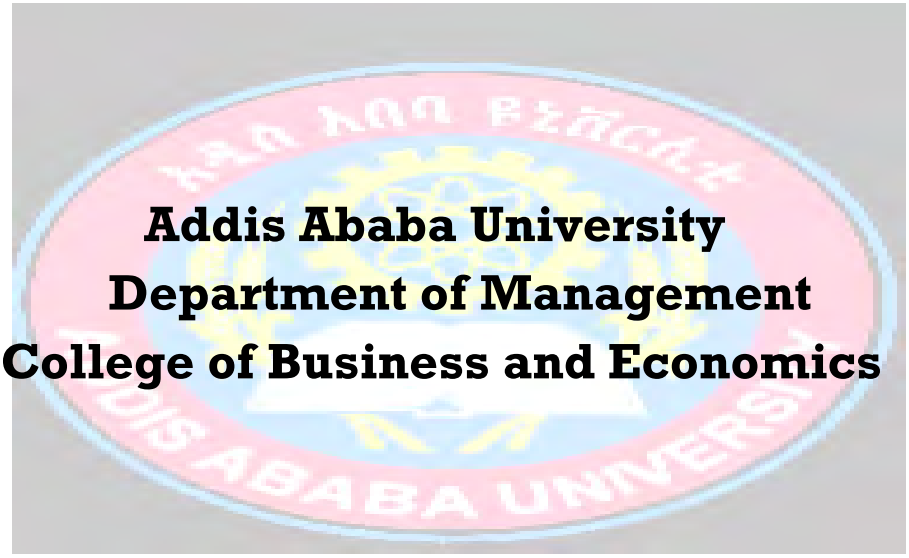

Performance of private commercial banks in Ethiopia, pre and post NBE bill periods.

By: Andebet Mulualem Zewdu

A Research Project in partial fulfillment of Requirements for the Degree of Executive Masters of Business Administration

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Department of Management

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This is to certify that the research project prepared by Andebet Mulualem, entitled: *Performance of Private commercial banks in Ethiopian Pre and Post bill periods* submitted in partial fulfillment of the requirements for the Degree of Executive Master of Business Administration complies with the regulations of the university and meets the accepted standards with respect to originality and quality.

Signed by the Examining Committee:

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Statement of Declaration

I, Andebet Mulualem, have carried out independently a research work on the topic entitled "Performance of Private Commercial Banks in Ethiopia Pre and Post NBE Bill Periods" Project in partial fulfillment of Requirements for the Degree of Executive Masters of Business Administration 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.

Signed: _____ Date:_____

Andebet Mulualem Zewdu

Abstract

This study aimed at comparing the performance of Private commercial banks in Ethiopia during pre and post Bill Periods. i.e 2008-2011 and 2012-2015 years. The study used quantitative research approach and secondary financial ratio analysis for six private commercial banks. Profitability performance, liquidity performance and asset quality performance of the banks were assessed to compare pre and post bill periods performance of the private banks. Purposive sampling was used to select samples from the total population. The study used trend analysis using graphs for each of the variables in the study to observe the trend on them throughout the observation period. A paired t- test is employed to test the hypothesis that the means of the two periods are same on the eight variables. As a result of hypothesis test it was found there is statistically significant difference between the two periods in respect to profitability measures of Return of Equity (ROE), Cost to Income(C/I) ratio, and Net interest margin (NIM). In addition statistically significant difference between the two periods is observed in the Liquidity measure of Liquid asset to deposit (LAD) ratio and asset quality measure of loan reserve to total loan (LRTL) ratio. The study reveal statistically insignificant difference between the two periods in respect to Return on Asset(ROA) and liquidity measure of Loan to Deposit(LD) ratio and Loan to total asset(LTA) ratios. Finally, the study had recommended on further research in bank performance and regulatory requirements in private banking business.

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Acronyms

AIB: Awash International Bank

BOA: Bank of Abyssinia

C/I ratio: Cost to Income ratio

DB: Dashen Bank

LAD ratio: liquid asset to deposit ratio

LD ratio: Loan to deposit ratio

LRTL ratio: Loan Reserve to Total Loans ratio

LTA ratio: Loan to total asset ratio

NBE Bill: National Bank of Ethiopia Bill

NBE: National Bank of Ethiopia

NIB: Nib International Bank

NIM: Net Interest Margin

ROA: Return on Assets

ROE: Return on Equity

SPSS: Statistical Package for Social Science

UB: United Bank

WB: Wegagen Bank

CHAPTER ONE

Introduction

The current structure of Private indigenous commercial banking business in Ethiopia has an age of not more than two decades, Awash international bank S.c being an ice breaker established in 1994 G.C. currently there are 16 private commercial banks authorized to operate in Ethiopia fulfilling the requirements set by the regulatory body.

A central bank is a bank under some degree of government control that is generally charged with controlling the money supply (to a greater or lesser degree),providing price stability (influencing the price level),attaining economic output and employment goals, regulating commercial banks (and perhaps other depository and non depository financial institutions), stabilizing the macro economy (proactively and/or by acting as a lender of last resort during financial crises), providing a payments system (check clearing and long-distance payments).Central banks also often act as the national government's banker by holding its deposits and making payments on its behalf. (Wright & Quadrini 2012).

The goals of National Bank of Ethiopia are to carry out extensive and sound institutional transformation tasks, maintain price and exchange rate stability, maintain adequate international reserves, improve the soundness of the financial system, play a decisive role in economic research and policy advice to the Government, create efficient Payment System and improve the currency management of the Bank. (www.nbe.gov.et).

As part of its monetary policy, National Bank of Ethiopia(NBE) issue a directive effective April 4,2011 that requires private commercial banks to hold 27 percent of the gross loan extension in a 5 year bill at an interest rate of 3 percent per annum. (NBE, 2011).The justification behind the directive is to increase the role of private

banks in supporting economic growth via financing long term priority sector projects, mainly huge projects being implemented as part of the five years growth and transformation strategic plan.

The supervisory body believed that Private Banks loan disbursement to long term projects was not more than 20%. The majority of loan was short term (domestic & international trade) which can maximize their profit. Owing to this justification, senior official of the bank publicly disclose that the Bill could not be a burden in a country where banks secure 40% profit. (www.ena.gov.et, 2011)

According to Ethiopian news agency such bills are customary mechanisms in fast growing economies in financing long term government projects. Countries like China, India, Pakistan and Japan have used such approaches to meet their demand.

The banking sector has been in a liquidity crunch ever since the introduction of the lending cap, imposed by the central bank on all commercial banks at the beginning of 2009 with the intention to curb the double digit inflation.

On the other hand, according to International Monetary Fund staff's report the directive does not have any direct effects on liquidity for the banking sector. The liquidity absorbed through the issuance of the NBE bills is re-injected into the system via DBE, where the proceeds are transferred for on-lending to finance government targeted private sector activities. (IMF country Report, 2012)

The staff report explain the requirement as having a sizable negative impact on private banks' intermediation activities and a potential of creating maturity mismatches as private banks collect savings at two to three-year maturity and even shorter in some cases, but have to freeze these resources for five years at rates lower than cost of funds. There is also a risk that as the profitability of private banks reduces on account of less intermediation because of this directive, they could raise noninterest income charges such as fees and commissions to recoup these losses, further impacting negatively on the private sector. (IMF country Report, 2012)

The exclusion of state owned banks, especially CBE, is one major source of compliant forwarded by bank experts through various Medias, which according to them the directive favors CBE in terms of having dependable deposit available for financing freed from such unprofitable investment. Recent developments show that CBE's dominance in deposit market share has been increase backed up by massive public enterprises attachment with it.

The measurement of bank performance particularly commercial banks is well researched and has received increased attention over the past years. There have been a large number of empirical studies on commercial bank performance around the world.(Kumbirai &Webb, 2010).

Various literatures try to explain the means to measure performance of commercial bank in different ways. According to 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. Bikker and Bos(2008) perform a comprehensive analysis of bank performance, expressed in terms of competition, concentration, efficiency, productivity and profitability.

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.

Some scholars reject such traditional method of measuring performance which is basically based on historical accounting data referring it as having limitation to measure the value of the firm. Some scholars promote incorporation of qualitative aspects in order to measure the performance of banks. One of the drawbacks considered in taking this traditional method of measurement is the possibility of manipulation of financial date by management at the expense of future performance.

However, according to Kumbirai and Webb (2010), financial ratio analysis that primarily based on accounting data permits a historical sketch of bank returns and

risks which are the only source of information for evaluating the management's potential to generate satisfactory returns in future.

1.2. Statement of the Problem

Few years are counted after the imposition of NBE bill on private commercial banks in Ethiopia. Creating an understanding regarding impacts of regulatory measures in the financial sector is crucial for bank managers as well as policy makers. A regulation might have positive impact on certain area of performance as well as negative impact in other area.

Assessment of pre and post period performance in banking sector helps to clearly understand whether there is difference in performance because of the implementation of certain regulations. Knowing specific area that shows variation because of such regulation enables decision makers in searching for alternative solutions to compensate benefits lost because of the negative impact and to utilize the opportunities created because of the positive impact of regulations.

Because of the newness of the regulation in the country, little has been done to show the implication of such regulator's action of the banks' performance. Literatures reveal contradicting results as to the significance of the impact on performance as well achievement made by private commercial banks before and after the imposition of the NBE Bill. In addition, methodologically, comparisons has not yet been done to see the variation, as well as significance, in performance before and after the implementation of the bill,

Therefore, to investigate if there is significant performance difference in private commercial banks in Ethiopia before and after the NBE Bill; this study assesses the performance on Ethiopian private commercial banks through financial data analysis for the period 2008-2015.

1.3. Research Question

The research answers the following questions:

- Is there statistically significant difference (change) in performance of private commercial banks in Ethiopia after the implementation of NBE bill?
- Are banks performing better before or after the implementation of the bill?
- Which specific area of performance measure shows variation during the two periods?

1.4. General Objectives:

The general objective of this study is to assess performance of private commercial banks in Ethiopia before and after NBE bill.

1.5. Specific Objectives:

- To see whether there is significance difference in profitability after the bill has been imposed.
- To see whether there is significance difference in Liquidity after the bill has been imposed
- To see whether there is significance difference in asset quality after the bill has been imposed.

1.6. Research Hypothesis

H0: There is no significant difference in performance of private commercial Banks in Ethiopia before and after the NBE bill has been imposed.

H0: μ1 = μ 2,

H1: There is significant difference in performance of private commercial Banks in Ethiopia before and after the bill has been imposed

H1: μ1 ≠ μ 2,

Where **μ**1 is the mean for 2008-2011 and **μ**2 is the mean for 2012-2015

1.7. Significance of the Study

The study will create an understanding regarding the performance of the private commercial banks before and after the NBE bill. The knowledge gained through the

investigation could be used by bank managers, scholars and policy makers to assess the implication of such regulations on the performance of the banking sector. The result obtained through the study could contribute as a base for pursuing further empirical finding which could be used in making informed decision in the banking sector.

1.8. Scope & Limitation of the Study

The scope of the study is to see the performance of Private commercial banks in Ethiopia before and after the NBE bill has been imposed using financial data analysis on profitability, liquidity and asset quality.

Since Selected Quantitative performance measurement has been employed by the study, the implication of qualitative performance measurement as well other quantitative measures not included in the study limit the sufficiency of information obtained by the investigation regarding the performance of the banks studied.

1.9. Organization of the Study

This research is organized in five chapters. The first chapter gives an introduction regarding the paper. Chapter two describes the review of related literatures. Chapter three provide detail description of the methodology employed by the research. Chapter four contains data presentation, analysis and interpretation. Finally, the last chapter concludes the total work of the research and gives relevant recommendations based on the findings.

CHAPTER TWO

2. LITERATURE REVIEW

2.1. Banking in Ethiopia

The primarily role of commercial banks is to mobilize deposit and avail such recourse for investment. Banks also play a pivotal role in the financial system; in the clearing and settlement of transactions .This intermediary role removes deficiency of capital which in turn plays significance impact in bringing economic development in a nation.

A sound banking system mobilizes the small and scattered savings of the community, and makes them available for investment in productive enterprises.

Expanding the banking system will create greater savings opportunities that will in turn boost funding via savings. The alternative is a country's heavy reliance on external sources, private or official value transfers such as remittances, and external borrowing. (Keatinge,2014)

The first bank to be established in Ethiopia was the Bank of Abyssinia in 1905. It was owned and managed by the British-owned National Bank of Egypt. It was given a banking monopoly for fifty years, including the right to issue notes and coins. However, three other banks were established in the next ten years. In 1931, the Bank of Abyssinia was replaced by the Bank of Ethiopia which was wholly owned by the government and members of the Ethiopian aristocracy, becoming the first 100% African-owned bank on the continent; it was also authorized to issue notes and coins and to act as the government's bank. It operated for only a few years, being closed after the Italian invasion. During the Italian occupation, several Italian banks opened branches in Ethiopia. (Harvey,1996).

After the liberation in 1942, the State Bank of Ethiopia was established. It became operational in 1943, with 43 employees and two branches, and acted as the country's central bank. The first governor was a Canadian. The Bank also acted as the

country's main commercial bank, while a few much smaller foreign banks continued to operate.

In 1963, a new banking law split the functions of the State Bank of Ethiopia into central and commercial banking as the National Bank of Ethiopia and the Commercial Bank of Ethiopia respectively. Both were government-owned. The very interesting part of this law is it allowed other commercial banks to operate. This included foreign banks provided they were 51% owned by Ethiopians. The biggest of these was the Addis Ababa Bank. It was 40% owned by Grindlays Bank (British owned) and had 26 branches by 1975. There were also two foreign commercial banks: the Banco di Roma and the Banco di Napoli, which had eight branches and one branch respectively in 1975.

After the fall of the imperial government in 1974, since the remaining private sector commercial banks were relatively small; they were nationalized and concentrated into the Commercial Bank of Ethiopia (CBE). The new Ethiopian socialist government merely shifted, therefore, from owning most of the banking system to owning it completely. (Harvey,1996).

Even after the fall of Dergu regime, the financial sector reforms in Ethiopia do not allow private sector participation in existing government banks, nor do they allow the entry of foreign banks until 1994.

1994 is considered as another turning point in the history of banking business whereby local private commercial banks are allowed to operate in the country. Awash international bank S.c is the first indigenous private commercial bank in Ethiopia which was established by 486 founder shareholders with a paid-up capital of Birr 24.2 million. It was licensed on November 10, 1994, and started banking operations on February 13, 1995.

Currently, the industry comprises one state-owned development bank and 18 commercial banks, two of which are state-owned, including the dominant Commercial Bank of Ethiopia (CBE). Even one of the state owned commercial bank,

Construction and Business bank, is on the way to merge with CBE that make the composition of the sector to one state owned commercial bank and 16 private commercial banks.

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

Studies made regarding the financial sectors in Ethiopia witness its infancy and dominancy by the state owned Commercial bank. Keatinge(2014) strengthen this claim declaring, State owned CBE dominate the sector with assets accounting for approximately 70 percent of the industry's total holdings. The dominance of public sector banking certainly restricts financial intermediation and economic growth. It contrasts with regional and international peer countries where banking industries have a much higher share of private sector and foreign participation. (Keatinge, 2014)

Literatures revel, compared to most countries, Ethiopia has taken a cautious approach toward the liberalization of its banking industry. For all intents and purposes, its industry is closed and generally less developed than its regional peers. (Keatinge 2014) and (Harvey 1996).

2.2. Bank performance and performance indicators

Performance is the accomplishment of a given task measured against preset known standards of accuracy, completeness, cost, and speed. In a contract, performance is deemed to be the fulfillment of an obligation, in a manner that releases the performer from all liabilities under the contract. (Business Dictionary.com)

Performance measurement systems are paramount important for evaluating the accomplishments of firm goals, constructing strategies for development, making decisions for investments and operate in a competitive environment.

A number of studies in literature have investigated banks' performance by using variety of approaches. The most traditional way of looking at the net income gives us an idea of how well a bank is doing, but it does not adjust for the bank's size, thus making it hard to compare how well one bank is doing relative to another.

According to 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.

Zhang and Li (2009) emphasize on the importance of balanced scorecard method in performance management of commercial banks. The balanced scorecard method includes both financial and nonfinancial measures which are based on the introduction of customer factors, internal business processes, employee learning and growth and financial factors.

Bikker and Bos (2008) perform a comprehensive analysis of bank performance, expressed in terms of competition, concentration, efficiency, productivity and profitability.

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 simple description about the bank's financial performance in comparison to previous periods as well as help to see how well it is doing compare to other banks' performance. Information obtained 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 importance of various types of indicators

Most literatures focused on the profitability aspect of commercial banks in measuring their performance. Return on Asset (ROA) and Return on Equity (ROA) are the most famous measure of bank performance. Return of Asset measures bank profitability that corrects for the size of the bank, which divides the net income of the bank by the amount of its assets. *ROA* is a useful measure of how well a bank manager is doing on the job because it indicates how well a bank's assets are being used to generate profits. The higher the ROA, the more the profitable the bank will be. Although *ROA* provides useful information about bank profitability, it is obvious that it is not what the bank's owners (equity holders) care about most. Generally, ROA shows the profits earned per dollar of assets and indicates how effectively the bank's assets are managed to generate revenues, although it might be biased due to off-balance-sheet activities. Return on Equity (ROE) is the most important indicator of a bank's profitability and growth potential. It is the rate of return to shareholders or the percentage return on each dollar (birr) of equity invested in the bank. Banks with a lower leverage ratio (higher equity) usually report a higher *ROA*, but a lower *ROE*. However, the *ROE* disregards the higher risk that is associated with a high leverage; at the same time, financial leverage is affected by regulation.

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 (C/I) 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.

Another most common means of evaluating bank performance used by scholars are CAMEL (CAMELS). The model is used in enormous scholarly works to assess the performance of banks worldwide. The CAMEL(S) rating is a supervisory rating system originally developed in the U.S. to classify a bank's overall condition. The

ratings are assigned based on a ratio analysis of the financial statements, combined with onsite examinations made by a designated supervisory regulator.

"CAMEL rating has become a concise and indispensable tool for examiners and regulators". This rating ensures a bank's healthy conditions by reviewing different aspects of a bank based on variety of information sources such as financial statement, funding sources, macroeconomic data, budget and cash flow.(Sandhya,2014). CAMEL is an acronym for five components of bank safety and soundness. It stands for Capital adequacy, Asset quality, Management capability, Earnings capacity, and Liquidity (Asset Liability management). For CAMELS it include another component which is Sensitivity (sensitivity to market risk, especially interest rate risk)

2.3. Factors affecting Bank 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 than small banks, for example, because of economies of scale in product development.

In their study, Bikker and Bos(2010) come up with following finding. The wage rate has a positive significant sign: banks that offer higher wages in order to attract more qualified personnel are rewarded with higher profitability. The coefficient for the price of other non-interest expenses is also positive and significant. Banks that incur these costs typically engage in frequent off-balance sheet operations and other non-intermediation activities. As a result, the positive sign for this variable may reflect the ability of banks to charge high margins on the products they supply after incurring these costs. Banks are able to pass a large portion of these costs on to customers. Likewise, banks that provide relatively many services compared to traditional intermediation.

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 of private commercial banks in Ethiopia.

Contrary to the above statement, Shahchera(2012) conclude that profitability is improved for banks that hold some liquid assets, however, there is a point at which holding further liquid assets diminishes a banks' profitability. Further he investigates that banks with a high proportion of loan asset ratio have a higher profitability.

According to 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.

According to 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.

2.4. NBE bill and Performance

One can see at a glance a pure impact of the bill on private commercial banks in Ethiopia. Basically, this impact is expressed in terms of holding too much of any banks asset(loan) in a relatively long term investment apart from their prevailing practice of focusing in short term lending. This mandatory regulatory requirement for sure challenge banks being an additional burden in the creation of maturity mismatch. By its very nature banks suffer from Asset -liability mismatch. The act of undertaking loans and deposits creates the mismatch, because while investors like to lend for as short a term as possible, borrowers prefer to borrow for as long a term as possible.

In other words, the act of banking is the process of maturity transformation, whereby banks 'lend long' and 'fund short'. Banks do not 'match-fund', because there would never be enough funds available to match a 25-year maturity mortgage with a 25-year fixed deposit. Thus, banking gives rise to liquidity risk, and bankers are therefore required to take steps to ensure that liquidity, the ability to roll over funding of long-dated loans, is continuously available. (Choudhry, 2011).

The Requirement also has the potentials of creating maturity mismatches**.** Private Banks collect savings mostly at two three-year maturity and even shorter is some

cases. Fulfilling the 27 percent equipment means that they have to freeze these resources for 5 years, creating a clear maturity mismatch. Based on the above fact, it is fair to assume that the asset structure and liquidity management of the private commercial banks has been affected by the bill regulation.

Few have been done on the impact of the bill on performance of private banks in Ethiopia. Those findings converge and diverge in certain respects. Eden (2014) makes a study on the impact of the bill on performance and come up with the following conclusion. NBE-Bill purchase has negative and significant effect on banks performance measured through both Return on Asset and Net Interest Margin. The researcher concludes that investment in NBE Bills results a negative impact due to the lesser amount of interest rate compared to the amount of interest rate if the amount invested on the Bill was invested on other investments.

In his study about the Impact of Policy Measures on Ethiopian Private Banks Performance, Tesfaye(2014) asserts the above statement by concluding that exposure to government bills has negative and significant relationship with performance. Nevertheless, the magnitude is not severe.

But due to measurement difference between the above two studies, they come up with varying conclusion as to the impact of the bill a specific performance indicator, Tesfay(2014) arguing the betterment of profitability record for private banks during times of policy restrictions, while Eden(2014) declare a lesser Return of asset earned by banks after the policy measure.

But According to Shibiru(2014), comparison between pre and post bill periods in terms of profit average growth rate of private banks, his findings revealed negative implication of the directive on the profit. According to his investigation, the average growth rate for profit of private banks before the directive came into forth has been 119% while it came down to 26% since the directive has implemented confirming the reduction in the growth of profit for private commercial banks.

According to IMF staff report (2012), the NBE directive is having tangible impacts on the banking sector, including maturity mismatch and less profitability. The staff's argument regarding lesser profitability arises from the interest rate of 3 percent per annum on the bill, while deposit rates are around 5 percent. But as per Tesfay's(2014) statement, the significant relation of the NIM with performance revealed bank's respond to the policy through adjusting their loan prices in a way to compensate for the opportunity lost. Hence, the Banks cost related to bill purchase to some extent seems covered by the borrowers but the increase in rate has not resulted in materialized high default risk.

According to Africa Economic Outlook (2012), because of the Bill requirement, credit to the private sector, which is already low, assumed to be held back as banks allocate funds towards NBE bills. Interest rates on loans charged by private banks may also rise to compensate the loss, unless banks fully absorb the costs of the new policy. In this regard, it becomes apparent that banks increase the price of loan significantly after the bill and tried to transfer the cost to borrowers.

On the other side, the bill is considered as having some positive impact on the overall banking system in Ethiopia. The sub optimal efficiency, less competition among banks and easy of profitability has been challenged by the NBE bill. In an effort to compromise the amount of fund tied up in the NBE bill banks make great efforts to enhance their deposit base through branch expansion strategies, implementation of technological products, and enhancement of quality service and diversification of services. This statement is supported by a study made by Getnet (2014) regarding financial inclusion, regulation and inclusive growth in Ethiopia. He states that some private banks are also trying to cope with the adverse implication of the NBE bills by aggressive deposit mobilization and expanding their branches to small towns. This is, of course, the unintended result that improves financial inclusion.

In assessing the impact of regulatory policy on the development of private commercial banks, Shibiru(2014) finds that the loanable funds of private commercial

banks reduced by birr 6.6 billion in 2010/11, 12.6 billion in 2011/12 and 18.4 billion in 2012/13 and these amount was channeled to purchase NBE bills in respective years. But this investigation has been evaluated in different perspective by Tesfaye (2014) who believe the bill seems contributed positively to performance via moping the excess liquidity holding of banks or to invest excess funds in earning government securities than the customary practice of holding liquid asset in zero earning accounts at the NBE.

Shibiru(2014) conclude that data accessed from the financial statements of private commercial banks indicated that liquidity (Loan to Deposit ratio) of private commercial banks after the directive enactment is higher than before the directive enactment reflecting that the reduction of liquid asset of banks to repay its liability. It was 62%, on average before the enactment of the directive and 76% on average after the enactment of the directive marking 14 percentage increases.

CHAPTER THREE

3. RESEARCH DESIGN AND METHODOLOGY

This chapter discusses the research design and methodology. The chapter is organized in six sections. The first section discusses the research design. Sampling design is presented in section two. Sources and Methods of data collection discussed on the third section and method of data analysis is presented in section four. The last part of this chapter discusses about the variable in the study.

3.1. Research Design

The study employee descriptive and inferential statistics to see the performance of Ethiopia's private commercial banks during the period 2008-2015.

3.2. Sampling Design

The total population is sixteen but for the study purpose, the sample size is six. Among the non-probability sampling techniques purposive sampling was used to select samples from the total population. Non-probability sampling technique is selected because random sampling is not appropriate for the study. Since the study covers a period of 8 years and since the bill imposed on 2011, the researcher believed taking banks having an age of more than 4 years before the implementation of the bill are relevant for the study. In addition, to eliminate the possibility of performance difference because of age and size, the peer banks established before 2000 are selected for this study. Therefore, the sample size is six, which includes, Dashen Bank S.C (DB), Awash International Bank S.C (AIB), Wegagen Bank S.C (WB), United Bank S.C (UB), Nib International Bank S.C (NIB) and Bank of Abyssinia S.C (BOA). Therefore, the matrix encompasses comparison of 24 pre bill observations with the other 24 post bill observations.

3.3. Sources and Methods of Data Collection

The researcher used secondary data for the study. NBE regulations, bank's policies and procedures, bulletins, literature related to the subject are used as a secondary source of interpretation.

As secondary source, the study also used panel data from 2008-2015 of six commercial private banks believed to be peer group in industry that results a total of 48 observations. Primarily balance sheets and income statements of the selected banks during the period have been bused as the main source of data for analysis.

3.4. Methods of Data Analysis

This paper used descriptive financial ratio analysis to measure, describe and analyze the performance of private commercial banks in Ethiopia during the period 2008-2015. To examine whether the difference in performance of the banks in 2008-2011 is statistically different from that of 2012-2015 a paired t- test is employed to test the hypothesis that the means of the two periods are the same on the eight variables as discussed below.

Inferences about the hypothesis are made by looking at test statistics and critical values associated with the mean. If P-value ≤ μ, reject the null hypothesis. If P-value > **μ**, do not reject the null hypothesis.

3.5. The Variables

A. Profitability Performance

In his study, Workneh use Bank profitability as a dependent variable measured by the ratio of the Return on Assets (ROA), Return on Equity (ROE), and Net Interest Margin (NIM).

Whereas, according to Kumbirai and Webb, the most common measure of profitability are ROA, ROE, and cost to income ratio(C/I). This study will use the four measures of profitability which are ROA, ROE, C/I and NIM.

Return on Assets (ROA) shows the ability of management to acquire deposits at a reasonable cost and invest them in profitable investments. This ratio indicates how much net income is generated per dollar (birr) of assets. The higher the ROA, the more the profitable the bank will be.

ROA =net profit/total assets

Return on Equity (ROE) is the most important indicator of a bank's profitability and growth potential. It is the rate of return to shareholders or the percentage return on each dollar (birr) of equity invested in the bank.

ROE= net profit/ total equity.

Cost to Income Ratio (C/I 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 will.

(C/I) = total cost (Expense) /total income

Net Interest Margin (NIM) is the spread between the interest earned on the bank's assets and the interest costs on its liabilities.

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. 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. If the interest cost of its liabilities rises relative to the interest earned on its assets, the net interest margin will fall, and bank profitability will suffer.

$$\textbf{NIM} = \frac{\textbf{Interest Income- Interest Expense}}{\textbf{Total Loans and Advances}}$$

B. Liquidity performance

Liquidity indicates the ability of the bank to meet its financial obligations in a timely and effective manner. It could be defined as the ability of bank to fund increases in assets and meet obligations as they come due, without incurring unacceptable losses. Liquidity risk arises from the fundamental role of banks in the maturity transformation of short-term deposits into long-term loans. (Vodova, 2010). The following ratios will be used to measure liquidity in the study.

Liquid assets to deposit ratio (LAD)

LAD = liquid asset/total deposit

This ratio indicates 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 (we included deposits of households, enterprises and other financial institutions). This ratio should therefore capture the bank's vulnerability related to these funding sources (Vodova, 2010). 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,2014)

Loans to total asset ratio (LTA)

LTA= Loans/total assets

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.

Loans to deposit ratio (LD ratio)

LD = Loans/total deposits

This ratio indicates 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 LD 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 (Credit Performance)

While it is expected that banks would bear some bad loans and losses in their lending activities, one of the key objectives of the bank is to minimize such losses. Credit performance evaluates the risks associated with the bank's asset portfolio i.e. the quality of loans issued by the bank. Asset quality will be measured using the following two ratios.

Loan reserve to Total loans (LRTL) = Loan reserve (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.

CHAPTER FOUR

4. 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 graphs to see the trend for each variable throughout the observation period. Test of normality has been employed whether the data for each variable is normality distributed.

4.1. Descriptive Statistic

This part presents the findings for each variable using graphs and analysis is done accordingly to observe the trend of bank performance before and after the implementation of the NBE bill directive. Trends of performance for each bank and for the industry as a whole based on the sample date is presented and discussed separately.

4.1.1. Profitability Performance

As disused in chapter two, profitability is one major aspect of evaluating commercial banks' performance. Profitability of performance is mainly measured using Return on Asset (ROA), Return on Equity (ROE), cost to income(C/I) ratio and Net Interest margin (NIM). The results for each profitability performance indicator are discussed below.

a) Return of Asset (ROA)

The primary role of commercial banks is to accept deposit and provide loans to customers in a way that maximize its profit. This intermediary role requires proper management of mobilizing deposit and invests the fund in profitable investments. ROA measure the ability of management to maximize its return on its asset (mainly loans). The ratio indicates how much net income is generated per each birr of assets. The higher the ratio, the more the profitable the bank is.

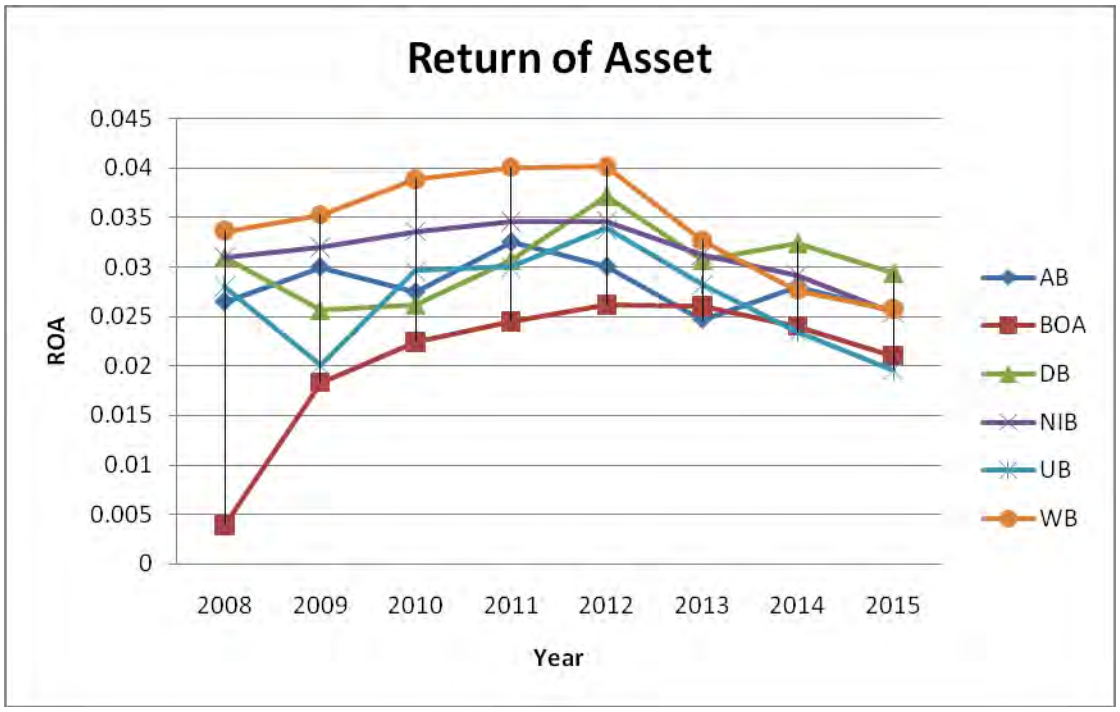

Chart 1: Return on Asset

As clearly indicated above, return on Asset (ROA) for the private banks show an increment up to the fiscal year of 2012 and start to decline afterwards (post bill period). The early post bill period (2012) mark significant improvement in ROA for most banks, even the highest ROA of all the sample fiscal periods. Banks with the highest ROA by the year 2012 are BOA (2.62%), DB (3.72%), UB (3.39%) and WB (4.02). Starting from fiscal year 2013 four banks, except DB and AIB, shows a constant decline in ROA. But the year 2015 marks a decline in ROA for all the sample banks compared with the previous year performance.

b) Return on Equity (ROE)

It is the most important indicator of a bank's profitability and growth potential. It is the rate of return to shareholders on each birr of equity invested in a bank. The higher the ration, the more profitable the bank is.

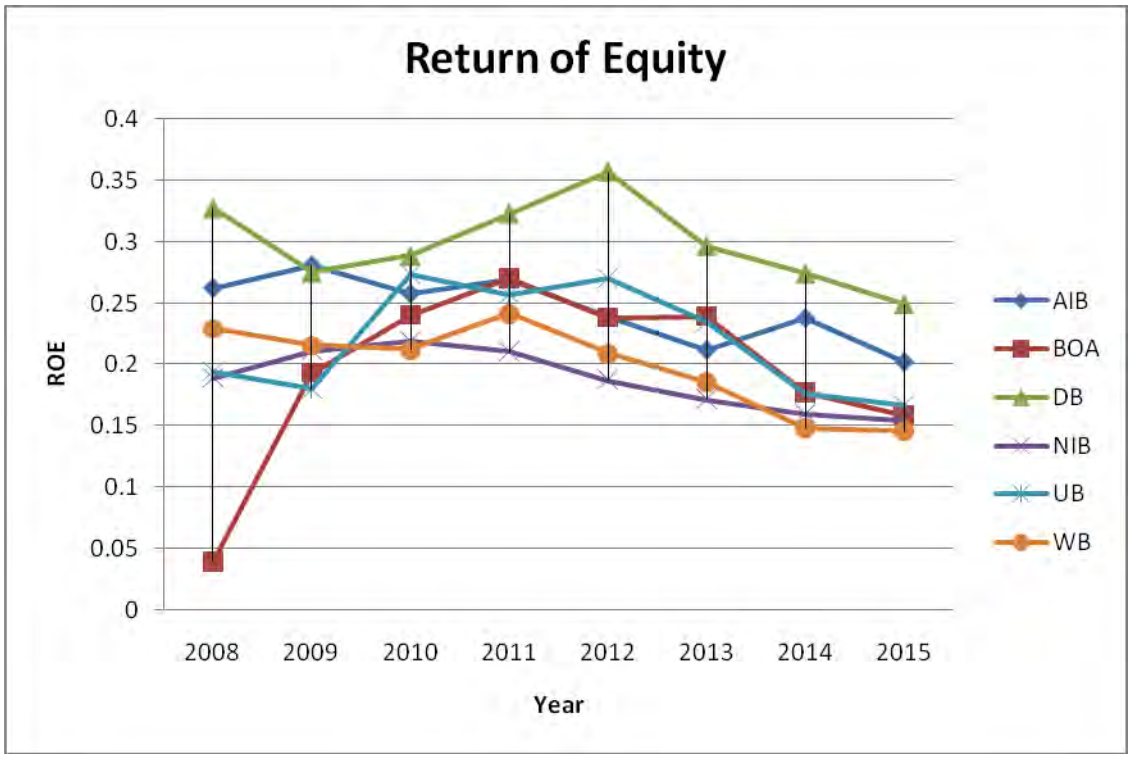

Chart 2 : Return on Equity

For most of the banks, ROE shows a declining trend starting from 2011(pre bill period) and continue declining in the post bill periods. Most banks increase their equity significantly by the year 2012 which attributes to the reduction of ROE during the same period. NBE's directive No. SBB/50/2011 enter into force as of September 19, 2011 which require existing private commercial banks to raise paid up capital to Birr 500 million by June 30, 2016 might have its implication on the reduction in ROE. Radical increase in profit after tax by the 2012 for DB and UB, even better than the succeeding fiscal year, result exceptional increment in ROE different from the rest sample banks.

c) Cost to Income ratio(C/I)

It measures income generated per birr cost. It signals how expensive it is for a bank to produce a unit of output. The lower the C/I ratio, the better the performance of the bank will be. It is the less powerful measure of profitability among the variables used in the study.

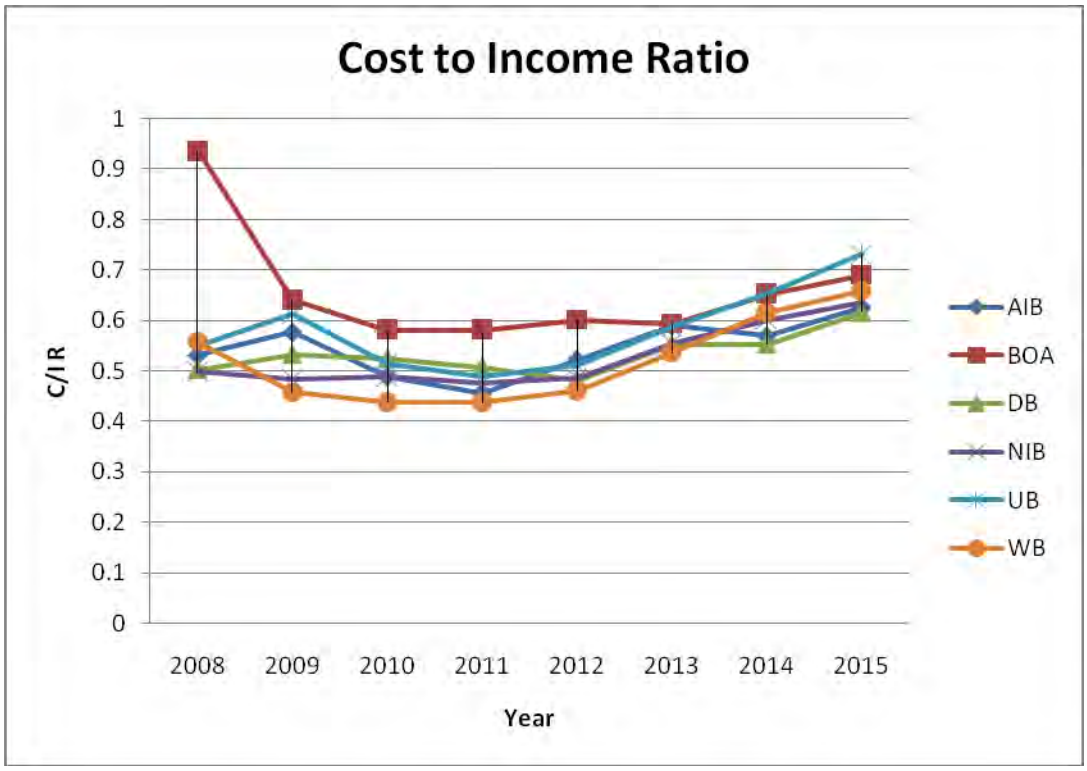

Chart 3: Cost to Income ratio

As it can be seen in the above Chart, the post bill period marks noticeable increment in cost to income ratio. For all the sample banks, 2015 shows a highest C/I ratio compared with the rest of the period studied. The highest Cost to income ratio which is register by 2015 are 62.57 %(AIB), 69.02(BOA), 61.68(DB), 63.53(NIB), 73.14(UB) and 65.92(WB). This implies providing banking service in Ethiopia is becoming costly from time to time. Exceptionally highest and abnormal C/I ratio has been registered by BOA (above 90%) which is attributed to expense incurred because of bad debts on the same fiscal year.

d) Net Interest Margin (NIM)

It is another important measure of profitability performance for banks. It is a spread between the interest earned on the bank's assets (loans) and the interest cost on its liabilities. The bank that able to raise fund with liabilities with low interest costs and is able to acquire assets with high interest income will get high net interest margin. Such banks are highly likely to be profitable.

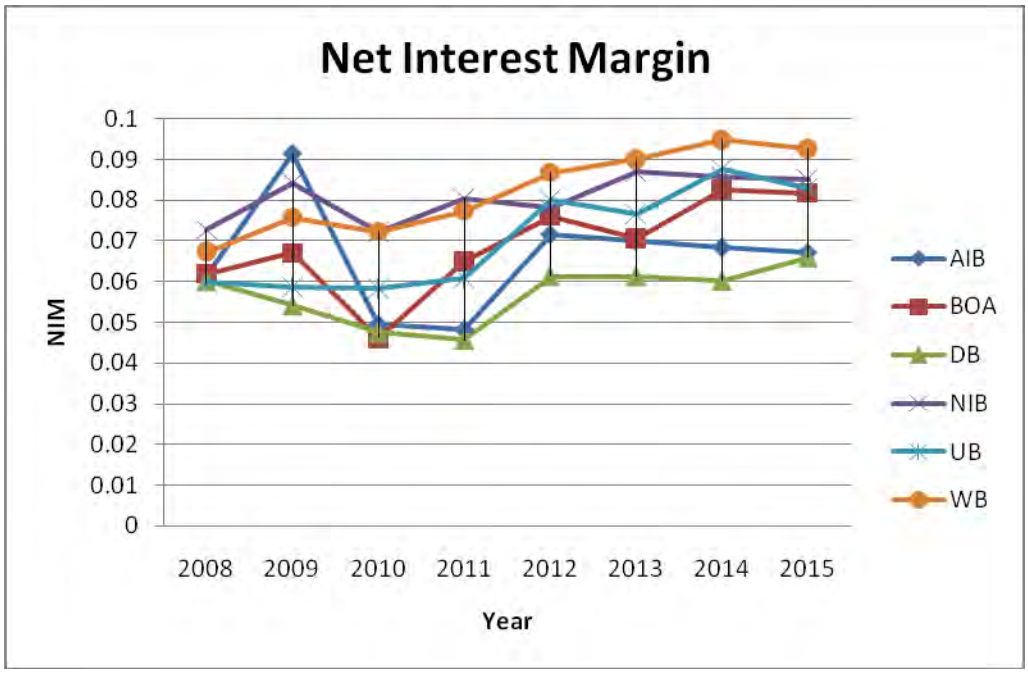

Chart 4: Net Interest Margin

As shown in chart 4, NIM during the pre bill and post bill period show a swing nature. But, in general terms, it is possible to conclude that the ratio has increased starting from 2011 for most of the sample banks. All sample private banks, except AIB, has registered highest NIM during post bill period with the following ratio, BOA (8.26%),DB (6.59%), NIB(8.7%), UB(8.76%) and WB(9.49%).

4.1.2. Liquidity Performance

Liquidity performance measures the ability to meet financial obligations as they become due and is crucial to the sustained viability of banking institutions. This thesis assess the liquidity performance of pre and post bill of private commercial banks in Ethiopia in terms of liquid asset to deposit (LAD) ratio, loan to total asset(LTA) ratio, and loan to deposit ratio(LD) ratio.

a) Liquid Asset to Deposit ratio (LAD)

This ratio indicated the percentage of short term obligations that could be met with the bank's liquid assets in case of sudden withdrawal. A higher ration implies the bank's ability to meet its obligations in terms of sudden withdrawal.

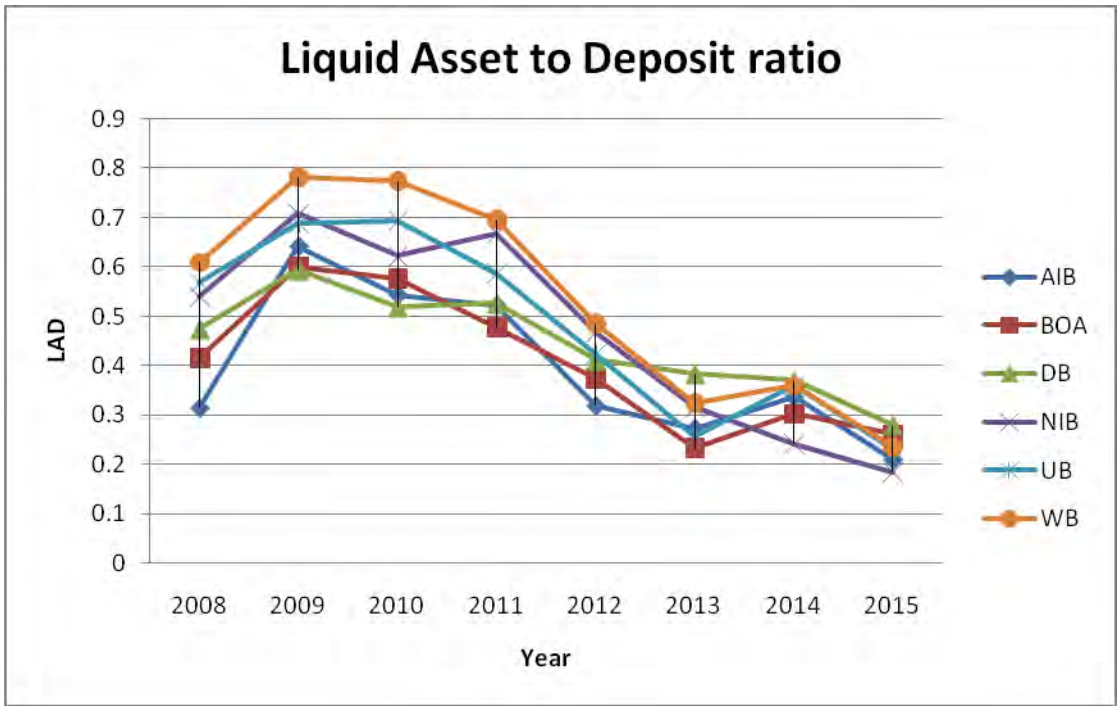

Chart 5: Liquid Asset to Deposit ratio

As it can be seen from chart 5, LAD ratio shows declining trend starting from 2010. The ratio drastically decline by the year 2012 and 2013(both in post bill periods). Comparison between 2010 and 2012 fiscal years in respect to this ratio revels a decline trend from 54.39% to 31.39%(AIB), from 57.64% to 37.26%(BOA), from 57.80% to 41.03%(DB), from 62.24% to 46.77%(NIB), from 69.31 to 42.36%(UB) and from 77.39% to 48.47%(WB). This significant falling for the period under review indicating reduced liquidity for the sample banks. This ratio ends up with the value less than 30% for all sample banks by the year 2015 which were above 55% for all of them by the year 2009.

b) Loan to Total Asset ratio (LTA)

LTA measures the percentage of assets that is tied up in loans. This ratio is the least measure of liquidity as it does not directly measure liquidity; it gives an indication of how much of the bank assets are tied into illiquid loans. The higher LTA ratio is the less is the liquidity of the bank.

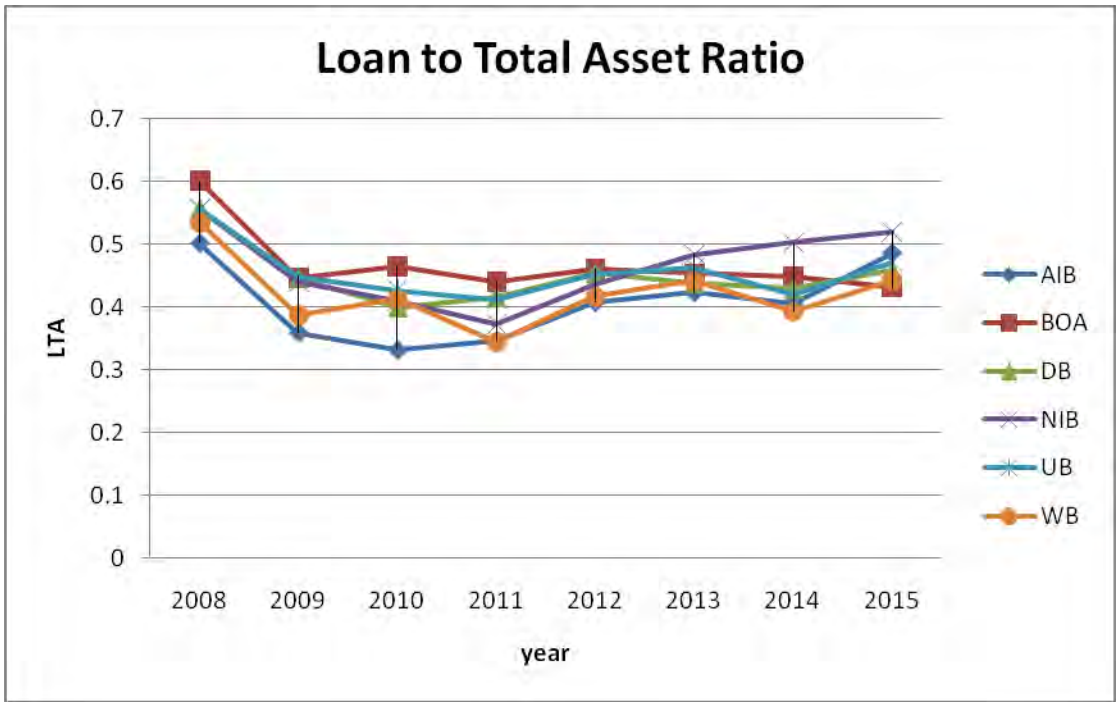

Chart 6: Loan to Total Asset ratio

From the trend displayed in chart 6, LTA ratio start to decline by the year 2009 for all sample banks under the study, continue to decline in a lesser extent till 2011 and shows insignificant continuous improvement from 2012 onwards. This ratio was above 50% for all sample banks during 2008 i.e 50.23%(AIB), 60.11%(BOA), 55.60%(DB), 55.72% (NIB), 55.68%(UB) and 53.53%(WB). However, the ratio fall below 45% by the year 2011 for the banks and become 34.64% (AIB), 44.04%(BOA), 41.57%(DB), 37.30%(NIB), 41.24%(UB) and 34.46%(WB). To the contrary, the ratio start to increase and ends up with a ratio above 45% for five sample banks by the year 2015 except BOA which register a ratio of 43.21%. Generally, the trend show an increase in loans granted to borrowers in the post bill period which have an implication of liquidity problem with a possible trade off with enhancing profitability through higher interest income. During pre bill period credit cap imposed by regulatory body has limited the lending capacity of private banks which has been lifted since 2012. As a result of this the loan granted to customers has been significantly increase in the post bill periods. Accordingly the composition of loan out of the total asset shows material increment in the post bill periods.

c) Loan to Deposit ratio (LD)

This ratio indicates the percentage of the total deposits locked into non-liquid assets. It relates illiquid assets with liquid liabilities. Higher ration implies lower liquidity.

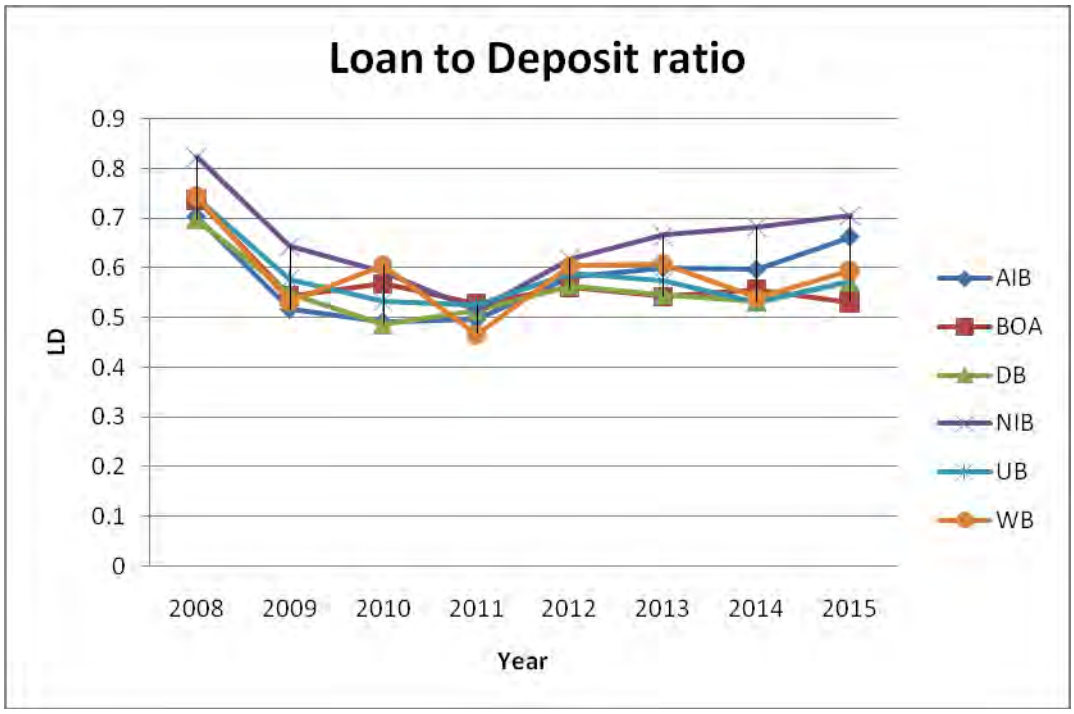

Chart 7: Loan to Deposit ratio.

As described in chart 7, LD ration fall significantly up to the year 2011(pre bill period) and rise significantly from 2012 onwards. The decline in this ratio during the pre bill period seemingly attributed to credit cap imposed by National bank of Ethiopia over commercial private banks to curb the overheated economy which has been then lifted by the year 2011. The credit cap is believed to limit the lending capacity of those private banks regardless of the fund available to finance customer. This regulation could have enhanced the liquidity performance of the private banks. Among the period covered by the study, 2008 exhibits a highest LD ratio for all ample banks with the following ratio; 70.27%(AIB), 73.80%(BOA), 69.77%(DB), 82.34%(NIB), 74.07%(UB) and 74.43% WB. On the other hand, the last pre bill period (2011) reveals the lowest LD ration for all sample banks studied. The lifting of the

credit cap by the year 2011 may result enhancement of loan injected to the market by private banks which in turn seemingly lift the ratio from 2012 onwards.

4.1.3. Asset Quality performance

Asset (credit) quality performance measures in respect to risks associated with the bank's asset portfolio. One of the key objectives of the bank is to minimize such losses. Asset quality performance of private commercial banks in Ethiopia during the pre and post bill periods has been assessed using Loan reserve (provision) to total loans ratio.

a) Loan Reserve to total Loans ratio (LRTL)

This ratio indicates the portion of the total portfolio that has been set aside but not charged off. It serves as an insurance to absorb potential losses caused by risky assets. A higher ratio implies poor asset (credit) quality.

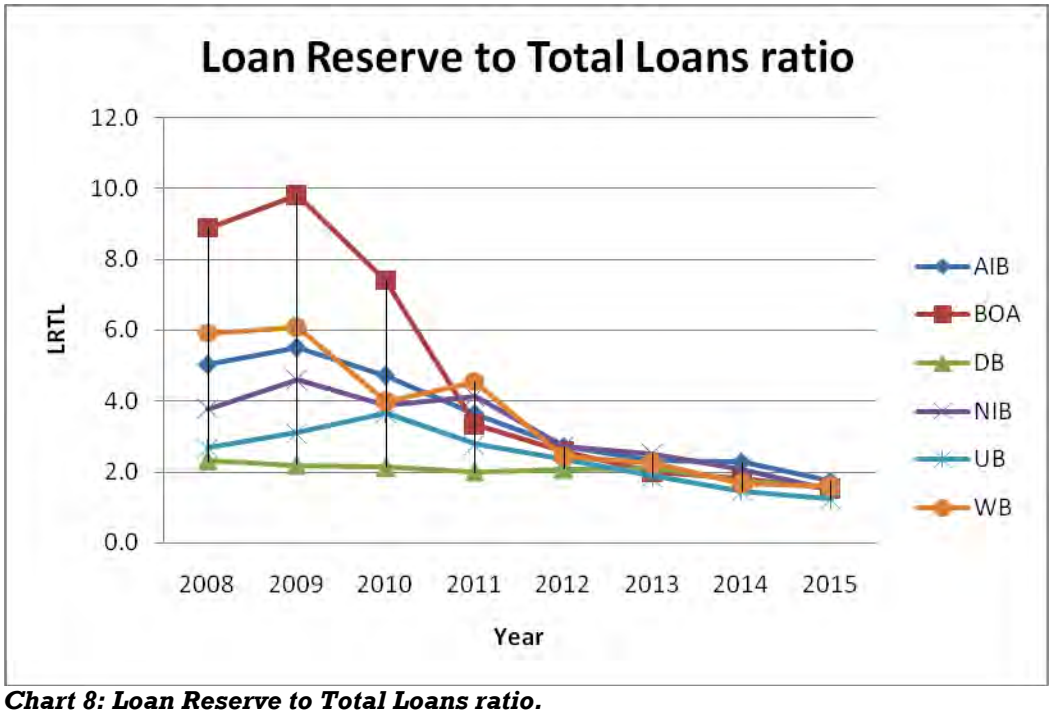

Chart 8: Loan Reserve to Total Loans ratio.

As shown in chart 8, LRTL ratio has shown a dramatic decline in post bill periods. The highest (exceptional) ratio has been registered by BOA (9.8%) during 2009. The

ratio falls below 2% for all sample banks during 2015. This implies credit quality has been improved during the post bill periods.

4.2. Financial Performance for the industry

Trend analysis for the industry average based on the information obtained from sample private banks is presented and discussed below.

Profitability performance

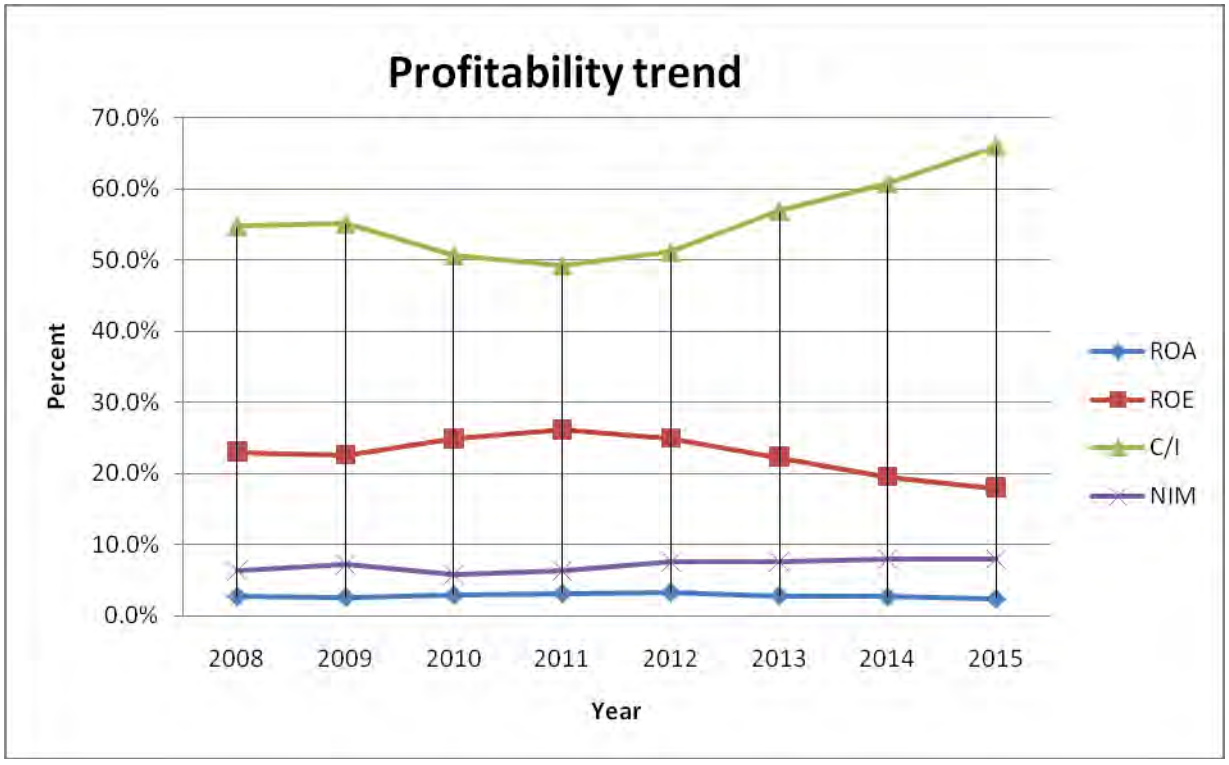

Chart 9: Profitability trend for the industry

As it can be seen from chart 9, the trend of profitability during the pre and post bill periods shows variation in respect to each profitability performance indicators. C/I ration raise significantly starting from 2012(post bill) period. The main reason for this seems high cost incurred by banks in respect to branch expansion, salary and benefit increment, aggressive branch expansion and promotion costs after the implementation of the bill owing to stiff competition among private banks toward

resource mobilization. In similar fashion, ROE starts to fall since 2012 in a consistent manner. Sluggish growth (on average 7%) in profit after tax during the post bill period, which has been 35% on average during the pre bill periods attributes to the deterioration in Return of Equity during the post bill periods. The average annual growth rate in loan during the post bill period which is 21% is higher than 13% growth rate in the pre bill period. In addition to the above statement , increment in interest rate on loans by most of the banks during the post bill periods result in better net interest margin performance of the banks. As it can be seen in the above figure, ROA for the banks show similar result.

Liquidity Trend (Industry)

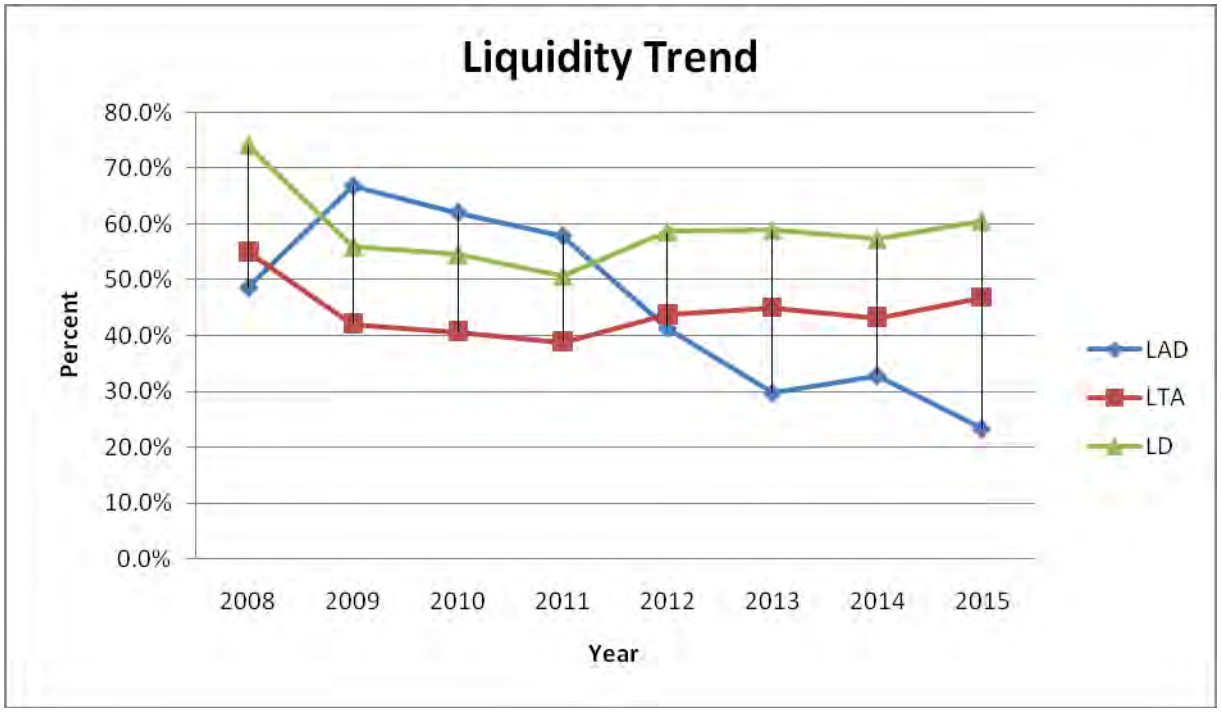

Chart 10: Liquidity trend for the industry

Liquidity performance trend for the sample banks show mixed result. Loan to total asset (LTA) and Loan to Deposit (LD) shows a declining trend in the pre bill periods and exhibit an increasing trend during the post bill periods. Better average annual growth in the outstanding loan and lesser average annual growth rate in both Deposit and total assets during the post bill period have resulted increase in both

LTA and LD ratio. Average Annual growth rate in loan, Deposit and total asset for the banks in the pre (post) bill period is 13% (21%). 26% (18%) and 27% (19%). A reduction in reserve requirement to ten percent in 2012 and to five percent in 2013 release some liquid fund to the banks that might have significant effect to enhance fund available to loan during the post bill periods

Whereas, generally speaking, Liquid asset to deposit ratio (LAD) shows a declining trend both in the post bill and pre bill periods. The ratio showed a tendency to increase by the year 2009 in the pre bill period and by the year 2014 in the post bill period. But for the rest of the fiscal year under the study liquidity position (measured in terms of LAD ratio) for the banks show a deteriorated performance. The declining trend in Liquid asset to deposit ratio were sever in the post bill period compared with the pre bill period. The reduction reserve requirement, as stated above, believed to convert liquid asset to loans resulting a shift in liquid asset to illiquid once. The Liquid asset position of the banks has increase during the pre bill at an average growth rate of 38% but the post bill average annual growth rate is 1%.

Asset (Credit) Quality

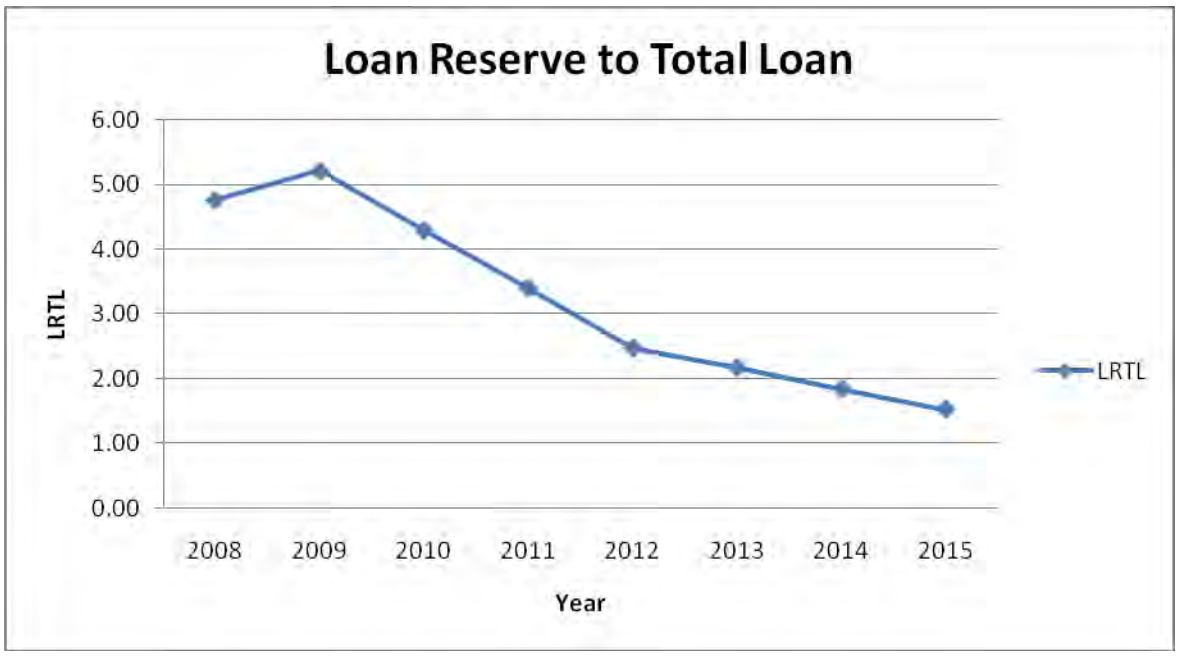

Chart 11: Asset Quality trend for the industry

As shown in the above chart, the Asset(credit) quality of the banks were at its peak by the year 2009 implying banks experience poor performance in terms of having bad loans. But the trend in respect to the quality of loans has been improve and show continuous decline since 2010 and the lowest level of provision held for bad to total outstanding loan ratio (1.5%) registered by the year 2015. This ratio has a direct relationship with the loan outstanding during a specific fiscal year implying as the amount of loan injected to the economy grows, if not managed in a different way, the ratio will grows in similar fashion. Apart from this fact the average annual growth rate in LRTL ratio were 4% in the post bill period contrary to a 21% percent increase in loans outstanding during the same period. This strengthens the fact that quality of the loan has been improved in the post bill period.

4.3. Summary Statistics of Variables

A descriptive statistics has conducted for all variable for both pre and post bill periods. It includes mean, median, maximum, minimum and standard deviation. The result of the descriptive statistics and its interpretations are presented as follows.

Table 1: Summary Statistics of variables

	observation		Mean		Std. Dev		Min		Max.	
Variable	Pre bill	Post bill	Pre bill	Post bill	Pre bill	Post bill	Pre bill	Post bill	Pre bill	Post bill
ROA	24	24	2.92%	2.86%	0.58%	0.49%	1.80%	1.96%	4.01%	4.02%
ROE	24	24	24.18%	21.22%	4.24%	5.31%	18.00%	14.60%	32.72%	35.67%
C/I	24	24	52.38%	58.68%	5.88%	6.74%	43.78%	46.10%	64.08%	73.14%
NIM	24	24	6.38%	7.77%	1.19%	1.04%	4.57%	6.02%	8.43%	9.49%
LAD	24	24	58.89%	31.78%	11.00%	8.13%	31.43%	18.39%	78.20%	48.47%
LTA	24	24	44.24%	44.77%	7.47%	3.08%	33.22%	39.27%	60.11%	52.01%
LD	24	24	58.87%	58.90%	10.02%	4.87%	46.63%	53.11%	82.34%	70.53%
LRTL	24	24	4.25%	2.00%	1.67%	0.43%	2.00%	1.20%	7.40%	2.70%

Source: SPSS output of Descriptive statistic of eight variables

As depicted in the above table, sample data on Liquid asset to deposit (LAD) ratio shows the highest dispersion among all the variables with 11%(8.13%) standard deviation from its mean of 58.89%(31.78%) and having a difference of 46.77%(30.08%) between the maximum and minimum values during the pre bill(post bill) period. High variations in liquid asset as well as deposit volume among sample banks during pre bill & post bill periods contribute for high variability in LAD ratio. Loan to deposit (LD) ratio during pre bill period stands second in respect to dispersion having 10.02% standard deviation from its mean 58.87% with a difference of 35.71% between the maximum and minimum values. Huge difference in loans granted to customers and deposit mobilize from customers brings this high variability among the performance of sample private banks. As a matter of fact, emanated from the very intermediary nature of banking business, the amount of resource available for loan is highly affected by the bank's ability to mobilize deposit from customers. As a result if there is high variability in deposit among banks there is possibility to have variability in loans granted to borrowers.

Slight variability is observed in return on Asset(ROA) with 0.58%(0.79%) standard deviation from its mean of 2.92%(2.86%) and having a difference of 2.21%(2.06%) between the maximum and minimum values during the pre bill(post bill) period.

4.4. Variable Test and Results

Inferences about the hypothesis are made by looking at test statistics and critical values associated with the mean. If P-value ≤ 0.05, reject the null hypothesis. If P-value >0.05, do not reject the null hypothesis. For the test statistics 5% (0.05) significant level is used to reject or not to reject the null hypothesis. The first test the researcher employs is diagnostic tests because they are the means to know whether the assumption for test statistics is valid or not on the other hand to know if it is OK to continue with the t-test. Accordingly, normality test has been performed and the results for each variable are presented below.

4.4.1. Normality Test

Before hypothesis testing to see whether there is statistically significant difference between the means of pre and post bill periods, normality testing are tested to know if the assumptions of normal distribution of sample data is violated or not. Accordingly, the output of the tests which are displayed by SPSS software are presented and interpreted.

Hypothesis:

Ho: The variables are normally distributed

H1: The variable are not normally distributed

Table 2: Normality Test Result

Performance Parameter	Indicator	Pre Bill Mean		Post Bill Mean		P Value		Decision
		Skewness	Kurtosis	Skewness	Kurtosis	Pre Bill	Post Bill	
Profitability	ROA	-0.237	-0.208	0.534	0.261	0.720	0.744	Keep Ho
	ROE	0.307	-0.672	0.909	0.756	0.310	0.072	Keep Ho
	C/I	0.536	-0.452	0.042	-0.267	0.266	0.991	Keep Ho
	NIM	0.119	-0.904	-0.202	-1.088	0.331	0.330	Keep Ho
Liquidity	LAD	-0.386	0.484	0.369	-0.590	0.857	0.634	Keep Ho
	LD	0.628	-0.487	0.463	0.205	0.127	0.728	Keep Ho
	LTA	0.578	-0.455	0.484	0.196	0.133	0.885	Keep Ho
Asset(Credit) Quality	LRTL	0.611	-0.457	0.024	-0.988	0.089	0.534	Keep Ho

Source: SPSS output for Normality test of eight variables.

In addition to the above information, based on the output generated by SPSS software Standard Error is 0.472 and 0.918 for Skewness and kurtosis, respectively.

A Shapiro-Wilk's test (P> 0.05) , shown in the above table, and a visual inspection of their histograms, normal Q-Q plots and box Plots showed that variable is approximately normally distributed for the pre and post data.

4.4.2. Hypothesis Test

To examine whether the difference in performance of the private commercial banks during pre and post bill periods is statistically different, a paired t- test is employed to test the hypothesis that the means of the two periods are the same on the eight variables. The table below provides a summary of a paired t- test results for the two periods under review generated by SPSS software.

Table 3: Paired T-Test Result

Performance Parameter	Indicator	Pre Bill Mean	Post Bill Mean	P Value	Decision
Profitability	ROA	2.92%	2.88%	0.76	Fail to Reject
	ROE	24.18%	21.22%	0.013	Reject
	C/I	52.38%	58.68%	0.003	Reject
	NIM	6.38%	7.77%	0.000	Reject
Liquidity	LTA	44.24%	44.77%	0.757	Fail to Reject
	LD	58.87%	58.87%	0.991	Fail to Reject
	LAD	58.89%	31.78%	0.000	Reject
Asset(Credit) Quality	LRTL	4.25%	1.996%	0.000	Reject

Source: T-Test result for eight variables

With regard to profitability, the result reveals differing output for performance indicators considered in the study. ROA, ROE and C/I ratio shows private commercial banks performed better in the pre bill periods compare with the post bill periods. Mean for ROA is 2.92% during the pre bill period which is greater than post bill mean ROA that has a value of 2.88%. In similar fashion, mean for ROE during the pre bill period is 24.18% which is greater than the mean ROE during the post bill period that has a value of 21.22%. C/I ratio is higher during the post bill period with a mean value of 28.68% compared with a pre bill period mean value of 52.38%. But, as shown in the above table, the other measure of profitability, NIM,

witness the betterment of this ratio during the post bill period compared with the pre bill period. The mean for NIM is 7.77% during the post bill period which is higher than the per bill mean of 6.38%. This indicates that the banks enjoy higher interest income from borrower compared with the interest expense it pays to depositor during the post bill periods. Banks increase the interest rate during the post bill period to compromise the benefit forgone due to amount tied in the unprofitable bill. The P- values for ROE, C/I ration and NIM are 0.013, 0.003 and 0.000 respectively, implying the differences between the performances for the two periods are statistically significant as the P-values are below 0.05 and therefore the null hypothesis has to be rejected. This leads to the conclusion that return on Equity (ROE) and Cost to Income(C/I) ratio deteriorated during the post bill period. To the contrary, the net interest margin (NIM), shows improved performance during the post bill period. The p-value for ROA is 0.76 which is higher than the level of significance value (0.05) resulting to keep the null hypothesis. This leads to the conclusion that the difference in performance in terms of return on Asset (ROA) for private banks during the two periods is not statistically significant.

The two Liquidity performance measures, namely Loan to total asset (LTA) and Loan to Deposit (LD) ratio, reveal similar mean during the two periods. This implies private commercial banks performance in respect to the above two measures of liquidity before and after the implementation of the bill result in similar achievement. The p-value for both LTA and LD is 0.757 and 0.991 which is higher than the level of significance value (0.05) implying the null hypothesis of equality of means for the two different time periods cannot be rejected for LTA and LD. This implies that there is no statistical significant difference in liquidity performance of private commercial banks measured in terms of LTA and LD before and after the implementation of the bill. However, the finding for liquid asset to deposit ratio (LAD) during the two periods shows a different trend than the above statement. Mean for LAD during the pre bill period is 58.89% is greater than the mean LAD during the post bill period that has a value of 31.78%%. This indicates that banks have been more liquid in the pre bill periods compared to the post bill periods in

terms of LAD. Moreover, the P-value being 0.000, force us to reject the null hypothesis which states no difference between the means of pre and post bill period in respect to performance. This leads us to conclude the presence of statistically significant difference in liquid asset to deposit performance of the private banks between the pre and post bill periods. In other term private commercial banks become illiquid, measured in terms of liquid asset to deposit ratio, in the post bill period than the pre bill periods.

With respect to credit quality the mean for loan reserve to loan (LRTL) ratio is 4.25%for the pre bill periods and 1.99 for the post bill periods indicating improve quality in loan portfolio after the implementation of the bill. Moreover, the difference is statistically significant as the P-value is 0.000 which is less than the level of significant (0.05). Therefore, the null hypothesis will be rejected.

The results of the paired t-test shows, despite the possible negative impact the bill could result in performance because of its lesser return compare with the prevailed interest income earned from loans granted to borrows, statistically significant positive performance in some performance indicators, namely NIM and LRTL ratios, during the post bill periods.

Even in some of the performance indicator that shows variation, the difference between the pre and post bill periods were not statistically significant. On the other side, statistically significant deterioration in performance of the banks has been register after the implementation of the bill in respect to most of performance measure of profitability and the most important measure of liquidity, LAD ratio. Generally, the finding based on the paired t- test shows mixture of results.

CHAPTER 5

5. Conclusion and Recommendation

5.1. Conclusion

This paper measured the performance of private commercial banks in Ethiopia before and after the implementation of NBE bill. The results indicate that private banks performance in terms of profitability and liquidity has been deteriorated in the post bill periods and credit quality has been improving during the same period.

With respect to each performance measures the study came up with a mixture of results. Return on Equity (ROE) and Cost to Income(C/I) ratio have shown statistically significant lesser performance in the post bill periods. To the contrary, owing to increment of interest on loan and advances during the post bill periods, net interest margin (NIM) show statistically significant improvement during this period. Whereas, the difference in performance during the two periods in terms of return on Asset (ROA) found to be statistically insignificant.

Regarding liquidity performance banks found to be illiquid in the post bill periods. The less performance during the post bill period is found to be statistically significant in respect to Liquid asset to deposit (LAD) ratio, despite the statistical insignificancy of the other two measures, namely loan to Deposit (LD) and Loan to Total Asset (LTA) ratio.

Notwithstanding the fact the total outstanding loans granted by private banks during the post bill period has been significantly increased, the asset quality of the banks has been improved witnessing implementation of sound and effective credit risk management policy by the private banks. This fact is strengthen by the downward trend in loan reserve to total loan (LRTL) ratio.

The analysis has also uncovered that most of the pictures observed in the post bill period has taken its shape since 2009. During the year 2009, in an effort to control hyperinflation in the country, NBE has limited the amount of loans the banks could

disburse to borrowers. This might have caused the loan to deposit and loan to total asset ratio to decline since 2009.

Till the end of 2015 the total amount invested in NBE bill by the six banks studied reaches Birr 26,554,650,067.00 which is more than half of the total loan outstanding balance of Birr 49,245,459,553.00. This amount tied up in a less profitable investment (3% interest rate) could have generated more revenue to private banks.

Tight regulatory restrictions that were taken place since 2009 seems to make observable difference in performance and the policy measures taken place by the year 2012 is believed to make some positive improvement in certain performance indicators and worsen others.

Noticeably, in the post bill period the private banking business seems to be highly competitive, witnessed by speedy growth in number of branches, vast promotional activities and remarkable engagement in diversity of service.

5.2. Recommendation

There has to be further research to see if private banks would have today's shape in terms of providing the quality of service they are providing, the product features being render, the number of branches and coverage they have currently, if regulatory restrictions like NBE bill were not in place.

Further research is recommended whether credit cap or the bill regulation have worse effect on performance of private commercial banks in Ethiopia.

It is also of paramount importance to see what would happen to the inflation if regulatory restriction in the private commercial banks were not put in place.

References

African Economic Outlook, 2012, Ethiopia 2012, http//www.africaneconomicoutlook.org

Bentum, W., 2012, The determinants of profitability of the commercial banks in Ghana during the recent years of global financial crisis, Aarhus University

Berger, A. & Bouwman,C.,2006, The measurement of bank liquidity creation and the effect of capital, Weather head School of Management, Case Western Reserve University, Washington, D.C.

Bikker, J. & Bos J. , 2005, Trends in competition and profitability in the banking industry: A basic framework, Suerf – The European Money and Finance Forum, Vienna.

Bikker, J. & Bos J. ,2008, Bank performance: A theoretical and empirical framework for the analysis of profitability, competition and efficiency, New York

Bikker, J., 2010, 'Measuring performance of banks: An assessment', Journal of Applied Business and Economics vol. 11(4), De Nederlandsche Bank and Utrecht University.

Choudhry, M., (2011), An introduction to banking: Liquidity risk and asset-liability management, John Wiley & Sons Ltd, United Kingdom.

Dietrich, A.& Wanzenried, G.,2010, , Determinants of Bank Profitability Before and During the Crisis: Evidence from Switzerland . Available at SSRN: http://ssrn.com/abstract=1370245 or http://dx.doi.org/10.2139/ssrn.1370245

Eden K., 2014, The Impact of national bank regulation on banks performance: Evidence from the private banks of Ethiopia, Addis Ababa University, Addis Ababa, Ethiopia.

Ethiopian News Agency, web site, http://www.ena.gov.et

Getnet, A., 2014, Financial inclusion, regulation and inclusive growth in Ethiopia, working paper 408.

Harvey, C. 1996, Banking reform in Ethiopia.

International Monetary Fund, 2012, IMF Country Report: The Federal Democratic Republic of Ethiopia, article IV Consultation, No. 12/287.

Keatinge, T., 2014, The role of public and private sector banking in Ethiopia's future economic growth, Global center on cooperative security, Policy brief.

Kumbirai, M. & Webb, R.,2010, A financial ratio analysis of commercial bank performance in South Africa, African review of economics and finance, Grahams town, South Africa,

Minyahil A.,2013, Performance of commercial banks of Ethiopia and global financial crisis, Addis Ababa University, Addis Ababa, Ethiopia.

Mulualem G., 2015, Analyzing financial performance of commercial banks in Ethiopia: CAMEL Approach, Addis Ababa University, Addis Ababa, Ethiopia.

National Bank of Ethiopia, 2011, Directives on minimum capital requirement of banks, Directive no. SBB/50/2011, Addis Ababa, Ethiopia.

National Bank of Ethiopia, 2013, Directives on reserve requirement (6th replacement), Directive no. SBB/55/2013, Addis Ababa, Ethiopia.

National Bank of Ethiopia, web site, http://www.nbe.gov.et/aboutus/history.html

National Bank of Ethiopian, 2011, Directives on the Establishment and Operation of National Bank of Ethiopia Bills Market, MFA/NBEBILLS/001/2011, Addis Ababa Ethiopia.

National Bank of Ethiopian,2008, Directive on asset classification and provisioning (4th replacement), directive no. SBB/43/2008 , Addis Ababa , Ethiopia

Ruozi, R. & Ferrari, P., 2013, Liquidity risk management in banks economic and regulatory Issues, Springer Briefs in Finance.

Semu, Z., 2010, Impact of reducing loan by Ethiopian banks on their own performance, Addis Ababa University.

Shahchera, M. (2012), The Impact of Liquidity Asset on Iranian Bank Profitability, International Conference on Management, Behavioral Sciences and Economics Issues, Penang, Malaysia.

Shibiru A.,2014, Assessing the implications of regulatory policy on the development of private commercial banks in Ethiopia, A case of NBE bills Purchase, Addis Ababa University, Addis Ababa, Ethiopia.

Teker, S., Teker, D. & Kent, O., 2011, Measuring commercial banks' performances in Turkey: A proposed model, Journal of Applied Finance & Banking, vol.1, no.3, 2011, 97-112

Tesfaye B.,2014, The impact of policy measures on Ethiopian private banks performance: The case of government bill purchase, European Journal of Business and Management, Vol.6, No.27.

Tseganesh, T.,2012, Determinants of banks liquidity and their impact on financial performance: Empirical study on commercial banks in Ethiopia , Addis Ababa University, Addis Ababa, Ethiopia

Vodova P., 2013, Determinants of commercial bank liquidity in Hungary, Financial Internet Quarterly.

Vodova, P., Determinants of commercial banks' liquidity in the Czech Republic, Silesian University in Opava, Karviná, Czech Republic.

Workneh, Y.,2015, The impact of liquidity on performance: Empirical study on Ethiopian private commercial banks, Addis Ababa University, Addis Ababa, Ethiopia.

Wright, R. & Quadrini, V. , 2012, Finance, Banking and Money ,Vol.1.1, USA

Zhang, Y. & Li, L., 2009, Study on balanced scorecard of commercial bank in performance management system, South China University.