College of Business and Economics

Comparative Analysis of Financial Performance of State-owned and Privately-Owned Commercial Banks in Ethiopia

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Statement of Declaration

This thesis, titled "Comparative Analysis of Financial Performance of State-owned and Privately-Owned Commercial Banks in Ethiopia" is my own original work, and all sources and works of others used as references have been appropriately acknowledged. No university or college has accepted this thesis for a degree, diploma, or other academic distinction.

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Statement of Certification

This is to certify that Agegnehu Sisay Checolle completed a thesis on the title of "Comparative Analysis of Financial Performance of State-owned and Privately-Owned Commercial Banks in Ethiopia" in partial fulfilment of the requirement for the degree of Master of Business Administration-Finance (MBA-Finance) in accordance with university regulations and meets the accepted standards in terms of originality and quality.

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External Examiner _____ Signature_____ Date _____

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Acronyms

AB: Abay Bank

AWB: Awash International Bank,

BOA: Bank of Abyssinia

BrB: Berhan International Bank

BuB: Bunna International Ban

CAR: Capacity Adequacy Ratio

CBE: Commercial Bank of Ethiopia,

CBO: Cooperative Bank of Oromia

DB: Dashen Bank,

EQ: Earning Quality

HB: Hibret Bank

LATA: Liquid Asset to Total Asset Ratio

LIB: Lion International Bank,

LR: Liquidity Ratio

MGTQ: Management Quality

NIB: Nib International Bank,

NIM: Net Interest Margin

NPL: Non Performing Loan

OIB: Oromia International Bank,

PB's: Private Banks

POB’s: Private-Owned Banks

ROA: Return on Asset

ROE: Return on Equity

SO: State-Owned

WB: Wegagen Bank (WB),

ZB: Zemen Bank

Abstract

The main objective of this research is to conduct a comparative analysis of the financial performance of Ethiopian state-owned and private-owned commercial banks from July 2013/14 to June 2019/20. The relevant information was gathered from the banks' audited financial accounts. As a result, the financial performance of Ethiopia's state-owned commercial bank was compared to that of privately owned commercial banks using the CAMEL model's financial performance metrics. The study's population consists of one state-owned and sixteen privately held commercial banks in Ethiopia that are currently operational in 2020. Purposive sampling approaches were used in this research. As a result, the study includes one state-owned commercial bank and thirteen privately held commercial banks. This research study adopts two methods of research design in order to describe the entire financial performance of commercial banks in Ethiopia such as analytical as well as descriptive study. A quantitative research approach has been used to evaluate the financial performance of the two types of banks. The two-sample (independent groups) t-test and Mann-Whitney U test are used to test and assess the two independent samples differ statistically. As per the study from eight financial performance indicators CAR, NPL & EQ ratios didn't result in statistically significant differences between the subsectors during the studied periods. The remaining financial performance indicators i.e. ROA, ROE, NIM, MAGTQ, and LR result in statistically significant differences in their performance between the state-owned commercial bank and private commercial banks. Therefore it is recommended that Management of State-Owned bank should work on their Asset Management and its utilization which will enhance banks profitability with its total assets. In addition, the state-Owned bank management should further identify the reason why the net interest margin of the bank was lower than of the average industry.

Key words; State bank, private banks, Camel model, Purposive sampling, t-test

Chapter One

Introduction

1.1 Back ground of the study

Financial institutions are critical to the growth and development of a country's economy. The banking sector offers a diverse range of financial services and plays a vital and fundamental role in the economy and society. Commercial banks, in particular, play an important role in the mobilization and distribution of economic resources in countries, as they make the community's surplus of deposits and investments useful by lending it to people for various investment reasons. They are the most important players in Ethiopia's financial sector, undertaking financial intermediation (Saeid Mohammed, 2018).

The total impact of the financial sector on the economy is to ensure long-term growth. It facilitates the mobilization of savings and the distribution of funds to productive areas. As a result, financial institutions are critical for growth and capital allocation efficiency (Levine, 2005).

The banking industry is vital to modern trade and economic development since it provides a major source of funding. Bank's success and growth are largely determined by their competitive marketing strategy. The performance of commercial banks is scrutinized for a variety of reasons. By monitoring the flow of resources among the units, commercial banks play an important role in ensuring the nation's stability. A country's industrial, agricultural, and commercial development would be impossible without a well-functioning financial system. Furthermore, commercial banks review their own performance throughout time in order to determine the results of earlier management actions and make changes as needed. Existing flaws may go unreported if performance is not consistently monitored, resulting in eventual financial collapse (doctor econ, 2001).

According to Babar and Zeb (2011), the banking industry is an important pillar of the financial sector of an economy; its performance measurement cannot be neglected. It has

been observed based on the standing of those countries that experienced a crisis in their banking system that such instability can cause irreparable damage to the country's economy (Ghasempour& Salami, 2016). Firms with better performance are better able to resist negative shocks and contribute to the stability of the financial system (Athanasoglou et al, 2008)

Zeitun and Tian (2007) cited by Bewket (2011) Ownership structure has long been considered as an important variable explaining firm performance. The common argument is that performance is differ in the private and state-owned firms; because ownership objectives, management incentives, and monitoring arrangements from each other.

According to Rostami (2015), referenced by Ashenafi (2020), the CAMEL model is a very useful, efficient, and accurate instrument that can be used to evaluate performance in banking industries as well as predict future and relative risk. The general objective of the study is to compare the financial performance of publicly and privately held commercial banks in Ethiopia over a seven-year period, beginning in 2013/14 and ending in 2019/20. The CAMEL model, which was adopted by FFIEC (The Federal Financial Institutions Examination Council, a formal US government interagency body composed of five banking regulators) in November 1979, has used to evaluate the financial performance of these banks with the goal of determining the importance of their role in the growth and development of the economy of Ethiopia.

Banks, insurance firms, and microfinance institutions are the main financial institutions in Ethiopia. Banks define Ethiopia's financial system, with banks accounting for around 88.33% of the financial sector's total capital in 2018. By the end of June 2018, the banking industry's total capital had reached about Birr 85.5 billion (USD2.98 billion), according to the National Bank of Ethiopia (NBE, 2018)

Ethiopia has a mixed banking system with both public and private banks. There are 23 banks, including the state-owned bank, the Commercial Bank of Ethiopia (CBE) NBE (2022). Comparing Commercial bank of Ethiopia and Private Banks (16 private banks inclusive of 13 the studied banks & Enat, Addis and Debu global bank), Private Banks held

59% of total capital, while CBE controlled 41% of their total capital (Financial statements of banks, June 2020).

In 2017/18, private banks accounted for 68.8% of the overall branch network (NBE, 2018). There are 4757 branch banks functioning across the country. Addis Ababa has 35.3 percent of the total number of bank branches. In 2017/18, the bank branch to population ratio was 1: 20286 people (NBE, 2018). This demonstrates that Ethiopia is a bank-underserved country with limited reach. The banking system received Birr 111.6 billion in loans during this time period. Private banks collected Birr 65.6 billion (58.8%) of the overall loan collection, with public banks collecting the rest. However, at the end of June 2018, total outstanding credit in the banking sector (excluding credit to the central government, which accounts for around 452 billion or 57 percent of total credit) grew to Birr 394.554 billion. The total deposit in all commercial banks reached 816.2 billion dollars in February 2019 (Ethiopian reporter, April 21, 2019), with Ethiopian Commercial Bank accounting for 60.8 percent of the total.

The list of commercial banks operating in Ethiopia in the year 2020 are Abay Bank, Addis International Bank, Awash International Bank, Bank of Abyssinia, Birhan International Bank, Bunna International Bank, Commercial Bank of Ethiopia, Cooperative Bank of Oromia, Dashen Bank, Debub Global Bank, Development Bank of Ethiopia, Lion International Bank, Enat Bank, Nib International Bank, Oromia International Bank, United Bank, Wegagen Bank (WB), Zemen Bank, ZamZam Bank, Goh Betoch Bank, Hijira Bank and Silinqee Bank S.C (www.nbe.gov.et)

1.2 Statements of the problem

Bank financial performance attracts a lot of attention in the finance literature because banks play such an essential role in the economy. Profitability, concentration, efficiency, and productivity are all metrics used to assess a bank's financial performance. Firms that perform well are better able to absorb negative shocks and contribute to the stability of the financial system. As per Athanasoglou et al (2008), the banking sector's financial performance has become one of the hot topics in the financial climate. The banking business is so important to a country's financial system and to the financial institution's competitiveness.

It is logical to assume that a bank's performance is influenced by its ownership structure or source of capital. Bonin et al. (2004), for example, show that international banks in transition countries are more cost-effective than domestic banks. Furthermore, foreign ownership provides access to cheaper foreign resources as well as the capacity to sell these resources in local markets at a lower cost than its domestic competitors. This increases the competitiveness of international banks, resulting in more efficient and effective operations.

Johan and Hui (2012) used the CAMEL model to assess the financial performance of different ownership structured commercial banks in Nepal. For the years 2005 to 2010, they studied eighteen commercial banks. The findings revealed that state banks are much less efficient than their private-sector counterparts. In Contrary, Ramachandran (2012) looked into the financial performance of both private and public sector banks in India. The study's goal is to classify banks based on their financial features in order to examine their financial performance in India's banking sector. According to the report, State banks performed significantly better than private sector banks during the period.

Ethiopia has no foreign banks; hence the financial markets are dominated by privately owned commercial and state-owned institutions. As a result, Ethiopia's banking sector is currently characterized by low competition and can be characterized by its market concentration towards large government commercial banks and an ownership structure that is undiversified (Lelissa, 2007). As per (Kefela, 2008) cited by (Wesen & Beyene, 2018) stated that non-competitive market structure exists in the Ethiopian banking industry, due to the nature of the country’s financial sector in which there are no foreign banks.

Deepak and Abebaw (2011) and Wesen and Beyene (2018) conclude private banks performed by far better than state owned bank in Ethiopia. On the contrary, Yaregal 2011, Abeneazer (2016), and Yidersal (2017) stated the performance of state owned-banks is superior to private banks in Ethiopia. In general, there are no national accepted findings about the effects of ownership structure on financial performance of banking sector. Thus, the impact of ownership on performance is to some extent uncertain and henceforward leads to motivating empirical studies.

Furthermore, beginning in 2018, due to the political circumstances the NBE has announced a new payment system, deposit procedures, and limits that have a significant impact on the financial performance of Ethiopian banks owned by the government and the private sector. Because, there is no comprehensive study on the subject of their relative performance strengths and weaknesses in relation to ownership disparities, this study will add to the little available literature.

1.3 Objective of the study

1.3.1 General objective

The main purpose of this research is to make a Comparative Analysis of the Financial Performance of State-owned and Private owned Commercial Banks in Ethiopia for the period starting from July 2013/14 to June 2019/20.

1.3.2 Specific objective of the study

The specific objectives of the study are

1. To compare the profitability trend between state-owned and private-owned commercial banks in Ethiopia.
2. To compare the capital adequacy between states -owned and private commercial banks in Ethiopia.
3. To compare the non-performing Loan between state-owned and private commercial banks in Ethiopia.
4. To compare management quality between state-owned and private-owned commercial banks in Ethiopia.
5. To compare earning ability between state-owned and private commercial banks in Ethiopia.
6. To compare liquidity ratio between state-owned and private commercial banks in Ethiopia.

1.4 Literature Driven Hypothesis

The hypotheses of this study were formulated by referring to past empirical studies that have been discussed in the study. However, from the review of the empirical literature, the researcher understands as there is no consistent result on the impacts of ownership type on the financial performance of commercial banks operating in Ethiopia. Considering this under the study the researcher have developed and tested the following hypothesis.

H1: There is significant difference in Profitability trend between state owned and private owned commercial banks in Ethiopia

H2: There is significant difference in capital adequacy ratio between state owned and private owned commercial banks in Ethiopia

H3: There is significant difference in management quality between state owned and private owned commercial banks in Ethiopia

H4: There is significant difference in non - performing Loan ratio between state owned and private owned commercial banks in Ethiopia

H5: There is significant difference in earning ability ratio between state owned and private owned commercial banks in Ethiopia

H6: There is significant difference in liquidity ratio between state owned and private owned commercial banks in Ethiopia

1.5 Significance of the Study

The findings and recommendations of the study will give information for the top-level management about the differences in the financial performance of the two types of banks. They do have the information on the CAMEL parameters differences between State-owned and Private owned banks. Furthermore, it gives insight into the current situation and performance of banks to regulatory bodies, shareholders, and investors. Besides, it also aids other researchers as a reference for further investigation on issues that are related to these topics.

1.6 Scope of the Study

Using the CAMEL framework, this study has compared the financial performance of one state-owned and thirteen private commercial banks. The banks have been selected based on the share of their Assets and Capital on June 30th, 2020. "The CAMEL technique was devised and utilized by the Federal Financial Institutions Examination Board to analyse the soundness and safety of individual banks in the United States in 1979." (Dang, 2011). It applies to every bank and credit union in the United States, and it is also carried out by several financial authorities outside the country (Dang 2011). CAMEL is a ratio-based technique for evaluating and ranking the performance of banks. The framework has become one of the most extensively utilized techniques for examining commercial banks' financial soundness in recent years (Roman & Sargu, 2013; Rose & Hudgins, 2010). The time period of the study covered seven years starting from 2013/14 to 2019/20. The study didn't consider the period before the year 2013/14 as some of the bank's audited financial reports are not posted to (removed from) the websites and found it difficult to get the financial reports on the spot. Audited financial report of some banks for the year 2020/21 is not yet published while conducting this study.

1.7 Organization of the study

The research report is organized into five chapters, each with its own set of sections and sub-sections. The first chapter addresses the study's introduction, which provides a brief explanation of the study's background. This chapter also covers the study's objectives, statement of the problem, research-driven hypotheses, significance, and scope. In chapter two theoretical foundations of the study and empirical studies conducted on relevant studies are presented. The third chapter focuses on the study's methodology. The research design, sample design, data type, collection method, the data analysis and the variables of the study has discussed under chapter three. The study's data is presented and analysed in the fourth chapter. The last chapter concludes the total work of the research and gives relevant recommendations based on the findings.

Chapter Two

Literature Review

2.1 Introduction

Several studies have looked into the impact of ownership structure on financial performance in a variety of industries around the world, including the banking industry. It has been argued since long time that private ownership of firms leads to better firm performance, since private ownership leads to better intra- firm allocation of resources. However, this does not guarantee that privately owned businesses will always outperform public or state-owned businesses. At the same time, it has been argued that if firms are subjected to competitive forces, they would perform efficiently irrespective of the sector it belongs (Sumon and Dimova, 2003). The necessity of understanding the relationship between ownership and performance is presumed. The goal of this chapter is to go over the literature on banks' performance using the CAMEL approach and how it relates to the ownership structure. Below are sub-topics that relate to this chapter. This chapter begins by outlining different theoretical frameworks related to the subject, followed by an empirical examination. Finally, the literature review's findings and knowledge gaps is discussed.

2.2 Theoretical Review

2.2.1 Overview of Banking Industry in Ethiopia

The Abyssinian Bank, which was founded on a 50-year deal with the Anglo-Egyptian National Bank, began Ethiopia's modern banking history in 1905. The Bank of Abyssinia was formally replaced by the Bank of Ethiopia after Emperor Haile Sellasie I took power in 1931. The Bank of Ethiopia, Africa's first indigenous bank, was founded by the Ethiopian government and members of the Ethiopian aristocracy (NBE, 2008). The bank was given the authority to print money and act as the government's bank. It only lasted a few years before being shut down after the Italian invasion. Several Italian banks established branches in Ethiopia during the Italian occupation. (Harvey,1996).

As per Fasil and Merhatbeb (2009) cited in Gadise (2014), the operation of bank of Ethiopia ceased whereas the departure of Italian and restoration of Emperor Haile Selassie's government established the state bank of Ethiopia in 1943. The Ethiopian monetary and banking law, which went into effect in 1963, split the State Bank of Ethiopia's activities into central and commercial banking, establishing the National Bank of Ethiopia and the Commercial Bank of Ethiopia, respectively. Other commercial banks, including foreign banks, were allowed to operate under the 1963 law if they were 51 percent owned by Ethiopians. As per (Habtamu, 2011) cited by (Addisu Ayalew, 2015) The 1963 law allowed for other commercial banks to operate, including foreign banks provided that they were 51% owned by Ethiopians. Addis Ababa Bank, Ethiopia's first private commercial bank, was founded by Ethiopians in 1964 with a capital of ETB 2 million and a 40% stake in National and Grindlay Bank of London. On 1 January 1975, all privately owned financial institutions, including three commercial banks, thirteen insurance firms, and two non-bank financial intermediaries, were nationalized following the fall of the imperial government in 1974 and the establishment of the command economy. The nationalized banks were then reorganized, resulting in the formation of one commercial bank, the Commercial Bank of Ethiopia; two specialized banks, the Agricultural and Industrial Bank (AIB), later renamed the Development Bank of Ethiopia (DBE), and the Housing and Savings Bank (HSB), were known as the Construction and Business Bank (CBB); and one insurance company, the Ethiopian Insurance Corporation (Wondimagegnehu, 2012).

Another watershed moment in the history of banking occurred in 1994, when local private commercial banks were granted permission to operate in the country. Awash International Bank S.c. is Ethiopia's first indigenous private commercial bank, started its operation with an authorized and paid up capital of Birr 50 million, and Birr 17.8 million respectively, and with only 131 shareholders and 32 staff. It received its banking license on November 10, 1994, and began operations on February 13, 1995. The industry currently consists of one state-owned development bank and 18 commercial banks, two of which are state-owned, including Ethiopia's major Commercial Bank (CBE)). Even one of the state owned commercial bank, Construction and Business bank, has been merged with CBE that make the composition of the sector to one state owned commercial bank and 16 private

commercial banks. The private commercial banks currently operating in Ethiopia with the year of establishment are: Abay bank(2010), Addis International Bank(2011), Awash International bank(1994), Bank of Abyssinia(1996), Birhan International bank(2009), Bunna International bank(2009), Cooperative bank of Oromia(2004), Dashen bank(1995), Debub global bank(2012),Enat bank(2012), Lion International bank(2006), Nib international bank(1999), Oromia International bank(2008), united bank(1998), Wegagen bank(1997), and Zemen bank(2008).(www.nbe.gov.et)

2.2.2 Bank performance and Performance Indicators

The precision, completeness, cost, and speed with which a work is done is referred to as performance. Performance in another way is defined as the completion of an obligation in such a way that the performer is liberated from all contractual obligations. (According to the online dictionary Business Dictionary.com) For analysing the success of corporate goals, formulating development plans, making investment decisions, and functioning in a competitive environment, performance assessment tools are essential.

The ability of a business entity to generate assets and revenue from its principal operation is referred to as financial performance. The relationship between numerous financial aspects in business is studied through financial statement analysis. Financial performance is also a phrase used to describe a company's financial health through time. To see how similar organizations perform, this financial performance is compared across industries and sectors. Annual reports are used to measure financial success in a variety of ways. True reports are reflected in financial performance (Kaplan, R. S., 2009).

Banks Financial performance is a measure of a firm's ability to generate revenue from its primary mode of operation (Anjichi, D. A. 2014). Financial performance used as a broad measure of a company's overall financial health over time, and it can be used to compare similar companies within the same industry or to compare entire industries or sectors (Ameer, R., & Othman, R. 2012).

According to Tekers and Kent (2011) cited in Andebet Mulalem (2016), the financial performance of a bank is generally dependent on its management efficiency, profitability,

liquidity (solvency), capital adequacy, asset quality, and growth. They describe each of the performance measures as follows: management efficiency is determined by three ratios, namely; profit per bank branch, profit per employee, non-interest income / non-interest expense. Profitability is measured by three ratios, namely; net income/stockholders equity, net income / total assets, and net interest income / earning assets.

The liquidity indicator is defined as the difference between the addition of cash and cash equivalents (deposits in other banks, trading securities, securities available for sale, and receivables from money markets, additions of 1-month deposits, demand deposits), and payables to money markets. Capital adequacy is measured by the capital adequacy standard ratio (Basel II). Asset quality is measured by the ratio of nonperforming loans / total loans.

Financial ratio analysis is used to measure the performance of commercial banks in the study undertaken in South Africa (Kumbirai and Webb, 2010). They categorize the financial ratios into three major categories of bank performance: Profitability performance, liquidity performance, and credit quality performance. The financial ratio method provides a simple description of the bank's financial performance in comparison to previous periods as well as helps to see how well it is doing compared to other bank performance. Information obtained from that financial ratio is largely used by regulatory bodies, investors, and management of the banking sector to assess financial performance. An enormous list of financial ratios as a means to measure bank performance is used by scholars. This is considered a major weakness of ratio analysis as there is a lack of agreement in the literature on the relative importance of various types of indicators.

Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM) are three classic performance indicators specified by the European Central Bank (BCE). Authors commonly utilize ROA, ROE, ROAA (Return on Average Assets), ROAE (Return on Average Equity), and NIM (Net Interest Margin) as metrics of banking performance in empirical research. These ratios are defined as follows: ROA = (Net income / Total assets) x 100, this ratio measures the profitability relative to the bank's assets and therefore the overall bank performance.

This ratio is used to determine the performance of a bank's assets. ROAA = (Net Income / Average of Total Assets) x 100, this ratio is the most important for comparing investment performance and performance of commercial banks; ROE = (Net Income / Equity) x 100, this ratio measures the bank's profitability by revealing the profit generated using the capital invested by the shareholders; ROAE = (Net Income / Average of Equity) x 100, this ratio measures the bank's profitability and is equal to the ratio of net income after tax to the average of equities. The higher the value, the greater the effectiveness of the bank; NIM (Net inters margins) = (Interest income - Total interest expense / Total productive assets) x 100 and measures the difference between the interest paid by the bank to the investors and the interest it receives from borrowers FERROUHI El Mehdi (2018).

Net Interest Margin was used as a performance indicator by Workneh (2015) and Eden (2014), as cited by Andebet Mulalem (2016), along with other performance indicators. The difference between interest income and interest expenses as a percentage of total assets is known as the net interest margin (NIM).

The interest earned on a bank's assets versus the interest costs on its liabilities has an impact on the asset and liability management of the bank. The net interest margin is used to calculate this spread. The net interest margin will be high, and the bank will likely be highly profitable if it is able to raise funds with low-interest liabilities and acquire assets with high-interest income. The difference between what the bank pays fund providers and what it receives from firms and other bank credit users is measured by net interest margins. A decrease in this ratio is interpreted as an increase in the cost of intermediation Ahtik, M., Banerjee, B., & Remsak, F. (2016).

2.2.3 Banks performance analysis using Camels model

In 1979, the Federal Financial Institutions Examination Board created and implemented the CAMEL system to assess the soundness and safety of individual banks in the United States (Dang, 2011). It applies to every bank and credit union in the United States, and it is also carried out by other financial supervisors outside the United States. CAMEL is a ratio-based technique for evaluating and ranking the performance of banks. The framework has become one of the most extensively utilized techniques for examining commercial banks' financial

soundness in recent years (Roman & Sargu, 2013; Rose & Hudgins, 2010). Each banking institution submitted to an on-site examination is graded on five important dimensions relevant to the bank's operations and performance under this system (Sahajwala & Van den Bergh, 2000). Capital, Asset Quality, Management, Earnings, and Liquidity are considered to reflect the banking institution's financial performance, financial position, operating soundness, and regulatory compliance (Mulualem, 2015). On a scale of 1 (best) to 5 (worst), each of the component factors is graded (worst). A composite rating is a condensed version of the component ratings that serves as the primary indicator of a bank's present financial health. The composite rating, which goes from 1 to 5 (worst), includes some subjectivity based on the examiners' overall judgment of the institution (Sahajwala & Van den Bergh, 2000).

Components of CAMEL Model

Olweny and Shipho (2011) concentrated on key industry characteristics that influence commercial bank performance in Kenya. Scholars frequently utilize the CAMEL model to authorize particular aspects of a bank (Dang, 2011). Capital Adequacy, Asset Quality, Management Efficiency, Earnings, and Liquidity (CAMEL) are acronyms for Capital Adequacy, Asset Quality, Management Efficiency, Earnings, and Liquidity. The following is a breakdown of each indicator:

1. Capital Adequacy

Capital adequacy measures the adequacy of the amount of capital to meet any unfortunate shocks that the bank may experience (Kosmidou, 2009).

Due to their intermediation activities, banks are regarded as the most essential element of the financial system, and their capital adequacy ratio is a key indicator in risk and profitability management. Following the financial crisis, Turkey enacted a slew of regulations governing bank capital structures. Since 2006, the goal has been to strengthen the banking system by requiring a minimum capital adequacy ratio of 12%, which is higher than the Basel criteria's standard of 8%. Capital Adequacy (CAR) is the ratio of a bank's capital to its risk-weighted assets and current liabilities, according to economics times (2021). Central banks and bank

regulators have determined to prohibit commercial banks from taking on too much debt and becoming insolvent in the process.

2. Asset quality

The quality of the loan portfolio has a direct effect on bank profitability and its financial performance. According to Dang (2011), the highest risk that commercial banks face is losses from overdue debts. Therefore, inappropriate lending rates are good credentials for the quality of the asset. Different studies used different types of financial ratios as proxies for bank performance. One of the major concerns of all commercial banks is keeping the number of non-compliant loans at the minimum level. Unsuitable loans will negatively affect bank profitability. Therefore, the more unsuitable loans, the higher the total amount of loans and the better the health of the bank's portfolio. It means that the lower this ratio, the better the bank operates (Sangmi & Tabassum, 2010). One of the major factors which affect the quality of Assets is a non Performing Loan.

3. Non-Performing Loans

Various loans and advances are provided by banks to industries, corporations, and individuals. Their primary source of income is interest on these loans. A bank, like any other business, strives to increase its earnings as much as possible. The primary activity of the banking sector around the world is credit lending. Without this activity, banks can no longer survive. This is why credit worth is seen as a key indicator of financial institutions' financial health and soundness, particularly banks. Banks' interest charges on advances and loans account for a significant portion of their assets (Saeed and Zahid, 2016).

A bank is ready to lend as much of its cash as possible since loans and advances are more profitable than any other asset. The banks' major concern, however, is credit quality. Most of the time, banks strive to strike a balance between increasing profit through lending while also managing the risk of loan default, which would reduce earnings and therefore capital. (Machiraju, 2003).

According to Tibebu (2011), as referenced by Addisu (2015), a bank should be cautious while advancing loans because there is a higher possibility of loan defaults. In other words, a

bank is put in a tough position when a loan is lost or defaulted, especially when the sum is large. A bank failure is the immediate result of a huge number of non-performing loans and advances in the banking sector. Despite the fact that banks retain collateral for the loans they make, they cannot be guaranteed whether or not they will be reimbursed. When such risks arise, loans become non-performing.

The concept of non-performing loans or assets has been defined in different kinds of literature in different ways. According to the Oxford Dictionary of Finance & Banking (3rd Edition), nonperforming loans (NPLs) is a loans on which the interest or payment is overdue. In the USA, non-performing loans (NPLs) are defined by regulators as a category of loan which is more than 90 days". Non-performing loans (NPLs) are loans for which the borrower has not made a payment for a specific length of time, according to the Oxford Business English Dictionary. Therefore the bank runs into trouble with non-performing loans (NPLs). According to Delil (2019), NPL is defined as a loan that has not been collected because of many factors, and those uncollected loans are said to be NPLs or bad loans. Many loans become non-performing after three months of default, but this might vary depending on the contract terms. A loan is non-performing when payments of interest and principal are past due by 90 days interest payments have been capitalized, financed, or delayed by agreement or payments are more than 90 days overdue, but there are other good reasons to doubt that payments will be made in full" (IMF,2008)

Machiraju (2001) expresses NPLs as a leading indicator of credit quality. NPLs or bad loans arise in respect of the loans and advances which are given by banks to the whole range of different projects including but not exclusively retail or wholesale, personal or corporate or short, medium or long term projects. NPLs are very sensitive elements of a bank's operation. NPLs, according to Handley (2010), can be used as a predictor of financial crises because they impair the nation's economic growth by reducing credit creation. NPLs, according to Michael (2006), have an impact on the banking sector's entire routine, putting it at risk of insolvency.

Non-performing assets also have a negative impact on the value of banks in the credit market. A bank's goodwill and brand image will suffer, which will harm the individuals who invest their money in the bank. According to Tihitina (2009), disclosing the degree of losses

in a bank's financial statements may cause a loss of trust in the bank's management as well as a fall in the bank's credit ratings.

According to NBEs directive SBB/48/2010, loans & advances are classified in to Pass, Special Mention, Substandard, Doubtful, and Loss based on the numbers of days past due.

4. Management quality

Human resource policies, an organization's general management policies, information systems, internal audit and control regimes, and strategic and budgetary plans are all examples of management policies. Separate books are inspected to reflect overall management quality, analyze human resources and the working style of a Board of Directors and Management, and expose the relationship between the two sides. However, some ratios of financial statements act as a proxy for management efficiency.

The ability of a bank management to properly organize the bank's resources, maximize profit, and reduce operating expenses can be demonstrated in part through financial ratios. One of these is the bank's operational profit to total revenue ratio (Ilhomovich, 2009; Sangmi & Tabassum, 2010). The greater the ratio number, the more efficient the bank's operations and revenue creation will be.

Mulalem (2014), Management quality is defined as the ability of the board of directors and management to identify, measure, and control the risks associated with an institution's activities, as well as to ensure that the institution's operations are safe, sound, and efficient while adhering to all applicable laws and regulations.

Various scholars have attempted to quantify managerial efficiency through the use of proxies such as financial ratios. Rahman et al (2009), Sangmi and Nazir (2010), and Nassreddine et al (2013) used the ratio of operating profit to income, whilst Nassreddine et al (2013) used the ratio of costs to total assets (2013). Golin (2001) utilized the ratio of operating costs to net operating income and operating expenses to assets, whereas Olweny (2011) used the ratio of operating costs to net operating income.

5. Earnings Quality

Krishan and Parsons (2008) define earnings quality as the degree to which reported earnings accurately reflect economic reality in order to correctly assess a company's financial performance. One of the main goals of financial reporting in the capital market, according to Francis, Olsson, and Schipper (2006), is to aid participants in forming judgments and informed investment decisions. High-quality financial data is intended to assist stakeholders in making informed investment decisions in this area (Ewert & Wagenhofer, 2012).

Earnings quality primarily assesses the bank's profitability and productivity, as well as the growth and long-term viability of future earnings potential (Ahsan, 2016). Similarly, a bank's earnings are used to support dividends, maintain proper capital levels, provide chances for investment in the bank's growth, plan for engaging in new businesses, and maintain a competitive outlook.

6. Liquidity

As per (Lartey, Antwi & Boadi, 2013), the term liquidity in the context of banks refers to the capability of a bank to meet its financial obligations as soon as they fall due. Liquidity management is crucial to the successful operations of all companies, particularly banking institutions, because client confidence in banks is mainly dependent on the timely availability of funds. Liquidity is defined as a commercial bank's capacity to meet its contractual obligations on time, which includes lending and investment commitments, deposit withdrawals, and liabilities maturities in the usual course of business.

Liquidity is regarded as a prerequisite for banks' day-to-day operations. Liquidity is important to banks' internal and external environments because it affects their day-to-day operations (Edem, 2017). Banks' ability to function properly can be harmed by a lack of liquidity, as they may be unable to meet consumer demands for funds on time. This will result in strained relationships with bank clients, thus developing a strategy for efficient liquidity management is critical. This could take the shape of suitable liquidity measurement, monitoring, and management techniques (Agbada & Osuji, 2013). As a result,

it is clear that liquidity and its effective management are critical components of a country's banking system. Effective liquidity management in banks should provide a proper balance between cash inflows and outflows, and the adoption of this approach by all banks will result in a stable financial industry (Dzapasi, 2020). Successful corporate operations will be ensured by effective liquidity management, which will aid in increasing return on assets, as well as improving earnings and capital (Businge, 2017). Shortening asset maturities, lengthening liability maturities, issuing additional stock, reducing contingent commitments, and so on are all ways for banks to increase liquidity.

The bank's ability to meet its current obligations is measured by the liquidity ratio. Banks make money by mobilizing deposits and providing funds to creditors, so they must be aware of their obligations to meet depositor demands. Liquidity risk arises when a bank is unable to meet the demands of its depositors. As a result, fund management practices should ensure that an institution can maintain a sufficient level of liquidity to meet its financial obligations on time, as well as quickly liquidate assets with minimal loss (Mulalem, 2015).

The liquidity indicator is defined as the difference between the addition of cash and cash equivalents (deposits in other banks, trading securities, securities available for sale, and receivables from money markets, additions of 1-month deposits, demand deposits), and payables to money markets.

Ratios	Formulas
Liquid Asset to Demand Deposit	$\frac{Liquid\ Asset}{Demand\ Deposit}$
Liquid Asset to Total Deposit	$\frac{Liquid\ Asset}{TotalCustomerDeposits}$
Liquid Asset Total Asset	$\frac{Liquid\ Asset}{Total\ Asset}$
Term Deposit to Total Deposit	$\frac{\text{Term Deposit}}{\text{Total Deposi}}$

Table 1 Liquidity Ratio

2.2.4 Owner ship

The term "ownership" refers to the legal right to possess something. An owner is a person who has two formal rights: the power to run the company and the right to acquire the company's residual earnings (net income after all obligations have been paid). Because formal (legal) control does not imply effective (economic) control, the term "formal" is employed. In the event of a sole proprietorship, a person can have complete control and residual rights, resulting in complete ownership (Hansmann 2000).

(Mohamed 2015), Nature of the owners: firms can differ because their owner is private or government (state). This ranges from banks that are owned entirely by private investors to banks owned entirely by the government i.e. private and state-owned banks. In the context of this research state ownership is to mean banks which are under the control of government and private banks are those which are established by individual investors and by issuing shares for the public. Ownership structure has long been considered as an important variable explaining firm performance. The common argument is that performance will be different in

the private and state-owned firms; because of ownership objectives, management incentives and monitoring arrangements differ from each other.

2.3 Empirical Review

A variety of studies have been conducted to examine, assess, and compare the financial performance and position of state and private banks in different nations. Commercial banks, according to Hassan, Ali, and Muhammad (2011), play a significant part or component in the financial industry. It contributes to the expansion of the economy. Every country's financial system revolves around banks. They came to the conclusion that private banks are better than public banks in terms of bank size, but both public and private banks in Pakistan had mixed financial performance from 2006 to 2009.

Johan and Hui (2012) used the CAMEL model to assess the financial performance of different ownership structured commercial banks in Nepal. For the years 2005 to 2010, they studied eighteen commercial banks. The findings revealed that state banks are much less efficient than their private-sector counterparts. The capital adequacy ratio, interest expenditures to total loan, and net interest margin all have a substantial impact on return on assets, whereas the capital adequacy ratio has a big impact on return on equity, according to this research. Performance evaluation is a critical method for businesses to motivate and constrain their employees, as well as a vital conduit for stakeholders to obtain information about the company's performance (Sun, 2011).

Claessens, Demirgüç-Kunt, and Huizinga (2001) and Dabla-Norris and Floerkemeier (2007) as per their study argued that there were no significant mean differences between the ownership structure and the NIM of the two sub-sectors.

Kajal and Monika (2011) conducted research to determine how effectively public and private sector banks manage non-performing assets (NPA). This study has become a need in order to compare the services of both private and public sector banks. Public sector banks in India are forced to compete with private and foreign banks due to greater competition, new information technologies that lower processing costs, the erosion of product and geographic barriers, and less restrictive government regulations.

According to De Nicolo (2001) and Iannota et al. (2007), government-owned banks have higher NPL than privately-owned banks. Micco et al. (2004) looked at financial institutions with various ownership structures in 119 countries. He came to the conclusion that non-performing loans were more common in government-controlled banks than in privately-owned banks. Garcia and Fernandez (2007) found that commercial banks (mostly private banks) are more vulnerable to nonperforming loans than deposit banks (mainly government-owned).

The study of Olweny and Shipho (2011) in Kenya focused on In the analysis regarding the financial performance of State Bank of India for the year 2000-2012 based on parameters of different ratios like Capital Adequacy Ratios, Asset Quality Ratios, Capability Ratios, Profitability Ratios, and Liquidity Ratios, the researcher has investigated that the bank's financial performance has been almost progressive over the operational periods considered for the study. The study emphasized relevant areas where the bank has to concentrate on improving its financial performance.

Studies have been undertaken to look into the impact of bank ownership on financial and economic growth (Sukhdey S, et al, 2016; Maria T. et al, 2016; Peter W. et al, 2010; La port et al., 2002). Others looked at the differences in lending behavior between state-owned and private-owned banks (Khwaja & Mian, 2005 and Sapienza, 2004), as well as the change in government-owned bank lending decisions during the election (Khwaja & Mian, 2005 and Sapienza, 2004). (Dinc., 2005). Furthermore, Faizu H. & Rehnuma S. (2016) and Corbett et al. (2010) investigated the impact of state ownership on performance differences between privately owned and state-owned banks in various locations. Almost all of the previous research examined at a country level has been done in either developed economies or developing ones where the financial sector is open for foreign investment.

Aswini et, al., (2013) did a study in the field of banking, objectives of study were to analyze the soundness and to measure the efficiency of public and private sector banks based on the market gap. The CAMEL rating system was utilized in this study to assess capital sufficiency, asset quality, management soundness, earnings, and liquidity. They discovered that private banks were at the top of the list when it came to soundness. Public sector banks,

such as Union Bank and SBI (State Bank of India), had fallen behind private banks in terms of economic soundness. Recently a study was done to measure the efficiency change of these selected banks operating in India from 2010 to 2012 (Jigar, 2013). According to the Data Envelopment Analysis exhibited that among the public sector banks, the performance of Bank of India, Canara, Punjab National Banks got dampened in the last two years under the study. Whereas the private sector banks showed marked consistency at their efficiency level except for Axis Bank during the period under the study.

Chennu Goel (2013) has made a comparative study on the performance of selected private and public sector in India. As per the study efficiency and profitability of the banking sector in India has assumed primal importance due to intense competition, greater customer demands and changing banking reforms.

Ramachandran (2012) looked into the financial performance of both private and public sector banks in India. The study's goal is to classify banks based on their financial features in order to examine their financial performance in India's banking sector. According to the report, public sector banks performed significantly better than private sector banks during the period. The overall regression study reveals that operational efficiency, asset management, and interest income size all have a considerable and beneficial impact on the banking industry's financial performance.

Deepak and Abebaw (2011) “private sector banks overtook their public-sector counterpart in terms of return on assets and net interest income margin. They stated that private sector banks outperformed public sector bank in terms of asset utilization and ability to produce profits. According to their findings, private sector banks were more profitable than public sector banks in terms of overall operations. According to their research, the ownership structure of commercial banks in Ethiopia has a significant impact on their profitability”. In addition Abeneazer (2016) findout and proved private ownership is greater mean of ROA than state owned banks.

Though financial ratios analysis compares the financial performance among commercial banks, the same bank had different ranks under the different financial ratios. Two profitability ratios (ROE, EIR) out of four profitability ratios (ROA, ROE, EIR, NIM)

demonstrated statistically significant differences between CBE and PBA. However, in terms of practical aspects, the results showed that PBA was in the better situation in terms of two out of four profitability ratios which are (NIM and EIR). CBE was in the better situation in terms of two out of four profitability ratios which are ROA and ROE. This is because ROEs of state owned bank was higher than those of private banks due to having utmost low shareholder equity (Wesen and Beyene, 2018). However Mozib, and Nadia (2020) Argued private bank is on the good position than the stated one in regarding of ROE as per their study.

Abeneazer (2016) stated the performance of state owned-banks is superior to private banks in Ethiopia in terms of profitability, liquidity, and solvency. He also concluded the ownership-based advantages may have a very limited impact on performance outcomes for banks in Ethiopia.

As per Yaregal 2011 the results of the performance measures that state owned banks are greater in mean performance measures than private banks. Yidersal (2017) stated the regression result shows that there is a statistically significant difference on the performance of state and privately owned commercial banks, in which state owned ones perform better than private ones.

Fentaw (2015), as referenced by Yidersal (2017), analyzed diverse literature on the determinants of banking profitability in Ethiopia, and he proposed that the missed ownership variable has to be included in the basket of determinants. As a result, examining the impact of ownership on the profitability of the banking sector in Ethiopia, where the financial system is still in its infancy and closed to foreign investors, is a fertile research gap with significant policy implications and the potential to add to the existing literature in the field.

According to Wesen and Beyene (2018), the CAR values show that Ethiopia's state-owned CBE is not very well to deal with large-scale shocks toward its balance sheet. In the studied period, the CAR of CBE does not meet the NBE criterion of 8%. Three of the eight performance metrics examined have no significant difference between the two subsectors (ROA, NIM, and IETTL). The state owned CBE was lower EIR means the banks performed well. High overhead costs created high EIR for private sector banks. Interest expense to total

loan (IETTL) of CBE is smaller compared with other privately owned banks. A higher ratio indicates that a company has a better capacity to cover its interest expense.

According to Morteza et al, there is a considerable difference in liquidity, earning performance, and management quality between private and public banks. Private Banks outperformed public banks in terms of liquidity and earnings, but public banks outperformed private banks in terms of management whereas public banks outperform private banks in terms of managerial performance. They also claimed that the overall mean implies that private banks perform better than public banks, despite the fact that this difference is not significant, and that private banks should strive to improve their performance.

Chapter Three

Research Methodology

3.1 Introduction

Research Methodology includes the assumptions and values, which is useful for interpreting data and reaching to conclusions.

3.2 Research Design

This research study adopts two methods in order to describe the entire financial performance of commercial banks in Ethiopia such as analytical as well as descriptive study. Quantitative research approach has used to evaluate financial performance of the two types of banks.

3.3 Sampling Design

The population of this study comprises one state-owned and sixteen privately owned commercial banks in Ethiopia actively working in the year 2020. The study has used purposive sampling techniques based on the share of their Asset and Capital of the banks looking at their financial statement on June 30th, 2020.

At the end of June 2020, the total Assets owned by the state-owned commercial bank has accounted for 59% while the rest of the private banks hold 41% of the Total Assets. (Own calculation based on financial statements on 30th June 2020). In addition, the total capital of State-owned commercial bank accounted is 40% while the private banks hold 60%. Under this study banks which had less than 1.5% share from the total Asset and less than 2% share from the total capital has not been selected. (Asset; Enat bank 0.81%, Addis bank 0.47%, and Debub global bank 0.57%. Capital; Enat bank 1.47%, Addis bank 1.11%, and Debub global bank 1.08%). As a result one state-Owned and thirteen privately owned commercial banks have been incorporate in the study. The study has covered seven years starting from 2013/14 to 2019/20. The study didn't consider the period before the year 2013/14 as some of the bank's audited financial reports are not posted to (removed from) the websites and found

it difficult to get the financial reports on the spot. In addition audited financial report of some banks for the year 2020/21 is not yet published while conducting this study.

3.4 Data Type and Source

This study has used secondary data to make a comparative analysis between the state-owned and privately owned commercial banks of Ethiopia. Audited financial statements of banks have been used for the study and downloaded it from the website of each bank selected for the study.

3.5 Data Collection Methods

The necessary information has been collected from the audited financial statements of the banks (from their websites) for the period starting from July 1st, 2013 to June 30th, 2020. The financial statements have been used to calculate the key financial ratios of the Private commercial banks and the state-owned banks for the above-mentioned period.

3.6 Data analysis

As noted by Kothari (2004), data has to be analyzed in line with the purpose of the research. Accordingly, this study has used descriptive and econometric analysis based on a panel data of commercial banks found in Ethiopia from the year 2013/14 to 2019/20. In order to make an analysis of the financial performance of state-owned and private commercial banks in Ethiopia Camel model is used. Secondary data has been analyzed to determine its performance. Different methods have used to analyze the data. The two-sample (independent groups) t-test and Mann-Whitney U test are used to test and assesses the two independent samples differ statistically. The scholars argued that for accurate and comprehensive statistical results, the statistical packages are the most consistent instruments (Buglear, 2005). Due to accuracy in performing the statistical functions, many scholars have used SPSS and other statistical packages for data analysis. SPSS 19 is used to analyze the data in this study.

3.7 The Variables

To compare the financial performance of state-owned and private commercial banks, the study has examined the relationship between the five independent variables: capital adequacy, asset quality, management efficiency, earning quality with the dependent variables: ROA, ROE, and NIM.

3.7.1. **Dependent Variable**

3.7.1.1. ROA

Many scholars remind that ROA is the key ratio for the evaluation of bank profitability given that ROA is not distorted by high equity multipliers, (Athanasoglou et al., 2008). As ROA is the most comprehensive accounting measure of a bank's overall performance, many regulators believe return on assets as the best measure of bank efficiency and it emerges as the key ratio for the evaluation of bank profitability (IMF, 2002).

Return on Asset (ROA) = Net Profit after Tax/Average Total Assets

3.7.1.2. **ROE**

A financial statistic that compares a company's profit to the total amount of equity contributed by its shareholders is called return on equity (ROE). According to Khrawish (2011), ROE is defined as the ratio of Net Income after Tax divided by Average Capital. The ratio of net income to total equity, according to Guru et al. (2002), represents the returns on capital for corporate owners. The return on equity (ROE) is a proxy for the returns that equity holders obtain from bank activities from the perspective of a shareholder. A business with a high return on equity is more likely to be cash flow self-sufficient. As a result, the greater the ROE, the more profit the company generates.

3.7.1.3. NIM

The difference between the interest income created by banks and the amount of interest paid out to their lenders (for example, deposits) is measured by the Net Interest Margin (NIM),

which is proportional to the quantity of their (interest-earning) assets. It is typically represented as a percentage of what the financial institution earns on loans and other assets in a certain time period minus interest paid on borrowed funds divided by the average amount of assets on which it earned income during that time period. The NIM variable is calculated by dividing net interest income by average assets (Gul et al., 2011). The bigger the net interest margin, the more profitable the bank is and the more stable it is.

3.7.2. **Independent Variable**

Capital Adequacy Ratio

Capital adequacy measures the adequacy of the amount of capital to meet any unfortunate shocks that the bank may experience (Kosmidou, 2009). In this study Capital adequacy was measured by a ratio of total equity over total risk weighted assets.

Asset quality

The asset quality is an important indicator to measure the strength of the bank. One of the major factors which affect the quality of an Asset is a non Performing Loan.

Non-performing loan ratio (NPLTL): In this particular study NPL ratio is measured by the ratio of non - performing loans over total loans and advances. Empirical studies indicated that non – performing loans & advances are inversely related to financial performance. Hence, the researcher of this study expected a negative relation between non – performing loans & advances and financial performance.

$$\textbf{NPLTL} = \frac{\textbf{Non-performing loan (NPL)}}{\textbf{Total Loan \& Advances (TL)}}$$

Management efficiency

Effective management is being noticeable amongst the most essential component behind the bank's performance indicators. The bank management efficiency guarantees the growth and survival of the bank. Loan to Deposit ratios shall be the best explaining ratio that enables to see the management capacity how efficient they convert from the total amount deposited to loan under the parameter of CAMEL.

MGTQ = Loan

Deposit

Earning quality

The earning quality is a very important measure that defines the capability of a bank to earn reliably. It determines the profitability of banks and explains their sustainability and progress in

earning the future. A popular indicator of earning quality is the percentage growth of net profit

EQ= Profit(Yn) – Profit (Yn-1)

Profit (Yn-1)

Liquidity

The bank's ability to meet its current obligations is measured by the liquidity ratio. The following ratio is used to measure liquidity in the study.

Liquidity= Liquid Asset/Total Deposit

Chapter Four

Result and Discussion

The result of the study is analyzed and discussed in this chapter. Figures, tables, percentages, and mean values are used and descriptive statistics of the variables are presented to see the trend for each variable over time in relation to the financial performance of state-owned and privately-owned commercial banks. Capital adequacy, asset quality, management efficiency, earning quality, and liquidity are all rated using CAMEL Approach.

4.1 Profitability

The ability of a business to make maximum profit is referred to as profitability. Return on assets, return on equity, expense to income ratio, and net interest margin were used to determine the profitability position in this study. From an accounting standpoint, return on assets is a comprehensive indicator of overall bank performance (Sinkey, 2002).

4.1.1 ROA

Commercial banks' fundamental function is to take deposits and give loans to customers in such a way that they maximize their profit. This intermediary position necessitates proper deposit mobilization and fund deployment in productive investments.

The ability of management to maximize the return on its assets is measured by ROA. The ratio represents the amount of net income made per birr of assets. The higher the ROA the more efficient the bank is in utilizing its assets.

Ownership	2014	2015	2016	2017	2018	2019	2020	Average
State	3.13	3.19	2.42	1.50	1.01	1.79	1.24	**2.04**
Private	3.21	2.95	2.76	2.72	2.53	2.76	2.70	**2.80**
Industry average	3.17	3.07	2.59	2.11	1.77	2.27	1.97	2.42

Table 2 ROA ratio of SO& POB's

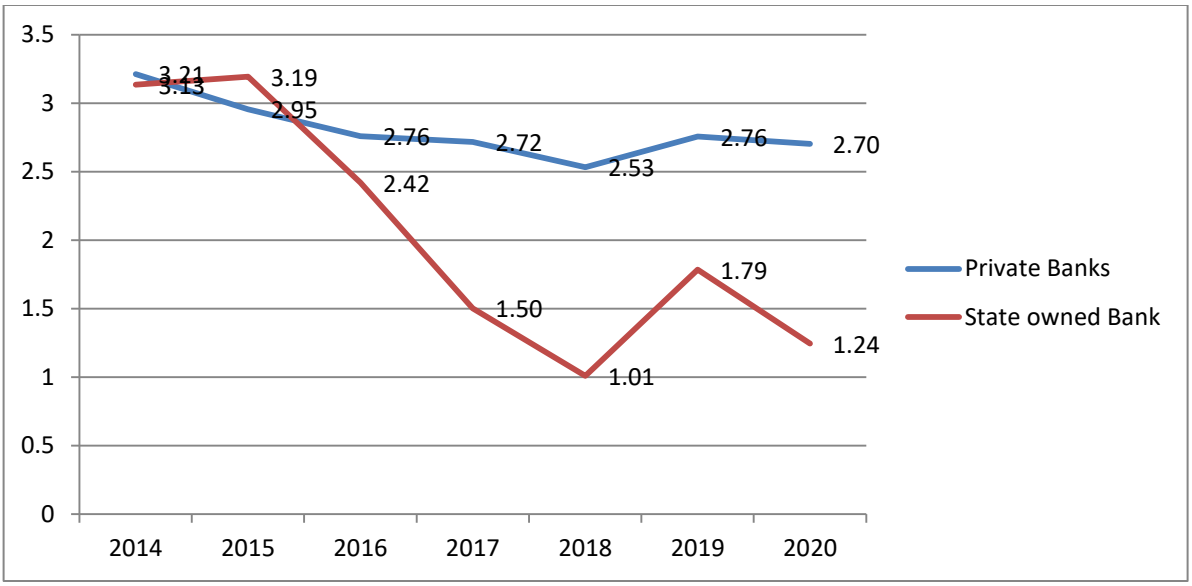

Figure 1 ROA ratio of SO & POB's

Table 2 shows the average ROA of Ethiopia's largest commercial banks from 2014 to 2020. The average ROAs (2.42%) of the banks were positive, showing that Ethiopia's banking system has performed quite well in recent years in terms of net profit. The average ROA of the state-owned bank was determined to be lower (2.04%) than that of Private Banks (2.80%). The studied banks' earnings were satisfactory, and none of them incurred a net operating loss.

The State-Owned bank has shown an increment of ROA average from the year 2014 to 2015 by 2%. The bank has shown a decline of ROA from the year 2015 to 2020 except 2019 has shown a significant increment of 77 % from its preceding year and went to decline in 2020 by 30%. A significant decline of 24%, 38%, & 33% have been seen during the years 2016, 2017, and 2018 respectively. In the year 2018, the least ROA has been recorded (1.01%) during the study period. The highest ROA for the State-Owned bank has shown in 2015 (3.19%).

The Private Banks have shown a decrement of ROA from the year 2015 to 2018 by 8%, 6.6%, 1.5%, and 6.8% in respect of the stated years. During the year 2019, the bank has recorded an 8.8% increment and followed a decrease of 2% in the year 2020. In the year 2018, the least ROA has been recorded (2.53%) by private banks during the study period.

The highest ROA for the private banks have shown in 2014 (3.21%) which is equivalent to the average industry.

Table 3 ROA ratio of POB's

Years / Private Banks	2014	2015	2016	2017	2018	2019	2020	PB Average	Rank
AB	2.24	3.22	2.71	4.25	1.81	3.66	2.84	**2.96**	**6**
AWB	3.33	2.73	2.67	2.69	3.13	3.75	3.16	**3.07**	**4**
BOA	2.52	2.34	2.45	2.36	1.15	2.18	1.77	**2.11**	**13**
BrB	3.56	2.99	4.58	3.94	2.67	2.76	2.73	**3.32**	**2**
BuB	3.11	3.58	3.30	2.42	2.76	3.38	2.64	**3.03**	**5**
CBO	4.96	3.32	1.50	1.46	2.20	1.84	2.51	**2.54**	**10**
DB	3.41	3.12	2.73	2.52	2.28	2.00	2.47	**2.65**	**8**
HB	2.54	2.14	2.14	1.98	2.29	2.36	2.27	**2.25**	**12**
LIB	3.36	3.75	3.74	2.81	3.09	3.11	2.47	**3.19**	**3**
NIB	3.16	2.81	2.45	2.80	2.16	2.38	2.74	**2.64**	**9**
OIB	3.07	2.83	2.39	2.17	3.64	2.68	2.62	**2.77**	**7**
WB	2.90	2.09	1.88	2.80	3.29	2.17	2.45	**2.51**	**11**
ZB	3.57	3.48	3.31	3.10	2.45	3.57	4.45	**3.42**	**1**
	3.21	**2.95**	**2.76**	**2.72**	**2.53**	**2.76**	**2.70**	**2.80**	

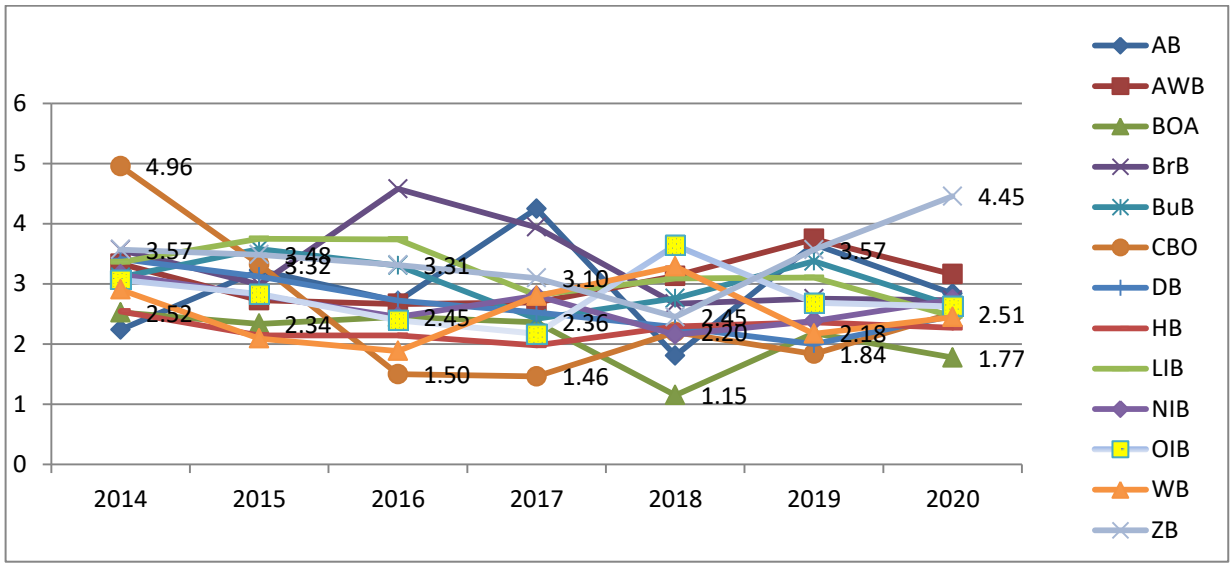

Figure 2 ROA ration POB's

The average ROA's of PB's is 2.8 % which is better than the average of the overall industry and the state-owned bank average (2.04%) recorded during the study period. Zemen Bank has shown a better performance in ROA which is 3.42% achieved by Zemen bank and this shows a proper utilization of resources than other privately owned banks. Berhan, lion international bank, Awash Bank followed and accounted for 3.32, 3.39 & 3.07 %

respectively. Wegagen, Hibert, and Bank of Abyssinia have shown a lower ROA during the period.

4.1.2 ROE

The return on equity (ROE) metric is used to calculate a company's profitability. It's a metric that measures how quickly a company's profits grow for its shareholders and owners. Investors and managers use the return on equity (ROE) ratio to compare the growth rates of different companies or compare a company to the industry standard.

Ownership	2014	2015	2016	2017	2018	2019	2020	Industry Average
State	57.00	62.80	60.45	22.32	20.10	23.57	25.30	**38.79**
Private	22.72	21.75	20.99	20.25	21.32	21.40	20.62	**21.29**
Industry average	39.86	42.28	40.72	21.29	20.71	22.49	22.96	30.04

Table 4 ROE ratio of SO& POB's

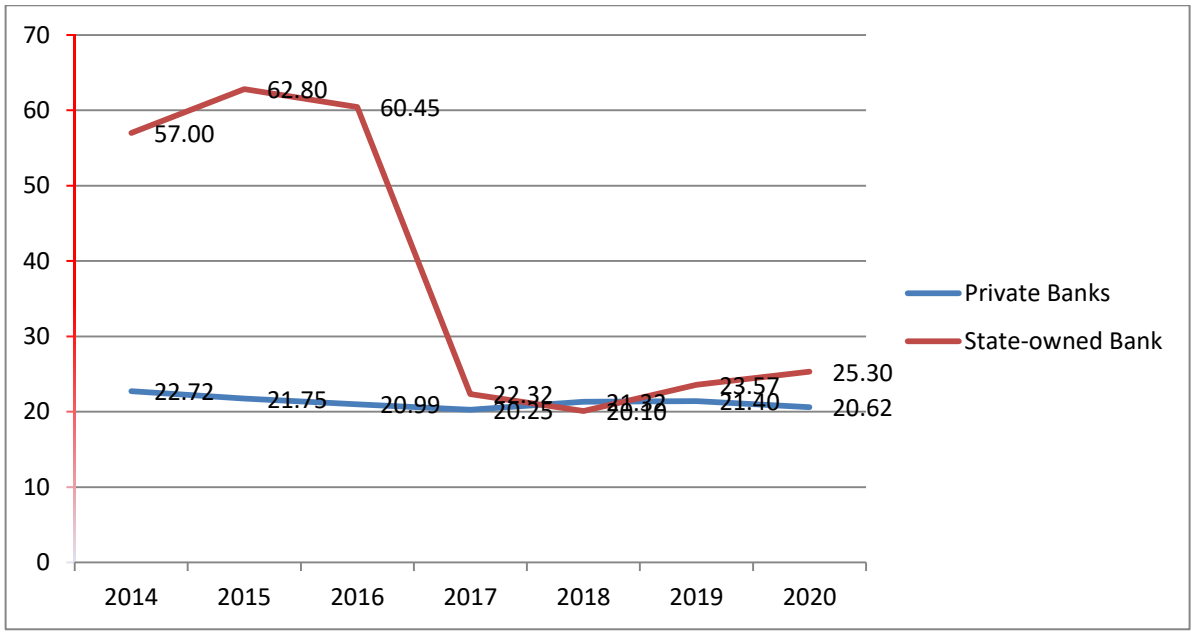

Figure 3 ROE ratio of SO & POB's

Table 4 displays the average ROE of Ethiopia's commercial banks from 2014 to 2020. The average ROE's the Ethiopian banks accounted is about 30.04%. The average ROE of the state-owned bank was 38.79% and which is higher than that of Private Banks (21.29%).

The State-Owned bank has shown an increment of 10% ROE from the year 2014 to 2015. As per the analysis result, a significant decline has been seen starting from year 2016 to 2018 by 4%, 63%, and 10% respectively. Increasing of 17% & 7% of ROE has been shown during the year 2019, and 2020 respectively. In the year 2018, the least ROE for the State-Owned bank has been recorded (20.10%) during the study period. The highest ROE for the State-Owned bank has shown in 2015 which is 62.8%.

The Private Banks have shown a decrement of ROE from the year 2015 to 2017 by 4% in each year. There is no change has been made during the year 2018. The ROE has started increment in the year 2019 by 5%. During the study period in the year 2017, the least ROE has been recorded (20.25%). The highest ROE for the private banks has shown in 2015 and it is about 22.72 %

Years Private	2014	2015	2016	2017	2018	2019	2020	PB Average	Rank
AB	21.20	21.47	17.69	28.20	18.00	23.54	18.07	**21.17**	**7**
AWB	27.50	22.32	19.11	23.30	25.03	30.16	23.97	**24.49**	**2**
BOA	18.66	17.62	17.28	17.22	17.50	16.90	16.06	**17.32**	**13**
BrB	19.08	16.31	29.12	23.67	16.04	18.32	17.78	**20.05**	**9**
BuB	20.25	22.52	22.83	17.40	18.89	20.40	15.61	**19.70**	**10**
CBO	38.53	25.00	15.19	15.18	26.89	23.22	28.15	**24.60**	**1**
DB	30.67	26.41	23.15	18.98	16.74	15.99	20.27	**21.74**	**6**
HB	20.03	18.30	18.78	18.13	22.51	23.48	20.88	**20.30**	**8**
LIB	17.92	27.21	28.03	22.09	24.45	24.68	21.29	**23.67**	**4**
NIB	17.29	16.28	15.19	18.87	16.23	18.48	20.47	**17.54**	**12**
OIB	22.94	25.48	21.63	20.14	34.30	23.66	20.71	**24.12**	**3**
WB	19.00	22.30	21.86	17.24	22.55	15.30	17.70	**19.42**	**11**
ZB	22.25	21.56	22.98	22.79	18.00	24.01	27.10	**22.67**	**5**
	22.72	**21.75**	**20.99**	**20.25**	**21.32**	**21.40**	**20.62**	**21.29**	

Table 5 ROE ratio of POB's

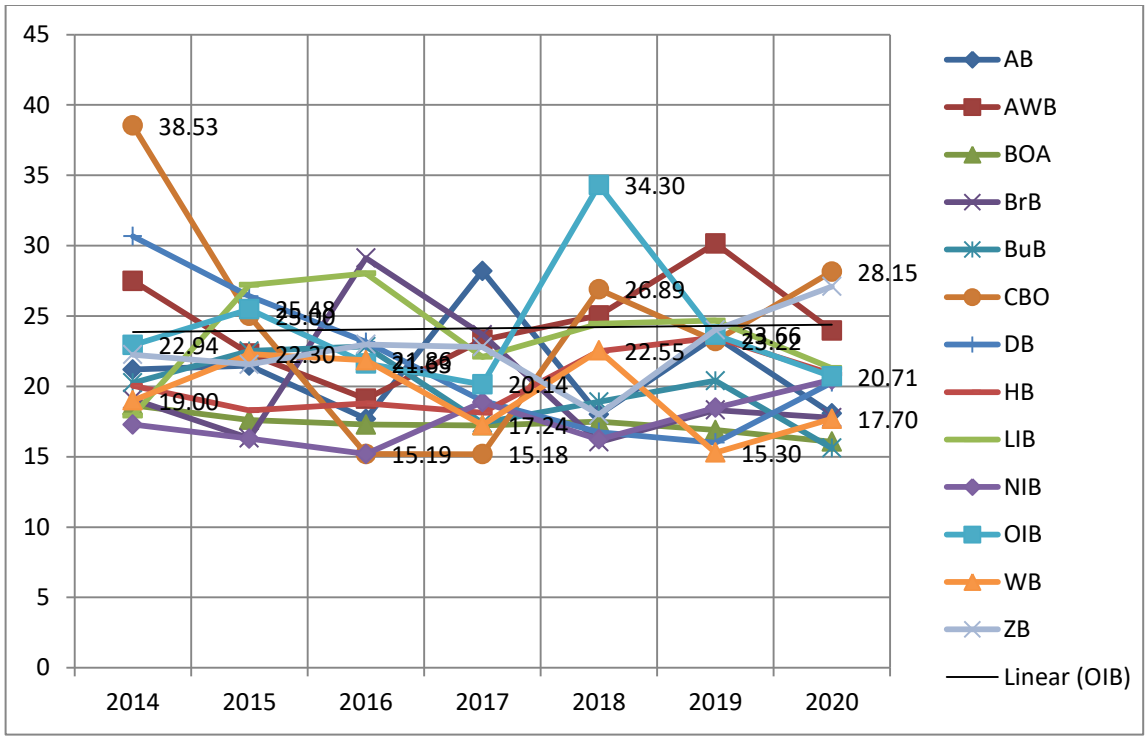

Figure 4 ROE ratio of POB's

As per table 5, the average ROE of PB's is 21.29 % which is lower than the overall industry average (30.04) and the state-owned bank average (38.79%) recorded during the study period. Cooperative Bank of Oromia, Awash Bank, and Oromia International banks have shown better performances in ROE ratios which were 24.6%, 24.49% & 24.12% respectively. This result showed how well a company's management manages shareholder money than others in the period. A higher return on equity is normally preferable; however, a declining ROE may suggest inefficient use of equity capital. Lion International Bank, Zemen Bank, and Dashen bank have accounted for above the average ROE which was 23.67%, 22.67%, 21.74% respectively. The lower ROE's has been shown by Bank of Abyssinia, Nib International Bank, and Wegagen bank with ROE's percentage of 17.32, 17.54 & 19.42 with respect to the mentioned banks.

4.1.3 NIM

It is another crucial indicator of a bank's profitability. It's the difference between the interest the bank earns on its assets (loans) and the interest it pays on its liabilities. A bank with a

high net interest margin will be able to raise funds through low-interest obligations and provide assets with high-interest revenue.

Table 6 displays the average NIM of Ethiopian Banks from 2014 to 2020. The average NIM's the Ethiopian banks accounted for during the stated periods is about 4.40%. The average NIM of the state-owned bank was 4.06% which is lower than the average of the Industry. The average NIM of the Private Banks in Ethiopia during the studied period was 4.73 which is better than that of the average rate. The Private Banks has scored a better NIM than that of the state-owned banks in the study period.

The State-Owned bank has shown an increment of 11%, 1%, and 11% NIM for the year 2015, 2016, and 2018 respectively. As per the analysis result, a significant decline has been seen for the year 2017, 2019, and 2020 by 12%, 6%, and 5% respectively. In the year 2017, the lower NIM for the State-Owned bank has been recorded (3.84%). The highest NIM for the State-Owned bank has shown in 2016 which is 4.36% and it is lower than the average industry rate.

The Private Banks have shown an increment of 3%, 5%, 3%, 9% and 2% NIM for the year 2015, 2016, 2017, 2018 and, 2020 respectively. There was a decline of NIM by 8% recorded in the year 2019. During the study period in the year 2014, the least NIM has been recorded (4.2%) and which is less than of the average rate in the industry. The highest ROE for the private banks has shown in 2018 (5.16%) and it was higher than that of the Average rate during the period.

Ownership	2014	2015	2016	2017	2018	2019	2020	Industry Average
State	3.89	4.33	4.36	3.84	4.24	3.98	3.80	**4.06**
Private	4.20	4.33	4.57	4.73	5.16	5.00	5.12	**4.73**
IA	**4.05**	**4.33**	**4.46**	**4.28**	**4.70**	**4.49**	**4.46**	**4.40**

Table 6 NIM ratio of SO& POB's

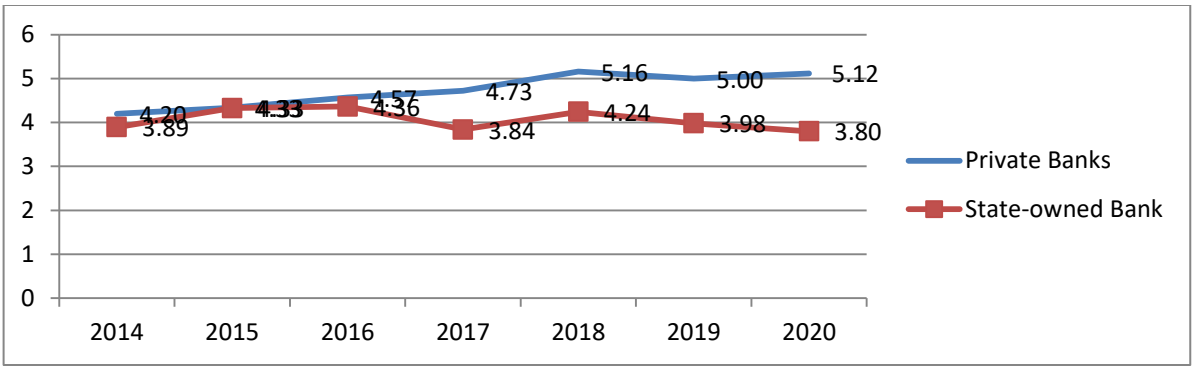

Figure 5 NIM ratio of SO & POB's

Years	2014	2015	2016	2017	2018	2019	2020	PB Average	Rank
Private									
AB	3.88	4.56	5.00	4.53	4.90	4.63	5.32	**4.69**	**8**
AWB	3.31	3.48	4.09	4.32	5.05	5.75	5.37	**4.48**	**11**
BOA	4.14	3.87	4.16	4.63	5.76	5.01	5.20	**4.68**	**9**
BrB	4.27	3.93	4.90	5.21	5.66	5.60	4.50	**4.87**	**6**
BuB	4.88	5.20	5.60	4.55	5.63	4.50	4.30	**4.95**	**5**
CBO	4.63	5.30	5.37	5.50	5.17	4.96	5.55	**5.21**	**1**
DB	3.89	3.20	2.93	4.36	4.45	4.67	5.41	**4.13**	**12**
HB	4.01	4.29	4.09	4.64	4.95	5.26	4.50	**4.53**	**10**
LIB	4.70	4.64	5.11	5.60	5.92	4.75	4.50	**5.03**	**4**
NIB	4.70	4.93	5.15	5.26	5.02	5.44	5.79	**5.18**	**2**
OIB	4.48	4.62	4.80	5.03	5.49	5.62	5.81	**5.12**	**3**
WB	3.92	4.46	4.56	4.75	5.65	5.22	5.05	**4.80**	**7**
ZB	3.80	3.86	3.62	3.05	3.45	3.57	5.23	**3.80**	**13**
	4.20	**4.33**	**4.57**	**4.73**	**5.16**	**5.00**	**5.12**	**4.73**	

Table 7 NIM ratio of POB's

The average NIM of PB's is 4.73 % which is higher than the overall industry average (4.40) and the state-owned bank average (4.06%) recorded during the study period. Cooperative Bank of Oromia, NIB International Bank, Oromia International bank, Lion International Bank, and Buna Bank have shown better performances in NIM ratios which were 5.21, 5.18% 5.12%, 5.03% & 4.95% respectively. A bank with a high net interest margin will be able to raise funds through low-interest obligations and provide assets with high-interest revenue. A higher net interest margin is normally preferable. The lower NIM's has been logged by Zemen bank, Dashen Bank, Awash Bank, Hebret Bank, Bank of Abyssinia and, Abay Bank as showen by Table 7.

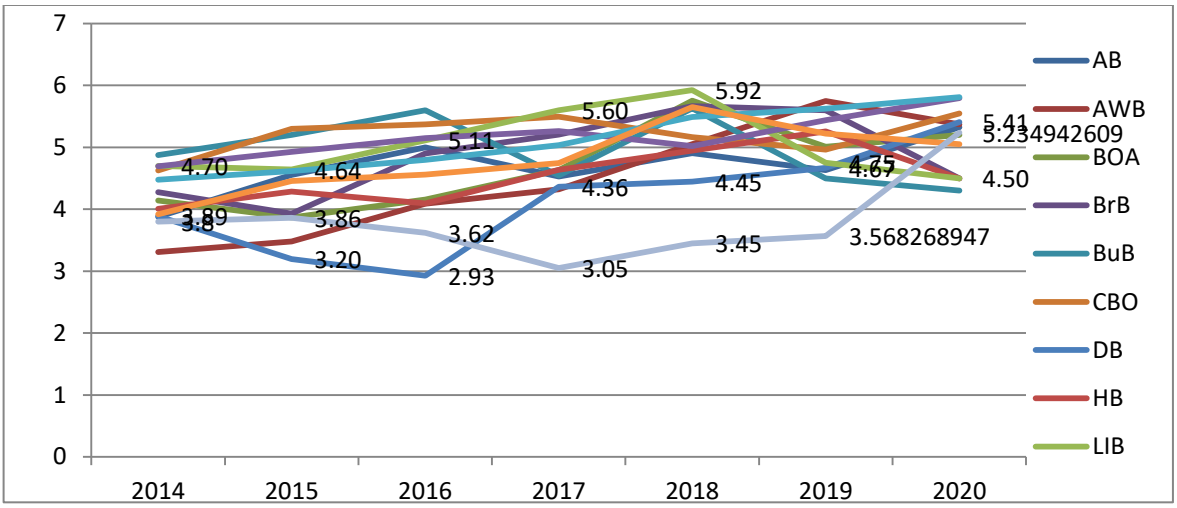

Figure 6 NIM ratio of POB's

4.2 Capital Adequacy

Under this study, it is observed the banks tried to capitalize and they complied with the directive of NBE on CAR. According to Banks Directives No. SBB/50/2011 the capital ratio should be greater than 8% and this enhanced a strong capital base for each bank.

Table 8 CAR ratio of SO& POB's

Ownership	2014	2015	2016	2017	2018	2019	2020	Average
State	14.50	13.20	13.50	29.70	30.00	27.40	22.40	**21.53**
Private	19.05	18.06	19.36	20.63	20.86	18.98	19.46	**19.49**
Average	16.77	15.63	16.43	25.16	25.43	23.19	20.93	20.51

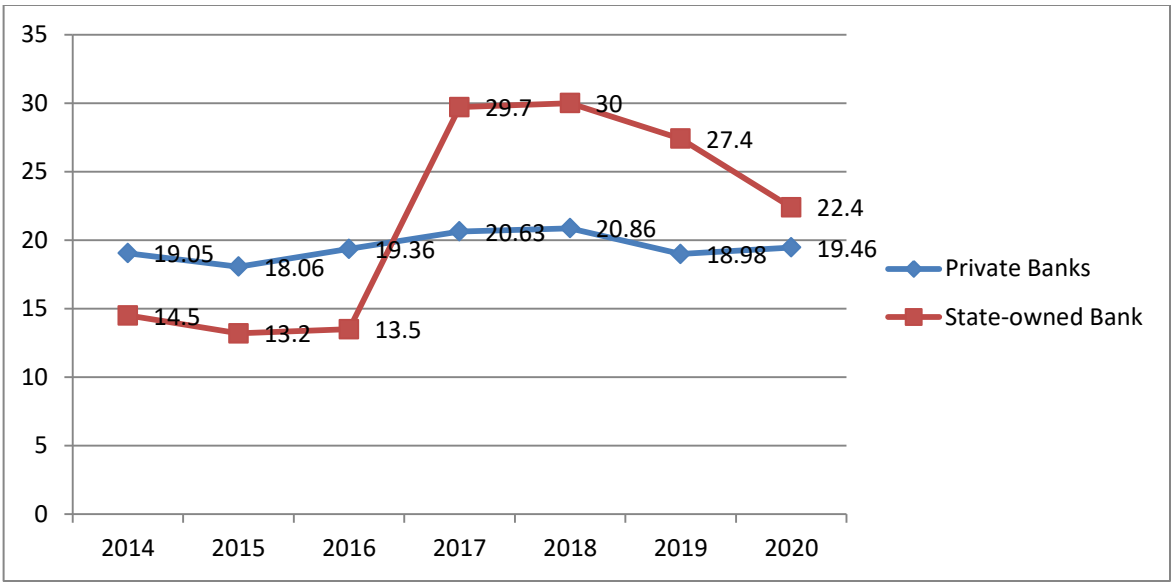

Figure 7 CAR ratio of SO& POB's

Table 8 shows the average CAR of commercial banks working in Ethiopia which were selected for this study from the year 2014 to 2020. The average Industry rate of CAR's of the selected banks accounted for during the stated periods is about 20.51% and which is higher than the standard (8%) set by NBE. The average CAR of the state-owned bank was 21.53 % which is higher than the average of the Industry. The average CAR of the Private Banks in Ethiopia during the studied period was 19.49 % which is a bit lower than that of the average rate but higher than that of the standard set by NBE. The Private Banks has scored a lower CAR than that of the state-owned banks in the study period. The studied banks' CARs were satisfactory, and none of them incurred below the standard set by NBE.

The State-Owned bank has shown a significant increment of 120% during year 2017. The bank has shown a decline of CAR for the year 2015, 2019, and 2020 by 9%, 9% and 18% in respect of the mentioned year. No significant changes have been shown in the years of 2016 & 2019. In the year 2015, the least CAR has been recorded and which was 13.2%. The highest CAR for the State-Owned bank has shown in 2018 (30.00%).

The Private Banks have shown a decrement of CAR from the year 2014 to 2015 by 5% flowing an increment of 7% in the year 2016 & 2017, During the year 2019, the bank has recorded 9% decrement and followed an increment of 3% in the year 2020. In the year 2015

in the PBs, the least CAR has been registered (18.06%) during the study period. The highest CAR for the private banks has shown in 2018 (20.86%) which is far higher than the standard set by NBE.

Table 9 CAR ratio of POB's

Years / Private Banks	2014	2015	2016	2017	2018	2019	2020	PB Average	Rank
AB	18.00	19.00	18.18	17.80	17.18	18.94	16.34	**17.92**	**9**
AWB	13.50	14.00	15.00	18.00	25.00	18.00	16.00	**17.07**	**11**
BOA	17.00	16.00	18.81	15.30	15.62	14.66	16.30	**16.24**	**13**
BrB	19.00	18.00	20.00	26.00	20.00	17.00	18.00	**19.71**	**3**
BuB	18.00	20.00	19.00	18.00	20.00	19.73	18.46	**19.03**	**5**
CBO	17.00	14.00	15.60	16.30	24.00	24.00	27.00	**19.70**	**4**
DB	15.00	14.00	18.00	26.00	19.00	18.00	16.00	**18.00**	**8**
HB	18.00	14.00	17.00	16.00	17.85	17.00	17.00	**16.69**	**12**
LIB	23.50	14.00	15.63	17.04	16.57	14.92	18.00	**17.09**	**10**
NIB	23.60	21.80	21.00	16.00	16.00	14.50	14.90	**18.26**	**7**
OIB	18.00	19.00	18.50	19.74	25.00	14.00	18.00	**18.89**	**6**
WB	17.00	19.00	21.00	22.00	21.00	23.00	20.00	**20.43**	**2**
ZB	30.00	32.00	34.00	40.00	34.00	33.00	37.00	**34.29**	**1**
	19.05	**18.06**	**19.36**	**20.63**	**20.86**	**18.98**	**19.46**	**19.49**	

The average CAR of PB's is 19.49 % which is lower than the overall industry average (20.51%) and the state-owned bank average (21.53%) recorded during the study period. Zemen , Wegagen and Berehan Banks have shown better performances in CAR ratio which were 34.29%, 20.43% & 19.71% respectively. A higher CAR is normally preferable. The lower CAR's has been belonged to Bank of Abyssinia , Hebret Bank, and Awash Banks as shown by Table 9.

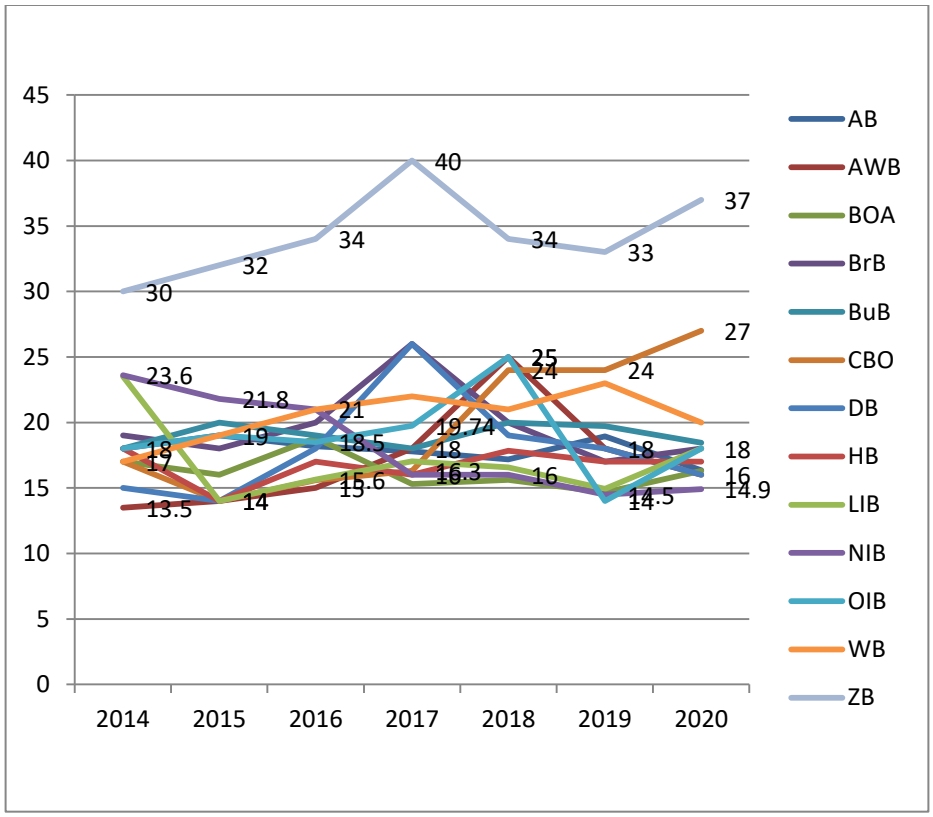

Figure 8 CAR ratio POB's

4.3 Asset quality

Banks have assets in the form of loans to businesses and individuals. The interest earned on these assets is a significant source of income and profit for banks, and the danger of the loans not being repaid is their primary risk. The poorer the loan quality, or "asset quality," the larger the credit risk. Banks must retain more capital to cover the associated credit risk and file bigger provisions to account for the projected losses when their asset quality deteriorates.

Asset quality is a major problem during an economic downturn, as many borrowers default on their loans and the number of non-performing loans rises. To reduce losses and the impact on banks' soundness and lending capacity, banks must always adhere to good lending standards, actively monitor asset quality, and proactively address non-performing loans.

As per NBE, "Non-performing loans " means loans whose credit quality has deteriorated such that full collection of principal and/or interest in accordance with the contractual

repayment terms of the loan or advance is in question. NPLR is the ratio of non - performing loans over total loans. Empirical studies indicated that non – performing loans & advances are inversely related to financial performance. The standard has been set by NBE and it is 5%.

Ownership	2014	2015	2016	2017	2018	2019	2020	Average
State	2.30	2.50	2.46	2.85	2.37	1.79	2.56	**2.40**
Private	2.33	2.46	2.75	2.62	2.75	2.64	2.59	**2.59**
Average	2.32	2.48	2.60	2.74	2.56	2.21	2.58	2.50

Table 10 NPL ratio of SO& POB's

Table 10 shows the average NPL ratio of commercial banks working in Ethiopia which were selected for this study from the year 2014 to 2020. The average Industry rate of NPL ratio of the selected banks accounted for during the stated periods is 2.50% which is quite minimal than of the standard set by NBE and it's a good show on the quality of the loan. The average NPLR of the state-owned bank was 2.4 % which is lower than the average of the Industry and it indicates State owned banks perform better in non-performing loan. The average NPL ratio of the Private Banks in Ethiopia during the studied period was 2.59 % which is a bit higher than that of the average rate but still it's lower than that of the standard set by NBE. The Stat-owned bank has scored a lower NPL ratio than that of the private banks in the study period. Hence The State-Owned Bank has better loan quality management than privately owned banks.

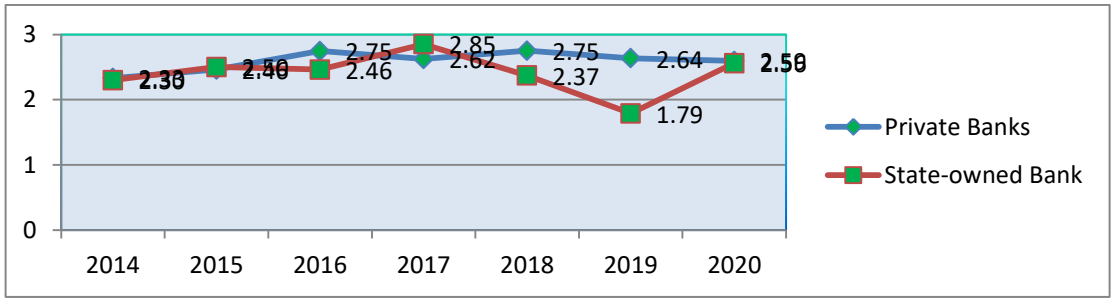

Figure 9 NPL ratio of SO& POB's

The State-Owned bank has shown a better NPL rate in the year 2019. Dramatically it has shown an increment of NPL ratio by 39% and it showed us follow-up needs in their Asset management in the succeeding years.

The Private Banks have shown a lower (a better) NPL rate in the year of 2014 which is 2.33%. However it has shown an increment in the rate of NPL in the following years and they have to give attention to their loan management.

Table 11 NPL Ratios of PB's

Years / Private Banks	2014	2015	2016	2017	2018	2019	2020	PB Average	Rank
AB	2.37	2.12	2.43	1.56	3.30	2.99	1.92	**2.39**	**4**
AWB	2.84	1.48	1.58	1.56	1.85	1.90	1.70	**1.84**	**1**
BOA	1.50	2.70	2.10	1.39	2.10	2.48	3.50	**2.25**	**3**
BrB	2.30	2.40	2.50	2.08	2.78	2.08	2.77	**2.42**	**5**
BuB	2.50	3.20	3.34	2.81	2.50	3.18	3.20	**2.96**	**11**
CBO	1.80	2.89	3.15	3.55	3.55	3.08	3.48	**3.07**	**12**
DB	3.45	3.35	3.23	3.50	3.45	3.01	1.67	**3.09**	**13**
HB	1.50	1.47	1.82	1.75	2.05	2.25	2.07	**1.84**	**2**
LIB	2.01	2.94	3.41	3.09	3.58	2.65	2.85	**2.93**	**10**
NIB	2.30	2.50	3.11	2.49	3.44	2.42	2.25	**2.64**	**6**
OIB	3.50	2.60	3.48	3.32	2.02	2.79	2.72	**2.92**	**9**
WB	1.98	2.03	2.09	3.50	2.63	2.90	3.40	**2.65**	**7**
ZB	2.25	2.32	3.45	3.50	2.53	2.53	2.18	**2.68**	**8**
	2.33	**2.46**	**2.75**	**2.62**	**2.75**	**2.64**	**2.59**	**2.59**	

The average NPL of PB's is 2.59 % which is a bit higher than the overall industry average (2.50%) recorded during the study period. Awash, Hebert, and Birhan Banks have shown better performances rate in NPL which were 1.84%, 1.84% & 2.25% respectively. A lower NPL rate is normally preferred. The higher NPL rate not the better rate during the period has registered by Dashen Bank, Cooperative Bank of Oromia & Bunna Banks which were 3.09%, 3.07%, and 2.93% respectively.

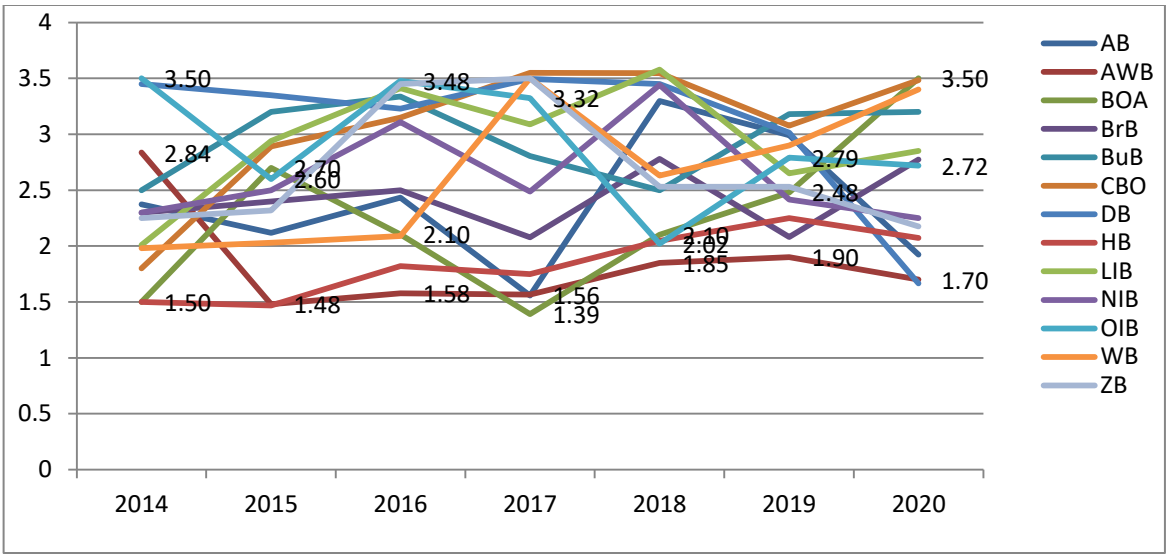

Figure 10 NPL ratio of POB's

4.4 Management Quality Efficiency

Effective management is being noticeable amongst the most essential component behind the banks performance indicators. The bank management efficiency guarantees the growth and survival of bank. **Loan** to **Deposit** ratios shall be best explaining ratio that enable to see the management capacity how effective they are in converting the amount deposited to loan.

Ownership	2014	2015	2016	2017	2018	2019	2020	Average
State	46.01	45.76	47.88	41.89	38.13	36.21	38.24	**42.02**
Private	57.57	64.19	64.24	65.77	64.15	70.62	75.71	**66.04**
Average	51.79	54.97	56.06	53.83	51.14	53.42	56.97	54.03

Table 12 MGTQ Rate of SO & POB's

Table 12 shows the average MGTQ rate of commercial banks working in Ethiopia which were selected for this study from the year 2014 to 2020. The average industry rate of MGTQ of the selected banks accounted for during the stated periods is about 54.03% which indicates from the total deposit collected , average of 54.03 % of it has been given to business entities and individuals as a loan. The average MGTQ rate of the state-owned bank was 42.02 % which is lower than the average of the Industry. The average MGTQ of the Private Banks in Ethiopia during the studied period was 66.04 % which is higher than that of

the average rate. The Private Banks has scored a higher MGTQ rate than that of the state-owned banks in the study period.

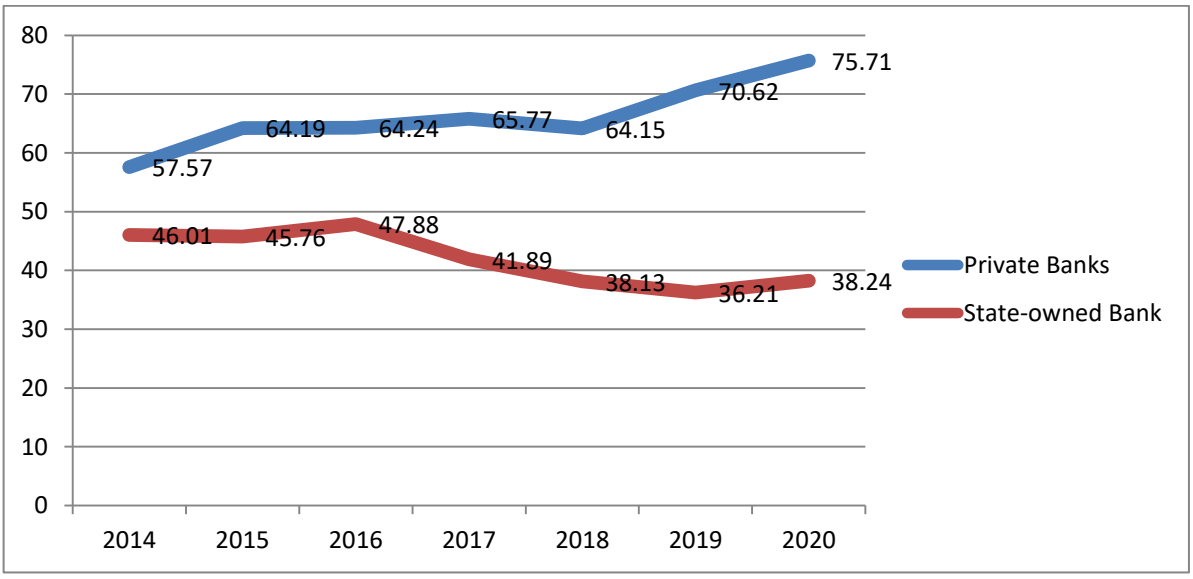

Figure 11 MGTQ ratio of SO & POB's

The State-Owned bank has shown an increment of MGTQ rate by 5% & 6% during year 2016 & 2020 respectively. The bank has shown a decline of the rate for the year 2017 to 2019 by 13%, 9% and 5% respectively. No significant changes have been shown in the years of 2015. In the year 2019, the least rate has been recorded and it was 36.21%. The highest MGTQ rate for the State-Owned bank has shown in 2016 (47.88%).

The Private Banks have shown an increment of MGTQ rate from the year 2014 to 2020. It indicates the banks have been working effective use of their deposit in changing to loan to their customer in respect of the consecutive years. In the year 2014, the least MGTQ rate that has been registered by private banks during the period and it was 57.57%. The highest of it for the private banks have shown in 2020 (75.71%) which is far higher than the state owned bank average rate.

The average of PB's MGTQ rate is 66.04 % which is a bit higher than the overall industry average (64.32 %) recorded during the study period. Bunna, Cooperative Bank of Oromia ,

NIB International and Awash Banks have shown better performances rate in MGTQ which were 71.98%, 70.87, 69.71% & 67.87% respectively.. The lower MGTQ average rate during the period has registered by Zemen Bank, Oromia International Bank and Dashen Bank respectively and they registered 57.76%, 62%, and 63.67% respectively.

Years / Private Banks	2014	2015	2016	2017	2018	2019	2020	PB Average	Rank
AB	60.25	64.60	64.54	62.93	62.75	66.49	73.01	**64.94**	**10**
AWB	56.93	63.99	63.88	68.85	68.63	75.66	77.12	**67.87**	**4**
BOA	57.14	53.93	59.12	67.44	69.75	73.83	78.21	**65.63**	**8**
BrB	58.88	61.99	71.28	70.68	66.20	68.27	76.57	**67.70**	**5**
BuB	63.19	69.87	68.62	70.73	69.79	78.28	83.37	**71.98**	**1**
CBO	68.12	91.45	72.54	69.52	58.37	67.69	68.37	**70.87**	**2**
DB	53.33	57.19	54.83	64.25	64.07	72.37	79.65	**63.67**	**11**
HB	53.92	58.11	63.34	67.95	65.32	72.60	79.01	**65.75**	**7**
LIB	58.13	63.51	67.36	61.68	63.35	70.88	73.02	**65.42**	**9**
NIB	69.71	71.61	61.56	66.33	62.44	69.59	75.99	**68.17**	**3**
OIB	51.00	62.74	61.55	61.47	58.44	65.51	73.28	**62.00**	**12**
WB	54.81	60.49	64.12	66.10	73.81	70.01	77.81	**66.73**	**6**
ZB	43.02	54.97	62.39	57.15	51.06	66.90	68.81	**57.76**	**13**
	57.57	**64.19**	**64.24**	**65.77**	**64.15**	**70.62**	**75.71**	**66.04**	

Table 13 MGTQ ratio of POB's

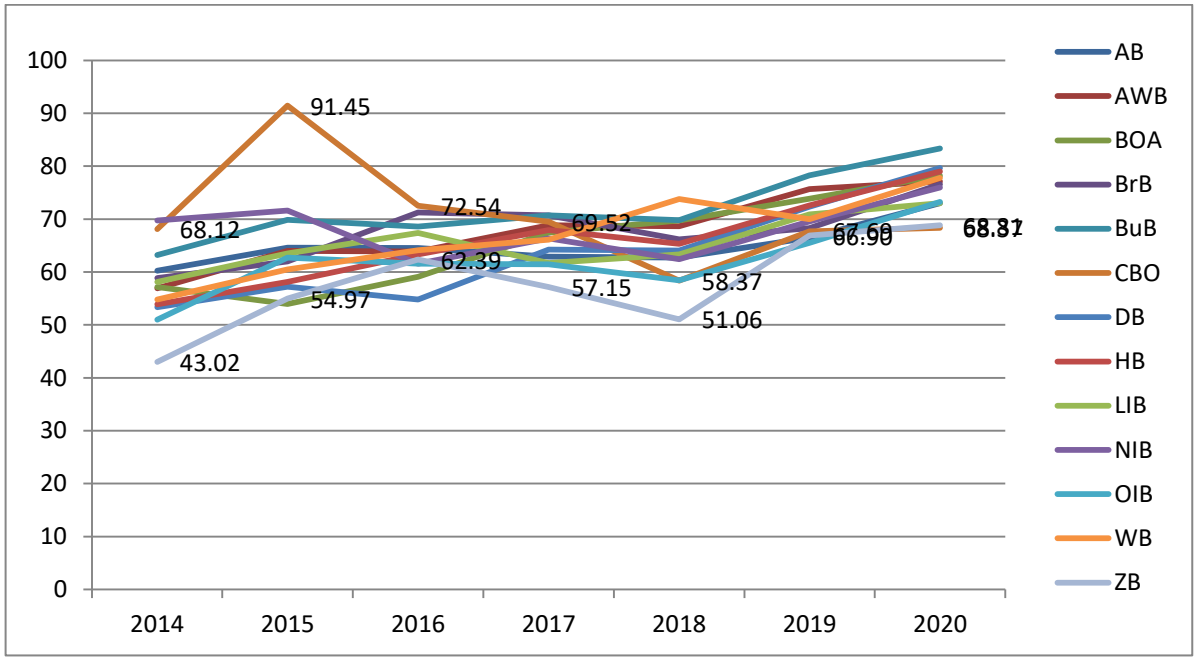

Figure 12 MGTQ ratio of POB's

4.5 Earning Quality

The earning quality is a very important measure that defines the capability of a bank to earn reliably. It determines the profitability of banks and explains its sustainability and progress in earning the future. A popular indicator of earning quality is percentage growth of net profit.

Table 14 EQ ratio of SO & POB's

Ownership	2014	2015	2016	2017	2018	2019	2020	Average
State	17.47	27.29	16.95	18.00	12.26	51.20	13.00	22.31
Private	37.13	26.22	25.34	31.12	35.37	42.60	27.99	32.25
Average	27.30	26.75	21.14	24.56	23.82	46.90	20.50	27.28

Table 14 displays the average EQ rate of Ethiopian Banks from the 2014 to 2020 under taken in this study. The average EQ rate of the Ethiopian banks showed during the stated periods is about 27.28%. The average EQ rate of the state-owned bank was 22.31% which is lower than the average of the Industry. The average EQ of the Private Banks in Ethiopia during the studied period was 32.25% which is better than that of the average rate. The Private Banks has scored a better EQ rate than that of the state-owned banks in the study period.

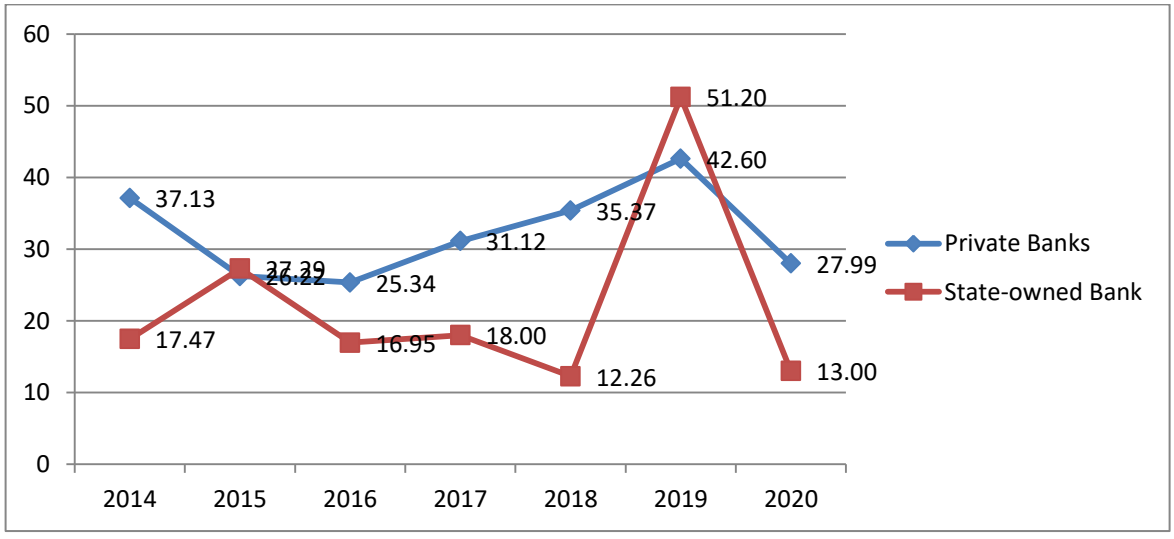

Figure 13 EQ ratio of SO & POB's

The State-Owned bank has shown a significant increment of the growth rate of profit in the year 2015 by 56%. As per the analysis result, a significant decline has been seen for the year 2016, 2018, and 2020 by 38%, 32%, and 75% respectively. A quadruple growth rate of profit has been observed in the year of 2019 comparing its preceding year. During the study period in the year of 2018 the lower EQ rate for the State-Owned bank has been recorded (12.26%). The highest EQ rate for the State-Owned bank has shown in 2019 which is 51.20 % and it is higher than the average industry rate.

The Private Banks have registered an increment of growth in net profit by 23%, 14%, and 20% from year 2017 to 2019 respectively. There was a decline of the rate by 29% & 34% recorded in the year 2015 & 2020. During the study period in the year 2016, the least EQ rate has been recorded (25.34%) and which is less than of the average rate in the industry. The highest net profit growth rate for the private banks has shown in 2019 (42.6%) and it was higher than that of the average rate during the period.

Table 15 EQ ration of POB's

Years / Private Banks	2014	2015	2016	2017	2018	2019	2020	PB Average	Rank
AB	51.58	52.90	16.83	54.50	15.00	70.36	19.50	**40.10**	**1**
AWB	34.70	14.38	15.29	27.82	56.89	63.07	16.49	**32.66**	**7**
BOA	36.01	11.09	30.38	34.32	14.00	75.60	19.86	**31.61**	**8**
BrB	70.75	17.02	65.21	33.97	15.97	39.69	20.77	**37.63**	**3**
BuB	34.97	68.34	39.03	17.65	56.58	47.34	15.97	**39.98**	**2**
CBO	38.30	10.19	15.00	65.00	46.00	25.68	35.00	**33.60**	**5**
DB	17.36	12.39	20.02	12.10	13.99	19.44	51.17	**20.92**	**13**
HB	18.26	11.15	20.51	14.63	47.61	31.15	18.77	**23.15**	**12**
LIB	35.00	49.50	30.29	12.68	45.51	37.96	19.31	**32.89**	**6**
NIB	19.72	17.43	15.78	44.81	19.50	40.05	44.94	**28.89**	**11**
OIB	37.77	43.75	11.95	19.86	63.20	12.49	15.38	**29.20**	**10**
WB	51.20	13.00	16.70	37.20	52.97	12.50	33.96	**31.08**	**9**
ZB	37.04	19.77	32.42	30.05	12.65	78.52	52.77	**37.60**	**4**
	37.13	**26.22**	**25.34**	**31.12**	**35.37**	**42.60**	**27.99**	**32.25**	

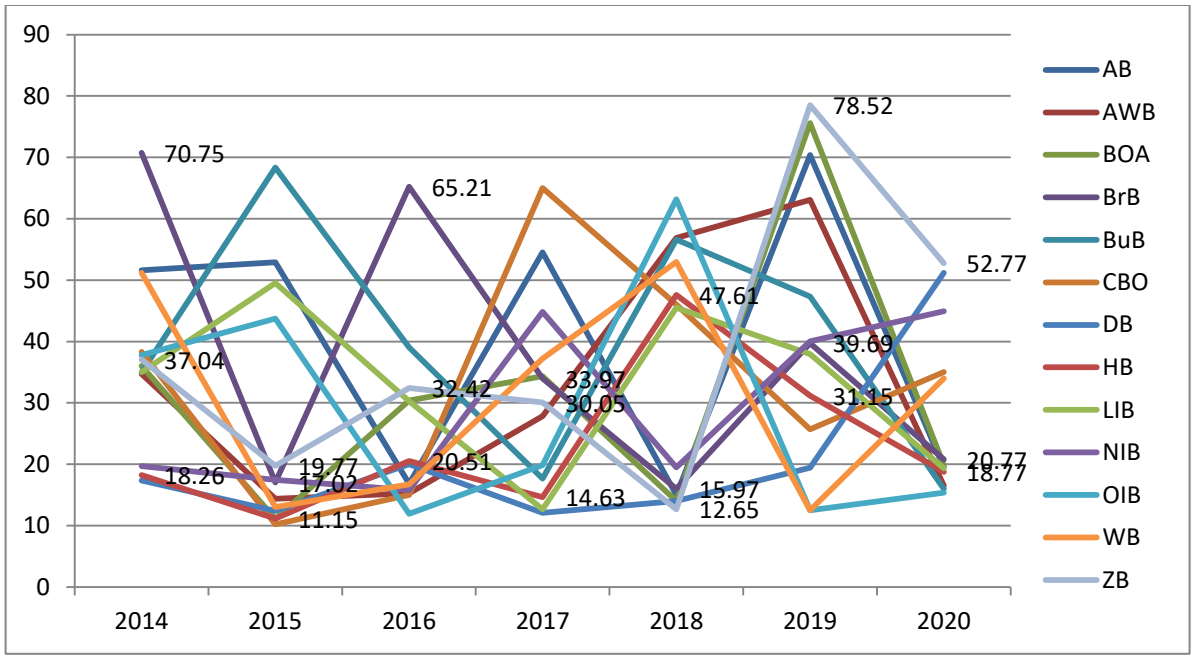

Figure 14 EQ rate POB's

As per table 15, the average of PB's EQ rate was 32.25 % which is a bit higher than the overall industry average (31.54%) recorded during the study period. Abay Bank, Bunna bank, Birhan Bank, and Zemen Bank have scored higher rates than the average rate recorded during the study period. Dashen Bank, Hebret Bank, and NIB International Bank accounted lower EQ rates that were, 20.92%, 23.15%, and 28.89 % respectively and it was lower than the average rate.

4.6 Liquidity

A liquidity ratio is a financial statistic that measures a company's capacity to meet short-term obligations. The liquidity ratio is calculated by dividing a liquid asset by the total asset in this study. It's derived by using the core measure of liquid assets as the numerator and total assets as the denominator, and it shows how much cash is accessible to fulfil planned and unforeseen cash demands. The liquidity level shows a deposit-taking bank's ability to resist shocks to its balance sheet.

Table 16 displays the average LAR rate of Ethiopian Banks from 2014 to 2020 undertaken in this study. The average LAR rate of the Ethiopian banks showed during the stated periods is about 20.22%. The average LAR rate of the state-owned bank was 16.59% which is lower

than the average of the Industry. The average LAR of the Private Banks in Ethiopia during the study period was 23.85%. It is a bit higher than the industry average rate. The Private Banks have scored a better LAR rate than that of the state-owned banks in the study period.

Ownership	2014	2015	2016	2017	2018	2019	2020	Average
State	15.81	16.84	18.08	14.68	18.51	15.79	16.41	**16.59**
Private	30.71	24.61	24.71	23.35	25.09	18.77	19.68	**23.85**
Average	23.26	20.73	21.40	19.02	21.80	17.28	18.04	20.22

Table 16 LAR of SO & POB's

The State-Owned bank has shown an increment of LAR in the years 2015, 2016, 2018 & 2020. A significant increment was observed in the year 2016 (26%). As per the analysis result, a significant decline has been seen in 2017 and, 2019 by 19%, and 15%. During the study period in the year 2017, the lower LAR rate for the State-Owned bank has recorded (14.68%). The highest LAR rate for the State-Owned bank has shown in 2018 (18.51 %). It was higher than the average industry rate.

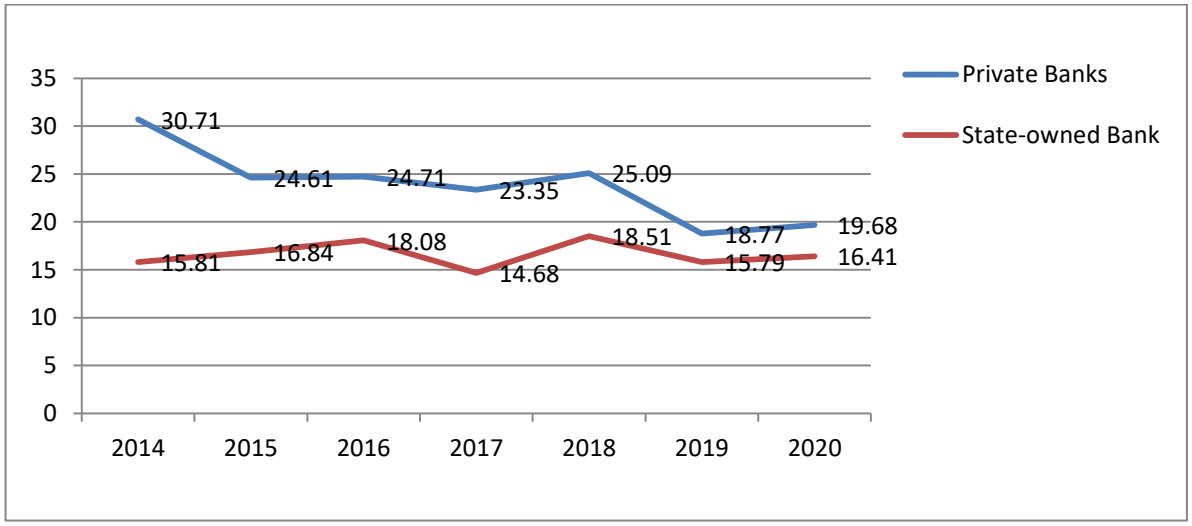

Figure 15 LAR of SO & POB's

The Private Banks have registered a decline in LAR rate by 25% & 20% recorded in the years 2015 & 2019. During the study period in the year 2019, the least LAR rate was recorded (18.77%) by the banks. It is less than the average rate in the industry. The highest

rate of it in the private banks has shown in 2014 (30.71%). It was higher than that of the average rate during the period.

Table 17 LAR of POB's

Years / Private Banks	2014	2015	2016	2017	2018	2019	2020	PB Average	Rank
AB	34.17	24.61	23.34	26.93	30.51	28.13	24.80	**27.50**	**3**
AWB	31.40	19.90	23.87	21.39	25.34	18.20	19.44	**22.79**	**10**
BOA	16.63	25.95	22.69	16.54	17.41	13.91	13.35	**18.07**	**13**
BrB	28.00	20.52	29.39	26.71	24.64	20.43	16.83	**23.79**	**7**
BuB	21.52	23.41	23.27	27.58	26.84	21.58	21.86	**23.72**	**8**
CBO	32.25	31.53	25.13	24.77	29.74	19.86	14.99	**25.47**	**4**
DB	37.00	27.91	30.31	18.87	19.57	13.62	16.34	**23.37**	**9**
HB	35.99	23.07	21.46	17.90	19.63	12.80	15.30	**20.88**	**11**
LIB	37.10	29.58	28.87	30.40	25.93	22.01	26.38	**28.61**	**1**
NIB	24.18	18.39	23.97	19.99	17.97	14.21	15.86	**19.23**	**12**
OIB	37.25	20.92	22.93	24.66	29.15	19.26	19.20	**24.77**	**5**
WB	35.79	23.99	26.03	24.87	19.75	18.22	21.14	**24.25**	**6**
ZB	28.00	30.22	20.00	23.00	39.68	21.74	30.29	**27.56**	**2**
	30.71	**24.61**	**24.71**	**23.35**	**25.09**	**18.77**	**19.68**	**23.85**	

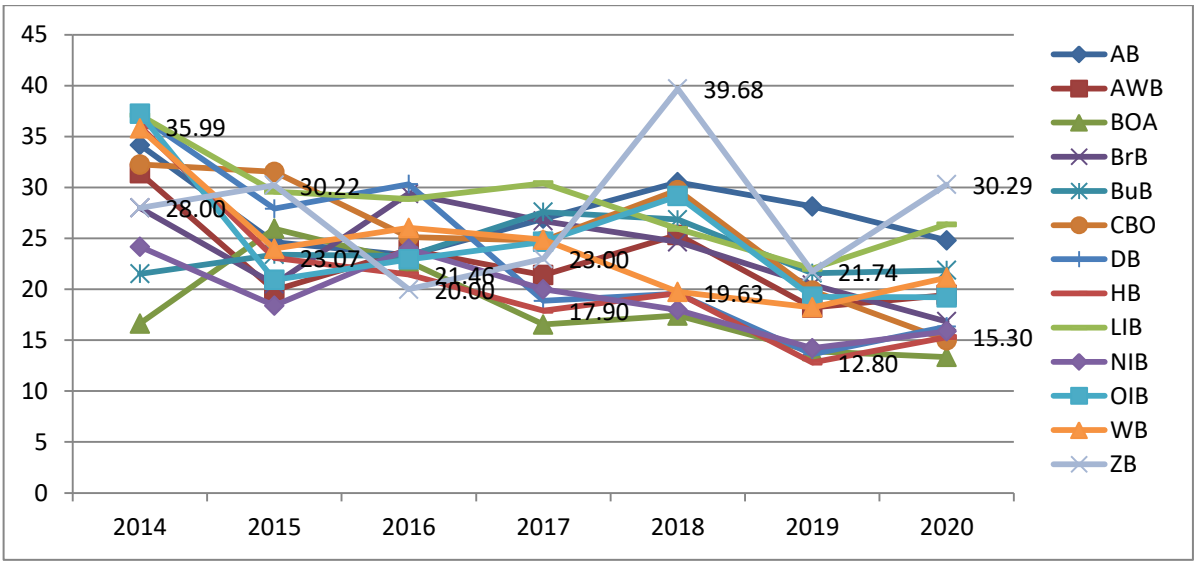

Figure 16 LAR of POB's

As per the table 17, the average of PB's LAR rate was 23.85% which is higher than the overall industry average recorded during the study period. Lion International Bank, Zemen bank, and Abay Bank have scored higher rates during the study period. Table 4:16 shows 2

private banks LAR is lower than the average industry rate (20.22%) however it was better than of the commercial bank of Ethiopia (State-Owned bank) .

4.7. Composite Rating

In order to assess the overall ranking of commercial banks in Ethiopia the composite rate has calculated from the individual ranking of banks for a period of 2013/14 to 2019/20. As per a CAMEL model and based on their Average ranking considering each variables, Berhan Bank and Abay Bank ranked 1st and 2nd respectively. The State owned bank (Commercial bank of Ethiopia ranked 13th and shown the bank scored a low performance considering Camel Model under this study.

Table 18 Composite rate

Banks	CAR	NPL	MGQE	EQ	Liquidity	Rate	Rank
AB	10	4	10	1	3	5.60	2
AWB	12	1	4	7	10	6.80	7
BOA	14	3	8	8	13	9.20	12
BrB	4	6	5	3	7	5.00	1
BuB	6	12	1	2	8	5.80	3
CBO	5	13	2	5	4	5.80	3
DB	9	14	11	14	9	11.40	14
HB	13	2	7	12	11	9.00	11
LIB	11	11	9	6	1	7.60	8
NIB	8	7	3	11	12	8.20	9
OIB	7	10	12	10	5	8.80	10
WB	3	8	6	9	6	6.40	6
ZB	1	9	13	4	2	5.80	3
State bank (CBE)	2	5	14	13	14	9.60	13

4.8. Data analysis

To determine the significant mean differences between state-owned and privately-owned commercial banks, data were analysed using an independent sample T-test. The two-sample (independent groups) t-test is a statistical hypothesis-testing method that determines whether two independent samples' means differ statistically. If the two-sample means are sufficiently different from each other, the population means are said to be different. Data must meet the normal distribution (approximately) of the variable for each group and homogeneity of variances to perform the independent sample T-Test (i.e., variances approximately equal across groups). Kolmogorov Smirnov tests of normality were used to determine if the data

had a normal distribution. The Kolmogorov-Smirnov test of normality yielded the following results. The P-values for NIM, ROA, NPL, and LR are all greater than 0.05, indicating that the data for the mentioned variables is normal and fit for the independent t-test. The P-values for ROE, CAR, MGTQ, and EQ are less than 0.05, and the variables are not normal, so a non-parametric test called Mann-Whitney U test was used.

Table 19 Tests of Normality

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Net interest Margin	.058	98	.200*	.978	98	.096
Return on Assets	.073	98	.200*	.987	98	.460
Return on Equity	.202	98	<.001	.652	98	<.001
Capital Adequacy Ratio	.209	98	<.001	.831	98	<.001
NPL %	.079	98	.148	.954	98	.002
Managment efficency ratio	.101	98	.016	.967	98	.015
Earning Quality	.204	98	<.001	.894	98	<.001
Liquidity ratio (Liquid Asset/Total deposit)	.074	98	.200*	.970	98	.024

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Equal variances across samples (homogeneity of variance) have been tested using Leven's test. If the variance is equal then the study for these variables meets the assumption homogeneity variance. If sig. is greater than .05, Leven's Test is non-significant so equal variances are assumed. As per the table, the probability for ROA is .196, and the t-test equal variances assumed. However, NIM, NPL, and LR's have P-values of .025, .009, and .007 respectively as result equal variances are not assumed.

Table 20 Independent Sample Test

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance				95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Mean Difference	Std. Error Difference	Lower	Upper
Net interest Margin	Equal variances assumed	5.183	.025	-2.506	96	.007	.014	-.66486	.26531	-1.19149	-.13824
	Equal variances not assumed			-5.697	15.728	<.001	<.001	-.66486	.11670	-.91261	-.41712
Return on Assets	Equal variances assumed	1.695	.196	-2.776	96	.003	.007	-.76264	.27471	-1.30794	-.21734
	Equal variances not assumed			-2.223	6.564	.032	.064	-.76264	.34302	-1.58482	.05954
NPL %	Equal variances assumed	7.143	.009	-.758	96	.225	.451	-.18682	.24662	-.67637	.30272
	Equal variances not assumed			-1.339	10.168	.105	.210	-.18682	.13949	-.49694	.12329
Liquidity ratio (Liquid Asset/Total deposit)	Equal variances assumed	7.736	.007	-3.151	96	.001	.002	-7.25861	2.30381	-11.83164	-2.68557
	Equal variances not assumed			-8.915	33.642	<.001	<.001	-7.25861	.81423	-8.91398	-5.60324

As per table 19 of Mann-whitney U test, ROE and MGTQ ratios have a significant mean Rank difference between the state-Owned and privately Owned banks.

Table 21 Mann-Whitney U Test

Ranks

	Bankscodes	N	Mean Rank	Sum of Ranks
Return on Equity	State-Owned	7	77.71	544.00
	Privately owned	91	47.33	4307.00
	Total	98		
Capital Adequacy Ratio	State-Owned	7	51.79	362.50
	Privately owned	91	49.32	4488.50
	Total	98		
Managment efficency ratio	State-Owned	7	4.43	31.00
	Privately owned	91	52.97	4820.00
	Total	98		
Earning Quality	State-Owned	7	34.71	243.00
	Privately owned	91	50.64	4608.00
	Total	98		

Test Statistics[a]

	Return on Equity	Capital Adequacy Ratio	Managment efficency ratio	Earning Quality
Mann-Whitney U	121.000	302.500	3.000	215.000
Wilcoxon W	4307.000	4488.500	31.000	243.000
Z	-2.724	-.221	-4.352	-1.428
Asymp. Sig. (2-tailed)	.006	.825	<.001	.153

a. Grouping Variable: Bankscodes

Table 22 Mean of Variables

Group Statistics

	Bankscodes	N	Mean	Std. Deviation	Std. Error Mean
Net interest Margin	State-Owned	7	4.0638	.24102	.09110
	Privately owned	91	4.7287	.69581	.07294
Return on Assets	State-Owned	7	2.0415	.88737	.33540
	Privately owned	91	2.8042	.68610	.07192
Return on Equity	State-Owned	7	38.7924	20.04597	7.57667
	Privately owned	91	21.2917	4.45700	.46722
Capital Adequacy Ratio	State-Owned	7	21.5286	7.71356	2.91545
	Privately owned	91	19.4865	5.29397	.55496
NPL %	State-Owned	7	2.4047	.32296	.12207
	Privately owned	91	2.5915	.64402	.06751
Managment efficency ratio	State-Owned	7	42.0164	4.60719	1.74135
	Privately owned	91	66.0372	7.87171	.82518
Earning Quality	State-Owned	7	22.3092	13.64927	5.15894
	Privately owned	91	32.2546	18.21590	1.90955
Liquidity ratio (Liquid Asset/Total deposit)	State-Owned	7	16.5880	1.34888	.50983
	Privately owned	91	23.8466	6.05622	.63486

As per the above test results the financial performance variables result has been analyzed and discussed as follows

NIM

Privately-owned commercial banks had significant differences in NIM from the state-owned bank in their means. The private banks had a greater NIM Mean (4.72%) than state-owned commercial banks (4.06%). Thus, Privately-owned commercial banks had significantly higher levels of profit-generating ability from interest-earning investments than the state-owned bank as compared by NIM during the study period. Similarly, Deepak and Abebaw (2011) concluded private sector banks overtook their public-sector counterpart in terms of net interest income margin. In contrast, Claessens, Demirgüç-Kunt, and Huizinga (2001) and Dabla-Norris and Floerkemeier (2007), argued that there were no significant mean differences between the ownership structure and the NIM of the two sub-sectors.

ROA

As per the study, the ROA of privately-owned commercial banks and state-owned commercial banks differed significantly in their means. The ROA Mean of private banks was higher (2.80%) than that of state-owned commercial banks (2.04). As a result, privately-owned commercial banks had a higher level of efficiency in the use of assets than the commercial bank of Ethiopia. The finding of these studies was consistent with Abeneazer (2016) & Deepak and Abebaw (2011). Under their study, they concluded that private sector banks outperformed public sector bank in terms of asset utilization and ability to produce profits.

ROE

The state-owned commercial bank had significantly differed in ROE means from the privately-owned commercial banks. The state-owned bank had a greater ROE Mean (38.79%) than that of the privately-owned commercial banks (21.29%). Thus, the state-owned commercial bank was effective in using the contributions of equity to generate profit. Consistent with this study Wesen and Beyene (2018) concluded that there is a statistically significant difference between the subsectors mean and determined the state-owned bank

had a greater ROE Mean than that of the privately-owned commercial banks. Inconsistent with this study Mozib and Nadia (2020) Argued private bank is in a good position than the stated one regarding ROE.

CAR

The average CAR of the state-owned bank (21.53 %) is higher than the average CAR of the Private Banks in Ethiopia during the studied period (19.49 %). Both subsectors scored a higher average rate than the standard set by NBE (8%). However, based on the Mann-Whitney test result, Privately-owned and State-owned commercial bank's CAR's mean difference was not significant during the study period. Empirical research studies that were done by Wesen and Beyene (2018) & Deepak and Abebaw (2011) had a similar finding with this study as there was no significant difference between the two sectors concerning CAR at a 95% confidence interval as per their respective study.

NPL

The average NPL of the state-owned bank was 2.4 % and it was less than the average NPL ratio of the Private Banks in Ethiopia (2.6 %). The rates for both sectors were lower than that of the standard set by NBE. However, based on the Independent-T test result, Privately-owned and State-owned commercial banks' NPL's mean difference was not significant during the study period. On the Contrary, NPLs were significant for the researchers which were reviewed under this study. According to De Nicolo (2001) and Iannota et al. (2007), government-owned banks have higher NPL than privately-owned banks. Micco et al. (2004) concluded that non-performing loans were more common in government-controlled banks than in privately-owned banks. However, Garcia and Fernandez (2007) found that commercial banks (mostly private banks) are more vulnerable to nonperforming loans than deposit banks (mainly government-owned banks).

MGTQ

Privately-owned commercial banks had a significant mean difference in MGQT from the state-owned commercial bank. The private banks had a significantly greater MGQT Mean (66.03%) than state-owned commercial banks (42.02%). Thus, Privately-owned commercial banks had significantly higher levels of capability and effectiveness in converting the

amount deposited to loan during the study period. On the contrary, Deepak and Abebaw (2011) conclude public sector commercial banks had significantly greater MGTQ performance than the state-owned ones.

EQ

The average EQ rate of the state-owned bank was 22.31% and the average EQ of the Private Banks in Ethiopia during the studied period was 32.25%. Thus, the Private Banks have scored a better EQ rate than that of the state-owned bank in the study period. However, based on the Mann-Whitney test result, Privately-owned and State-owned commercial banks' EQ ratio's mean differences were not significant during the study period. Consistent with this study Morteza et al, claimed that the difference in mean between the two sectors is not significant.

LR

Privately-owned commercial banks had a significant mean difference in LR from the state-owned commercial bank. The private banks had significantly greater LR Mean (23.84%) than state-owned commercial banks (16.59%). Thus, Privately-owned commercial banks had significantly higher levels of capability to meet short-term obligations during the study period. It showed how much cash is accessible to fulfill planned and unforeseen cash demands. The Privately-owned commercial banks had an ability to resist shocks to its balance sheet than the state-owned commercial bank as per this study. Similar with this study Morteza et al, noted a considerable difference in liquidity between private and public banks. According to his study Private Banks outperformed public banks in terms of liquidity. In contrary Abeneazer (2016) stated the performance of state owned-bank was superior to private banks in terms of liquidity.

Chapter Five

Conclusion and Recommendation

5.1 Conclusion

The main purpose of this research is to make a Comparative Analysis of the Financial Performance of State-owned and privately-owned Commercial Banks in Ethiopia for the period starting from July 2013 to June 2020. The analysis relied on secondary data from the Bank's annual financial reports. As per the study, the financial performance in the two sectors had different ranks under the different financial ratios.

The first Proxy used to measure the Profitability of the banks was ROA. ROA of the state-owned bank was lower than that of Private Banks. The studied banks' earnings from Assets were satisfactory, and none of them incurred a net operating loss. The other profitability indicator used to make a comparison between the two sectors was ROE. As per the study, during the studied period, the ROE of the state-owned bank was higher than that of Private Banks. The third Profitability measure used in the study was the NIM ratio. The Private Banks have a better NIM than that of the state-owned banks in the study period. A bank with a high net interest margin will be able to raise funds through low-interest obligations and provide assets with high-interest revenue.

Capital adequacy is better in private sectors which were measured by a ratio of total equity over total risk-weighted assets which showed the ability of private banks is better in meeting unexpected operational losses as compared to state-owned banks. However the mean difference is not significant between the two sectors.

The State-owned bank has scored a lower NPL ratio than that of the private banks in the study period. Hence The State-Owned Bank has better loan quality management than privately owned banks. NPLR is the ratio of non - performing loans over total loans. The standard has been set by NBE and it is 5%. The two subsectors achieved better than the standard which was set by NBE. However the mean difference is not significant between the two sectors.

The Private Banks have scored a better EQ rate than that of the state-owned banks in the study period. It determines the profitability of banks and explains their sustainability and progress in earning the future.

The Private Banks have a better MGTQ than that of the state-owned banks in the study period. As per this study, the bank management efficiency of the private banks shows how they are more efficient to convert the total amount deposited to a loan than that of the State-Owned bank.

Interims of LR the Private Banks have better than that of the state-owned banks in the study period. Private Banks have the capacity to meet short-term obligations that the state-owned banks.

As per the two-sample (independent groups) t-test and Mann-Whitney Test, from the three profitability ratios (ROA, NIM & ROE,) all of them revealed statistically significant differences between state-Owned banks and Private Banks. In this study, during the study period, Private Banks were in a better position in terms of NIM, and ROA ratios. However State owned-commercial bank was better in ROE than that of private banks. MAGTQ and LA/Loan (Liquidity) ratios have shown statistically significant differences in their performance between the state-owned commercial bank and private commercial banks. In this study, during the study period, Private Banks were also in a better position in terms of MAGTQ, and LA/Loan (Liquidity) ratios.

The other variables like CAR, NPL, and EQ didn't show a significant difference between the subsectors during the studied periods.

Thus as per the study from eight financial performance indicators CAR, NPL & EQ ratios didn't result statistically significant difference between the subsectors during the studied periods. The remaining financial performance indicators i.e. ROA, ROE, NIM, MAGTQ, and LR result statistically significant difference in their performance between state-owned commercial bank and private commercial banks. Under this study the financial performance of the Privately-owned commercial banks were better than the state-Owned commercial bank.

5.2 Recommendation

This study compared the Financial Performance of State-owned and privately-owned Commercial Banks in Ethiopia for the period starting from July 2013 to June 2020.The following recommendations were made based on the findings and conclusions reached.

Management of State-Owned bank should work on their Asset Management and its utilization which will enhance banks profitability with its total assets. In addition, the state-Owned bank management should further identify the reason why the net interest margin of the bank was lower than of the average industry. The bank management should identify the problem on NIM whether on how they raise funds or how they provide assets and the related interest rate charged respectively. The Private Banks management should have to look at their equity management and provide the necessary action to improve it.

State-Owned bank resulted in a lower CAR, MGTQ, LATA ratio, and the management should identify the problem with each proxy and work towards their improvements. In addition, NPLR in state-owned banks is higher than private banks and it needs further improvement by the management.

The private banks perform better than the state-owned bank during the studied period in most of the financial performance indicators under this study except EQ. However, they still need to improve their performance and should enjoy the benefit they will get from the market.

5.3 For Future research

In the areas listed below, this study has more research prospective.

- Only private and public sector banks were considered in this study when comparing their financial performance; however, this could be expanded to include micro-financial institutions that make significant contributions to Ethiopia's financial sectors.

- Only quantitative aspects of financial performance are considered in this study; however, there may be some qualitative aspects that can help banks improve their financial performance that should be considered.
- This study is entirely based on secondary data, which could be supplemented by asking top-level management about their financial performance, which could aid the researcher in identifying factors that cause differences in bank financial performance.

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APPENDICES

Appendix

Appendix-I Financial ratios

Name of banks	Ownership	Year	NIM	ROA	ROE	CAR	NPL	MGQE	EQ	Liquidity
CBE	State-owned Ba	**2014**	3.89	3.13	57.00	14.50	2.30	46.01	17.47	15.81
CBE	State-owned Ba	**2015**	4.33	3.19	62.80	13.20	2.50	45.76	27.29	16.84
CBE	State-owned Ba	**2016**	4.36	2.42	60.45	13.50	2.46	47.88	16.95	18.08
CBE	State-owned Ba	**2017**	3.84	1.50	22.32	29.70	2.85	41.89	18.00	14.68
CBE	State-owned Ba	**2018**	4.24	1.01	20.10	30.00	2.37	38.13	12.26	18.51
CBE	State-owned Ba	**2019**	3.98	1.79	23.57	27.40	1.79	36.21	51.20	15.79
CBE	State-owned Ba	**2020**	3.80	1.24	25.30	22.40	2.56	38.24	13.00	16.41
AWB	Private Banks	**2014**	3.31	3.33	27.50	13.50	2.84	56.93	34.70	31.40
AWB	Private Banks	**2015**	3.48	2.73	22.32	14.00	1.48	63.99	14.38	19.90
AWB	Private Banks	**2016**	4.09	2.67	19.11	15.00	1.58	63.88	15.29	23.87
AWB	Private Banks	**2017**	4.32	2.69	23.30	18.00	1.56	68.85	27.82	21.39
AWB	Private Banks	**2018**	5.05	3.13	25.03	25.00	1.85	68.63	56.89	25.34
AWB	Private Banks	**2019**	5.75	3.75	30.16	18.00	1.90	75.66	63.07	18.20
AWB	Private Banks	**2020**	5.37	3.16	23.97	16.00	1.70	77.12	16.49	19.44
NIB	Private Banks	**2014**	4.70	3.16	17.29	23.60	2.30	69.71	19.72	24.18
NIB	Private Banks	**2015**	4.93	2.81	16.28	21.80	2.50	71.61	17.43	18.39
NIB	Private Banks	**2016**	5.15	2.45	15.19	21.00	3.11	61.56	15.78	23.97
NIB	Private Banks	**2017**	5.26	2.80	18.87	16.00	2.49	66.33	44.81	19.99
NIB	Private Banks	**2018**	5.02	2.16	16.23	16.00	3.44	62.44	19.50	17.97
NIB	Private Banks	**2019**	5.44	2.38	18.48	14.50	2.42	69.59	40.05	14.21
NIB	Private Banks	**2020**	5.79	2.74	20.47	14.90	2.25	75.99	44.94	15.86
AB	Private Banks	**2014**	3.88	2.24	21.20	18.00	2.37	60.25	51.58	34.17
AB	Private Banks	**2015**	4.56	3.22	21.47	19.00	2.12	64.60	52.90	24.61
AB	Private Banks	**2016**	5.00	2.71	17.69	18.18	2.43	64.54	16.83	23.34
AB	Private Banks	**2017**	4.53	4.25	28.20	17.80	1.56	62.93	54.50	26.93
AB	Private Banks	**2018**	4.90	1.81	18.00	17.18	3.30	62.75	15.00	30.51
AB	Private Banks	**2019**	4.63	3.66	23.54	18.94	2.99	66.49	70.36	28.13
AB	Private Banks	**2020**	5.32	2.84	18.07	16.34	1.92	73.01	19.50	24.80
BOA	Private Banks	**2014**	4.14	2.52	18.66	17.00	1.50	57.14	36.01	16.63
BOA	Private Banks	**2015**	3.87	2.34	17.62	16.00	2.70	53.93	11.09	25.95
BOA	Private Banks	**2016**	4.16	2.45	17.28	18.81	2.10	59.12	30.38	22.69
BOA	Private Banks	**2017**	4.63	2.36	17.22	15.30	1.39	67.44	34.32	16.54
BOA	Private Banks	**2018**	5.76	1.15	17.50	15.62	2.10	69.75	14.00	17.41
BOA	Private Banks	**2019**	5.01	2.18	16.90	14.66	2.48	73.83	75.60	13.91
BOA	Private Banks	**2020**	5.20	1.77	16.06	16.30	3.50	78.21	19.86	13.35
BrB	Private Banks	**2014**	4.27	3.56	19.08	19.00	2.30	58.88	70.75	28.00
BrB	Private Banks	**2015**	3.93	2.99	16.31	18.00	2.40	61.99	17.02	20.52
BrB	Private Banks	**2016**	4.90	4.58	29.12	20.00	2.50	71.28	65.21	29.39
BrB	Private Banks	**2017**	5.21	3.94	23.67	26.00	2.08	70.68	33.97	26.71
BrB	Private Banks	**2018**	5.66	2.67	16.04	20.00	2.78	66.20	15.97	24.64
BrB	Private Banks	**2019**	5.60	2.76	18.32	17.00	2.08	68.27	39.69	20.43
BrB	Private Banks	**2020**	4.50	2.73	17.78	18.00	2.77	76.57	20.77	16.83
BuB	Private Banks	**2014**	4.88	3.11	20.25	18.00	2.50	63.19	34.97	21.52
BuB	Private Banks	**2015**	5.20	3.58	22.52	20.00	3.20	69.87	68.34	23.41
BuB	Private Banks	**2016**	5.60	3.30	22.83	19.00	3.34	68.62	39.03	23.27
BuB	Private Banks	**2017**	4.55	2.42	17.40	18.00	2.81	70.73	17.65	27.58
BuB	Private Banks	**2018**	5.63	2.76	18.89	20.00	2.50	69.79	56.58	26.84
BuB	Private Banks	**2019**	4.50	3.38	20.40	19.73	3.18	78.28	47.34	21.58
BuB	Private Banks	**2020**	4.30	2.64	15.61	18.46	3.20	83.37	15.97	21.86

Name of banks	Ownership	Year	NIM	ROA	ROE	CAR	NPL	MGQE	EQ	Liquidity
OIB	Private Banks	**2014**	4.48	3.07	22.94	18.00	3.50	51.00	37.77	37.25
OIB	Private Banks	**2015**	4.62	2.83	25.48	19.00	2.60	62.74	43.75	20.92
OIB	Private Banks	**2016**	4.80	2.39	21.63	18.50	3.48	61.55	11.95	22.93
OIB	Private Banks	**2017**	5.03	2.17	20.14	19.74	3.32	61.47	19.86	24.66
OIB	Private Banks	**2018**	5.49	3.64	34.30	25.00	2.02	58.44	63.20	29.15
OIB	Private Banks	**2019**	5.62	2.68	23.66	14.00	2.79	65.51	12.49	19.26
OIB	Private Banks	**2020**	5.81	2.62	20.71	18.00	2.72	73.28	15.38	19.20
DB	Private Banks	**2014**	3.89	3.41	30.67	15.00	3.45	53.33	17.36	37.00
DB	Private Banks	**2015**	3.20	3.12	26.41	14.00	3.35	57.19	12.39	27.91
DB	Private Banks	**2016**	2.93	2.73	23.15	18.00	3.23	54.83	20.02	30.31
DB	Private Banks	**2017**	4.36	2.52	18.98	26.00	3.50	64.25	12.10	18.87
DB	Private Banks	**2018**	4.45	2.28	16.74	19.00	3.45	64.07	13.99	19.57
DB	Private Banks	**2019**	4.67	2.00	15.99	18.00	3.01	72.37	19.44	13.62
DB	Private Banks	**2020**	5.41	2.47	20.27	16.00	1.67	79.65	51.17	16.34
LIB	Private Banks	**2014**	4.70	3.36	17.92	23.50	2.01	58.13	35.00	37.10
LIB	Private Banks	**2015**	4.64	3.75	27.21	14.00	2.94	63.51	49.50	29.58
LIB	Private Banks	**2016**	5.11	3.74	28.03	15.63	3.41	67.36	30.29	28.87
LIB	Private Banks	**2017**	5.60	2.81	22.09	17.04	3.09	61.68	12.68	30.40
LIB	Private Banks	**2018**	5.92	3.09	24.45	16.57	3.58	63.35	45.51	25.93
LIB	Private Banks	**2019**	4.75	3.11	24.68	14.92	2.65	70.88	37.96	22.01
LIB	Private Banks	**2020**	4.50	2.47	21.29	18.00	2.85	73.02	19.31	26.38
HB	Private Banks	**2014**	4.01	2.54	20.03	18.00	1.50	53.92	18.26	35.99
HB	Private Banks	**2015**	4.29	2.14	18.30	14.00	1.47	58.11	11.15	23.07
HB	Private Banks	**2016**	4.09	2.14	18.78	17.00	1.82	63.34	20.51	21.46
HB	Private Banks	**2017**	4.64	1.98	18.13	16.00	1.75	67.95	14.63	17.90
HB	Private Banks	**2018**	4.95	2.29	22.51	17.85	2.05	65.32	47.61	19.63
HB	Private Banks	**2019**	5.26	2.36	23.48	17.00	2.25	72.60	31.15	12.80
HB	Private Banks	**2020**	4.50	2.27	20.88	17.00	2.07	79.01	18.77	15.30
WB	Private Banks	**2014**	3.92	2.90	19.00	17.00	1.98	54.81	51.20	35.79
WB	Private Banks	**2015**	4.46	2.09	22.30	19.00	2.03	60.49	13.00	23.99
WB	Private Banks	**2016**	4.56	1.88	21.86	21.00	2.09	64.12	16.70	26.03
WB	Private Banks	**2017**	4.75	2.80	17.24	22.00	3.50	66.10	37.20	24.87
WB	Private Banks	**2018**	5.65	3.29	22.55	21.00	2.63	73.81	52.97	19.75
WB	Private Banks	**2019**	5.22	2.17	15.30	23.00	2.90	70.01	12.50	18.22
WB	Private Banks	**2020**	5.05	2.45	17.70	20.00	3.40	77.81	33.96	21.14
ZB	Private Banks	**2014**	3.80	3.57	22.25	30.00	2.25	43.02	37.04	28.00
ZB	Private Banks	**2015**	3.86	3.48	21.56	32.00	2.32	54.97	19.77	30.22
ZB	Private Banks	**2016**	3.62	3.31	22.98	34.00	3.45	62.39	32.42	20.00
ZB	Private Banks	**2017**	3.05	3.10	22.79	40.00	3.50	57.15	30.05	23.00
ZB	Private Banks	**2018**	3.45	2.45	18.00	34.00	2.53	51.06	12.65	39.68
ZB	Private Banks	**2019**	3.57	3.57	24.01	33.00	2.53	66.90	78.52	21.74
ZB	Private Banks	**2020**	5.23	4.45	27.10	37.00	2.18	68.81	52.77	30.29
CBO	Private Banks	**2014**	4.63	4.96	38.53	17.00	1.80	68.12	38.30	32.25
CBO	Private Banks	**2015**	5.30	3.32	25.00	14.00	2.89	91.45	10.19	31.53
CBO	Private Banks	**2016**	5.37	1.50	15.19	15.60	3.15	72.54	15.00	25.13
CBO	Private Banks	**2017**	5.50	1.46	15.18	16.30	3.55	69.52	65.00	24.77
CBO	Private Banks	**2018**	5.17	2.20	26.89	24.00	3.55	58.37	46.00	29.74
CBO	Private Banks	**2019**	4.96	1.84	23.22	24.00	3.08	67.69	25.68	19.86
CBO	Private Banks	**2020**	5.55	2.51	28.15	27.00	3.48	68.37	35.00	14.99

Appendix-II- Average Means of Variables

Group Statistics

	Bankscodes	N	Mean	Std. Deviation	Std. Error Mean
Net interest Margin	State-Owned	7	4.0638	.24102	.09110
	Privately owned	91	4.7287	.69581	.07294
Return on Assets	State-Owned	7	2.0415	.88737	.33540
	Privately owned	91	2.8042	.68610	.07192
Return on Equity	State-Owned	7	38.7924	20.04597	7.57667
	Privately owned	91	21.2917	4.45700	.46722
Capital Adequacy Ratio	State-Owned	7	21.5286	7.71356	2.91545
	Privately owned	91	19.4865	5.29397	.55496
NPL %	State-Owned	7	2.4047	.32296	.12207
	Privately owned	91	2.5915	.64402	.06751
Managment efficency ratio	State-Owned	7	42.0164	4.60719	1.74135
	Privately owned	91	66.0372	7.87171	.82518
Earning Quality	State-Owned	7	22.3092	13.64927	5.15894
	Privately owned	91	32.2546	18.21590	1.90955
Liquidity ratio (Liquid Asset/Total deposit)	State-Owned	7	16.5880	1.34888	.50983
	Privately owned	91	23.8466	6.05622	.63486

Appendix III- Test of Normality

Tests of Normality

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Net interest Margin	.058	98	.200*	.978	98	.096
Return on Assets	.073	98	.200*	.987	98	.460
Return on Equity	.202	98	<.001	.652	98	<.001
Capital Adequacy Ratio	.209	98	<.001	.831	98	<.001
NPL %	.079	98	.148	.954	98	.002
Managment efficency ratio	.101	98	.016	.967	98	.015
Earning Quality	.204	98	<.001	.894	98	<.001
Liquidity ratio (Liquid Asset/Total deposit)	.074	98	.200*	.970	98	.024

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

Appendix III- Test of Normality

Independent Samples Test

		Levene's Test for Equality of Variances		t-test for Equality of Means							
						Significance		Mean	Std. Error	95% Confidence Interval of the Difference	
		F	Sig.	t	df	One-Sided p	Two-Sided p	Difference	Difference	Lower	Upper
Net interest Margin	Equal variances assumed	5.183	.025	-2.506	96	.007	.014	-.66486	.26531	-1.19149	-.13824
	Equal variances not assumed			-5.697	15.728	<.001	<.001	-.66486	.11670	-.91261	-.41712
Return on Assets	Equal variances assumed	1.695	.196	-2.776	96	.003	.007	-.76264	.27471	-1.30794	-.21734
	Equal variances not assumed			-2.223	6.564	.032	.064	-.76264	.34302	-1.58482	.05954
NPL %	Equal variances assumed	7.143	.009	-.758	96	.225	.451	-.18682	.24662	-.67637	.30272
	Equal variances not assumed			-1.339	10.168	.105	.210	-.18682	.13949	-.49694	.12329
Liquidity ratio (Liquid Asset/Total deposit)	Equal variances assumed	7.736	.007	-3.151	96	.001	.002	-7.25861	2.30381	-11.83164	-2.68557
	Equal variances not assumed			-8.915	33.642	<.001	<.001	-7.25861	.81423	-8.91398	-5.60324

Appendix IV- Mann-Whitney U Test

Ranks

	Bankscodes	N	Mean Rank	Sum of Ranks
Return on Equity	State-Owned	7	77.71	544.00
	Privately owned	91	47.33	4307.00
	Total	98		
Capital Adequacy Ratio	State-Owned	7	51.79	362.50
	Privately owned	91	49.32	4488.50
	Total	98		
Managment efficency ratio	State-Owned	7	4.43	31.00
	Privately owned	91	52.97	4820.00
	Total	98		
Earning Quality	State-Owned	7	34.71	243.00
	Privately owned	91	50.64	4608.00
	Total	98		

Test Statistics[a]

	Return on Equity	Capital Adequacy Ratio	Managment efficency ratio	Earning Quality
Mann-Whitney U	121.000	302.500	3.000	215.000
Wilcoxon W	4307.000	4488.500	31.000	243.000
Z	-2.724	-.221	-4.352	-1.428
Asymp. Sig. (2-tailed)	.006	.825	<.001	.153

a. Grouping Variable: Bankscodes