COMPARING FINANCIAL PERFORMANCE OF STATE OWNED COMMERCIAL BANK WITH PRIVATELY OWNED COMMERCIAL BANKS IN ETHIOPIA

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ABSTRACT

The main objective of this study is to examine the effect of ownership structure on financial performance of Ethiopian commercial banks. Hence, the financial performance of state owned commercial bank was compared with privately owned commercial banks in Ethiopia based on key financial performance measures. In order to achieve the stated objective, the study adopts a quantitative research approach by using financial ratio analysis and test for means equality analysis techniques. Samples of fifteen commercial banks were selected based on the year of establishment. Audited financial statement data covering from 2011 to 2017 analyzed. The result reveal that ROEs of public sector bank was higher than those of private banks but the overall performance of state owned bank was not observed sound because other financial ratios including ROA, LDR, CDR, CAR and NIM, of most of the private banks were found superior. Other findings of the study show that there is a significance difference between the financial performance measures like ROE, CDR, LDR, CAR, EIR and NIM between states owned CBE and the privately owned banks in Ethiopia. In terms of ROA, not statically significant difference between state owned and private commercial banks in Ethiopia over the studied period.

KEY WORDS

financial ratio analysis, banks, *t*-test, correlation, descriptive analysis

JEL CODES

G21, M41, N27, N20

1   INTRODUCTION

Financial system is serving as back bone in a country and acts as good facilitator for financial institutions. Financial institutions play vital role for the development and progress of country's economy. Strong financial system promotes investment by financing productive

business, mobilizing savings, efficiently allocating resources and facilitating trade activities. McKinnon (1973) and Levine (1997) mentioned that an efficient financial systems are critical to reduce information and transaction cost. Consequently, financial institutions are keys for growth and efficient capital allocation (Levine, 2005). From the financial institutions, banks are one of the principal units in financial ecosystem which determine its prosperity and consequently that of countries economy as well. Accordingly, Schumpeter (1934) noted that banking sector is the main source of fund for long term investment and the sector is the foundation of economic growth.

A commercial bank's performance is examined for various reasons. Bank regulators identify banks that are experiencing severe problems so that they can be remedied. Shareholders need to determine whether they should buy or sell the stock of various banks. Investment analysts must be able to advise prospective investors on which banks to select for investment. Commercial banks also evaluate their own performance over time to determine the outcomes of previous management decisions so that changes can be made where appropriate. Without persistent monitoring of performance, existing problems can remain unnoticed and lead to financial failure in the future.

1.1   Commercial Banks in Ethiopia

The major financial institutions operating in Ethiopia are banks, insurance companies and microfinance institutions. Financial system in Ethiopia is determined by banks where the banking systems account for around 88.33 percent of total capitals of the financial sector in 2018. The total capital of the banking industry reached about Birr 85.5 billion (about USD 2.98 billion) by the end of June 2018 National Bank of Ethiopia (NBE, 2018). Ethiopia has mixed banking system comprising state- and private-owned banks. The number of banks still remained 18, of which two state-owned banks including Commercial Bank of Ethiopia (CBE) and Development Bank of Ethiopia (DBE) and sixteen private commercial banks. Regarding

to the share of capital, private banks jointly accounted for 39.9 percent of the total capital, with the remainder 51.1 percent by CBE and 9 percent being held by DBE. The share of private banks in total branch network was 68.8 percent in 2017/18 (NBE, 2018). Total number of branch banks operating across the country is 4757. Out of these branches, 35.3 percent of the total bank branches were located in Addis Ababa. As it is bank branch to population ratio stood at 1 : 20286 people in 2017/18 (NBE, 2018). This shows the fact that Ethiopia indeed, is under-banked country with limited outreach.

During the time period, the banking system collected Birr 111.6 billion in loans. Of the total loan collection, the share of private banks was Birr 65.6 billion (58.8 percent) the remaining is collected by public banks. However, total outstanding credit of the banking system (excluding credit to the central government about 452 billion or 57% of total credit) increased to Birr 394.554 billion at the end of June 2018. The total deposit in all commercial banks reached 816.2 Billion on Feb. 2019 (Ethiopian reporter, April 21, 2019), out of it Commercial bank of Ethiopia accounted 60.8%.

Currently operating commercial banks in Ethiopia are listed as: Abay Bank (AB), Addis International Bank (AdIB), Awash International Bank (AIB), Bank of Abyssinia (BOA), Birhan International Bank (BrIB), Bunna International Bank (BuIB), Commercial Bank of Ethiopia (CBE), Cooperative Bank of Oromia (CBO), Dashen Bank (DB), Debub Global Bank (DGB), Development Bank of Ethiopia (DBE), Lion International Bank (LIB), Enat Bank (EB), Nib International Bank (NIB), Oromia International Bank (OIB), United Bank (UB), Wegagen Bank (WB), Zemen Bank (ZB), and PBA (Private Bank Average) is used as an abbreviation.

1.2   Statement of the Problem

Bank financial performance gets a great deal of attention in the finance literature by considering that banks serve as a key role in the economy. The financial performance of banks is expressed in different ways like via profitability,

concentration, efficiency, productivity and so on. Firms with better performance are better able to resist negative shocks and contribute to the stability of the financial system. Athanasoglou et al. (2008) as a result the financial performance of the banking sector has been one of the hot issues in financial environment. Since the banking industry plays a major role in the financial system of the countries and supports the competitiveness of the financial institution. It is reasonable to expect that the performance of a bank is affected by its ownership structure or origin of capital.

There is no foreign bank involved in Ethiopia so the financial markets leave to only domestic private and state-owned banks. As a result, currently the banking sector in Ethiopia is characterized by little and insufficient competition and perhaps can be distinguished by its market concentration towards the big government commercial banks and having undiversified ownership structure (Lelissa, 2007). Ethiopian law prohibits non-Ethiopian citizens from investing in Ethiopian Financial Institutions (NBE, 2016).

In Ethiopian banking sector, regardless of the series of changes and liberalization measures undertaken, which are expected to change the ownership structure, concentration, and profitability and in general its performance of the sector as compared to the situations prevalent before the reform period, currently the country's banking sector is characterized by the existence of high concentration (low competition) and operational inefficiencies; which is a clear sign of unimpressive performance of the sector (Lelissa, 2007). Related to this, Kefela (2008) also noted 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. Furthermore, even if the financial sector reform aims at improving profitability, efficiency and productivity, by adopting a strategy of gradualism, Ethiopian banks' performance has still remained poor with substantial gaps in service delivery to private agents, particularly to the rural and lower-income population (Lelissa, 2007).

In particular, Kapur and Gualu (2012) revealed that private sector banks had better profitability, asset quality and capital adequacy performance measurements, while state-owned banks were better in cost management indicator. In terms of liquidity, no difference was observed between the private and government banks. On the contrary, Yaregal (2011) found the performance of state owned-banks is superior to private banks in Ethiopia in terms of profitability, liquidity and solvency. He concluded that privatization is not the only solution to improve poor performance of state ownership rather introduction of competition can substantially get better performance of both state and private ownership.

In general, there are no universally accepted findings about the effects of ownership structure on financial performance of banking sector, because countries different each other by their economic systems, financial systems, political systems and operating environments. Thus, in this study the researchers examined financial performance differences between the ownership structure of Ethiopian commercial banks by using variety of variables (profitability, liquidity, asset management, efficiency and capital adequacy) and comparing the financial performance of selected banks. Even though, several of earlier studies have made to add their own contribution to the literature and stated their own findings, they were inclined towards to the transition and developed economy, and less developing countries including Ethiopia received little attention in this arena. Consequently the conclusion and finding of the study in one country may not serve to another.

1.3   General Objective

The general objective of the study is to compare the financial performance of private commercial banks and state owned commercial banks in Ethiopia over the period July 2011 to June 2017.

Specific Objectives

Specific objectives that are derived from the general objective and needed to be addressed in the studies are:

- To examine the financial performance of commercial banks in Ethiopia by using key financial ratios.

- To compare the profitability of private banks with state owned bank in Ethiopia.
- To compare the liquidity of private banks with state owned bank in Ethiopia.
- To compare the capital adequacy of private banks with state owned bank in Ethiopia.
- To compare the efficiency of private banks with state owned bank in Ethiopia.

2   EMPIRICAL LITERATURE

A number of studies have been examined the influence of ownership structure on financial performance on various sectors including banking industry around the world. Most of the studies conducted on either a particular country or a number of countries case. Thus, the following section reviews the empirical literature related to the effect of ownership structure on financial performance with a particular focus on those that have been conducted more recently, as far as they are the best indicators of the current situation.

In 2007, Unal et al. (2007) studied a comparative profitability and operating efficiency analysis of state and private banks in turkey and suggests that state owned banks are as efficient as Private Banks and even more efficient at some aspects. Thus, it raises the question of "Whether to privatize banks or not?" in the studied period 1997–2006. Iannotta et al. (2007) compared the performance and risk of a sample of 181 large banks from 154 European countries over the 1999–2004 periods and evaluated the impact of alternative ownership models, together with the degree of ownership concentration, on their profitability, cost efficiency and risk.

Chen et al. (2005) found that state banks outperformed other types of banks. According to authors some previous researchers like La Porta et al. (2002) and Barth et al. (2004) believe that government banks do more harm than good to the economy because the hidden political agendas prevent them from fulfilling their expected role of economic prosperity. In the developing countries where the legal tier is weak the possibility of corruption in government banks cannot

be ruled out. On the other hand, researchers such as Yeyati et al. (2004) believe that government banks should not be judged solely on profitability but also on the way they so the economic conditions of any country. But a research by Altunbas et al. (2001) studied bank ownership and efficiency in German Banking market. They found that little evidence to suggest that privately owned banks are more efficient than their mutual and public-sector counterparts

Another research by Omran (2007) analyzes both private and state banks' relative performances and also evaluates bank privatization process in Egypt by comparing the pre- and post privatization performances of privatized banks. He addressed the financial and operating performance of a sample of 12 Egyptian banks from 1996 to 1999, during which time control was transferred from the state to the private sector. Following privatization, the results indicate that some profitability and liquidity ratios for private-owned banks decline significantly, but other performance measures were virtually unchanged. Antithetically, the results indicate that the relative performance changes of private-owned banks were better than those of mixed banks with majority state ownership but worse than those of banks with other ownership forms (state-owned and mixed private ownership). Yet, the study finds a strong evidence to support the theory and previous empirical findings that banks with greater private ownership perform better. Therefore, the author reports that private banks outperform government banks.

Similarly, García-Herrero et al. (2009) found that less concentrated banking system as well as

lower government intervention increases bank profitability. They concluded that companies under control of government as shareholder are valued lower than the comparable companies under control of non-government shareholder. In this regard, many authors present evidence justifying the view that state-owned enterprises are less efficient than private firms.

Ben Naceur and Goaied (2008) investigates the impact of banks' characteristics, financial structure and macroeconomic indicators on banks' net interest margins and profitability in the Tunisian banking industry for the 1980–2000 period. The empirical findings suggested that private banks were relatively more profitable than their state-owned counterparts. Moreover, banks which hold a relatively high amount of capital and higher overhead expenses tend to exhibit higher net-interest rate margin and profitability levels, while size was negatively related to bank profitability. During the period under study, they found that stock market development had a positive impact on bank profitability. The result indicated that macroeconomic conditions had no significant impact on Tunisian banks' profitability.

The research conducted by Hsiao et al. (2010) emphasized and analyzed the operating efficiency changes in the pre- and post-reform period. For the purpose of their study the researchers used a samples of 40 Taiwanese banks over the period of five years from 2000–2005 and Data Envelopment Analysis (DEA) tool used. The results of DEA showed that banks faced lower operating efficiency during First Financial Restructuring reform era (2002–2003) in comparing to pre-reform period (2000–2001), yet in the post-reform period (2004–2005) faced higher operating efficiency. The results also shown that banks with a higher non-performing loan ratio have lower operating efficiency mean while banks with a high capital adequacy ratio have higher operating efficiency. In the same year Cornett et al. (2010) uncovered the pattern of changing performance difference between state owned and private banks around the Asian financial crisis.

On the same country, Lin and Sum (2012), using a panel of Taiwanese bank data over the period from 1997–2010, the paper conducts a joint analysis to examine the static, selection, and dynamic effects of ownership on bank performance. Simultaneously, the researchers attempt to determine whether politics had a significant effect on the performance of public banks, by incorporating dummy explanatory variable that represents a pan-public bank in a major election year was also included. The results indicate that both the pure-public banks and the private banks experiencing mergers and acquisition significantly outperform the pure-private banks in most performance measures (static and selection effects). Private Banks experiencing mergers and acquisition had consistently ascending non-performing loan ratios in both the short and long term, yet four other performance measures display a short-term improvement but a long-term deterioration after the mergers and acquisition (dynamic effects). They found that public banks undergone privatization had particularly poor loan growth rates which improve significantly following the privatization, in addition all other performance measures presented short-term deterioration but long-term improvement after the privatization (selection and dynamic effects). Banks participated or acquired by foreign banks perform significantly outperform than the pure-private banks in all five performance measures, yet had all measures show short-term deterioration but long-term improvements following the ownership change (selection and dynamic effects) indicating that foreign participation and acquisitions had a positive effect on bank performance. Finally, the pan-public banks have ascending NPL ratios in the major election years indicated that politics do matter.

A research done by Jiang and Yao (2010) pays special attention to the ownership, selection effect and dynamic effect of governance changes on bank performance. For the purpose of their study the researchers used a samples of Chinese banks over the period of thirteen years from 1995–2008 and one-step stochastic frontier analysis (SFA) approach was employed. The results of SFA approach showed that Joint Stock Commercial Banks and City Commercial Banks (the two private-owned banks) out-

perform State-owned Commercial Banks. The results also showed that bank efficiency has improved over the data period 1995–2008, since the estimated average cost and profit efficiencies were 74% and 63% respectively. Moreover, the researchers found that foreign ownership participation has a negative effect on profit efficiency in the long-term while initial public offerings (IPOs) improve bank profitability in the short-term. The researchers recommended that bank reforms in China should be done to tackle the current financial crisis.

Another research done by Qasim et al. (2012) found mixed results. They was made an attempt in order to compare the financial performance of public and private banks of Pakistan for a samples of twenty-five private and two public-owned commercial banks during the period of 2006–2011. From the sampled period, the researchers found that public and private banks have different ranking based on different financial ratio. For instance, on the basis of ROE, ROA, breakup value per share, cash and cash equivalent deposit to total assets, non performing loans (NPLs) to gross advances and NPLs to equity ratios, the performance of public banks were at first while private banks are at second. On the other hand, on the basis of investment to total assets, total liabilities to total assets, advances to total assets, net interest margin, interest expenses to total income, spreads and capital ratios, the private banks are at first while public banks were second.

On the same country, the primary research question of the study conducted by Haider et al. (2013), was to find out, whether the privately owned banks perform better than state owned banks? To answer their research question performance of both types of banks i.e. private and state owned banks was examined. These findings are very much consistent with some of the other researches which showed no performance difference between state-owned and private-owned banks, like Micco et al. (2007), Unal et al. (2007) etc.

Aswini et al. (2013) studied the soundness and efficiency of twelve public and private sector banks based on market cap. CAMEL approach has been used over a period of twelve years from 2000–2011, and they found that private sector banks were at the top of the list, with their performances in terms of soundness being the best. Public sector banks like Union Bank and SBI have taken a backseat and display low economic soundness in comparison. On the other hand, they measure the efficiency change of selected banks operating in India during 2010–2012. By using frontier based non-parametric technique, Data Envelopment Analysis (DEA), provides significant insights on efficiency of different banks and places private sector ones at an advantage situation and thereby hints out the possibility of further improvisation of most of the public sector banks.

Rahman and Rejab (2015) suggested that the bank performance varies with different types of ownership structure. Ozili and Uadiale (2017) investigated whether ownership concentration influence banking profitability in a developing country context. They found that banks with high ownership concentration have higher ROA, higher NIM and higher recurring earning power while banks with dispersed ownership have lower ROAs but have higher ROE.

Gupta and Sundram (2015) worked to compare the financial performance of selected public and private sector banks in India from 2009–10 to 2013–14. The study found that overall performances of private sector banks are better than public sector bank. A number of other significant contributions to the study of comparing bank performance with respect to ownership structure listed as (Sathye, 2005; Shankar and Sanyal, 2007; Chaudhary and Sharma, 2011; Waleed et al., 2015).

2.1 Review of Previous Related Studies in Ethiopia

Geda (2006) examines liberalization program by analyzing the performance of the sector before and after the reform. His study notes that given the recent nascent development the financial sector in the country, the relatively good shape in which the existing financial institutions find themselves, and given that supervision and

regulation capacity of the regulating agency is weak, the government's strategy of gradualism and its overall reform direction is encouraging. However, he argue for charting out clearly defined time frame for liberalization and exploring the possibility of engaging with foreign banks to acquire new technology that enhance the efficiency of the financial sector in general and the banking sector in particular.

Similarly, Kiyota et al. (2007) focus on issues of financial sector liberalization in Ethiopia, with reference in particular to the Ethiopian banking sector. They identified two factors that may constrain Ethiopia's financial development. One was the closed nature of the Ethiopian financial sector in which there are no foreign banks, a non-competitive market structure, and strong capital controls in place. The other was the dominant role of state-owned banks. Their observations suggested that the Ethiopian economy would benefit from financial sector liberalization, especially from the entry of foreign banks and the associated privatization of state-owned banks.

Likewise, Lelissa (2007) aimed to assess the impact of financial liberalization on the ownership structure, market concentration and profitability performance of the Ethiopian banking industry. He found out that the reform has brought a lot of remarkable changes on the structure and performance of the banking sector as compared with the situations prevalent before the reform period. However, the reform has restricted the advantages that could be obtained from diversified ownership structure via prohibiting operation of foreign banks and participation of the private sector to the ownership of government banks. Moreover, the researcher found that the profitability of the industry has also shown a tremendous improvement after the reform measure has been taken. However, the existing government banks are enjoying having the higher share of profit from the industry and still the pattern of the industry profit is following the profitability structure of the giant bank, CBE, as mentioned by him. Finally, he identified and recommended areas that need further liberalization measures so as to enhance the performance of the industry.

More specifically, Rao and Lakew (2012) examine the relationship between cost efficiency and ownership structure of commercial banks in Ethiopia using data envelopment analysis (DEA). They found that the average cost efficiency of state-owned commercial banks over the period 2000–2009 was 0.69, while that of the private commercial banks is 0.74. The aggregate cost efficiency of Ethiopian commercial banks was found 0.73. The Kruskal-Wallis (K-W) non-parametric test indicates that the difference between cost efficiency of the state-owned and private commercial banks was statistically insignificant. They also found little statistical evidence to conclude that the state-owned commercial banks were less cost efficient than the private commercial banks. Thus, ownership structure has no significance influence on the cost efficiency of commercial banks in Ethiopia. In addition, the study has identified bank size, loan loss reserve to total assets, market share, market concentration, capital adequacy, and return on average assets as the key factors that influence the cost efficiency of the commercial banks.

Another study done by Kapur and Gualu (2012) was examined the impact of ownership structure on performance of commercial banks in Ethiopian. They used eight Ethiopian commercial banks over the period from 2001–2008. They have employed both parametric and nonparametric tests of differences among public and private sector banks. Their results revealed that private sector banks had better profitability, asset quality and capital adequacy performance and public sector banks were better in cost management measures. In terms of liquidity, there was no difference observed between the private and public sector bank.

On the contrary, Yaregal (2011) examined the performance of banks by classifying in terms of their ownership type to explore the effects of ownership on performance over the period from 2005–2010. The researcher begin by documenting the extent of, theoretical rationale and measured performance of state and private owned banks around the world, and then assessed the performance of banks in Ethiopia. His empirical evidence clearly shows that state owned banks

are superior in performance than privately owned banks, and from eleven ratios used to measure performance seven supports for state ownership and the remaining supports private ownership. In case of growth pattern of deposit, loan and asset, the researcher founded better trends in private banks than state owned banks.

Eshete et al. (2013) assessed the trend, nature, and extent of competition in the Ethiopian banking industry using qualitative, descriptive and econometric techniques. They mentioned that the financial system in Ethiopian is dominated by banking industry, and yet, it is amongst the major under-banked country in the globe. Moreover, they mentioned that Ethiopian banking industry can be characterized as highly profitable, concentrated and moderately competitive. In addition they mentioned that CBE seizes quasi-monopoly power. In terms of contestability, they indicated that the Ethiopian banking industry could be characterized as incontestable as entry in the industry was difficult; due to legal, technological and economic factors. Competition in terms of price

was relatively weak in the Ethiopian banking industry.

Worku (2015) found that even if private-owned banks have shown some superiority, the difference is not that much greater in Ethiopia. This is because ownership structure may have very limited impact on performance of banks in Ethiopia which are operating in environments that are weakly competitive and highly regulated.

Rao and Desta (2016) disclosed ownership type have no significance impact on the financial performance of Ethiopian commercial banks. Moreover, Dinberu and Wang (2017) showed there is a significance outperformance of state owned commercial banks than privately owned competitors in Ethiopia over the year 2005–2014. And hence, examining the impact of ownership on the financial performance of banking sector in Ethiopia, where the financial system is at its infant stage and closed for foreign investors have significant importance in policy directions and also to the addition of the existing literature in the area.

3 METHODOLOGY

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. In order to reach a complete analysis, the financial statements of the bank such as income statement, balance sheet and statement of cash flow was analyzed. The financial ratios computed as an indicator to compare the financial position of the banks. Financial ratios have long been considered as good predictors of business failure and are proved to accurately discriminate between failed and non-failed companies several years prior to failure (Moscalu and Vintila, 2012; Dang, 2011). For this reason, essential variables which are highly correlated with the financial performance for the studied banks, have given a complete picture of how the bank carries on its operations which influence the financial position and contribute enhancing the overall performance.

Main source data for the paper are the annual audited financial reports of each concerned bank included in the studies. Four main financial statements are used for ratio analysis of selected commercial banks, such as balance sheets, income statement, cash flow statement, statement of shareholder's equity.

The sample size consists of fifteen Ethiopian commercial Banks listed on National Bank of Ethiopia. The researcher used purposive sampling techniques based on date of establishment. Only commercial banks who have seven year audited annual report included in the research. The two private banks excluded from the study were Debub Global bank and Enat Bank these banks have only 1.7% in branch network share and 1.5% in capital of the banking system (NBE, 2018). Annual Time Series data for both independent and dependent variables were extracted from the data. To accomplish the aforementioned research objectives, the data for

this study was gathered from the bank's financial statements as published on their respective banks annual audited financial report from the period July 2011 to June 2017.

In this work by using the data from financial report such as balance sheet, income statement and cash flow statement of the respected commercial banks and by using financial ratio analysis method the financial performance of private commercial banks and state owned commercial banks in Ethiopia analyzed. The profitability ratios (ROA and ROE) are as-

sumed as dependent variables while capital adequacy ratio (CAR), interest expenses to total loan (IETTL), net interest margin ratio (NIM), loan to deposit ratio (LDR), cash to deposit ratio (CDR), expenses to income ratio (EIR), operating efficiency ratio (OER) and size of the bank were used as independent variables. Also, Independent sample t-tests were used to identify the statistical differences in performance between state owned commercial bank and privately owned commercial banks in Ethiopia.

4   RESULTS AND DISCUSSIONS

4.1   Financial Ratios of Commercial Banks in Ethiopia

Financial ratio analysis has been extensively employed to assess the financial performance of operations for a long time by investors, creditors, and managers. It permits them to obtain more valuable information from financial statements than they can receive simply from reviewing the absolute numbers reported in the documents (Andrew et al., 1993).

4.1.1   Profitability

Profitability is the company's ability to generate optimal profit. In this study, the position of profitability has been measured with the help of return on assets, return on equity, expense to income ratio and net interest margin. Return on assets is a comprehensive measure of overall bank performance from an accounting perspective (Sinkey, 2002).

Tab. 1 (column 1) depicts average ROA of major commercial banks in Ethiopia for the period 2011 to 2017. The average ROAs of all the studied banks have been estimated positive shows that in the recent years, the performance of the banking system in Ethiopia was reasonable in terms of net profit. The average ROA of private sector banks (2.66%) was found lower than that of state owned (2.79%). The earning performances of commercial banks were satisfactory and no banks suffered from net operating loss. The net profit

to total assets ratio of Zemen bank to gain profit seemed most attractive due to proper mobilization of available resources than other commercial banks. The second position was for Wegagen bank with average ROA equal to 3.07%. The last position was belonged to Abay bank with average ROA equalled to 1.74% but ROA values computed during the study period were found positive. CBE was maintained eight places with ROA equalled to 2.79% among studied commercial banks. As ROAs of ZB, WB, AIB, DB, AdIB, NIB, and LIB were estimated greater than CBE, it can be concluded that these banks were successful in mobilizing their available resources more effectively than the state owned bank CBE. The two sample t-test with 95% confidence interval includes the null value, as shown in Tab. 3; there is no statistically significant difference between the two subsectors with respect to ROA.

The second profitability measure is ROE; this ratio shows the ability of management to manage equity to generate profits for the company. The ROE measure is probably the most commonly encountered, and is usually integrated into bank strategy, with a target ROE level stated explicitly in management objectives. Note that there is a difference between the accounting ROE and the market return on equity; the latter is calculated as a price return, rather like a standard profit and loss calculation, which is taken as the difference between market prices between two dates. The
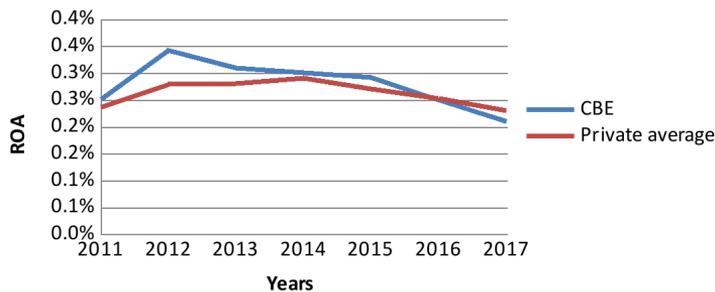
Fig. 1: Average ROA of state owned and private commercial banks in Ethiopia
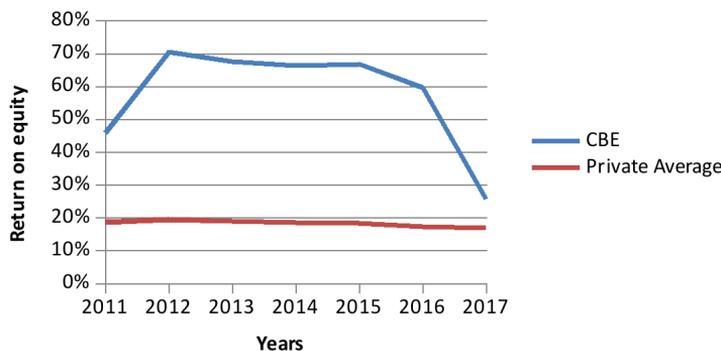

Fig. 2: ROE of state owned and private banks in Ethiopia

ROE target needs to reflect the relative risk of different business activity.

Fig. 1 reveal that in the study period state owned CBE had a better ROA from 2011–2016 in 2017 private banks average was above CBE.

The ROE of the major commercial banks in Ethiopia are presented for the average of the seven years in Tab. 1, column 3. The average ROE ratio was 18.37% for privately owned banks and 62.69% for CBE over the period 2011 to 2017. This implies that the shareholders receive low returns in terms of dividend relative to state owned bank. In order to rank the commercial banks based on this ratio, CBE was the first one; it has an average ROE of 62.69%. The second position was for DB with ROE equalled to 27.22%, the third position was for ZB with ROE 24.78% and the last position was belonged to AB with ROE equalled to 11.13%. It shows that higher ROE had satisfactory earning profit and the shareholders earn better return on their investment than lower ROE. The average ROEs of all studied commercial

banks in Ethiopia were positive and enjoy with satisfactory earning. As indicated in Tab. 3, the 95% confidence interval does not include the null value then we conclude that there is statistically significantly difference between the subsectors with respect to ROE.

NIM has been treated as an extremely important measure to the bank and its minimum value for a healthy bank is considered about 4.5% (Dang, 2011). A small change in the interest margin has a huge impact on profitability. Higher NIM is associated with profitable banks by maintaining good asset quality.

Tab. 1, column 10 indicates that the average of privately owned banks had higher average NIM (3.47%) than that of state owned bank (3.45%). It means private banks were able to maintain good asset quality than state owned bank in average. While comparing the individual banks, AIB was occupied first position with the highest NIM of 5.33%. The interest margin of NIB was 4.00% is in second position; CBO was 3.86% and ranked in third position. The

Tab. 1: Average financial ratio of the fifteen commercial banks in Ethiopia

Bank	ROA	CAR	ROE	LDR	CDR	IETTL	EIR	NIM
CBE	2.79%	5.54%	62.69%	45.89%	20.07%	3.68%	27.49%	3.45%
DB	2.97%	11.72%	27.22%	55.97%	35.13%	5.52%	43.56%	2.72%
AIB	2.98%	13.71%	23.20%	60.55%	28.88%	4.93%	43.24%	5.33%
BOA	2.39%	12.52%	20.87%	56.84%	29.09%	5.42%	50.44%	3.51%
WB	3.07%	18.40%	17.42%	60.58%	35.80%	4.25%	47.59%	3.80%
UB	2.27%	12.81%	18.76%	58.76%	32.45%	5.30%	52.28%	3.65%
LIB	2.88%	16.69%	18.10%	59.93%	42.12%	4.16%	47.79%	3.75%
CBO	2.39%	12.41%	20.51%	61.10%	39.75%	3.53%	58.25%	3.86%
NIB	2.89%	17.37%	17.15%	63.47%	33.10%	4.34%	44.81%	4.00%
ZB	3.58%	15.55%	24.78%	53.27%	42.07%	6.89%	41.23%	1.87%
OIB	2.10%	13.47%	16.84%	52.20%	33.98%	4.38%	60.76%	3.33%
BuIB	2.45%	18.75%	14.30%	67.74%	39.28%	4.10%	54.89%	3.85%
BrIB	2.62%	17.94%	15.38%	59.84%	47.24%	3.99%	49.83%	3.19%
AB	1.74%	19.41%	11.13%	60.55%	40.98%	3.75%	71.18%	3.03%
AdIB	2.96%	27.31%	11.57%	66.43%	52.74%	4.88%	55.19%	2.74%
PBA	2.66%	16.29%	18.37%	59.80%	38.04%	4.67%	51.50%	3.47%

state owned CBE was in ninth positions with 3.45% NIM. It seems the profitability of the banks in Ethiopia was not so satisfactory.

4.1.2 Capital Adequacy

As stated in the foregoing analysis, banks under study are well capitalized and they are complying with the directive of NBE on CAR. According to the Licensing and Supervision of Banking Business Minimum Capital Requirement for Banks Directives No. SBB/50/2011, all licensed banks total capital should be greater than 8% of the total risk weighted assets of commercial banks in order to be a strong capital base. As indicated by CAR, on the average, capital adequacy of privately owned banks was fair during the study period. Total capital adequacy ratio of private banks lies between 11.72% and 27.31% indicates that capital adequacy is fair and on the average, this ratio falls within this range.

It is clear from Tab. 1 column 2 that the average CAR of state owned bank is below NBE requirement. AdIB ranked first in CAR with 27.31%, AB was second position with 19.41%, BuIB ranked third spot with average CAR of 18.75. In addition, average capital fund ratios of privately owned banks during the study period hang around 16.9%. This was higher

than the minimum ratio specified by NBE. This clearly implies that private banks are complying with the directive of NBE on the requirement of the capital base of commercial banks. The two sample independent t-test (Tab. 3) result showed that there is no significance difference between the two sectors with respect to CAR at 95% confidence interval.

4.1.3 Liquidity Ratio

The LDR is a major tool to examine the liquidity of a bank and measures the ratio of fund that a bank has utilized in credit out of the total deposit collected. Higher the LDR entail the effectiveness of the bank to utilize the fund it collected. As per the Tab. 1, column 4, the LDR of the state bank shows that their liquidity position was lower than that of the private banks average. There is no standard for LDR in commercial banks in Ethiopia.

The LDR of the bank was quite consistent over the past 7 years beginning from 2011–2017. Among the fifteen commercial banks BuIB was ranked first and state owned CBE was in the last position. In an average, the bank has been able to utilize half portion of the depositors fund in the form of credit. The average LDR of private banks was 59.80% higher than the state owned CBE which had 45.89% in the studied
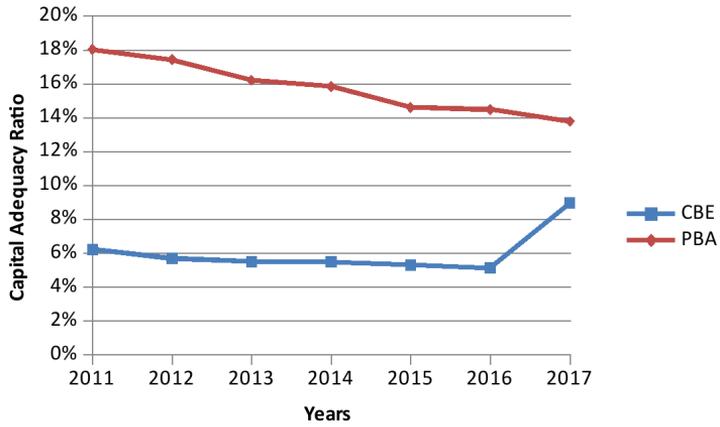
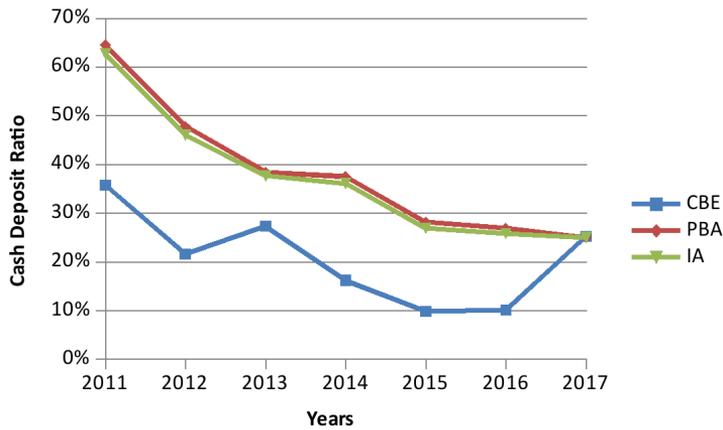Fig. 3: CAR of state owned and private commercial Banks in Ethiopia

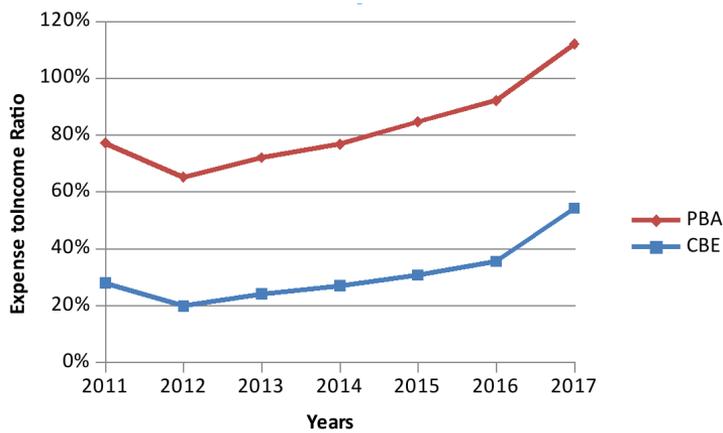Fig. 4: CDR of commercial banks In Ethiopia

Fig. 5: EIR of state owned and private commercial Banks in Ethiopia

period average. In order to rank the banks, BuIB was the first one; it has an average LDR of 59.80%. The second position was for AdIB bank with LDR equalled to 66.43%, and the last position was belonged to CBE bank with 45.89%. It seems new private banks are efficient to utilize the funds collected as deposit. The independent two sample *t*-test of LDR reveal in Tab. 3, there is a significance difference between the groups in 95% level of confidence. The proper LDR is a delicate balance for banks. If banks lend too much of their deposits, they might overextend themselves, particularly in an economic downturn. However, if banks lend too few of their deposits, they might have opportunity cost since their deposits would be sitting on their balance sheets earning no revenue. Banks with low LTD ratios might have lower interest income resulting in lower earnings.

Other liquidity measure was CDR. Cash to deposit ratio is the ratio of how much a bank lends out of the deposits it has mobilized. It indicates how much of a bank's core funds are being used for lending, the main banking activity. It can also be defined as Total of Cash in hand and Balances with NBE divided by Total deposits. CDR is the amounts of cash balance branches maintain to meet their liabilities. As cash holding is very expensive, banks try to maintain minimum holding.

Tab. 1, column 5, shows that CDR of commercial banks in Ethiopia lie 20.07%–52.74%. From Tab. 2 and Fig. 4 shows in the study period 2011–2017 CDR of commercial banks in Ethiopia declined sharply. Among the fifteen commercial banks AdIB was highest CDR and state owned CBE was lowest CDR in average throughout the studied period. Further Fig. 4 implies that PBA was above CBE in the studied time intervals.

4.1.4 Efficiency Ratio

In this study the efficiency of the Bank's performance is measured by EIR and IETTL. Tab. 1, column 6, exhibits average IETTL of major commercial banks in Ethiopia for the period 2011–2017. The average IETTL of privately owned banks (4.67%) was found higher than that of state owned CBE (3.68%) the

result imply that management of the private sector banks was the more efficient than state owned commercial banks in Ethiopia. Among the individual banks CBO (3.53%) management was the least efficient, whereas ZB (6.89%) management was the most efficient among the studied banks for the studied period.

For a bank, an efficiency ratio is an easy way to measure the ability to turn assets into revenue. The efficiency ratio for banks is calculated as expenses (not including interest) divided by revenues. Since a bank's operating expenses are in the numerator and its revenue is in the denominator, a lower efficiency ratio means that a bank is operating better. An efficiency ratio of 50% or under is considered optimal. If the efficiency ratio increases, it means a bank's expenses are increasing or its revenues are decreasing.

In the year 2011 to 2017 the major commercial banks in Ethiopia had an average EIR lies between 27.14% and 71.18%. Tab. 1, column 7 confer state owned CBE was the lowest EIR and AB had the highest average EIR in the studied period. The result reveal that CBE operating better than other commercial banks in Ethiopia. Fig. 5 unveil that operating EIR from the start 2012 sharply increasing this divulge noninterest expense grow faster than the total income.

4.2 Ranking of the Commercial Banks

Different commercial banks had different ranking based on each financial ratio related to ROA, ROE, CAR, EIR, IETTL, NIM, CDR and LDR (Tab. 1). Based on the bank return on assets, the higher rank was for ZB, which is a private bank, WB Bank, was the second and the last position belonged to AB, private bank. The state owned CBE was in the 8th position. Based on return on equity CBE belonged to first position, DB was second position and the lowest one was AB. Based on capital adequacy ratio AdIB was first position, AB was second position and last position belonged to CBE.

Based on the NIM, AIB was first position while NIB was second position and last position

Tab. 2: CDR of fifteen commercial banks in Ethiopia for the year 2011–2017

Bank	2011	2012	2013	2014	2015	2016	2017
CBE	35.69%	21.53%	27.28%	16.11%	9.79%	10.05%	25.18%
DB	52.58%	41.05%	38.24%	37.00%	27.91%	30.19%	18.91%
AIB	52.28%	31.89%	27.27%	33.65%	20.96%	19.27%	16.83%
BOA	47.67%	37.26%	23.20%	30.19%	25.95%	22.76%	16.61%
WB	69.51%	45.18%	33.98%	21.34%	24.79%	27.96%	27.85%
UB	58.68%	42.36%	25.57%	38.00%	23.07%	21.46%	18.02%
LIB	70.35%	59.83%	42.43%	42.05%	34.45%	22.07%	23.65%
CBO	61.46%	38.83%	69.95%	32.25%	31.53%	25.14%	19.07%
NIB	66.79%	46.77%	31.63%	24.18%	18.39%	23.97%	19.99%
ZB	60.82%	46.03%	36.67%	49.28%	30.19%	35.24%	36.28%
OIB	55.68%	41.69%	32.52%	37.26%	22.97%	22.98%	24.74%
BuIB	76.97%	44.67%	37.54%	41.53%	23.41%	23.27%	27.58%
BrIB	76.19%	57.76%	46.44%	48.79%	40.52%	29.39%	31.61%
AB	79.13%	59.96%	38.65%	34.17%	24.61%	23.34%	26.97%
AdIB	75.11%	75.11%	53.06%	54.43%	44.12%	49.11%	40.65%
Industry average (IA)	62.59%	46.00%	37.63%	36.02%	26.84%	25.75%	24.93%

Tab. 3: Independent *t*-test result of CBE (Group 1) and PBA (Group 2)

		Levene's Test for Equality of Variances		*t*-test for Equality of Means					95% Confidence Interval of the Difference	
		F	Sig	*t*	df	Sig. (2-tailed)	Mean Difference	Std. Error Difference	Lower	Upper
ROA	EVA	3.538	0.084	0.865	12	0.404	0.0016463	0.0019042	−0.0025025	0.0057952
	EVNA			0.865	9.068	0.410	0.0016463	0.0019042	−0.0026563	0.0059490
ROE	EVA	11.342	0.006	6.349	12	0.000	0.3912758	0.0616295	0.2569966	0.5255549
	EVNA			6.349	6.037	0.001	0.3912758	0.0616295	0.2406955	0.5418560
CDR	EVA	0.499	0.493	−2.719	12	0.019	−0.1746892	0.0642501	−0.3146782	−0.0347002
	EVNA			−2.719	10.521	0.021	−0.1746892	0.0642501	−0.3168917	−0.0324868
LDR	EVA	1.141	0.306	−6.565	12	0.000	−0.1458059	0.0222081	−0.1941932	−0.0974185
	EVNA			−6.565	11.560	0.000	−0.1458059	0.0222081	−0.1943984	−0.0972134
CAR	EVA	0.689	0.423	−12.465	12	0.000	−0.0972917	0.0078053	−0.1142981	−0.0802854
	EVNA			−12.465	11.668	0.000	−0.0972917	0.0078053	−0.1143519	−0.0802316
EIR	EVA	1.678	0.220	−4.388	12	0.001	−0.2019160	0.0460156	−0.3021754	−0.1016566
	EVNA			−4.388	8.024	0.002	−0.2019160	0.0460156	−0.3079725	−0.0958596
NIM	EVA	0.588	0.458	0.323	12	0.752	0.0011429	0.0035374	−0.0065646	0.0088503
	EVNA			0.323	11.176	0.753	0.0011429	0.0035374	−0.0066280	0.0089138
IETTL	EVA	8.528	0.013	−1.608	12	0.134	−0.0066571	0.0041407	−0.0156791	0.0023648
	EVNA			−1.608	6.544	0.155	−0.0066571	0.0041407	−0.0165885	0.0032742

Source: SPSS Result (EVA: Equal Variance Assumed, EVNA: Equal Variance Not Assumed)

belonged to ZB. Based on interest expenses to total loan, ZB was in the first position; DB was occupied second position while the last position was for CBO.

Based on cash to deposit ratio, the first position was for AdIB while BrIB was occupied the second position and CBE was in the last position. Based on loan to deposit ratio, BuIB was first position, AdIB was second position and last position belonged to CBE.

4.3   Independent Samples Test

The two-sample (independent groups) t-test is used to determine whether the unknown means of two populations are different from each other based on independent samples from each population. If the two-sample means are sufficiently different from each other, then the population means are declared to be different.

Tab. 3 reveal that from the studied performance measure ROA, NIM, IETTL ratios didn't show significance difference between state owned commercial bank and the private commercial banks average in the studied periods. In other variables like ROE, CDR, CAR, LDR and EIR there were a significance difference between the subsectors with 95% confidence intervals. Under column 9 and 10 of Tab. 3 the negative sign implied that the PBA performances were better than state owned commercial bank in Ethiopia in the studied period.

5   CONCLUSION AND RECOMMENDATION

5.1   Conclusion

The main objective of the study is to compare the financial performance of state owned commercial banks with privately owned commercial banks in Ethiopia. The study period covered the year 2011–2017 on which fifteen banks are considered. The study used secondary data which was gathered from the Banks annual financial reports.

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 share holder equity. EIR and IETTL are the two efficiency measure in the study. 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.

The values determined for CAR reveal that state owned CBE not so strong in Ethiopia to manage the possible large-scale shocks to their balance sheet. The CAR of CBE in the studied period doesn't satisfy the NBE requirement 8%.

From the studied eight performance indicators three (ROA, NIM, IETTL) of them have not significance difference between the two subsectors. For the remaining five we conclude that there are statistically significant differences between the groups as shown in Tab. 3.

5.2   Recommendation

This study compares the financial performance of commercial banks in Ethiopia over the period of 2011 to 2017. On the basis of the findings and conclusions reached, the following recommendations were forwarded.

Management of state owned banks should strive to improve returns on their asset investments as compared with private owned banks. Since return on asset is main parameter to measure financial performance of banks. On the other hand, private commercial banks managements should improve returns on their equity/capital investment as compared with state owned banks. In particular the newly established banks AB, BuIB and AdIB are below the standard 15%.

Managements of state-owned banks should strive to improve its capital adequacy ratio, interest expense to total loan ratio, net interest margin and loan to deposit ratio as compared with private banks.

Managements of private commercial banks should try to reduce its expense to income ratio as compared with state-owned banks. This can be done through decreasing general and administrative expenses or by improving revenue.

The problem of excess liquid asset of the banks should be handled with due attention. All studied Banks satisfy liquidity requirement directives No. SBB/57/2014. In order to utilize the excess liquidity, efficient fund management should be exercised by both private- and state-owned banks.

Generally, private banks performed by far better than state owned bank in Ethiopia. The two sample independent *t*-test result showed that there is a significance difference between the two sub-sectors on the studied financial performance measures except ROA, NIM, and IETTL. Finally, the study provides bank managers with understanding of activities that would enhance their banks financial performances. The results of this study imply that it might be necessary for a bank management to take all the required decisions to enhance the financial positions of the bank.

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