

Financial Performance Analysis of Commercial Banks in Ethiopia (In Case Of Newly Established)

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Abstract

This study was focused on the area of financial performance analysis of commercial banks by using CAMEL approach in Ethiopian banking industry. The study was conducted on 8 commercial banks, by collecting data from their annual reports from year 2010 to 2018. The overall objective of this study was to analyze the effects of CAMEL variables, bank size on profitability measurements of Bank performance, to rank banks included under this study based on their financial performances and this study also aimed to investigate the interconnection between CAMEL ratios with profitability, late and early establishment of banks.. The study used quantitative approach from the three methods of conducting business and social research. This study used BP as dependent variable and bank size and liquidity as independent variable in addition to CAMEL variables. The researcher used panel data for CAMEL ratios. the part and descriptive part were analyzed by descriptive analysis.

Random effect regression analysis was also used to test the hypothesis and to determine the relative importance of each independent variable included in the CAMEL framework to explain dependent variables. During the ranking process by composite CAMEL place which were established later. The econometric analysis showed that, asset quality, management efficiency, liquidity, size of the bank and were significant variables to explain BP, unlike capital adequacy and earning quality which were not significant variable. Similarly, capital adequacy, asset quality, liquidity, and were Insignificant variables to explain BP, but earning quality of the bank were not significant variable to influence BP. In general for banks whose capital adequacy, asset quality, management efficiency and liquidity position were low as compared to peer banks shall inject some capital, improve their asset quality, control their cost and control their liquidity position respectively in order not lose public trust. In connection with their determinant factor to increase return on equity banks shall give special attentions to asset quality, management efficiency, liquidity. Banks shall also concentrate on increasing their total asset by mobilizing deposit and converting the deposit to loan, as total asset or size of the bank is a determinant factor to increase return on asset.

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LIST OF ACRONYMS

LB-Lion bank

ZB- Zemen bank

BIB-Birhan international bank

BIB-Buna international bank

CAMEL-Capital adequacy asset quality management efficiency earning quality liquidity

AB-Awash Bank

WB- Wegegen bank

NBE-National bank of Ethiopia

COB-Cooperative Bank Of Oromia

OIB-Oromia international bank

OLS-Ordinary least square

ROA-Return on asset

ROE-Return on equity

UFIRS-Uniform financial institution relating system

CHAPTER ONE

1.1 Background of the study

The stage of development of the banking industry is a good reflection of the development of the economy (Misra & Aspal, 2013). To sustain the development of the economy, the performance and health of banks has to be checked and evaluated periodically. There are different approaches used by different regulatory bodies. Among those approaches, most preferred parameters used by the regulators and different scholars are CAMEL (capital adequacy, asset quality, management quality, earnings and liquidity) rating criterion to assess and evaluate the performance and financial soundness of the activities of the bank. The CAMEL supervisory criterion in banking sector is a significant and considerable improvement over the earlier criterions in terms of frequency, check, spread over and concentration (Misra & Aspal, 2013; Basel, 2011).

Financial performance of banks refers to the capacity in generating sustainable profitability. Traditional method of applying financial ratios to evaluate bank's state of performance has been long practiced. CAMEL approach is used to evaluate financial performances of banks because; it benefits the banks management to evaluate their financial health and performance. CAMEL approach is significant tool to assess the relative financial strength of a bank and to suggest necessary measures to improve weaknesses of a bank.. 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.

Financial sectors play crucial role in economic growth and industrialization via channeling funds from surplus units- the depositors, to the deficit units, the borrowers, in the process gaining from the spread of the different interest charged. Their intermediation role can be said to be a catalyst for economic growth (Funso, Kolade and Ojo, 2012). The role and importance of banks of

modern economy is enormous (Bikker, 2010; Rashid, 2010; Altan , Beduk and Yusufazari, 2014) and its products/services which it provides growing in terms of depth, the number of institutions and the amount of money that managed by such institutions. The roles of such Banks are paramount in developing countries like Ethiopia where the financial market is underdeveloped and none existed due to such circumstance the study will conduct the research title of financial performance analysis of newly commercial banks in Ethiopia.

1.2 Statement of Problem

Performance of commercial banks, Return on Asset and Return on equity the major ones. VincentOkoth (2013), Murthy *and Sree*(2003); Alexandru et al., (2008).On the other hand as noted by Mustafa (2014), the two widely used profitability measurements in order to assess commercial banks" performance are return on total assets (ROA) and return on total equity (ROE). These measures have been used by analysis and bank regulators is for, assessing industry performance and, on other hand for, forecasting market structure trends which is used to predict bank failures and mergers and finally, for other purposes where a profitability measure is wanted Gilbert and Wheelock, (2007). The banking sector's performance is perceived as the models of economic activities of the economy. The stage of development of the banking industry is a good consideration of the development of the economy (Misra & Aspal, 2013).

The banking sector's performance is perceived as the replica of economic activities of the economy. The stage of development of the banking industry is a good reflection of the development of the economy (Misra & Aspal, 2013). Evaluation of financial performance of the banking sector is an effective measure and indicator to check the soundness of economic activities of a nation

Evaluation of financial performance of the banking sector is an effective measure and indicator to check the soundness of economic activities of a nation. The Innovators works by Anteneh, Arega and Yonas, (2011), evaluated the performance of selected commercial banks of Ethiopia

using a framework of CAMEL for the period of 2000. 2010. They found that independent variables in CAMEL framework have highly explained the performance variables i.e., return on assets and return on equity. The private banks were in a better position than the public banks in terms of asset quality, management quality, and earning

Mulualem (2015) on his evaluation of fourteen commercial banks using panel data and multiple regression for the period of 2010-2014 reveals that Capital adequacy, Asset Quality and Management efficiency have negative relation whereas earning and liquidity shows positive relationship with both profitability measures. The ranking result based Buna international bank ranked first by capital adequacy, asset quality and liquidity ratio while commercial bank ranked first by Management efficiency and Earning ratios respectively and finally Wegagen Bank was the first by the composite rate. However, the study conducted by Dakito (2015) using CAMEL approaches for the period 2000-2013 found that NIB's overall performance was good

Although various studies were made to explain bank performance using CAMEL parameters there are few studies were done in private commercial banks of Ethiopia various studies had used these profitability indicators by selecting both of them at once or either of the two separately as profitability measurements. To the best of researcher's knowledge, in our country these studies try to examine performance analysis of newly commercial banks in Ethiopia

1.3 OBJECTIVES OF THE STUDY

1.3.1. GENERAL OBJECTIVES

The main objective of this study to analyze the overall financial performance of newly established commercial banks in Ethiopia

1.3.2. Specific objectives

- To assess the effect of capital adequacy on banks' performance
- To measure the importance of asset quality on banks' performance
- To evaluate the impact of management quality on banks' performance
- To investigate the impact of earning quality on banks' performance;
- To examine the effect of liquidity on banks' performance
- To examine the effect of size on bank performance

1.4 Research Hypothesis

H1: Capital adequacy of the bank has in significantly affects banks performance.

H2: Asset quality of the bank has in significantly affects banks performance.

H3: management quality of the bank has significantly affects banks performance.

H4: Earning quality has in significantly affects banks performance

H5: Liquidity has in significantly affects banks performance.

H6: size has significantly affect bank performance

1.5 Significance of the Study

The finding of study was providing relevant information to newly commercial banks on the area of financial performance (weakness and strength) which needs improvement. Furthermore, it gives insight about the current situations and performance of banks to the regulatory body, shareholders, investors and managers. Besides, it will be used as a reference to researchers that want further investigation into the area of study

1.6 Scope of the Study

The scope of the study would be delimited to financial performance analyses of eight newly established commercial banks which include, Oromia international Banks, Buna international bank, lion Bank, cooperative bank of orormia, zemen Bank, Birhan international bank, wegegen bank and awash international bank. Because they have relatively resent this compared to others according to their establishment. For the purpose of this study, the financial performance of the banks will measure using six elements, which were capital adequacy, Asset quality, and management efficiency earning quality, size and liquidity.

1.7 Organization of the Study

This research proposal is organized in to five chapters. Chapter one states introduction that includes background of the study, statement of the problem, objective, significance, scope and limitation of the study. The second chapter presents review of related literature. The third chapter deals with research design and methodology which include research design, source of data and date collections, sampling method and method of data analysis techniques. The fourth chapter discusses data analysis and interpretation and the fifth chapters describes about conclusion and recommendation

CHAPTER TWO

REVIEW OF LITERATURE

2.1 THEORETICAL REVIEW

2.1.1. Bank performance:

The measurement of bank performance particularly commercial banks is well researched and has received increased attention over the past years (Seiford and Zhu, 1999). There have been a large number of empirical studies on commercial bank performance around the world (see Yeh, 1996; Webb, 2003; Lacewell, 2003; Halkos and Salamouris, 2004; Tarawneh, 2006). However, little has been done on bank performance in Ethiopia. However, with the deteriorating health of the banking institutions and the recent surge of bank failures as a result of the current global financial crisis, it is justified that bank performance receives increased investigation from both scholars and industry specialists. There are two broad approaches used to measure bank performance, the accounting approach, which makes use of financial ratios. Traditionally accounting methods primarily based on the use of financial ratios have been employed for assessing bank performance (Ncube, 2009).

Berger and Humphrey (1997) indicated that, “evaluating the performance of a financial institution can inform government policy by assessing the effects of deregulation, mergers and market structure on efficiency” (p175). Bank regulators screen banks by evaluating banks’ liquidity, solvency and overall performance to enable them to intervene when there is need and to gauge the potential for problems (Casuet al, 2006). On a micro-level, bank performance measurement can also help improve managerial performance by identifying best and worst practices associated with high and low measured efficiency.

The CAMEL approach of measuring financial performance was traced back its origin to 1979, when the Uniform Financial Institutions Rating System (UFIRS) was implemented in US banking institutions to introduce ratings for on-site examinations of banking institutions. Under

this system, each banking institutions subject to on-site examination is evaluated on the basis of five critical dimensions relating to the bank's operations & performance (Sahajwala & Van den Bergh, 2000). These are Capital, Asset Quality, Management, Earnings and Liquidity and are seen to reflect the financial performance, financial condition, operating soundness and regulatory compliance of the banking institution (Muluaem, 2015). Each of the component factors is rated on a scale of 1 (best) to 5 (worst). A composite rating is assigned as an abridgement of the component ratings and is taken as the prime indicator of a bank's current financial condition. The composite rating ranges between 1 (best) and 5(worst), and also involves a certain amount of subjectivity based on the examiners' overall assessment of the institution in view of the individual component assessments (Sahajwala & Van den Bergh,2000).

2.1.2. Components of CAMEL Model

CAMEL which stands for capital adequacy, asset quality, management efficiency, earning and Liquidity. Those individual components used to measure the operational performance and soundness of banks.

2.1.3Capital 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 Hacıoglu(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 significant level of capital adequacy. The following ratios are included under this category by various researchers for analysis purpose. 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 $[(\text{Investment in government securities inside the country} + \text{Investment in government securities outside the country}) / \text{Total Investment}] \times 100$. 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.

2.2.4. Asset quality

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 $\text{Net NPAs} = \text{Gross NPAs} - \text{Provisions on NPAs} + \text{Interest on suspense account}$. 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.

2.2.5. 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).[

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 put 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 measure the amount of expenditure incurred to generate a 1 birr income. The lower the ratio is better performance of the management.

2.2.6. 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 noncore activities like investments, treasury operations, corporate advisory services etc.(Jayanta 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.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 bank's 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.

2.2.7. 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). 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 a 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. (AshishGupta, 2015)

2.2 Empirical Literature

Mulualem Getahun(2015) the study was to analyze the financial performance of Ethiopian Commercial Banks using CAMEL approach and rank the banks based on their performance as well as to test the existence of the relationship between the selected CAMEL factor measurements with the profitability measures. The financial performance of Fourteen Commercial Banks examined by using panel data from year 2010 to year 2014. The study used quantitative research approach and secondary financial data are 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: Capital adequacy, Asset Quality, Management efficiency, Earning and Liquidity 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.

Melaku Alemu et .all (2016) analyze the overall performance of private commercial banks in Ethiopia using CAMEL rating approach. In this study, the financial performance of six sampled private banks was measured using the audited financial reports of 10 years period (2007-2016). Novel feature of this study was the inclusion of more explanatory variables, which were not used by the average researchers i.e. fixed asset to total assets, net profit per employee, total deposit per no. branches, total loan per no. of branches, measurements. The collected data were analyzed using both descriptive and inferential statistical tools. The descriptive statistics tools used to rate the overall performance of the bank, while panel regression model was used to measure the impact of CAMEL elements on bank performance i.e. ROA and ROE. As per the composite rating of CAMEL, the finding of the study revealed that NIB bank stood on the top followed by United bank, while Awash bank and Bank of Abyssinia stood the least. On both panel model estimations, LEVRAGE, NIEGE, NPEP, TDBRA, TLBRA, NIITA, and LATD explanatory variables were significant in determining the profitability indicators-ROA and ROE. No asset quality indicators were significant in determining the profitability ratios.

AntenehTeshome(2018) This study was focused on the area of financial performance analysis of commercial banks by using CAMEL approach in Ethiopian banking industry. The study was conducted on 11 commercial banks, by collecting data from their annual reports from year 2011 to 2016. The overall objective of this study was to analyze the effects of CAMEL variables, bank size and net interest margin on profitability measurements of return on asset and return on equity, to rank banks included under this study based on their financial performances and this study also aimed to investigate the interconnection between CAMEL ratios with profitability, late and early establishment of banks.

The study used quantitative approach from the three methods of conducting business and social research. This study used ROA and ROE as dependent variable and bank size and net interest margin as independent variable in addition to CAMEL variables. The researcher was used panel data for econometric analysis and descriptive statics for CAMEL ratios. Both the econometrics part and descriptive part were analyzed by descriptive analysis. Fixed effect regression analysis was also used to test the hypothesis and to determine the relative importance of each independent variable included in the CAMEL framework to explain dependent variables. During the ranking process by composite CAMEL, BUNA, ZB and ABAY was ranked from 1st to 3rd place which were established later

Muhabie Mekonnen(2015) This study is aimed at evaluating the financial performance of the banking sectors in Ethiopia with a special focus on Zemen Bank S.C. for the period 2009 to 2014. To meet the objective of the study, secondary sources of data, such as annual reports of the bank have been utilized. After collecting the necessary data, appropriate financial ratios and descriptive statistical techniques were employed for analyzing, interpreting and giving a condensed picture of the collected data. Accordingly, the results of the study revealed that the financial performance of the bank had kept on improving, if not fluctuating over time. Besides, the bank has performed well in profit earning and efficiently managing its assets for generating revenue, whereas there is a need for improvement in its much dependence on outside financing and the high proportion of non-performing loans.

The econometric analysis showed that, asset quality, management efficiency, liquidity, size of the bank and net interest margin were significant variables to explain ROA, unlike capital adequacy and earning quality which were not significant variable. Similarly, capital adequacy,

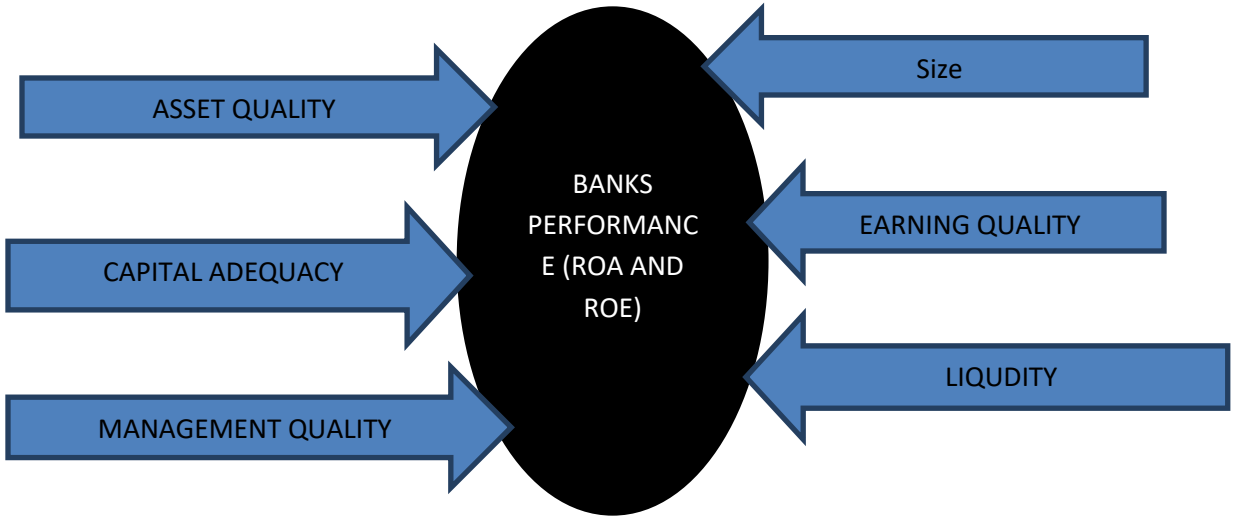
asset quality, management efficiency, liquidity, and net interest margin were significant variables to explain ROE, but earning quality and size of the bank were not significant variable to influence ROE.

2.3. Summary and Knowledge Gap

Although various studies were made to explain bank performance using capital adequacy, asset quality, management efficiency, earning quality and liquidity. Parameters there are few studies were done in private commercial banks of Ethiopia various studies had used these profitability indicators by selecting both of them at once or either of the two separately as profitability measurements. To the best of researcher's knowledge, in our country these study was be tried to examine performance analysis of newly commercial banks in Ethiopia

2.4 Conceptual Frame Work

The main objective of this study will examine the financial performance analysis of newly established commercial banks in Ethiopia. Based on the previous literature review parts bank performance were affected by Capital, Asset Quality, Management, Earnings and Liquidity, the black colour part represents the dependent variables (bank performance)will be used in this study. The main objective of this conceptual framework will be to clear for the user or any other reader easily to understand the research idea. Generally; this conceptual frame work model to summarize the main focus and scope of this study in terms of variables.



CHAPTER THREE

RESEARCH METHODOLOGY

3.1 Introduction

The purpose of this chapter is to present the underlying principles of research methodology and the choice of the appropriate research method for the study. The chapter is arranged as follows: section Introduction, research design, Research approach and section Data type and sources, population and sampling determination, data collection model specification and finally, the description of study variables and their expected sign were presented in this chapter.

3.2 Research Design

Research design is a master plan specifying the methods and procedures for collecting and analyzing the required data. The choice of research design depends on objectives that the researchers want to achieve its objective (John, 2007). Since this study would be designed to examine the relationships between financial performance and its analyses. A logical reasoning either deductive or inductive is required. Deductive reasoning starts from laws or principles and generalizes to particular instance whereas inductive reasoning starts from observed data and develops a generalization from facts to theory. Besides, deductive reasoning is applicable for quantitative research whereas inductive reasoning is for qualitative research. Thus, due to quantitative nature of data, the researcher was use deductive reasoning to examine the cause and effect of relationships between the dependent and independent variables in this study. As noted by Kothari (2004), explanatory research design examines the cause and effect relationships between dependent and independent variables Therefore, since this study would be examining the cause and effect relationships between financial performance and the ratio analyses; it is an explanatory research design. The objective to achieve in the study is a base for determining the research approach for the study. In case, if the problem identified is factors affecting the outcome having numeric value, it is quantitative approach (Creswell, 2003). Therefore; this research would be employed quantitative research approach.

3.2.1 Research Approaches

As noted in Creswell (2009) in terms of investigative study there are three familiar types of research approaches to business and social research namely, quantitative, qualitative and mixed methods approach. Therefore, the following discussion briefly presents the basic nature of quantitative, qualitative and mixed research approaches along with their respective merits and demerits.

Quantitative research is a means for testing objective theories by examining the relationship among variables (Creswell 2009, p.4). In quantitative research approach there are two strategies of inquiries namely, survey design and experimental design. The chief advantage of this approach is that numbers are easy to work with, data are readily collected, coded, summarized and analyzed (Dunn 1999, p. 37). Further quantitative research approach has the advantage of being able to make generalizations, for a broader population, based on findings from the sample. Apart from its advantages, as noted by Dunn (1999) quantitative research approach has the following disadvantages. For example, the sample selected may not represent the total population and the researchers know much about the collective or average experience of research participants, but not their individual experiences (Dunn 1999).

Qualitative research approach is one in which the investigator often makes knowledge claims based primarily on the multiple meanings of individual experiences, socially and historically constructed meanings, participation in issues, collaboration or change oriented with an intent of developing a theory or pattern (Creswell 2003, p. 18). As noted in Sarantakos (2005, p. 45 cited in Yesegat 2009, p. 73) qualitative research approach uses strategies of inquiry such as narratives, ethnographies, grounded theory studies, or case studies. The key advantage of qualitative research design is that it discloses the richness of human experience (Lincoln and Guba 1985, cited in Dunn, 1999, p.37). Moreover, qualitative research design has advantages like flexibility and emergent without being constrained by standardized procedures (Liamputtong and

Ezzy 2005, p. 204, cited in Yesegat 2009, p. 74). A part from the above mentioned advantages, qualitative research design has also its own weaknesses. As noted in Dunn (1999) the demerits of this approach includes; absence of quick response, difficulty, inefficiently, and lack of generalization among others.

Mixed research is an approach to inquiry that combines or associates both qualitative and quantitative forms (Creswell, 2009). As a major advantage, when the investigator uses this approach he can learn more about the research problem (Leedy and Ormrod, 2005 cited in Semu 2010, p. 44). In connection to this, Greene et al. (1989, p. 256, cited in yesegat, 2009, p. 75) also emphasized that as all methods have inherent biases and limitations, so use of only one method to assess a given phenomenon was inevitably yield biased and limited results. Besides, as an additional merit, the approach is not limited to one method or the researcher is not committed to only one method which means the investigator is flexible.

3.3 Data type and sources

The data types would be secondary data and analysis that are the financial statements of the banks that came from the National banks of Ethiopia and this study would be used panel data. The researcher prefers to use panel data since panel data can take heterogeneity among different units into account over time by allowing for individual-specific variables. Besides, by combining time series and cross-section observations, it gives more informative data. Furthermore, panel data can better detect and measure effects that simply cannot be observed in pure cross-section or pure time series data. The researcher was used secondary sources of data that is panel in nature. A secondary source of data would be preferred by the researcher since it is less expensive in terms of time and money while collecting. And also, it affords an opportunity to collect high quality data. Secondary data may either be published or unpublished data. Those secondary data can obtain from the audited annual financial statements of the concerned commercial banks in Ethiopia (NBE).

3.4 Population and Sampling determination

The total target population of the study is all commercial banks in Ethiopia and currently, the country has seventeen commercial banks in Ethiopia. Excluding development bank and also

construction and businesses banks merge to commercial bank of Ethiopia. Among these the researcher wants to select some commercial banks which have relatively recent in establishment. Sample design deals with sample frame, sample size and sampling technique. Sampling is a technique of selecting a suitable sample for the purpose determining parameters of the whole population. There are seventeen banks in Ethiopia. From These wegagen bank (WB), awash bank (AW), zemen bank (ZB), Birhan international bank (BIB), LION bank (LB), Cooperative Bank Of Oromia (CBO), Buna international bank (BIB) and Oromia international bank (OIB). Those Commercial banks could operate after 2007/08 having auditing financial statements for consecutively Nine years working experience.

3.5 Data Collection Instruments

Quantitative data collection methods were entered on the quantification of relationships between variables. The current study was used only secondary data. In this study the researcher use ratio for commercial banks that operated during the 2010 to 2018 period. The data set bank specific variables asset quality, capital adequacy, management quality, earning quality and liquidity. The bank specific data was obtained from the audited financial statement of newly established commercial Banks. Besides, related books, journals, articles and various manuals also use as sources of Secondary data.

3.6. Data Processing and Analysis

After the collection of data, the data was analyzed and process in order to comprehend the qualitative. The quantitative data was giving us the availability of ratio which have significant impact on the selected newly commercial banks. Data to look for patterns and relationship between and/or among data groups by using descriptive and inferential (statistical) analysis. E-view was to analyze the data is obtained from secondary sources. Specifically, descriptive statistics (mean standard deviation and chart) and inferential statistics (correlation and regression) was taken from this tool

3.7 Variable Description

3.7.1 Dependent variable

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 total equity (ROE). 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 used the two dependent variables, namely return on asset (ROA) and return on equity (ROE) for this particular study. 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. Return on Equity measures the profit earned per birr of capital invested. ROE is a financial ratio that refers to how much profit a company earned compared to the total amount of shareholder equity invested or found on the balance sheet or it is what the shareholders look in return for their investment (Vincent Okoth 2013). It is computed as the ratio of net income after tax to total equity capital of the bank.

3.7.2 Independent variable

This study was used six independent variables, which includes capital adequacy, asset quality, and management efficiency, earning quality, size and liquidity.

3.8. Model Specification and variables

The aim of this study was to examine the financial performance and ratio analyses. of newly established commercial Accordingly, this study examined the performance of commercial banks in Ethiopia by adopting the ordinary Least squares (OLS) regression model which is to test the hypothesis and to realize the relationship between the dependent variable and independent variable. The general formula of multivariate regression equations is adopted:

$$Y_{it} = \beta_0 + \beta X_{it} + \varepsilon_{it}$$

Where: -

Y_{it} is the dependent variable for firm 'I' in year 't', β_0 is the constant term, β is the coefficient of the independent variables of the study, X_{it} is the independent variable for firm 'i' in year 't' and ε_{it} the normal error term.

Thus, this study is based on the conceptual model adopted from Farad and Taqadus (2013). Accordingly, the estimated models used in this study are modified and presented as follow;

$$FP_{it} = \beta_0 + \beta_1(CA)_{it} + \beta_2(AQ)_{it} + \beta_3(ME)_{it} + \beta_4(EQ)_{it} + \beta_5(LQ)_{it} + \beta_6(BS)_{it}$$

Where; β_0 is an intercept; $\beta_1, \beta_2, \beta_3, \beta_4, \beta_5$ and β_6 represent estimated coefficient for specific bank i at time t,

BP; bank performance

CA; capital adequacy

AQ; asset quality

ME; management efficiency

EQ; earning quality

LQ; liquidity

BS; Bank size

CHAPTER FOUR

ANALYSIS AND DISCUSSION

4.1 Descriptive analysis

These sections would analyses about various Descriptive outputs of both dependent variables of bank performance and the six independent variables. These would include descriptive statistics, Tests of multicollinearity, tests of auto correlation, tests of normality, and tests of hetroscaeastcity.

4.1.1. Descriptive statistics

Table 1: Summary of Descriptive Statistics for Dependent and Independent variables

	BP	AQ	CA	ER	ME	SZ	LR
Mean	3.094915	0.053323	0.152817	0.107982	1.149682	4.159914	0.603130
Median	3.069056	0.005919	0.148759	0.080720	0.177508	3.998556	0.612404
Maximum	6.717239	1.108045	0.352212	1.013945	37.43156	6.717239	0.891170
Minimum	-3.164038	-0.002745	0.079487	0.021945	0.013351	2.579229	0.404914
Std. Dev.	1.312018	0.167864	0.044383	0.148051	4.666958	1.072416	0.091570
Observations	72	72	72	72	72	72	72

Source: e-view output

The above displayed table presented to describe mean, median, maximum, minimum and standard deviation values for both dependent and independent variables. As exhibited from the table bank performance have a mean value of 300.09% and median values of 300.07% and maximum values of 672% and which was registered by financial performance of commercial bank of Ethiopia on 2018, and the minimum values of 316.4% and were recorded by financial performance of commercial bank in Ethiopia and also have a standard deviation values of 131.2% and 72 observations respectively.

The best capital adequacy ratio of financial performance of commercial bank of Ethiopia in leads capital adequacy to have maximum values of 35.2% and the lowest capital adequacy of CBE on 2016 obliged capital adequacy to have minimum values of 7.9%. Capital adequacy ratio also has mean values of 15.3%, median values of 114.9% and standard deviation values of 4.43%. asset quality to bear maximum values of 110.8% and have a minimum value of 0.27%..5.33%, 0.6% and 16.78% were mean, median and standard deviation values of asset quality.

Best cost sensitiveness of commercial banks of Ethiopia on contribute management efficacy to have minimum values of 1.34% and due to loss incurred by Bank performances of commercial bank, it was obliged to have a maximum values of 37.43%. 114.9%, 17.8% and 4.66% were mean, median and standard deviation values for management efficiency. Earning quality have registered maximum, mean, median and standard deviation values 114%, 10.8%, 8.7% and 14.80% respectively. And it has also minimum values of 2.3% because of profit decline of financial performances of commercial bank of Ethiopian. In connection with highest liquidity position of , liquidity has a minimum value of 89% and due to lowest position of commercial bank of Ethiopia on it also shows a minimum liquidity values of 40.5%. As liquidity was represented by the ratio of liquid asset to total deposit, it has also mean, median and standard deviation values of 60.3%, 61.2% and 9.157% respectively. As bank size was represented by total asset and as the very highest total asset of the banking industry was owned by the great government bank, commercial banks of Ethiopia, the size shows the mean, median, maximum and standard deviation values of 416%, 399% , 672% and 107.24% respectively. Lowest total asset of commercial bank of Ethiopia obliged size to have a minimum value of 257%.

4.1.2. Tests of multicollinearity

Table 2: Tests of multicollinearity

	AQ	CA	ER	ME	SZ	LR
AQ	1					
CA	-0.246156	1				

ER	-0.042271	0.112615	1			
ME	-0.051861	0.518458	-0.080564	1		
SZ	-0.013139	-0.345194	-0.232002	-0.224454	1	
LR	-0.186625	0.227700	-0.061905	0.090301	-0.125452	1.000000

In linear regression models we need to check if a relationship exists among the explanatory variables or not. If they correlate too much, then there is a problem of multicollinearity, which means the explanatory variables partly explain each other. According to Cooper & Schindler

(2009) and Masher (2007) as cited on mulualem (2015), they suggested that a correlation coefficient below 0.8 between explanatory variables should not be considered as sign of multicollinearity, but if it is more than 0.8, it should be corrected, because it is a sign of multicollinearity problem. All correlation results are below 0.75, which indicates that mulicolnarity is not a problem for this study.

4.1.3. Tests of auto correlation

Table 3: Derbin-Watson test of Autocorrelation or Serial-correlation

	Positive Autocorrelation	No negative Inconclusive	autocorrelation	Inconclusive	Autocorrelation	
	0	dL	du	2	4-du	4-dL
1		1.313	1.65		2.35	2.69

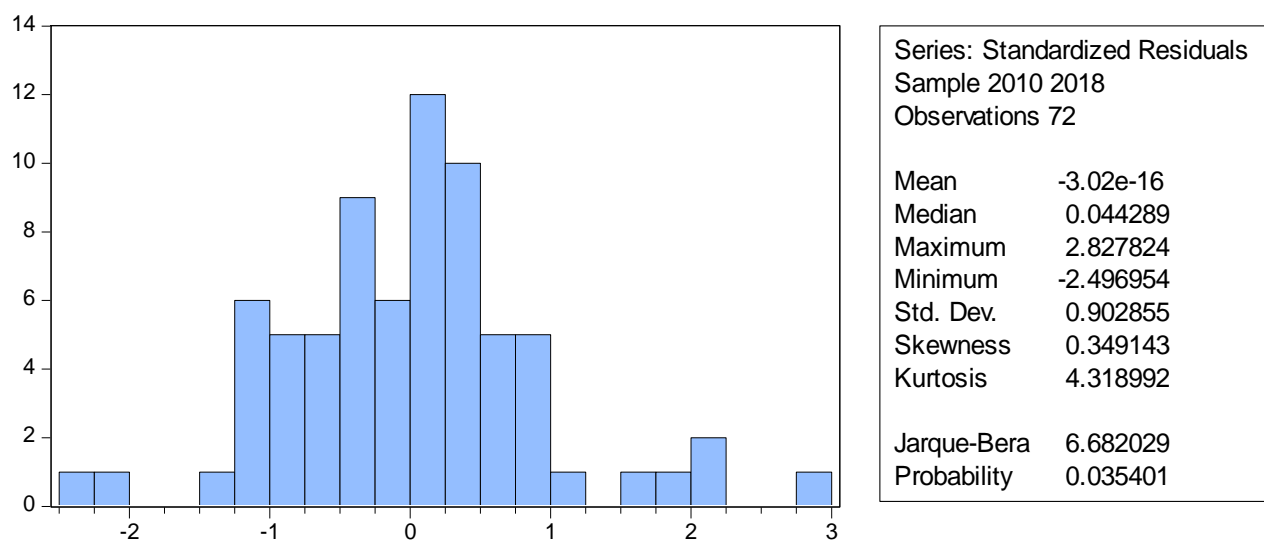
Therefore, based on the DW criteria, figure 2 above, for 72 observations with six explanatory variables at 1% level of significance, the dL and dU values are 1.313 and 1.65 respectively. The DW value for 72 observations is 1.65 (see, Annex 1). This means that there is no first order

autocorrelation in the regression model since the DW value (1.65) lies within the range of du (1.65) and 2.

4.1.4 Test of Normality Assumption

Normal distribution of the variables is one of the classical linear regression model (CLRM) requirement or assumptions that have to be met up. This means that errors terms are normally distributed, and that a plot of the values of the residuals will approximate a normal distribution curve. And, if the error terms not normally distributed, the linear relationships and significance test can be distorted (Osborne & Waters, 2002). The researcher can test this assumption through several pieces of information, such as Skewness, Kurtosis, and Jarque-Bera. According to Chris Brooks (2008 p 162-163), one of the most commonly applied tests for normality is the BeraJarque (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 to not to reject the null of normality at the 5% level. We can say that the residuals are normally distributed because; the probability value of Jarque-Bera shows a value of 6.6 for bank performance and 0.064 for bank performance which is much more than 0.05 as displayed below.

Table 4: tests of normality



4.1.5. Tests of Heteroscedasticity

Heteroscedasticity occurs when the variance of the residuals from a model is not constant. If residuals have constant variance, we call residuals are homoscedastic. To check these I have used Breusch-Pagan-Godfrey test and found that variance of residuals are homoscedastic, due to the Prob. Chi-Square (27) is greater than 0.05 which were 0.2162 for Bank performance.

Table Heteroskedasticity Test: White

F-statistic	1.336361	Prob. F(27,44)	0.1925
Obs*R-squared	32.44042	Prob. Chi-Square(27)	0.2162
Scaled explained SS	43.83978	Prob. Chi-Square(27)	0.0215

Source: e-view output

4.1.6 Choosing the model: Random effect VS Fixed effect.

According to Gujarati (2004), if the number of time series data is greater than the number of cross-sectional units, there is likely little difference in the values of the parameters estimated by fixed effect model and random effect model. Hence the choice here is the Random effect modelsince the number of time series (i.e., nine years) is greater than the number of cross-section units (i.e., eight commercial banks).

Correlated Random Effects - Hausman Test

Equation: Untitled

Test cross-section random effects

Test Summary	Chi-Sq. Statistic	Chi-Sq. d.f.	Prob.
Cross-section random	0.888199	6	0.9895

According to Husman test the number of probability is more than 0.05.Hence the choice here random effect model.

Model Specification

$$BP=1.5+AQ-0.914+CQ6.2+ER0.21+LR-1.65+ME-0.176+BS0.45$$

Random effect

Dependent Variable: BP

Method: Panel EGLS (Cross-section random effects)

Date: 01/04/21 Time: 09:48

Sample: 2010 2018

Periods included: 9

Cross-sections included: 8

Total panel (balanced) observations: 72

Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.497426	1.198141	1.249791	0.2159
AQ	-0.914566	0.778527	-1.174739	0.2444
CA	6.179458	3.613659	1.710028	0.0920
ER	0.210744	0.877841	0.240070	0.8110
LR	-1.646610	1.365957	-1.205463	0.2324
ME	-0.176012	0.030267	-5.815409	0.0000
SZ	0.451001	0.137389	3.282644	0.0017

Effects Specification

	S.D.	Rho
Cross-section random	0.199762	0.0400
Idiosyncratic random	0.979044	0.9600

Weighted Statistics

R-squared	0.503252	Mean dependent var	2.639657
Adjusted R-squared	0.457398	S.D. dependent var	1.275779
S.E. of regression	0.939759	Sum squared resid	57.40451
F-statistic	10.97516	Durbin-Watson stat	1.499363
Prob(F-statistic)	0.000000		

The regression table of Bank performance, table demonstrates the relationship between dependent variable (BP) and independent variables. As it is seen from the table r-square and the adjusted r-square values were 50% and 46% respectively, which means 50% variation on Bank performance were explained by the under listed independent variables CA, AQ, ME, EQ, LIQ and size collectively. The values of adjusted r-square were used because, adjusted r-square ensures that the addition of more independent variables doesn't produce misleading high values of r-square and it is also a modified version of r-square that has been adjusted for the number of predictors in the model.

The independent variables AQ, CQ, ER, LR are insignificant at 5% significant level because their probability value were greater than 0.05: ME and SIZE was also another significant variable to measure Bank performance at 5% significance level due to its probability value of 0.0000 and 0.0017 respectively is significant variable to explain Bank performance.

The coefficient of independent variables tells us their relationship with BP. Accordingly, AQ, ME, LR seems to have an inverse relationship with BP due to its – sign, but they have direct relationship with , because their reduction of values are a good signal for increasing Bank performance. ME and SIZE also have a direct relationship with dependent variable. If asset quality and management efficiency decreased (best performance) by 5%, Bank performance would increase by -0.915% and -0.176% respectively and vice versa. If Liquidity, size of bank (total asset) increased by the respective units, BP would also increase by -1.65%, and 0.45% respectively and vice versa. Capital adequacy and earning quality do not have strong relationship with Bank performance their inverse relationship.

CHAPTER FIVE

CONCLUSION AND RECOMMENDATION

5.1. Conclusion

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. Based on the findings of The CAMELS model rating reveals are one of the rating systems applied for regulatory policy and to rank the overall performances of commercial banks. CAMEL rating applied in this study was, to rank banks based on their performance and to know the relationship between CAMEL variables and profitability measurements of banks. The empirical CAMEL Model findings regarding the element of the model and profitability as measured by bank performance.

As it is observed from composite capital adequacy of financial performances of commercial banks, In Ethiopian and do not have negative effect on composite capital adequacy ratio. We can also say that, the profit and early establishment of commercial banks does not have strong relationship with composite capital adequacy of commercial banks, because from top five profitable and early established banks only in place by composite capital adequacy measure. The composite asset quality of commercial banks shows that, it does have negative relationship with late establishment of commercial banks; do not have strong relationship with early establishment and profit of banks.

Composite management ratios do not have strong relationship with profit and early establishment of commercial banks. As observed from composite earning quality table, it has moderate relationship with profit, early and late establishment of banks, because by this ratio bank performance of all commercial bank of Ethiopia incase of newly established. Where place which selected by top profitability, early and late formation criterion for selection banks. Banks included by late formation criterion are most liquid than early established ones because of the score of BIB and ZB, and also highest profitable banks had moderate liquidity position. And finally late establishment has strong positive relationship with composite CAMEL ratios of commercial banks rather

than early formation and profit of the respective selected banks, because from eight banks included by late formation criterion, eight banks took the position from by composite CAMEL ratios.

Management efficiency and size of the bank were the major significant variables to affect performance of commercial banks by return on asset measure at 1% significant level. Liquidity, capital adequacy, earning quality and asset quality has insignificant effect on bank performance at 5% significant level, whereas earning quality does not have significant impact on profitability measurement of bank performance. Asset quality and capital adequacy looks to have an inverse relationship with bank performance. In connection with their negative sign, but they have direct relationship with them. Size of the bank and management efficiency has direct relationship with bank performance of analysis in commercial bank in Ethiopia. Capital adequacy, asset quality, earning ratio and liquidity were the most insignificant variables to affect BP at 5% significant level as compared to significant variable size of the bank and management efficiency despite their inverse relationship. Capital adequacy, asset quality, liquidity ratio and earnings ratio depend on the P-V of the independent variable with compared to dependent variable to perform the bank analysis have an inverse relationship with BP.

5.3. Recommendations

Based on the findings of the study the following recommendations were forwarded. The study revealed asset quality ratio, management efficiency, Earning ability, liquidity and size are the key driver of bank performance of commercial banks in Ethiopia. CAMEL is commonly used method for the evaluation of performance and ranking of banks. Based on the findings discussed above, I was forward the following recommendation for the concerned banks management.

- ✓ As asset quality, management efficiency, liquidity are determinant factors to increase bank performance, shall give special attention.
- ✓ Since total asset or size of the bank is a determinant factor to increase bank performance, banks shall concentrate on increasing their total asset by mobilizing deposit and converting the deposit to loan.

- ✓ The study revealed that asset quality ratios, Management efficiency, Earning ability and Liquidity were the key drivers on profitability of commercial banks in Ethiopia.
- ✓ Commercial Bank of Ethiopia should accompany its capital growth by growth in bank performance to analysis the profitability of the banks. This may be done by increasing their investment rate; i.e. decreasing the dividend payout ratio. Much emphasis should be put on improving the BP rather than increasing leverage as a means of improving shareholder return.

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Appendix 1 Random effect

Dependent Variable: BP
 Method: Panel EGLS (Cross-section random effects)
 Date: 01/04/21 Time: 09:48
 Sample: 2010 2018
 Periods included: 9
 Cross-sections included: 8
 Total panel (balanced) observations: 72
 Swamy and Arora estimator of component variances

Variable	Coefficient	Std. Error	t-Statistic	Prob.
C	1.497426	1.198141	1.249791	0.2159
AQ	-0.914566	0.778527	-1.174739	0.2444
CA	6.179458	3.613659	1.710028	0.0920

ER	0.210744	0.877841	0.240070	0.8110
LR	-1.646610	1.365957	-1.205463	0.2324
ME	-0.176012	0.030267	-5.815409	0.0000
SZ	0.451001	0.137389	3.282644	0.0017

Effects Specification

	S.D.	Rho
Cross-section random	0.199762	0.0400
Idiosyncratic random	0.979044	0.9600

Weighted Statistics

R-squared	0.503252	Mean dependent var	2.639657
Adjusted R-squared	0.457398	S.D. dependent var	1.275779
S.E. of regression	0.939759	Sum squared resid	57.40451
F-statistic	10.97516	Durbin-Watson stat	1.499363
Prob(F-statistic)	0.000000		

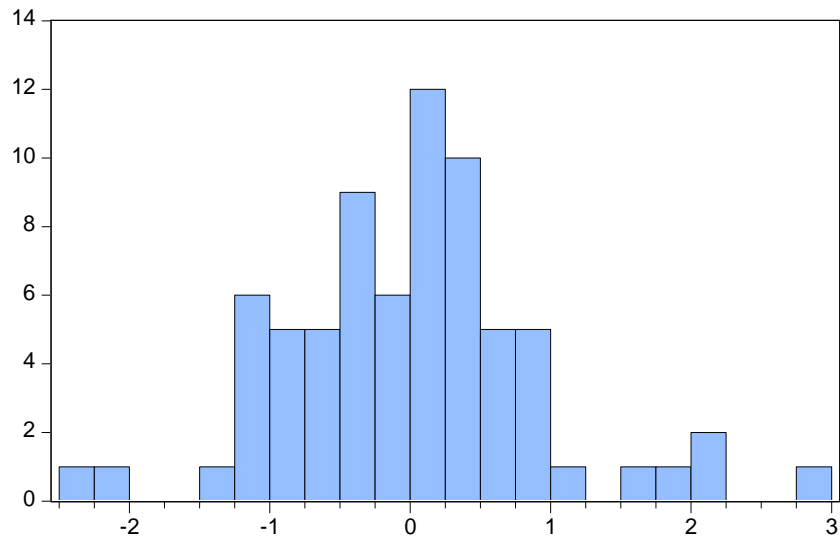
Appendix 2

4.7.2. Tests of multicollinearity

	AQ	CA	ER	ME	SZ	LR
AQ	1					
CA	-0.246156	1				
ER	-0.042271	0.112615	1			
ME	-0.051861	0.518458	-0.080564	1		
SZ	-0.013139	-0.345194	-0.232002	-0.224454	1	
LR	-0.186625	0.227700	-0.061905	0.090301	-0.125452	1.000000

Appendix 3

Table 31 tests of normality



Series: Standardized Residuals	
Sample 2010 2018	
Observations 72	
Mean	-3.02e-16
Median	0.044289
Maximum	2.827824
Minimum	-2.496954
Std. Dev.	0.902855
Skewness	0.349143
Kurtosis	4.318992
Jarque-Bera	6.682029
Probability	0.035401

Appendix 4

Table Heteroskedasticity Test: White

F-statistic	1.336361	Prob. F(27,44)	0.1925
Obs*R-squared	32.44042	Prob. Chi-Square(27)	0.2162
Scaled explained SS	43.83978	Prob. Chi-Square(27)	0.0215

Source: e-view output