RELATIONSHIP BETWEEN MONETARY POLICIES AND FINANCIAL PERFORMANCE OF BANKING INSTITUTIONS IN KENYA: A CASE STUDY OF COMMERCIAL BANKS IN NAIROBI CITY

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A RESEARCH THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE AWARD OF MASTER DEGREE IN BUSINESS ADMINISTRATION MAJORING IN FINANCE OF KENYA METHODIST UNIVERSITY

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DECLARATION

I declare that this thesis is my original work and has not been submitted to any academic institutions for examination purpose

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DEDICATION

I dedicate this Research Thesis to my lovely husband, Mr. Peter Lual Dau and my Father, Mr. Thuc Koch Ajak for the support, encouragement, motivation, and praying for me endlessly without question. Thanks once again for giving me hope in despair, joy in sorrow, and ease in pain and investing so much in me. No one loves me more than you two May God bless you abundantly!

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ABSTRACT

The main purpose of this study was to determine if central bank rate relate with financial performance, to establish whether central bank open market operations associate with financial performance, to evaluate relationship between cash reserve ratio and financial performance and finally to determine the moderating influence of banks size on the relationship between monetary policies and financial performance. A case study of commercial banks in Nairobi city had a sample size of 42 commercial banks. The study adopted descriptive research design. Data was collected using secondary data collection sheet. The collected data was analyzed through quantitative methods of descriptive and inferential statistics such as correlation and multiple regression models. The tool used was Statistical Package for Social Sciences version 20.0. The findings established were represented in form of Tables and Figures. The study established that central bank rate has a positive and significant influence on financial performance of commercial banks in Kenya; central bank open market operations also has a positive and significant influence on financial performance of commercial banks in Kenya; cash reserve ratio has a negative and insignificant influence on financial performance of commercial banks in Kenya and bank size as a moderating variable has positive significant moderating effect on the relationship between monetary policies and financial performance of commercial banks in Kenya. The study recommends commercial banks to put more emphasis on both internal and external factors; the study recommends that the financial regulatory authorities such as the central bank of Kenya should formulate policies that can foster commercial banks involvement in investing in treasury bills and treasury bonds; the central bank of Kenya should be flexible when changing the cash reserve ratio and finally the banks management should embark on activities that will lead to high assets volume such as lowering of interest rate to attract borrowers and better customer relationship to retain customers.

TABLE OF CONTENTS

LIST OF FIGURES

LIST OF TABLES

LIST OF ACRONYMS

CBK	:	Central Bank of Kenya
CBR	:	Central Bank Rate
SPSS	:	Statistical Package for the Social Sciences
MFIs	:	Micro-Finance Institutions
MPC	:	Monetary Policy Committee
OMO	:	Open Market Operations
ROA	:	Return on Assets
SACCOs	:	Savings and credit Cooperative
T-BILL	:	Treasury Bills
CRR	:	Cash Reserve Ratio
ANOVA	:	Analysis for Variance
NACOSTI	:	National Commission for Science Technology and Innovation
NIM	:	Net Income Margin
ROE	:	Return on Equity
MFBs	:	Micro-finance Banks
CRBs	:	Credit Reference Bureaus
MRPs	:	Money Remittance Providers
AVECM	:	Asymmetric Vector Correction Model
PLC	:	A public Limited Company
POLS	:	Pooled Ordinary Least Square
ROCE	:	Return on Capital Employed
GDP	:	Gross Domestic Product
OLSs	:	Ordinary Least Squares
CCTV	:	Closed Circuit Television
FE	:	Fixed Effects

CBOMO	:	Central Bank Open Market Operations
CAR	:	Capital Adequacy Ratios
RE	:	Random Effects
CPL	:	Consumer Price Index
FEM	:	Fixed Effects Model
REM	:	Random Effects Model
VIF	:	Variance Inflation Factor
FDI	:	Foreign Direct Investment
CBI	:	Central Bank Independence
NPLs	:	Non Performing Loans
AMCO	:	Asset Management Company of Nigeria
IT	:	Information Technology
MPs	:	Members of Parliament
CAMEL	:	Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability, and Liquidity Management.

CHAPTER ONE

INTRODUCTION AND BACK GROUND TO THE STUDY

1.1 Introduction

This chapter presents the introduction, back ground of the study, problem statement, and purpose of the study, research objectives, research questions, and justifications of the study, scope of the study, limitations of the study, and operational definition of the terms as well as basic assumptions of the study.

1.2 Background of the Study

According to central bank of Kenya [CBK] (2010), a bank means a company which carries on, or proposes to carry on, banking business in Kenya and includes the co-operative bank of Kenya limited but does not include the central bank of Kenya. Commercial banks are licensed and regulated by the central banks of the jurisdictions (countries) in which they operate. In Kenya, the central bank of Kenya licenses, supervises and regulates commercial banks, as mandated under the banking Act (Cap 488).

Banks facilitate financial development by mobilizing and allocating funds to investment projects with the greatest long-term economic benefits. Moreover, it is widely acknowledged that a well-structured banking system, defined by its supervisory practices, risk taking, and governance, promotes greater financial performance and economic stability Caprio and Levine (2007), stated that promoting ample banking practices, however, has proven to be difficult. Effective bank regulation has two main objectives: the first is to protect private interests of depositors, investors, and creditors; the second is to

safeguard public or collective interest by promoting the integrity and reputation of financial services of markets. The wave of deregulation of the financial services in the late 1980s and the recent globalization of the industry have both counterbalanced by a rise in regulations and enforcement actions (Gully, 2015).

1.2.1 Monetary Policy

This is the process by which the government, central bank, or monetary authority of a country controls the supply, availability and cost of money or rate of interest to attain a set of objectives oriented towards the growth and stability of the economy. Monetary policy rests on the relationship between the rates of interest in an economy that is the price at which money can be borrowed and the total supply of money Saunders and Schumacher (2016), the 1971–1973 collapse of the Bretton Woods system created, for the first time in history, a situation in which the world's leading central banks were responsible for conducting monetary policies. Previously, central banks had normally operated under the constraint of some metallic standard like gold or silver standard (Kydland & Prescott, 2017).

In many developing countries, the explicit objectives of monetary policy include either the achievement of price or exchange rate stability. For instance, while monetary policy in South Africa is designed to achieve price-stability, in China its objective is to maintain a stable value of the domestic currency, and in Nigeria it is expected to accomplish price and exchange rate stability. Historically, the framework of monetary policy in many developing countries has followed the monetary targeting or exchange rate targeting approaches.

However, over the last two decades a number of developing countries have adopted information technology (IT).

The environments in which commercial banks operate are constantly changing with different factors influencing their operations and hence affect their performance. Since the turn of the millennium, the general business environment has become more volatile, unpredictable and very competitive. Goodfriend (2015) stated that, coping with the increasingly competitive environment has called on commercial banks to rethink their strategies. Commercial banks must realize that their services and products, regardless of how good they are, will not simply guarantee good financial performance because of unpredictable internal and external factors.

Recent trends in technology, financial innovations and globalization are certainly posing new challenges for market participants in the Kenyan financial sector. To this extent, advances in computer technology and telecommunications are expanding the frontiers of electronic banking and internet based financial services. In addition to that, local banks have continuously sought to establish branches in other East African countries. This leads banks to been exposed to different environments in terms of regulations, market size, markets rates and many others which are country-specific. All those developments would surely have implications on the costs and revenues and hence the profitability of the commercial banks in the Kenyan banking industry is either affected negatively or positively depending on the level of risks.

The central bank of Kenya monetary policies are therefore designed to support the government's desired growth in the production of goods or services, and employment

creation though achieving, and maintaining a low and stable rate of inflation central bank of Kenya (2016), however, in the recent past monetary policy has become a very important tool in helping stabilize a weakening shilling which has been of a concerned to investors and other economic policy makers, a weak home currency shillings creates costly import, raises the level of inflation consequently creates economic deterioration.

In addition to that, central bank of Kenya is responsible for the conduct of a nation's monetary policy Friedman (2013) disclosed, over several past years CBK has stepped through monetary policy instruments to promote sound macroeconomic conditions. Notably, in 2011 the central bank of Kenya increased interest rates from 5.75% to 18% over a relatively short period to reign in on a weakening shilling (CBK, 2011).

A further decline of the shilling was averted and stable macroeconomic conditions were restored. The rate was then reduced to 8.5% for some time until when it again due to a weakening shilling, the central bank of Kenya increased the rates from 8.5% in the month of May to 10% in the month of June and then to 11.5% in July 2015. However, this has not been the desired effect as the shilling continues to weaken further against the US Dollar central bank of Kenya (2015). Recently the monetary policy committee (MPC) lowered central bank rate to 10% hence the commercial banks lower their interest rates to 14% from 14.5% after central bank of Kenya capped the interest rate (CBK, 2016).

1.2.2 Financial Performance of Commercial Banks

Financial performance is a measure of company's policies and operations in monetary terms. There are many different ways to measure banks financial performance.

Financial performance measurement generally looks at firms financial ratios (derived from their financial statements) such as liquidity ratios, activity ratios, profitability ratios, bad debt ratios. The financial performance of commercial banks will be measure through it profitability. There are various profitability measures that are used to measure financial performance of commercial banks, they include net interest margin (NIM), return on equity (ROE), and return on assets (ROA).

The return on assets is one of the financial ratios that refer to the profitability of a firm. It is a ratio of income to its total assets; it measures the ability of the firm management to generate income by utilizing company assets at their disposal. In other words, it shows how efficiently the resources of the company are used to generate the income. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution (Bae & Ratti, 2014).

According to Wen (2010) he states that, a higher return on assets shows that the company is more efficient in using it resources. Basically, financial performance of commercial banks in Kenya was measured using return on assets for this study case.

1.2.3 Commercial Banks in Kenya

The company's act, the banking act, the central bank of Kenya act, the Kenya bankers association and the various guidelines issued by the central bank of Kenya, to governs the banking industry in Kenya. The banking sector in Kenya was liberalized in 1995 and exchange controls lifted. The central bank of Kenya, which falls under the cabinet secretary to the national treasury docket, is responsible for formulating and implementing monetary

policies and fostering the liquidity, solvency and proper functioning of the financial system. The central bank of Kenya acts as the main regulator of commercial banks in Kenya (CBK, 2014).

As at 31st December 2016, the Kenyan banking sector comprised of the central bank of Kenya, as the regulatory authority, 43 banking institutions (42)1 commercial banks and 1 mortgage finance company, 8 representative offices of foreign banks, 13 micro-finance banks (MFBs), 3 credit reference bureaus (CRBs), 17 money remittance providers (MRPs) and 77 foreign exchange (forex) bureaus. Out of the 43 banking institutions, 40 were privately owned while the Kenya government had majority ownership in 3 institutions. Of the 40 privately owned banks, 25 were locally owned (the controlling shareholders are domiciled in Kenya) while 15 were foreign-owned (many having minority shareholding). The 25 locally owned institutions comprised of 24 commercial banks and 1 mortgage financial institution. Of the 15 foreign-owned institutions, all commercial banks, 11 were local subsidiaries of foreign banks while 4 were branches of foreign banks. All licensed micro-finance banks, credit reference bureaus, forex bureaus and money remittance providers were privately owned.

1.3 Statement of the Problem

Globally, central bank independence (CBI) does not only help assure price stability but also fosters financial stability and improve financial performance (Bernanke, 2010). According to Greuning and Bratanovic (2003) poor financial performance has been seen due to most banks in developing economies such as Thailand, Indonesia, Malaysia, Singapore, Japan and Mexico experienced high non-performing loans, uncontrollability of

operation expenses which let significant decline from a high of 13.6% in December 1998 to 3.2% in 2007 during financial and banking crisis resulted in the closing down of several banks in Indonesia and Thailand.

In Africa, The same scenario had been witnessed in African countries for example, in 1998 in Cameroon, nonperforming loans accounted for 30percent of total loans. Three banks were restructured and two were liquidated as well in 2000 in Nigeria technically distrait banks in Nigeria had accumulated nonperforming loans in excess of the shareholders' funds that led to the injection of about N700bn by the central bank of Nigeria and the formation of the asset management company of Nigeria (AMCON) in July, 2010 to participate in a bazaar of nonperforming loans (NPLs) as strategies to vitalizing the revolting banks.

In Kenya, the link between monetary policy and bank profitability has gained prominence following the great financial crisis of 2007-2008. Kenya is East Africa's largest economy, short-term interest rates have sagged to near five and long-term interest rates to historically low levels. Importantly, estimated 10-year term premia have been mostly negative in a number of jurisdictions since 2011. There is widespread agreement that central bank of Kenya's aggressive response at the early stages of the crisis was critical for helping prevent a financial and economic meltdown. However, in recent years, concerns have been growing that the net benefits of prolonged monetary accommodation might be declining due to its negative side effects. (Rajan 2017), One such side effect is the negative effect of a low interest rate structure on bank financial performance and hence on the soundness of the banking sector in Kenya.

Despite the increasing importance of monetary policies in Kenya, there has been scanty study that has focused on the relationship between monetary policies and bank financial performance. It is against this background this study embarked to fill the existing knowledge gap and contextual gap and establish the relationship between monetary policies and financial performance of commercial banks in Kenya.

1.4 Purpose of the Study

To determines the relationship between monetary policies and financial performance of commercial banks in Kenya.

1.5 Objective of the Study

The overall objective of the research study was to find out the relationship between monetary policies and financial performance of commercial banks in Kenya.

1.5.1 Specific Objectives of the Study

The study was guided by the following specific objectives;

i. To examine the relationship between Central Bank Rate and financial performance of commercial banks in Kenya.

ii. To establish the relationship between Central Bank Open Market Operations and financial performance of commercial banks in Kenya.

iii. To evaluate the relationship between Cash Reserve Ratio and financial performance of commercial banks in Kenya.

iv. To determines the Moderating influence of Bank Size on the relationship between monetary policies and financial performance of commercial banks in Kenya.

1.6 Research Questions

The study sought to answers the following questions;

i.   What is the relationship between Central Bank Rate and financial performance of commercial banks in Kenya?

ii. To what extent does Central Bank Open Market Operations influence the financial performance of commercial banks in Kenya?

iii. What is the relationship between Cash Reserve Ratio and financial performance of commercial banks in Kenya?

iv. What is the moderating influence of Bank Size on the relationship between monetary policies and financial performance of commercial banks in Kenya?

1.7 Justifications of the Study

While this study may be of value to any other person interested in monetary policies and financial performance, it is also anticipated that its findings will specifically benefit different groups of organization.

The study is expected to contribute to the existing literature in the field of monetary policies. Future scholars can use this research as a basis for further research in the area of monetary policy theories.

A lot of government attention in banking sector is on the vision 2030 achievement of Kenya being center of finance in Eastern and Southern Africa. So, government of Kenya will benefit more from this study as it will help in determining if the commercial banks in Kenya are performing towards that end or not.

Investors will be in a position to utilize the research findings and recommendations from the study to forecast the financial performance of commercial banks and rebalance their portfolio accordingly given the changes in monetary policies regulation.

This study will also be helpful to the management of central bank of Kenya, banking industries and others policy makers in decision making process, therefore leading to improvement on their financial performance through proper usage of research thesis.

1.8 The Scope of the Study

The content of the research study focused on the relationship between monetary policies and financial performance of commercial banks in Kenya, it shown the cost-effectiveness and general financial performance of commercial banks in Kenya.

This study was carried out in banking sectors targeting the 42 commercial banks in Kenya. It was based on the fact that it provides financial services in the country and yet their performance has been decreasing in the recent years.

The period covered in the research study is from year 2013-2017; this is because banking institutions in Kenya experienced challenges of financial performance and financial services thus hindrance in economic activities and economic growth.

1.9 Limitations of the Research Study

The study was based on the five years study period from year 2013 to 2017. Since this is the latest period; it ensured availability of data that is more applicable to the current economic situation. However, a longer duration of the study captured periods of various

economic significances such as booms and recessions. This would have probably given a longer time focus hence a broader dimension to the problem.

The results may not be applicable to other financial firms such SACCOs and MFIs as the case study for the research was only based on 42 commercial bank in Kenya while it can offer important insights to other financial institutions, such conclusions should be approached with care given the variations in the way commercial banks operate and the way other financial institutions operate. To improve this, it may be of important to replicate this study to other financial institutions or to include them in the study for future references.

The study used secondary source of data collection which was accessed from audited and published financial statements of commercial banks in Kenya, monetary policy statements and relevant reports from central bank of Kenya, banks being very fragile in their operations, disclosing their information's direct to the researcher was a problem.

1.10 Operational Definition of the Terms

Monetary Policy- it is the process by which the government of a country through the central bank, or monetary authority controls the supply, availability and cost of money or rate of interest to attain a set of objectives oriented towards the growth and stability of the economy. The monetary policy tools for this study were central bank rate; central bank open market operation; cash reserve ratio and finally bank size as a moderating variable.

Financial Performance- this is the ability of a bank to make profit on its assets or investments. The financial performance indicator for this study is Return on Assets.

Commercial Banks- this is defined as the financial institutions which offer services to general public such as accepting deposits, and issuing loans to their customers among others.

Central Bank Open Market Operation- it is an activity by the central bank to buy or sell government bonds in an open market

Cash Reserve Ratio- it is proportion of a commercial bank's deposit liabilities which must be deposited at central bank of Kenya at no interest.

Central Bank Rate- this refers to the rate of interest which central bank charges on it loan and advances it to commercial banks.

Bank Size- it is a ratio that represents the ownership of assets by the banks, high assets ownership enables banks to offer more financial services and vice versa. In this study bank size as a moderating variable was measured by total assets.

1.11 Basic Assumptions

The information used in this study was obtained from published journals, websites, newspapers, textbooks and internet source. The researcher found this information's necessary and relevant to the area of study since it has undergone through several verification thus recommended to contain original information.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews empirical studies that have been undertaken in relation to the study objectives and a relationship to evaluate contributions made. In addition, a review of various theories that are related to this research study, determinates of financial performances, summary of the literature review, relationship between study variables and financial performance measured by return on assets and finally the conceptual framework is explained using a concept map that captures the key variables and linkages the relationships amongst variables.

2.2 Theoretical Review

The concept of monetary policies has been in existence for so many years all over the world. However, it was not developed as it is today due to some factors like increase in competition from other financial institutions, changes in customer demands among others. Central banks of Kenya regulations are of growing importance in financial institutions, particularly in management of banks operation. There are number of theories that have been developed in describing the relationship between monetary policies and financial performance of commercial, but this paper will only discuss the following five theories which are; Agency Theory, Stakeholder Theory, and Liquidity Theory, Keynesian Theory and Theory of Financial Development and Economic Growth.

2.2.1 Agency Theory

In commercial banks there is management team (managers) and the owners (shareholders) of the business. Owners' delegates power to the management whom they expect them to work towards achieving their main interest which is wealth maximization. Clarkson (1995) also states that wealthy creation for the owners of the organization is the main purpose for the business. Management team has more information concerning firm's performance as compared to their owners. Commercial banks management is responsible in managing all the banks operation thus having more information concerning the operation of the bank as compared to their shareholders.

According to Roe (1994) shareholders lack enough information on how to run the business as well as deep understanding of their business leading to having management team in their business. According to Howels and Bain (2004) banking sectors rules and regulations exist to manage asymmetric information which may be exposing the shareholders to certain risk not aware of but managers have all the information. Banks work with money which is very tempting to fraud and other illegal practices such as financing terrorism groups so, separation of ownership and control results to different behaviors in the management team such as agency problem where management leaves the interest of shareholders and start working towards achieving their own interest. Agency problem has been a problem in all financial institutions where if not controlled, it may results to negative impact on the overall performance of the firm, it results to negative impact on the overall performance of the firm. Blair and Tony (1994) management has to be well monitored and institutional

arrangement to be in place in order to make sure there is no abuse of the power by managers.

In large organization where there is dispersed ownership like in the case of commercial banks, shareholders has to incur cost in dealing with agency problem which is known as agency cost. There are two main costs which can be used to minimize shareholders-management conflict that is, monitoring cost and incentive cost. Monitoring cost is associated with things like ensuring effective internal audit, external audit, internal controls, good supervision, and CCTV among others. Incentive cost is the cost incurred by shareholders through increase of employee's wealth by paying high remuneration and other benefits such as; shares appreciation rights, commissions, spouse allowances or children education. The problem with this agency cost is that, everyone wants to be rewarded, so managers may be tempted to give false information in order to get incentives even if that is not the real situation of the organization (Commercial bank). Shareholders can directly intervene the management with threats of firing or threat of takeover in orders to control agency problem (Sanda, Mukaila, & Garba, 2005).

2.2.2 Stakeholder theory

In operation of any business, shareholders and management are not only the important ones in the running of business. Miles (2012) state that stakeholders theory considers wider group which affects the organizational objectives and policies as compared to agency theory which consider only two groups, shareholders and management. This theory recognizes two types of stakeholders, internal stakeholders and external stakeholders. Internal stakeholders comprises of employees, managers and owners while external

stakeholders comprises of suppliers, government, creditors, customers, community and environment from which the business is operating in. Other stakeholder's involvement in organizational decision making can help to reduce conflict hence smooth business operation. Turnbull (1994) listed three important approaches in stakeholders' theory, descriptive, instrumental and normative approach. Descriptive approach is used to show characteristics and behavior on how firm is managed. Instrumental approach shows connection that exists between stakeholder's management group and the organizational goals. Normative approach identifies morals for good organizational operation and management (Donaldson & Preston, 1995).

Banks regulation and rules recognizes all the above stakeholders as they play an important role in bank performance. McDonald and Puxty (1979) states that banks no longer concentrate with shareholders only; this is because every business operates within a society which it has to be recognized. The issue of social and environment accounting has been for the last few years gaining an important in the modern business world. Starik and Rands (1995) suggested environment as key important stakeholder in the running of a business. Information about business operating environment is becoming important to both the business and information users as it provides information which helps to discharge accountability to the society. It also helps in demonstrating responsiveness of the firm to certain ethical issues in that community, some business which supports the issue of community environment are becoming 'greener' in their business operation (Gray, Collison & Bebbington, 1997).

2.2.3 Liquidity Preference Theory

Liquidity preference theory simply refers to a desire of having cash in one pocket. Liquidity is any form of an asset which can be easily converted in to cash, money is considered as the most liquid in all assets. Commercial banks deal with mostly liquid assets which can be demanded anytime by the investors. Interest rate is a reward for not holding liquid asset for specified period which it is calculated by the demand and supply of money.

According to Keynes (1936) demand for money is categorized in three motives; firstly, transaction motive which is desire to have cash for basic transaction such as for transport, wages or raw material payment. Secondly, precautionary motive which is holding cash to cater for any unexpected expenses if happens such as; accident or illness. Thirdly, speculative motive which is to hold cash and anticipate future changes in order to exercise one rights in stock buying. If stock price is expected to rise then interest rate is expected to fall so, investors will buy and wait until price rises. Supply of money is the total amount of money circulating in a country.

Different investors have different taste in liquidity where some may prefer illiquid assets. The more illiquid an asset is the more the interest rate. Liquidity in banks can be affected by several factors such as political instability in a country, like in the case of what happened in Kenya in 2007 and 2008 post-election violence, every investor from the affected area rushed to the bank with the desire to have his/her cash in the pocket. Argument by Keynes (1936) was criticized by other authors such as Rothbard (2009), he argued that, interest rate is influenced by other factors not liquidity preference only as Keynes suggested. Keynesian

theory of interest considers short-run interest with no explanation on long run interest, He added.

2.2.4 Keynesian Theory

This theory was proposed by Keynes (1936). It holds that some microeconomic level actions if taken collectively by a large proportion of individuals and firms can lead to inefficient aggregate macroeconomic outcomes, where the economy operates below its potential output and growth rate. The supply of money is determined by the monetary authority (the central bank), by lending the commercial banks and by the public preference for holding cash (Fielding & Shortland, 2015).

Current interest rates reflect expected inflation rates, income (GDP) and expected money supply changes. Frankel, Schmukler and Serven (2014), suggested that, in order to stabilize the economy combination of two approaches: a reduction in interest rates and government investment in infrastructure. Investment by government injects income, which results in more spending in the general economy, which in turn stimulates more production and investment involving still more income and spending. The initial stimulation starts a cascade of events, whose total increase in economic activity is a multiple of the original investment.

In the neo-classical synthesis, which combines Keynesian macro concepts with a micro foundation, the conditions of general equilibrium allow for price adjustment to eventually achieve this goal. More broadly, monetary policies transmission through the interest rate channel is based on the traditional Keynesian interpretation of the role of money for real

interest rate movements. A change in interest rates affects firm's investment spending, consumer spending on housing and personal consumption of durable goods. Gerlach and Svensson (2013) spell out the differences in the manifestation of the credit channel. A monetary contraction leads to a reduction in bank lending due to a drop in bank deposits, and due to a deterioration of borrowing firm's balance sheets and a decline in collateral value. A decline in aggregate credit reduces output. A reduction in firm's cash flow and a drop in equity prices following periods of tight money monetary policies as put a downward pressure on aggregate lending. Consumers would rather hold more liquid assets after a drop in the stock market following a monetary contraction, thus decreasing spending on illiquid assets such as real estate and on durable goods.

On the other hand, this theory is in connection with the research study basically on the issue of micro economics actions when taken by the concern parties, will definitely have an impact on macroeconomic outcomes. For example, if private sectors make decisions, it can either affect the economy outcome negatively or positively.

2.2.5 Theory of Financial Development and Economic Growth

Theory of financial development and economic growth was advanced by Levine (2005). It provides a theoretical review which proves that financial development plays an important role to the country economic growth.

Stock and Watson (2013) suggests that financial institutions and markets can foster economic growth through several assumptions for example easing the exchange of goods and services through the provision of payment services, mobilizing and pooling savings

from a large number of investors, possible investment projects, thus allocating savings to their most productive use, monitoring investment, diversifying, increasing liquidity and reducing inter-temporal risk. Since many market frictions exist and laws, regulations, and economic policies differ markedly across economies and over time, improvements along any single dimension may have different implications for resource allocation and welfare depending on other frictions in the economy.

The strength of Levine theory was by introducing control factors, by examining three growth indicators: real per capital growth by looking at inflation rate and interest rate, growth in capital accumulation which address monetary policies as independent variable and it measurements (weighted average lending interest rates and deposit rates, average 364 T-Bills rate ad Treasury bond rates, weighted average each bank net demand and time liability and average book value of total assets of the bank), also by introducing new financial performance as a dependent variable measures by return on assets, however. There are some weakness associated with Levine approach, first, he do not address causality. Second, he excludes other components of the financial sector such as bond market and the non-banking financial institutions. Third, he limits stock market to liquidity while it also provides risk diversification.

This theory is basically relevant to the study because of many financial markets that exist, the government or central bank is forced to change polices to ensure markets frictions are improved, such changes can affect the economy and as the results, the financial performance of commercial banks is affected as well.

2.3 Theoretical Framework

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┌─────────────────────┐
│  Agency Theory      │─────────────┐
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│  Stakeholder Theory │──────►      │
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│  Liquidity Preference│──────►      │        │    Financial     │
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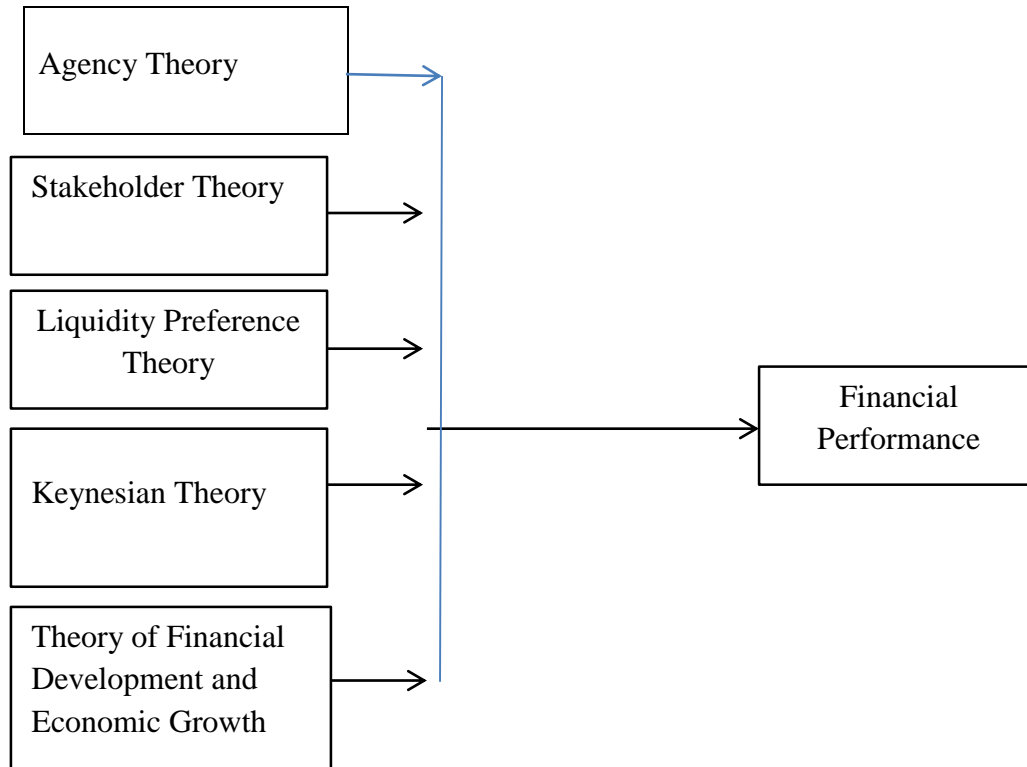
Figure 2.1 Theoretical Framework

2.4 Determinants of Financial Performance

Terance (1989) defines performance measurement as a way of ensuring that resources available are used in the most efficient and effective way. The essence is to provide for the organization the maximum return on the capital employed in the business. Financial performance for banks is very important because managers need to know how well the banks are performing.

The determinants of bank performances can be classified into bank specific (internal or intrinsic) and macroeconomic (external or extrinsic) factors. Internal factors are individual bank characteristics which affect the bank's financial performance. These factors are

21

basically influenced by internal decisions of the management and the board and external determinants of bank profitability are factors that are beyond the control of a bank's management. They represent events outside the influence of the bank. Nevertheless, the management can anticipate changes in the external environment and try to position the institution to take advantage of anticipated developments.

The Bank Specific/Internal/Intrinsic Factors are discussed as below

As explained above, the internal factors are bank specific variables which influence the profitability of specific bank. These factors are within the scope of the bank to manipulate them and that they differ from bank to bank. These include capital size, size of deposit liabilities, size and composition of credit portfolio, interest rate policy, labor productivity, and state of information technology, risk level, management quality, bank size, ownership and the like. CAMEL framework often used by scholars to proxy the bank specific factors. Dang (2011), stated that CAMEL stands for Capital Adequacy, Asset Quality, Management Efficiency, Earnings Ability and Liquidity Management. Each of these indicators is further discussed as below.

2.4.1 Capital Adequacy

Capital is the amount of owner funds available to support a bank's business and act as a buffer in case of adverse situation. Athanasoglou, Brissimis and Delis (2005) mentioned that bank's capital creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs. Moreover, greater bank capital reduces the chance of distress. Capital adequacy is the level of capital required by the banks to enable them withstand

risks such as credit, market and operational risks they are exposed to in order to absorb the potential loses and protect the bank's debtors. The adequacy of capital is judged on the basis of capital adequacy ratio (CAR). Capital adequacy ratio shows the internal strength of the bank to withstand losses during crisis. Capital adequacy ratio is directly related to the resilience of the bank to crisis situations. It also has a direct impact on the profitability of banks by determining its expansion to risky but profitable ventures or areas (Sangmi & Nazir, 2010).

2.4.2 Asset Quality

The bank's asset is another bank specific variable that connects with profitability of a bank. The bank assets include among others current assets, loan portfolio, fixed assets, and other investments. More often than not the loan book of a bank is the major asset that generates the major share of the banks income. The loan portfolio quality has a direct bearing on bank profitability. The highest risk facing a bank is the losses that arise from non-performing loans. Thus, non-performing loan ratios are the best proxies for asset quality. It is the major concern of all commercial banks to keep the amount of non-performing loans at a low level. Thus, low non-performing loans to total loans ratio shows good health of the bank portfolio; the lower the ratio, the better the commercial banks financial performance (Sangmi & Nazir, 2010).

2.4.3 Management Efficiency

Management efficiency is one of the key internal factors that determine the bank profitability. It is represented by different financial ratios like total asset growth, loan

growth rate and earnings growth rate. Yet, it is one of the complexes subject to capture with financial ratios. Moreover, operational efficiency in managing the operating expenses is another dimension for evaluating management quality. The performance of management is often expressed qualitatively through subjective evaluation of management systems, organizational discipline, control systems, quality of staff, and others parameters. The capability of the management to deploy resources efficiently, income maximization, reducing operating costs can be measured by financial ratios. One of the ratios used to measure management quality is operating profit to income ratio Sangmi and Nazir (2010), states the higher the operating profits to total income (revenue) the more the efficient management is in terms of operational efficiency and income generation, the other important ratio that proxy management quality is expense to asset ratio. The ratio of operating expenses to total asset is expected to be negatively associated with profitability. Management quality in this regard, determines the level of operating expenses and in turn affects profitability (Athanasoglou *et al*., 2005).

2.4.4 Earnings Ability

Financial institutions in the recent years have increasingly been generating income from off-balance sheet business and fee income. Albertazzi and Gambacorta (2006) noted that the decline in interest margins forced banks to explore alternative sources of revenues leading to diversification into trading activities, other services and non-traditional financial operations. The concept of revenue diversification follows the concept of portfolio theory which states that individuals can reduce firm specific risk by diversifying their portfolios. In the study of Sufian and Chong (2009), the findings showed that there was positive

relationship between total non-interest income divided by total assets, a proxy for income diversification and a bank profitability using data from all commercial banks in Philippines.

2.4.5 Liquidity Management.

Liquidity is another factor that determines the level of bank performance. Liquidity refers to the ability of the bank to fulfill its obligations, mainly of depositors. Adequate level of liquidity is positively related with bank profitability. The most common financial ratios that reflect the liquidity position of a bank are customer deposit to total asset and total loan to customer deposits. Other financial ratios that can be used to measure liquidity, Ilhomovich (2009) are cash to deposit ratio which was used to measure the liquidity level of banks in Malaysia.

Some of the Bank Macroeconomic/External/Extrinsic Factors are as follow

Extrinsic factors are the macroeconomic strategy stability, inflation, gross national product, interest rate and political unpredictability (Athanasoglou *et al.,* 2005). Some of these factors are discussed as follow;

2.4.6 Gross Domestic Product

Gross domestic product (GDP) measures total number of finished goods and services monetary value manufacture in a country in a given duration of time. Gross domestic product is measured on yearly basis and it compromises all consumption by private consumers and public consumers, government outlays, investments and exports less imports occurring inside a demarcated borderline. The gross domestic product is one of the key primary indicators of a country's fiscal performance. It is calculated in two methods;

one is by tallying up everyone's income during the period, second one is by totaling the worth of all goods and services that are already finished and produced in the country throughout the a specific year (Kadongo, 2011).

2.4.7 Interest Rates

The charge on borrowing money is interest rates. Percentage is useful in expressing interest rate on the total amount borrowed. Interest rate is the amount of interest charged per unit of time in a given period of time, normally one year. There are a myriad of rates and no one particular rate of interest. Varying interest rates echo the capability and enthusiasm of borrowers to meet their obligations and easiness with which a borrower's promissory note or bond, mortgage, debenture or other indication of indebtedness can be turned into money. The reflection of the quality of the money in which a debt is denominated is illustrated by the level of interest rates. This is the rate at which the moneylender and debtor are taxed guaranteed by the self-assurance in which investors embrace the pertinent fiscal and monetary establishments. The total borrowed interest rates also show the return on asset like government bond or any other bond within an economy (Kadongo, 2011).

In addition to that, interest rate is the earnings a financier anticipate by advancing and finalized with his/her liquidity. The interest rate is a two phase scenario in that owners of surplus funds will part with some if it is high as they expect higher returns in future. Higher interest rates demoralize borrowing on the other hand. In equilibrium state interest rate is equal to demand, investment, and supply and saving in the capital market.

2.4.8 Exchange Rates

Exchange rates have a significant link with financial performance, when the rates of exchange in currency has variations and affect right of the import price including the production cost and Consumer Price Index (CPI). Exchange rate discrepancies are transmitted to domestic prices through three networks of prices of imported consumption goods, exchange rate movement affects domestic prices directly. The second factor affecting the performance is intermediate imported goods prices influencing exchange rate movement which has effect on production cost of domestically produced goods. The last is domestic goods priced in foreign currency. The magnitude of fluctuations is redirected in the consumer price index (CPI) which rest on the portion of consumption imports basket (Nwankwo, 2006).

Demand increases for domestic goods when factors affecting prices causes rise in price level of imported goods and services hence reduction in completion is experienced. This shift equilibrium which results pressure mounting on domestic prices and nominal wages as demand increases. Additional rising pressure will be applied on domestic prices as a result of rising wages. Depreciation in the rate of exchange can merely safeguard the local industry as local production cost rises much less than the rate of depreciation as compared to prices of imported equivalent increases by the full amount of the depreciation. This scenario of currency depreciation leads to improved and conducive environment for indigenous industry production. Supplementary rise in rate of exchange lead to foreign currency gains in a well-controlled macro-economic policy environment by commercial

banks which are integrated in their income statements to progress on their performance (Nwankwo, 2006).

2.4.9 Inflation Rates

Investors usually demand a high price to shelter their acquaintance to inflation risks as long as there is improbability in the market and in turn this leads to reduction in the capacity of investment. In order to bring the inflation permanency rate it is significant to inspire investment (Nwankwo, 2006).

Inflation is also sustained or persistent increase in the general prices of goods and services in the long ran. High inflation rates lead to high interest rates on loans and thus lead to higher income to banks. The effect of inflation on banking performance depends on whether inflation is anticipated or unanticipated, in an event where an increase in the financial performance, financial profit and efficiency, 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.

2.5 Empirical Review

There are several documented studies on the determinate of financial performance of commercial banks both at international and local level. Some of these studies incorporated various monetary policies in analyzing the relationship with commercial banks financial performance. Some of these studies are viewed in this section.

2.5.1 International Evidence

Sheng (1991) did a study on a relationship between performance and regulation of bank in Washington which found out that, regulations has positive effect on performance. This result was supported by Howels and Bain (2004) study. However, Barth, Caprio and Levine (2001), stated that, an increase in financial restriction lead to an increase in financial crisis. Vianney (2013) studied on the relationship between regulations and financial performance of Rwanda commercial banks and concluded that, capital adequacy ratio, liquidity ratio and management efficiency ratio has no evidence to explain financial performance of commercial banks in Rwanda.

Gertler and Gilchrist (1994) conducted a study that specifically looked at how bank lending business responds to monetary policy tightening. Their study reveals that business lending does not decline when policy is tightened. They concluded that the entire decline in total lending comes from a reduction in consumer and real estate loans. In contrast to Gertler and Gilchrist (1994) study, Kashyap and Stein (1994) found evidence that business lending may respond to a tightening of monetary policy. They found that when policy is tightened, both total loans and business loans at small banks fall, while loans at large banks are

unaffected. The differential response of small banks may indicate they have less access to alternative funding sources than large banks and so are less able to avoid the loss of core deposits when policy is tightened.

Rao and Somaiya (2006) investigated the impact of monetary policy on the profitability of banks in India between 1995 and 2000. The monetary variables were banks rate, lending rates, cash reserve ratio and statutory ratio, and each regressed on banks profitability independently. Lending rate was found to exact positive and significant influence on bank's profitability, which indicates a fall in lending rates will reduce the profitability of the banks. Also, bank rate, cash reserve ratio and statutory ratio were found to significantly affect profitability of banks negatively. Their findings were the same when lending rate, bank rate, cash reserve ratio and statutory ratio were pooled to explain the relationship between bank profitability and monetary policy instruments in the private sector.

Gul, Faiza and Khalid (2011) research was focused on examining the effect of bank specific and macroeconomic factors on bank profitability by using data of top 15 Pakistan commercial banks over the period 2005-2009. The pooled ordinary least square (POLS) method was used to investigate the impact of assets, loans, equity, deposits, economic growth, inflation and market capitalization on profitability, measured through return on asset (ROA), return on equity (ROE), return on capital employed (ROCE) and net interest margin (NIM). The results found evidence that both internal and external factors have a strong influence on profitability.

Gambacorta and Iannoti (2005) investigated the velocity and asymmetry in response of bank interest rates (lending, deposit, and inter-bank) to monetary policy shocks (changes)

in Italy from 1985-2002 using an asymmetric vector correction model (AVECM) that allows for different behaviors in both the short-run and long-run .The study shows that the speed of adjustment of bank interest rate to monetary policy changes increased significantly after the introduction of the 1993 banking law, interest rate adjustment in response to positive and negative shocks are asymmetric in the short run, but not in the long-run. They also found that banks adjust their loan (deposit) prices at a faster rate during period of monetary tightening (easing).

Syafri (2012) study analyzed the factors that affect the profit of commercial banks in Indonesia, using polling data from commercial banks listed on the Indonesia Stock Exchange between 2002 and 2011. Bank profitability was measured by return on assets and results showed that loan to total assets, total equity to total assets and loan loss provision to total loan have positive effect on profitability.

Frederic (2014) carried out a study on determinants of the local commercial banks' financial performance in Uganda. The study included variables such as inflation, capital, adequacy, management efficiency, and interest income and asset quality. The study analyzed data of all banks which included foreign and domestic commercial banks where a linear multiple regression analysis was conducted over the period 2000 to 2011. The findings of the study show that inflation significantly influences the performance of domestic commercial banks in Uganda.

Udeh (2015) examined the impact of monetary policy instruments on profitability of commercial banks in Nigeria using the Zenith bank PLC experience. The paper used descriptive research design. It utilized time series data collected from published financial

statements of Zenith bank PLC as well as central bank of Nigeria bulletin from 2005 to 2012. Four research questions and four hypotheses were raised for the study. Pearson product moment correlation technique was used to analyze the data collected while t-test statistic was employed in testing the hypotheses. The study discovered that cash reserve ratio, liquidity ratio and interest rate did not have significant impact on the profit before tax of Zenith bank PLC. However, minimum rediscount rate was found to have significant effect on the profit before tax of the bank. The paper concluded that a good number of monetary policy instruments do not impact significantly on profitability of commercial banks in Nigeria. The paper recommended that management of commercial banks in Nigeria should look beyond monetary policy instruments to enhance their profits.

Cekrezi (2015) carried a study to explore the factors that mostly affect financial performance of commercial banks which operate in Albania. The study population consisted of 16 commercial banks with domestic and foreign capital, during the period 2010 to 2013 with a total of 48 data. The investigation used cross sectional time series data which were collected from the balance sheet annual reports. The study concluded that bank size has a negative but statistically insignificant effect on banks profitability, capital adequacy was one of the bank specific factors that influence the level of bank profitability while liquidity was negatively related with profitability.

A study was conducted by Buyinza (2010) to examine how profitable commercial banks in Sub-Saharan African countries were. The study focused on samples of 23 commercial banks profitability covering the period 1999 to 2006 all in Sub-Saharan African countries. The research made use of panel data regression analysis where the results of the study show

that bank size has a significant positive effect on profitability of banks. However, the study conducted a cross country analysis.

Ndugbu and Okere (2015) conducted a study on monetary policy and the performance of deposit money banks in Nigeria. The study focused on monetary policy on the performance of deposit money banks in Nigerian for the period ranging from 1993 to 2013. The findings from the ordinary least squares show that the relationship between cash reserve ratio and performance of money deposit banks was insignificant. Notably, the findings of Ndugbu and Okere (2015) is in contrast with that of Ajayi and Atanda (2012) who found cash reserve ratio to have a significant negative effect on the performance of commercial banks in Nigeria. In addition, this study did not consider the moderating influence of bank size on the relationship between cash reserve ratio and performance of commercial banks but this research study put banks size into much consideration.

2.5.2 Local Evidence

Kamau (2009) did a study on commercial banks in Kenya and set to establish how capital adequacy affects profitability of the banks. He found out that the capital structure of banks is highly regulated. This is because capital played a crucial role in reducing the number of bank failures and losses to depositors when a bank fails as high leveraged firms are likely to take excessive risk in order to maximize shareholder value at the expense of finance providers. To this extent, he concluded that banks with adequate capital were more profitable than banks which were struggling to maintain the statutory capital adequacy requirement.

Ochieng (2014) did a study on the effect of central bank of Kenya prudential guidelines and regulations on financial performance of commercial banks in Kenya using six (6) variables; gross domestic product, average annual inflation rate, management efficiency, corporate governance, capital requirement and liquidity management. He found a strong and positive relationship between central bank of Kenya prudential guidelines and banks performance.

Waweru (2013) conducted a study on the effect of monetary policy on commercial bank's financial performance in Kenya. in respect to cash reserve ratio and financial performance of commercial banks, the results of the study indicate that; amount of funds commercial banks deposit with central bank of Kenya, that is, cash reserve ratio has a significant positive effect on commercial banks' profitability in Kenya. However, the research did not feature bank size which accounts for economies of scale and its moderating effect on the relationship between cash reserve ratio and financial performance of commercial banks in Kenya.

Kimani (2013) studied the effect of monetary policy on the lending behaviors of Commercial banks of Kenya. The study established that central bank rate; cash reserve ratio; open market operation and uncertainty caused by possible outcomes caused by monetary policy changes influences lending behavior of commercial banks in Kenya.

Ongore and Kusa (2013) study examined the effects of bank specific factors and macroeconomic factors on the performance of commercial banks in Kenya during the period from 2001 to 2010. They analyzed ten years panel data for 37 commercial banks, using linear multiple regression model and generalized least square on panel data to

estimate the parameters. The findings showed that bank specific factors significantly affect the performance of commercial banks in Kenya, except for liquidity variable. But the overall effect of macroeconomic variables was inconclusive at 5% significance level. The moderating role of ownership identity on the financial performance of commercial banks was insignificant. Thus, it can be concluded that the financial performance of commercial banks in Kenya is driven mainly by board and management decisions, while macroeconomic factors have insignificant contribution.

Otuori (2013) studied on the influence of exchange rate determinants on the financial performance of commercial banks in Kenya. The study found that interest rate had a positive effect on bank performance in Kenya. The study therefore concluded that higher levels of interest rate lead to higher profitability in commercial banks in Kenya. The study found that inflation rate had a negative effect on firm performance in Kenya. It was therefore concluded that higher levels of inflation rate result in lower bank profitability in Kenya. The study found that external debt had a negative effect on bank profitability in Kenya. The study therefore concluded that higher levels of external debt result in lower bank profitability in Kenya. The study found that exports and imports had a positive effect on bank profitability in Kenya and concluded that higher levels of exports and imports lead to higher profitability of commercial banks in Kenya.

Kiganda (2014) investigated the effect of macroeconomic factors on bank profitability in Kenya with equity bank limited in focus. In view of the previous inconclusive findings on the effect of macroeconomic factors on bank profitability among researchers, the study was to establish the effect of macroeconomic factors on bank profitability in Kenya with equity

bank in focus. The study specifically sought to determine, establish and examine effect of; economic growth (real gross domestic product), inflation and exchange rate on bank profitability in Kenya with equity bank in focus respectively using annual data for the period of 5 years spanning from 2008 to 2012 and examined using multiple regression analysis. The ordinary least square results show that macroeconomic factors have insignificant effect on bank profitability in Kenya with equity bank in focus. Specifically; economic growth (real gross domestic product) and inflation have a positive insignificant effect whereas exchange rate has a negative insignificant effect at 5 % level.

Meshak and Nyamute (2016) conducted a study on monetary policy and financial performance of commercial banks listed in the Nairobi Securities Exchange, Kenya. The variables considered in the study were cash reserve ratio, central rate and open market. The findings of the study established that cash reserve ratio (CRR) negatively influenced the financial performance of commercial banks listed on the 24 Nairobi stock exchanges. However, the study did not look at bank size which is an important banks specific variable that accounts for economies of scale. However, this study considered size of the banks as a moderating variable.

2.6 Summary of Literature Review and Identified Research Gap

From the empirical review, there is inconclusive evidence on the factors that determine the financial performance of commercial banks. While many of the researchers seem to agree

that internal variables affect the financial performance of commercial banks, there is no consensus on the relationship between macro-economic variables and financial performance of commercial banks. Some of the studies have concluded that there is no relationship between macroeconomic variables and financial performance of commercial banks or the relationship is insignificant, others have concluded that there is evidence of a relationship between macroeconomic variables and financial performance of commercial banks.

This study therefore, seeks to fill the gap in the findings of the two local studies done on the determinants of commercial bank financial performance in Kenya. Kiganda (2014) study was on the effect of macroeconomic variables on equity bank hence it might not be suitable to generalize its findings, while Ongore and Kusa (2013) used both internal and external determinants for their study. The study concluded that, financial performance of the commercial banks is driven by the board and management decision while macroeconomic factors have insignificant contribution. This study will therefore seek to specifically establish the relationship, if any, of monetary policies and financial performance of commercial bank in Kenya using bank size as the moderating variable.

2.7 The relationship between Monetary Policies and Financial Performance

Monetary policies are used to stabilize inflation, promote growth, support long-term sustenance of public debt through steady interest rates and contribute to a reduction in

operational costs by enabling financial access within the economy. Monetary policies tools used in this study include the central bank rate; cash reserve ratio; central bank open market operations and bank size as a moderating variable.

Camarero and Tamarit (2012) pointed out that monetary policy is the measure of company policies and operations in monetary terms. In addition that, monetary policy refers to the actions of the central bank to regulate the money supply which could be through discretional monetary policy, it is measure through the instruments such central bank interest rate, central bank open market operation, cash reserve ratio and many others.

Loayza and Schmidt (2002), explained the objectives and goals that the central bank seeks to achieve generally are low inflation (usually targeted), protection of value of currency, full employment, and sustainable economic output (economic growth).

According to Leland and Pyle (2017), there are two types of monetary policy that exist and include expansionary policy or contractionary policy. An expansionary policy aims at increasing the total supply of money in the economy rapidly or decreases the interest rate. When the central bank wants to carry out an expansionary monetary policy, it goes to the security market to buy government bonds with money, thus increasing the money stock or the money in circulation in the economy. This may also be achieved by the central bank lowering the base lending rate, central bank rate, and thereby reducing the cost of funds in the economy. Expansionary policy is traditionally used to combat unemployment in a recession and spur economic growth by allowing investors access to capital (Bikker & Haaf, 2015).

A contractionary policy on the other hand decreases the total money supply. When the central bank wants to implement a contractionary monetary policy, it goes to the security market to sell government bonds for money thus, decreasing the money stock or the money in circulation in the economy. Contractionary policy is used to combat inflation. Furthermore, monetary policies are described as follows: accommodative, if the interest rate set by the central bank or monetary authority is intended to create economic growth; neutral, if it is intended neither to create growth nor inflation; or tight if it is intended to reduce inflation.

2.7.1 Relationship between Central Bank Rate and Financial Performance

The central bank rate is the lowest rate of interest charged on loans to commercial banks by the central bank. The level of the central bank rate is reviewed and announced by the monetary policy committee at least every two months and its movements, both in direction and magnitude, signal the monetary policy stance. An increase in the central bank rate signals lead to an increase in the bank's lending rates hence a tightening of the bank's loan books. This is expected to reduce the bank's profitability.

The bank rate is also called as a discount rate which is the rate at which the commercial bank rediscounts their bills of exchange from the central bank. 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.

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. In spite of that Saar and Yagil (2015) declared that, when the interest rates are too low, the interest earned from the loaned out amounts is negligible and thus contributes little to the profitability of the commercial bank. Therefore, a need to balance interest rates become essential in order to ensure the banks benefit without negative out come on its ability to earn interest from their customer deposits. It is important to note that this is the case that happened when the financial crisis of 2008 occurred. On the report of Zulkhibri (2012), it was discovered that interest rates are major determinant of bank specific and macro-economic factors that influence profitability of commercial banks.

2.7.2 Relationship between Central Bank Open Market Operation and Financial Performance

The central bank of Kenya through open market operations, purchases and sales of eligible securities to regulate the money supply and the credit conditions in the economy. Open market operation (OMO) can also be used to stabilize short-term interest rates. When the central bank buys securities on the open market, it increases the reserves of commercial banks, making it possible for them to expand their loans which increase the money supply.

This means that commercial banks can expand their loan book and thus lead to an increase in their profitability.

In addition to that, central banks in most industrial countries conduct monetary policy mainly via open market operations, where money is supplied in exchange for securities discounted with a short run nominal interest rate Kuttner (2013), hence, the costs of money acquisition depend on the current discount rate and the availability of collateral. In macroeconomic theory, however, it has often been claimed that open market operations are irrelevant in the sense that they are equivalent to lump-sum money transfers. The central bank buys or sells (on behalf of the fiscal authorities) the treasury securities to the banking and non-banking public (that is in the open market). One such security is treasury bills. When the central bank sells securities, it reduces the supply of reserves and when it buys (back) securities-by redeeming them-it increases the supply of reserves to the deposit money banks, thus affecting the supply of money.

2.7.3 Relationship between Cash Reserve Ratio and Financial Performance

The cash reserve requirement or cash reserve ratio is the portion of commercial banks deposits that required to be deposited at the central bank of Kenya. The deposits are kept in the cash reserve ratio account and do not earn interest, therefore the higher the cash reserve ratio, the less the availability of cash for commercial banks to conduct their financial intermediation roles. On the other hand the lower the cash reserve ratio the more the availability of cash for commercial banks to perform their financial intermediation roles which in turn enhances their financial performance (Cheruiyot, 2012).

Cash reserve ratio is also refers to as a certain percentage of total deposits the commercial banks are required to maintain in the form of cash reserve with the central bank. The objective of maintaining the cash reserve is to prevent the shortage of funds in meeting the demand by the depositor. The amount of reserve to be maintained depends on the bank's experience regarding the cash demand by the depositors. If there had been no government rules, the commercial banks would keep a very low percentage of their deposits in the form of reserves. Since cash reserve is non-interest bearing, i.e. no interest is paid on the deposits, therefore, the commercial banks often keep the reserve below the safe limits. This might lead to a financial crisis in the banking sector. Thus, in order to avoid such uncertainty the central bank imposes a cash reserve ratio on commercial banks. The central bank has the legal power to change the cash reserve ratio any time at its discretion. The cash reserve ratio is a legal requirement and therefore it is also called as a statutory reserve ratio (Gerlach & Svensson, 2013).

Through a cash reserve ratio, the central bank can change money supply in the economy. Such as, when the economy demands a contractionary monetary policy the central bank will raise the cash reserve ratio. On the other hand, when the economic conditions, demand for an expansionary monetary policy the central bank cuts down the cash reserve ratio. The cash reserve ratio method is more handy and effective where the open market operations and bank rate policy proves to be ineffective. However, its efficiency with respect to its impact on the capital market depends on the banking credit share in the credit market.

2.7.4 Moderating influence of Bank Size on Monetary Policies relationship with Financial Performance

The banks size is another element that researchers have focused on in connection to the financial performance of commercial banks. The size of banks is measured based on the assets base, number of branches, number of clients and capital base. Kuttner (2013) recognized just slight connection between the measure of a bank and their financial performance. However, this study focused on the total assets to measure bank size so that the relationship between monetary policies and financial performance of commercial banks in Kenya is established.

In addition to that bank size as measured by total assets is used as a moderating variable to analyzed financial performance of the bank system. Bank size is generally used to capture potential economies or diseconomies of scale in the banking sector. This variable controls for cost differences in product and risk diversification according to the size of the financial institution. This is included to control for the possibility that large banks are likely to have greater product and loan diversification. In most finance literature, natural logarithm of total assets of the banks is used as a proxy for bank size. The effect of bank size on profitability is generally expected to be positive. Claessens and Laeven (2015), likely a positive relationship between size and bank profitability could be found if there are significant economies of scale. In view of theory and empirical evidences, a positive relationship is expected between bank size and bank's performance ($\beta_5 > 0$).

2.8 Conceptual Framework

A conceptual framework demonstrates the proposed relationship between the variables in this study. Mugenda and Mugenda (2003) cited in Jegadeesh and Titman (2016). In this discourse, the accompanying conceptual framework is used to analyze the relationship

between monetary policies and financial performance of commercial banks in Kenya. Monetary policies form the independent variables while financial performance forms dependent variable. Monetary policies under study include; central bank rate, central bank central bank open market operation and cash reserve ratio. The proxy for financial performance is accounting based measure that is the return on assets (ROA). The moderating variable is the bank size. The framework is displayed diagrammatically in Figure 2:2.
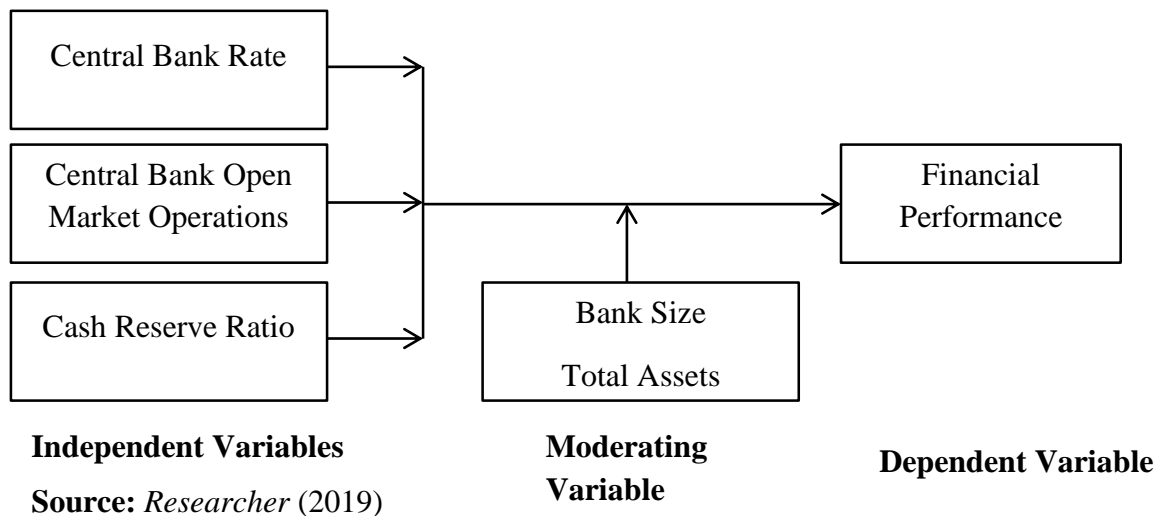
Independent Variables

Source: *Researcher* (2019)

Figure: 2:2 Conceptual Framework

2.9 Operational Framework

Figure 2:3 summarize the variables that have been used in the study and their operationalization.

Parameters　　　　**Independent**　　　　**Dependent Variable**
　　　　　　　　　　　　　Variables

```
┌─────────────────┐
│ • Lending       │      ┌──────────────┐
│   Interest Rates│─────▶│ Central Bank │───┐
│ • Deposit Rates │      │     Rate     │   │
└─────────────────┘      └──────────────┘   │
                                            │    ┌──────────────────┐
┌─────────────────┐                         │    │    Financial     │
│ • 364 Treasury- │      ┌──────────────┐   │    │   Performance    │
│   Bills Rate    │      │ Central Bank │   ├───▶│                  │
│ • Treasury Bond │─────▶│ Open Market  │───┤    │ • Return on      │
│   Rates         │      │ Operations   │   │    │   Assets         │
└─────────────────┘      └──────────────┘   │    └──────────────────┘
                                            │
┌─────────────────┐                         │
│ • Each Bank's   │      ┌──────────────┐   │
│   Net Demand    │      │ Cash Reserve │   │
│ • Time          │─────▶│    Ratio     │───┘
│   Liabilities   │      └──────────────┘
└─────────────────┘                         ┌──────────────────┐
                                            │    Bank Size     │
    **Source:** *Researcher* (2019)         │ • Total Assets   │
                                            │                  │
                                            └──────────────────┘

                                            **Moderating Variable**
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Figure 2:3 Operational Framework

CHAPTER THREE

RESEARCH METHODOLGY

3.1 Introduction

This chapter constitutes of the procedures and method, which are employed in the study. This include the research design, target population, sampling procedure, instrumentation of the research study, data collection methods, data analysis, and presentation, diagnostic tests, test of significance and lastly the ethical considerations.

3.2 Descriptive Research Design

This study used descriptive research design. According to Cooper and Schindler (2003) cited in Carhart (2003), explained a descriptive study as it is concerned with finding out the what, where and how of a phenomenon. A descriptive research design is a design that is used when the research wants to describe specific behavior as it occurs in the environment Gregory, Patricia and Garry (2015). However, the overall objective of this research study was to find out and report the relationship between monetary policies, if any, with financial performance of commercial banks in Kenya. This study therefore sought to generalize the findings to all 42 commercial banks in Kenya.

3.3 Target Population

According to Mugenda and Mugenda (2003) cited in Helder and Mendonca (2003) explained target population as that population to which a researcher wants to generalize the findings of the study. In the views of Cleomar, Silva and Cavalcanti (2016), the target population or the universe describes all the members of the real or hypothetical set of people, events or objects to which the researcher wishes to generalize the results of the

research study. In this study, the researcher targeted all the 42 commercial banks licensed and surprised by the central bank of Kenya. This target population provides data that is useful in answering the research questions raised by the researcher on how monetary policies are link with financial performance of commercial banks in Kenya

3.4 Sampling Procedure

A sample essentially describes as a set of representative elements drawn from the target population. Gabriel, Montes and Cabral (2013) mentioned that sampling method represents the rules and procedures by which some elements of the population are included in the sample. The objective of sampling is to identify representatives from the larger population for the purposes of fulfilling the study objectives. The idea behind the sampling process is to overcome challenges and constraints in studying the entire population (Simplice, 2016).

The research used a census study approach to target all the 42 commercial banks in Kenya. A census study subjects all the elements with the same characteristics to the study. Asongu (2013) disclosed that where feasibility is possible, a census study is preferred as it keeps the errors associated with sampling at minimum. The census study method led to a sample size of 42 commercial banks in Kenya (Bae & Ratti, 2014).

3.5 Instrumentation of Research Study

The study relied solely on secondary data regarding monetary policies and financial performance of commercial banks. The data was collected from audited and published financial statements and other corporate handbook of the commercial banks in Kenya, central bank and commercial banks of Kenya websites. The study further exploited monetary policies information's as available from monetary policy statements and relevant reports from central bank of Kenya. The secondary was collected using a document review guide or checklists to ensure all the important dimensions of interests are captured.

3.5.1 Validity of the Research Instrument

Validity is essentially concerns on the extent to which the research instrument evaluates or assesses what it has been made to assess. Mugenda and Mugenda (2003) cited in Gerlach and Svensson (2013) to ensured that the document review guide as designed collect the kind and scale of data sought to collect, the researcher used expert opinion method where the input of resourceful sources and particularly the supervisors comments was considered very useful in this case, therefore, the content, dimension and scope of the document review guide was improved until all the supervisors were both satisfied on the research validity status.

3.5.2 Reliability of the Research Instrument

According to Jensen and Johnson (2014), reliability essentially concerns with the extent to which the research instrument administered more than once would yield similar results. As Prather and Bertin (2015) further presents, the idea behind reliability is that any significant results must be more a one-time instance finding and must be inherently repeatable. It

concerns the data reflecting the honest representation of the situation. To ensure reliability of the data collected, the study collected data from authoritative and official sources such as audited and published financial statements and other corporate handbooks of commercial banks in Kenya, central bank of Kenya and commercial banks of Kenya websites, monetary policy statements and relevant reports from central bank of Kenya.

3.6 Method of Data Collection

Secondary source of data was used for the study. It applied to facts, assumptions and premises contained in the documentary sources. The specific data collected for this study was from book values of the commercial banks during the study year 2013 to 2017; total value of Return on Assets for the year, Weighted Average Lending Interest Rates ad Deposit Rates for the year, Weighted Average 364 Treasury Bills Rate and Treasury Bonds for the year, Weighted Average Each Bank Net Demand and Time Liabilities for the year and Average book values for the year were all reviewed under this research study for proper data analysis.

3.7 Data Analysis and Presentation

Data collected were tabulated in an excel worksheet for ease of manipulation in determining average values of the variables for the study. Data collected were purely quantitative and were analyzed by descriptive analysis techniques. The descriptive statistical tools such as SPSS version (20.0) helped the researcher to describe the data. The findings were presented using tables, percentages, tabulations, means, standard deviation and other statistics measures

The researcher used a multiple regression model in carrying out analysis to find out the relationship between monetary policies and financial performance of commercial banks in Kenya. A responsive variable was financial performance of commercial banks in Kenya measured by return on assets while the predictor variables were the monetary policies instruments such central bank rate, central bank open market operations, cash reserve ratio and bank size as moderating variable.

To quantify the strength of the relationship between the variables, the researcher used the following Multiple Regression Models:

$Y = \beta_0 + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \varepsilon$ ………………..Model 1 (Without moderation variable)

$Y = \beta_0 + (\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3) Z + \varepsilon$ ………………..Model 2 (With moderation variable)

Where;

Y= the dependent variable (Financial performance of banks measured by ROA).

β_0= is constant and it is the Y value when all the predictor values (X_1 X_2 X_3) are zero.

β_1 β_2 β_3= are constants regression co-efficient representing the condition of the independent variables to the dependent variable.

X_1= Central Bank Rate

X_2= Central Bank Open Market Operations

X_3= Cash Reserve Ratio

Z= Bank Size (Moderating variable)

Ɛ= (Extraneous) Error term explaining the variability as a results of other factors not accounted for.

3.7.1 Table: 3. 1 Operationalization of the Study Variable

Symbol	Variable	Measurement
Y	Financial Performance	Return on assets calculated as the ratio of banks net income in a given period to the total value of its assets.
X_1	Central Bank Rates	Weighted average lending interest rates and deposit rates for the year.
X_2	Open Market Operations	Average 364 T-Bills rate and Treasury bond rates for the year.
X_2	Cash Reserve Ratios	Weighted average each bank net demand with with liabilities for the year.
Z	Bank Size	Natural logarithm of average book value of total assets of the bank during the year.

Source: *Researcher Data* (2019)

3.8 Diagnostic Tests

Diagnostic tests are performed in a study to ensure that the data is adequate for analysis. The study conducted diagnostic test for normality test, test for correlation and Hausman tests of model effect estimation.

3.8.1 Normality Test

For the purpose of subsequent analysis, the variables were subjected to normality test to check whether the data provided were normality distributed or not. If the variables are not normality distributed then there would be a problem in subsequent statistical analysis until the variables assumes normality.

Shapiro-Wilk (W) test was used to test normality of the study variables, it was used because the sample size was small (42). This test is appropriate where the sample is between 7 to 2,000 respondents. In cased of larger sample that is between 2,000 to 5,000 respondents than Kolmogorov-Smirnov (D) test is appropriate.

According to Park and Garson (2012), the hypothesis was to test whether the data was normality distributed is given by H0 and H1, a = 0.05, the rule is reject H, if p-value is less than a, else fail to reject H where the null hypothesis was the data was normal while the alternative hypothesis was that the data was not normal. The findings of the test are shown in the Table 4.2, the table indicated that, using Shapiro-Wilk (W) test, the study variables were normality distributed since the p-values are higher than 0.05.

3.8.2 The Hausman Test for Model Effect Estimation

The model selection compared fixed effect and random effect where former assumes that the real effect is the same in all 42 commercial banks under the study and the summary effect is the estimate of this common effect size while the latter assumes that the true effect size varies from one firm to another and that the firms under the study represents a random sample effect size that could have been observed and thus the summary effect is the estimate of the mean of these effect. Borenstein (2009) and Woodridge (2004), indicate that under fixed effect, there is an assumption that all the dispersion is observed effect is due to sampling error whereas under random effect, there is allowance that some of the dispersion observed may illustrate real differences in effect size a cross firms in this case, the commercial banks of Kenya.

In order to determine the best fitting model of the firm performance, this study adopted Hausmam specification test where the fixed effect model specification was compared to the random effect model. The null hypothesis was that the differences in co-efficient are not systematic. Consequently, on conducting the test, it was shown that p-values less than 0.05 at 95% level of significance implied that the individual firm are best modeled using the fixed effect method and p-values greater than 0.05 at 95% level of significance implied that the individual firm effect are best modeled using the random effect methods. The findings of the test are indicated in Table 4.3 in chapter four.

3.9 Test of Significance

Correlation test was carried out to determine how strongly a pair of variables under the study is highly or perfectly correlated. A multiple regression analysis was done to test the relationship between monetary policies instruments used and financial performance of commercial banks in Kenya. The study tested its hypothesis at 5% level of significance**.**

3.10 Ethical Consideration

Research ethics are rules and norms which are expected to be followed in a research by the researchers. All researches are guided by certain professional standards and ethical principles. Observing the norms ethically in research is vital as it enhances the goals of research study. The research was guided by ethical rules and standards applicable to Kenya Methodist University and Kenya at large.

The researcher also made used of the research permit which was obtained from the National Commission for Science Technology and Innovation (NACOSTI) to approach relevant institutions for data collection.

When reporting the results of the study, the researcher ensured that the research report exactly what was represented by the data collected in order to avoid misinterpretation of the study findings.

CHAPTER FOUR

RESEARCH FINDINGS AND DISCUSSIONS

4.1 Introduction

An analysis of findings as outlined in the research objectives was done in this chapter. The chapter documents both descriptive and inferential findings used to achieve the research objectives. Discussion of findings and comparison with other studies is also conducted under this chapter.

4.2 Descriptive Analysis

The data obtained through data collection instrument is presented in Table 4.1 where data were analyzed descriptively in terms of measures of central tendency and measures of variability. A measure of central tendency includes mean scores. A measure of variability includes standard deviation. The main purpose of descriptive analysis is that it summarizes data in a useful and informative manner. The nature of the statistical technique to be applied for inferential analysis of the data depends on the characteristics of the data.

4.2.1 Findings of Descriptive Statistics

Table 4.1 shows the summary of descriptive analysis results for all the variables in the study in terms of the mean scores, standard deviation, minimum and maximum and the number of observations.

Table 4.1 Summary of Descriptive Results

VARIABLES	OBS	MEAN	STD.DEV	MIN	MAX
Return on Assets	210	.248	.070	.111	.594
Central Bank Rate	210	.260	.149	.015	.865
Central Bank Open Market Operation	210	6.4	.121	5.032	13.388
Cash Reserve Ratio	210	.345	.180	1.018	9.105
Bank Size	210	15.499	1.798	11.470	20.012
Valid N (Listwise)	210				

Source; *Research Data* (2019)

Key; *OBS=Observation;STD.DEV=StandardDeviation;MIN=Minimum;MAX=maximum*

The findings indicates that for the periods under study (2013-2017), the return on assets of commercial banks in Kenya ranged between 0.111 percent and 0.594 percent with a mean return on assets for the five years being 0.248. This indicated that the commercial banks were efficient at converting their investments into profits.

Given minimum (5.032) and maximum (13.388) percentage changed in central bank open market operations with the mean of 6.4, implied that there was an increase in the amount of reserve for commercial banks leading to expansion of central bank loans and their investment which increase supply of money in circulation.

Cash reserve ratio was averaged to 26 percent. This implied that the central bank of Kenya required the commercial banks in Kenya to maintain an average of 26% of their total asset in form of cash reserve in the central bank. The percentage deviated from the central bank

of Kenya required rate by 14.9 percent with the minimum percentage and maximum percentage being 1.5 and 8.65 respectively.

Bank size as proxied by a natural logarithm of total assets ranged from Kshs 11.470 billion in 2013 to Kshs 20.012 billion in 2017 with an average size of Kshs 15.499 billion. This means the size of a bank influence its financial performance in many ways. Larger banks can exploit economies of scale and scope and thus being more efficient compared to small banks. In addition to that, small banks may have less power than larger banks; thus they find it difficult to compete with larger banks particularly in high competitive banking markets environment. On the other hand, as banks become larger, the might suffer from inefficiencies which can result into inferior financial performance.

4.3 Diagnostic Tests

These are test performed on the data variables to ensure conformity with the requirements of the multiple regression technique used in the study and to ensure that the findings are more robust and valid

4.3.1 Normality Test

Normality test is conducted in the study to ensure that the data is normality distributed. The non-normal distribution of data could lead to making of wrong inferences. According to Green (2008), the null hypothesis is that the data is not normality distributed while the alternative hypothesis is that the data is normality distributed. A p-value of less than 0.05 shows that there is non-normality whereas a p-values of more than 0.05 shows that there is normality. This test was carried out using Shapiro-Wilk (W) test.

Table 4.2: Normality Test Results

Results for Shapiro-Wilk (W) Test for Normal Data

Variables	Obs	W	V	Z	*p*-value
Return on Assets	210	0.92594	9.353	5.094	0.071
Central Bank Rate	210	0.87659	65.734	5.876	0.085
Central Bank Open Market Operation	210	0.89395	13.393	5.912	0.065
Cash Reserve Rate	210	0.75856	23.134	5.678	0.063
Bank Size	210	0.37268	79.223	9.961	0.086

Source: *Research Data (2019)*

From Table 4.2 above the *p*-values indicated are greater than 0.05, for that reason, the study concluded that the data set was normally distributed.

4.3.2 The Hausman Test for Model Effects Estimation

In order to determine the best fitting model of banks performance, this study adopted Hausmam specification test where the fixed effects model specification was compared to the random effects model. The null hypothesis was that the differences in co-efficient are not systematic. Consequently, on conducting the test, it was shown that *p*-values less than 0.05 at 95% level of significance implied that the banks are best modeled using the fixed effects method and *p*-values greater than 0.05 at 95% level of significance implied that the

banks effects are best modeled using the random effects methods as indicated in the table below.

Tables 4.3: The Hausman Test for Model Effect Estimation – Un-moderated

Financial Performance Measures	Variables	*P*-values	Model
ROA	CBR	0.3895	RE
ROA	CBOMO	0.8052	RE
ROA	CRR	0.1266	RE
ROA	CBR, CBOMO & CRR	0.4954	RE

The Hausman Test for Model Effect Estimation – moderated

Financial performance measures	Variables	*p*-values	Model
ROA	CBR *Size, CBOMO *Size and CRR*Size	0.000	FE

Source; *Research Data* (2019*)*
Key; *ROA= Return on Assets; CBR= Central Bank Rates; CBOMO=Central Bank Open Market Operations; CRR= Cash Reserve Ratios; SIZE= Size of the Bank;* FE= Fixed Effects; RF= Random Effects.

Table 4.3 displays the Hausman specification test results for panel regression equations that were analyzed in the subsequent sections; the test results shows *P*-values were statistically insignificant and significant at 0.05. The study concluded that the Hausman test for model effect estimation – un-moderated with *p*-values greater than, 0.05, random effects was appropriate while Hausman test for model effects estimation- moderated with *p*-values less than 0.05, fixed effect estimation model was appropriate.

4.4 Inferential Statistics

Inferential statistics are used to test hypothesis about the relationship between the independent variable and dependent variable. Some of these inferential statistics used in this research study include; Correlation Analysis and Regression Analysis used to establish the relationship between monetary policies and financial performance. This section gives the findings.

4.4.1 Correlation Analysis

This is a test that indicates the extent to which two variable are linearly related. This test was carried out using Pearson's Correlation and the results are presented in the table below.

Table 4.4: Pearson's Correlation Coefficients Results

	ROA	CRR	CBOMO	CBR	SIZE
ROA	1.000				
CRR	-0.3378	1.000			
	0.0605				
CBOMO	0.0387	-0.7343	1.000		
	0.0214	0.0000			
CBR	0.5268	-0.6503	0.0646	1.000	
	0.0410	0.0000	0.4096		
SIZE	0.3685	0.5759	-0.7637	-0.6505	1.000
	0.0000	0.1883	0.6721	0.3757	

Source; *Research Data* (2019*)*
***Key;** ROA= Return on Assets; CBR= Central Bank Rates; CBOMO=Central Bank Open Market Operations; CRR= Cash Reserve Ratios; SIZE= Size of the Bank.*

According to Green (2008), if a pair of variable has a correlation of 0.8 or -0.8 (that is to say r^2 of 64% or more than that), then the pair is said to be strongly correlated. From the Table above, none of the pair of association has r of more than 0.8 or -0.8, meaning that the data is free from multicollinearity problem.

The results indicated that cash reserve ratio has a negative and insignificant correlation with return on assets of commercial banks in Kenya (r = -0.3378, Sig= 0.0605, < .05). This implies that an increase in cash reserve ratio leads to insignificant decrease in return on assets of commercial bank in Kenya. The findings of the study are consistent with the findings of Kiganda (2014) who investigated the effect of macro factors on bank profitability in Kenya with equity bank limited focus. Ordinary least square showed macro-economic factors has insignificant effect on bank profitability with equity bank focus.

The results also indicated that central bank central bank open market operations has a positive and significant correlation with return on assets of commercial bank in Kenya (r = 0.0387, Sig = 0.0214, < .05). This implies that an increase in central bank open market operations leads to a significant increase in return on assets of commercial bank in Kenya. The findings are consistent with the findings of a study by Roa and Somaiya (2006) that investigated the impact of monetary policy on the profitability of banks in India and revealed a positive and significant relationship.

It was also established that central bank rate has a positive and significant correlation with return on assets of commercial banks in Kenya (r = 0.5268, Sig = 0.0410, < .05). This implies that an increase in central bank rate leads to a significant increase in return on assets of commercial bank in Kenya. The findings are consistent with the findings of a study by Otuori (2013) who studied on the influence of exchange rate determinants on the financial performance of commercial banks in Kenya. The study found that central bank rate had a positive effect on bank performance in Kenya.

The last findings indicated that bank size as a moderating variable has a positive and significant correlation with return on assets of commercial bank in Kenya ($r = 0.03685$, Sig $= 0.000, < .05$). This implies that an increase in the size of the bank leads to a significant increase in return on assets of commercial bank in Kenya. The findings are consistent with the findings of a study by Buyinza (2010) who examine how profitable commercial banks in Sub-Saharan African countries were and the results shown that bank size has a significant positive relationship with banks profitability.

4.5.2. Regression Analysis

To determine the relationship between monetary policies and financial performance of commercial banks in Kenya, the study carried out a multiple linear regression analysis. The following Regression Model was adopted:

$$Y = \beta_0 + (\beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3) Z + \varepsilon$$

Where;

Y= Financial Performance of Commercial Banks.

β_0= Is constant and β_1 β_2 β_3= Regression Co-efficient.

X_1= Central Bank Rate.

X_2= Central Bank Open Market Operations.

X_3= Cash Reserve Ratio.

Z= Bank Size (Moderating variable).

Ɛ= Error Term.

The results for model summary are presented in Table 4.5.

The model summary table reports the strength of the relationship between the model and the dependent variable.

Table 4.5: Model Summary Report

Model	R	R Square	Adjusted R^2	Std. Error of the estimate
1	.798[Bo]	.682	.148	.0246792

Source: Research Data (2019).

Predictors; *(Constant), Central Bank Rate, Central Open Market Operations, Cash Reserve Ratio and Size of the Banks.*

The key test for the study used multiple regression equation models ($Y = \beta0 + (\beta1X1 + \beta2X2 + \beta3X3) Z + \varepsilon$). The r co-efficient of 0.798 indicates that the predictors of the model which are central bank rate, central bank open market operations, cash reserve ratio and moderating variable that is bank size do have a strong relationship of 79.9% with dependent variable of return on assets.

The r^2 which is also called co-efficient of determination of 0.682 indicates that the model can explain only 68.2% of the variations in the return on assets of the 42 commercial banks in Kenya and that there are other factors which can explain 31.8% of the variation in return on assets. This shows that the independent variables of the study are significant predictors of the financial performance of the 42 commercial banks operating in Kenya and under the supervision of central bank of Kenya.

Analysis of Variance (ANOVA)

This is a statistical method used to test the difference between two or more means. In addition to that, analysis of variance is used to test general rather than specific differences among the means. In regression analysis, the researcher used ANOVA to determine the usefulness of the independent variables in explaining variation in the dependent variable. An important statistical test conducted in analysis of variance was the *F*-test and the results are showed in the Table below:

Table 4.6 Analysis of Variance – (Goodness of Fit)

Model	Sum of Squares	Df	Mean Square	F	Sig.
1Regression	.014	5	0.03	5.581	$0.001^{\beta 0}$
Residual	.063	104	0.01		
Total	.077	109			

Dependent Variable; *Financial Performance*

Predictors; *(Constant), Central Bank Rate, Central Open Market Operations, Cash Reserve Ratio and Size of the Banks*

Source: Research Data (2019).

The findings shows that the *F*-statistic (F= 5.581) of the model produces a *p*-value of 0.001 which is less than the set level of significance of 0.05 (0.001 ≤ 5%) for a normally

distributed data, this implied that the model is fit to explain the relationship between monetary policies and financial performance of commercial banks in Kenya

Co-efficient of Determination

This is a measure of how much of the variability in one variable can be explained by variation in the other. Regression co-efficient is the constant B_o in the regression equation that tells about the change in the value of dependent variable corresponding to the unit change in the independent variable.

Table 4.7 shows the summary of regression analysis conducted on the data gathered. However, the table shows the correlation co-efficient, the standard errors, the t-statistics and the level of significance.

Table 4.7 Regression Coefficients

Model	Unstandardized Co-efficient		Standardized Co-efficient		
	B	Std Error	Beta	t	Sig
1 β₀(Constant)	.395	.056		7.04	.000
DIF(CBR,1)	.210	.004	7.01	2.65	.008
DIF(OMO,1)	.036	.050	0.53	0.72	.018
DIF(CRR,1)	-.017	.035	0.27	-0.52	.603

65

SIZE	.009 .0091	12.50	28.05	
				.004

Responsive; *Dependent Variable: (ROA)*
Source; *Research data* (2019)

The regression output is laid in Table 4.7. The beta co-efficient used in the study are the unstandardized co-efficient. At 95% level of confidence, central bank rate (t = 2.65, *p*-value = 0.008), central bank open market operations (t = 0.72, *p*-value = 0.018), cash reserve ratio (t = -0.52, *p*-value = 0.603) and bank size (t = 28.05, *p*-value = 0.004).

Constant = 0.395 and it shows that if the independent variables (central bank rate, central bank open market operations, cash reserve ratio, and bank size) were all positively zero rated, than the financial performance of commercial banks would be 0.395 units.

The results indicates that central bank rate has a positive and significant association with return on assets (B = 0.210, Sig = 0.008). This implies a unit increase in central banks rate would lead to an increase in financial performance of commercial banks in Kenya by 0.210 units. The findings are consistent with the findings of a study by Waweru (2013) who conducted a study on the effect of monetary policy on commercial banks' financial performance in Kenya. The study focused on central bank base rate and financial performance. The results of the study indicates that; the average base rate of the central bank of Kenya, that is, central bank base rate has a significant positive effect on the Kenyan commercial banks' profitability.

The results indicates that central bank open market operations has a positive and significant relationship with return on assets (B = 0.036, Sig = 0.018). This implies a unit increase in central banks open market operations would lead to an increase in financial performance

of commercial banks in Kenya by 0.036 units. The findings are consistent with the findings of a study by Roa and Somaiya (2006) that investigated the impact of monetary policy on the profitability of banks in India and revealed a positive and significant relationship.

The results indicates that cash reserve ratio has a negative and insignificant relationship with return on assets (B = -0.017, Sig = 0.603). This implies that a unit increase in cash reserve ratio would lead to a decrease in financial performance of commercial banks in Kenya by -0.017 units. The findings are consistent with the findings of a study by Udeh (2015) who examined the impact of monetary policy instruments on profitability of commercial banks in Nigeria using Zenith bank Plc experience. The paper concluded that a number of good monetary policy instruments do not impact significantly on profitability of commercial banks in Nigeria.

The results indicates that bank size as a moderating variable has a positive and significant relationship with return on assets (B = 0.009, Sig = 0.004. this implies that a unit increase in the size of the bank would increase financial performance of commercial banks in Kenya by 0.009 units. The findings are consistent with the findings of a study by Al-Qudah and Jaradat (2013) on macro-economic variables and banks 27 characteristics on the profitability of Jordanian Islamic banks. As a measure of profitability, the study adopted return on equity and return on assets. The study findings reveal bank size to significantly affect profitability as measured by return on equity and return on assets.

CHAPTER FIVE

SUMMARY, CONCLUSIONs, RECOMMENDATIONS AND SUGGESTIONS FOR FURTHER RESEARCH AREAS

5.1 Introduction

This chapter summarizes the finding of the study; the chapter draws conclusions from the findings and makes recommendations on commercial banks in Kenya for their improvement to increase financial performance. Finally, the chapter proposes areas for further research.

5.2 Summary of the Findings

The study determined the relationship between monetary policies and financial performance of commercial banks in Kenya. Specifically, the study focused on the relationship of central bank rate, central bank open market operations, and cash reserve ratio and bank size as a moderating variable. The targeted population was commercial banks in Kenya with a sample size of 42 banks. The quantitative data collected through

secondary data collection sheet was analyzed with the helped of SPSS version 20.0 to establish the descriptive and correlation findings which have been summarized in this section. The summary is presented per objective.

The overall objective of the study was to find out the relationship between monetary policies and financial performance of commercial banks in Kenya. Financial performance of commercial banks was measured by return of assets. The results of the study indicated that there is a strong (R=0.798 or 79.8) positive relationship between monetary policies and financial performance of commercial banks in Kenya. The results are inconsistent with the findings of Gul, Faiza and Khalid (2011), Ochieng (2004) and Sheng (1991).

Gul, Faiza and Khalid (2011) research was focused on examining the effect of bank specific and macroeconomic factors on bank profitability, the results found evidence that both internal and external factors have a strong influence on profitability.

Ochieng (2004) did a study on the effect of central bank of Kenya prudential guidelines and regulation on financial performance of commercial banks in Kenya; he found out that, there is a strong positive relationship between central bank of Kenya prudential guidelines and regulation on financial performance of commercial banks in Kenya.

Sheng (1991) did a study on the relationship between performances and regulations of banks, results showed regulations has positive effect on performance, Howels and Brain (2004) study supported this result.

5.2.1 Central Bank Rate

The study examined the relationship between central bank rate and financial performance of commercial banks in Kenya. Correlation findings indicated that central bank rate has a positive and significant correlation with return on assets, which implies that an increase in central bank rate leads to a significant increase in financial performance of commercial banks in Kenya. Regression findings indicated that central bank rate has a positive and significant influence on financial performance of commercial banks in Kenya.

5.2.2 Central Bank Open Market Operations

The research study also established the relationship between central bank open market operations and financial performance of commercial banks in Kenya. Correlation findings indicated that central bank open market operations has a positive and significant correlation with return on assets, which implies that an increase in central bank open market operations leads to a significant increase in financial performance of commercial banks in Kenya. Regression findings indicated that a central bank open market operations has a positive and significant impact on financial performance of commercial banks in Kenya.

5.2.3 Cash Reserve Ratio

The study also evaluated the relationship between cash reserve ratio and financial performance of commercial banks in Kenya. Correlations results indicated that cash reserve ratio has a negative and insignificant correlation with return on assets, which implies that an increase in cash reserve ratio leads to insignificant decrease in financial performance of commercial banks in Kenya. Regression results indicated that cash reserve

ratio has a negative and insignificant effect on financial performance of commercial banks in Kenya.

5.2.4 Bank Size

Lastly the study determined the moderating influence of bank size on relationship between monetary policies and financial performance of commercial banks in Kenya. The correlation findings indicated that bank size as a moderating variable has a positive and significant correlation with return on assets; this implies that an increase in the size of the bank leads to a significant increase in return on assets. Regressions findings indicates that bank size as a moderating variable has a positive and significant relationship influence on financial performance of commercial banks in Kenya.

5.3 Conclusions

Commercial banks operate within the framework of monetary policies which is set and determined by the central bank. The external environment of commercial banks is characterized by monetary policies which impact the financial performance of the banking institutions. Therefore, changes in the monetary policies influence the financial performance of commercial banks either negatively or negatively.

The overall objective of the study was to find out the relationship between monetary policies and financial performance of commercial banks in Kenya. The study found out that there is a strong positive relationship between monetary policies and financial performance of commercial banks in Kenya. Therefore, the study concludes that monetary policies instruments influence the financial performance of commercial banks in Kenya.

The first specific objective of the study was to examine the relationship between central bank rate and financial performance of commercial banks in Kenya. The results showed that central bank rate had significant and positive relationship with return on assets. The study therefore concluded that central bank rate had significant and positive influence on financial performance of commercial banks in Kenya. However, higher interest rates tend to moderate economic growth, increase the cost of borrowing, reduce disposable income and therefore limit the growth in consumer spending.

The second specific objective was to establish the relationship between central bank open market operations and financial performance of commercial banks in Kenya. The research findings showed that, there was significant positive relationship with return on assets. Thus the study concluded that central bank open market operation had significant and positive relationship with financial performance of commercial banks in Kenya. In addition to that, when central bank buys securities on the open market, it increases the reserves of commercial banks, making it possible for central bank to expand their loans and hence increase the supply of money in an economy.

The third specific objective of the study was to evaluate the relationship between cash reserve ratio and financial performance of commercial banks in Kenya. The results showed that cash reserve ratio had insignificant and negative relationship with return on assets, hence, the study concluded that changes in cash reserve ratio did not necessarily lead to change in financial performance of commercial bank in Kenya, because of that, the lower the cash reserve ratio, the higher the availability of cash for commercial banks in Kenya to

conduct their financial intermediation role, leading to great improvement in financial performance and vice versa.

Lastly, the study also determines the moderating influence of bank size on the relationship between monetary policies and financial performance of commercial banks in Kenya. The finding shows that bank size had a positive significant relationship between monetary policies and financial performance of commercial banks in Kenya, on that account, the study concluded that bank size has positive significant moderating effect on the relationship between monetary policies and financial performance of commercial banks in Kenya. Bank size is a specific characteristic with the control of total assets; therefor it is capable of economic of scale as bigger bank enjoyed larger market share and hence greater performance of these banks.

5.4 Recommendations

This section presents the recommendations for policy implications by the financial performance and the relevant authorities in Kenya in order to enhance monetary policies among the commercial banks. The recommendations have been presented per objective.

5.4.1 Central Bank Rate

Based on the findings that central bank rate has a positive influence on financial performance among commercial banks in Kenya, the study recommends commercial banks to put more emphasis on both internal and external factors to improve financial performance. These internal factors include capital adequacy, asset quality, management efficiency, earning ability and liquidity management. External factors include inflation,

gross national product, interest rate and political unpredictability. Monetary policies relation will be handled by the management through risk management policies for the banks and banking sectors can anticipate the external environments in which businesses operates to avoid shortcoming in future.

5.4.2 Central Bank Open Market Operations

From the findings and conclusions, the study recommends that the financial regulatory authorities such as the central bank of Kenya should formulate policies that can foster commercial banks involvement in investing in treasury bills and treasury bonds. Central bank open market operation predict positive and significant influence on financial performance of commercial bank in Kenya, therefore it is important to develop policies that can manage changes in monetary policies in order to improves poor financial performance of banking institutions in Kenya.

5.4.3 Cash Reserve Ratio

Furthermore, the study concluded that cash reserve requirement has a negative and insignificant effect on the financial performance of commercial banks in Kenya. Therefore, the central bank of Kenya should be cautious when changing the cash reserve ratio especially when increasing a percentage of total deposits the commercial banks are required to maintain in the form of cash reserve with the central bank since it leads to a

decrease in the amount of cash available for commercial banks to perform their intermediary roles.

5.4.4 Bank Size

Lastly, the study concluded that bank size has positive significant moderating effect on the relationship between monetary policies and financial performance of commercial banks in Kenya. Therefore, the management of 42 commercial banks should embark on activities that will lead to high assets volume. These activities include lower interest rate to attract borrowers and better customer relationship to retain customers.

5.5 Suggestions for Further Research Areas

The study suggests that more studies be done in this area focusing on other financial institutions such as micro-finances and deposit taking SACCOs that also give loans. The monetary policies contribute 68.2% level of its variant on financial performance of commercial banks in Kenya, in future, a similar study should be carry out to establish the other factors influencing financial performance of commercial banks in Kenya. An inquiry into the challenges facing the commercial banks should be done; this will help to reveal how best the challenges can be overcome hence promoting efficient implementation, monitoring and evaluation of commercial banks.

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APPENDICES

Appendix I: Letter of Introduction

KENYA METHODIST UNIVERSITY

27th May, 2019

Dear Respondent,

RE: REQUEST TO FILL THE QUESTIONNAIRE

My name is […………..], I am a postgraduate student at Kenya Methodist University and I am carrying out a study on the relationship between of monetary policies and financial performance of commercial banks in Kenya as part of partial requirement for the award of Master degree in business administration (Finance Option).

The information sought from you will be treated with utmost confidence, and results of this study will be available for your use/reference.

Thank you,

[…………….]

Yours sincerely,

Appendix II: Secondary Data Collection Sheet

1. Name of the bank………………………………………………………………

	Return on Assets	**Central Bank Rates**	**Central Bank Open Market Operations**	**Cash Reserve Ratios**	**Bank Size**
Year					
2013					
2014					
2015					
2016					
2017					

Key: *ROA= Return on Assets; CBR= Central Bank Rates; CBOMO= Central Bank Open*

Market Operation; CRR= Cash Reserve Ratio; SIZE= Size of the Bank.

Appendix III: List of Commercial Banks in Kenya as at 31st December 2014

Tier 1
1. Co-operative Bank of Kenya
2. Kenya Commercial Bank(KCB)
3. Equity Bank
4. Barclays Bank
5. Commercial Bank of Africa(CBA)
6. Standard Chartered Bank
Tier 2
7. Family Bank
8. I&M Bank
9. NIC Bank
10. Diamond Trust Bank
11. Bank of Africa
12. Housing Finance
13. Ecobank
14. Prime Bank
15. Bank of Baroda
16. CFC Stanbic Bank
17. Citibank
18. Guaranty Trust Bank
19. National Bank
20. Bank of India
Tier 3
21. Jamii Bora Bank
22. ABC Bank
23. Credit Bank
24. Paramount Universal
25. Consolidated and Development Bank

26. Fidelity Bank
27. Equatorial Commercial Bank
28. Giro Bank
29. Guardian Bank
30. Middle East Bank
31. Oriental Commercial Bank
32. Paramount Universal Bank
33. Trans-National Bank
34. Victoria Bank
35. First Community Bank
36. Habib A.G Zurich Bank
37. Habib Bank
38. Gulf Africa
39. Sidian Bank
40. UBA Bank
41. Consolidated Bank
42. Development Bank

Source: Central Bank of Kenya (2015)