The Effect of Bank Specific Factors on Financial Performance of Private Commercial Banks in Ethiopia

By: Bantideru Balkew

A Thesis Submitted to Department of Accounting and Finance in partial Fulfillment of the Requirements for the Award of the Degree of Master of Science in Accounting and Finance

Addis Ababa University

Addis Ababa, Ethiopia

December, 2020

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December, 2020

DECLARATION

I hereby declare that the work which is being presented in this project paper entitled "The Effect of Bank Specific Factors on Financial Performance of Private Commercial Banks in Ethiopia" is my original work, has not been presented for a degree in any other university and The work is original in nature and is suitable for submission for the reward of the MSc Degree in Accounting and Finance.

_____ _____

Bantideru Balkew Date

Board of Examiners Approval Sheet

This is to certify that the thesis prepared by the author, entitled: The Effect of Bank Specific Factors on Financial Performance of Private Commercial Banks in Ethiopia and submitted in partial fulfillment of the requirements for the Degree of Master (Accounting and finance) complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

By: Bantideru Balkew

Approved by Board of Examiners:

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Advisor	Signature	Date

Acknowledgements

First and for most I would like to thank the Almighty God who gave me power and patience in every endeavor of my life. Next, I would like to extend my deeper indebtedness to my advisor, Habtamu (PhD) for his invaluable comments, encouragements and guidance at various stage of the study.

Next I am thankful to Addis Ababa University for their help provided to me during my thesis work through the Department of Accounting and Finance. My special gratitude also extended to the management and staff members of the all Ethiopian private Commercial Banks and the National Bank of Ethiopia for their cooperation in providing me all the necessary data required for the study.

Finally, I would also like to express my sincere thanks to all designated parties who help me for my thesis work in every circumstance.

Abstract

The main purpose of this paper is to investigate the effect of bank specific factors which can affect the financial performance of private commercial banks in Ethiopia. A total of 16 private commercial banks (those having well organized financial data till 2009) were purposefully taken & their audited annual financial reports were analyzed for the period of 2009-2018. For this purpose, explanatory research design, Pearson Correlation Coefficient and Multiple Linear Regression Analytical approaches were applied. In this study, return on asset taken as the dependent variables and bank specific factors liquidity management, asset quality, management efficiency, earning quality and capital adequacy as independent variables were used. Any autocorrelation problem was checked. The results indicated that capital adequacy, management efficiency and earning quality have positive and statistically significant effect on financial performance of private commercial banks of Ethiopia measured by ROA. But, liquidity management has negatively significant impact on financial performance of the banks (ROA). Finally, the study also depicted that asset quality is statistically significant determinant of sound financial performance of private commercial banks in Ethiopia. Therefore, due attention should be given in ensuring adequate capital, optimum liquidity, efficient expense management system and adequate earning quality by commercial banks for better performance and profitability in their own area of business.

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Abbreviations

AIB: Awash International Bank SC

AQ: Asset Quality

BIB: Birhan International Bank SC

BJ: Bera-Jarque

BOA: Bank of Abyssinia SC

BUNA: Buna International Bank SC

CA: Capital adequacy

CAR: Capital Adequacy Ratio

CAMEL: Capital adequacy, Asset Quality, Management efficiency, earning quality and liquidity

DB: Dashen Bank SC

EQ: Earning quality

LIB: Lion International Bank SC

LIQ: Liquidity

ME: Management efficiency

NBE: National bank of Ethiopia

NIB: Nib International Bank SC

NIM: Net Interest Margin

ROA: Return on Assets

ROE: Return on Equity

UB: United Bank SC

WB: Wegagen Bank SC

ZB: Zemen Bank S.C

CHAPTER ONE

INTRODUCTION

1.1 Background of the Study

Financial institutions play a dynamic role in economic resource distribution of countries. Good performance of these financial institutions is the symbol of prosperity and economic growth in any country or region and poor performance of these institutions not only hamper the economic growth and structure of the particular region but also affects the whole world Khan and Senhadji, (2001).

Commercial banks in most of the world economies are dominant type of financial institution that provide installment, facilitates the internal and external trade and the movement of money and capital when compared to any other financial institution G&B, (2003). They channel funds from depositors to investors continuously. They can do so, if they generate necessary income to cover their operational cost they incur in the due course. In other words for sustainable intermediation function, banks need to be profitable. Beyond the intermediation function, the financial performance of banks has critical implications for economic growth of countries Mulualem (2015). Good financial performance rewards the shareholders for their investment and encourages them to make additional investments. This, in turn, encourages additional investment and brings about economic growth. On the other hand, poor banking performance can lead to banking failure and crisis which have negative repercussions on the economic growth. Banks are crucial for any country's economy particularly that of the economy of the developing countries such as Ethiopia, because no growth can be achieved if savings are not efficiently channeled into productive investment opportunities Tekeste, (2013).

1.2 Statement of the Problem

A sound financial system is indispensable for a healthy and thrilling economy. The performance of any economy is to largest extent dependent on the performance of the banking sector (Ermias, 2016).The African banking system and regulation relative to other parts of the world shows that the banking environment (encompassing depth, efficiency, penetration, innovation and competition), as well as regulation and supervision standards is relatively shallow and less penetrated. The difficulties in creating borrowers' ability and willingness to repay, and lack of legal support for

creditor rights limit banks' lending schemes, which contributes to shallow financial development. For example, in East and West Africa, the percentage of adults in public credit registry remains low on average, accounting for less than 1% and 3% of adult population respectively. Besides, in Africa, there is also low financial penetration. Less than a quarter of sub-Saharan Africa's population has access to a formal bank account. This indicates that (i) there is less financial inclusion particularly in low income communities and (ii) the degree to which private individuals can access financial services is limited. In sub-Saharan Africa, only 21% of the adult population has bank account which is the lowest level of financial penetrations. (Eugene and Mouhamadou, 2015).

Admassu and Asayehgn (2014) stated that at present-day, Ethiopian banking sector is in a rudimentary and fragile state. Understanding the bank specific factors and their influence in bank profitability and performance is crucial to the management of commercial banks, stakeholders and other interested groups such as the central bank and the government. Research studies conducted to assess the internal aspects that determine the profitability and financial performance of commercial banks have revealed several internal bank specific factors, external and industry specific factors. The bank specific factors are particular to a given institution, thus the internal factors that determine profitability in one bank are different from other banking institution in Ethiopia.

A review in literature indicates that several research studies done on local and international arena concentrated on specific factors. According to a research done by Obamuyi (2013), the determinants of bank's profitability in developing economies, with a particular interest in Nigeria showed that bank specific factors such as efficient management of expenses and increased interest income affects profitability. Additionally, the same research indicated that macro environment factors such as favorable economic conditions also result in increased profitability of commercial banks. This study ignored the industry specific factors. A study by Dawit (2016), concentrated on factors influencing banking sector performance in Ethiopia. The researcher found out that board, management decisions influence the performance of commercial banks in Ethiopia, and that macro-economic factors have minimal impact on the banks performance. However, the research omitted the impact of industry specific factors on the performance of banks in the country.

Although studies have been done on bank-specific factors and their effect on financial performance; none of the studies have exclusively concentrated on identifying the bank specific

factors that influence bank's profitability in developing countries and with particular focus on Ethiopia. It is clear that in Ethiopia, there is limited literature on the bank specific factors and ways in which they determine bank profitability. The studies also revealed inconsistent results, this shows that the existing empirical study on the topic is scanty/ less. This study sought to fill this gap.

1.3 Research Objectives

1.3.1 General Objective

The study intended to assess the effect of bank specific factors that determines the financial performance of private commercial banks in Ethiopia.

1.3.2 Specific Objectives

In this study, the following objectives were attained:

1. To depict the effect of capital adequacy on the financial performance of private commercial banks in Ethiopia.
2. To determine the influence of asset quality on the financial performance of private commercial banks in Ethiopia.
3. To analyze the influence of management efficiency on the financial performance of private commercial banks in Ethiopia.
4. To determine the impact of earnings ability on financial performance of commercial banks in Ethiopia.
5. To depict the effect of liquidity management on the financial performance of private commercial banks in Ethiopia.

1.4. Research Question and Hypothesis

1.4.1. Research Questions

This study will be guided by the following research questions:

i. What are the effects of capital adequacy on the financial performance of Private commercial banks in Ethiopia?
ii. How does asset quality affect the financial performance of Private commercial banks in Ethiopia?
iii. What impact does management efficiency have on the financial performance of private commercial banks in Ethiopia?
iv. What is the impact of earnings ability on financial performance of private commercial banks in Ethiopia?

v. What is the effect of liquidity on the financial performance of private commercial banks in Ethiopia?

1.4.2. Research Hypothesis

The hypotheses of this study were formulated by referring to the existing theories and past empirical studies that have been conducted on the effect of bank specific factors on the financial performance of commercial Banks. However, from the review of empirical literature, the researcher perceived as there is no consistency in the results for the effect of Bank specific factors, beside to this the study formulated the following hypotheses.

H1.There is a positive relationship between capital adequacy and financial performance.

H2.There is a positive relationship between inflation asset quality and financial performance.

H3.There is a positive relationship between management efficiency and financial performance.

H4.There is a positive relationship between earning quality and financial performance.

H5.There is a Negative relationship between liquidity and financial performance.

1.4 Significance of the study

The finding of this study which details with the bank specific factors that determines the financial performance of private commercial bank in Ethiopia it will have beneficial for different stakeholders such as;

- ✓ The finding of this study might be used as policy input in developing regulatory standards regarding the factors that determines the financial performance of private commercial banks of Ethiopia.
- ✓ Furthermore, the outcomes of the study may minimize the literature gap in the area of study particularly in Ethiopia.
- ✓ The outcome of this project would enable private commercial bank adopt workable strategies to control the problem of a growing bank specific factors in the institution and thereby improve its financial performance and profitability.
- ✓ The study might serve as a source of reference for other related research works in the future.

1.6 Scope and Limitation of the Study

The study has been adjusted to fit its objectives of assessing the bank specific factors that determines the financial performance of private commercial banks in Ethiopia within the limits of specified time. The research decided to limit this study to ten years (2009- 2018). The data will be selected from audited financial reports of ten purposively selected private commercial banks Awash Bank (AB), Dashen Bank (DB), Wegagen Bank (WB), Bank of Abyssinia (BOA), United Bank (UB), Nib International Bank (NIB), Zemen Bank (ZB), Bunna International Bank (BIB), Berhan International Bank (BIB), and Lion International Bank (LIB)). These banks purposively selected from 16 private commercial banks of Ethiopia in order to make the data representative the researcher try to select early established and latest private commercial Banks proportionally. The study has been inconsistent of data from different banks.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Introduction

Banks play very significant role in the economies of the nation. The well-being of the economy is highly related to the soundness of its banking system. Financial performance of banks refers to the capacity in generating sustainable profitability. According to Olweny and Shipho, (2011) a more organized study of bank performance started in the late 1980"s with the application of Market Power and Efficiency Structure theories. Banks Performance is measured at two levels, one is at the management and regulatory level of the respective banks and another is at external rating agencies. The main objective of regulatory and supervisory rating systems is to measure the bank performance at internal level and its compliance with regulatory requirements to keep the bank on right track. These ratings are highly confidential and are only available to the bank management. External credit rating agencies examine and evaluate the banks and issue ratings for the general public and investors in particulars Haseeb (2011). Olweny and Shipho (2011) also argued that the Market Power theory assumes bank profitability is a function of external market factors, whereas the Efficiency Structure theories and the balanced portfolio theory largely assume that bank performance is under the influence of internal efficiencies and managerial decisions.

2.2. Theoretical Framework

Various theories have been put forth by scholars across the world explaining the effect of firm-specific factors on financial performance. However, this study will get its guidance from three main theories that are considered to support this study. They include the Agency Theory, Resource-Based theory and the Institutional Theory.

Agency Theory

Jensen and Meckling (1976) described the agency theory as an approach used to explain the conflict of interest that exists in the principal–agent relationship. Under the agency theory, companies act as agents to the shareholders, who are the company owners or principals. However, the primary issue or agency dilemma arises when the companies act in the interests of the managers and not the shareholders (Berle and Means, 1932). Coase (1960) explains that the agency dilemma

is mainly caused by the fact that the agents have more information than the principal, making it difficult for the principal to determine whether the decisions made by the agents are in their best interests. Agency dilemma affects the performance of a business negatively by lowering the overall welfare of both the principal and the agent as a result of mistrust. Additionally, Lucian & Jesse (2004) explain that agency problem causes agency costs incurred because of the deviation from the principal's main interests. Signing contracts between the agency and the principal is one of the effective measures that reduce the occurrence of agency problems. According to Jensen & Meckling (1976), the agent- principal relationship is best governed through a contract that spells out the duties and responsibilities of each party.

Berger et al (1997) explain that without a contract, it is easy for the agents to make decisions that favour the management at the expense of the principals or company owners. The authors further reveal that the conflict of interest arises from factors such as lack of transparency as well as the intangible nature of outputs. The contracts are also important in promoting operational performance of companies due to corporate growth. They ensure that the goals of the agents and the principals align for the benefit of all.

Resource-Based Theory

Introduced in 1984 by Warner felt, the resource-based theory is a useful tool in determining causes of different performance by firms. Theoretical interests of transaction costs at the corporate strategy level determine the role of company resources. The role of firm's resources is also determined by the economy of scope. The business strategy level explores the link between various variables such as competition, resources and profitability.

Chen (1996) explains that the role of imperfect information on business performance is also explored at this level. For a company to operate profitably, it must implement strategies that promote its competitive advantage and increase its earnings relative to the cost of capital. Based on industrial organization economics, the profitability of companies is dependent on the level of industry attractiveness. The strategic decisions made by authorities focus on promoting favorable industry environments, identifying profitable segments, and controlling competitive pressures. Therefore, resource-based theory entails using information to make business decisions; a knowledge-based perspective.

Ami and Schoemaker (1993) explain the distinction between resources and capabilities. The former refers to available factors that a company owns and controls while the latter is special type of resources aimed at improving an organization's performance Makdok, (2001). According to Cornner and Prahalad (1996), capabilities refer to organizational ability to deploy its resources. By evaluating the two theories, it is evident that the current study is supported by resource-based theory. The approach posits that a firm's performance is determined by its tangible and intangible resources.

Institutional Theory

The basic premise that this theory is founded is that firms are pressurized to adapt to forms and processes that are deemed to be legitimate. Institutional theorist holds that the institutional environment has a significant influence on developing formal structures of a firm as compared to market pressures. DiMaggio (1988) argues that innovative structure which is deemed to improve technical efficiency as set out by early adopting firms achieve legitimacy in an environment.

Eventually, these kinds of innovations are accepted and thus become legitimized whereby failure to them is perceived as irrational since firms are obligated to adopt and comply with such innovations. During this stage, new and already existing firms will be forced to adopt the structural form even when there are no prospects of such form improving efficiency. This coincides to a similarity of such forms and processes in the organizational environment that is referred to as 'institutional isomorphism'; such pressures to institutional isomorphism have been put forth by DiMaggio (1988), he argued that they are strong and normative forces. These pressures aim to duplicate other organizational systems, activities and structure. Technological changes are perceived to boost legitimacy since they are perceived to be desirable especially in situations of uncertainty whereby the players are not certain of the outcomes as a result of adopting various processes. In some cases such imitation can be done without any tangible evidence on performance improvement.

Abrahamson (1996) opined that imitative forces explicate the extensive adoption of, for instance management decisions that have limited evidence on performance gains. Example includes fashion and fads. Coercive pressures include external forces from the regulatory bodies and the government among other agencies to comply with certain systems and processes. Dempsey, Labor & Rozeff (1993) argued that this form of pressures is usually linked to the legal necessities and health and protection guidelines. This theory is relevant to this study since it considers industry factors which

emanate from competitive pressures and affect performance of financial institutions .Therefore, this theory is important to this study as it attempts to explain the factors that affect firms and their implications on firm performance.

2.2.1. Financial performance of commercial banks

One way to measure bank performance is by determining the profitability of the bank. Profitability is the ability of a bank to make profits by earning more money that exceeds the yearly expenses and taxes every financial year. The Banks make profits from fees charged for their services and the interests levied on assets. On the other hand, the main expense incurred by banks is in the interest paid on their liabilities every financial year. A positive difference between the earnings and the expenses represents the profitability of any financial institution. The bank's assets that attract revenue to the institution include loans to individuals, companies, and other institutions and securities the bank holds. The principal liabilities for the banks include deposits and the funds borrowed from other banks or through selling of commercial paper in the money market.

The measure of profitability of a bank is determined by the return of assets (ROA) and the return on equity (ROE). The assets such as the loans and securities are utilized by the banks to earn a large portion of the institution's income. The ROA is determined by dividing the bank's net interest income by average total assets. The ROA is expressed as a percentage. The net interest income is determined by obtaining the difference between the interest received on assets and interest paid on liabilities.

Net interest income = interest received on assets – interest paid on liabilities.

$$\text{Return on Assets (ROA)} = \frac{\text{Net Income}}{\text{Average Total Assets}}$$

Mulualem, (2015)

Bank profitability can also be measured by determining the return on equity (ROE). The ROE represents the amount of net income returned as a percentage of shareholder's equity. The ROE measures a bank's profitability by determining the institution's earnings using the money invested by the shareholders. Just like ROA, ROE is also expressed as a percentage Mulualem, (2015).

$$\text{Return on Equity} = \frac{\text{Net Income}}{\text{Shareholder's Equity}}$$

2.2.2 Bank specific factors

Banks specific factors or internal factors are the individual bank characteristics, which affect bank performance. These factors are influenced by the internal decisions of management and board.

These factors are also within the scope of the bank to manipulate them and they differ from bank to bank. These include capital, size of deposit liabilities, size, and composition of credit portfolio, interest rate policy, labor productivity, and state of information technology, risk level management quality, bank size, and ownership among others Dang, (2011). To proxy bank specific factors scholars often use CAMEL framework. CAMEL stands for capital adequacy, asset quality, management efficiency, earnings ability, and liquidity Mulualem, (2015).

2.2.3. Indicators of Financial Performance of Commercial Banks.

The main goal of commercial banks is mostly the profit that they generate. All the strategies designed and activities performed thereof are meant to realize this magnificent objective though they have other goals. There are different ratios that can be adopted to measure the profitability of commercial banks of which return on asset, net interest margin and return on equity are the major ones Murthy and Sree, (2003); Alexandru et al., (2008) as cited on the study of Ongore and Gemechu (2013).

Tigist (2014) examined the factors that can affect Ethiopia commercial banks' using panel data of the banks for the period of 2002-2013 using the fixed effect regression model ROA and NIM were used as the performance measure. Andebet (2016) studied the performance of private commercial banks in Ethiopia using bank profitability as dependent variable which in turn measured using return on assets (ROA) measured by net profit/total assets, return on equity (ROE) measured by net profit/ total equity, and net interest margin (NIM) measured by interest income- interest expense/total loans and advances.NIM is also measured by net interest income/Total loan and advances Tigist,(2014). Mulualem (2015) analyzed the financial performance of fourteen Ethiopian commercial banks using fixed effect multiple linear regression model for two profitability measures: ROE which reflects the profit earned per birr of capital invested and measured by net profit after tax/total shareholders' equity, and ROA which reflects the ability of banks management to generate profits from the bank's assets and measured through net profit after tax/total asset of banks.

The study of Dawit (2016) also employed ROA (Net income after tax to its total asset), ROE (Net Income after Taxes divided by Total Equity Capital) and NIM (Interest Income) minus the interest paid on borrowed funds (Interest Expense) divided by the average amount earning assets (Loans

and Advances) as dependent variables to measure the financial performance of commercial banks in Ethiopia. Muhabe (2015) also depicted that profitability is the most common method of financial ratios which is used to measure the performance of banks. Profitability enables to evaluate how well the bank is performing in terms of profit. It is mostly measured using return on asset, return on equity and net interest margin. According to his study, the ROA reflects the ability of a bank's management to generate profits from the bank's assets. It shows the profits earned per birr of assets. It also

2.2.4. Financial Performance Determining Factors of Commercial Banks

Bank's supervisory agencies are responsible for monitoring the financial conditions of commercial banks and enforcing related legislation and regulatory policy. Accordingly, CAMELS rating are one of the rating systems applied for regulatory policy and to rank the overall performances of commercial banks. CAMEL is a standardized financial rating system having short form of five measures namely: Capital adequacy, Asset quality, Management efficiency, Earnings quality and Liquidity. CAMEL method is commonly used for the evaluation of performance and ranking of banks. According to Yuva P, (2016), CAMEL rating is a subjective model which indicates financial strength of a bank, whereas CAMEL ranking indicates the banks relative position with reference to other banks. Each of these performance indicators are described below:

- ✓ **Capital adequacy**

Capital adequacy shows whether banks have adequate capital in order to meet the withdrawal demand of its customers in crisis period. In other words, it reflects whether the bank has enough capital to bear unexpected losses arising in the future Türker Kaya, (2001) as cited on Serhat Yuksel, Hasan Dincer and Umit Hacioglu (2015). According to Misra & Aspal (2013), it is prominent indicators of the financial health of a banking system. It is very useful for a bank to conserve & protect stakeholders‟ confidence and preventing the bank from being bankrupt. According to Chen, 2003 to prevent the bank from failure it is necessary to maintain a significant level of capital adequacy. The following ratios are included under this category by various researchers for analysis purpose.

Among the chief determiners of bank performance is its capital level. This normally works as a fallback position or buffer in case of financial doldrums bombarding the bank, as commented by

Athanasoglou et al. (2005). Bank capital can be seen as a stable source of bank liquidity compared to deposits which are more likely to be short term especially in developing nations where even bank runs are probable. Bank capital also allows the firm to cushion itself against all types of risk which affect the bank including operational and market risk. In promoting this drive for banks to weather risks, the supervisory authorities, normally the central banks stipulate the capital adequacy ratio. Such a ratio determines the internal ability of the bank to overcome crisis situations. It has also a direct effect on the profitability of banks by determining its expansion to risky but profitable ventures or areas Sangmi and Nazir, (2010). However, suboptimal capital levels and over reliance on the same generally reduce the need for deposits and other sources of cheaper sources of capital and thus might reduce the profitability of the bank.

Capital Adequacy Ratio (CAR) measures the ability of the bank to absorbing loses arising from risk assets. The higher the ratio represents better performance of the bank. According to Yuva P., (2016), it shall be computed as tier I capital +tier II capital/risk weighted asset. Tier I capital represents for Equity Share Capital + Disclosed Reserves and Tier II capital is the sum of Undisclosed Reserves + General loss Reserves + Subordinate term debts Jayanta k. (2012).Debt to equity ratio (leverage ratio) represents the degree of leverage of a bank. It shows how much proportion of the bank business is financed through equity and how much through debt. It is calculated by dividing sum of total borrowing and deposits with shareholders‟ net worth. Higher ratio is an indication of less protection for the depositors and creditors and lower ratio is seen as better performance of the bank. Misra & Aspal (2013).Advance to asset ratio indicates the proportion of loans and advances deployed to the total funds. Higher the ratio better is the availability of funds for loans and advances out of their total assets and vice versa. Jayanta k. (2012).Government Securities to total investment ratio shows the percentage of risk-free investment in bank’s investment portfolio. It will be computed as [(Investment in government securities inside the country +Investment in government securities outside the country)/ Total Investment] × 100. Higher government securities to total investment ratio is an indication of risk-free investment in bank’s investment portfolio. However, it may affect the return on investment because of lower return from government securities.

- ✓ **Asset quality**

The asset portfolio of the bank, in terms of portfolio duration, quality, concentration, and weights determines greatly the performance of the bank. The asset side of the statement of financial position determines the interest revenue of the bank, which in turn affect the net interest margin, profitability and return on assets. Such assets include among many loans. The quality of such affect the income generated, such that poor loan quality often results in non-performing loans which are really a trouble world over. Thus non-performing loan ratio is the best proxies for asset quality. Thus, low nonperforming loans to total loans shows that the good health of the portfolio a bank. The lower the ratio the higher the chances of bank performing better than counter parties Sangmi and Nazir, (2010).

The quality of assets is an important parameter to gauge the strength of a bank. The logic behind calculating the asset quality is to determine the employment of assets in investment using net income as a fraction of the bank total assets (ROA) Dakito Alemu (2015).One important objective of the financial sector reforms is to improve the quality of loan assets and assets have been classified into performing and nonperforming assets. Assets that have low quality usually have higher possibility to become a Non-Performing Loan. Non-Performing loans are usually bad debts that are in default or they are near to be in default. According to Sangmi and Nazir (2010), Asset quality is classified as: Standard assets are those assets that are performing and loan is paying interest and installment at due date, further they do not carry more than normal risk. Formerly, no provisions were required. Sub-standard assets are those assets that have been classified as non-performing for a period less than or equal to three quarters. In such cases, the current net worth of the borrower/guarantor or the current market value of the security charged is not enough to ensure recovery fully. It has fully developed weaknesses that jeopardize the liquidation of a debt. Doubtful assets are those assets that have remained substandard for 18 months. The provision of 100% of the provisions is to be made by the realizable value of the security to which a bank has recourse. The quality of assets has been examined with the help of following three ratios:

Net NPAs to Total Assets reflects the efficiency of bank in assessing the credit risk and recovering the debts. In this ratio, the Net NPAs are measured as a percentage of total assets. The lower the ratio reflects, the better is the quality of advances. Misra & Aspal(2013). According to Misra &Aspal (2013) and (Jayanta k. 2012), Net NPAs to Net Advances is the most standard measure to judge the assets quality, measuring the net nonperforming assets as a percentage of net advances.

Net NPA will be computed as Net NPAs = Gross NPAs – (Provisions on NPAs + Interest on suspense account. Investments to total asset ratio is used as a tool to measure the percentage of total assets locked up in investment. Alternatively, it indicates the extent of development of assets in investment as against advances. This ratio is used as a proxy to measure the quality of assets.

- ✓ **Management Efficiency**

As per Jayanta k. (2012), management is most important ingredient that ensures the sound functioning of banks. It is another essential component of the CAMEL model that guarantee the growth and survival of a bank. Misra & Aspal (2013).With increased competition in the banking sector; efficiency and effectiveness have become the rule as banks constantly strive to improve the productivity of their employees. In order to satisfy customers, banks maintained extended working hours, flexible time schedules, outsourcing marketing etc. The performance of Management capacity is usually qualitative and can be understood through the subjective evaluation of Management systems, organization culture, and control mechanisms and so on. However, the capacity of the management of a bank can also be gauged with the help of certain ratios as follows Sangmi and Nazir, (2010).

It's a common talk among academic researchers that 'companies do not fail, but people do'. How efficiently the management is deploying bank resources on different operations determines the profitability of the bank. It is generally proxied by many different ratios including total asset growth, loan growth rate and earnings growth rate. Though it is difficult to capture using quantitative measures, some ratios from the financial statements can specifically act as a proxy. Such ratios include operating profit to income (Sangmi and Nazir, 2010). The higher the ratio, the higher the management efficiency on the contrary, the management efficiency can be proxies by expense to asset ratio. The lower the ratio, the better it is. Thus, the quantitative proxy for management efficiency should be clear on the onset Athanasoglou et al.,(2005). If the management can lower expenses the better as this can increase the profitability of the bank.

According to Yuva P, (2016) and Jayanta k. (2012), total advances to total deposits ratio measures the efficiency of management in converting the deposits available with the bank into high earning advances. Total deposits include demand deposits, savings deposits, term deposits and deposits of other banks. According to the above authors, total advances also include the receivables. Improvement and enlargement of business (total of deposits and advances) is the main function of

banks. Increase in business per employee is an important indicator of productivity of banks because employees are generally considered as input and business as output of a bank. This ratio is used to find out whether the bank is relatively under or over staffed. Higher the ratio better is the productivity efficiency of the employees of the banks. Profit per employee is used to measure the productivity efficiency of employees of the banks or according to Yuva P, (2016), this ratio is a ratio to check efficiency of the bank in maximizing profit per employee. Improvement in profit per employee advocates efficiency of the management effective utilization of employee as an input and profit as a measure of output. Expenditure to income is one of the management efficiency measurement, which is used to measures the amount of expenditure incurred to generate a 1 birr income. The lower the ratio is better performance of the management.

- ✓ **Earning Quality**

The Earnings/Profit is a Conventional Parameter of measuring financial performance. Higher income generally reflects a lack of financial difficulties and so would be expected to reduce the likelihood of failure of a bank (Cole and Gunther, 1996). It is another important parameter for judging the operational performance of a bank. Total income of a bank is divided into two parts. Income from core activities (i.e. income from lending operations) and income generated by non-core activities like investments, treasury operations, corporate advisory services etc. Jayanta k. (2012).The excellence of earnings determines the capability of a bank to earn consistently. It mainly determines the profitability and productivity of the bank, explains the growth and sustainability in future earnings capacity. In order to measure earning quality of the bank the following ratios were used in different literatures. NIM is an important measure of a bank's core income i.e. income from lending operations. NIM is the difference between the interest income and the interest expended. In the computation of Net interest margin to total asset, NIM is expressed as a percentage of total assets. A higher spread indicates the better earnings given the total assets and vice versa.

Earnings ability represents the potential for a bank to realize profits that enable the organization to fund expansion remain competitive and increase its capital. From the bank's regulator viewpoint, earnings ability's essential purpose is to absorb losses and boost the bank's capital. Earning ability can be evaluated using a number of accounting rations namely return on assets (ROA), return on equity (ROE), and Net interest income margin (NIM), Ongore & Kusa, (2013).Aziza and Sarkani (2014) reviewed the financial performance of Mellat bank using the

CAMEL model. Mellat bank is a private bank in Iran that has existed since 1980 as a merger of ten pre-revolution private banks. Each of the CAMEL model dimensions were examined using trend analysis method and both mean and standard deviation statistics. In the process, the researchers determined all the model criteria and identified an ascending trend in the period under investigation. The researchers further investigated the relationship between the model variables and the financial performance of Mellat bank and examined the relationship using two linear and multiple regression as well as OLS method. The findings of the study show that there exist positive significant relationships between the indices of earnings ability with financial performance.

Net profit to total asset ratio reflects the return on assets employed or the efficiency in utilization of assets. It is calculated by dividing the net profits with total assets of the bank. Higher the ratio reflects better earning potential of a bank in the future. Misra & Aspal (2013) Percentage growth in net profits the ratio of percentage growth in net profit after tax over the previous year or last year. Higher the ratio better is the profitability of the bank and vice versa. Operating profit to total asset ratio indicates how much a bank can earn from its operation after meeting its operating expenses for every birr investment in total asset. Higher the ratio shows the better profitability of the bank and vice versa. The interest income to total income ratio reflects the banks capability in generating income from its lending activities. Interest income includes income on loans and advances, interest earned on deposits maintained in different banks. Non-interest income is any income earned by the banks other than interest income. Non-Interest income to total income ratio of non-interest income to total income measures the income from various operations other than lending as a percentage of total income.

- ✓ **Liquidity**

Public deposit their money in banks mainly for two reasons, the first one is for safety and the other is to earn interest income. Thus, repayment of deposits along with timely payment of interest is of crucial importance for a bank. For this reason, banks should always maintain sufficient liquidity. Liquidity shows the ability of the banks to discharge their liabilities as and when they mature. Or, it is the ability of the banks to convert non-cash assets into cash as and when needed. In order to examine the liquidity position of banks, there are four ratios used by different authors. Liquid Assets to demand deposits ratio measures the ability of a bank to meet the demand for withdrawal of cash from demand deposits in a particular year. It is calculated by dividing liquid assets by total

demand deposits. Liquid assets include cash in hand, balances with banks in country and outside the country and money at call on short notice. Jayanta k. (2012).

Liquidity defines the capability of a bank to meet its dues in time or fund unexpected increase in liabilities and loan demands. According to Dang (2011) adequate level of liquidity is positively related to bank profitability. The most common financial ratios that reflect the liquidity positions of a bank according to the author are deposits to total asset, liquid assets divided by total deposits Said and Tumin, (2011) and total loan to customer deposits. Other scholars use different financial ratio to measure liquidity. For instance Ilhomovich (2009) used cash to deposit ratio to measure the liquidity level of banks in Malaysia. However, the study conducted in China and Malaysia found that liquidity level of banks has no relationship with the performances of banks Said and Tumin, (2011).

Weersainghe and Ravinda (2013) conducted a research to observe the effects of bank specific factors such as liquidity risk, bank size, capital adequacy, operating cost, credit risk and macroeconomic determinants such as GDP growth rate and interest rate on the profitability of commercial banks in Sri Lanka. The researchers utilized quarterly data relating to the bank-specific and macroeconomic indicators. The research took place between 2001 and 2011. Multiple panel regression was used to analyze the data and determine the relationship between the dependent and the independent variables.

Additionally, the researchers used the ROA and the ROE as profitability indicators of the banks under the study. The empirical results indicated that the larger the commercial banks the more the profits recorded. This is because of the economies of scale as compared to the banks with a higher regulatory capital ratio. Additional findings from the panel regression indicated that the liquidity was inversely proportional to the commercial banks profitability in the country.
Liquid assets to total deposits ratio indicates the ability of the bank to meet its deposit obligations with available liquid funds. Total deposits include demand deposits, savings deposits, term deposits and other deposits. Liquid assets to total assets measure of liquidity indicate the percentage of bank's total assets in liquid form. Higher the percentage better is the liquidity and vice versa. Term deposit to total deposit ratio indicates that total proportion of term deposit in the total deposit. If the proportion of term deposit is more in total deposit that is not good for long term survival of any bank. Lowest ratio of term deposit to total deposit is favorable one. Ashish Gupta,(2015)

2.3. Empirical Review

This section gives a discussion of the studies that have been done locally and globally in relation to firm-specific factors and financial performance. These studies have been explored by various scholars, using different approaches such as research design, nature of the population, sampling techniques, nature of data and type analysis. The basis of these studies is to guide the researcher on the appropriate approach to adopt for this study and establish important gaps.

Akben-Selcuk (2016) examined the factors that influenced firm competitiveness in Borsa Istanbul; the study covered duration of 10 years (2005-2014). Panel data was employed; the findings showed that ROA was positively linked to size, gross sales, liquidity and growth. Contrary to this, ROA was negatively correlated to leverage and R&D outflows. Tobin's Q ration was found higher when the level of debt as well as high level of liquidity. This study was too broad; it considered firm competitiveness as its dependent variable and it was conducted in a developed country.

Weersainghe and Ravinda (2013) did a research involving the contribution of bank- specific factors and financial structure on bank's profitability at Macao. The study adopted bank level data for the period between (1993-2007). The researcher used panel data to find out internal factors to boost profitability; they included capital adequacy, bank size, and market share and asset quality. External variables such as GDP, interest rate and inflation were considered as external variables. The study findings revealed that the bank's capital strength attained a positive effect on profitability. This study considered profitability as the dependent variable while the current study has considered financial performance. Secondly, this study was done in a developed country.

Dietrich and Wanzenried (2011) tested the link between bank-specific traits, industry characteristics on profitability of commercial banks in Switzerland. The study covered a period of eight years and several factors were considered such as bank growth relative to market growth rate, effective tax rate and the age of the bank. Other factors that were involved include growth of bank loans, market growth, age of the bank and effective tax rate.

The findings showed that well capitalized banks recorded better performances. Further, it was found that the bank's age had a significant effect on profitability while its location had a direct

effect on bank profitability. The study employed a longitudinal research design and it was conducted in a global set-up.

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

Similarly, Kosmidou et al.,(2008) conducted a research on the impact of bank-specific characteristics, macroeconomic conditions and financial market structure of UK owned commercial banks' profits. The researchers measured the effects on profitability using the return on average assets (ROA) and net interest margins (NIM). The research covered the period 1995-2002 where an unbalanced panel data set of 224 observations was provided for the econometric analysis. The findings of the research indicated that capital strength as shown by the equity to assets ratio is a significant determinant of profitability of the UK commercial banks.

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

Ifeacho C.and Ngalawa H. (2014) carried out a research study on the impact of bank specific variables and selected macroeconomic variables on the South African banking sector between

1994 and 2011. The researcher considered capital adequacy, asset quality, management, earnings ability and liquidity under the CAMEL model of bank performance evaluation in the study. The Ifeacho and Ngalawa' s study employed data in annual frequency from South Africa's four largest banks, namely ABSA, First National Bank, Ned bank, and Standard Bank. The four banks account for over 70% of the South Africa's banking assets. The researcher investigated the banks using the return on assets (ROA) and return on equity (ROE) as measures of the bank performance. Findings indicated that capital adequacy exhibited a significant negative relationship with ROA, while its relationship with ROE is significant and positive as expected.

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

The ability of the management of commercial banks to deploy its resources efficiently, income maximization, reducing operating costs can be determined using financial rations. The quality of management exhibited by the finance departments of commercial banks determines the levels of operating expenses and in turn affects profitability and financial performance. Athanasoglou et al., (2008). A study done by Liu (2011) focused on the effects of variables from the CAMEL model on bank performance in China. The study concentrated on the CAMEL variables that included capital adequacy, asset quality, management, earnings ability, and liquidity. The researcher's sample size consisted of 13 Chinese banks all listed in the Shanghai Stock Exchange between 2008 and 2011. Liu implemented the fixed effects multiple linear regression model in his research to measure the relationship between internal factors from CAMEL model and bank performance. The findings of this study indicated that return on assets is directly affected by shareholders risk-weighted capital adequacy ratio, costs to income ratio, net interest rate margins, and loans to deposits ration. Additionally, the findings indicated that the return on equity could be affected by costs to income ratio, operating expenses to assets ratio and loans to deposits ratio.

Management efficiency was therefore found to be a major influence to the outcome of these indicators and therefore a major determinant of bank performance.

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

Ghazouani and Moussa (2013) evaluated the explanatory factors that impacted on Tunisian banks; firm size, operational efficiency, capital ratio credit quality and ownership. A sample of 10 conventional banks was used in the period (1998-2011). Panel data and generalized method of moments (GMM) was employed. It was unearthed that bank capitalization and bank size had a positive and significant effect on performance. This study failed to consider firm-specific factors. Also, the study applied GMM approach while the current study will adopt a regression equation.

Siva and Natarajan (2011) empirically tested the applicability of CAMEL and its consequential impact on the performance of SBI Groups. The study found that CAMEL scanning helps the bank to diagnose its financial health and alert the bank to take preventive steps for its sustainability. Prasuna (2004) examined the performance of 65 Indian banks according to the CAMEL Model and concluded that better service quality, innovative products and better bargains were beneficial because of the prevailing tough competition. Saminathan (2016) evaluated financial performance of 18 private banks, 25 public banks and 8 foreign Indian banks for the purpose of ranking one against the other. The result shows that there is a statistically significant difference between the CAMEL ratios of the selected Public Sector Banks, Private Sector Banks and Foreign Banks in India. Sufian and Chong (2008) examined the determinants of financial performance under

profitability during the period 1990-2005 in Philippines banks. The results of the study showed a direct relationship between financial performance and bank-specific factors.

Similarly, the empirical results suggested that the bank specific factors including asset quality affects profitability and by extension the financial performance of the banks. Loans are a major asset in Kenya's commercial banks that generates a large portion of a banks income. However, the loans also expose the banks to latent losses derived from delinquent loans (Dang, 2011). It is advisable for banks to keep their amount of nonperforming loans to low levels by commercial banks because such loans affect the profitability of the banks and eventual financial performance (Sangmi & Nazir, 2010).

Vong et al, (2009) conducted a research whose main objective was to assess the contribution of bank-specific, macroeconomic, and financial structure factors to the profitability of banks in Macao. The researchers utilized bank level data for the period of 1993-2007. Additionally, the researchers adopted the panel data regression to establish the important factors in achieving high profitability by using internal variables, namely capital ratio, asset composition, asset quality, expense management, source of funds, and market share. The research also included external variables, such as the GDP growth rate, real interest rate and inflation. ROA was the main ratio used as a measure of profitability for the commercial banks. The findings of the research indicated that capital strength of a bank has a positive impact on profitability. Conversely, asset quality measured by the loan-loss provisions negatively affects the performance of the commercial banks.

A study conducted between 1994 and 2011 by Ifeacho C. and Ngalawa H. on the impact of bank-specific variables and selected macroeconomic variables on the South African banking sector found that asset quality have a positive effect on bank performance .The study used the CAMEL model in evaluation of bank performance and investigated the banks performance using the return on assets (ROA) and return on equity (ROE) as measures of the bank performance. According to the findings, all bank-specific variables are statistically noteworthy determinants of bank performance.

Abdulazeez (2014) investigated the financial performances of Saudi commercial banks during the period 2000-2013. A sample of 21 commercial banks comprising of 10 foreign owned banks and 11 Saudi domestic banks for the captioned 14 years period have been used in the study .Panel data Linear Multiple Regression model and Ordinary Least Squares have been used in the present study

to estimate the impact of the driver ratios like capital adequacy, asset quality, operational efficiency, bank size, net loan to total deposits, liquid assets to total assets. On the financial parameters like Return on Equity (ROE), Return on Asset(ROA), Net Interest Margin (NIM).The study found that at the pool level, that capital adequacy, operational efficiency, bank size, net loan to total deposits and liquid assets to total assets have positive and significant relationship with ROA but asset quality has negative and significant relationship with ROA. Similarly, capital adequacy, bank size and liquid assets to total assets have positive significant relationship with ROE, whereas net loan to total deposits has positive but insignificant relationship with ROE. Asset quality has negative and significant relationship and operational efficiency has negative but insignificant relationship with ROE. All the determinant variables excepting capital adequacy and operational efficiency of banks have positive significant relationship with NIM. Capital adequacy has positive but insignificant relationship with NIM and operational efficiency has negative but significant relationship with NIM.

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

Tarawneh (2006) found that the banks having high total capital, deposits, credits, or total assets does not always means that has healthier profitability performance. The operational efficiency and asset management, in adding to the bank size, positively influenced the financial performance of these banks. In the light of his empirical study he concluded that the operational efficiency and asset management, in addition to the bank size, strongly and positively influenced financial performance of the banks.

Ahmad, (2011) in his study of the financial performance of seven Jordanian commercial banks used ROA as a measure of banks performance and the bank size, assets management and operational efficiency as three independent variables affecting ROA. He concluded that there is a strong negative correlation between ROA and bank size and with operational efficiency, while, find positive correlation between ROA and asset management ratio. Khizer et.al. (2011), in his study about profitability indicators of banks in Pakistan for the period of 2006-2009 find that profitability is directly and positively affected by operating efficiency, assets management ratios, and size when using ROA as profitability indicator. The association between profitability and other indicators is different, when using ROE as profitability indicator. ROE is positively related with assets management and negative association was found with size and operating efficiency.

Rizwan Jan 2014 analyzed financial performance of top ten Private commercial private banks in Pakistan. The study used Regression analysis and correlation technique in order to address the issue. Returns on asset and interest income were taken as dependent variables while bank size, asset management and operational efficiency were taken as independent variables. The results showed that, ROA of the banks were strongly and negatively influenced by the bank size. Operational efficiency is negatively related with the ROA. Other dependent variable interest income of the banks was strongly and positively influenced by the bank size and is statistically significant. Interest income showed negative relation with the operational efficiency and results were also statistically significant.

Ansarul Haque (2014) evaluated the concurrent performance of chosen few major Indian banks from 2009 -2013 following the global financial slump of 2008. In order to judge their performance, he compares the financial position of Banks and to prove the viability, he had used the parameters Return on Asset, Return on Equity and Net Interest Margin. In order to check whether there is significant difference of profitability means among different banking groups, he used analysis of variance (ANOVA).The result indicates that there is no significant means in difference of profitability among various banking groups in respect to ROA and NIM, yet a significant means of difference is seen among the peer groups in terms of ROE. In the paper on financial performance of commercial banks, the financial performance of the two major banks namely J&K Bank and Punjab National Bank operating in northern India has been evaluated by using CAMEL model. Its result reveals that the position of the banks under study is sound and commendable so far their

capital adequacy, asset quality, management capability and liquidity are concerned Sangmi and Tabasum, (2010).

Srinivas K., SarojaL (2013) compared and analyzed the Financial Performance of HDFC and ICICI Bank. For the purpose of analysis of comparative financial performance of the selected banks by using CAMELS model with t-test. The result showed that there is no significance difference between the ICICI and HDFC bank's financial performance but the ICICI bank performance is slightly less compared with HDFC. Reddy K. Sriharsha (2012) analyzed relative performance of banks in India using CAMEL approach. It is found that public sector banks have appreciably improved indicating positive impact of the reforms in liberalizing interest rates, rationalizing directed credit an Investments and increasing competition.

Omondi (1996) explored the effects of bank-specific factors on financial performance of commercial banks. An explanatory approach was adopted using panel data research design. Published sources were utilized in the period, 1991 to 1995 from CBK. A regression model was used and the findings revealed that bank-specific factors had a statistical significance on financial performance. This study was conducted carried out 21 years ago, various changes have taken place such as technological changes and regulatory changes hence this findings might not hold.

Oloo (2010) did a research on the factors that determined financial performance of Kenyan commercial banks. The study was conducted in the period, 2001 to 2010. Panel data was used and multiple regression models were adopted. The results found that bank-specific did not have any significant effect on commercial bank performance. However, these factors did not have any effect on liquidity. This study was too broad and did not explicitly look at the firm-specific factors which impact on commercial banks' financial performance.

Litunya (2014) tested the link between internal variables and firm profitability of Kenyan commercial banks in a period of ten years. A descriptive form of research design was employed and published data sources were utilized from CBK and KNBS. A regression equation was used and the results revealed that loan portfolio, liquidity and asset quality were significant. The weakness of this study is that it limited itself to internal firm variables. Kamau (2014) did a survey on the link between liquidity and profitability of local banks in a population of 43 banks. A descriptive study was employed to establish the nexus between the parameters under investigation.

The duration for the study was five year and a linear regression model was adopted. The findings showed a positive link between liquidity and profitability. Control variables such as asset quality, bank growth and branch network were found to be insignificant. This study limited itself to liquidity as the independent variable while the current study is considering all the firm-specific factors as its independent variables.

Nyaga (2014) explored the determinants of commercial banks' financial performance. A descriptive design was implemented in a population of 43 commercial banks. This study took place between; 2001 to 2010, published data sources were utilized and analysis was achieved with the help of inferential statistics. Capital adequacy and exchange rates were found to be inversely correlated to ROE. Liquidity, operational efficiency, bank size, GDP and inflation were found to influence ROE positively. This study was too broad since it looked at all the commercial bank determinants that affect financial performance.

Mulualem (2015) examined financial performance of 14 Ethiopian Commercial Banks using CAMEL approach from year 2010 to 2014.The study used quantitative research approach, and analyzed by using multiple linear regression models for two profitability measures: ROE and ROA. Fixed effect regression model was applied to investigate the impact & relationship of CAMEL factors with bank profitability measures separately. The empirical result shows that capital adequacy, Asset Quality and Management efficiency have negative relation whereas earning and liquidity shows positive relationship with both profitability measures with strong statically significance except Capital Adequacy which is insignificant for ROA whereas Asset quality for ROE.

Dakito Alemu (2015) studied banks performance with the title“ Assessment of Banking Performance using Capital Adequacy in Ethiopia” to evaluate the financial performance of banking sector in Ethiopia and also to see the relation between capital adequacy and bank's performance of 8 banks for the period of 2000-2013. In order to address these, he used both descriptive and econometric analyses. The descriptive analyses were made using CAMEL approach and central tendency measures. The result shows that, as compared to other banks NIB‟s overall performance was good. In addition to the descriptive data analysis, the study also employed regression model, GLS, which is used to see whether capital adequacy which is measured by the amount of shareholders fund affect the bank performance which is measured by Return on asset (ROA). The

finding shows that, shareholders‟ fund is the main factor that determines the performance of banking industry Therefore; there exist positive relationship between capital adequacy and bank performance.

Căpraru and Ihnatov (2014) tried to assess main determinants of banks' profitability in five selected Central and Eastern European Countries over the period from 2004 to 2011. They used return equity (ROE) as proxy measuring the profitability of banks calculated as a ratio of the net profit to total equity; the return on assets (ROA) calculated as a ratio of the net profit to the total bank assets and net interest margin (NIM) computed as a ratio of the difference between interest income and interest expense to the total assets of the bank. They also considered three determining factors of banks' profitability: bank-specific factors (bank size, financial structure, credit risk taken, liquidity risk, business mix, structure of income expenditure and capital adequacy); industry specific (market concentration, financial intermediation etc.) and macroeconomic elements (e.g. economic growth and inflation). The results showed that the management efficiency and capital adequacy growth influence the bank profitability for all performance proxies, while credit risk and inflation determine only the ROA and ROE.

Okumu and Oyugi (2016) studied on the factors influencing financial performance of saving and credit cooperative Societies (SACCOs) in Kisumu County, Ethiopia using CAMEL approach (i.e. capital adequacy, asset quality, corporate management efficiency and liquidity management) as independent variable and ROA as proxy for measuring the financial performance of the selected institutions as a dependent variable. The result showed that financial performance of SACCOs in Kisumu County is influenced by capital adequacy, asset quality, management efficiency and liquidity management.

There are many factors that can be customized to measure performance of banks in a typical developing economy and from which is profitability. Echekoba et.al (2014) tried to identify the determinants of Bank's performance using Profitability as a proxy in Nigeria: Using Camel Rating Model (2001-2010) using ordinary least square estimation method. The result of this study indicates that liquidity management has significant effect on the profitability of banks. But, capital adequacy, assets quality, management efficiency and earning did not. The study of Dawit (2016) also tried to evaluate important factors of financial performance of Ethiopian private commercial banks using the random effect model on both firm specific and external factors.

The internal factors used in this study include capital adequacy, asset quality, earning ability, liquidity management and bank size, whereas, the external factor is foreign exchange rate. Moreover, ROA, ROE and NIM were used as dependent variable to measure the financial performance. Based on the regression result; asset quality, earning ability and bank size have a significant influence on the financial performance of Ethiopian commercial banks measured by return on asset, return on equity and net interest margin.

Melaku (2017) sought to analyze the overall performance of six sampled private commercial banks in Ethiopia using CAMEL rating approach with panel regression model to measure the impact of CAMEL elements (asset quality in terms of fixed assets / total assets, loan loss provision/ total loans; capital adequacy through total capital/total asset and total debt/total equity; liquidity management using liquid asset/total deposit, and management efficiency measured by noninterest expense/ gross expense and net profit/ employee) as predictors on bank performance using ROA (net income / total assets) and ROE (net income / total capital) as dependent variables.

Poudel (2012) studies the impact of credit risk management on financial performance of commercial banks in Nepal for the period of 2001 to 2011. The result revealed that there is significant relationship between return on assets and all independent variables specifically, default rate, cost per loan assets and capital adequacy ratio. Funso et al, (2012) carried out an empirical investigation on the effect of credit risk on performance of five commercial banks in Nigeria of the years 2000 to 2010 and found that non-performing loans and loan loss provision have statistically significant negative impact on return on assets while loans and advances has statistically positive impact on performance.

Habtamu (2012) further reached on the determinants of profitability of Ethiopian private commercial banks for the years 2002 to 2011. Return on assets, return on equity and net interest margin was used as measurement of performance. The fixed effect regression output revealed that Gross Domestic Product has positive effect on the three measurements of profitability. Management efficiency and bank size have positive effect on both return on assets and return on equity but have no significant effect on net interest margin. Capital adequacy has negative relation with both return on assets and net interest margin but has no significant effect of

return on equity. Assets quality has negative relation with net interest margin but have no effect on the remaining two proxies of performance.

Ogboi and Unuafe (2013) examines the impact of credit risk management and capital adequacy on banks financial performance in Nigeria using a time series and cross sectional data from 2004 to 2009. Loan Loss Provisions (LLP), Loans and Advances (LA), Nonperforming Loans (NPL), and Capital Adequacy (CA) were the proxies of the independent variable whereas; Return on Asset (ROA) was the measure of financial performance. The researcher found that the higher the loan and advances, the worst the performance of banks in Nigeria. The result further indicated that sound credit risk management and capital adequacy enhance performance of the banks under the study.

Moreover, Tesfaye (2014) investigated the determinants of Ethiopian Commercial Banks Profitability taking into account bank specific and external variables for the 1990 to 2012 periods. Accounting measures mainly Return on Assets (ROA) was used to measure the banks' performance. The result indicated that management efficiency, expressed by non-interest expense to total expense has negative and significant relation with profitability. Result also showed that capital adequacy serves for providing assurance for liquidity position of banks than enhancing profitability and that liquid asset to total deposit have no significant effect on profitability. From the external determinants of profitability identified by the researcher, the inflation has been observed to have significant effect on profitability. Bank size and real GDP have got no significant effect on profitability.

Kenenisa and Chawla (2015) who analyzed the effect of bank size and ownership on financial performance also for the years 2000 to 2013 revealed that bank size, measured by logarithm of total assets got significant effect on the three measurements of performance; mainly return on assets, return on equity and net interest margin. But the bank ownership has effect on performance measured by return on assets revealing that private banks outperform in generating profit on their assets especially those state-owned ones. Million et al, (2015) investigated the impact of credit risk management on profitability of commercial banks in Ethiopia using return on assets and return on equity and found that nonperforming loan ratio, has negative and significant impact on return on assets and return on equity. Loan loss provision ratio has statistically significant positive

impact of both proxies of performance. Capital adequacy ratio has negative impact on return on equity but found to have no impact on return on assets.

Tilahun and Chawla (2016) also assessed the determinants of commercial banks' profitability in Ethiopia for the years 20001 to 2013. The researchers used Net Interest Margin (NIM) as proxy of profitability whereas; number of branches, loan amount, ownership structure, and deposit amount and bank size were used as independent variables for their study. The Ordinary Least Square (OLS) regression indicated that loan to deposit ratio, branch size, and ownership have significant effect on NIM; while bank size has no significant effect.

Melaku (2016) also investigated the determinants of profitability of private commercial banks in Ethiopia using data of 2004 to 2011. Return on assets was the measure of performance, whereas capital, assets size, loan to total assets, liquidity, labor productivity, overhead, credit risk, interest income, GDP growth rate, interest rate and market share were the dependent variables. The regression output revealed that provision for loan loss, overhead, have significant negative effect, while earning, net interest income, bank size, and productivity have positive effect on profitability measured by return on assets.

Gemechu (2016) also researched on determinants of profitability of bank industry in Ethiopia for the years 2002 to 2012 using return on assets and net interest margin as measure of performance. The finding revealed that loan to advances, efficiency and productivity, have positive effect on both return on assets and net interest margin. Liquidity risk and exchange rate have positive effect on return on assets but have no effect on net interest margin. At the same time, regulation, market concentration, economic growth, interest rate has positive effect on net interest margin but have insignificant effect on return on assets. But expense mismanagement has negative effect on both measure of performance but capital adequacy has no effect on performance.

Lemma and Rani (2017) analyzed the determinants of financial performance of commercial banks in Ethiopia data from two public and seven private banks for the years that were considered for the study. Return on assets was used as proxies of financial performance while the internal and external factors were considered to analyze the factors. Descriptive, correlation and regression analysis were used to analyze the data and the findings revealed that liquidity and earnings ratio have positive relation with return on assets. The findings further revealed that CAR, the ratio of

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

Hadad (2013) in Ghana conducted a study whose main objective was to determine the factors that affected the financial performance of the Naara rural banks in the upper east region of the country. The researcher used the annual financial statements that covered an 11-year long period between 2000 and 2010. Multiple regression analysis was used as the main statistical tool to analyze the data collected from the bank under the study. The research sought to establish empirical relationship that existed between Naara rural banks financial performance on one hand and its credit portfolio, liquidity, non-performing loan and total assets on the other hand. The findings of the research indicated that liquidity and size were positively and related considerably to the performance of the bank.

In Kenya Tesfai A (2015) studied the relationship between liquidity, capital adequacy and non- performing loans on financial performance of Habib bank AG Zurich.The researcher used regression analysis to investigate on the relationship between the independent variables and the dependent variables. The study revealed that there exist a positive relationship between profitability and liquidity for commercial banks. Liquidity was one of the factors that determine profitability of commercial banks. Liquidity was found to influence the measures of financial performance of Habib Bank AG Zurich. The study recommended that the bank should enhance their liquidity management through identifying, measuring, monitoring, and controlling liquidity risk in their bank. In addition finance managers should identify all the factors that influence the liquidity of their banks with an aim of developing strategies to minimize their

effect. In addition, the study recommended that investors should invest more in commercial banks with a high liquidity as their financial performance is expected to increase.

Ongore and Gemechu (2013) depicted the determinants of financial performance of commercial banks in Ethiopia using explanatory study based on secondary data obtained from published statements of accounts of all commercial banks in Ethiopia for ten years (2001 to 2010). They used ROA, ROE and NIM as dependent variable and bank specific factors such as capital adequacy, asset quality, management efficiency and liquidity management and macroeconomic variables like GDP growth rate and inflation rate as explanatory variable. The study showed that capital adequacy, asset quality and management efficiency

2.4. Conclusion for research gap

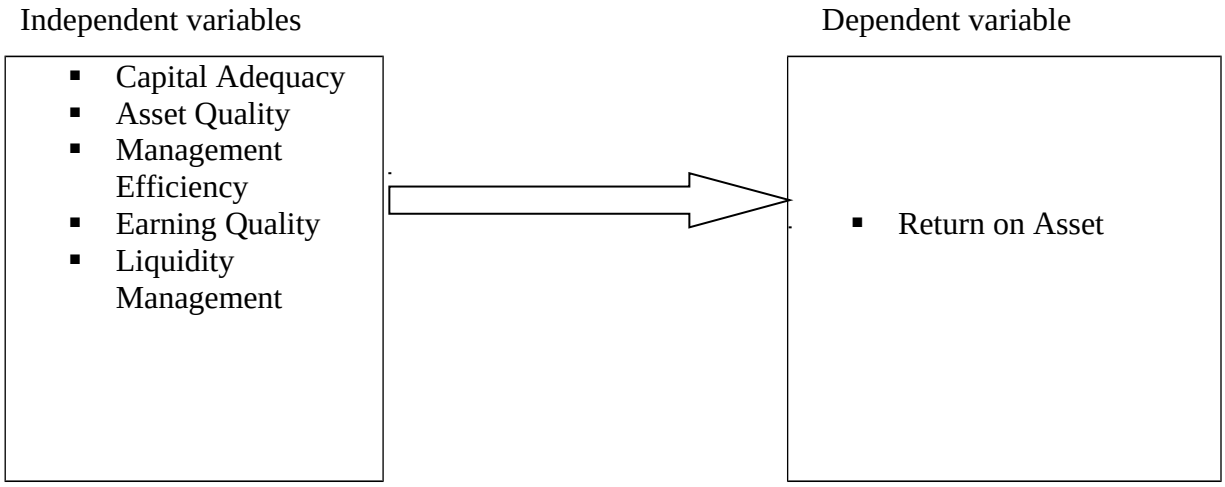
Most of the studies discussed above were supporting the CAMEL variables are significant to explain the dependent variables return on asset and return on equity positively. Although studies have been done on bank-specific factors and their effect on performance; none of the studies have exclusively investigated the effect of bank- specific factors on financial performance of commercial banks in Ethiopia. It was because of this backdrop that this study sought to find an answer to the question: what is the effect of bank-specific factors on financial performance of commercial banks in Ethiopia?

2.5. Conceptual Framework

A conceptual framework is a model of presentation where a researcher conceptualizes or represents the relationships between variables in the study and shows the relationship graphically or diagrammatically. The purpose of a conceptual framework is to help the reader to quickly see the proposed relationships. It was expected that a positive link between bank-specific factors and financial performance would prevail. Effective management of credit policies aids a bank in minimizing non-performing loans. Proper balance of debt and equity enable a bank to meet its financial compulsions. Quality of an investment is attributable to an increase in sales. This coincided with resource-based theory, which maintained that banks with adequate capital holding

were less likely to suffer from financial distress. Large and stable banks were able is able to meet its financial responsibilities and grasp investment opportunities that promise better returns.

Figure 1.1 shows the conceptual framework identifying the various variables and their effects on the financial performance of private commercial banks in Ethiopia.



Source: Researcher's Own formulation (2019)

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

This chapter introduces the methodology to be applied in this study. Research methodology is a process in which the researcher uses tools and procedures to collect and analyses data. Covered in this chapter included the research design, target population, sampling technique, data collection instruments and procedures and data analysis.

3.2 Research Design

This study employed explanatory type of research design with quantitative data analysis research approach. With such a study, information was obtained to meet the underlying purposes and objectives of the study. Explanatory research design is useful in investigating the existing relationships among the varia1bles that will be captured in this study. The study employed quantitative research approach. According to Creswell, 2014 quantitative research is an approach for testing hypothesis and theories by examining the relationship among variables.

3.3 Population

Population is a set of elements having similar traits defined by the sampling criteria adopted by the researcher. This involves target and accessible population. Target population constitutes a whole group of people/object that the researcher seek to generalize the finding of the study while accessible population is a population that the researcher is reasonable access, it might be a sub set of the target population Mugenda, (2013). The target population under the study is all private commercial banks registered by NBE and under operation in the country currently. At this time, there are 16 private commercial banks in Ethiopia.

3.4. Sample Size and Sampling Method

As noted above, the target population would be all private commercial banks registered by NBE and under operation in the country currently. Among this, the study was conducted on 10 commercial banks operating in Ethiopia, which is round 62% of the total population. The sampling technique used is purposive sampling. Purposive sampling may be defined as selecting units based on specific purposes associated with answering a research questions or it is a type of

sampling in which particular settings, or events are deliberately selected for the important of information they can provide that cannot be gotten as well from other choices, to recognize whether strong relationship between financial performance of the respective banks and CAMEL ratios exists or not. Therefore, the matrix for the frame is 10*10 that includes 100 observations.

Table 3.1 List of the sample commercial Banks

SAMPLE PRIVATE COMMERCIAL BANKS	
Name of private Commercial Banks	Year of establishment
1. Awash Bank	1994
2.Dashen Bank	1995
3.Bank of Abyssinia	1996
4.Wegagen Bank	1997
5.United Bank	1998
6. Nib Intern, Bank	1999
7. Zemen Bank	2008
8. Bunna International Bank	2009
9. Berhan Intern, Bank	2009
10. Lion International Bank	2006

Source NBE annual report 2012/13

3.5. Data Collection

The study used secondary source of data that is derived from annual report of the selected banks and NBE from year 2009 to 2018. The study covered ten years period (2009-2018). Duration of ten years was considered sufficient in allowing the researcher to establish a clear and accurate linkage between variables. In the study only private commercial banks that had been operational in the study period were considered. Nature of data for all the study variables (independent and dependent) is continuous.

3.6. Dependent variable of the study

The ultimate goal of commercial banks is profit in every aspects of their service. As noted by Mustafa (2014), the two most widely used profitability measurements in order to assess commercial banks‟ performance are return on total assets (ROA) and return on equity. Various studies had used these profitability indicators either by selecting both of them at once or either of the two separately as profitability measurements. Accordingly, the researcher uses the dependent variables of return on asset (ROA).

Return on asset measures efficiency of the company in using its assets to generate net income. Higher values of the return on assets shows that the company is more effectively managing its assets to produce greater amount of net income. It is computed as the ratio of net income after tax to total assets of the bank.

3.7. Independent variable of the study

This study would have five independent variables, which includes capital adequacy, asset quality, and management efficiency, earning quality, liquidity.

Capital adequacy

This ratio serves as a mirror to see banks themselves whether they have adequate capital in order to meet the withdrawal demand of its customers in crisis period. From the four ratios included under this group capital adequacy ratio (CAR) would best explain the issue, because it measures the ability of the bank to absorb losses arising from risk asset? Capital adequacy ratio is computed as the ratio of total capital to total asset.

Asset quality

It is an important parameter to gauge the strength of a bank in relation with quality of its asset. From the three ratios, it is represented by the ratio of allowance for doubtful account to net advance ratio, because according to Misra & Aspal (2013) and Jayanta k. (2012), it is the most standard measure to judge the assets quality.

Management efficiency

Nowadays there is an increasing trend of competition in the banking sector, and efficiency and effectiveness have become the rule as banks constantly strive to improve the productivity of their employees. From the four ratios included under this category, expenditure to income ratios would best explain this parameter of CAMEL, because it is used to measure the efficiency by spending fewer amounts of cents to generate a one birr income.

Earning quality

It mainly determines the profitability and productivity of the bank, and explains the growth and sustainability in future earnings capacity. Accordingly, percentage growth of profit from year to year represented the earning quality from the five ratios included under this study. It is selected because; it measures the sustainability of profitability. It is computed as profit of this year over to profit of last year minus one.

Liquidity

In general liquidity measures the ability of the banks to convert non-cash assets into cash as and when needed. Thus, the ratio of liquid asset to total deposit were selected from the five ratios included under this thesis, because it would best explain by indicating the ability of the bank to meet its deposit obligations with available liquid funds and it also considers total deposit rather than fraction of deposit. It is computed as the ratio of liquid assets to total deposits.

3.8 Data Analysis

After proper editing, the data has been coded and entered to the software then it will make ready for analysis. For the purpose of achieving the objectives of the study, the collected data has been processed and analyzed with descriptive statistics using Statistical Package for Social Studies (SPSS). This technique is selected because it helps to summarize the sample, provides and allows describing the characteristics of the data collected and it helps to thoroughly analyses and interprets the questions one by one in order to reach meaningful results. Descriptive statistics will be used such as mean, standard deviation, median, maximum, minimum values.

Table 3.2: Definition of variables and their expected sign

	Independent Variables			
NO.	Explanatory Variables	Description of Measurement (proxies)	Conception	Expected sign
1	Capital Adequacy	shareholders' equity/ total assets	CA	+
2	Asset Quality	Provision for doubtful debts and advances/Net loans and advances	AQLTY	+
3	Management efficiency	Operating expenses/net operating income.	MGTE	+
4	Liquidity	Loan deposit ratio (Total loan/total customers deposit)	LM	-
5	Earning quality	NIM	EQ	+
Dependent Variables : related to financial performance (Profitability)				
	Return on Assets	Net profit/Total asset	ROA	

Source: Researcher own formulation (2019)

3.9 Regression Model Specification

To test for the effect of bank specific variables on the bank performance a multiple linear regression model will be employed and the computer package SPSS (Statistical Package for the

Social Sciences) will be employed to solve the multiple regression equation will be used in this study. As presented below, multiple regression analysis was adopted to show the bank's specific factors affecting the profitability of banks;

The ROA will be measured as indicated below:

ROA = PBT/Total assets …….. 1

Model: $Y= \beta 0it + \beta 1X1it + \beta 2X2it + \beta 3\ X3it + \beta 4\ X4it+\beta 5\ X5it+Єit$---------2

Hence we estimate the following regression model.

$ROA\ it = \beta 0 + \beta 1\ CA\ it+ \beta 2\ AQ\ it + \beta 3\ MGTE\ it + \beta 4\ L\ it+ \beta 5\ EA\ it + Є\ it$-----1

Where:

ROA it = Represents Return on Asset of the bank i at time

β0= Constant, Y intercept

Є it =Error term where i is cross sectional at t time period.

β1, β2, β3 and β4 = regression Coefficient indicating rate of change of financial performance as of the independent variables.

CA it=Capital adequacy for bank i in year t

AQLTY it =Asset quality for bank i in year t

MGT E it=Management efficiency for bank i in year t

LM it=Liquidity for bank i in year t where

EA it = Net profits /Total assets of bank i at time t (Earnings ability)

t=2009-2018

Coefficients β1, β2, β3 and β4 and β5 will be used to measure the sensitivity of the dependent variable (ROA) to unit changes in the five explanatory variables. F-statistic and t -statistic were used to carry out tests of significance for the overall fit of the model (R2) and the independent variables respectively. Pearson and spearman correlation coefficients will be used to test for multi col-linearity.

3.10. Organization of the study

The study was organized under the following chapter structure. Chapter one is introduction which, includes statement of the problem, research questions, objectives of the research, scope and limitation of the study. Chapter two include literature review about CAMEL approach both

theoretical and empirical part. Chapter three is about research design and Methodology. This chapter includes data source, sampling techniques, data analysis and empirical model. Chapter four is all about discussion of results and findings and the last chapter will summarize the study by forwarding summary conclusion and recommendation.

CHAPTER FOUR

DATA ANALYSIS, RESULTS AND ISCUSSION

4.1. Introduction

In this chapter of the study, the panel's data, which is collected from the financial statements, the results from descriptive statistics are discussed, and the data that were collected for this study are secondary in nature. The explanatory research design was used in order to get insight into the variables of the effect of banks specific factors among the sampled banks and it is used as a base to forward recommendations after determining the relationship between the variables from correlation and regression analyses. The results from the regression and correlation analysis are presented in table and discussed one by one. The regression model is used to analyze the panel data collected and to test the effect of the independent variables on the dependent variable so that the research hypotheses are fully tested. Multiple regression analysis is employed to test whether one or more independent variables (predicators) influence the dependent variable (outcome variable) and to identify whether the effect is positive or negative. Generally the purpose of this chapter is to present results and analysis of data obtained from different methods involved in this study. The data was collected on the ten commercial banks for the period ranging from 2009 to 2018. The Financial Performance of commercial Banks in Ethiopia over time is measured by ROA (Return on Assets). The analysis was carried out in line with the main objective for this study which was to the effect of bank specific factors on the financial performance private commercial banks in Ethiopia.

4.2. Results

The purpose of this section is to present the results of data obtained from different data sources. Accordingly, the results of the documentary analysis (structured reviews of documents) are presented in the following subsections.

4.2.1. Descriptive Statistics

This section presents the descriptive statistics of dependent and explanatory variables used in this study. Descriptive statistics was utilized in describing the outcome of the data using trend by simplifying huge amounts of data in a logical manner. This form of statistics presents quantitative data using simple summaries. This section presents the descriptive statistics of dependent and explanatory variables used in this study. The dependent variable used in this study was ROA while explanatory variables are CA, AQLTY, MGTE, EQ, and LM. Accordingly, the following table 4.1 reports mean, median, maximum, minimum, standard deviation and number of observation for each variables used in this study. In case, the following table 4.1 shows that all variables have 100 observations.

Table 4.1: Descriptive Statistics for the study variables

	ROA	*CA*	*AQLTY*	*MGTE*	*EQ*	*LM*
Observation	*100*	*100*	*100*	*100*	*100*	*100*
Minimum	*-0.0241*	*0.0955*	*0.0659*	*-3.5381*	*0.0083*	*0.1172*
Maximum	*0.3109*	*1.6734*	*0.0969*	*3.7828*	*1.3241*	*8.1924*
Mean	*0.05047*	*0.21135*	*0.0235*	*1.23057*	*0.32017*	*0.69092*
Std. Deviation	*0.05874*	*0.27076*	*0.02092*	*1.03774*	*0.2536*	*1.19878*

Source: Researcher own computation, 2019

As the table above depicts, all the dependent and explanatory variables are having range of 100 observations. The average value of return on asset is 0.05047 which shows that percentage of ROA is 5 % standard deviation. Further, Management efficiency (MGTE) measured has very high mean of 1.23057 this shows that percentage is more than 100 with a range of -3.5381 minimum and 1.23057 maximum values while standard deviation is 1.03774.

The mean of Liquidity management (LM) is 0.6909 this shows that percentage of LM is 69 % which is slightly high and the standard deviation is also very high 1.19878 which shows that percentage is more than 100. The mean value of Capital Adequacy (CA) is 0.21135 that shows that percentage of CA is 21 % with a minimum value of 0.0955 and maximum value 1.6734 and 0.27076 value of standard deviation. While the mean for Management Efficiency (MGTE) 1.23057; this shows that percentage of MGTE is 123% which is very high and more than 100 and ranging between -3.5381 of maximum and 3.7828 of minimum value with high standard deviation of 1.03774. On average, Asset Quality (AQLTY) is 0.0235; this shows that percentage of AQLTY is 2.35 % which is very low and its standard deviation is 0.02092 and ranging between 0.0048 minimum values to 0.0969 maximum values.

4.2.2. Test for the Classical Linear Regression Model (CLRM) Assumptions

This section provided test for the classical linear regression model (CLRM) assumptions such as Normality, Heteroscedasticity, Autocorrelation and Multicolinearity tests. The linearity of the parameter is assumed since the model applies linear ordinary least square (OLS). The objective of

the model is to predict the strength and direction of association among the dependent and independent variables. Before applying the model for testing the significance of the slopes and analyzing the regressed result, Normality, Multicolinearity, Autocorrelation and Heteroscedasticity tests are made for identifying misspecification of data if any so as to fulfill research quality.

- ✓ **Test of Multi Collinearity**

As indicated earlier we say there is Multicollinearity problem when there is correlation between variables employed in the regression model (when the assumption that cov(x1,x2) = 0 is violated). That is the existence of a ``perfect`` or exact linear relationship among some or all explanatory variables of a regression model (Gujarati, 1995). The Interco relation between the two variables can be measured by the partial correlation coefficient between one variable with another variable. The test of multi-collinearity problems of explanatory variable of private commercial banks in Ethiopia (asset quality, capital adequacy, management efficiency, earning quality and liquidity management effectiveness of banks) was made using VIF and Tolerance. As explained by Addisu (2015), tolerance is an indicator of how much of the variability of the specified explanatory variables is not explained by the other independent variable in the model formulated and it is computed using the formula of $1-R^2$ for each independent variable.

Accordingly, to him, if this value is very small (less than .10), it indicates that the multiple correlation with other variables is high, suggesting the possibility of multicollinearity. Similarly, Addisu also stated that the value given for the VIF (Variance inflation factor) is just the inverse of the tolerance value (1 divided by Tolerance). If the value of VIF is above 10, it indicates existence of multicollinearity.

Table 4.2: Collinearity statistics

Variables	*Tolerance*	*VIF*
CA	*.832*	*1.202*
AQLTY	*.936*	*1.069*
MGTE	*.833*	*1.201*
EQ	*.728*	*1.374*
LM	*.986*	*1.014*

Source: Researcher's own computation, 2019

As table 4.2 shows, since the tolerance limit is greater than 0.10, and the variance inflation factor is below 10 (cut off VIF), multi-collinearity problem doesn't exist. Therefore, the model is free from multicollinearity problems.

- ✓ **Test for Autocorrelation Assumption**

This assumption implies that the errors are linearly independent of one another (uncorrelated with one another) Brooks (2008). If the errors are correlated with one another, it would be stated that they are auto correlated, that means errors associated with one observation are uncorrelated with the errors of any other observation.

Pearson correlation coefficients show whether dependent and independent variables are correlated and how much they are correlated each other. The researchers test the autocorrelation using both Breusch-Godfrey Serial Correlation LM Test, The result implies that the research independent variable error term is uncorrelated each other.

The test result indicated in Breusch-godfrey test shows the null hypothesis of no autocorrelation is not rejected, since it is above 5% significance level. Hence the p value is 0.23 so there is not autocorrelation within the variables.

Table 4.3: Breusch-Godfrey Serial Correlation LM Test:

F-statistic	*1.165052*	*Prob. F (2, 82)*	*0.3170*
*Obs*R-squared*	*2.624921*	*Prob. Chi-Square(2)*	*0.2692*

Source: Researcher's own computation (2019)

- ✓ **Heteroscedasticity Test**

In the classical linear regression model, one of the basic assumptions is Homoskedasticity assumption that states as the probability distribution of the disturbance term remains same for all observations. To test for the presence of Heteroscedasticity, the popular white test was employed (Brooks 2008). As shown in table, the white test statistic gave that there was no evidence for the

presence of Heteroscedasticity in this particular study since the p-values for all versions of the test statistic were in excess of 0.05. Hence the p value is 7.41% showing insignificant value.

Table 4.4: Heteroskedasticity Test: White

F-statistic	*1.725553*	*Prob. F (38, 56)*	*0.0311*
*Obs*R-squared*	*51.23957*	*Prob. Chi-Square (38)*	*0.0741*
Scaled explained SS	*278.4757*	*Prob. Chi-Square (38)*	*0.0000*

Source: Researcher's own computation (2019)

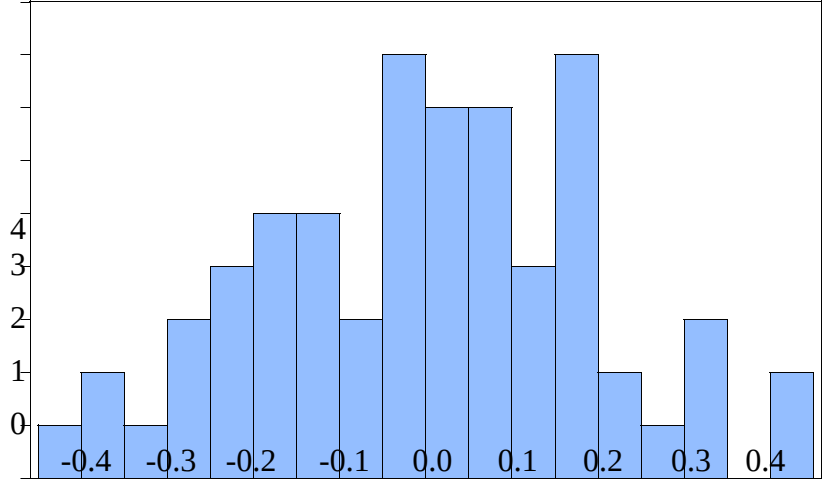
- ✓ **Tests of normality ROA**

According to Chris Brooks (2008), one of the most commonly applied tests for normality is the Bera Jarque (BJ) test. If the residuals are normally distributed, the histogram should be bell-shaped and the Bera-Jarque statistic would not be significant. This means that the p-value given at the bottom of the normality test screen should be bigger than 0.05 as displayed below.

One of the basic assumptions of the classical linear regression model (CLRM) is the stochastic/disturbance term is normally distributed. If this curve is like bell shaped distribution it can be concluded that the disturbance term is normally distributed with mean zero and constant variance one (i.e. N~(0, 1)). To get the residuals normally distributed first we have to make sure that each variables employed are found to be normally distributed. In this case, most of the variables are found to be normally distributed; a normal distribution is not skewed and is defined to have a coefficient of kurtosis 2. Skewness measures the extent to which a distribution is not symmetric about its mean value and kurtosis measures how far the tails of the distribution are. If the residuals are normally distributed, the histogram should be bell shaped.

The residuals scatter plots allow us to check whether the residuals should be normally distributed about the predicted dependent variable scores. As we can understand from the histogram and p-p plot depicted below, the residuals seem normally distributed and the residuals are distributed with a mean of 0 and standard deviation of 0.19. Thus, the model fulfills the assumption of being normally distributed.

Figure 4.1: tests of normality ROA



Series: Standardized Residuals Sample 2009-2018 Observations 100

Mean	-2.17e-17
Median	0.000313
Maximum	0.441560
Minimum	-0.410300
Std. Dev.	0.192732
Skewness	-0.021263
Kurtosis	2.567792
Probability	0.782320

4.2.3. Correlation Analysis

Correlation analysis is a way to indicate the degree to which two or more variables are associated with or related to each other. Each individual variable have negative or positive relationship with each other, Correlation coefficient between two variables ranges from +1 (i.e. perfect positive relationship) to -1 (i.e. perfect negative relationship). The most widely used bi-variant correlation statistics is the Pearson product-movement coefficient, commonly called the Pearson correlation which was used in this study.

As Brooks (2008), if it is stated that y and x are correlated, it means that y and x are being treated in a completely symmetrical way. Thus, it is not implied that changes in x cause changes in y, or indeed that changes in y cause changes in x rather, it is simply stated that there is evidence for a linear relationship between the two variables, and movements in the two are on average related to an extent given by the correlation coefficient.

Table 4.5: Correlation Matrix of Dependent and Independent Variables

	CA	*AQ*	*MGTE*	*EQ*	*LQTY*
ROA	*0.813428*	*0.027279*	*0.35011*	*0.59115*	*-0.078922*

Source: Researcher's own computation (2019)

According to the above table asset quality is positively correlated with return on asset with the coefficient of 0.027279 and the linear relationship between AQ and ROA is statistically different from zero/statistically in significant. Return on asset is positively correlated with capital adequacy with the coefficient of 0.813428 and statistically different from zero/statistically significant. Liquidity is negatively correlated with the dependent variable (ROA) with the coefficient of -0.078922 and statistically different from zero/statistically significant. Management efficiency is positively correlated with return on asset with the coefficient of 0.35011 and the linear relationship between MGTE and ROA is statistically different from zero/statistically significant. The last variable is Earning Quality; its correlation coefficient is positive with the coefficient of 0.59115, but statistically significant/different from zero.

Among the bank specific factors affecting Return on asset, Capital adequacy, asset quality management efficiency, and earning quality have positive significance correlation at 5% level but Liquidity have is negatively correlated with return on asset and it have a statistically significant at 1% significant level influence.

4.3. Regression Analysis of the Study

A regression equation was adopted in testing the hypothesis for this research on the link between firm-specific factors and commercial banks' financial performance. The objective of this study was to determine the effect of bank specific factors on the financial performance of commercial banks in Ethiopia. To accomplish this, the study conducted a regression analysis which gives the relationship between the independent variables used in the study including the capital adequacy, asset quality, management efficiency, earnings' ability, liquidity and the dependent variable performance (measured by the ROA). The data used was collected for 10 years thus giving a 10 year period data which facilitated linear regression analysis.

A. Analysis of Regression of ROA

1. Model Fit test of ROA

As depicted below, R square and adjusted R square were addressed to evaluate whether the formulated model can fit, overall, in measuring financial soundness of the banks.

Table 4.6: Model Summary

Model	*R*	*R Square*	*Adj. R Square*	*Std. Error of the estimate*
1	*.824*	*.879*	*0.8351*	*0.0355121*
Predictor:(Constant),CA,AQTY,LM,MGTE,EQ				

Source: Researcher's own computation (2019)

As depicted in table 4.6, above, the adjusted R square value is 83.51 % and from this it is concluded that 83.51 percent of the variation in the dependent variable (ROA) of commercial banks is explained by the independent variables (asset quality, capital adequacy, management efficiency, earning quality and liquidity management efficiency). This indicates the regression model can strongly explain the dependent variables.

The outcomes of the model, as whole, which was depicted by analysis of variance (ANOVA) also indicated that it has a significant good degree of prediction of the dependent variable (ROA).

Table 4.7: ANOVA Analysis

Model		*Sum of Square*	*Df*	*Mean Square*	*F*	*Sig*
1	*Regression*	*.096*	*5*	*.019*	*15.233*	*.000*
	Residual	*.045*	*36*	*.001*		
	Total	*.141*	*41*			
a. Dependent Variable: ROA						
b. Predictors: (Constant), AQLTY, CA, LM, MGTE, EQ						

Source: Researcher's own computation (2019)

As it was portrayed on table 4.7 above, the value of F-statistics is 15.23 and is significant as the level of Significance is less than 5%. The result indicated that the developed regression model is statistically significant that it can be relied upon to describe the influence of the specific factors on performance of the private commercial banks. That means, asset quality, capital adequacy, liquidity management, management efficiency and size of the banks are significant measures of financial well-being of Ethiopian private commercial banks appraised by return on asset (ROA).

B. Regression Coefficients of ROA

It is observed in the table below that the coefficients of the repressors showed how much ROA changes as a change in quality of asset, capital adequacy, management efficiency, earning quality and liquidity management of the banks.

Table 4.8: Analysis of Regression Coefficients [a] of ROA

Model		Unstandardized Coefficients		Unstandardized Coefficients	T	Sig
		B	Std. Error	Beta		
1	Constant	.435	.135		.503	.618
	CA	.170	.022	.783	7.563	.000
	AQLTY	.009	.084	.020	.107	.037
	MGTE	.014	.006	.242	2.344	.025
	EQ	.008	.014	.060	.541	.592
	LM	-.003	-.005	.051	-.540	.593
a. Dependent Variable: ROA						

Source: Researcher's own computation (2019)

The regression result shown on table 4.8, above showed as capital adequacy and asset quality of the banks are significant measures of the financial welfare of Ethiopian private sector commercial banks evaluated by return on asset (ROA) of banks.

Accordingly, keeping other factors constant a unit increase in capital adequacy and asset quality of the banks led to 0.170 and 0.009 increase in ROA of banks respectively over the study periods of 2009-2018 which was consistent with the hypothesis.

4.4. Discussion of Findings

Descriptive results revealed that ROA increased with a margin of 0.058 with an average value of 0.05047. This was a rapid increase considering that it took place in a span of 10 years. These results conform to the observations of Mulualem (2015) who unearthed that commercial banks' ROA increased rapidly amid 2009 to 2015. The average value of return on asset is 0.05047 which shows that percentage of ROA is 5 % standard deviation. Further, Management efficiency (MGTE) measured has very high mean of 1.23057 this shows that percentage is more than 100 with a range of -3.5381 minimum and 1.23057 maximum values while standard deviation is 1.03774.

The mean of Liquidity management (LM) is 0.6909 this shows that percentage of LM is 69 % which is slightly high and the standard deviation is also very high 1.19878 which shows that percentage is more than 100. The mean value of Capital Adequacy (CA) is 0.21135 that shows that percentage of CA is 21 % with a minimum value of 0.0955 and maximum value 1.6734 and 0.27076 value of standard deviation. While the mean for Management Efficiency (MGTE) 1.23057; this shows that percentage of MGTE is 123% which is very high and more than 100 and ranging between -3.5381 of maximum and 3.7828 of minimum value with high standard deviation

of 1.03774. On average, Asset Quality (AQLTY) is 0.0235; this shows that percentage of AQLTY is 2.35 % which is very low and its standard deviation is 0.02092 and ranging between 0.0048 minimum values to 0.0969 maximum values. This was a sign that commercial banks got returns efficiently from their investments. Capital adequacy rose with a margin of 0.27 in the study's ten-year period. This was a moderate increase which was considered effective in ensuring that commercial banks did not suffer from liquidity problems. These results coincide with the observations made by Mulualem (2015) who established that capital adequacy recorded a moderate growth during the time of study.

On the correlation of the study variable, the researcher conducted a Pearson moment correlation. From the finding in the table above, the study found that there was weak positive correlation between capital adequacy of commercial banks and asset quality as shown by correlation factor of 0.020, this weak relationship was found to be statistically significant as the significant value was 0.002 which is less than 0.05, the study also found weak positive correlation between ROA of commercial banks and asset quality as shown by correlation coefficient of 0.051, this too was also found to be significant at 0.028 level. The study also found weak positive correlation between ROA of commercial banks and earnings ability as shown by correlation coefficient of 0.048 at 0.006 level of confidence. The study also found weak positive correlation between ROA of commercial banks and liquidity as shown by correlation coefficient of 0.049 at 0.001 level of confidence.

The study also found weak positive correlation between earnings ability of commercial banks and management efficiency as shown by correlation coefficient of 0.071 at 0.016 level of confidence. The study also found weak positive correlation between management efficiency of commercial banks and capital adequacy as shown by correlation coefficient of 0.063 at 0.477 level of confidence which is less than 0.5.

From ANOVA statistics, the F statistic was 15.33 with a distribution F(3,1), and the probability of observing a value greater than or equal to 3.436 is less than 0.001 as given by the significance value of 0.015 which is less than the critical value at 5% level in a 2-tailed test. This therefore reveals that the regression model developed is statistically significance and the variation in the results is insignificant that cannot result to a much difference in case of a change in the study units (population) and therefore the model can be relied upon to explain the effect the specific factors on performance of commercial banks in Ethiopia.

4.4.1 Effects of capital adequacy on financial performance

The study concludes that capital adequacy affects the financial performance of commercial banks. The study concludes that there exists a positive and significant association between capital adequacy and financial performance of commercial Banks. Further an increase in capital adequacy would lead to a positive and significant increase in financial performance of the commercial banks. This shows that capital adequacy has an effect on financial performance.

4.4.2 Effects of asset quality on financial performance

The study concludes that asset quality has a positive and insignificant association with the financial performance of commercial banks in Ethiopia. The study found that asset quality had the less influence in financial performance of commercial banks compared to the other independent variables. Increase in asset quality would lead to insignificant increase in financial performance of the commercial banks.

4.4.3 Effects of management efficiency on financial performance

The study concludes that management efficiency has a positive and significant association with financial performance of commercial banks .The study found that an increase in management efficiency would lead to a significant increase in financial performance of commercial banks in Ethiopia.

4.4.4 Effects of earnings ability on financial performance

The study concludes that earnings ability has a positive and significant association with financial performance of commercial banks .The study found that an increase in earnings ability would lead to a significant increase in financial performance of commercial banks in Ethiopia.

4.4.5 Effects of liquidity on financial performance

The study concludes that liquidity has negative and significant association with financial performance of commercial banks .The study found that an increase in liquidity would lead to a significant increase in financial performance of commercial banks in Ethiopia. From the regression model obtained, all the independent variables (capital adequacy, asset quality, management efficiency, earnings' ability, liquidity) all rated as zero, ROA would rate at 0.435. Therefore it can

be concluded that only 43.5% of ROA variation in banks can be explained by capital adequacy, asset quality, management efficiency, earnings' ability and liquidity. Based on the findings it can be concluded that the Asset quality of the bank had the highest influence on ROA of banks.

Table 4.9: Summary results for the effect of bank specific factors on financial performance of private commercial banks in Ethiopia

	ROA		
Variables	*+significant*	*-significant*	*Insignificant*
CA	√		
AQLTY	√		
MGTE	√		
EQ	√		
LMGT		√	

"+Significant" designates that the variable is statistically significant and positively affect the bank's profitability; "−Significant" shows that the variable is statistically significant and negatively affect the bank's profitability; "insignificant" represents that the variable is statistically not significant effect on the bank's profitability; ROA: Return on Asset, CA: Capital adequacy, AQLTY: Assets quality, EQ: Earning Quality, LMGT: Liquidity Management, MGTE: Management Efficiency". Source: Researcher's own computation (2019).

CHAPTER FIVE

CONCLUSIONS AND RECOMMENDATIONS

5.1 Introduction

This chapter presents conclusions made from the study and the recommendations for policy and for further research. The researcher conducted the study on effects of bank specific factors on financial

performance of private commercial banks in Ethiopia. Secondary data was collected on the independent and dependent variables and analysed, the results were presented in chapter Four.

5.2 Conclusion

The study was intended to investigate the effect of bank specific factors on financial performance of commercial banks in Ethiopia by using secondary data of 2009-2018. The multiple regression analysis was made using one dependent variable (ROA) and five independent variables (asset quality, capital adequacy, and management efficiency, earning quality and liquidity management). The regression result clearly showed that asset quality, management efficiency and earning quality is statistically significant factor that positively boost the financial soundness of the selected commercial banks in Ethiopia as it can help banks to realize economic scale. It was also indicated that capital adequacy is statistical and positively affect the financial performance of the banks. That means, the higher equity capital the banks have, the more the banks become financially sound.

Further, the study showed that liquidity management of banks has statistically negative impact on the financial soundness of private commercial banks of Ethiopia, i.e., the higher liquid the banks are the lesser their ability they generate profit. Management efficiency of banks has positive and statistically significant impact on the financial performance of the privet commercial banks. That means operational expenses inefficiency shrinks the return on asset of the banks in Ethiopia. The result also depicts as quality of assets of banks is statistically insignificant factor for the financial performance of private commercial banks in Ethiopia.

5.3 Recommendations for policy

From the findings and conclusions an increase in capital adequacy leads to a significant increase in bank’s financial performance therefore the study recommends that bank capitalization should be encouraged in all commercial banks and other financial institutions so that performance can be enhanced. Institutions should strive to retain earnings to boost up capital rather than paying inflated bonuses. Well capitalized institutions have lower financial risk and thus are more likely to survive financial crisis thus, a well-capitalized banking system will ensure financial stability and make the industry more resilient against external shocks and risk.

Therefore, the private commercial private banks in Ethiopia should create enough capital through issuance of shares, investment, and retained earnings to run their business in healthy way since greater capital reduces the chance of distress and it boasts their profit. Moreover, managerial efficiency should be given due consideration in order to minimize operating expenses, deploy their resources efficiently and intensify their income to enhance their profitability so as to stay competitive and more resilient to economic tremors.

From the findings increase in earnings ability has a positive and significant increase in bank performance. The study recommends that the banks should also strive to remain competitive so as to increase their earnings ability. Lastly, the liquidity of private commercial banks should be managed wisely to obtain optimal amount of liquid assets to avoid mismatch between profitability and risk of short term insolvency since it has reverse movement with profitability.
Further empirical study will be required to establish this.

5.4 Recommendations for Further Study

From the findings 83.5% of the variation in banks performance can be explained by the independent variables in the study therefore the study recommends that further studies be conducted to determine the effect of economic factors that affect bank performance.

The study therefore suggests a similar study should be carried in micro finance institutions in Ethiopia. Further studies should also be done and focus on the factors independently to cover more grounds, for example, effect of asset quality on financial performance of commercial banks in Ethiopia. In future research work also, it might be useful to understand the factors that impact on effectiveness of monetary policy of the National Bank since money supply significantly and negatively relate to bank profitability. This is because the Central bank can have the right policy objectives but certain prevailing factors in the industry can be an impediment to the realization of these objectives.

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APPENDIX I: List private of Commercial Bank Operating In Ethiopia

No	Bank Name	Years of establishment
1	Awash Bank	1994
2	Dashen Bank	1995
3	Bank of Abyssinia	1996
4	Wegagen Bank	1997

5	United Bank	1998
6	Nib International Bank	1999
7	Cooperative Bank of Oromia	2004
8	Lion International Bank	2006
9	Oromia International Bank	2008
10	Zemen Bank	2008
11	Bunna International Bank	2009
12	Berhan Bank	2009
13	Abay Bank	2010
14	Addis International Bank	2011
15	Debub Global Bank	2012
16	Enat Bank	2012

Appendix II: Data collection sheet

I: Banks ROA from 2009 to 2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mean	0.0497	0.0466	0.0476	0.0453	0.0414	0.0458	0.0462	0.0472	0.0481	0.0478
Median	0.0479	0.0485	0.0490	0.0447	0.0479	0.0451	0.0456	0.0451	0.0462	0.0460
Standard Deviation	0.0148	0.0188	0.0163	0.0153	0.0207	0.0212	0.0230	0.0251	0.0254	0.0252
Range	0.0430	0.0570	0.0580	0.0536	0.0634	0.0652	0.0658	0.0654	0.0662	0.0661
Minimum	0.0290	0.0170	0.0190	0.0190	0.0167	0.0172	0.0168	0.0171	0.0714	0.0878
Maximum	0.0720	0.0740	0.0770	0.0726	0.0500	0.0687	0.0784	0.0820	0.0890	0.0810

Source: e-view output

II: Table 4.2 Banks ROE from 2009 to 2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mean	0.0277	0.0236	0.0536	0.0536	0.0675	0.0625	0.0654	0.0684	0.0712	0.0694
Median	0.0479	0.0482	0.0490	0.0443	0.0472	0.0461	0.0436	0.0461	0.0462	0.0486
Standard Deviation	0.0128	0.0132	0.0138	0.0146	0.0204	0.0201	0.0221	0.0231	0.0238	0.0242
Range	0.0410	0.0478	0.0480	0.0501	0.0569	0.0582	0.0608	0.0624	0.0642	0.0661
Minimum	0.0190	0.0170	0.0190	0.0170	0.0172	0.0172	0.0188	0.0191	0.01984	0.0278
Maximum	0.0620	0.0720	0.0710	0.0723	0.078600	0.0787	0.0794	0.0801	0.0870	0.0890

Source: e-view output

III: Banks' Capital adequacy from 2009 to 2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mean	0.1908	0.2328	0.2062	0.1895	0.1701	0.1882	0.2341	0.240	0.2352	0.2723
Median	0.1776	0.2380	0.2100	0.1890	0.1770	0.1725	0.1801	0.182	0.1840	0.1801
Standard Deviation	0.0435	0.0512	0.0271	0.0259	0.0249	0.0274	0.0254	0.0282	0.0289	0.0292
Range	0.1350	0.1398	0.0930	0.0810	0.0700	0.0925	0.0871	0.0913	0.0915	0.0921
Minimum	0.1430	0.1612	0.1480	0.1390	0.1400	0.1430	0.1423	0.1560	0.1631	0.1646
Maximum	0.2780	0.3010	0.2410	0.2200	0.2100	0.2300	0.2562	0.2542	0.2632	0.2615

Source: e-view output

IV: Banks Asset quality from 2009 to 2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mean	0.0644	0.0403	0.0898	0.0376	0.0568	0.1381	0.2361	0.0981	0.2130	0.1351
Median	0.0137	0.0215	0.0337	0.0220	0.0509	0.0251	0.0725	0.0653	0.0842	0.0831
Standard Deviation	0.0718	0.0521	0.0608	0.0313	0.0487	0.1230	0.2310	0.0235	0.1562	0.1356
Range	0.1772	0.1574	0.4450	0.0884	0.1129	0.2531	1.3210	1.425	1.2032	1.2310
Minimum	0.0028	0.0066	0.0050	0.0016	0.0071	0.0075	0.0065	0.0082	0.0086	0.0084
Maximum	0.1800	0.1640	0.4500	0.0900	0.1200	0.0625	0.0682	1.0253	1.0652	1.0362

Source: e-view output

VI: Banks management efficiency from 2009 to 2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mean	1.1322	1.5949	1.4428	1.2243	1.5003	1.8230	2.0212	2.0452	2.1560	2.1362
Median	1.1900	1.4400	1.2700	1.2765	1.5650	1.6210	2.0231	2.1451	2.1632	2.2012

Standard Deviation	0.4570	0.5852	0.8547	0.6157	0.9451	1.3601	1.2605	1.4251	1.6230	1.4251
Range	1.6400	2.2500	3.1700	1.9650	2.0700	2.1056	3.0261	3.1201	2.4560	2.0231
Minimum	1.2900	1.3800	1.5800	1.0150	1.2120	1.6250	1.6023	1.8630	2.0213	2.0345
Maximum	2.9300	4.6300	4.7500	2.9800	3.4500	4.235	5.1023	4.3201	5.2350	4.2045

Source: e-view output

VII: Banks earnings ability from 2009 to 2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mean	0.0965	0.0410	0.0446	0.0396	0.0221	0.0325	0.0240	0.0645	0.0821	0.0651
Median	0.0359	0.0450	0.0470	0.0395	0.2512	0.2351	0.3201	0.36512	0.3821	0.4210
Standard Deviation	0.1646	0.0161	0.0160	0.0157	0.0177	0.0198	0.0251	0.0288	0.0263	0.0292
Range	0.0740	0.0510	0.0548	0.0460	0.0595	0.1425	0.1046	0.1530	0.1482	0.1624
Minimum	0.0290	0.0170	0.0192	0.0190	0.0094	0.0152	0.0186	0.0154	0.0168	0.0192
Maximum	0.5030	0.0680	0.0740	0.0650	0.0501	0.0251	0.0264	0.0235	0.0251	0.0285

Source: e-view output

VIII: Banks' Liquidity from 2009 to 2018

	2009	2010	2011	2012	2013	2014	2015	2016	2017	2018
Mean	0.4225	0.4617	0.4557	0.4443	0.3479	0.4526	0.4251	0.5124	0.5200	0.5204
Median	0.3570	0.3737	0.3560	0.3470	0.3100	0.3851	0.4125	0.4025	0.4125	0.4205
Standard Deviation	0.2090	0.2401	0.2349	0.2683	0.2951	0.2321	0.3254	0.3125	0.3251	0.3051
Range	0.6680	0.7440	0.6810	0.7854	0.4930	0.7245	0.6591	0.8251	0.8895	0.7985
Minimum	0.2720	0.3000	0.3060	0.3076	0.2470	0.3621	0.3025	0.4152	0.3984	0.4251
Maximum	0.9400	1.5440	1.6870	1.5930	0.5400	0.7521	0.6352	0.6584	0.7452	0.7251

Source: e-view output