DETERMINANTS OF FINANCIAL PERFORMANCE AMONG SECOND TIER COMMERCIAL BANKS IN KENYA

BY

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MASTER OF SCIENCE AND COMMERCE (FINANCE & INVESTMENT)

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DECLARATION

I declare that this dissertation is my original work and has not been previously published or submitted elsewhere for award of a degree. I also declare that this contains no material written or published by other people except where due reference is made, and author duly acknowledged.

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I do hereby confirm that I have examined the master's dissertation of

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and have certified that all revisions that the dissertation panel and examiners recommended have been adequately addressed

Sign: _____ Date: _____

Dr. Ibrahim Tirimba
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ABSTRACT

The main objective of this research was to assess the determinants of financial performance among the second tier commercial banks in Kenya. The Profitability of commercial banks and their performance has become an important topic of research. However, it is difficult for the management and shareholders to find the right measure to evaluate their banks given the availability of many variables that have been utilized by various scholars to pinpoint factors influencing the financial performance of banks. This dilemma leaves researchers without a satisfactory position and opens up a gap for further analysis of the financial performance among the second tier commercial banks. The research objectives were asset quality, leverage, capital adequacy and liquidity. The study was guided by the trade-off theory, agency theory, modern portfolio theory and the efficient market hypothesis theory through the theoretical review, empirical review and conceptual framework. A descriptive research design was used to target all the 10 second tier commercial banks in Kenya. Secondary data on the identified inquiry variables were collected for five years between 2014 to 2018. Data from all the 10 second tier commercial banks in Kenya was analysed using STATA on the panel data regression model. Housman test was done to determine which panel regression model was appropriate for the study. Diagnostics tests conducted were multicollinearity, autocorrelation heteroscedasticity and normality for the residuals. The findings were exhibited in a tabular form. The study findings showed that leverage and capital adequacy had a significant negative effect on the financial performance of the banks. However, asset quality has a positive insignificant effect while Liquidity had a negative insignificant effect on return on equity. The study recommends that policymakers should ensure that they adhere to the financial safety net by limiting moral hazard risk and limiting bank failures. The second tier Commercial banks can still increase their debt to equity ratio so as to have more capital reserves to survive a financial crisis. The study further recommends for an increase in capital adequacy ratio in all the second tier commercial banks in Kenya to boost their stability and save them from financial stress and also ensure they maintain adequate capital to cushions the banks about any potential losses hence protecting the interest of bank's depositors and other lenders and this will enhance financial performance among second tier commercial banks.

Key words: Financial performance, asset quality, leverage, capital adequacy, liquidity

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DEDICATION

I dedicate this dissertation to the Almighty God, my mother,Glady's Kitolo , my sister Ruth Mwende and friends who have been of great moral support thought my study. Their patience, love and understanding during this time inspired me to go through this work successfully. Great honour is indebted onto my research supervisor. Dr. Ibrahim Tirimba, May God bless him abundantly for his guidance and moral support he accorded me during this study.

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ACRONYMS AND ABBREVIATIONS

ARDL	Autoregressive Distributed Lag
BPLM	Breusch-Pagan Lagrange Multiplier
CAMEL	Capital Adequacy, Asset Quality, Management Efficiency
CAR	Capital Adequacy Ratio
CBK	Central Bank of Kenya
EPL	Earnings Performance and Liquidity
GDP	Gross Domestic Product
LA	Loan Advances
LLP	Loan Loss Provision
NBK	National Bank of Kenya
NIM	Net Interest Margin
NPL	Non- Performing Loans
NPLR	Non-Performing Loan Ratio
NSE	Nairobi Securities Exchange
OLS	Ordinary Least Squares
POLS	Pooled Ordinary Least Squares
ROA	Return on Assets
ROE	Return on Equity
VIF	Variance Inflation Factor

OPERATIONAL DEFINITION OF TERMS

Asset Quality: Asset quality is stated as the overall risk attached to the various assets held by an institution and determines how well a financial institution predicts the credit risk of their assets and how well they manage them (Nzoka 2015).

Capital Adequacy: Capital adequacy is the sum of own fund which is easily reached to finance a bank's and also acts as a buffer in case of adverse conditions (Olweny & Shipho, 2011). Most banks have capital that generates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs.

Financial Performance: Financial performance is defined as the extent to which the firm generates revenue through efficient utilization of the available assets (kiganda, 2014). It is the degree to which the financial objectives are being achieved by considering the outcome of the monetary aspects of organizational operating processes and policies.

Leverage: According to Chadha and Sharma (2015) leverage is the ratio of debt and equity embraced by an organization and shows the association between owner's funds or equity and borrowed funds in the organization's capital structure.

Liquidity: According to (Basel Committee on Banking Supervision, (2013), Liquidity can be outlined as the capability of a firm to sustain its short- term financial responsibilities by converting the short- term assets into cash without incurring any loss.

Tier two Banks Tier two Commercial banks are the second category of bank ranking that consists of banks with an asset base between Ksh. 10 billion to Ksh. 40 billion (CBK Report 2018)

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Agreeing with Malakolunth and Rengasamy, (2012) Financial intermediaries such as commercial banks, have a very important role to play in the economic growth of a country. As a county's economic backbone, bank performance can generate spillover effects on different sectors (UNDP, 2009). Rao and Lakew (2012) report that "these commercial banks offer the all-important services of providing deposit and credit facilities for personal and corporate customers, making credit and liquidity available in adverse market conditions, and providing access to the nation's payments systems". Given that commercial banks are also the channels employed to ensure the successful monetary policy of the central bank of the economy as a result it is considered that they also share the duty of stabilizing the economy of their country (Muiruri, & Ngari, 2014).

Existing literature in Europe, America and Asia indicates that financial institutions are facing key challenges in expansion and improvement of revenue generation. For instance, Nasserinia, Ariff and Fan-Fah (2014) in Japan examined how some bank individual features and numerous market and macroeconomic factors impact the financial performance of banks. Results indicate that net interest margin (NIM) is a key performance variable and that adverse association exists amongst NIM, capital adequacy and credit risk while a positive association is found between liquidity risk, asset quality, management efficiency and NIM. Bank concentration has a positive influence on banks in Japan but though the outcomes of income diversification and size are positive they are not significant. The macro-economic factors, GDP growth and money supply have negative and significant associations on performance though their influences are not as strong as those of bank-specific variables.

Most studies indicate that commercial banks in the Sub-Sahara experience additional profitability than the global average (Lipunga, 2016). The adage stating that high risk yields high returns comes into play here since investments in the region are observed to be highly risky ones. The Demand for banking services in Sub-Sahara Africa is rather high when compared to the supply and this may be another reason for the higher profitability margins in the region. High interest rates are charged in this region and there is less competition due to there being a few numbers of banks when compared to the banking services demanded. A perfect example is an East African region whereby the lion share of the market is taken by a few governments owned banks. Both external and internal macro-economic factors that are bank specific variables play a fundamental function in the financial performance of commercial banks (Al-Tamimi, 2010). Individual bank features are the internal factors that influence banking performance. The board and management of the bank are the major players affecting the internal aspects. The external issues influence the overall profitability of the banks and are factors that cannot be regulated internally as they are countrywide or sector wide.

Approving to this statement Katrodia (2012) , claims that there is a link between the banking sector and the economy of a given country. Conversely, it is imperative to observe that the soundness of the commercial banks is essentially reliant on their financial performance which is typically used to reveal the strengths and the weaknesses of such a commercial bank (Makkar & Singh, 2013). The financial performance of any entity is generally gaged by ascertaining its profitability. Hence, financial performance scrutiny of commercial banks has remained to be of great attention to academic study since the Great Depression intern in the 1940's. In the last two periods research has revealed that commercial banks in Sub-Sahara Africa (SSA) are further rewarding than the rest of the world with an average Return on Assets of 2 percent (Flamini, McDonald & Schumacher, 2009).

An investigation was conducted to ascertain the results of banking sectorial components on the profitability of commercial banks in Kenya. The first objectives of the profitability of Commercial banks in Kenya were Liquidity, operational cost efficiency, asset quality, income diversification and capital adequacy. The other objective was to ascertain and determine the results of Foreign ownership, market structure factors, and market concentration, on the profitability of commercial banks in Kenya. Explanatory research design through the panel data was employed The data was sourced from the annual financial statements of 38 Kenyan commercial banks from 2002 to 2008 obtained from the CBK and Banking Survey 2009. The Multiple linear regression models were used to analyse data the obtained data.

The success of Commercial banks is determined by the quality of the loan portfolio. The Asset quality also known as loan quality is the total risk involved to the various assets kept by the individual or institution. It determines exactly how well a financial establishment forecasts the credit risk of their assets and how well they accomplish such (Olweny & Shipho, 2011). The bank assets include Credit portfolio, Current assets, fixed assets and other investments. For this study, the ratio of non-performing loans was employed in the determination of the asset quality variable.

Secondly, the leverage ratio of debt and equity implemented by an organization shows the relationship between the owner's funds or equity and hired resources in the organization's capital structure (Chadha & Sharma, 2015). A capital structure of an Organizations with a mixture of equity and debt is said to be levered and those without this combination are unlevered firms. In the words of Enekwe, Agu, & Eziedo, (2014) financial leverage is a parameter used to evaluate the ratio adopted by various organizations to finance their cumulative assets. Financial leverage can still be described as the extent to which an organization uses fixed income securities such as debt and preferred equity.

Corresponding to Dang (2011) the capital adequacy is projected on the source of the capital adequacy ratio(CAR). The ratio reveals the internal strength of the bank to withstand losses during a crisis. The ratio is specifically relative to the strength of the bank to the crisis state. It also has a direct influence on the probability of banks by regulating its expansions to risky but profitable undertakings. With adequate capital, an organization is expected to resolve all liquidity challenges and operate optimally.

Literature reviews have also indicated liquidity dictates strategic provision or withdrawal by the management from the market of circulation of the amount of liquidity consistent with desired levels of short-term reserve money without altering the profit-making capability and operations of the bank (Alshatti, 2015). It depends on the daily valuation of the liquidity requirements in the banking system, so as to ascertain its liquidity demands and consequently the volume of liquidity to allot or retire from the market (CBK, 2018). In this study, liquidity was measured by looking at the Current ratio among the selected banks.

1.1.1 Financial Performance

Generally, the financial performance of Commercial banks in Kenya in the last two decades has progressed. Financial performance measures the extent to which the firm generates revenue through the efficient utilization of the available assets (Kiganda, 2014). Financial performance is the degree to which the financial objectives are being achieved by considering the outcome of the monetary aspects of organizational operating processes and policies.

During financial analysis, decision-makers select, evaluate, and interpret financial data, in addition to relevant information, to help appreciate the dynamics influencing performance (Obamuyi, 2013). The results of financial analysis are helpful in evaluating concerns related to how employees are performing; whether an enterprise is operating efficiently; and probable opportunities for external investment.

The main agenda of regulators are helping the Kenyan financial institutions achieve vision 2030 targets, through rapidly and massively scaling up financial inclusions for improved accessibility to many Kenyans (Kamau & Were, 2014). The Financial performance of an entity can be measured through the following key aspects: -Profitability, Liquidity, and Solvency, Financial efficiency, Repayment capacity and Working Capital Management. Commercial Banks aim at reviewing the financial performance to help in reassessing the bank goals and plan effectively to increase profits (Jaber, & Al-khawaldeh, 2014). Finances are mostly reviewed through profitability, whose key standard measures include: -Net profit margin and gross profit margin for instance return on Equity, return on assets, return on capital employed, and economic value -added. In this study, financial performance was determined based on the return to equity. According to Levine (2008), return to equity is a profitability ratio that analysis the rate at which shareholders' investment in the business has yielded returns. This is obtained by dividing the total incomes of a business by the owner's equity. This was done for the entire period under study.

1.1.2 Second Tier Banks in Kenya

The banking industry in Kenya has undergone significant growth in terms of deposits, assets, profitability and product offerings mostly due to automation of services and branch networks expansions both locally and regionally. This expansion has attracted new entrants into the sector as well as increased competition among existing players (Muiruri & Ngari, 2014).

As per the Central Bank of Kenya supervision report (CBK, 2018), the banking sector is composed of 43 Banking Institutions, 42 Commercial Banks,1 Mortgage Finance Company,9 Representative offices of Foreign Banks, 13 Microfinance Banks (MFBs), 3 Credit Reference Bureaus (CRBs),19 Money Remittance Providers (MRPs), 8 Non-Operating Bank holding Companies and 70 Foreign Exchange (forex) Bureaus. Performance of the

banking sector registered improved financial position between 2017 and 2018 evident by a 10.1 percent increase in total assets, 14.6 percent growth in profitability, capital and reserves registered a 5.3 percent increase (CBK, 2018).

The banking sector in Kenya is presided by different Acts Such as the Companies Act, the Banking Act, the Central Bank of Kenya Act and various other prudential guidelines that have been issued by the Central Bank of Kenya (CBK) over the years. The banking sector in Kenya was liberalized in 1995 which led to the removal of exchange controls. One of the mandates of the CBK is to formulate and implement the monetary policies to be adopted by the Government and ensure there are liquidity, solvency and proper functioning of the financial system in the country. The CBK also publishes valuable information related to the banking industry in Kenya and the non-banking financial institutions, as well as information about the interest rates prevalent in the country and other publications and guidelines (CBK, 2014).

Commercial banks in Kenya are grouped into three groups on the basis of the value of the bank's assets. The first category is the commercial banks with an asset base of more than Kshs 40 billion. The second category is commercial banks with an asset base between Kshs 10 billion to Kshs 40 billion The third and the last groups are banks with an asset base of less than Kshs 10 billion (CBK,2018). This is based on a weighted index of all their net assets, capital, reserves, customer deposits, Number of loans and deposit account. The Second tier two commercial banks in Kenya include: NIC Bank, Bank of Baroda (Kenya) Limited, Prime Bank Ltd, National Bank of Kenya Ltd, Citibank N.A Kenya, Bank of India, Family Bank Ltd, SBM Bank Kenya Ltd, HFC Ltd and Eco Bank Kenya Ltd.

The second tier commercial banks combined market shares decreased from 26.10% in the financial year ended December 2017 to 21.22 % in the financial year ended in December 2018. This was caused by the movement of Bank of Africa Limited from second tier banks in

2017 to third tier banks in 2018 due to a decrease in its net assets and I& M Bank Ltd from second tier banks in 2017 to tier one bank in December 2018. Also, the SBM Kenya Limited moved from third tier banks in 2017 to second tier banks in 2018 (CBK Supervision Report, 2018). This is clear that the second tier commercial banks in Kenya experience challenges that can cause serious damage to the economy. According to Khrawish (2011), commercial banks play an important role in the economic prosperity of any country in the world. As such, banks acts as a link between depositors and borrowers and in doing so are supposed to generate income to cover for their operational costs. However, this income ought to be more than the costs incurred in order to make profits as one of the key reasons for the existence of such institutions.

1.2 Statement of the Problem

Second tier commercial banks have reported losses over the past five years like for instance, the National Bank of Kenya recorded a loss before tax of Kshs 0.1 billion, down from a profit before tax of Kshs 0.8bn in the financial year 2017 while the HFC Ltd experienced a deterioration of its assets quality with gross non- performing loans (NPLs) rising by 62.4% to Kshs 13.3 billion in the financial year 2018 from Kshs 8.2bn in the financial year 2017 (Cytonn Banking Sector Report, 2018). This trend has raised questions on the key issues affecting the performance of second-tier banks in Kenya. This dilemma leaves researchers without a satisfactory position on the determinants of financial performance and opens up a gap for further analysis of the financial performance of banks in Kenya.

Nevertheless, the annual central bank report (2018) has revealed the inconsistent performance of commercials banks in Kenya. The report indicated a slight performance of the banking industry but in view of the second-tier banks, performance has slightly improved creating a debate on what could be the key reason for such a trend (CBK Report, 2018).

However, some of the second-tier commercial banks like chase bank and Imperial Bank have gone under receivership due to fraudulent activities of substantial magnitude in the year 2015 and 2016, respectively. In addition, due to the desire for synergy and growth has also seen some other second tier banks like the National Bank of Kenya (NBK) being acquired by the KCB group in the year 2019.

Numerous studies have been undertaken in this area locally and internationally. Lipunga (2016) did a study and focused on the banking industry in Malawi. A similar study was carried out by Obamuyi (2013) which assessed the determinants of banks' profitability in a developing economy and focused on the banking industry in Nigeria. In Kenya, a study by Ongore and Kusa (2014) focused on the determinants of commercial bank's financial performance and established that the position of ownership identity on commercial banks' financial performance was not extraordinary. The majority of the readily available literature amalgamates internal, external and macroeconomic factors. The current studies have left the area on the internal financial performance factors grey. Also, the above studies have taken the entire bank concept without focusing on specific tiers to identify their performances. This creates a knowledge gap to be filled by this study of assessing the determinants of the financial performance of second tier banks in Kenya.

1.3 Objectives of the Study

1.3.1 General Objective

To assess the determinants of financial performance among second tier Commercial banks in Kenya.

1.3.3 Specific Objectives

i. To assess the effect of asset quality on financial performance among second tier banks in Kenya.

ii. To evaluate the effect of leverage on the financial performance among second tier banks in Kenya.

iii. To assess the effect of capital adequacy on the financial performance among second tier banks in Kenya

iv. To determine the effect of liquidity on financial performance among second tier banks in Kenya.

1.4 Research Hypothesis

The research was guided by the following hypothesis, tested at 95% significance level.

$H_0$1: There is no significant effect between asset quality and financial performance among second tier commercial banks.

$H_0$2: There is no significant effect between leverage and financial performance among second tier commercial banks

$H_0$3: There is no significant effect between capital adequacy and financial performance among second tier commercial banks

$H_0$4: There is no significant effect between liquidity and financial performance among second tier commercial banks

1.5 Justification of the Study

The Kenyan banking industry does not only play a substantial role in the Kenyan economy, but Kenya is one of the most important banking centers among the East Africa Countries. The profitability of commercial banks and their performance has become an important topic of research. However, it is difficult for the management and shareholders to understand the right measure to assess their banks given the availability of many variables that have been utilized by various scholars to identify the determinants of the financial performance of banks. This

dilemma leaves researchers without a satisfactory position and opens up a gap for further analysis of the determinants of financial performance among the second tier commercial banks in Kenya hence the need for the study.

1.6 Significance of the Study

1.6.1 Bank Management

The research focused on the determinants of financial performance among second tier banks. This will make the banking institutions better understand the determinant factors of their financial performance and therefore focus on improving these factors to ensure that their financial performance keeps on doing better.

1.6.2 Policy Makers

As a backbone of economic development, the study guided the policy makes especially the Central bank of Kenya and the Kenya National Treasury in formulating policies that will ensure favorable macroeconomic indicators to spur growth and profitability in the sector.

1.6.3 Researchers and Academicians

The findings in the study pointed out the gap that academia in the field of finance, economics and the banking sector community needs to fill in order to improve the financial performance in the second tier banks.

1.7 Scope of the Study

This study concentrated on analyzing the determinants of financial performance among the second tier commercial banks in Kenya and looked into factors such as asset quality, leverage, capital adequacy and liquidity with reference to second tier banks in Kenya. The

researcher used descriptive research design and collected secondary data to evaluate the relationship between the study variables. Secondary data on financial performance indicators were collected from 2014 to 2018, available from the individual bank websites and CBK. The period was chosen as it offers recent time series observations and it constitutes a period of major developments in the Kenyan banking system.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This section entails the evaluation of the foundational theories that support the study, empirical review from the past similar study with regard to the proposed study objectives, the conceptual framework and finally the operationalization of variable.

2.2 Theoretical Review

2.2.1 Trade-off Theory

Trade-off theory was developed by Modigliani and Miller (1958) and argues that all expenses and debts of any organization ought to be equalized with the payback for an optimum capital structure to be achieved as debated by the bankruptcy cost trade-off models (DeAngelo & Masulis, 1980). These gains need to be well adjusted with the debt costs which include tax shields while the costs consist of the costs related to financial distress. The models such as agency theoretical models Myers & Stewart (1984) suggest that costs are balanced by curtailing the conflicts arising between the management and the shareholders. Cash flow drawbacks are also reduced to offset costs which are linked with asset substitution which results in underinvestment.

This hypothesis implies that the best capital structure is achieved when the marginal expenditure and marginal value are at par. The trade-off models hence entail that the pursued leverage by firms is adjusted over time (HackbartA, Hennessy & Leland 2007). For instance, the capital market theory advocates that if one predicts more return, then more risk should be accepted. These trade-offs will then again be achieved on the risks that are not theoretically averted through diversification. The banks that are more diversified yield extra returns than those that are less diversified.

This theory has been criticized by several authors. Kormendi and Lipe (1987) did a study to validate the key assumptions of the theory. The empirical evidence provided by the researchers indicated that the capital structure adopted by organizations did not have a positive and linear relationship with key earnings of the institution such as leverage, contradictory to well-established empirical evidence. This explanation is based on earnings in an organization are not certainly predicted and therefore investors should carefully plan all possible investment undertakings.

Iqbal, Muneer, Jahanzeb and Rehman, (2012) did a review on the implications of the trade-off theory in the financial sector. The review revealed that the theory supports the leverage in constructing the capital structure in a firm by looking at the benefits versus the costs of any capital structure chosen. The authors found out that the optimal levels of leverage in any firm must be achieved by balancing the benefits accrued from interest payments and the cost of issuing the debt. With the proper balancing of the two, any firm can strike any optimal option to have both debt and equity in its capital structure and maximize its profits both in the long run and short run.

In a different review, Muneer, and Rehman, (2015) on modern financing options for modern organizations revealed that the optimal capital structure in any organization is realized by trading off the costs of debt and equity against their benefits. Organizations in need of finance must look for both internal and external sources but due care must be undertaken to balance between the costs and benefits of each source. For instance, a key benefit of using debt to finance organizations 'operations is the gain of the debt tax shield. However, if this option is not used wisely, an organization may be trapped in a debt-trap which negatively affects its financial performance.

The theory has persuaded to justify the significance of trade-off between risk and return. All financial institutions including banks face legal risks and foreign exchange risks.

Credit risks, operational risks, and counterparty risks liquidity risks including others and therefore, the management must ensure the banks when assuming these risks have equal return from the same (Huang, & Ritter, 2017). However, one of the key limitations of this theory is its failure to tackle a number of notable causes such as; the level of the loan portfolio that will be best for maximization of return and minimizing of risk and how to establish the optimal level of loans.

2.2.2 Agency Theory

This theory was put forward by Jensen and Meckling in (1976) and signifies a set of suggestions in administering a modern corporation which is naturally described by a large number of shareholders or owners who allow distinct individuals to influence and direct the use of their collective capital for future gains (Jensen & Meckling, 1976). The agency theory is concerned with lowering the agency problem which will lead to increase value maximization. It provides a direct link between corporate governance and financial performance.

Agency theory, argues that a company is made of binding contracts between the owners of factors of productions and agents. Information asymmetry is the greatest problem between the principal and the agent. The theory therefore, suggests that to balance the demands of the parties' information flow between them must be improved such that each party has unlimited access to key information in regard to the existing relationship (Jensen & Meckling 1976).

Agency theory denotes that when agents have equity in the firm, they are more likely to embrace the actions desired by principals as those of their own. However, according to Hendry (2012), regardless of the existing relationship between the principal and the agents the goal is to maximize the organizations value and profitability. The managers acting on

behalf of the owners and shareholders have the sole responsibility of expanding the business operations to improve on the shareholder's equity.

Panda and Leepsa, (2017) articulate that both agents (managers in firms) and the principals (shareholders) have an interest in the well-being of the firm but the principal success depends on the performance of the agents. The authors revealed that agents are provided with necessary resources to run the operations in an organization in a manner that improves the value of the organization. For bank managers, the sole goal to offer services to its clients in a way that costs are reduced and profits maximized. The organizations resources available must be put into proper use to increase the shareholder's wealth invested in the business.

However, this theory has some weaknesses as pointed out by Perrow (1986) who posted a new dimension into the study and pointed out previous theorists had concentrated on the problems emanating from the agent's side on the 'principal and agent problem'. The author opined that problems in agent-principal might emanate from the principal. The study concluded that principals who mistreat, cheat, dodge and exploit their agents have posed a danger to the established relatioship and the agent may retaliate and act against the initial agreement. Furthermore, Perrow (1986) added that in some circumstances the agents are mistakenly made to work with the risky working environment from their principals and are not efficiently warned of the dangers of such an undertaking which puts the entire relation and its objective in jeopardy.

The applicability of the theory to the study is that when the demands of the owner are made agency costs are minimized. Agency costs can cause a firm to encounter financial problems that lead to liquidity risks which undermine the normal operations of the bank (Sangmi & Nazir, 2010). The theory supports the decision-making role of the top management to ensure commercial banks and its employees adopt the best financing

strategies and optimally utilize the resources within the organization to reduce the bad effects of liquidity risks.

2.2.3 Modern Portfolio Theory

The theory is adequately expounded by the articles done by Markowitz (1952) in which it attempts to guarantee that the return projected from a certain portfolio in relation to the risk of that portfolio equally reduces the risk of an anticipated return in a specified level by examining carefully at the ratio of the collection of assets. This claim developed by Markowitz specified that by investing in assets whose returns move in diverse ways, investors can actively compensate certain risks found in personal stocks and thus suggests that investors should select assets measured financially for their platform using the contribution of each asset to the overall, mean and average variance of the platform.

Consequently, this hypothesis attempts to warrant that the anticipated returns of a certain amount of platform risk are maximized or the risk at any level is maximized by choosing the ratio of certain assets. Crouhy et al. (2012) opine centered on this position that using the capability of diversification, the risk that seems to be associated with specificity in any individual stock can be lowered at a cost amounting to nothing. Corresponding to Kaplan and Scholar (2008), portfolio theory is presumed as one of the theories that influence finance and investment economically. Kaplan and Scholar (2008) claim that in agreement with the theory of portfolio, there is a big opportunity to acquire an optimal portfolio that will propose a high level of expected return on the specified risk. This means that it is not just looking at the risk estimated and the return on the asset but instead on the combined portfolio risk and return trade -off.

The modern portfolio postulates that if and when organizations and the management master the art of diversification, they can create an efficient composition of portfolios that can maximize its output while minimizing their operations costs (Reilly, 2013). From the

theory analysis undertaken by Reilly (2013), it's not prudent for management to look at cost-benefit analysis of one portfolio in business investment. Management should look at various investment options available with the potential of expanding the organizations operations and the output level. This must be followed by looking at the availability of the assets to seize the options and how to efficiently allocate the resources to increase profitability.

The bottom-line reason that management should anchor when investing in alternative assets, stocks and other securities in the banking industry is to reduce the risk impact resulting from such investments. However, such investment has an effect of improving the firm's income levels as income is coming from various portfolios. In the words of Comin Cass and Mulani (2016) ,the theory acts as an alarm to the management that putting all eggs into one basket is riskier than investing in various options that can maximize shareholders wealth. In relation to the current study, the management ensures all resources are efficiently utilized and if diversification options are available should be undertaken. This if and when undertaken in a prudent manner the banks' profits will increase.

By establishing on this theory, the validation for a bank in lending to numerous sections either corporate or individual investors is to make progress on the risk and the attributes of the portfolio, bearing in mind that the lending strategy will offer a maximum absolute level of return while making an improvement on the diversification of portfolio (Bodie et al., 2005).

2.2.4 Efficient Market Hypothesis

The theory was championed by Fama (1970). It describes that in an efficient market stocks will always trade at their fair market value in the securities exchange reflecting all available information, rendering it almost difficult for investors to purchase undervalued shares or sell

shares at inflated prices. The efficient market hypothesis (EMH) has been under academic and professional consideration for many years.

The efficient market hypothesis (EMH) postulates that exact prices for assets in the stock market owned by organizations are efficient with respect to information available in the market (Donald, 1983). This concept however implies that no key investment strategy adopted by the shareholders based on current information or even past information about the market produces unusual big profits. Even with numerous investment advisory services, voluminous market information, and numerous investors, the alteration of prices in relation to new market information is sudden.

The efficient market hypothesis theory has several assumptions that must present to effectively exhibit desired results. First, there are many and competing for profit-maximizing partakers who analyze as well as value all trading securities, independent of each other and do not share this information (Donald, 1983). Secondly, any new information with respect to the trade of securities in the market becomes available randomly. Moreover, another assumption is that all competing investors immediately try to alter security prices swiftly in order to reflect the current available information which will have a substantial effect on the overall value of the offerings.

The efficient market hypothesis improved the study of bank performance since the profitability of such institutions is greatly influenced by the external factors in the market. The theory advocated that the portfolio composition of a commercial bank, its profit and the return to shareholders is the result of the decisions made by the management and the overall bank's policy decisions (Uzhegova, 2015). Hence, the theories contribute to the decision that banks' financial performance is manipulated by both internal and external factors. The efficient market hypothesis says a market is efficient if all information relevant to the value

of a share, whether or not generally available to existing or potential investors, is quickly and accurately reflected in the market price.

One of the key criticisms of this theory is built on the assumption that prices of stock in the market have a random walk depending on the current market information. However, Lo, Andrew and Craig (1999) found out in most stock markets in developed countries did not follow the random walk model established by key believers of the theory. The study by Andrew and Craig (1999) model showed that there was a key association between past and current performance of stocks in the market where the stock with past best performance keeps on performing while stocks with inconsistent performance maintain the trend.

This theory is applicable today in the banking industry and shareholders. With a proper study of the past market, financial institutions are able to make a projection on the performance of the market. This in turn informs the banks path to follow in their investment so as to maximize returns from the stock market. Banks are profit making institutions and therefore having key investments in the stock market with maximum returns is a wise undertaking by the management to improve the value of shareholders' investment.

2.3 Empirical Review

2.3.1 Asset Quality and Financial Performance

According to Nzoka (2015), asset quality also known as loan quality is the general risk involved in the various assets held by the individual or institution. It determines how well a financial institution forecasts the credit risk of their assets and how well they achieve them. The bank asset comprises current assets, credit portfolios, fixed assets, and other investments. frequently a growing asset (size) relates to the age of the bank (Athanasoglou et al., 2005). Ordinarily, the loan of a bank is the core asset that generates the major share of the banks

income. The Loan is the principal asset of commercial banks from which they generate income.

Asset quality refers to the assessment of credit risk associated with a stock portfolio. The level of management of the credit risk heavily determines the rating of the asset quality of the banks. Asset quality plays an important role in maintaining the liquidity of banks and costs, hence a thorough analysis should be conducted to evaluate the impacts. This analysis fabricates multiple factors that aid in formulating asset quality ratings. Operational efficiency and portfolio diversification are some of the factors considered when conducting an asset quality rating. The rating is majorly done from one to five. A rating of 1 indicates that an asset possesses high quality will little credit risk and the rating of 5 portrays that an asset possesses a low quality rate with high credit risk (Andrew Bloomenthal, (2020)

The profitability of commercial banks is determined by the quality of the loan portfolio. The greatest risk of fronting a bank is the losses resulting from neglectful loans (Dang, 2011). Therefore, non-performing loan ratios are the best representations of asset quality.Commercial banks are supposed to maintain the quantity of non-performing loans at a low level. This is so as high non-performing loan influences the productivity of the bank. Consequently, low Non-performing loans to total loans show the good health of the portfolio of a bank. A lower ratio indicated enhanced performance (Sangmi & Nazir, 2010).

According to Levine (2008), asset strongly determines the performance of any commercial bank because it increases interest income and reduces the cost burden of bad debt management at the same time. By law, Commercial banks are supposed to keep aside cash deductible as an expense so as to cushion the bank against bad debts and other loan defaults.

Further, Adeolu, (2014) did a study on asset quality and performance of banks in Nigeria. Pearson correlation coefficient and SPSS regression were used to examine the data. The survey found out there was a strong relationship between the two. The research also

found out that no association between bank loans and profitability although this contradicts Khalid (2012) which concluded a negative association exists between profitability and asset quality.

Adnan (2012), investigated the effects of management of assets quality on shareholder's value and profitability- Jordanian listed commercial banks case from 2001 to 2012, The Study established that the asset quality impacts bank 's profitability positively. This evidently states that commercial bank management should prioritize the diversification of its activities so as to achieve sustainable performance.

Vigneswara (2015) examined India's profitability though uses of panel data techniques (1997-2009) and bank asset quality determinants, the study found out that priority sector credit was not enough to have an effect on Non-performing loans. This was the opposite of general opinion and like the case with local branches stating aversion of rural credit is a false opinion.The performance of the whole banking sector rather than a specific bank is tied to bad debts. Additionally, capital adequacy and investment activity have a significant effect on the profitability of banks, unlike assets size which has no effect,

Chisti (2013) conducted a study to assess the outcome of loan quality on bank performance. The association among the asset quality management proxies and profitability relationship were precisely analyzed. Return on asset and profitability ratios were used as proxies for bank profitability for the period 2006 to 2010, the operating performance of the sample banks was estimated with the help of financial ratios. The study used a multiple regression model and found out that bank asset quality and operating performance are positively correlated. The results of the study showed that a bad asset ratio has a negative relationship with banking operating performance, after controlling for the effects of operating scale, traditional banking business concentration and the idle fund ratio. The findings additionally support the hypothesis that the higher the quality of loan processing activities

before loan approval, the lower the non-value-added activities that are necessary to process problematic loans, and thus the higher the banking operating performance will be. Asset quality on bank performance is thus important in that it measures how well a financial institution forecasts the credit risk of their assets and how well they manage them. Good management of assets determines how well a bank can improve business and generate revenues.

According to Cheruiyot, (2016), the asset quality of a bank is the general observation and examination of assets to establish the level of credit risk associeted with its operation. He conducted a study to determine the influence of asset quality on the profitability of Commercial banks in Kenya. The research employed modern portfolio theory, signaling theory and capital asset pricing theory. The study employed a descriptive survey and targeted all the 43 commercial banks in Kenya. The study was derived from the specific bank websites and the website of the central bank and the bank library. The study found out that if the ratio of a non-performing asset to the net asset is lower, then asset quality and profitability is positive. The study resolved that there is a great association amongst asset quality and profitability. This finding cannot be generalized to other firms because the study generally focused on the outcomes of asset quality on the profitability of commercial banks, hence there is a need to conduct different research in the same field.

2.3.2 Leverage and Financial Performance

As defined by Chadha and Sharma, (2015) leverage is the ratio of debt and equity implemented by an organization and shows the relationship between the owner's funds or equity and borrowed funds in the organization's capital structure. The author also indicates that organizations with a mixture of equity and debt in their capital structure are said to be levered and those without this combination are unlevered firms. In the words of Enekwe,

Agu, and Eziedo, (2014) financial leverage is a parameter used to evaluate the ratio adopted by various organizations to finance their cumulative assets. Financial leverage can still be described as the extent to which an organization uses fixed income securities such as debt and preferred equity (Rajkumar, 2014).

Zahoor Huma, Bader and Muhammad (2015) ascertained the impact of financial leverage on the productivity of firms in Pakistan. Panel data from 154 textile companies quoted at Karachi Stock Exchange (KSE) over 6-year period between the years 2006 to 2011 were analyzed. The investigation used descriptive statistics, correlation and multiple regression analysis to analyze data. The findings showed a negative link amid leverage of the performance of firms. The scope of this study was big enough since it covered all textiles firms listed at the Karachi Stock Exchange. Similar studies should be conducted in other regions and also in different industries.

A research conducted on the impact of financial leverage on the financial success of John Keells holdings plc in Sri Lanka (Rajkumar 2014). The objective of the research was ascertaining the interrelationship amongst financial leverage and financial productivity. It was a case study on John Keells Holding plc that used data for 7 years from the year 2006-2012 using regression and correlation analysis. A negative relationship amid the variables under investigation was established. The findings also showed that financial leverage has a great impact on the productivity of the company studied. The scope of this research is small since the research was conducted on one company hence researchers should replicate the study on other companies or industries.

Enekwe et al. (2014) did a study on ascertaining the connection amid financial leverage and financial performance of listed pharmaceutical firms in Nigeria. The research used the ex-post factor research design on selected six quoted pharmaceutical companies in Nigeria. A correlation and multiple regression analysis study were conducted on a 12-year

financial reports data for the period 2001–2012. The analysis found an insignificant effect between independent variables and the financial performance of the sampled companies. The period of study is long enough to give reliable findings however the population sample was small to give a conclusive recommendation. Future studies on the topic should be done on a bigger population sample to give more reliable findings.

Samuel, (2016) conducted a study on "Assessment of the relationship between leverage and performance: An empirical study of unlisted banks in Ghana". The study draws its focus from unlisted banks in Ghana. The study finds confirmed that the unlisted banks are highly leveraged with more debt compared to equity. The survey further confirmed that there is a significant relationship between the unlisted bank's gear and the performance variables. The correlation results showed a significant relationship or interrelation between the magnitude of a firm and its performance. The study recommended that in order to have an optimal leverage ratio in the banks, the managers and stakeholders should effectively and efficiently oversee the utilization of debts. This can be achieved by stipulating policies that will induce more equity funds to run the banks.

Ishuza, (2015) conducted research on the "effects of financial leverage on commercial banks profitability in Tanzania." The data of the study was retrieved secondarily from audited financial statements in all listed commercial banks in the city of Dar es salaam. The survey employed a descriptive study design in which the relationship between dependent variables was measured using the return on average asset and return on average equity. The dependent variable was measured using Dept Ration which was computed using regression analysis. The study findings confirmed that commercial banks are hubs of debts with an average of 89.9%. The findings further indicated that there is a negative relationship between the amount of debt in capital structure and the average return rate.

Gweyi and Karanja (2014) conducted research on the influence of financial leverage on the financial success of deposit -taking saving and credit co-operative in Kenya. Convenient sampling was used to choose 40 out of 135 saving and credit co-operative licensed in Kenya. Data for 3 years 2010-2012 was used. The study adopted both descriptive and analytical design. Correlation analysis was used and the test was done at a 99% confidence interval where an insignificant positive connection was established amid debt to equity ratio and ROA. The findings could not be generalized due to the smaller sample size and limited scope of organizations investigated.

Further, Amenya (2015) studied the connection involving capital composition and financial productivity of companies quoted at the NSE. Data on 26 randomly selected firms out of the 61 firms listed at the NSE was collected over a 6-years from 2008-2013. The study adopted descriptive design, correlation and regression analysis. The study indicated that financial leverage has an adverse influence on companies' productivity as measured by ROE. The study applied secondary data. A review of the same case using primary data sources involving the experts in the stock market might bring out different outcomes.

2.3.3 Capital Adequacy and Financial Performance

Capital is the aggregate bank's own fund existing to aid the business and act as a buffer in case of an adverse situations (Olweny & Shipho, 2011). Capital creates liquidity for the bank due to the fact that deposits are most fragile and prone to bank runs. Besides, huge bank capital reduces the chance of distress (Dang, 2011). Still, it is not without shortcomings that it induces weak demand for liability, the cheapest sources of funds. Therefore, capital adequacy is the level of capital obligatory by the banks to empower them to withstand the risks such as credit, market and operational risks they are exposed to in order to absorb the potential losses and protect the bank's debtors.

Corresponding to (Dang, 2011) capital adequacy is approximated on the basis of capital adequacy ratio (CAR). The ratio illustrates the internal strength of the bank to withstand losses during a crisis. The ratio is directly proportional to the resilience of the bank to a crisis state. It has also a direct effect on the profitability of banks by determining its expansion to risky but profitable undertakings or areas.

Adequate capital is vital for commercial banks to function efficiently because it provides protection against failure (Kivuvo & Olweny, 2014). The significant question is on how much and what type of capital a bank needs to hold so that it has suitable protection. Capital denotes the portion of the bank's liabilities which does not have to be repaid and thus is available as a buffer in case the value of the bank's assets decline (Thumbi, 2013). Banks do not always make a profit, so capital is essential to act as a cushion when banks are impacted by large losses. In the event that a bank's asset value is lower than its total liabilities, the bank becomes insolvent and equity holders are likely to choose to default on the bank's obligations.

Thumbi, (2013) sought to offer a better understanding of factors affecting capital adequacy in the Commercial banks in Kenya. A descriptive research design was employed in the research. The target population was all the 43 Commercial banks in Kenya. Secondary data was collected. Data collected were analysed using descriptive statistics, correlations, and linear regression analysis. A comparative analysis of capital adequacy was also done. The study depicted an analysis of the overall capital adequacy with respect to identified variables. The research found out that there was a direct association amongst capital adequacy, credit risk, working capital ratios and size of the bank. The results pointed out that, the capital adequacy of the Commercial banks and working capital has a positive and strong relationship.

Research by Gudmundsson, Ngoka-Kisinguh and Odongo (2013) aimed to ascertain the role of capital requirements on bank competition and stability in Kenya for 36 commercial banks in the period 2000-2011. Lerner index and the Panzar and Rosse H-statistic to assess competition in Kenya's banking industry were employed in the study. A panel regression model to approximate the fixed effects of capital requirements on bank competition and stability was used. The log of core capital was positive and significant while the squared log of core capital was negative and significant which are propositions that an increase in core capital reduces competition up to a point and then increases competition. Return on equity showed a positive relationship in support of the evidence that capital management improves the performance of banks and financial stability.

Mwongeli (2016) sought to find out if there was an association between regulations and financial performance. One of the independent variables was capital adequacy while the dependent variable was financial performance. The study adopted descriptive research design. The target population of the study was all the 43 commercial banks in Kenya for 5 years between 2010 and 2015. Chi- square test of independence was used to examine the correlation between the two study variables. The study established that the majority of the banks had complied with the minimum capital requirement and the government must continue to ensure that there is a compliance with the stipulated guidelines in order to ensure the stability of the banking sector in Kenya. This research determined whether the period from 2014-2016, regulations have affected the financial performance of second tier commercial banks.

Capital adequacy plays a significant role in determining the capacity of the bank in relation to the underlying liabilities and potential risks such as operational and credit risk among others. It alerts the banks about potential losses hence protecting the interest of the bank's depositors and other lenders. Regulations are in place to ensure that all the banks meet

their minimum capital requirement. (Nzioki, 2015) Conducted a survey on "the impact of capital adequacy on the financial performance of commercial banks quoted at the Nairobi Stock Exchange." The study utilized annual reports of commercial banks as its source of secondary data. The study findings confirmed that capital adequacy positively affects the profitability of the commercial banks hence it serves as a milestone for the profitability of banks. These results support the 2012 central bank move to gradually raise the banks' capital level and closely monitor their operation to ensure they are making profits.

An adequate amount of capital ensures that the daily activities of banks run smoothly without any hindrance. The adequacy of a bank's capital heavily relies on the economic conditions, size or capacity of the bank and the regulations governing capital adequacy. The main challenge that is still facing many of the banks is to maintain the set standards through solvency and at the same time make optimal profits (SHARIF, 2015). Capital adequacy plays a vital role in the financial performance of commercial banks since it acts as a buffer in times of losses and it also provides a stable platform for a bank to retain its capital status after the losses (Kamaita, 2018). Total assets to total deposits and the efficiency of bank operations are the major factors that determine the financial performance of commercial banks. Loan ratio and a total asset to total deposit have a positive effect on the financial performance of commercial banks while risk -weighted ration and core capital ratio have a negative effect on the financial performance of commercial banks (Pradhan, 2017). Capital adequacy is vital for the performance of any institution more so its sustainability. With sufficient capital, banks can carry out their core activities like issuing loans, branding and marketing without straining (Ukinamemen, 2019).

Ronoh and Ntoiti, (2015) researched the impacts of capital structure on the financial performance of listed commercial banks in the Nairobi Securities Exchange in Kenya, a case study of Kenya Commercial Bank Limited. A descriptive research design was adopted. The

target population was all annual financial reports of 230 branches of Kenya Commercial Bank Limited. The study used secondary data. The performance was used as the dependent variable and was measured in terms of ROA and ROE using multiple regression Models. Results showed that deposits, debt and equity were negative and significantly related to the financial performance of listed commercial banks in Kenya as measured by return on assets. The regression analysis results indicated that the association between Retained Earnings ratio was positive though insignificantly related to financial performance as measured by return on assets. It was therefore determined that the capital structure of listed commercial banks in Kenya is significant and influences the financial performance of commercial banks negatively. The above studies confirm that researchers are yet to agree on the degree to which the capital adequacy ratio influences the financial performance of second tier commercial banks in Kenya.

Ogboi and Unuafe (2013) studied the effect of capital adequacy on banks' financial performance in Nigerial by use of cross-section data and time series from 2004-2009 obtained from selected bank's annual reports and accounts in Nigeria. Data from the published financial statement of six out of twenty-one banks operating in Nigeria as at December 2009 was used for the study. The panel data model was used to estimate the association that exists among loan loss provisions (LLP), loans and advances (LA), non-performing loans (NPL), capital adequacy (CA) and return on asset (ROA). Results showed that capital adequacy affected positively the bank's financial performance with the exception of loans and advances that were found to have a negative association with banks' profitability during the study period.

2.3.4 Liquidity and Financial Performance

Liquidity in finance is simply the ability of an institution to sufficiently maintain cash to cater for its upcoming financial obligations. According to Husni Ali Khrawish (2011) in the context of banking, it's the capability of a bank to immediately satisfy cheques withdrawal, cash withdrawal and all other modes of withdrawals sanctioned by its clients as well as legitimatize new loan demands by customers and at the same time comply with central banks' reserve requirements.

A different definition as posed by Marozva (2015) defined liquidity as the degree by which an institution can convert its assets into cash or the ease through which an asset can be converted to cash. Thus, liquidity dictates strategic supply or withdrawal by the management from the market of circulation of the amount of liquidity consistent with desired levels of short-term reserve money without altering the profit-making ability and operations of the bank. It depends on the daily assessment of the liquidity conditions in the banking system, so as to ascertain its liquidity needs and thus the volume of liquidity to allot or withdraw from the market (CBK, 2018).

A study was done by Alshatti, (2015) on the impact of liquidity management and how this affected the profitability of thirteen Jordanian banks revealed a positive association amongst some liquidity indicators and profitability of the banks selected. In particular, variables such as investment ratio and quick ratio when measured by return on equity revealed a positive correlation. Conversely, a negative association exists between liquidity and profitability when measured by return on assets. He explains is due to the under-utilization of untapped deposits. Such liquidity does not provide optimal profit maximization for the banks

According to Ibe (2013), the influence of liquidity management on the success of a sample of three large Nigerian banks through the influence of treasury bills, certificates of

deposit and cash balances measured against profit after tax, results show that there is a substantial association amongst liquidity management and profitability. Ibe (2013) recommended that optimal utilization of these resources is required to ensure profit maximization. Investing idle cash and managing risk is critical in ensuring the bank is still liquid as it enhances shareholder wealth. The banks did not show optimum use and were more liquid and needed more effort in resource use.

A survey in Canada by Graham and Bordeleau, (2010) indicated that a nonlinear association occurs, whereby value is improved for banks that hold some liquid assets, though, there is a point beyond which holding further liquid assets diminishes a banks' profitability, all else equal. Also, estimation results provided some evidence that the association between liquid assets and profitability depends on the bank's business model and the risk of funding market difficulties. Accepting a more traditional. deposit and loan-based business model allows a bank to optimize profits with a lower level of liquid assets.

Molefe and Muzindutsi (2016) study on liquidity and bank performance in South Africa between 1998 and 2014 was carried out. The research used the Autoregressive Distributed Lag (ARDL)-bound testing approach and the Ordinary Least Squares (OLS) to investigate the nexus between net interest margin and liquidity. The findings revealed that there is a negative significant deterministic association between net interest margin and funding liquidity risk.

Olongo (2013) researched the association between liquidity and effectiveness for companies listed at the Nairobi Securities Exchange. The study established that the cash conversion period and the current ratio as liquidity measures negatively manipulated the profitability of the firms listed in the NSE over the 5 years while the quick ratio as a liquidity measure did not significantly affect the profitability of the firms listed in the NSE over the 5 years

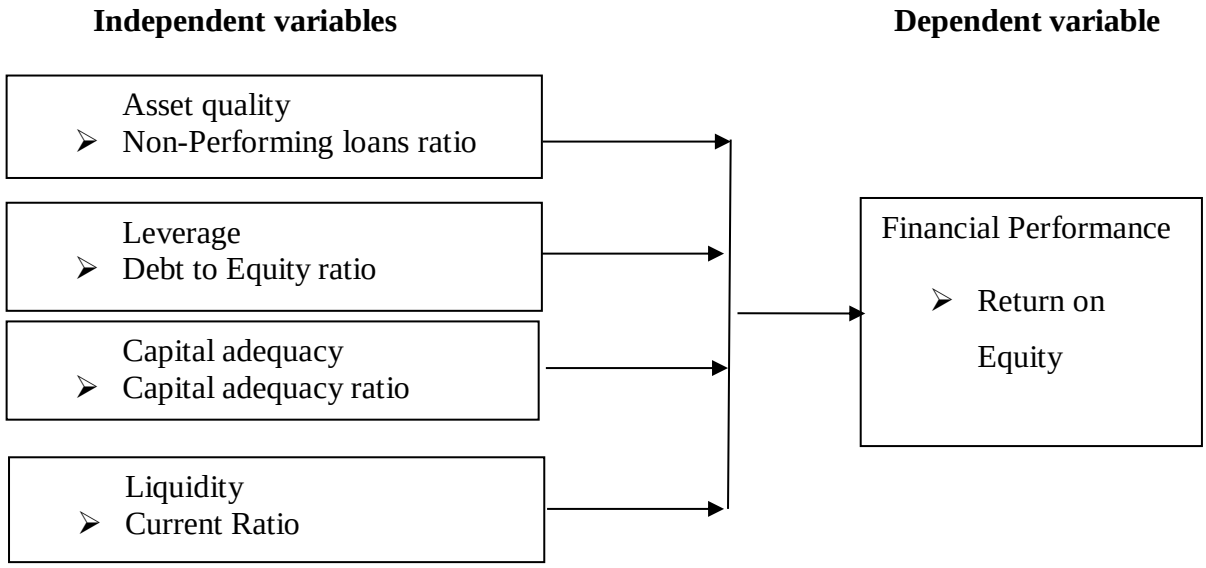
Musembi, Ali and Kingi (2016) researched the influence of liquidity risk causes on the financial performance of Commercial banks listed at the Nairobi Securities Exchange, measured the micro-economic variables which are specific to the bank, that is, liquidity level, capital adequacy and asset quality, and included one macro-economic variable, inflation, measured against return on assets. The results of the study showed that the liquidity variable's influence on the financial performance variable was positive but not significant for liquidity level, positive and significant for capital adequacy and asset quality, and negative and significant for inflation.

2.4 Conceptual Framework

According to Mugenda and Mugenda (2013), the conceptual framework is a concept that tabulates the connection and nature of the relationship between study variables. It shows the theory underlying these relationships and describes the nature and direction of these variables. In this study, variables such as Asset quality, leverage, capital adequacy and liquidity were presented as the independent variables while financial performance among second tier commercial banks in Kenya was presented as the dependent variable (Figure 1).

Figure 1

Conceptual Framework



Source: Author (2020)

Asset quality may be defined as the quality and structure of banks assets. A loan book is the core factor in determining asset quality. Hence, when analyzing asset quality, the non-performing loan book or NPL is of significant importance. Research conducted on the Nigerian banking system concentrated on non-performing loans as a dependent variable in ascertaining the quality of bank assets (Ezeoha, 2011). Milenković, Pjanić and Andrašić (2013) deliberate this further, citing the NPL as a valid measure in establishing asset quality. As a bank's core source of revenue, it could be assumed that the higher the volume of lending the better. However, this is not necessarily true, reckless lending can lead to impairment which in turn can impact the profitability (Adewale, 2014). However, a conservative lending policy, meaning that a large liquid deposit base remains untouched, can also prove suboptimal (Ezeoha, 2011).

Financial leverage is the degree to how much a company uses equity and debt to finance its assets. As debt increases, financial leverage increases. Management tends to favor equity financing over debt since it carries less risk (Matt, 2000). Leverage takes the form of a

loan or other borrowing (debt), the proceeds of which are re-invested with the intent to earn a greater rate of return than the cost of interest. An unlevered firm is an all-equity firm, whereas a levered firm is made up of ownership equity and debt (Andy, Chuck & Alison, 2002). Leverage allowsa greater probable returns to the investor than otherwise would have been available, but the probable loss is also greater if the investment becomes worthless, the loan principal and all accrued interest on the loan still need to be repaid (Andy et al., 2002)

Capital adequacy is defined as a quantum of the fund, which a financial institution should have a plan to preserve in order to conduct its business in a prudent manner (Kishare & Pandey, 2005). Bank's capital then depends on a number of factors such as the bank's size, the level of risk involved in its operations, the market forces, the lending policy, its management capabilities, its portfolio (assets and cash) (Nacer & Kandil, 2008). Capital adequacy can also see as a percentage ratio of a bank's primary capital to its (loan and investments), used to gauge its financial strength and stability (Amahalu, Abiahu, Okika & Obi, 2016). As per the capital adequacy standard set by international settlements (BIS) banks must have a primary capital base equal at least to eight percent (8%) of their assets (CBN, 2006)

Liquidity can be defined as the aptitude of a firm to meet short term financial obligations by converting the short term assets into cash without incurring any loss. According to (Basel Committee on Banking Supervision, (2013), assets are considered to be high-quality liquid assets if they can be easily and immediately converted into cash without losing value. Markets are considered to be liquid when those who have assets holdings can sell them at prices that do not involve considerable losses so as to gain the finances they need to fulfill other commitments.

2.5 Operationalization of Variables

Table 1

Operationalization of Variables

Variable	Indicator	Measurement	Formula
Asset Quality	Non-Performing ratio	Ratio	Total Non-performing loans/Gross Loans
Leverage	Debt: equity ratio	Ratio	Total Debt/ Total Equity
Capital Adequacy	Capital adequacy ratio	Ratio	Total Equity/Total Assets
Liquidity	Current ratio	Ratio	Total Current Assets/Total Current Liabilities
Financial Performance	Return on Equity	Ratio	Net Shareholders Income/Total Equity

Source: Author (2020)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The section summarizes the research design, target population, sampling design, sample size determination, data collection instrument, data collection procedure and finally the data analysis method which was adopted.

3.2 Research Design

The researcher employed descriptive research design, Kothari (2014) defined this study design as an exercise of collecting data from a group with an aim of undertaking an in-depth analysis and also to test hypotheses and provide answers to the current and existing problem as outlined in the study. The process involves formulating objectives of the study, scheduling the data collection methods, determining the sample from the target population, gathering either primary or secondary data, analyzing and finally making conclusions and recommendations about the current situation. The researcher adopted descriptive research design as it facilitates the use of a few study variables to make conclusions. Concurring to Mugenda and Mugenda (2013), a descriptive research design is suitable in answering questions like how who and how much making to more appropriate for social studies. Moreover, this design was more suitable as it facilitated an efficient data collection process and gave a clear picture of the present situation.

3.3 Target Population

According to (Cooper and Schindler, 2003) Population signifies the total collection of elements about which one wishes to make some inference and an element symbolizes each

member of the population. The study targeted all the 10 tier two commercial banks in Kenya (CBK report, 2018).

3.4 Sampling and Sampling Procedure

The study adopted a census sampling method. According to Cooper and Schindler, (2012) Census is a quantitative research method where all the members of the population of interest are enumerated. With census, a researcher chooses to examine the entire population that has one or more shared characteristics. This technique is commonly used to generate reviews of events or experiences. The target population in this study was not big and therefore census technique was the most suitable method of collecting data from the target population.

3.5 Data Collection

The researcher utilized secondary data traced from the statement of comprehensive income and statements of financial positions from the banks audited annual reports available from the CBK and individual bank's websites. The period was selected as it proposes recent time series observation and it captures a period of major developments in the Kenyan Banking system. Data for each of the bank specific factors were collected namely; asset quality, capital adequacy, leverage and liquidity. Data on return on equity to evaluate performance for the commercial banks was also collected over the study period.

3.6 Diagnostic Tests

Linear regression analysis was adopted in the study. Data was checked if it meets the assumptions for linear regression analysis before undertaking the regression analysis. These assumptions are; autocorrelation, homoscedasticity, multicollinearity and normality.

3.6.1 Multicollinearity Test

According to Kothari (2014), the presence of association of independent variables signals multicollinearity. Variables need to be linearly independent of each other. Cooper and Schindler (2006) assert that the presence of multicollinearity results in invalid significant tests because of the distorted regression coefficients. Variance Inflation Factor (VIF) was employed to check the presence of multicollinearity. A VIF of above 5 shows multicollinearity, while a VIF below 5 indicates that there is no multicollinearity.. (Gujarati, Basic Econometrics, 2003).

3.6.2 Autocorrelation Test

Autocorrelation may be defined as a "correlation between members of a series of observations ordered in time as in time series data or space as in cross-sectional data (Gujarati, Basic Econometrics, 2003). The survey will apply the Wooldridge test to assess serial correlation. The null hypothesis for the test is no serial correlation. Therefore, p values of 0.05 and above will indicate no serial correlation while p values of 0.05 and below will indicate the presence of serial correlation.

3.6.3 Heteroscedasticity Test

Heteroscedasticity is the lack of error variance (Gujarati, 2003). Using the independent variables regression residual values, the study applied the Breusch-Pagan Cook-Weisberg test for group- wise heteroscedasticity to assess heteroscedasticity in the data. If heteroscedasticity is present, robust errors should be used in place of standard errors. The null hypothesis of the test is homoscedasticity. Thus, when the p -value is above 0.05, it shows homoscedasticity and when p -value is below 0.05, this indicates heteroscedasticity.

3.6.4 Normality Test

Normality test in statistics, are used to establish if a data set is well-modeled by a normal distribution and to compute how likely it is for a random variable underlying the data set. The tests are a form of model selection and can be interpreted in several ways, depending on one's interpretations of probability (Henry, 2002). The research conducted the normality test to assess the normality of residuals. Saunders et al. (2015) denote that the error terms of a regression model need to be normally distributed for the inferences from the model regarding significance levels and coefficients to be valid. In this study, the Shapiro-Wilk test was performed to assess the normality of residuals. The null hypothesis of the test is that the residuals are normally distributed. Hence, when p value is above 0.05, the residuals are normally distributed. However, when the p value is below 0.05, the residuals are not normally distributed.

3.6.5 Hausman Test

To assess the best model for the study, a Hausman test was conducted to establish which among the panel regression models (random effects model and fixed effects model) was suitable for the data. The null hypothesis will be the random effect model is appropriate while the alternative hypothesis will be fixed effect is the appropriate model. If the P value is less the 5% null hypothesis is rejected and the alternative hypothesis is accepted. (William, 2008).

3.7 Data Analysis and Presentation

The data analysis in this study involved the use of descriptive and inferential statistics in order to help the researcher establish the relationship between the study variables. After the field work, all data was sorted, edited and coded into Stata to enable the answers to be clustered into several categories and analyzed by means of descriptive statistics. The findings

were presented using tables and graphs. Regression analysis was also used as it provides means of objectively assessing the degree of the association amongst the independent variables and the dependent variables in the prediction of the dependent variable. The panel regression analysis model was used. The model was specified as follows:

$Y_{it} = \beta_o + \beta_1 X_{1it} + \beta_2 X_{2it} + \beta_3 X_{3it} + \beta_4 X_{4it} + \varepsilon_{it}$

Where; Y_{it} = is the Financial Performance of tier two commercial banks in Kenya

X_{1it} = is the Asset Quality

X_{2it} = is the Capital Adequacy

X_{3it} = is the Leverage

X_{4it}= is the Liquidity

β_o = is the intercept term

β_1, β_2, β_3 and β_4 are the coefficients of the independent variables

ε_{it} = is the error term

CHAPTER FOUR

DATA ANALYSIS, FINDINGS AND DISCUSSION

4.1 Introduction

The chapter focuses on data analysis, findings discussions and interpretation of data. The analysis of the data will include descriptive statistics, discussion on each of the study variables data both independent and dependent variables, Diagnostics tests will be performed to evaluate whether the analyzed data is in conformity with model assumptions and in conclusion the data model suitable for the study will be fitted.

4.2 Descriptive Statistics

This section summarizes the data that was received in relation to asset quality, leverage capital adequacy, liquidity and financial performance for five years (2014-2018) for 10 second tier commercial banks in Kenya. Descriptive statistics for mean, standard deviation, minimum and maximum values for overall, between and within firms are provided in Table 2.

The study results provided in Table 2 show that the mean of asset quality (Asseq) as indicated by the ratio of non-Performing loans was 0.14 or 14% with a standard deviation of 0.1781 and a maximum value of 0.95. On leverage, the mean was 5.6 or with a standard deviation of 3.85 and a maximum of 15.4 while the mean of capital adequacy was 0.185 or 18.5% with a standard deviation of 0.1577. The mean of liquidity was 0.7914 or 79.14% with a standard deviation of 0.7197. For financial performance as measured by return on equity had a mean of 0.1468 or 14.68% with a standard deviation of 0.3528 for the second tier commercial banks in Kenya.

Table 2

Descriptive Statistics

Variable		Mean	Std. Dev.	Min	Max	Observations	
Assetq	overall	.14	.1781423	0	.95	N =	50
	between		.1153699	.026	.354	n =	10
	within		.1396819	-.214	.736	T =	5
Leverage	overall	5.6	3.846578	-13.83	15.47	N =	50
	between		2.25646	3.68	11.684	n =	10
	within		3.181224	-12.732	13.218	T =	5
Cap_Ade	overall	.185	.1577294	-.08	.92	N =	50
	between		.1056083	.068	.456	n =	10
	within		.120979	-.131	.649	T =	5
Liquid~y	overall	.7914	.7196967	.18	5.31	N =	50
	between		.3365459	.286	1.45	n =	10
	within		.6433864	-.2086	4.6514	T =	5
Fin_Perf	overall	.1468	.3528047	-.21	2.46	N =	50
	between		.1500169	-.042	.506	n =	10
	within		.3221851	-.5692	2.1008	T =	5

Source: Author (2020)

4.3 Study Variables

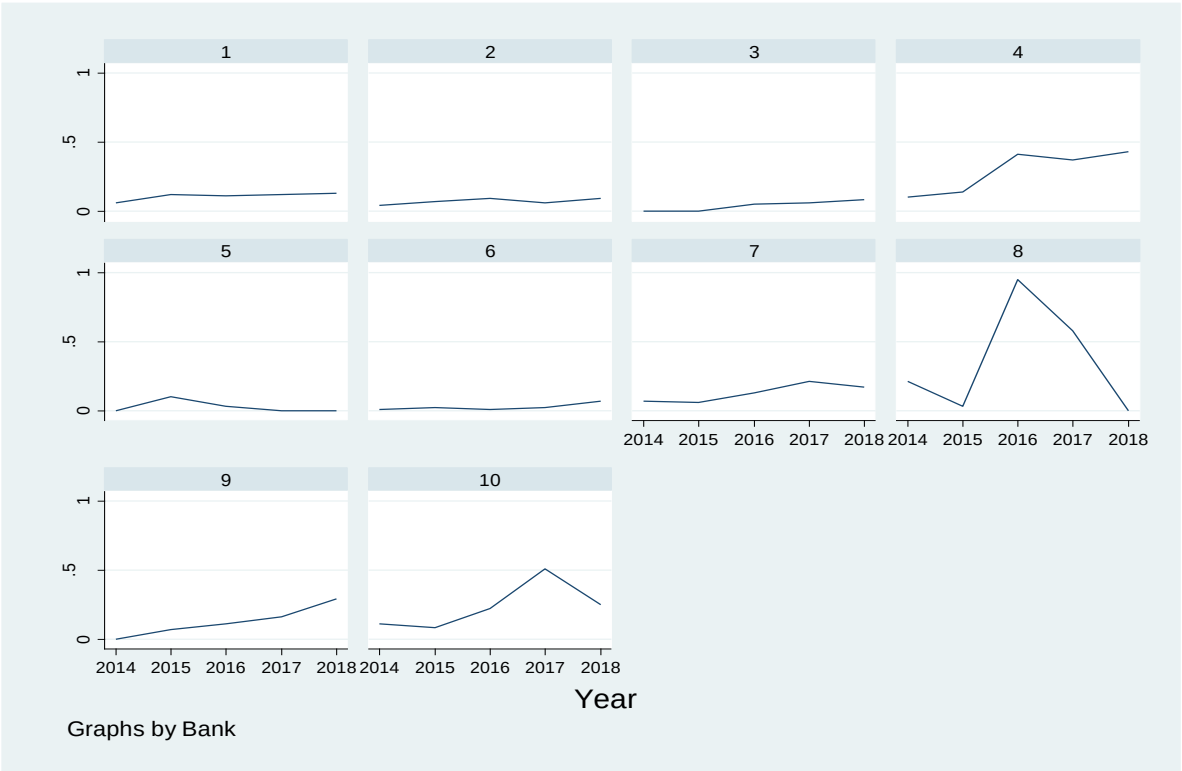
This section provides the exploratory analysis of the study variables using panel data plots and overlain plots. The trends for the 10 second tier commercial banks in Kenya for asset quality, Leverage, Capital adequacy and liquidity are provided. This provides the five year trend that could enable comparison between the commercial banks. Moreover, the overlain plots for financial performance as measured by return on equity are provided.

4.3.1 Panel data plots for Asset Quality of the Second Tier Commercial Banks

The study developed the panel data plots for asset quality for the 10 second tier commercial banks in Kenya The results are provided in Figure 2.

Figure 2

Panel Line plots for Asset Quality



Source: Author (2020)

The plots (Figure 2) indicate that most of the banks did not have significant variations over the five-year . However, Bank 8 and 10 indicated the most changes over the five-year period. For bank 8, there was a small decrease in the year 2015 followed by a sharp rise in the year 2016 and then by a sharp decrease in the year 2017 over to the year 2018. For bank 10, a sharp rise was observed in the 2017 year which followed by a corresponding decrease in the year 2018.

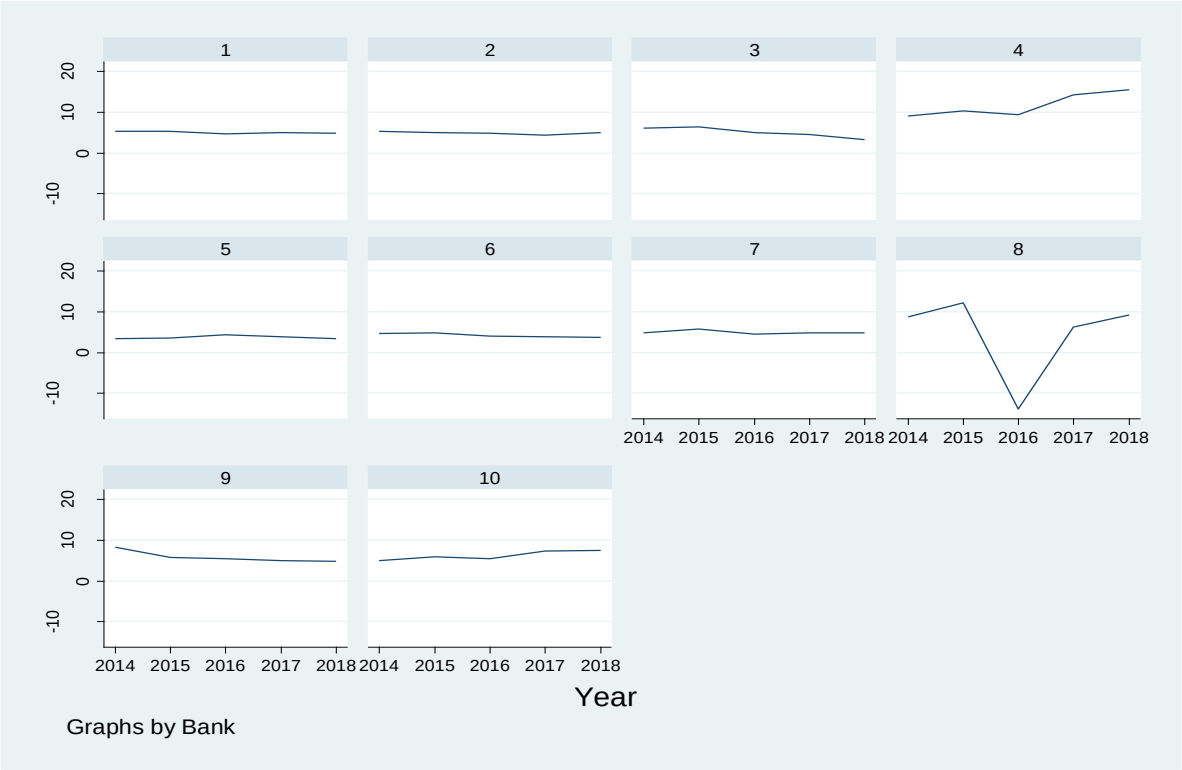
4.3.2 Panel data line plots for Leverage of second tier Commercial Banks.

The panel data line plots for leverage were developed and they are presented in Figure 3. The plots indicate that the second tier commercial banks experience minimal changes in leverage over the five-year period except for Bank 8. This bank experienced a sharp decline in

leverage in the 2015/2016 years which was followed by a corresponding increase in the following financial year.

Figure 3

Panel Data Line Plots for Leverage



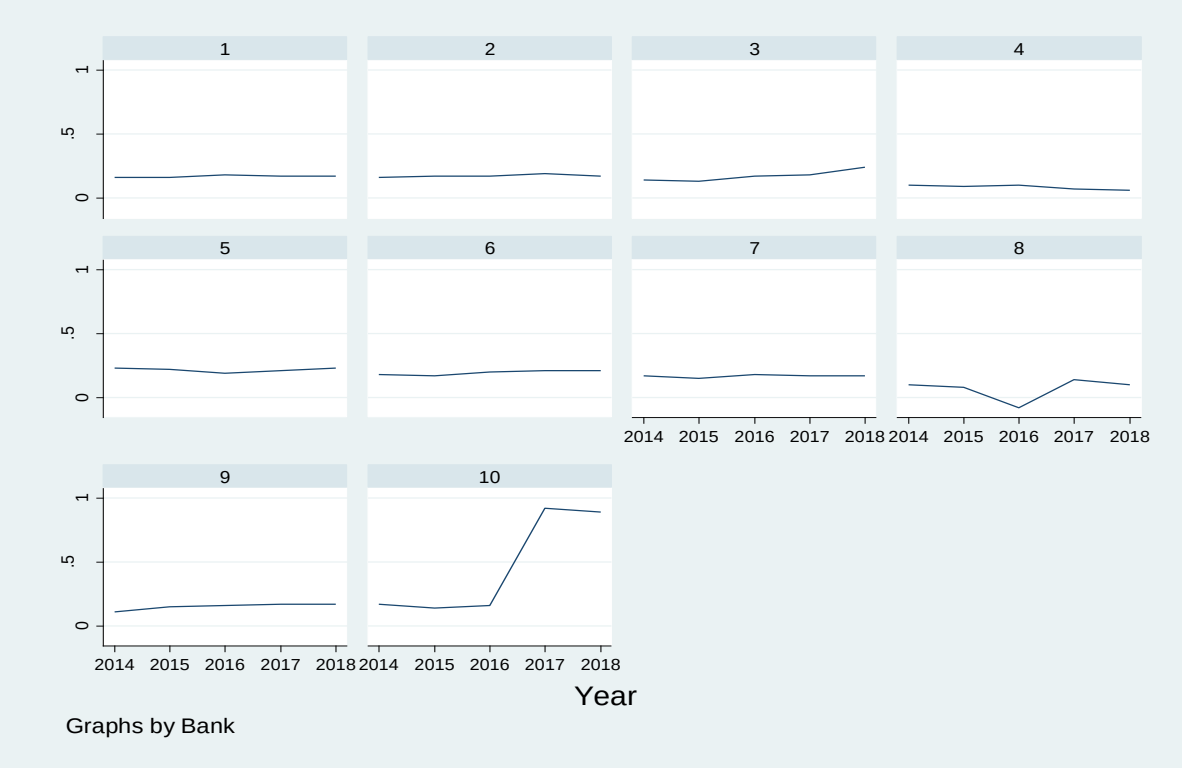
Source: Author (2020)

4.3.3 Panel data line plots for Capital Adequacy of Second tier Commercial Banks.

The panel data line plots for capital adequacy are provided in Figure 4. The results indicate that except for banks 8 and 10, all other banks had minimal shocks to their capital adequacy. For instance, bank 8 had a small decrease in the 2015/2016 financial year which followed by a corresponding increase in the following financial year. Bank 10 on the other hand experience a sharp increase in the 2016/2017 financial year but had minimal changes in the other years.

Figure 4

Panel Data Line Plots for Capital adequacy



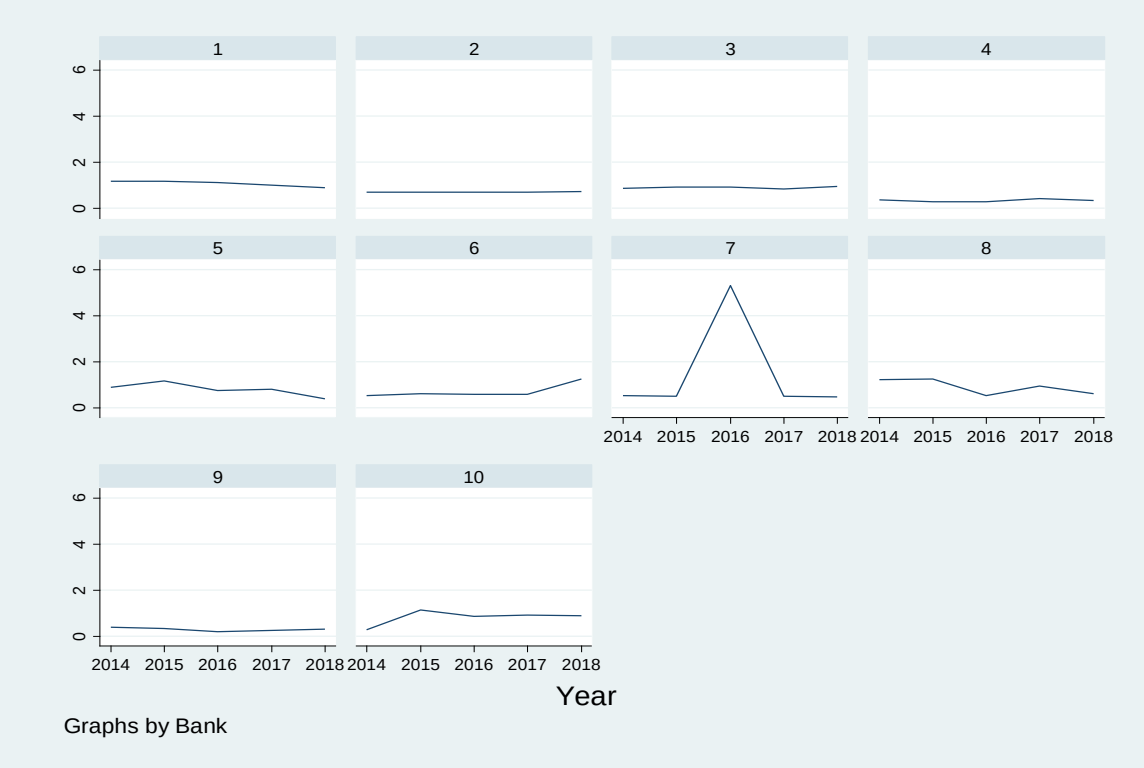
Source: Author (2020)

4.3.4 Panel Data line plots for Liquidity of Second Tier Commercial Banks

Figure 5 presents the panel data line plots for liquidity in the 10 second tier commercial banks in Kenya. The results indicate that most of the bank's level of liquidity remained significantly unchanged over the five-year period studied. However, Banks 5, 6, 8 and 10 experienced minimal changes over the years while Bank 7 experienced a huge increase in liquidity in the 2015/2016 financial year which was followed with a similar decrease the following financial year.

Figure 5

Panel Data Line Plots for Liquidity



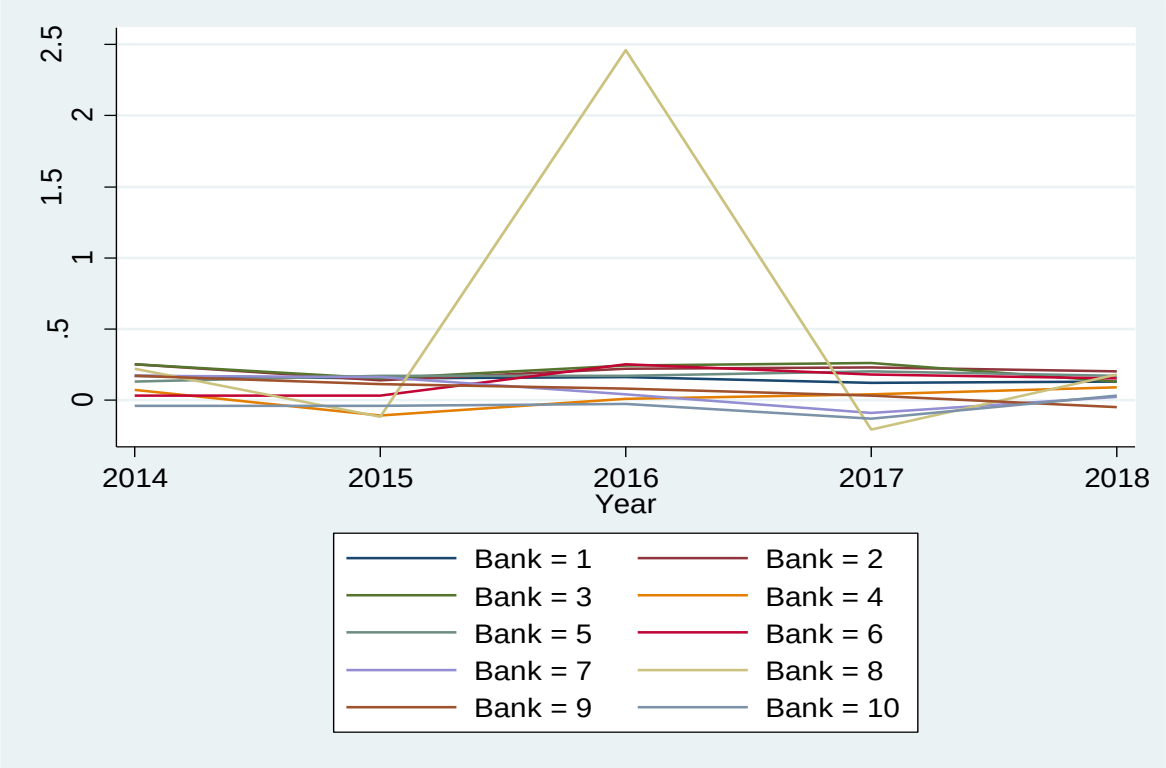
Source: Author (2020)

4.3.5 Overlain Plots for Financial Performance of Second Tier Commercial Banks

The overlain plots for return on equity were developed and provided in Figure 6. This enables a comparison of the 10 banks on their financial performance over the five-year. The results indicate that most of the second tier commercial banks had comparable trends for financial performance except bank 8. This bank experienced a sharp rise in financial performance in the 2015/2016 financial year which was followed by a corresponding decline the following financial year.

Figure 6

Overlain Plots for Financial Performance



Source: Author (2020)

4.4 Diagnostic Tests

The researcher analyzed the diagnostic tests to ensure that the data conforms to the classic linear regression assumptions. The tests conducted include a test of multicollinearity, heteroscedasticity test, a test of serial correlation and a test of normality of errors. Testing for model specification was critical to ensure that the fitted model was reliable and efficient for hypotheses testing. The tests and the results are provided hereunder.

4.4.1 Multicollinearity Test

The first diagnostic test conducted was a test of multicollinearity. Cooper and Schindler (2006) assert that the presence of multicollinearity results in invalid significant test because of the distorted regression coefficients. The study applied VIF to test for multicollinearity.

Variables with VIF of above 5 indicated multicollinearity while those with VIF of less than 5 indicate no multicollinearity. Table 3 shows the results of multicollinearity.

Table 3

Multicollinearity Test

Variable	VIF	1/VIF
Leverage	1.08	0.923501
Assetq	1.08	0.928956
Cap_Ade	1.02	0.979752
Liquidity	1.02	0.980180
Mean VIF	1.05	

Source: Author (2020

The results presented in Table 3 show that all the VIF for leverage, asset quality, capital adequacy and liquidity were below 5. The mean VIF was 1.05. These findings led to the conclusion that there was no multicollinearity between the study variables since all the VIF were below 5.

4.4.2 Autocorrelation Test

The autocorrelation of the errors of the fitted regression was tested using Wooldridge test for autocorrelation in panel data. The test's null hypothesis is that there is no first order serial correlation. This is accepted if the p -value is above 0.05. The results are provided in Table 4.

Table 4

Test of Autocorrelation

Wooldridge test for autocorrelation in panel data
Ho: No first order autocorrelation
F (1, 9) = 2.327
Prob > F = 0.1528

Source: Author (2020)

The results provided in Table 4 indicate that the statistic was not significant at the 5% level of significance (F = 2.327, p = 0.1528). These findings led to the acceptance of the null hypothesis that there was no first order serial correlation.

4.4.3 Heteroscedasticity Test

The study conducted a test of the equality of the variance of errors of the fitted model. This was conducted using the Breusch-Pagan Cook-Weisberg test of heteroscedasticity. The null hypothesis for this test is that the variance of errors of the fitted model has a constant variance. This null hypothesis is accepted when the p -value of the chi -square is above 0.05. The study results are presented in Table 5.

Table 5

Heteroscedasticity Test

```
Breusch-Pagan / Cook-Weisberg test for heteroskedasticity
         Ho: Constant variance
         Variables: fitted values of Fin_Perf

         chi2(1)      =    17.38
         Prob > chi2  =   0.0000
```

Source: Author (2020)

The study results provided in Table 5 indicate that the chi square value was significant at a 5% level of significance (Chi square = 17.38, p < 0.05). These findings indicate that the null hypothesis was rejected and the alternate hypothesis accepted. The implication of these results was that there was heteroscedasticity. To correct for this, the study applied robust standard errors that were adjusted for the 10 clusters of the commercial banks.

4.4.4 Normality Test

Normality test in statistics are used to determine if a data set is well-modeled by a normal distribution and to work out how likely it is for a random variable underlying the data set. The tests are a form of model selection and can be translated in several ways, depending on one's interpretations of probability. In linear regression analysis, the errors of the fitted model should be normally distributed. This study used the Shapiro-Wilk test to assess the normality of residuals. The null hypothesis of the study is that the errors are normally distributed while the alternate hypothesis is that errors are not normally distributed. The errors from the model were saved after model fitting. The test was then conducted on these errors. The study results are presented in Table 6.

Table 6

Test of Normality of Errors

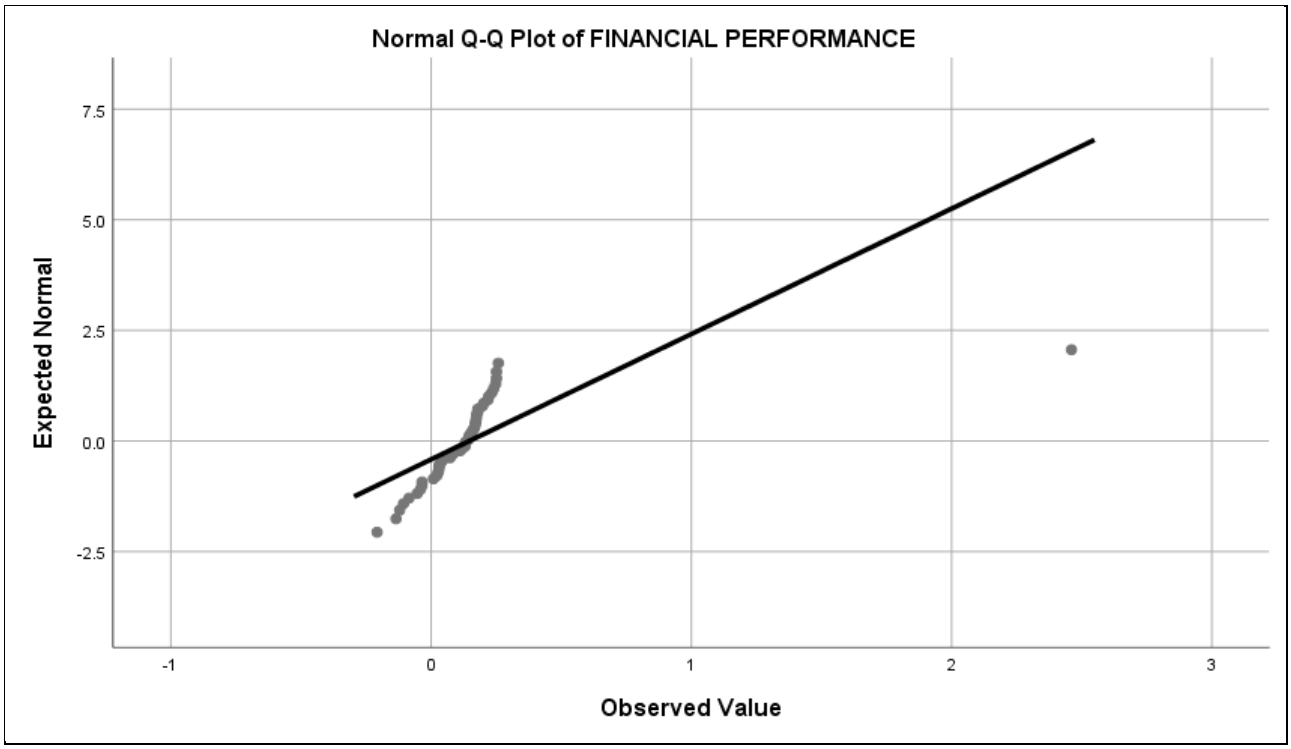
Variable	Obs	W	V	Z	Prob > z
Residuals	50	0.9711	1.481	0.587	0.2512

Source: Author (2020)

As evident in Table 6, the z value of the Shapiro-Wilk test was 0.587 and was not significant at a 5% level of significance (p = 0.2512). This showed that the null hypothesis of normal distribution could not be rejected. The conclusion was that the errors of the regression model were normally distributed. To evaluate normality residuals, the researcher again used the q-q plot shown in Figure 7. If the plot is linear, this implies that the residuals follow a normal distribution.

Figure 7

Testing the Normality of Residuals



Source: Author (2020)

According to the q-q plot, the residuals are normally distributed since the plot is approximately linear.

4.4.5 Hausman test

After the diagnostic tests, the study conducted the Hausman test to determine which panel model was more appropriate for the data collected in the study. The null hypothesis of the Hausman test is that the random effects model is the one that is appropriate for the data against the alternative fixed effects model. The model assesses whether the unique characteristics or errors are correlated with the independent variables. Therefore the null hypothesis is accepted when the p -value of the test is greater than 0.05. The findings from the test are provided in Table 7.

Table 7

Hausman Test Results

```
. hausman fixed random

                ——— Coefficients ———
             |      (b)          (B)            (b-B)     sqrt(diag(V_b-V_B))
             |    fixed        random       Difference          S.E.
-------------+------------------------------------------------------------
      Assetq |   .0641994     .6184496       -.5542502        .2253947
   Leverage  |  -.0858595    -.0613871       -.0244724        .0098041
    Cap_Ade  |  -.0408751    -.5251073        .4842322        .1721434
  Liquidity  |  -.0150237    -.0285062        .0134825        .0133054
------------------------------------------------------------------------------
                           b = consistent under Ho and Ha; obtained from xtreg
            B = inconsistent under Ha, efficient under Ho; obtained from xtreg

    Test:  Ho:  difference in coefficients not systematic

                  chi2(4) = (b-B)'[(V_b-V_B)^(-1)](b-B)
                          =        6.82
                Prob>chi2 =      0.1456
                (V_b-V_B is not positive definite)
```

Source: Author (2020)

The results in Table 7 showed that the null hypothesis was accepted (chi square = 0.1456, p = 0.1456). This indicated that the unique errors were not correlated with the independent variables. The appropriate model for the study was therefore the random effects model.

4.4.6 Test for Random effects

To decide between the random effects model and the pooled ordinary least squares model, the study tested for the presence of random effects. This was tested using the Breusch-Pagan Langrangian Multiplier test for random effects. This model tests whether the variance of the errors from regression is dependent on the values of the independent variables. The null hypothesis of the test is that there is no significant variance between the entities and hence the

pooled ordinary least squares model is appropriate for the study. This implies that across the panels, there are significant differences. The results of the test are provided in Table 8.

Table 8

Test for Random Effects

```
Breusch and Pagan Lagrangian multiplier test for random effects

        Fin_Perf[Bank,t] = Xb + u[Bank] + e[Bank,t]

        Estimated results:
                         |       Var     sd = sqrt(Var)
                ---------+-----------------------------
                Fin_Perf |    .1244712       .3528047
                       e |    .0336206       .1833592
                       u |    .0005196       .0227949

        Test:   Var(u) = 0
                                 chibar2(01) =      0.31
                              Prob > chibar2 =    0.2896
```

Source: Author (2020)

The results in Table 8 indicate that the null hypothesis of no significant variance across entities was accepted. This hence meant that there were no significant random or unique differences between the second tire commercial banks random and therefore, the random effects model would not be appropriate for the study. The implication is that the pooled ordinary least squares model was appropriate for the study.

4.5 Model Fitting

The research conducted a pooled ordinary least squares model. Due to the issue of heteroscedasticity, the model applied robust standard errors. Wooldridge (2015) notes that when the homoscedasticity assumption is violated, the ordinary least squares (OLS) regression method provides consistent and unbiased estimates. However, the estimates are not the best linear estimates since the standard errors of these estimates are not the smallest.

To correct these robust standard errors should be used. This was applied in this study and the fitted model is presented in Table 9.

Table 9

Fitted Pooled Ordinary Least Squares Model

Linear regression — Number of obs = 50; F(4, 45) = 6.18; Prob > F = 0.0005; R-squared = 0.7258; Root MSE = .19279

Fin_Perf	Coef.	Robust Std. Err.	t	P>|t|	[95% Conf.	Interval]
Assetq	.6261011	.3126345	2.00	0.051	-.0035772	1.255779
Leverage	-.0610561	.0130192	-4.69	0.000	-.0872781	-.034834
Cap_Ade	-.5366029	.2265585	-2.37	0.022	-.9929151	-.0802906
Liquidity	-.028911	.019295	-1.50	0.141	-.0677731	.009951
_cons	.5232115	.0883934	5.92	0.000	.3451781	.7012449

Source: Author (2020)

Table 9 shows that two independent variables had a significant negative effect on the dependent variable while two had no significant effect. These results can be summarized by the following model:

$Y = 0.523 + 0.626X_1 – 0.061X_2 – 0.537X_3 – 0.029X_4$…….. (ii)

Where:

Y= Financial Performance

X_1 = Asset Quality

X_2= Leverage

X_3= capital adequacy

X_4= Liquidity

According to the regression equation, financial performance was 0.523 in the absence of the effect of all independent variables. The results of the analysis confirmed that a unit increase in asset quality leads to a 0.626 increase in financial performance. Besides, a unit increase in leverage would lead to a 0.061 decrease in financial performance, whereas a unit increase in capital adequacy would lead to a 0.537 decrease in financial performance. Moreover, a unit increase in liquidity would lead to a 0.030 decrease in financial performance. However, asset quality had a positive but not significant effect on financial performance ($\beta = 0.626$, $t = 2.00$, $p > 0.05$). On the other hand, leverage had a significant negative effect on financial performance of the second tier commercial banks ($\beta = -0.061$, $t = -4.69$, $p < 0.05$) and similarly, capital adequacy had a significant negative effect on financial performance of the banks ($\beta = -0.537$, $t = -2.37$, $p < 0.05$). Liquidity did not have a significant effect on financial performance of the second tier commercial banks ($\beta = -0.029$, $t = -1.50$, $p > 0.05$).

From Table 9, the R-Squared denotes the explanatory power of the model and is the percentage of the explained variance in the financial performance of the second tier commercial banks. The r squared (0.7258) indicates that 72.58% of the variance in financial performance among second tier commercial banks was explained by the factors included in the model which were asset quality, leverage, capital adequacy and liquidity was strong. This implies that 27.42% was explained by other factors not included in the model.

The goodness of fit of the model was tested using the f test ($F = 6.18$, $p < 0.05$). The findings (Table 9) indicate that the model was a good fit and was also statistically significant. This indicates that the model has predictive power and can be used to predict the financial performance of second tier commercial banks using the four independent variables.

4.6.1 Hypothesis Testing

The hypothesis was tested using the pooled ordinary least squares regression in Table 4.8.

H_{01}: *Asset quality has no significant effect on financial performance among second tier commercial banks in Kenya*.

The results of the regression analysis show that asset quality had no significant effect on financial performance among second tier commercial banks in Kenya. This was because the p -value was above 0.05. At 5% level of significance and a 95% level of confidence. The research therefore, fails to reject the null hypothesis.

H_{02}: *Leverage has no significant effect on financial performance among second tier commercial banks in Kenya.*

The conclusions of the regression analysis show that Leverage had a negative effect on financial performance among second tier commercial banks in Kenya by a factor of -0.061 and a p value of less than 0.05. At 5% level of significance and a 95% level of confidence this is statistically significant (P=0.00<0.05) as the P-Value is lower than 0.05." The study therefore. rejects the null hypothesis.

H_{03}: *Capital adequacy has no significant effect on financial performance among second tier commercial banks in Kenya.*

The results of the POLS regression analysis show that capital adequacy had a significant negative effect on financial performance among second tier commercial banks in Kenya by a factor of -0.537 and p- value of 0.004. At 5% level of significance and a 95% level of confidence this is statistically significant (P=0.022<0.05) as the P-Value is lower than 0.05." The study therefore, rejects the null hypothesis.

H_{04}: *liquidity has no significant effect on financial performance among the second tier commercial banks in Kenya*.

The outcomes of the regression analysis show that liquidity had no significant influence on financial performance among second tier Commercial banks in Kenya. The p- value was above 0.05 (p = 0.141). At a 5% level of significance and a 95% level of confidence, this is not statistically significant as the p-Value is higher than 0.05. The study therefore, fails to reject the null hypothesis.

4.6 Discussion of the Findings

The research sought to resolve the extent to which asset quality, leverage, capital adequacy and liquidity influences the financial performance of second tier Commercial banks in Kenya. On the asset quality the research found out that it has no significant outcome on the financial performance of second tier commercial banks in Kenya and this was in line with a study done by Vigneswara (2015) conducted on India' banking profitability,asset quality being the main determinant, The study establishe that the performance of the whole banking sector is tied to bad debts and capital adequacy and investment activity had a significant effect on the bank's profitability, unlike asset quality which has no effect on the banking sector profitability.

This finding on the asset quality failed to support the modern portfolio theory done by Markowits (1952) that states that the management should ensure that all resources are efficiently utilized and diversification options available should be undertaken in a prudent manner thus increasing the bank's profitability.

Further, the research findings of the negative and significant outcome of leverage on the financial performance of second tier Commercial banks were in line with some previous studies. For an instant the study conducted by Ishuzu (2015) assessed the effect of financial leverage on Commercial bank's profitability in Tanzania. The research concluded that there was an undesirable relationship concerning the amount of debt in the capital structure and the average return rate. However, the research contradicts the findings of Enekwe et al. (2014) who did a study on the connection between the financial performance and leverage on the

listed pharmaceutical firms in Nigeria and found an insignificant effect between the independent and dependent variables.

The findings on the leverage support the Trade-off theory by Modigliani and Miller (1958) which states that for an ideal capital structure to be achieved the marginal cost and marginal profit should be at par as the targeted leverage of firms should be adjusted over time (Hachbarth, Hennessy & Leland,2007) for instance if one anticipates more returns, more risks should be embraced.

The other research finding on capital adequacy showed that it had a significant negative influence on the financial performance among the second tier Commercial banks in Kenya. The results are inconsistent with the findings of Ogboi and Unuafe (2013) who established that capital adequacy affects clearly on the financial performance of commercial banks in Nigeria. Capital adequacy is fundamental for the performance of any institution more so its sustainability, with sufficient capital, banks can carry out their core activities like issuing loans, branding and marketing without straining (Ukinamemen,2019).However, conferring to (Dang,2011) capital adequacy is assessed based on the capital adequacy ratio which confirms the internal strength of the bank to survive losses during crises and it also has a direct influence on the success of banks by governing its growth to risky but profitable undertakings

The outcome of the regression analysis showed that liquidity has no significant effect on financial performance among the second tier commercial banks in Kenya. This is contrary to research of Alshatti (2015) who found out a positive correlation involving liquidity indicators and the prosperity of thirteen selected Jordanian banks. The research finding fails to support the agency theory by (Jensens & Meckling 1976) which proposes that agency costs can cause a firm to encounter financial problems that lead to liquidity risks which undermine the normal operations of the bank (Sangmi & Nazir,2010). The research findings were in line

with research done by Molefe and Muzindutsi (2016) who did a study on liquidity and bank performance in South Africa and found out that there is a negative meaningful relationship between net interest margin and funding liquidity risk.

CHAPTER FIVE

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

5.1 Introduction

The chapter presents a brief of the major finding on the determinants of financial performance among the second tier commercial banks in Kenya. The chapter draws the study conclusion and discusses major recommendations and gives suggestions for further studies.

5.2 Summary of the Findings.

The main objective of this research was to examine the determinants of financial performance among second tier Commercial banks in Kenya. The summary relates to the study findings and the output of hypothesis testing. The hypothesis related to the effect of asset quality, leverage, capital adequacy and liquidity on the financial performance among the second tier Commercial banks in Kenya. The summary is provided in relation to the output of the hypothesis testing.

5.2.1 Asset Quality

After the analysis on the influence of asset quality on the financial performance among the second tier banks, it was established that asset quality had an insignificant positive effect on return on equity which shows that an increase by one unit change in non-performing loan ratio will lead to a corresponding increase in return on equity. This means that the stiffening of non- performing loans to gross loans favorably affected the financial performance among the second tier commercial banks in Kenya.

5.2.2 Leverage

The study findings indicated that leverage had a significant negative effect on the financial performance as measured by equity to debt ratio among second tier commercial banks in Kenya. This suggests that second tier Commercial banks with less debt performed well than their counterparts with more debts in their financial structure. This means that increasing the level of debt would lead to a decrease in return on equity. While taking into account the mean average, standard deviation, the lowest to maximum debt to equity values thus implying that whenever the debt to equity ratio is increased by the Central banks, the second tier commercial banks in Kenya performance will decrease and banks reports decline on the return on equity and vice versa.

5.2.3 Capital Adequacy

From the analysis on the impact of capital adequacy on the financial performance among the second tier commercial banks, it was observed that Capital adequacy has a significant negative effect on return on equity. Capital adequacy was determined by the capital adequacy ratio. Thus increasing the capital adequacy ratios reduces the performance of second tier Commercial banks. This signifies that if the Central bank of Kenya increased the capital adequacy ratio attributing to a reduction of funds available for operations of banks among the second tier commercial banks their financial performance will decrease significantly.

5.2.4 Liquidity

The research findings indicated that liquidity had an insignificant negative effect on the return on equity. An increase in liquidity levels reduces financial performance among second tier Commercial banks. Based on these findings and the impact of the current ratio on ROA,

tightening of liquidity regulations adversely affected the financial performance among second tier of commercial banks in Kenya.

5.3 Conclusion

The study concluded that the association between asset quality and financial performance of second tier banks was positive and significant and this indicates that lower gross non-performing loans to total gross loans result in good performance among second tier commercial banks. Thus it is possible to say that commercial banks with lower asset quality and high gross non-performing loans are less profitable than the others in the same sector. But these results were not significant hence lead to the conclusion that Second tier Commercial Banks performance in Kenya is not influenced by the asset quality.

On the leverage. the association between the bank's financial performance was found to be negative and had a significant effect on the second tier commercial bank's performance in Kenya. This denotes that high debt to equity ratio relates to poor financial performance. As a result, it is possible to resolve that all the second tier commercial banks with low debt to equity ratio are more profitable.

From the research ,the relationship between the commercial bank's performance and capital adequacy was found to be negative and had a significant effect on the financial performance of second tier commercial banks in Kenya. An increase in capital Adequacy ratio by the Central bank of Kenya reduces the return on equity of the second tier Commercial banks. This implies that banks that factor in capital adequacy ratio in their core capital must ensure that it will be maintained at a desirable level so as to increase the financial performance among the second tier commercial banks in Kenya. and also sufficient capital adequacy ratio will enable the banks to take up unanticipated blows and also imply that they will continue to accolade their commitments.

Finally, the research concludes that liquidity as signified by the current ratio was discovered to have no significant influence on the financial performance among the second tier commercial banks in Kenya. This reveals that financial performance is not such as retaining high liquid assets in the organization rather it is about leverage and capital adequacy. This does not imply that the liquidity status of any commercial bank has no consequences at all, rather it means that liquidity had a minor influence on the financial performance among the second tier commercial bank in the study period. Then it is likely to conclude that those bank managers who invest their liquid assets can generate income thus boost their overall performance and vice versa.

5.4 Recommendations

Grounded on the research outcomes, the survey established that asset quality, leverage, capital adequacy and liquidity were the main determinants of financial performance among second tier Commercial banks in Kenya and suggest the following recommendations:

The study recommends that policymakers should ensure that they adhere to the financial safety net by limiting moral hazard risk and limiting bank failures. The Second tier Commercial banks can still increase their debt to equity ratio so as to have more capital reserves to survive a financial crisis. The study further recommends for an increase in capital adequacy ratio in all the second tier commercial banks in Kenya to boost their stability and save them from financial stress and also ensure they maintain adequate capital to cushions the banks about any potential losses hence protecting the interest of bank's depositors and other lenders and this will enhance financial performance among second tier commercial banks.

5.5 Limitations of the Study

During the data collection stage, some banks had not published all their audited financial statements on their website thus making it difficult for the researcher to obtain all the data needed at once and other banks were to willingly to expose their data due to fear that the data will be used for malicious practices. The researcher only concentrated on the second tier commercial banks in Kenya as there was readily available financial information on their website and ignored the entire banking sector.

The study only covered the period between 2014 to 2018 based on four variables namely asset quality, leverage, capital adequacy and liquidity leaving other macro-economic variables that impact financial performance among the second tier commercial banks in Kenya.

5.6 Suggestion for Further Studies

The study is a milestone for further research in the field of the determinant of financial performance among second tier commercial banks in Africa and particularly in Kenya. The findings have demonstrated the effects of asset quality, leverage, capital adequacy and liquidity on the determinant of financial performance among the second tier commercial banks in Kenya.

The current study should therefore be expanded further in the future to determine other factors that influence the determinant of financial performance among second tier commercial banks. Further, there is a need to undertake similar research in other countries in order to establish whether the explored factors can be generalized to influence the determinant of financial performance among second tier commercial banks.

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APPENDICES

Appendix I: Data Collection Form

Year	Net Income	Shareholders' Equity	Total Non-Performing Loans	Total Gross Loans	Total Debt	Total Equity	Total Assets	Total Current Assets	Total Current liabilities
2014									
2015									
2016									
2017									
2018									

Appendix II: List of Second Tier Banks in Kenya

1. NIC Bank
2. Bank of Baroda (Kenya) Limited
3. Prime Bank Ltd
4. National Bank of Kenya Ltd
5. Citibank N.A. Kenya
6. Bank of India,
7. Family Bank Ltd,
8. SBM Bank Kenya Ltd,
9. HFC Ltd
10. Eco bank Kenya Ltd.

Appendix III: Data Capture Template

BANK	**ASSET QUALITY** Total Non-performing loans/Total loans	**LEVERAGE** Total Debt / Total Equity	**CAPITAL ADEQUACY** Total equity/Total Assets	**LIQUIDITY** Total Current Assets/Total Current Liabilities	**FINANCIAL PERFORMANCE** Net shareholders income/Total equity
NIC Bank.					
2014	0.06	5.24	0.16	1.17	0.17
2015	0.12	5.29	0.16	1.15	0.15
2016	0.11	4.58	0.18	1.12	0.16
2017					

	0.12	4.94	0.17	0.99	0.12
2018	0.13	4.82	0.17	0.89	0.13
Bank of Baroda (Kenya) Limited.					
2014	0.04	5.28	0.16	0.70	0.25
2015	0.07	5.05	0.17	0.68	0.14
2016	0.09	4.83	0.17	0.68	0.22
2017	0.06	4.37	0.19	0.68	0.23
2018	0.09	5.03	0.17	0.72	0.20
Prime Bank Ltd.					
2014	0.00	6.10	0.14	0.86	0.25
2015	0.00	6.45	0.13	0.90	0.15
2016	0.05	5.03	0.17	0.90	0.24

2017	0.06	4.45	0.18	0.82	0.26
2018	0.08	3.20	0.24	0.93	0.13
National Bank of Kenya Ltd.					
2014	0.10	9.07	0.10	0.36	0.07
2015	0.14	10.35	0.09	0.27	(0.11)
2016	0.41	9.34	0.10	0.27	0.01
2017	0.37	14.19	0.07	0.41	0.04
2018	0.43	15.47	0.06	0.32	0.09
Citibank N.A. Kenya.					
2014	0.00	3.32	0.23	0.89	0.13

2015	0.10	3.54	0.22	1.15	0.17
2016	0.03	4.26	0.19	0.75	0.17
2017	0.00	3.87	0.21	0.80	0.20
2018	0.00	3.41	0.23	0.38	0.17
Bank of India.					
2014	0.01	4.66	0.18	0.52	0.03
2015	0.02	4.87	0.17	0.60	0.03
2016	0.01	4.01	0.20	0.58	0.25
2017	0.02	3.87	0.21	0.57	0.18
2018	0.07	3.75	0.21	1.24	0.15
Family Bank Ltd.					
2014	0.07	4.78	0.17	0.51	0.17

2015	0.06	5.75	0.15	0.49	0.16
2016	0.13	4.45	0.18	5.31	0.04
2017	0.21	4.88	0.17	0.49	(0.09)
2018	0.17	4.79	0.17	0.45	0.02
SBM Bank Kenya Ltd.					
2014	0.21	8.79	0.10	1.22	0.22
2015	0.03	12.12	0.08	1.24	(0.12)
2016	0.95	(13.83)	(0.08)	0.51	2.46
2017	0.58	6.23	0.14	0.95	(0.21)
2018	0.00	9.20	0.10	0.60	0.18
HFC Ltd.					
2014	0.00	8.29	0.11	0.38	0.17

2015	0.07	5.75	0.15	0.33	0.11
2016	0.11	5.37	0.16	0.18	0.08
2017	0.16	4.90	0.17	0.24	0.03
2018	0.29	4.84	0.17	0.30	(0.05)
Eco bank Kenya Ltd.					
2014	0.11	4.87	0.17	0.27	(0.04)
2015	0.08	5.93	0.14	1.13	(0.04)
2016	0.22	5.45	0.16	0.86	(0.03)
2017	0.51	7.30	0.92	0.92	(0.13)
2018	0.25	7.50	0.89	0.89	0.03