Addis Ababa University
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Comparative Analysis of Financial Performance of Private Commercial Banks in Ethiopia

A Research Project in partial fulfillment of Requirements for Degree of Master of Business Administration in Financial Services, Specialization in Banking

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Statement of Declaration

I, Sewagegn Chane Ayehu, have carried out independently a research work on the topic entitled. ``**Comparative Analysis of Financial Performance of Private Commercial Banks in Ethiopia**`` project in partial fulfillment of requirements for Degree of Master of Business Administration in Financial Services, specialization in Banking with the guidance and support of the research advisor. I declare that this is my original work and has not submitted to any other college or university for academic credit.

Signature_____ Date_____
Sewagegn Chane Ayehu

Statement of Certification

This is to certify that the research project prepared by Sewagegn Chane Ayehu, entitled: **Comparative Analysis of Financial Performance of Private Commercial Banks in Ethiopia** in the 5 years period from 2012 to 2016 submitted in partial fulfillment of requirements for Degree of Master of Business Administration in Financial Services, specialization in Banking complies with the regulations of the university and meets the accepted standards with respect to originality and quality

Signed by the Examining Committee

Advisor Habitamue Birhanue (PhD) Signature_____ Date_____

Examiner Alem Hagos (PhD) Signature _____Date_____

Examiner Abebe Bayu (PhD) Signature _____Date_____

Abstract

The purpose of this study was to evaluate the Comparative Analysis of Financial Performance of Private Commercial Banks in Ethiopia for the period of 5 years from 2012 to 2016. To this end, review of relevant theoretical and empirical literature was made. Besides, data/information on financial performance that are believed to affect performance of private commercial banking in Ethiopia was gathered from sources such as reports of National Bank of Ethiopia and that of respective private commercial banks, and other relevant sources. Then, the gathered data/information was presented, analyzed and described using quantitative techniques. Financial ratios were employed to measure the profitability, liquidity, asset quality and efficiency as well as growth rate in total assets and total income of banks; in addition Analysis of Variance (ANOVA) was used to test the significance differences of profitability, liquidity and efficiency means among peer banks groups. Ethiopian private commercial banking sector remained stable; banks are adequately capitalized and profitable and remained in a sound position. The study found that, there is no a significant means difference of profitability among of peer banks groups in terms of ROE and NIM. However, a significance differences among banks group is existed in terms of ROA. And also there is no a significant means difference of liquidity among of peer banks groups in terms of loan to total assets, liquid asset to deposit and loan to deposit. There is a significance difference of efficiency among banks group is existed in terms of cost income ratio (CIR). The possible recommendations are strong measurement framework should be deployed ROA improvement targets through the management structure of the organization. Resource mobilization is a must in order to narrow the gap between the loan demand and its provision or supply of the financial resources. Performance improvement is required in order to lower the C/I ratio and becomes the better performer in the banking sector. Improving the ability of management to identify and manage credit risk is also required in order to have a better quality in asset.

Key words: financial performance, financial ratios, private commercial banks, Ethiopia

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Acronyms

ANOVA- Analysis of variance

C/I- Total cost (Expenses) to total income

CIR- Cost income ratio

LAD- Liquid asset to deposit

LD- Loan to deposit

LPTL- Loan provision to total loan

LTA- Loan to total Asset

NIM- Net Interest margin

ROA- Return on Asset

ROE- Return on Equity

SPSS- Statistical packages for social science

Chapter One

1. Background of the Study

Finance and economic growth are often cited to have strong link. Many authors argued that finance, through its allocation, facilitation and pooling of savings from many disparate individuals, funnel them to the real sector and helps bring about economic growth. In this way, finance is one of the driving factors of economic growth. (Schumpeter, 1912) often quoted in many of the accessible reports Beck et al (2000) is said to have provided the basic features of financial institutions when saying that "financial systems influence who gets to use society's savings"(pp.261-300) which basically defines the key tasks of banks in an economy

The key argument is that (a) the power of banks can help match the best investment opportunities with the available savings which can be translated into capital; and (b) banks ability to process information can help screen good projects and businesses from others, thereby contributing to growth and productivity gain. These key functions of influencing investment quality and the composition of investment are often reported to depend on how well developed a banking system is. Growth hinges, among others, on the level of financial development. A country with diversified financial services and high level of financial deepening would be in a better position to allocate resources more efficiently and in the end influence economic growth. The higher is the degree of financial development, the larger the effect of finance on productivity, growth, and employment creation and trade activities (Levine, 1993).

Banking has a significant impact on the success of the economy. Sound financial health of a bank is the guarantee not only to its depositors but is equally significant for the shareholders, employees and whole economy as well. As a sequel to this maxim, efforts have been made from time to time, to measure the financial performance of each bank and manage it efficiently and effectively (Din Sangm, 2010). There are two main aspects from which one can measure the overall performance of the banks namely, financial aspects and human aspects. The financial statement measures are related to the decisions which directly affect the items in a balance sheet and profit & loss accounts.

Financial performance is the process of measuring the results of an organization policies and operations in terms of monetary value. These results are reflected in the firm's profitability, liquidity or leverage. Evaluating the financial performance of a business allows decision-makers to judge the results of business strategies and activities in objective monetary terms. Normally the ratios are used to determine the financial performance of an organization. A well designed and implemented financial management is expected to contribute positively to the creation of a firm's value (Padachi, 2006). Ultimate goal of profitability of a firm can be achieved by efficient use of resources. It is concerned with maximization of shareholders or owners wealth (Panwala, 2009).

Various literatures try to explain the means to measure performance of commercial bank in different ways. Tekers & Kent (2011), the financial performance of a bank is generally depended on its management efficiency, profitability, liquidity (solvency), capital adequacy, asset quality, growth and market value. Chiaku at el (2006) examined the comparative performance of small U.S. commercial banks, medium size commercial banks and large commercial banks for the period of 1997-2002 by employing profit efficiency return on assets, interest income, non interest income and loan loss reserve as criteria for the comparison. Abdus at el (2006) evaluated the inter-temporal performance of commercial banks; the study was based on three categories of banks size, large, medium and small banks in the State of Utah for the period of 5 years for 2000 to 2004, by using two measures of performance profits and quality of loans. The performance measures used were return on assets, return on equity, loan loss reserve ratio, and loans past due 30-89 days as a percentage of total loans.

Kumbirai and Webb (2010) use financial ratio analysis to measure the performance of commercial banks in South Africa. They mainly investigate the profitability performance, liquidity performance and credit performance of commercial banks in South Africa during the period 2005-2009. Aikaeli (2008) uses Data Envelopment Analysis to measure the performance of commercial banks of Tanzania focusing bank efficiency; this study compares and evaluates financial performance of small, medium and large Commercial banks in Tanzania for the period from 2006-2012 using financial ratio analysis

2. Statement of the Problem

In developing countries like Ethiopia, banks play a major role in financial development. This is especially true since stock and corporate bond markets are usually missing. Moreover, the development of the banking system and improving of its performance is related to higher economic growth of a country. In Ethiopia commercial banks contribute to economic growth through their financial intermediation role. Banks in the development of vibrant financial sector are vital through introducing innovative products and services to the sector. This can be materialized when the banks are creating and then popularizing new financial instruments as new financial technologies, institutions, and markets. In Ethiopia Commercial banks are materialized new products and technologies which are new to the Ethiopian financial sectors. Some of these are one window services, card banking, mobile banking, internet banking, van based banking, agent banking, interest free banking and branch net working(Yishak&legesse,2014). Better performance of commercial banks is pro foundation for product innovation, diversification and efficiency of the commercial banks (Hempell, 2002). The stability of commercial banks as whole in the economy depends on better financial performance. Better financial performance level has tendency to absorb risks and shocks that commercial banks can face.

Commercial banks in Ethiopia have undergone immense regulatory amendments or placements and technology changes after 1994 financial sector reforms. Ethiopian banks are faced with increasing competition and rising costs as a result of regulatory requirements, financial and technological innovation, challenges of the structure of banks and entry of large public commercial bank in expansion of branch network throughout the country (NBE directives, No. 50/2011, 53/2012.55/2013, 58//2014, 62/2015). Even though these changes had dramatic effect on assets formation, bank branch network coverage, concentration, and market share in deposits and loans, banks encountered problems on status of banking like unhealthy profits margin, unhealthy competition in deposits mobilization, liquidity position, asset quality, fulfilling risk and compliance requirements of correspondent banking, and high costs in acquiring banking technologies. And also IT infrastructure to scale up existing banking, technologies i.e. card banking, mobile and internet banking

Studies on bank performance in Ethiopia had focused on bank efficiency (see Workneh (2015), Eden (2014.) together with other performance indicator used Net Interest Margin (NIM) as performance indicator. NIM is considered as commonly watched measure of bank performance which is the difference between interest income and interest expenses as a percentage of total assets. Andebet (2016) compared the performance of six private commercial banks in Ethiopia using financial data analysis in the period 2008-2015 before and after NBE bill by employing profit efficiency, return on asset, return on equity, cost to income and net interest margin and with other performance indicators liquidity and asset quality. The present study is different from earlier studies in two ways: sample coverage and methodology. Methodologically, comparisons has not yet been done to see the variation, as well as significance in performance among the peer banks

The measurement of financial performance of the banking sector is important for several reasons. (1) Financial Performance is a vital factor for financial institutions wishing to carry out their business successfully. (2) In a rapidly changing and more globalised financial marketplace, governments, regulators, managers and investors are concerned about how efficiently banks transform their expensive inputs into various financial products and services. (3) the financial performance measures are critical aspects of banking sector that enable us to identify unique bank strengths and weaknesses, which in itself inform bank profitability, liquidity, credit quality and efficiency. Therefore, the study is motivated to investigate if there is significant performance difference on private commercial banks in Ethiopia among the peer banks by assesses the performance of private commercial banks using financial data analysis for the period 2012-2016.

3. Objectives of the Study

The general objective of the study is to evaluate the Comparative Analysis of Financial Performance of Private Commercial Banks in Ethiopia. Specifically; the study addresses the following issues

- To examine any significance changes of profitability among peer banks
- To investigate the level of liquidity of the peer banks
- To identify the level of operational efficiency of the peer banks

- To evaluate the level of asset quality of the peer banks
- To distinguish well performing peer banks from poor performing ones.

4. The Hypothesis of the Study

The following hypotheses have been formulated

Ho_1, There is no significance means difference on ROA among the peer banks group

Ho_2, There is no significance means differences on ROE among the peer banks group

Ho_3, There is no significance means differences on NIM among the peer banks group

Ho_4, There is no significance means differences on LTA among the peer banks group

Ho_5, There is no significance means differences on LAD among the peer banks group

Ho_6, There is no significance means differences on LD among the peer banks group

Ho_7, There is no significance means differences on CIR among the peer banks group

H_0: $\boldsymbol{\mu_1 = \mu_2 = \mu_3}$

Where: $\boldsymbol{\mu_1}$ is the means on (ROA, ROE, NIM, LTA, LAD, LD & CIR) large banks group

$\boldsymbol{\mu_2}$ is the means on (ROA, ROE, NIM, LTA, LAD, LD & CIR) medium banks group

$\boldsymbol{\mu_3}$ is the means on (ROA, ROE, NIM, LTA, LAD, LD & CIR) small banks group

5. Significance of the Study

Primarily, the study is expected to provide important input for private commercial banks for strategic decision measure to be taken on the area of financial performances. Besides, it could provide baseline data/information to those individuals/institutions that are interested to conduct further study on the area; and may also contribute to existing bodies of literature.

6. Scope and Limitation of the study

The scope of the study is to assess financial performance analysis of Private Commercial Banks of Ethiopia, specifically the financial performance of the banks 5 years between the years 2012-2016 with regard to variables of interest. The private commercial banks operated in the country are at most similar on ownership structure, business model, product mix, industry profile and the like. There are many amendments or replacements on NBE Directives Asset classification and provisioning, reserve requirement, liquidity requirement limitations on Investment of Banks,

foreign currency deposit, interest rates, bank corporate governance, branch out reach, minimum paid up capital and the like in the selected study period. And, the study is expected to be limited by various factors such as resource (logistics, finance, time) as well as other quantitative measures is not considered.

7. Organization of the Research

The research will be organized in five chapters. The first chapter presents background information, statement of the problem, and objective of the study, scope and limitations of the study and organization of the study. Chapter two contains review of related literature. The third chapter present methodology of the study (which constitutes research approach of study, population, sample size and sampling design, types and sources of data, variables under consideration and methods of data collection and presentation). Then, chapter four will contain presentation of data and analysis; while chapter five will present summary of major findings and recommendations.

Chapter Two
Related Literature Review

2.1. Banking in Ethiopia

The Ethiopian formal financial; sector was born in 1905 when the Bank of Abyssinia was established. It has involved a number of ups and downs. The most important periods could be divided in to five. The first period cover 1905-1936 in which the formal financial sector was at its infancy only in its limited operations but also the technology used. The second period could be 1941-1963 in which the modern bureaucratic system and government was established in the country with British Empire in every sector of the government. In tandem with this, the Barkley commercial bank started its operation in Ethiopian and the state Bank of Ethiopia was established which has twin role. One role was to act as a commercial Bank and the other role was to serve as the national bank of the country. The third period covers from 1963 to 1974 where Financial Sector moved into the modern operations. The major achievements were the national bank of Ethiopia was established, private banks and insurances began operating and development banks started operations.

The fourth period could be seen in the period of the degree in which socialism was the motto. All important private ownership was denied and government owned all important means of production. With these respects, banks and insurance grangerization were confiscated by the government, the characteristics of the financial sector were private Banks and insurance were not allowed to operate and the inefficiencies of the sector. And, government direct involvement on interest determination, credit allocation and foreign exchange allocation.

The fifth period would the period after the fall of the military regime in which the government took a very drastic measure to move from controlled economy to market economy. In this regard, the most noticeable measurement undertakes was the proclamation that allows the domestic sectors investors in the financial sector. Following government financial reforms, the private banks and insurance increased dramatically in the last $2\mathit{0}$ years. The number of both private and public banks becomes about 17 and the number of branches soared to more than 4257 The Ethiopian banking industry has been introducing modern technology like card banking, mobile

banking internet banking and new products along with better skilled manpower in the sub-sectors Kozok-etal, (2007). Currently, the industry comprises one state owned development bank and 17 commercial banks, one of which is state owned dominant Commercial Bank of Ethiopia (CBE). 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: Awash Bank (1994),Dashen bank (1995),Bank of Abyssinia (1996),Wegagen bank(1997),United bank(1998),Nib international bank(1999),Cooperative bank of Oromyia(2004),Lion international bank(2006), Zemen bank(2008). Oromia International bank (2008), Bunna International bank (2009), Birhan bank (2009), Abay bank (2010), Addis International Bank (2011), Debub global bank (2012), and Enat bank (2012). (www.nbe.gov.et).

In spite of the fact that period achievements, the Ethiopian banking industries have not been immune from shortcomings which has to be curbed within the coming period. The most mentioned shortcoming related with the low level of saving associated with the low level of saving associated with the limited accessibility of the institutions. The African found to be one of the lowest in 2008 with 3.8% but the sub-Saharan Africa was about 33.6% in the same period. The Ethiopian financial institutions size, particularly banks, taking the total asset as a yardstick found at the bottom of the East Africa standard in 2010 (Yishak and Legesse, 2014).

The Ethiopian banking provides the very traditional services in any global standards. The product and the process which are providing are also very limited. Few ATM are installed in the country and internet banking, credit card telephone banking and so are so not yet very limited in the system. The developing countries' customers enjoyed the products earlier (AfDB 2015).

2.2. Finance and Economic Growth

Several scholars Beck, T. (2011), Levine, R. et al (1993) have supported the significance of banks to the growth of the economy. Commercial banks contribute positively to economic growth by channeling surplus funds to their most productive uses. The literature not only showed the greater function of banks in the economy but also stressed that without the existence of a sound and efficient banking system, the economy can't function well. When a bank fails, the

whole of a nation's payment system is thrown in to jeopardy. To attain development there should be a good developed financial system to support not only the economic but also the society. Levine (1993) argued that financial systems allocate resources across sectors; range of projects and over time, and proposed five mechanisms by which the financial systems influence growth.

The first is that banks have the information with regard to products and possible investments projects, and by processing the information are capable of allocating capital to the most efficient projects and sectors capable of generating large growth outcome. Banks have the expertise to scan the business environments, evaluate and screen high return projects and are able to bear cost of evaluations. The ultimate provider of capital to the various sectors and projects who are the small savers would not have the capacity to evaluate the myriads of economic actors vying for limited resources such as capital; nor do they be able to bear the cost of evaluations.

The second role of banks by which they influence growth is through monitoring investments and exerting corporate governance on their clients. Banks do several monitoring activities in order to ensure that clients will not fail on their debt which would not be possible if it were by the direct lenders to the firms. The key is that banks themselves are guided by prudence and have the discipline to contain them from taking excessive risks. Through continuous monitoring by banks, firms would follow a path of efficiency in their production and trading.

The third task of banks is facilitation of trade in an economy, and their ability to diversify and manage risk across time and sectors in an economy. The fourth channel by which banks contribute to growth is through their ability to mobilize and pool savings. This is often known as the maturity transformation of banks, where they collect deposits from various small individual depositors and avail it to short, and medium and long term borrowers while at the same time allowing depositors immediate access to their accounts. In this case, growth may depend on (a) the size or level of deposit (b) on the degree of efficiency these savings are translated into quality investment through the banks. Banks contribute towards increasing the size of financial savings which are easy to allocate to the most productive socially and economically desirable activities. Finally, through their payment instruments or systems, banks provide large supports to the economy so much so that goods and services are exchanged at ease and without much cost. Ease

of trading and exchange, therefore, is expected to contribute to growth through lower transfer or transaction costs.

Empirical evidences on the finance and growth relationship are not always conclusive because of other factors including time, country specific characteristics, and sensitivities to model selections. Levine (1993); Beck (2011); Beck et al (1999) and others suggest that the overwhelming evidence with regard to the finance- growth nexus is positive, and therefore strongly argue for liberalization, deregulation and private ownership of banks. But on the other side of the debate is that while finance may be important for economic growth, extreme form of liberalization and competition may not enhance growth and productivity. Excessive competition may lead to excessive risk taking of banks, gambling, fragilities and instabilities, and ultimately lead to financial crisis (Stilgitzt 2000). The later argue for a proper regulation of banks to curb them from taking excessive risks under the influence of competitions, and ensure financial stability and strength. Evidences that contradict the main stream thinking are also generated. Ayadi et al (2013), for example, analyzed the relationship between finance and growth for countries across the Mediterranean areas, and found out that credit to the private sector was negatively related with growth and concluded that this situation reflects problems of credit allocation in the region, and weak supervision and regulation. Their findings suggest that resources allocation under competitive banking system may not necessarily lead to the desired situation unless it is well regulated.

2.3. Banks Performance and performance indicators

The word 'Performance' means 'the performing of an activity, keeping, in view the achievement made by it'. In other words, 'Performance' means 'the role Played by an arrangement keeping in view the achievement made by it'. In the context of the banks, it takes into account the way of their progress. (Nirmal, 2004) According to Albans (1978), performance' is described as the efforts extended to achieve the targets efficiently and effectively, the achievement of targets involves the integrated use of human, financial and natural resources. Financial performance is the process of measuring the results of an organization policies and operations in terms of monetary value. These results are reflected in the firm's profitability, liquidity or leverage. Evaluating the financial performance of a business allows decision-makers to judge the results of

business strategies and activities in objective monetary terms. Normally the ratios are used to determine the financial performance of an organization. A well designed and implemented financial management is expected to contribute positively to the creation of a firm's value (Padachi, 2006). Ultimate goal of profitability of a firm can be achieved by efficient use of resources. It is concerned with maximization of shareholders or owners wealth (Panwala, 2009). Bank financial performance evaluation is traditionally based on the analysis of financial ratios such return on equity (ROE), return on assets (ROA), net interest margin (NIM), capital asset ratio, growth rate of total revenue, cost/income ratio. However, regardless of how many ratios are being used, a model that would fully satisfy the analysis of needs and bank operations' efficiency evaluation has not been developed yet. For this reason, the financial ratio analysis is complemented with different quality evaluation, with features such as management quality, equity structure, competitive position and others to be included into the financial evaluation (Tihomir 2001).

Medhat (2006) evaluated the financial performance of Omani Commercial banks used multiple regression analysis and correlations by employing ROA and interest income as performance proxies which represented as the dependent variables, and bank size, asset management and operational efficiency as independent variables. Found that, there is strong positive correlation between financial performance and operational efficiency and a moderate correlation between ROA and bank size, while, ANOVA analysis; result indicated that, there exists an impact of that independent variable on financial performance as the F-stat was significant and below the 5%. Ahmad (2011) investigated the financial performance of seven Jordanian commercial banks; the study used ROA as a measure of banks' financial performance and the bank size, asset management and operational efficiency as three independent variables affecting the financial performance. The results of the study showed a strong negative correlation between ROA and banks' size, a strong positive correlation between ROA and asset management ratio, and a negative weak correlation between ROA and operational efficiency. Khizer at el (2011) study about banks' profitability in Pakistan, they found a significant relation between asset management ratios, capital and economic growth and with ROA, the operating efficiency, asset management and economic growth are significant with the ROE. On the other hand, domestic banks are determined to have a lesser capital adequacy ratio than foreign banks.

Chiaku at el (2006) examined the comparative performance of small U.S. commercial banks, medium size commercial banks and large commercial banks for the period of 1997-2002 by employing profit efficiency (PROFEFF), return-on-assets (ROA), interest income, non interest income and loan loss reserve as criteria for the comparison. The results showed that between 1997 and 1999, small banks were more profit efficient (PROFEFF) than large banks but less than medium size banks. Abdus at el (2006) evaluated the inter-temporal performance of commercial banks; the study was based on three categories of banks size, large, medium and small banks in the State of Utah for the period of 5 years for 2000 to 2004, by using two measures of performance profits and quality of loans. T-tests and Kruskal-Wallis test were applied to a variety of standard bank operations measures to determine whether there are significant differences in performance among three categories of banks. The performance measures used were return on assets (ROA), return on equity (ROE), loan loss reserve ratio, and loans past due 30-89 days as a percentage of total loans. The study results showed that, no significant difference in performance between small and large banks between the years 2000 and 2004. However, there was a significant difference between small and medium, and medium and large banks in their ROA of medium banks are significantly higher than that of small and large banks.

Sanaullah (2009) compared the financial performance of Islamic and Conventional banks in Pakistan from 2006 to 2009 by employing independent sample t-test and ANOVA to determine the significance of means differences of financial ratios between and among banks, eighteen financial ratios were estimated to measure the performances in term of profitability, liquidity, risk and solvency, capital adequacy, deployment and operational efficiency. The results of the study indicated that, Islamic banks proved to be more liquid, less risky and operationally efficient than conventional banks.

Tekers and Kent (2011) the financial performance of a bank is generally depended 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, noninterest income/noninterest expense. Profitability 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, securities available for sale, trading securities and receivables from money markets and the additions of 1-month deposits, demand deposits and payables to money markets. Capital adequacy measured by the capital adequacy standard ratio (Basel II). Asset quality measured by the ratio of nonperforming loans/ total loans. The last category is growth measured by the growth rate of deposits and loans. .

Kumbirai and Webb (2010) use financial ratio analysis to measure the performance of commercial banks in South Africa. They categorize the financial ratios in to three major category of bank performance: Profitability performance, liquidity performance, and credit quality performance. Financial ration method provides a previous periods as well as help to see how well it is doing compare to other banks' performance. Information obtain from those financial ratio largely used by regulatory body, investors and management of the banking sector to assess the financial performance. Enormous list of financial ratio as a means to measure bank performance is used by scholars. This is considered as a major weakness of ratio analysis as there is lack of agreement in the literature on the relative important of various types of indicators.

Workneh (2015) and Eden (2014) together with other performance indicator used Net Interest Margin as performance indicator. Net interest margin (NIM) is considered as commonly watched measure of bank performance which is the difference between interest income and interest expenses as a percentage of total assets. One of a bank's primary intermediation functions is to issue liabilities and use the proceeds to purchase income earning assets. If a bank manager has done a good job of asset and liability management such that the bank earns substantial income on its assets and has low costs on its liabilities, profits will be high. How well a bank manages its assets and liabilities is affected by the spread between the interest earned on the bank's assets and the interest costs on its liabilities. This spread is exactly what the net interest margin measures. If the bank is able to raise funds with liabilities that have low interest costs and is able to acquire assets with high interest income, the net interest margin will be high, and the bank is likely to be highly profitable. The net interest margins measures the gap between what the bank

pays the providers of funds and what the bank gets from firms and other users of bank credit. A decline in this ratio is interpreted as an increase in cost of intermediation.

Kumbirai & Webb (2010) use cost to income ration, together with other performance indicators, to measure commercial banks performance. Cost to income Ratio is efficiency measure, calculated as total cost divided by total income measures the income generated per cost. That is how expensive it is for the bank to produce a unit of output. The lower the cost to income ratio, the better the performance of the bank will be. According to Dietrich & Wanzenried (2010), the coefficient of the cost-to-income ratio is statistically highly significant and negative in all specifications that are the more efficient a bank, the higher is its profitability.

2.4. Factors affecting Bank performance

Bank performance proxy measures are different in various literatures, such as Rao & Tekeste (2012), Ongore and Gemechu (2013), Alper and Anbar (2011), Athanasoglou,et.al., (2005), and Alexiou and Sofoklis (2009), on the issue of investigating the factors that influence the performance of the bank are most commonly employed one or two or all of the three alternative measure (ROA, ROE and NIM) were used.

Rao & Tekeste (2012) conducted the research on the topic "Determinants of Profitability of Commercial Banks in a Developing Country. In the study equity to asset ratio, non-interest income to total income and bank size have positive and significant impact on the profitability, the loan loss reserve to total loans in found to have negative impact on profitability though it is statistically insignificant, liquidity and operational efficiency are also negatively affect the profitability of the banks.

Ongore and Gemechu (2013), study on determinants of financial performance of commercial banks in Kenya. The finding revealed that specific factors such as capital adequacy, asset quality and management efficiency significantly affect the performance of Kenyan commercial banks, except for liquidity variable. The relationship between bank performance and capital adequacy and management efficiency was found to be positive and for asset quality the relationship was negative. But the overall effect of macroeconomic variables was inconclusive and the role of ownership identity on the financial performance of commercial banks was insignificant. Evan if

it is found that GDP has negative correlation with performance indicators, the relationship is insignificant.

Alkhatib, (2012), with the purpose to empirically examine the financial performance of five Palestinian commercial banks listed on Palestine securities exchange. The finding implies that operational efficiency and asset management individually have significant impact on ROA, when they used along with bank size and credit risk, they add significant effect on Tobin's Q and EVA. San and Heng (2013), conducted the study aims to investigate the impact of bank specific factors. The results imply that ratios employed in this study have different effects on the performance of banks in both China and Malaysia, except credit and capital ratios, Operating ratios influence performance of banks in China, but this influence is not true for Malaysian banks regardless of the measure of performance.

Analyzing the factors affecting bank profitability in Switzerland, Dietrich & Wanzenried (2010), obtain the following result regarding return on average assets. Better capitalized bank seem to be more profitable. In addition, an above-average loan volume growth affects bank profitability positively. The share of interest income at total income also has a significant impact on profitability. Banks that are heavily dependent on interest income are less profitable than banks whose income is more diversified.

Bikker and Bos (2010) support the finding made by Dietrich & Wanzenried (2010) regarding the positive impact size have in profitability. They conclude that large banks are better able to set higher markups on their marginal costs, which reflects less competitive pressure. Large banks may also be in a better position to collude with other banks. Reputation is likely to be related to size and may help to exert market power to increase margins. Large banks are expected to be more successful in creating fully or partly new banking products and services that shall banks, for example, because of economies of scale in product development.

In assessing the impact of liquidity on financial performance of private commercial banks in Ethiopia, Workneh (2015) declare that the impact is inconsistent (both positive and negative) and the significant relationship varies from measure to measure. He noted that some results show a statistically significant relationship between liquidity and bank performance while others display

insignificant relation. And finally, he concluded that he can't draw a firm conclusion of the relationship between liquidity and bank performance and bank performance of private commercial banks in Ethiopia.

Tsegenesh (2012), there is positive relationship between liquidity of commercial banks and their financial performance. In the other word, banks holding more capital and had large size had more liquid assets benefit from a superior perception in funding markets, reducing their financing costs and increasing profitability. Base on her study, she concluded that the impact of bank liquidity on financial performance was non-linear (i.e. positive and negative). This result indicate that there is some level of liquidity up to which liquidity enhances financial performance and beyond that point it hinders financial performance.

Semu (2010), deposit and capital have statistically significant relationship with banks" performance measured in terms of return on equity (ROE). But contrary to this finding a study made by Dietrich and Wanzenried (2010) about banks in Switzerland, the yearly growth of deposits does not affect bank profitability significantly. They added, there is no empirical evidence that banks in Switzerland are able to convert an increasing amount of deposit liabilities into significantly higher income earning assets. Basically the above contradiction may require seeing the market structure the nations investigated.

A diverse range of studies have been conducted by the researchers for measuring the performance of the banks, which present different perspective with regards to the performance of the banks in different countries. The financial performance of a bank is generally depended on its management efficiency, profitability, liquidity (solvency), capital adequacy, asset quality, growth and market value.

The main aspect from which one can measure the performance banks is the financial aspect. The financial statement aspect are related to the decisions which directly affect the items in a balance sheet and profit and loss accounts In this regard the gaps found from the literature review:-

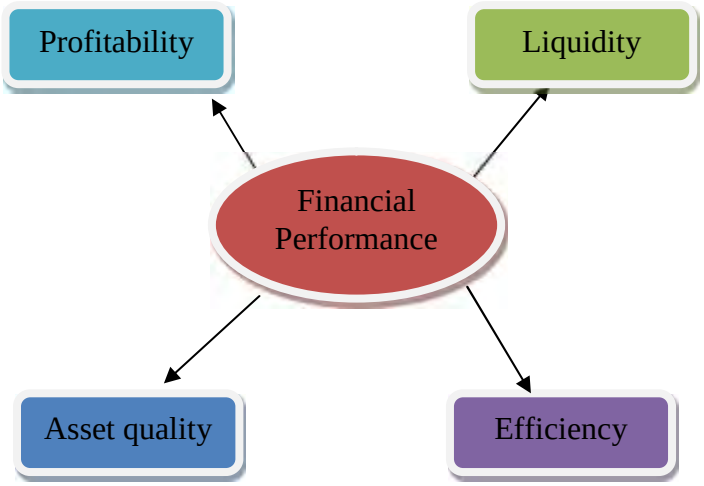
- There are very few such studies where a large number of financial variables have been taken together for measuring the performance of the banks.

- No researchers have made efforts to provide a comparative performance analysis of Ethiopian private commercial banks as large, medium and small simultaneously

2.5. **Conceptual Model**

On the basis of the literature review, a conceptual model is formulated to illustrate the comparative analysis of financial performance of private commercial banks in Ethiopia. The model shows profitability, liquidity, asset quality and efficiency as performance indicators. The following conceptual framework explains the performance and its dimensions.

Figur2.1.Conceptual Models



2.5.1. Financial Performance

Performance indicators of the banks can be divided into two main categories, namely the financial statement and non financial statement indicators. The financial statement indicators are related to the decisions which directly affect the items in a balance sheet and profit & loss accounts. On the other hand, the non financial statement indicators involve those factors which do not have a direct impact on the financial statements. A detailed literature review, on every dimension discussed in the above conceptual framework, has been done in the following section.

Chapter Three
3. Methodology of the Study

3.1 Research Approach

The study employed quantitative research approach based on secondary data. Secondary data is used to study the relationship of financial indicators with the performance of banks. A quantitative approach is relevant because it employs statistics, which is a comparative methodological discipline that uses mathematical ideas for descriptive data analysis, point inference, and hypothesis testing. The secondary data is collected for the four variables namely; liquidity, profitability, efficiency and asset quality ratio

3.2 Population and Sampling

The secondary data have been collected 5 years panel data from the period from 2012 to 2016. Since the secondary data is collected from balance sheet and profit and loss statement, and performance indicators of private commercial banks, hence all the private commercial banks operating in Ethiopia during the above period are the population of the study. There are two types of commercial banks operated in Ethiopia, public sector bank and private sector banks. The public sector bank is excluded from the study because the public sector bank is not comparable with the private commercial banks in terms of size, age, scope, industry profile, market capitalization, risk appétit, business model and products/service mix offered by the banks. Thus sample of 14 private banks has been taken; the selection of the sample size is based on the availability of the data covered by the period of study. The banks are grouped in to banks peer group based on the contribution of the assets of banks in total assets of the banking industry as on 30 June 2016. The large peer bank groups are the banks that have total assets greater or equal 15 billion ETB (i.e. Dashen bank, Awash bank, Abyssinia bank, Wegagen bank, United bank and Nib bank) medium peer bank groups are the total asset greater or equal 7 billion birr but less than 15 billion ETB (i.e. Cooperative bank of Oromia, Lion bank, Berhan bank, Oromia International bank and Zemen bank), and small peer banks group are their total assets less than 7 billion ETB (i.e. Bunna international bank, Addis international bank and Abay bank). Each of the three group's banks can be summarized as commercial banks. Two banks are excluded from

the study sample, Debub Global due to data unavailability of 2012 financial performances, and Enat bank less operating periods.

3.3 Data Collection and Analysis

To properly achieve the objective of the research secondary data (quantitative) are used. The data collected by using different methods. And, quantitative data/information on variables of importance in relation to financial performance are presented using appropriate descriptive statistics figures, tables, percentage, mean values, and the like analyze accordingly. Additionally, to examine whether the difference in financial performance of the banks in 2012-2016 is statistically different among peer banks groups analysis of variance (ANOVA) is employed to test the hypothesis that the means of the peer banks group are the same on the three financial performance variables

Inferences about the hypothesis are made by looking at test statistics and critical values associated with the mean. The F test statistic is follows F distribution with k - 1 degrees of freedom corresponding the between column variance in the numerator and n - k degrees of freedom corresponding to within column variance in the denominator. In this study the decision criterion is P value. If P value is less than (5%) or 0.05 we will reject null hypothesis and accept the research hypothesis, If P-value is greater than 0.05, do not reject the null hypothesis.

3.4 Variables

A, Profitability Performance

Profitability is a bank's first line of defense against unexpected losses, as it strengthens its capital position and improves future profitability through the investment of retained earnings. An institution that persistently makes a loss will ultimately deplete its capital base, which in turn puts equity and debt holders at risk. All the strategies designed and activities which are operated in the bank with the aim of maximizing the profit of the for the purpose of measuring profitability: Profitability is measured using the following criteria: return on Asset (ROA), return on Equity (ROE), net interest margin (NIM) and cost to income (C/I)

a) Return on Asset (ROA)

Return on Asset (ROA) is a financial ratio that shows the financial performance of a bank. The return on assets (ROA) is the net income for the year divided by total assets, usually the average value over the year. This ratio measures the ability of the bank management to generate income by utilizing company assets at their disposal. In other words, it shows how efficiently the resources of the company are used to generate the income. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution (Khrawish, 2011), states that a higher ROA shows that the company is more efficient in using its resources.

b) Return on Equity (ROE)

Return on Equity (ROE) is a financial ratio that refers to how much profit a company earned compared to the total amount of shareholder equity invested. ROE is what the shareholders look in return for their investment. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. Thus, the higher the ROE the better the company is in terms of profit generation. It is further explained by Khrawish (2011) that ROE is the ratio of Net Income after Taxes divided by Total Equity Capital. Return on Equity (ROE) is an internal performance measure of shareholder value, and it is by far the most popular measure of performance, since: (i) it proposes a direct assessment of the financial return of shareholder's investment; (ii) it is easily available for analysts, only relying upon public information; and (iii) it allows for comparison between different companies or different sectors of the economy

c) Net Interest Margin (NIM)

Net Interest Margin (NIM) is a measure of the difference between the interest income generated by banks and the amount of interest paid out to their lenders (for example, deposits), relative to the amount of their (interest earning) assets. It is usually expressed as a percentage of what the financial institution earns on loans in a specific time period and other assets minus the interest paid on borrowed funds divided by the average amount of the assets on which it earned income in that time period (the average earning assets). The NIM variable is defined as the net interest income divided by total earnings assets (Gul et al., 2011). Net interest margin measures the gap between the interest income the bank receives on loans and securities and interest cost of its borrowed funds. It reflects the cost of bank intermediation services and the efficiency of the bank. The higher the net interest margin, the higher the bank's profit and the more stable the

bank is. Thus, it is one of the key measures of bank profitability. However, a higher net interest margin could reflect riskier lending practices associated with substantial loan loss provisions (Khrawish, 2011).

d) Cost to Income Ratio (C/I)

Cost to income ratio measures the income generated per birr cost. That is how expensive it is for the bank to produce a unit of output. The lower the C/I ratio, the better the performance of the bank that can be denoted as **C/I** = total cost (Expense) /total income

B, Liquidity Performance

Liquidity indicates the ability of the bank to meet its financial obligations in a timely and effective manner. (Samad 2004) states that ‘‘*liquidity is the life and blood of a commercial bank*’’ There should be adequacy of liquidity sources compared to present and future needs, and availability of assets readily convertible to cash without undue loss. Rudolf (2009) emphasizes that “the liquidity expresses the degree to which a bank is capable of fulfilling its respective obligations”. Liquidity ratio will be calculated as *total customer deposits to total assets, loan to deposit and loan to total asset.*

a) Liquid assets to deposit (LAD)

Total customer deposits to total assets measure the percentage of short term obligations that could be met with the bank’s liquid assets in the case of sudden withdrawals. The ratio more focuses on the bank’s sensitivity to selected types of funding. This ratio should therefore capture the bank’s vulnerability related to these funding sources (Vodova, 20113). The bank is able to meet its obligations in terms of funding (the volume of liquid assets is high enough to cover volatile funding), if the value of this ratio is 100 % or more. Lower value indicates a bank’s increased sensitivity related to deposit withdrawals. It is the composition of the balance sheet relating liquid (short term) assets to volatile rate sensitive liabilities where the difference between the two is the net liquidity position of the bank (deficit or surplus) and is a measure of its exposure to liquidity risk. this measure is being used as controlling mechanism or measure of liquidity for commercial banks by the central bank(NBE) enforcing them to maintain a certain level of liquid assets vis-à-vis their current liabilities revising from time to time.(Workneh,2015)

b) Loans to total asset (LTA)

LTA measures the percentage of assets that is tied up in loans. It indicates what percentage of the assets of the bank is tied up in illiquid loans. The higher the ratio, the less liquid the bank is. The higher LTA ratio is the less liquidity of the bank and at the same time, higher potential profitability the bank can enjoy with exposure to liquidity risk.

c) Loans to deposit (LD)

Loan to deposit measures the percentage of the total deposits locked into non-liquid assets. In other words it relates illiquid assets with liquid liabilities. A high figure denotes lower liquidity. Loan to deposit ratio is the most commonly used liquidity ratio by both banks and analysts. Generally, with higher loan to deposit ratio, the more likely the bank is relying on borrowed funds. If receivables from loans are delayed or withdrawals from deposit side exceeds new deposit significantly over a short term of period, bank will take more financial stress by having excessive loans and more risky to meet depositors‟ obligations by selling an amount of loans at loss.

C, Asset Quality Performance

In the banking sector asset quality refers to a review or an evaluation of, which the credit risk associated with any particular assets. Such type of assets normally requires payments of interest like a loans and investment portfolios. Asset quality connotes the level of money related to quality and dangers in a bank resource, principally advances and investments. The support of asset quality is an essential feature of banks. Asset quality of the bank is one of the issues whenever a research on banks conducted. How effective management is in controlling and monitoring credit risk can also have an effect on the credit rating is given. Asset quality is a facet of bank management entails the evaluation of firm to help the measurement of the level of and size of risk associated with its operation. The asset quality highlights the amount of existing potential credit risk related to the advancement and portfolios of investment, other property owned, and various assets, as well as some off balance sheet transactions. Asset quality will be measured using loan provision (reserve) to Total loans (LPTL) = Loan provision/Total loans.

This ratio indicates the proportion of the total portfolio that has been set aside but not charged off. It is a reserve for losses expressed as a percentage of total loans. Loan reserve (provision) is the money put aside to pay off loan defaults and serve as an insurance to absorb potential losses caused by risky assets.

D, Efficiency Performance

The presence of inefficiencies is considered an inherent feature of banking. According to Turati (2003:2), "banks are regarded as firms that emerge as a result of some sort of market imperfections; hence they bring about a certain degree of inefficiency with respect to perfect competitive outcome". Banking efficiency is important at both macro and micro levels and in order to allocate resources effectively, banks should be sound and efficient. Efficiency in banking can be distinguished between allocate and technical efficiency.

Efficiency ratios measure the ability of a business to use its assets and liabilities to generate revenue. A highly efficient organization has minimized its net investment in assets, and so requires less capital and debt in order to remain in operation. Efficiency ratios are used to judge the management of a business. If an asset related ratio is high, this implies that the management team is effective in using the minimum amount of assets in relation to a given amount of revenue. Conversely, a low liability-related ratio implies management effectiveness, since payables are being stretched.

Cost income ratio (CIR) reflect bank`s operational efficiency and it is defined as non interest cost (operating cost, such as administrative costs, staff salaries and property costs excluding bad debts and doubtful expenses) divided by total income and non- interest income (Dierticha and Wanzenried, 2009). Cost income ratio used as an indicator of management's ability to control costs and is expected to have a negative relations with profits, since improved management of these expenses will increase efficiency and there for raise profits (Guruet.al, 2000)

Chapter Four
Data Analysis and presentation

This chapter presents the findings of the study and analysis of the data collected using various statistical tools. Descriptive statistics of the variables is presented using figures, tables, percentage, mean values, to see the trend for each variable throughout the observation period in relation to financial performance. To see the difference in financial performance of the banks in 2012-2016 is statistically different among peer banks groups analysis of variance (ANOVA) is used to test the hypothesis that the means of the peer banks group are the same on the seven financial performance variables Inferences about the hypothesis are made by looking at test statistics and critical values associated with the mean.

4.1 Banking Sector Profitability Performance

Profitability in this study is measured by four indicators; Return on Asset (ROA), Return on Equity (ROE), Net interest Margin (NIM) and Cost to Income (C/I)

A) Profitability performance based on Return on Asset (ROA)

It can be seen (Table 4.1 (a & b) that all banks group are profitable. Under the period of study no banks group recorded the negative return on assets. Medium banks are more profitable than the large and small banks with the average ROA of 10.16% followed by small banks with 9.87% and the last is large banks with 9.20%. Descriptive statistics table 4.1b shows large banks have lower risk on ROA with the standard deviation of 0.81 and range of 3% in which the maximum and minimum are recorded as 10% and 7% respectively. Small banks have lower risk on ROA compared to Medium banks with standard deviation of 1.41 and range of 4% in the maximum and minimum on ROA are recorded as 12% and 8% respectively. However, medium banks have shown higher risk on ROA among the three bank groups with the standard deviation of 1.65 and range on ROA of 6%, with maximum and minimum ROA of 14 and 8% respectively. The results further found that medium and small banks have moderate right skewed distribution on ROA which is approximately to symmetric with the measure of 0.51 and 0.09 respectively while large banks group distribution on ROA is negatively skewed with the measure of skewness of -1.24.

Table 4.1a. Return on Assets (ROA %) on Commercial Banks 2012-2016.

Banks peer group	2012	2013	2014	2015	2016
Large banks	9.17	9.33	9.33	8.83	9.33
Medium banks	9	9.4	11	10.6	10.8
Small banks	8.33	8.67	10.67	10.67	10.67

Source: own calculation

Table 4.1b. Descriptive Statistics results on ROA % 2012-2016

Banks peer group	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
Large	30	3.00	7.00	10.00	9.20	.81	-1.240	2.058
medium	25	6.00	8.00	14.00	10.16	1.65	.509	-.387
small	15	4.00	8.00	12.00	9.87	1.41	.092	-1.341

Source: survey computation

The profitability results trends on ROA indicate an increasing on ROA for all banks group but especially for medium and small banks peer group. The small banks group shows an increasing on ROA trend from year 2012 to 2014 and becomes constant since then. The large banks groups have shown almost constant ROA record from 2012 to 2016 except a slight decrease on ROA in 2015, from 9.33% to 8.83% for 2014 to 2015. Similarly the medium banks groups have also shown a record of an increasing on ROA from 2012 to 2014 with a slight decrease in 2015, from 11% to 10.6% then after it shows a slight increase on ROA from 10.6% to 10.8%. All banks groups recorded an increase of ROA for 2016; medium banks were 10.8% which is higher than other banks groups followed by small banks groups with 10.67% and lastly large banks groups with 9.33%. The ROA result implies that there is an efficient utilization of their resources among all banking groups. Since the ROA measurement shows how efficiently the resources of the company are used to generate the income. It further indicates the efficiency of the management of a company in generating net income from all the resources of the institution. Therefore, the banks groups with higher ROA (the medium banks peer groups) shows that the company is more efficient in using its resources than the large and small banks peer group.

B) Profitability performance based on Return on Equity (ROE)

Table 4.2a &4.2b and figure 4.2 show the results of profitability on Return on Equity (ROE).

Table 4.2a Return on Equity (ROE %) on Commercial Banks from 2012-2016.

Banks peer group	2012	2013	2014	2015	2016
Large	38	46.5	37.5	38.33	39.17
Medium	30.6	36.8	44.4	45.2	49.2
small	20.67	31	36.33	44.67	42.67

Source: own calculation

Table 4.2b Descriptive Statistics results on ROE % from 2012-2016.

Banks peer group	N	Range	Min.	Max.	Mean	Std. Deviation	Skewness	Kurtosis
large	30	52.00	26.00	78.00	39.90	11.03	1.410	3.355
medium	25	47.00	14.00	61.00	41.24	11.89	-.076	-.259
small	15	35.00	17.00	52.00	35.07	11.18	.111	-1.108

Source: own calculation

The general performance indicates that, all three banks groups performing better, medium banks recorded higher average ROE with 41.24% followed by large banks groups with 39.90% and lastly small banks with 35.07%, however large banks have lower risk on ROE comparing to other two groups with standard deviation on ROE of 11.03 followed by small banks groups by 11.18%, while medium banks groups showed higher risk with standard deviation on ROE of 11.89. The study found that large banks and small banks peer groups have a right skewed with a measure of 1.41 and 0.11 respectively while the medium banks groups shows a negative or left skewness at a measures of approximately -0.08. The results of profitability trends indicate that for both the medium and small banks groups their ROE were increased for the five years of under the study considerations from 30.6% to 49.2% for medium banks groups and from 20.67% to 42.67% for small banks group which is decreased in the last year from 44.67% to 42.67%. In the large banks groups there was a rising record on ROE for the first year of study from 38% to 46.5% while it has shown a down record from 46.5% to 37.5% in the year 2014 then after it shows an increase on ROE since then. In the year 2016 all banks groups have recorded a slight incremental returns on Equity.

Since the Return on Equity measurement refers to how much profit a company earned compared to the total amount of shareholder equity invested. Therefore, from the results prevailed above we can see that the medium banks peer groups are earning more returns followed by the large banks peer groups and small banks respectively. A business that has a high return on equity is more likely to be one that is capable of generating cash internally. Thus, the medium banks peer group and the large banks peer groups are recording the higher ROE than the small banks peer group so that they are the better the banks groups in terms of profit generation.

C) Profitability performance based on Net Interest margin (NIM %)

The results of profitability of banking sector on net interest margin (NIM) measures the gap between the interest income the bank receives on loans and securities and interest cost of its borrowed funds. It reflects the cost of bank intermediation services and the efficiency of the bank. The higher the net interest margin the higher the bank's profit and the more stable the bank is. Thus, it is one of the key measures of bank profitability.

The general performance indicates that small banks have higher average NIM compared to large and medium banks with 62.8% followed by medium banks with 61.52% and lastly large banks with 57.80% however, this high average NIM for small banks is caused by these banks charging high rate on loans facilities they are offering to their clients and the same offering low interest rate for deposits. From the NIM average value computation, the small banks peer groups are recording the higher value but this peer group shows the lowest ROE computation as shown in the above ROE trend analysis and this can be justified by the logical reasons as the number and amount of the shareholders equity is increasing faster than the other banks peer groups and the wider gap between the supply and demand of the resource facilities through loan provision in consequence with the higher interest rate charging on loans. In addition the cost effectiveness can also be taken as a reason for the case.

The results also indicate that medium banks have higher risk on NIM compared to other two groups with the standard deviation of 12.38 followed by large banks with 5.82 while small banks showed lower risk with 4.54 large and small banks have highly positive skewed distribution on

NIM with the measure of skewness of 0.45 and 0.30 respectively. The medium banks have a negative skewness with a measure of -0.96.

The higher net interest margin could reflect riskier lending practices associated with substantial loan loss provisions. Therefore, the medium banks peer groups are riskier banks groups with a high standard deviation.

Table: 4.3a Return on Net Interest Margin (NIM %) from 2012-2016

Banks peer group	2012	2013	2014	2015	2016
large	58	57.67	58.83	57.17	57.33
medium	54.6	58.6	63.6	66	64.8
small	61.67	64	62.67	63.33	62.33

Table 4.3b: Descriptive Statistics on Net interest Margin (NIM %) 2012-2016.

Banks peer group	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
large	30	22.00	49.00	71.00	57.80	5.82	.446	-.353
medium	25	47.00	33.00	80.00	61.52	12.38	-.958	.073
small	15	14.00	57.00	71.00	62.80	4.54	.303	-1.021

Source own computation

The results on NIM trends show that the large and medium banks groups have faced a positive trends on NIM from 2012 to 2016 while the small banks groups shows a down ward trend between the year 2013 and 2015 due to increasing trends of non-performing loans for banks high operating costs had affected the financial performance of private banking sector in Ethiopia.

D) Profitably Performance based on cost to total income

The cost to total income ratio tells us the profitability of the banks in their performance. In table 4.4 below we see that small banks peer groups have a standard deviation of 5.62 followed by the large banks peer groups with standard deviation of 9.00 and lastly the medium banks groups with value of 10.67. Therefore, small banks peer groups have a relatively normal distribution in the cost to total income ratio than the medium and the large banks peer groups. The medium banks peer groups have attempting their peak distribution in the cost to total income with a high kurtosis value of 5.02 and skewness of 1.77 measurement which is not taken as a normal ratio.

Table 4.4 Descriptive Statistics of Cost to total Income

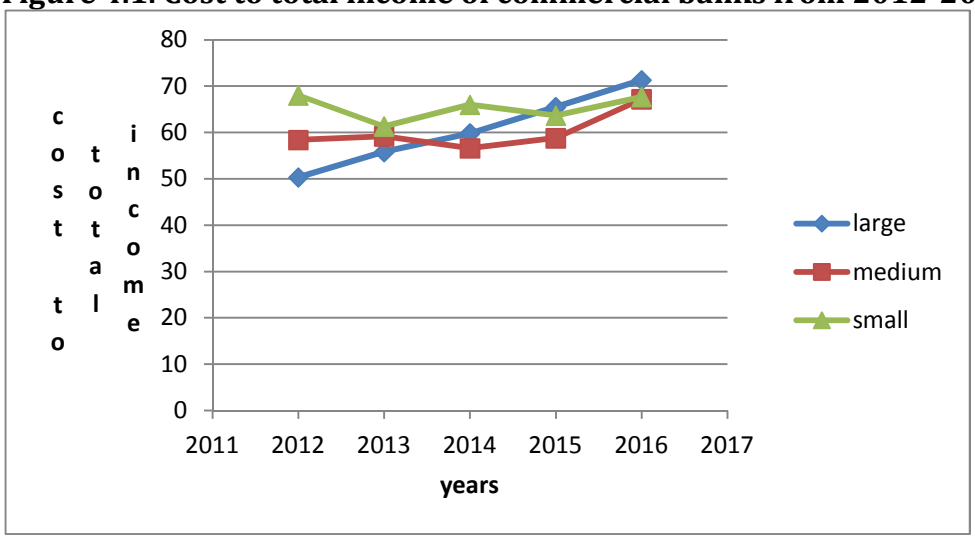
Banks peer group	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
large	30	42	43	85	60.57	9.001	.419	.634
medium	25	51	46	97	59.92	10.673	1.768	5.019
small	15	19	56	75	65.33	5.615	0.098	-0.689

Source: Survey computation

The trend of the cost to total income ratio of all the banks peer groups is shown below under figure 4.1. From the figure we deduce that the large banks peer groups are moving in stable and incremental trends throughout the study survey period. Next to the large banks peer groups the medium banks peer groups are experiencing a more stable trend in the cost to total income ratio trend than the small banks peer groups which have some ups and downs trend in the measurement ratio especially in the year between 2013 and 2015.

Since cost to income ratio measures the income generated per birr cost. That is how expensive it is for the bank to produce a unit of output. The lower the C/I ratio, the better the performance of the bank that can be denoted as **C/I** = total cost (Expense) /total income. Therefore, the small banks peer groups are generating better income with less cost than the medium and the large banks groups.

Figure 4.1. Cost to total income of commercial banks from 2012-2016



Source: own computation

4.2 Banking Sector Liquidity Performance

4.2.1 Loan to total assets

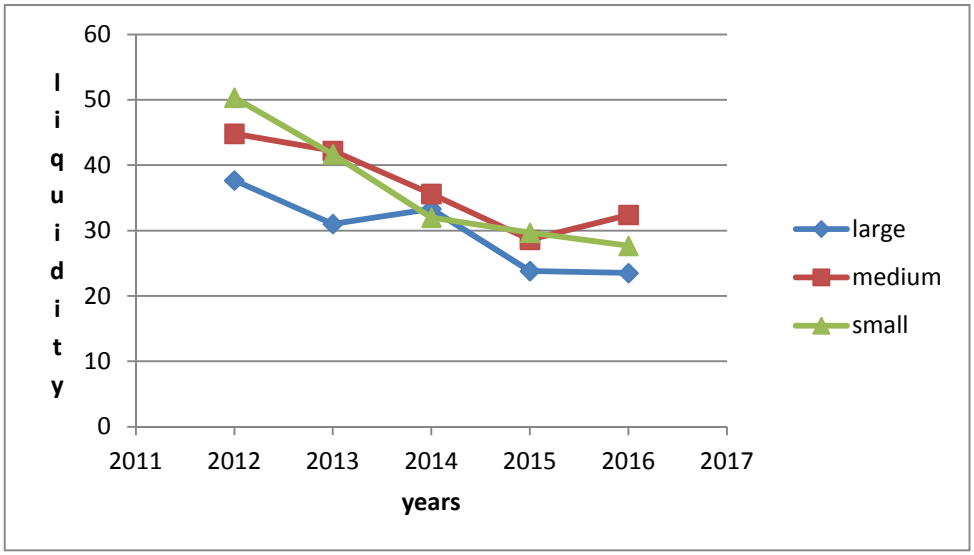
In banking sector liquidity performance measures the ability to meet financial obligations as they become due and is crucial to the sustained viability of banking institutions. It can be seen under the period of study from 2012 to 2016 in table 4.5a small and medium banks have recorded high average liquidity level with average of 36.27 and 36.72 respectively compared to large banks with average liquidity level of 29.87 however this lower liquidity level for large banks is contributed by low mobilization of funds due to may be weak deposit mobilization strategy of these banks. Also high rate of non-performing loans is another reason for liquidity level. Further the results indicate that small banks have high risk in liquidity level comparing to other banks groups with the standard deviation of 17.72 followed by medium banks with standard deviation of 13.21. Large banks have approximately symmetric distribution of liquidity level with the measure of skewness of 0.49 followed by small banks groups while medium banks with highly positive distribution of 0.93.

Table 4.5a. Descriptive Statistics of loan to total assets from 2012-2016

Banks peer group	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
large	30	43	12	55	29.87	11.83	.488	-.586
medium	25	61	15	76	36.72	13.21	.927	2.254
small	15	61	14	75	36.27	17.72	.700	-.135

Source: study survey

Figure 4.2 below shows the liquidity positions trends of banking sectors in Ethiopia, the liquidity level of all banks have shown a decline record throughout the survey years. In year 2014 large banks have shown a significant increase in liquidity than the medium and small banks. The small banks have shown a tremendous decrease in liquidity until the end of year 2016. However, all banks groups are showing their liquidity is experiencing a decline trends this is may be due to the changes in the level of loan granted to the borrowers and the changes in the level of savings is moving in a different speed rate that is the incremental change in the total assets or deposit is faster than the change in the loan granted to the borrowers. This result would happen if their deposit strategy, branch expansion and area of their concentration could not take all these factors in to considerations.



Banks peer group	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
large	30	43	12	55	29.83	11.876	.471	-.582
medium	25	61	15	76	37.08	13.379	.862	1.835
small	15	61	14	75	35.20	17.387	.842	.351

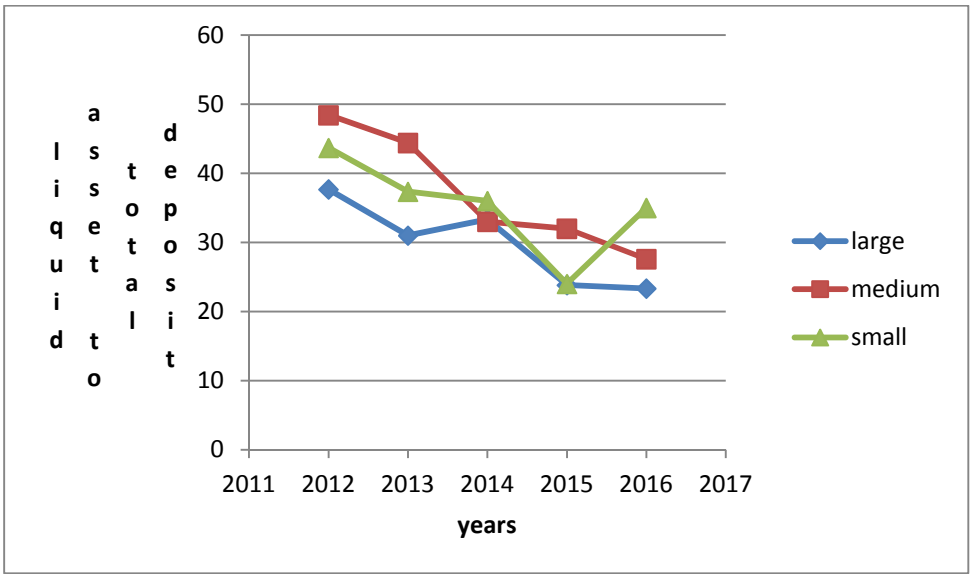

liquid asset to total deposit
60
50
40
30
20
10
0
2011
2012
2013
2014
2015
2016
2017
years
large
medium
small

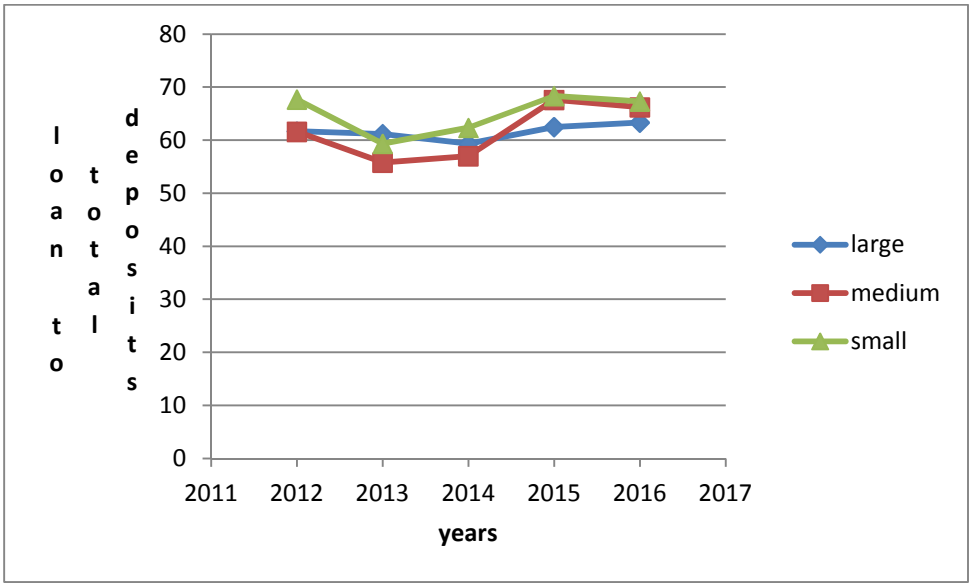
Table 4.6c Descriptive Statistics of loan to deposits

Banks peer group	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
large	30	18	54	72	61.60	5.021	.288	-.925
medium	25	47	47	94	61.64	11.586	1.477	2.570
small	15	15	58	73	65.00	5.127	.059	-1.371

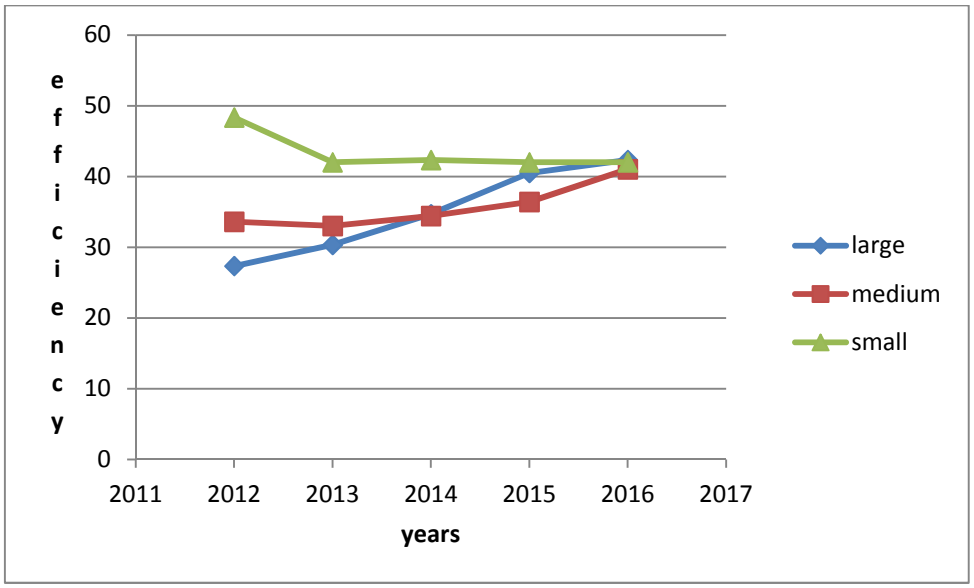
Source: own computation

Figure 4.4 below, shows the loan to total deposits liquidity positions trends of banking sectors in Ethiopia, the loan to total deposits liquidity level of all banks have shown a decline record in the year 2013. In year 2014 large and medium banks have shown almost constant liquidity than small banks. However, all banks groups are showing their loan to deposit liquidity is experiencing a betterment trends, this is may be due to the amount of loan granted to the borrowers are going in an incremental trends more than the resources mobilized, even though both loan and deposits are increasing in all banking groups.

From the liquidity measurements taken in to considerations under all the three scenarios i.e. loan to total assets, liquid assets to total deposits and loans to total deposits, we can conclude that all the private banks are showing an incremental trends in their deposit mobilizations from year to year. Hence, therefore, keeping the resource mobilization strategy in a wide and vast way to mobilize the resource in accordance with the capacity they have will help to sustain their performance growth and contribution to the country's economic development.


loan to total deposits
80
70
60
50
40
30
20
10
0
2011
2012
2013
2014
2015
2016
2017
years
large
medium
small

Banks peer group	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
large	30	30	23	53	35.03	7.26	.690	.194
medium	25	41	20	61	35.68	9.43	.624	.733
small	15	20	36	56	43.33	5.42	1.041	.815



Since Efficiency ratios measure the ability of a business to use its assets and liabilities to generate revenue. A highly efficient organization has minimized its net investment in assets, and so requires less capital and debt in order to remain in operation. Efficiency ratios are used to judge the management of a business. If an asset related ratio is high, this implies that the management team is effective in using the minimum amount of assets in relation to a given amount of revenue. Therefore, the small banks peer groups are using their assets and liabilities to generate more revenue than the medium and large banks peer group.

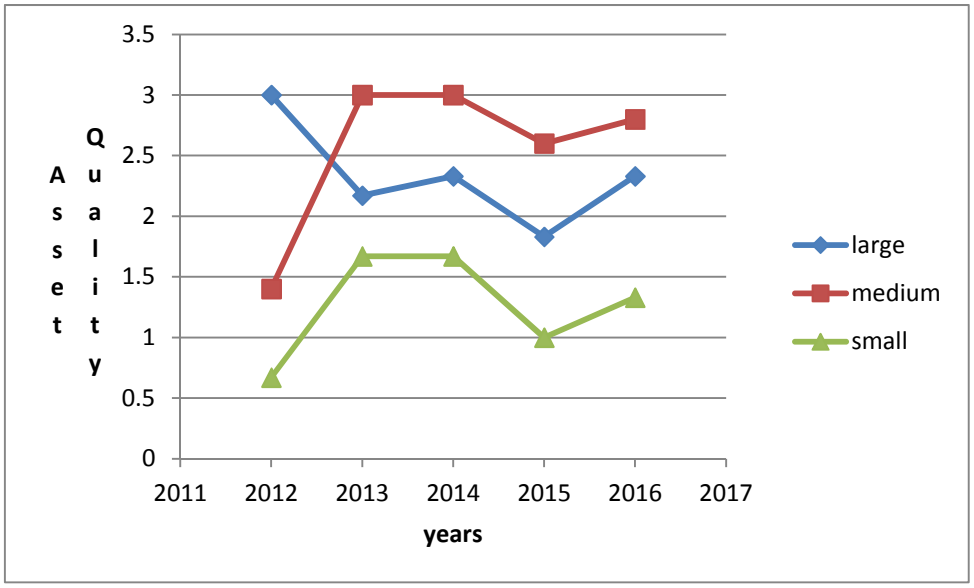
4.4 Asset quality and its trend

The asset quality rating reflects the quantity of existing and potential credit risk associated with the loan and investment portfolios. The ability of management to identify and manage credit risk is also reflected. But, here the provision for doubtful loans from the gross loans is taken in to account in the evaluation of asset quality. All other risks that may affect the value or marketability of an institution's assets, including, but not limited to, operating, market, reputation, strategic, or compliance risks, are assumed to be the same for all banks peer groups. Based on this assumption all banks groups have positively skewed to the right. Therefore, small banks peer group and large banks peer groups have less standard deviation of 0.80 each than the medium banks groups of 2.33. Hence, in terms of asset quality measurement small and large banks peer groups have better value than the medium banks peer group. All this and their asset quality trend are shown below.

Table 4.8 Descriptive Statistics of asset quality

Banks peer group	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
large	30	4	1	5	2.33	.80	1.876	3.852
medium	25	8	1	9	2.56	2.33	1.983	3.282
small	15	3	0	3	1.27	.80	1.386	1.891

Source: survey computation


Asset Quality
3.5
3
2.5
2
1.5
1
0.5
0
2011
2012
2013
2014
2015
2016
2017
years
large
medium
small

4.5 Growth rate in terms of total assets

From the survey period conducted all banks peer groups are experiencing a positive incremental in their total assets. But the large banks peer groups are recording fast growing trend than the medium banks peer groups and small banks peer groups.

Table 4.9.Assets Growth rates trends from 2012-2016

Banks peer group	2012	2013	2014	2015	2016
large	15	15	21	17	20
medium	43	49	27	51	24
small	123	65	50	45	43

Source: survey computation

Table 4.10 Descriptive Statistics of growth in assets

Banks peer group	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
large	30	50	4	54	17.77	8.525	2.596	10.996
medium	25	85	-7	78	40.68	20.387	-.217	-.062
small	15	225	35	260	75.93	62.478	2.304	5.204

Source: own computation

From the descriptive statistics we can see that small banks groups have a high standard deviation of measurement with value 62.5 followed by the medium banks peer group with 20.4 and lastly with large banks peer groups with value of 8.5. Large banks peer groups have a high kurtosis value 11 than both the medium and small banks peer groups with value of -0.06 and 5.2 respectively. The medium banks peer groups have a negative skweness and kurtosis value than both the large and the small banks peer groups.

4.6 Growth rate in terms of total income

The total income growth rate of all banks peer groups also shows a negative record except that the large banks peer group recorded a downward and upward oscillation in total income from year to year. Both the medium and the small banks peer groups are experiencing a downward record in their total income rates trend throughout the survey period except the medium banks got an incremental record in the year 2013.

Table 4.11 Income growth rates trends from 2012-2016

Banks peer group	2012	2013	2014	2015	2016
large	20	16	20	16	20
medium	50	53	51	45	43
small	281	96	67	58	36

Source: survey computation

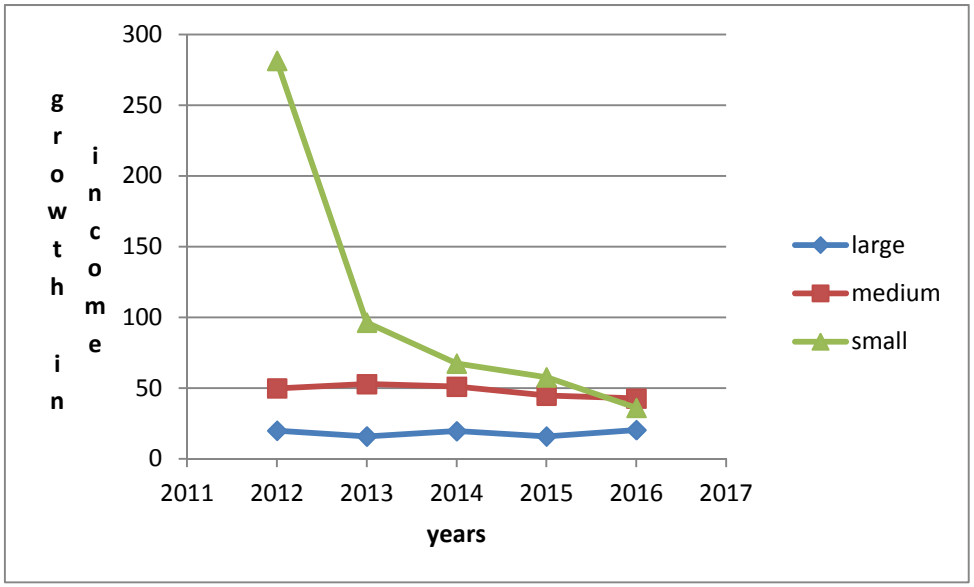
From the descriptive statistics we can see that the small banks peer groups have a high record of standard deviation measurement with value 161.98 followed by the medium and large banks peer groups with value of 25.87 and 10.64 respectively. In addition, the small banks peer groups have a high value of kurtosis with value 13.86 which tells us that the small banks peer groups have reached their peak period in recording the total income incremental.

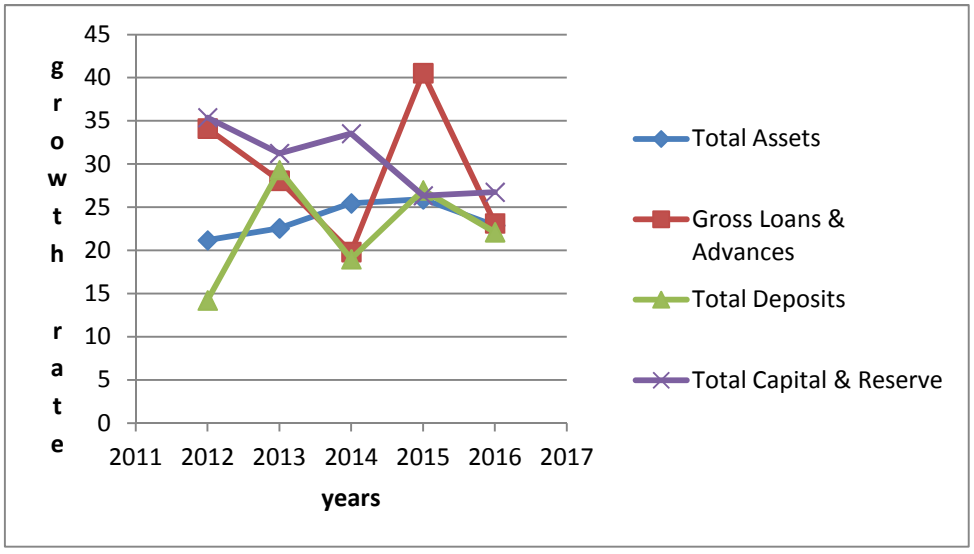
Table 4.12 Descriptive statistics of income growth from 2012-2016

Banks peer group	N	Range	Minimum	Maximum	Mean	Std. Deviation	Skewness	Kurtosis
large	30	48	-13	35	19.03	10.640	-.847	1.760
medium	25	124	-13	111	48.20	25.871	.080	.992
small	15	658	26	684	107.73	161.978	3.671	13.858

Source: survey computation

The trend in total income for all banks peer groups is clearly shown below in figure 4.7. The small banks peer groups were recording the higher total income in the year 2012 than both the large banks peer group and the medium banks peer group. The large and the medium banks peer groups are recording almost constant incremental trends in their total income throughout the survey period.


growth in income
300
250
200
150
100
50
0
2011
2012
2013
2014
2015
2016
2017
years
large
medium
small


growth rate
45
40
35
30
25
20
15
10
5
0
2011
2012
2013
2014
2015
2016
2017
years
Total Assets
Gross Loans & Advances
Total Deposits
Total Capital & Reserve

4.7 Results of test statistics

The test statistics is tested if there is any significant difference regarding the profitability related to ROA, ROE and NIM among all the three banking peer groups from 2012 to 2016. The results of ANOVA are shown below for each of ROA, ROE and NIM profitability measurement respectively by SPSS software.

Table 4.12 ANOVA of return on asset

Source of Variation	Sum of Squares	df	Mean Square	F	p-value
Between Groups	13.192	2	6.596	3.950	.024
Within Groups	111.893	67	1.670		
Total	125.086	69			

The ANOVA table 4.12 reveals that the ROA p-value is 0.024 which is less than 0.05, level of significance. Hence the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, there is a significant means difference of ROA among large banks peer group, medium banks peer group and small banks peer group. Hence the financial performance of all three banking groups regarding this ratio is different

Table 4.13 ANOVA of return on equity

Source of Variation	Sum of Squares	df	Mean Square	F	p-value
Between Groups	373.578	2	186.789	1.443	.244
Within Groups	8674.193	67	129.466		
Total	9047.771	69			

The ANOVA table 4.13 reveals the ROE p-value is 0.244 which is greater than 0.05, level of significance. Hence the null hypothesis is accepted and the alternative hypothesis is rejected. Therefore, the statistical evidence is not sufficient to accept the hypothesis that is there is a significant means difference of ROE among large banks, medium banks and small banks. Hence the financial performance of all three banking groups regarding this ratio is the same.

Table4.14 ANOVA of net interest margin

Source of Variation	Sum of Squares	df	Mean Square	F	p-value
Between Groups	317.760	2	158.880	2.152	.124
Within Groups	4945.440	67	73.813		
Total	5263.200	69			

The ANOVA table 4.14 above also reveals that the NIM p-value is 0.124 which is greater than 0.05, level of confidence. Hence the null hypothesis is accepted and the alternative hypothesis is rejected. Therefore, the statistical evidence is not sufficient to accept the hypothesis that is there is a significant means difference of ROE among large banks, medium banks and small banks. Hence the financial performance of all three banking groups regarding this ratio is the same.

Table 4.15 ANOVA of Loan to total assets

Source of Variation	Sum of Squares	df	Mean Square	F	p-value
Between Groups	767.646	2	383.823	2.035	.139
Within Groups	12639.440	67	188.648		
Total	13407.086	69			

The ANOVA table 4.15 above reveals that the loan to total assets p-value is 0.139 which is greater than 0.05, level of confidence. Hence the null hypothesis is accepted and the alternative hypothesis is rejected. Therefore, the statistical evidence is not sufficient to accept the hypothesis that is there is a significant means difference of loan to total assets among large banks, medium banks and small banks. Hence the financial performance of all three banking groups regarding this ratio is the same

Table 4.16 ANOVA of liquid asset to deposit

Source of Variation	Sum of Squares	df	Mean Square	F	p-value
Between Groups	766.736	2	383.368	2.036	.139
Within Groups	12618.407	67	188.334		
Total	13385.143	69			

The ANOVA table 4.16 above reveals that a liquid asset to deposits p-value is 0.139 which is greater than 0.05, level of confidence. Hence the null hypothesis is accepted and the alternative hypothesis is rejected. Therefore, the statistical evidence is not sufficient to accept the hypothesis that is there is a significant means difference of liquid assets to deposits among large banks, medium banks and small banks. Hence the financial performance of all three banking groups regarding this ratio is the same.

Table 4.17 ANOVA of loan to deposit

Source of Variation	Sum of Squares	df	Mean Square	F	p-value
Between Groups	134.811	2	67.406	1.045	.357
Within Groups	4320.960	67	64.492		
Total	4455.771	69			

The ANOVA table 4.17 above reveals that the loan to deposits p-value is 0.357 which is greater than 0.05, level of confidence. Hence the null hypothesis is accepted and the alternative hypothesis is rejected. Therefore, the statistical evidence is not sufficient to accept the hypothesis that is there is a significant means difference of loan to deposits among large banks, medium banks and small banks. Hence the financial performance of all three banking groups regarding this ratio is the same.

Table 4.18 ANOVA of efficiency

Source of Variation	Sum of Squares	df	Mean Square	F	p-value
Between Groups	761.131	2	380.566	6.256	.003
Within Groups	4075.740	67	60.832		
Total	4836.871	69			

The ANOVAs table 4.18 reveals that the efficiency p-value is 0.003 which is less than 0.05, level of significance. Hence the null hypothesis is rejected and the alternative hypothesis is accepted. Therefore, there is a significant means difference of efficiency among large banks peer group, medium banks peer group and small banks peer group. Hence the financial performance of all three banking groups regarding this ratio is different.

The results under the period of study no Ethiopian private commercial banks group recorded the negative return on assets. Medium banks are more profitable than the large and small banks with the average ROA of followed by small banks and the last is large banks. This is different with the findings of Chiaku at el (2006) examined the comparative performance of U.S. commercial banks. The results showed that between 1997 and 1999, small banks were more profit efficient than large banks but less than medium size banks. There is a significant means difference of ROA among large banks peer group, medium banks peer group and small banks peer group. This is consistent with Abdus at el (2006) evaluated the inter-temporal performance of commercial banks as large, medium and small banks in the State of Utah. There was a significant difference between small and medium, and medium and large banks in their ROA of medium banks are significantly higher than that of small and large banks.

As investigated the financial performance of the three peer banks groups or fourteen private commercial banks; the study used profitability (i.e. ROA, ROE, NIM and Cost to total Income), liquidity (i.e. loan to asst, liquid asset to deposit and loan to deposit), asset quality and operational efficiency as four independent variables affecting the financial performance. The results of the study showed a strong positive correlation with ROA and ROE, a negative strong correlation with NIM and cost to total income. From the liquidity measurements taken in to considerations under all the three scenarios i.e. loan to total assets, liquid assets to total deposits and loans to total deposits, we can conclude that all the private banks are showing a significant negative correlation trends in their loan to assets and liquid assets to deposits ratio while there is a strong positive correlation with loan to deposit ratios. From the study survey result, the overall banks efficiency measurement trend shows that the ability of banks to use their resources efficiently both in producing banking products and services and in generating income from these goods and services beyond the noninterest expenses or cost incurred shows a strong negative correlation. In terms of an effective management in their asset quality, the result shows there is a strong positive correlation. Since the asset quality highlights the amount of existing potential credit risk related to the advancement and portfolios of investment, other property owned, and various assets, as well as some off balance sheet transactions the medium and the large banks are better in their asset management.

Chapter Five
Conclusions and Recommendations

5.1 Conclusions

This paper analyzed the financial performance of Ethiopia's private commercial banking sector over the period of 5 years from 2012 to 2016. The results indicate that the overall banks financial performance in terms of profitability (measured in terms of ROA, ROE, NIM and C/I), level of liquidity, asset quality and efficiency.

The indicators of profitability of ROA and ROE demonstrate, medium and small bank groups recorded an increase in the rate of profit in the five years of the study and small banks are found to be the more profitable in comparison to the medium and large banks, banks profitability deteriorated during 2014 to 2015 as the banks' operating environment deteriorated may be due to increasing bank operating costs related with high bank branch expansion and management cost. However, in 2016 all banks groups recorded an increase in the rate of profit. In the profitability indicator of NIM the performance indicates that, small banks have higher average NIM compared to large banks and medium banks, however, this high average NIM for small banks is caused by charging high interest rates on loans they offer to their client and the same times offering low interest rate for deposits while other small banks are not offering any interest for deposits.

The analysis has also covered the liquidity position of all private banks. From the liquidity measurements taken in to considerations under all the three scenarios i.e. loan to total assets, liquid assets to total deposits and loans to total deposits, we can conclude that all the private banks are showing an incremental trends in their deposit mobilizations from year to year. Hence, therefore, keeping the resource mobilization strategy in a wide and vast way to mobilize the resource in accordance with the capacity they have will help to sustain their performance growth and contribution to the country's economic development.

Furthermore, the study found that, there is a significant means difference of profitability among of banks groups in term of ROA, however, no a significance differences among banks group were existed in profitability in term of ROE and NIM. However, all banks groups are showing liquidity is experiencing a decline trends, this is may be due to high changes in the level of savings than the changes in loan provisions. In addition to this the deposit strategy, the branch expansion and area of their concentration may have a mismatch from the loan seekers and business types.

The asset quality rating reflects the quantity of existing and potential credit risk associated with the loan and investment portfolios. The ability of management to identify and manage credit risk is also reflected. But, here the provision for doubtful loans from the gross loans is taken in to account in the evaluation of asset quality. Since the asset quality highlights the amount of existing potential credit risk related to the advancement and portfolios of investment, other property owned, and various assets, as well as some off balance sheet transactions the medium and the large banks are better.

Efficiency ratio is also taken in the study to evaluate the comparative performance of the private banks. Since Efficiency ratios measure the ability of a business to use its assets and liabilities to generate revenue. A highly efficient organization has minimized its net investment in assets, and so requires less capital and debt in order to remain in operation. Therefore, the small banks peer groups are using their assets and liabilities to generate more revenue than the medium and large banks peer groups under the study.

5.2 Recommendations

From the analysis so far, the following recommendations be put forward;

- To improve banks financial performance, the banks need a good regulatory environment, i.e. enhance enabling, creativity and innovation, smoothing the power distance through participation of the operators and minimizing too much control rather than risk based supervision. Regarding to their deviations from the mean that will enable them to expand their scope of business but strictly within the financial service sector. With a good regulation, supervision and corporate governance, unnecessary cost and expenses will be cut down and the profit will increase.

- The banks should put in place good corporate governance, which is, monitoring activities in order to ensure that clients will not fail on their debt which would not be possible if it were by the direct lenders to the firms. The key is that banks themselves are guided by prudence and have the discipline to contain them from taking excessive risks. Through continuous monitoring by banks, firms would follow a path of efficiency in their production and trading. Hence it will allow for transparency and minimize fraud in the bank (this is the case where some banks charge different interest rates within the same business groups, which would tend to create doubts on the clients).

- The Ethiopian private commercial banking sector experiences a high return on equity so further additional investment is required to exploit the return from the sector.

- Clear business and financial model across its portfolio of businesses/products to create the roadmap for ROA improvement

- Strong measurement framework that deploys ROA improvement targets through the management structure of the organization

- Almost all banking groups are experiencing higher interest margin, further resource mobilization is a must in order to narrow the gap between the loan demand and its provision or supply of the financial resources.

- The private commercial banks required further performance improvement in order to lower the C/I ratio and becomes the better performer in the banking sector.
- Improving the ability of management to identify and manage credit risk is also required in order to have a better quality in asset.
- Improving the efficiency of assets and liabilities to generate more revenue is required in order to have highly efficient organization which could minimize its net investment in assets, and so requires less capital and debt in order to remain in operation.

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Annexes

Annex I

Bank Concentration based on size

Total Assets at End of June 30	2012	2013	2014	2015	2016
Dashen Bank	17,520,042	19,747,175	21,962,202	24,763,886	28,576,434
Awash Bank	13,125,217	**14,362,303**	22,106,346	25,210,501	31,147,685
Abyssinia Bank	8,239,514	10,160,114	11,276,391	13,667,559	16,828,069
Wegagen Bank	8,347,155	10,393,803	11,528,770	13,711,365	16,189,764
United Bank	8,786,860	9,985,997	11,876,369	14,360,872	17,269,873
Nib Int. Bank	8,275,695	9,144,544	10,747,283	13,256,124	15,830,322
COOP. bank of Oromyia	3,670,726	6,537,470	7,350,372	11,462,067	10,687,348
Lion Int. Bank	2,463,032	2,942,433	3,613,339	5,859,362	8,119,232
Buna.Int, Bank	1,365,032	2,128,454	3,011,946	4,499,696	6,820,959
Oromyia Int. Bank	2,787,394	3,911,231	6,151,661	9,534,850	11,281,589
Zemen Bank	**2,394,242**	**3,248,479**	**3,924,769**	**4,874,341**	**7,374,132**
Berhan Bank	1,285,037	2,197,315	2,814,261	4,171,944	7,196,303
Addis Int. Bank	424,671	916,174	1,262,722	1,714,971	2,462,190
Abay Bank	1,237,900	1,951,100	3,196,780	4,582,191	6,186,768
Debub Global Bank	145,817	380,565	874,823	1,143,592	1,291,960
Enat Bank		130,025	1,417,349	2,209,449	3,248,191
Total Assets at End of June 30	**79,922,517**	**97,626,592**	**120,823,211**	**151,669,728**	**185,970,668**

Annex II

		return on asset	return on equity	net interest margin	liquidity ratio	asset quality	cost to income	efficiency	liquid asset to deposit	loan to deposit
return on asset	Pearson Correlation	1	.538**	-0.122	-0.012	.454**	-0.22	-.337**	-0.055	0.07
	Sig. (2-tailed)		0	0.316	0.925	0	0.073	0.004	0.65	0.55
	N	70	70	70	70	70	70	70	70	70
return on equity	Pearson Correlation	.538**	1	-0.19	-.274*	.404**	0.06	-0.23	-.268*	-.267*
	Sig. (2-tailed)	0		0.115	0.022	0.001	0.619	0.055	0.025	0.03
	N	70	70	70	70	70	70	70	70	70
net interest margin	Pearson Correlation	-0.122	-0.19	1	0.015	-.463**	0.114	.427**	-0.029	.306*
	Sig. (2-tailed)	0.316	0.115		0.901	0	0.346	0	0.81	0.01
	N	70	70	70	70	70	70	70	70	70
liquidity ratio	Pearson Correlation	-0.012	-.274*	0.015	1	0	-0.22	-0.133	.869**	0.02
	Sig. (2-tailed)	0.925	0.022	0.901		1	0.069	0.271	0	0.85
	N	70	70	70	70	70	70	70	70	70
asset quality	Pearson Correlation	.454**	.404**	-.463**	0	1	-0.04	-.360**	0.004	-0.17
	Sig. (2-tailed)	0	0.001	0	1		0.722	0.002	0.976	0.15
	N	70	70	70	70	70	70	70	70	70
cost to income	Pearson Correlation	-0.216	0.06	0.114	-0.219	-0.04	1	.796**	-0.186	0.03
	Sig. (2-tailed)	0.073	0.619	0.346	0.069	0.722		0	0.124	0.83
	N	70	70	70	70	70	70	70	70	70
efficiency	Pearson Correlation	-.337**	-0.23	.427**	-0.133	-.360**	.796**	1	-0.155	0.23
	Sig. (2-tailed)	0.004	0.055	0	0.271	0.002	0		0.201	0.06
	N	70	70	70	70	70	70	70	70	70

liquid asset to deposit	Pearson Correlation	-0.055	-.268*	-0.029	.869**	0.004	-0.19	-0.155	1	-0.05
	Sig. (2-tailed)	0.65	0.025	0.81	0	0.976	0.124	0.201		0.69
	N	70	70	70	70	70	70	70	70	70
loan to deposit	Pearson Correlation	0.073	-.267*	.306*	0.023	-0.17	0.026	0.226	-0.049	1
	Sig. (2-tailed)	0.548	0.026	0.01	0.85	0.152	0.83	0.059	0.688	
	N	70	70	70	70	70	70	70	70	70

**. Correlation is significant at the 0.01 level (2-tailed).

*. Correlation is significant at the 0.05 level (2-tailed).