the Determinants of Commercial Bank's Profitability: (A Conceptual Frame Work and Modeling). *European Scientific Journal,* 11(19), 323 – 351.

Flamini, V., McDonald, V. & Schumacher, L. (2009). The Determinants of Commercial Bank Profitability in Sub-Saharan Africa.*IMF Working Paper 09/15.* International Monetary Fund.

Gall, M.D., Gall, J. P. & Borge, W. R. (2006). Educational Research: An Introduction. (8th Ed.). New York; Pearson.

Gedajlovic, E. & Shapiro, D. M. (2002).Ownership Structure and Firm Profitability in Japan. *Academy of Management Journal,* 45 (2), 565-575.

Gitonga, K. W. (2014). Effects of Macroeconomic Variables on Credit Risk in the Kenyan Banking System. *International Journal of Business and Commerce,* 3(9), 01-26.

Hoffmann, P. S. (2011). Determinants of the Profitability of the US Banking Industry. *International Journal of Business and Social Science,* 2(22), 255 – 269.

Ishaya, L. C. & Abduljeleel, B. O. (2014). Capital Structure and Profitability of Nigerian Quoted Firms: The Agency Cost Theory Perspective, *American International Journal of Social Science,* 3(1), 139 – 158.

Jamali, A. H. & Asad, A. (2012). Management Efficiency and Profitability in Indian Automobile Industry: From Theory to Practice. *Indian Journal of Science and Technology,* 5(5), 2779 – 2781 47.

Kimutai, C. J. & Jagongo, A. (2013). Factors Influencing Credit Rationing by Commercial Banks in Kenya. *International Journal of Humanities and Social Science*, 3(20), 244 – 252.

Kosmidou, K. (2008). The Determinants of Banks' Profits in Greece during the Period of EU Financial Integration. *Managerial Finance,* 34(3), 146-159.

Kosmidou, K., Tanna, S. & Pasiouras, F. (2008). Determinants of Profitability of Domestic UK.

Kyalo, S. M. (2013). An Evaluation of the Factors Affecting Profitability of Commercial Banks In Kenya. *Unpublished MBA Project.* Moi University.

Lipunga, A. M. (2014). Determinants of Profitability of Listed Commercial Banks in Developing Countries: Evidence from Malawi. *Research Journal of Finance and Accounting*, 5(6), 41-49.

Maigua, C. & Mouni, G. (2016). Influence of Interest Rates Determinants on the Performance of Commercial Banks in Kenya. *International Journal of Academic Research in Accounting, Finance and Management Sciences,* 6 (2), 121–133.

Mensi, S. & Zouari, A. (2010). Efficient Structure versus Market Power: Theories and Empirical Evidence. *International Journal of Economics and Finance,* 2(4), 151 – 166 48.

Mian, S. N., Haris, K. S. & Muhammad, M. N. (2012). The Role of Debt in Reducing Agency Cost: Empirical Evidence from Pakistan. *Innova Ciencia,* 4 (5), 28 – 43.

Mirzaei, A. (2012). The Effect of Market Power on Stability and Performance of Islamic and Conventional Banks. *Islamic Economic Studies,* 18 (1 & 2), 45-81.

Mukhongo, H. O., Maokomba, C. & Musiega, D. (2014). The Effects of Alternative Banking Channels on Profitability of Commercial Banks- Case of the Co-Operative Bank of Kenya. *The International Journal of Engineering and Science,* 3 (3), 29-34.

Muzahem, A. (2011). An Empirical Analysis of the Practice and Determinants of RiskDisclosure in an Emerging Capital Market: The Case of United Arab Emirates. *Unpublished MBA Thesis.* University of Portsmouth.

Nagaraju, T. (2013)The Determinants of Commercial Banks Profitability in India. School of Economics, University of Hyderabad. Electronic copy available at http://ssrn.com/abstract=2544838.

Nkegbe, P. K. & Yazidu, U. (2015). Banks Performance in Ghana: Trends and Determinants. *Global Journal of Development Studies,* 12 (1&2), 33-52.

Nsambu, K. F. (2014). Factors Affecting Performance of Commercial Banks in Uganda: A Case For Domestic Commercial Banks. Proceedings of 25th International Business Research Conference 13 - 14 January 2014, Taj Hotel, Cape Town, South Africa, ISBN: 978-1-922069-42-9 1 49.

Ntow, G. M. & Laryea, A. E. (2012). A Financial Performance Comparison of Foreign VS Local Banks in Ghana. *International Journal of Business and Social Science*, 3(21), 82 – 87.

Obamuyi, T. M. (2013). Determinants of Banks' Profitability in a Developing Economy: Evidence from Nigeria. *Organizations and Markets in Emerging Economies,* 4 (8), 97-111.

Odunga R. M., Nyangweso P. M., Carter D. A. & Mwarumba, M. (2013). Credit Risk, Capital Adequacy and Operating Efficiency of Commercial Banks in Kenya. *International Journal of Business and Management Invention,* 2 (9), 6-12.

Omondi, O. G. (2015). Basel Accords on Risk Management: A Survey of Kenya's Commercial Banks. *Journal of Global Economics,* 3 (164), 64-74.

Ongore, V. O. & Kusa, G. B. (2013). Determinants of Financial Performance of Commercial Banks in Kenya. *International Journal of Economics and Financial Issues,* 3(1), 237-252

Onuonga, S. M. (2014). The Analysis of Profitability of Kenya`s Top Six Commercial Banks: Internal Factor Analysis. *American International Journal of Social Science,* 3(5), 94–103

Otuori, O. H. (2013). Influence of exchange rate determinants on the performance of commercial Banks in Kenya. *European Journal of Management Sciences and Economics,* 1(2), 86-98.

Ponce, A. T. (2011). What Determines the Profitability of Banks? Evidence from Spain. Pablo de Olavide University.

APPENDICES

Appendix I: List of Commercial Banks in Kenya

1	Victoria Commercial Bank Ltd	26	Spire Bank Ltd
2	UBA Kenya Bank Limited	27	Ecobank Kenya Ltd.
3	Trans-National Bank Ltd	28	Dubai Bank Kenya Ltd.
4	Standard Chartered Bank Kenya Ltd	29	Diamond Trust Bank Kenya Ltd.
5	Prime Bank Ltd	30	Development Bank of Kenya Ltd.
6	Paramount Universal Bank Ltd	31	Credit Bank Ltd.
7	Oriental Commercial Bank Ltd	32	Co-operative Bank of Kenya Ltd.
8	NCBA Bank Ltd	33	Consolidated Bank of Kenya Ltd.
9	National Bank of Kenya Ltd	34	Commercial Bank of Africa Ltd.
10	Middle East Bank (K) Ltd	35	Citibank N.A Kenya.
11	Sidian Bank Ltd	36	Chase Bank (K) Ltd.
12	Kenya Commercial Bank Ltd	37	Charterhouse Bank Ltd
13	Jamii Bora Bank Limited	38	CFC Stanbic Bank Ltd.
14	Imperial Bank Ltd	39	Barclays Bank of Kenya Ltd
15	I & M Bank Ltd	40	Bank of India
16	Habib Bank Ltd	41	Bank of Baroda (K) Ltd
17	Habib Bank AG Zurich	42	Bank of Africa Kenya Ltd
18	Gulf African Bank Limited	43	African Banking Corporation Ltd
19	Guardian Bank Ltd	44	Housing Finance Company Ltd.
20	Mayfair bank ltd		
21	First community Bank Limited		
22	Fina Bank Ltd		
23	Fidelity Commercial Bank Ltd		
24	Family Bank Limited		
25	Equity Bank Ltd		

Source: (CBK, 2014)

Appendix II: NACOSTI Research Authorization Letter

REPUBLIC OF KENYA

NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Ref No: 347936

Date of Issue: 21/August/2019

RESEARCH LICENSE

This is to Certify that Mr.. REUBIN MWIKAMBA of Moi University, has been licensed to conduct research in Baringo, Bomet, Bungoma, Busia, Elgeyo-Marakwet, Embu, Garissa, Homabay, Isiolo, Kajiado, Kakamega, Kericho, Kiambu, Kilifi, Kirinyaga, Kisii, Kisumu, Kitui, Kwale, Laikipia, Lamu, Machakos, Makueni, Mandera, Marsabit, Meru, Migori, Mombasa, Muranga, Nairobi, Nakuru, Nandi, Narok, Nyamira, Nyandarua on the topic: THE MODERATING EFFECT OF BANK OWNERSHIP ON THE DETERMINANTS OF FINANCIAL PERFORMANCE OF COMMERCIAL BANKS IN KENYA for the period ending : 21/August/2020.

License No: NACOSTI/P/19/627

347936

Applicant Identification Number

Director General
NATIONAL COMMISSION FOR SCIENCE,TECHNOLOGY & INNOVATION

Verification QR Code

Appendix III: Moi University Research Authorization Letter

MOI UNIVERSITY
ISO 9001:2008 CERTIFIED
SCHOOL OF BUSINESS AND ECONOMICS

Tel: 0053 43031
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P.O Box 4700-30100
ELDORET
KENYA

MU/NRB/MBA/RP/01

29th July 2019

National Commission for Science, Technology and Innovation
Upper Kabete
P.O. Box 30623-00100
NAIROBI

Dear Sir/Madam,

RE: REQUEST FOR RESEARCH PERMIT
MWIKAMBA REUBEN

This is to confirm that the above named is a Postgraduate student of Moi University, School of Business and Economics, Department of Management Science. Mr. Mwikamba is pursuing a Master of Business Administration course offered at Nairobi campus.

The student successfully defended his proposal and is due to proceed for his research data collection.

The research Title is – "**The Moderating Effect of Bank Ownership on Determinants of Financial Performance of Commercial Banks in Kenya.**"

The student is in the process of obtaining a research permit to enable him visit the identified research centers. The University shall highly appreciate any assistance accorded to him.

Yours faithfully,

DR. ROBERT ODUNGA
FOR: DEAN, SCHOOL OF BUSINESS AND ECONOMICS

MOI UNIVERSITY
NAIROBI
CBD CAMPUS
SCHOOL OF BUSINESS & ECONOMICS
Box 80054 – 00200, NAIROBI

Appendix V: Research Schedule Timetable

	2021					
Activities	**June**	**July**	**August**	**Sept**	**Oct**	**Nov**
Project writing	XX	XX				
Projet defense			XX			
Project corrections						
Data collection						
Data analysis						
Report writing and submission						
Project defense						
Post- presentation corrections						
subission						